



SEATTLE CITY COUNCIL

Transportation and Utilities Committee

Agenda

Friday, September 25, 2020

9:30 AM

Special Meeting

Remote Meeting. Call 253-215-8782; Meeting ID: 586 416 9164; or
Seattle Channel online.

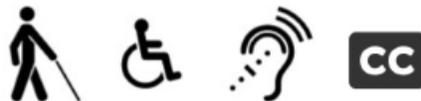
Alex Pedersen, Chair
Dan Strauss, Vice-Chair
M. Lorena González, Member
Lisa Herbold, Member
Tammy J. Morales, Member
Debora Juarez, Alternate

Chair Info: 206-684-8804; Alex.Pedersen@seattle.gov

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September 25, 2020 - 9:30 AM
Special Meeting

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Remote Meeting. Call 253-215-8782; Meeting ID: 586 416 9164; or Seattle Channel online.

Committee Website:

<http://www.seattle.gov/council/committees/transportation-and-utilities>

This meeting also constitutes a meeting of the City Council, provided that the meeting shall be conducted as a committee meeting under the Council Rules and Procedures, and Council action shall be limited to committee business.

In-person attendance is currently prohibited per Washington State Governor's Proclamation No. 20-28.9, through October 1, 2020. Meeting participation is limited to access by telephone conference line and Seattle Channel online.

Register online to speak during the Public Comment period being held at the 9:30 a.m. Transportation and Utilities Committee meeting at

<http://www.seattle.gov/council/committees/public-comment>

Online registration to speak at the Transportation and Utilities Committee meeting will begin two hours before the 9:30 a.m. meeting start time, and registration will end at the conclusion of the Public Comment period during the meeting. Speakers must be registered in order to be recognized by the Chair.

Submit written comments to Councilmember Pedersen at

Alex.Pedersen@seattle.gov

Sign-up to provide Public Comment at the meeting at

<http://www.seattle.gov/council/committees/public-comment>

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Please Note: Times listed are estimated

A. Call To Order

B. Approval of the Agenda

C. Public Comment

(20 minutes)

Register online to speak during the Public Comment period at the 9:30 a.m. Transportation and Utilities Committee meeting at <http://www.seattle.gov/council/committees/public-comment>.

Online registration to speak at the Transportation and Utilities Committee meeting will begin two hours before the 9:30 a.m. meeting start time, and registration will end at the conclusion of the Public Comment period during the meeting. Speakers must be registered in order to be recognized by the Chair.

D. Items of Business

1. [Res 31971](#) **A RESOLUTION** relating to the City Light Department; adopting a **Transportation Electrification Strategic Investment Plan** for the City Light Department that will guide the development of the utility's infrastructure strategy and investment priorities related to the electrification of transportation.

Attachments: [Att A - SCL Transportation Electrification Strategic Investment Plan 2021-2024](#)
[Att B - SCL TE SIP Community and Stakeholder Outreach and Engagement Summary](#)
[Att C - SCL TE SIP Racial Equity Analysis Summary](#)
[Att D - SCL Transportation Electrification Strategy Report](#)

Supporting Documents: [Summary and Fiscal Note Presentation](#)
[Central Staff Memo](#)

Briefing, Discussion, and Possible Vote
(30 minutes for Items 1 and 2)

Presenters: Debra Smith, General Manager and CEO, Emeka Anyanwu, David Logsdon, Victor Couto, Jenny Levesque, and Maura Brueger, Seattle City Light (SCL)

2. [CB 119895](#) **AN ORDINANCE** relating to the City Light Department; granting authority for the Department to offer incentive programs in the electrification of transportation for its customers, including the promotion of electric vehicle adoption and advertising programs to promote the utility's services, incentives, or rebates; and adding a new Chapter 21.53 to the Seattle Municipal Code.

Supporting Documents: [Summary and Fiscal Note](#)

Briefing, Discussion, and Possible Vote

Presenters: Debra Smith, General Manager and CEO, Emeka Anyanwu, David Logsdon, Victor Couto, Jenny Levesque, and Maura Brueger, SCL

3. **Amendment to SMC 21.49.090 which currently imposes a barrier to the efficient and timely deployment of electric vehicle (“EV”) charging sites; SCL proposes legislation clarifying Seattle City Light’s discretion to allow additional services on a parcel.**

Supporting Documents:

[Draft Council Bill Overview](#)

Briefing and Discussion, (15 minutes)

Presenters: TBD

4. [CB 119899](#) **AN ORDINANCE relating to the City Light Department; amending Section 21.49.125 of the Seattle Municipal Code; updating the City Light Department’s Open Access Transmission Tariff and rates to meet changes in costs and regulations.**

Attachments: [Att A - SCL Pro Forma Open Access Transmission Tariff](#)
[Att B - Generator Interconnection Procedures](#)
[Att C - Generator Interconnection Agreement](#)

Supporting Documents:

[Summary and Fiscal Note Presentation](#)

Briefing, Discussion, and Possible Vote (30 minutes)

Presenter: Debra Smith, General Manager and CEO, Jim Baggs, Cathy Leone, and Maura Brueger, SCL

5. [CB 119898](#) **AN ORDINANCE relating to the City Light Department; amending subsection 21.49.086.D of the Seattle Municipal Code to define the Net Wholesale Revenue target used in Rate Stabilization Account operations for 2021-2024.**

Supporting

Documents: [Summary and Fiscal Note](#)
[Presentation](#)

Briefing, Discussion, and Possible Vote (15 minutes)

Presenters: Debra Smith, General Manager and CEO, Kirsty Grainger, Chris Ruffini, Carston Croff, and Maura Brueger, SCL

E. Adjournment



Legislation Text

File #: Res 31971, **Version:** 1

CITY OF SEATTLE

RESOLUTION _____

A RESOLUTION relating to the City Light Department; adopting a Transportation Electrification Strategic Investment Plan for the City Light Department that will guide the development of the utility’s infrastructure strategy and investment priorities related to the electrification of transportation.

WHEREAS, in its 2019 session the Washington State Legislature passed, and the Governor signed, SHB 1512

(“the legislation”) relating to electrification of transportation by amending or creating new sections to the RCW; and

WHEREAS, the Legislature found that “programs for the electrification of transportation have the potential to allow electric utilities to optimize the use of electric grid infrastructure, improve the management of electric loads, and better manage the integration of variable renewable energy resources” (§1(1) of the legislation); and

WHEREAS, the Legislature found that “state policy can achieve the greatest return on investment in reducing greenhouse gas emissions and improving air quality by expediting the transition to alternative fuel vehicles, including electric vehicles” (§1(2) of the legislation); and

WHEREAS, the Legislature further recognized that each electric utility, depending on its unique circumstances, can determine an appropriate role in the development of electrification of transportation infrastructure; and

WHEREAS, the legislation created what was codified as RCW 35.92.450, which provides that the “governing authority of an electric utility formed under this chapter may adopt an electrification of transportation plan”; and

WHEREAS, RCW 35.92.450 also allows for an electric utility to offer “incentive programs in the electrification of transportation for its customers, including the promotion of electric vehicle adoption and advertising programs to promote the utility’s services, incentives, or rebates”, provided that “utility outreach and investment in the electrification of transportation infrastructure does not increase net costs to ratepayers in excess of one-quarter of one percent”; and

WHEREAS, City Light has created a Transportation Electrification Strategic Investment Plan aligned with the legislation and the RCW; and

WHEREAS, the Transportation Electrification Strategic Investment Plan will guide the development and implementation of the utility’s electrification of transportation infrastructure strategy and investment priorities; and

WHEREAS, in developing its Transportation Electrification Strategic Investment Plan, City Light has undertaken broad customer and stakeholder engagement across communities and sectors consistent with the City’s Race & Social Justice Initiative and in collaboration with the Department of Neighborhoods and the Office of Sustainability & Environment to get input for the Transportation Electrification Strategic Investment Plan; and

WHEREAS, City Light will continue best-practice community outreach and engagement efforts during subsequent phases of program, service, and incentive development; including collaboration between City Light staff, community members and other stakeholders to achieve long-term transportation electrification goals and objectives; and

WHEREAS, City Light has summarized its customer and stakeholder outreach and engagement efforts in its Transportation Electrification Strategic Investment Plan: Community and Stakeholder Outreach and Engagement Summary (Attachment B to this resolution); and

WHEREAS, City Light’s Transportation Electrification Strategic Investment Plan draws on the findings of a strategy report it developed in collaboration with the Rocky Mountain Institute, which found that

customers (from individuals to large commercial and industrial) are electrifying vehicles (from passenger cars to seafaring ships) at an increasingly rapid rate (Attachment D to this resolution); and

WHEREAS, the Transportation Electrification Strategic Investment Plan calls for proactive planning, early investments and programs, and will prioritize systemic, long term solutions to achieve specific racial equity outcomes to improve the lives of individuals living in environmental justice communities identified in the City of Seattle Office of Sustainability & Environment’s Equity & Environment Agenda (EEA); and

WHEREAS, City Light has summarized its racial equity analysis work completed for the Transportation Electrification Strategic Investment Plan using the City’s Race and Social Justice Initiative Racial Equity Toolkit (Attachment C to this resolution); and

WHEREAS, the overall benefits of the Transportation Electrification Strategic Investment Plan will be generally distributed across the entire City Light service territory and categories of customers through their rate impacts and universal program offerings; and

WHEREAS, the adoption of the Transportation Electrification Strategic Investment Plan represents a key milestone in City Light’s overall transition to the “utility of the future” that meets its customer-owners’ needs how they choose and in an efficient, innovative, and future-focused manner rooted in equity and social justice; and

WHEREAS, City Light’s Transportation Electrification Strategic Investment Plan is aligned with and will contribute to the success of the overarching Citywide Transportation Electrification Plan Framework; and

WHEREAS, the City Council has reviewed the Transportation Electrification Strategic Investment Plan and the results of customer and stakeholder engagement; NOW, THEREFORE,

**BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SEATTLE, THE MAYOR
CONCURRING, THAT:**

Section 1. The City Council adopts the City Light Department’s (“City Light”) proposed Transportation Electrification Strategic Investment Plan, a copy of which is attached to this resolution as Attachment A and incorporated by reference.

Section 2. The City Council requests that the General Manager and Chief Executive Officer of City Light continue to consult with other City departments, stakeholders, community partners, and a wide range of customers on specific initiatives, programs, services, and incentives in furtherance of the Transportation Electrification Strategic Investment Plan. In formulating and developing its implementation strategy, City Light will ensure that it upholds the values of equity, the environment, and the grid.

Section 3. City Light shall submit an annual report to the Mayor and City Council on progress of implementation and further development of the overall Transportation Electrification Strategic Investment Plan. City Light will continue to review and update the Transportation Electrification Strategic Investment Plan at least every four years.

Adopted by the City Council the _____ day of _____, 2020, and signed by me in open session in authentication of its adoption this _____ day of _____, 2020.

President _____ of the City Council

The Mayor concurred the _____ day of _____, 2020.

Jenny A. Durkan, Mayor

Filed by me this _____ day of _____, 2020.

Monica Martinez Simmons, City Clerk

(Seal)

Attachments:

Attachment A - SCL Transportation Electrification Strategic Investment Plan 2021-2024

Attachment B - SCL TE SIP Community and Stakeholder Outreach and Engagement Summary

Attachment C - SCL TE SIP Racial Equity Analysis Summary

Attachment D - SCL Transportation Electrification Strategy Report



Seattle City Light

Transportation Electrification

Strategic Investment Plan

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Letter from Debra Smith, General Manager and CEO

At Seattle City Light, we are redefining electricity services to meet the evolving demands of our customers and our rapidly growing metropolitan area. City Light envisions a utility of the future that is responsive to the wants and needs of community members most impacted by environmental inequities, operates a modernized grid that enables real-time smart technology interaction and provides economic opportunities through infrastructure investments and upgrades. A modernized electric grid will allow for resource optimization and prepare the region to withstand growing climate impacts.

City Light is seizing transportation electrification as an opportunity to deliver on this vision. With our clean energy, the Pacific Northwest is in a unique position to electrify the transportation sector and deliver a triple win for our customers, the environment and the utility.

City Light leaders and staff bring passion and expertise to facilitate this transformation. Through engagement with community members, technical analysis, collaboration with their City colleagues and partnership with industry leaders, City Light will capitalize on this opportunity for innovation and future investment. Now is the time for re-envisioning energy services that elevate communities throughout our greater Seattle region—especially those that have been historically excluded. We are ready; and our infrastructure, our people, our region and our future stand to benefit. Join us!

Executive Summary

Seattle City Light is embarking on a transformation. For over a century, the utility has provided power to the Puget Sound region while being responsive to customer needs – highlighted by our more than 40 years of energy efficiency offerings and our status as the first electric utility to achieve net-zero greenhouse gas emissions (GHG). Yet, with the intense urgency of eliminating the human causes of climate change and as new technologies evolve, City Light must rise to the occasion to meet customer needs and expectations. For example, a quickly growing electric vehicle (EV) market offers an opportunity for City Light to play an important role in reducing the climate and environmental impacts of our transportation sector, the region’s largest source of hazardous air pollutants. Personal vehicles make up one part of the EV market, but the market includes, and the largest benefits of transportation electrification are expected to accrue from, electrified transit buses, ferries, commercial fleets, medium- and heavy-duty trucks, shared mobility vehicles, and other forms of micro-mobility, including e-bikes and scooters.

Transportation electrification also offers significant opportunities to address the environmental inequities that exist in our region. Neighborhoods where marginalized populations are a relatively large share of residents are more likely to be located near the city’s major transportation routes, especially the city’s high-volume freight routes. This means the city’s Black, Indigenous, and people of color residents are significantly more likely than white residents to be exposed to air pollution that research has shown to cause the development and aggravation of many health conditions, including asthma, heart disease, and cancer. City Light’s Transportation Electrification Strategic Investment Plan is a component of the City’s work to address these inequities and City Light will focus on the wants and needs of environmental justice communities, which includes Black, Indigenous, and people of color as well as immigrants, refugees, persons experiencing low incomes, English

language learners, youth and seniors, in advancing the Plan. The continued focus on equity is central to the utility’s values framework.

This Plan is a result of the Washington state legislature’s 2019 passage of House Bill 1512, which enables electric utilities to incorporate transportation electrification into utility modernization. City Light, along with City of Seattle leadership and departments, has already been moving toward that envisioned future with the Drive Clean Seattle Initiative and the Green New Deal. City Light has conducted in-depth transportation electrification analyses as well as piloting public and residential EV charging, partnering with regional public transit agencies, and launching time-of-day electricity rates to better understand potential impacts of this growing market.

The Plan reflects City Light’s engagements with the cities in our service area, with communities we serve, and with partner agencies to further our modernization and customer-focused missions. New authority resulting from the approval of this Plan will activate even greater progress toward our vision. The Seattle City Council’s approval of this Plan will open the door to committing resources and making investments that will enable the transformation of the Seattle area’s transportation ecosystem, bolster and modernize our electric grid to enable public transit charging, support freight and commercial fleets, and provide flexibility for personal mobility, foster new economic and workforce opportunities, and ensure that investment in transportation infrastructure results in equitable outcomes.

This Seattle City Light Transportation Electrification Strategic Investment Plan describes how the utility is using our strategic investments and building upon previous analyses within our values framework to achieve a vision of the healthy future that our region depends on: equitable, carbon-neutral, modernized, and future-enabled.



Context

It is a time of once-in-a-century transformation in the electric power sector. Technology, regulation, market development and customer demand are changing rapidly. Electric utilities worldwide are responding to the shifting preferences of their customers, testing new business models, launching new services and technologies, and making innovative investments to restructure their grids to make them more resilient, bi-directional and flexible.

The transportation sector is also changing rapidly as buses, ferries, freight trucks, fleets and personal modes of travel are shifting to electricity for fuel rather than relying on gasoline and diesel. Alongside the evolution of the market, policy choices have in many places accompanied technological innovation to support the health and security of residents and the natural and built environments. The City of Seattle has in recent years redoubled its own commitments, from the Drive Clean Seattle Initiative in 2016 to the Green New Deal in 2019. City Light supports the transition to an electrified transportation system by enabling a grid that efficiently meets the demand of our customers today and tomorrow.

The City of Seattle's vision is that in Seattle's future, everything that moves people, goods and services in and around the City is electrified. Seattle will lead the transition to an electrified economy, supplying residents with clean electricity via a reliable, carbon-free electric grid. People will

take electric buses, ferries or light rail to work, shopping and other destinations. A robust bike lane network will make it easy for Seattleites to leave cars behind and use bikes, e-scooters and e-cargo bikes or walk. Ships at port are plugged in, every package delivered to your doorstep comes on an electric van, truck or e-bike. Silent, clean, electric trash and utility trucks will service neighborhoods. While not all of this technology is available today, Seattle City Light and our partners aim to pursue and help accelerate the new technologies necessary to electrify transportation at scale.

Our utility is a publicly owned asset and, as such, the intention of this Transportation Electrification Strategic Investment Plan is to sustain and maximize the value of the utility grid to our customers as we work to achieve a fully electrified transportation future. The processes and offerings to achieve our vision as a utility of the future will require City Council support, utility investments, engagement with communities and customers, and close collaboration with other City departments, as well as partnerships with transportation agencies and other external partners. We have already begun this journey. City Light is actively engaging with communities most impacted by environmental inequities and racial, social and economic burdens; identifying essential investment requirements; conducting pilots and technical analyses; and establishing critical partnerships with transportation providers.

History

City Light has been working in the transportation electrification space over the past five years and has made investments in innovative offerings and partnerships based on technical and feasibility analyses. These have built on City Light's long legacy of innovation and conservation, including the elevation of environmental stewardship and protection as a core operating value. Attention to innovation has also led to investments in service delivery that support customer adoption of new technologies, including transportation electrification.

More recently and alongside other City of Seattle partners, City Light has been engaging communities, implementing new pilot projects and conducting technical and policy analysis throughout 2019 and 2020 to support the development of this Transportation Electrification Strategic Investment Plan. Important transportation electrification milestones are highlighted below.



City Light's Road to Transportation Electrification

City of Seattle and electric utility leaders have been shaping transportation electrification transformation for the past five years.

2015-2016: City Light conducted a technical analysis of the evolving transportation electrification market and potential utility impacts.

2017: Drive Clean Seattle Initiative launched City investments to accelerate transportation electrification, including City Light's public and residential charging pilots.

January 2019: City Light's 6-year Strategic Plan highlighted challenges, opportunities and priorities in meeting future and continuing market, utility and customer demands.

June 2019: City Light released its Transportation Electrification Strategy with a values framework to shape the utility's strategic direction in transportation electrification.



July 2019: The Washington State Legislature passed a law (HB 1512) granting public utilities the authority, already established for investor-owned utilities, to offer incentives and services to their customers to electrify transportation.

December 2019 – Ongoing: City Light has engaged community leaders and stakeholder groups to help inform the utility's strategic investment priorities.

Citywide Alignment

City Light's vision and desired outcomes for a future electrified transportation system are aligned with the City of Seattle's existing and emerging effort to adopt a set of 2030 "North Star" goals driving the transition to an electrified and zero-carbon transportation system. The Citywide Transportation Electrification Plan Framework spans the whole of the City of Seattle government and identifies and integrates priority focus areas to:

- Build partnerships in environmental justice communities.¹
- Install and support transportation electrification infrastructure.
- Create jobs and employ people from environmental justice communities.
- Prioritize mode shift and dismantle policies and regulatory frameworks that incentivize fossil fuel transportation.
- Support the electrification of government and commercial fleets.

Environmental justice communities

refer to communities defined in Seattle's Equity and Environment Agenda and include communities of color, immigrants, refugees, people with low incomes, youth and English language learners. We refer to environmental justice communities throughout this Plan.

- Implement new fee structures that reduce barriers to transportation electrification, including time-of-day rates.

City Light and several other City departments that have a role in transportation electrification are collaborating to support the broader Citywide Transportation Electrification Plan Framework. Each City department contributes critical services to deliver on the goals of the Plan.

Figure 1.
Citywide coordination
of Seattle departments



¹Seattle Office of Sustainability and Environment. "Equity and Environment Agenda."
<https://www.seattle.gov/Documents/Departments/Environment/EnvironmentalEquity/SeattleEquityAgenda.pdf>

City Light continues to build and implement business-critical strategies to optimize its grid while pursuing equitable and environmentally sound outcomes. The utility supports the City's workforce development efforts, namely Priority Hire, and is coordinating with apprenticeship programs to strengthen pathways to energy industry jobs. In addition, the utility supports the City's efforts to encourage contracting with Women & Minority Business Enterprise (WMBE) firms, thereby assisting WMBE firms in creating generational wealth and advancing equity in our contracting process. According to research conducted for Drive Clean Seattle,² the King County Metro area could support the maximum potential of 14,310 EV and electric vehicle service equipment (EVSE) related jobs, earning an average of \$26.76 per hour, if EV adoption were to reach 100%. At the current EV adoption rate of 3%, we estimate there are 429 jobs supporting this new market.

City Light provides electric power to more than 460,000 customer meters, which translates to more than 906,000 individuals in Seattle and eight adjacent jurisdictions: Burien, Renton, Tukwila, SeaTac, Normandy Park, Shoreline, Lake Forest Park and parts of unincorporated King County in White Center and Bryn Mawr-Skyway. Citywide coordination on transportation electrification is inclusive of our franchise cities. Similar to our alignment with the City of Seattle, City Light will work with our franchise city partners to achieve our shared long-term, regional transportation electrification goals.



Figure 2. Seattle City Light customer service area map



²Hays Witt. "Connecting Disadvantaged Communities to Quality Jobs in the Transportation Electrification Sector: An Initial Assessment." Strategic Action LLC for the Drive Clean Seattle Program. December 2018



Inputs

The key factors informing the Transportation Electrification Strategic Investment Plan—each of which represent a body of work that has been built in recent years and expanded leading up to this Plan—are grouped into two categories. First, the primary technical and feasibility analyses; and second, the values that guide City Light’s buildout of transportation electrification programs and supporting grid investments.

Technical and Feasibility Analyses

City Light’s commitment to transportation electrification has been supported by its analyses of the market potential for electrification of personal vehicles, medium- and heavy-duty trucks and buses and the potential impact of increased transportation electrification on the grid and the utility’s business. Two technical and feasibility analysis reports have laid the foundation to guide City Light’s Transportation Electrification Strategic Investment Plan.

TRANSPORTATION ELECTRIFICATION BENEFIT ANALYSIS (2016)

In 2015 and 2016, City Light worked with Energy and Environmental Economics, Inc. (“E3”) and a consortium of public and investor-owned Northwest energy utilities to understand the environmental, grid and economic benefits of transportation electrification. This analysis concluded that City Light receives a net utility system benefit of

roughly \$1,250 per personal EV over the vehicle’s lifetime and \$120,500 per bus or other heavy-duty EV. While there are system costs associated with increased transportation electrification (e.g., distribution and transmission infrastructure upgrades), with proactive utility planning and intervention, the system benefits (e.g., new revenue) are estimated to outweigh the costs, spreading the economic benefits of transportation electrification to all customers.

Recommended utility offerings from City Light Transportation Electrification Strategy Report (2019)

Invest in charging infrastructure with emphasis on universal access and expanding coverage.



Develop new rates and improve customer service for the transportation market.



Prepare for heavy-duty electrification.



Figure 3. Recommended offerings

TRANSPORTATION ELECTRIFICATION STRATEGY REPORT (2019)

Building on the Benefit Analysis, City Light engaged Rocky Mountain Institute over 2018 and 2019 to co-develop a Transportation Electrification Strategy Report. The report, which included detailed market research and insights, concluded that City Light should play a key enabling role in spurring EV adoption across multiple sectors that includes extensive and proactive planning to optimally accommodate the resulting increased demand for electric power. The strategy report recommends that City Light engage in three key intervention areas (Figure 3) to support transportation electrification adoption across five customer types: personal vehicles, shared mobility and transportation network companies (TNCs), medium-duty vehicles, heavy-duty vehicles and transit. The technical evaluation addressed City Light's system capacity as well as market projections for EV adoption across customer types.

Leading with Values

City Light is centering this future-focused work on three key values: equity, environment and operating the grid as an asset to deliver public good (Figure 4). Initially established in the Strategy Report, City Light has reinforced these values during the development of this Plan—particularly, through engagement with environmental justice communities (see below and the attached Seattle City Light Transportation Electrification Strategic Investment Plan: 2021-2024 – Community and Stakeholder Outreach and Engagement Summary). City Light will focus investments in transportation electrification where there are opportunities to improve the lives of and outcomes in the communities we serve.

EQUITY

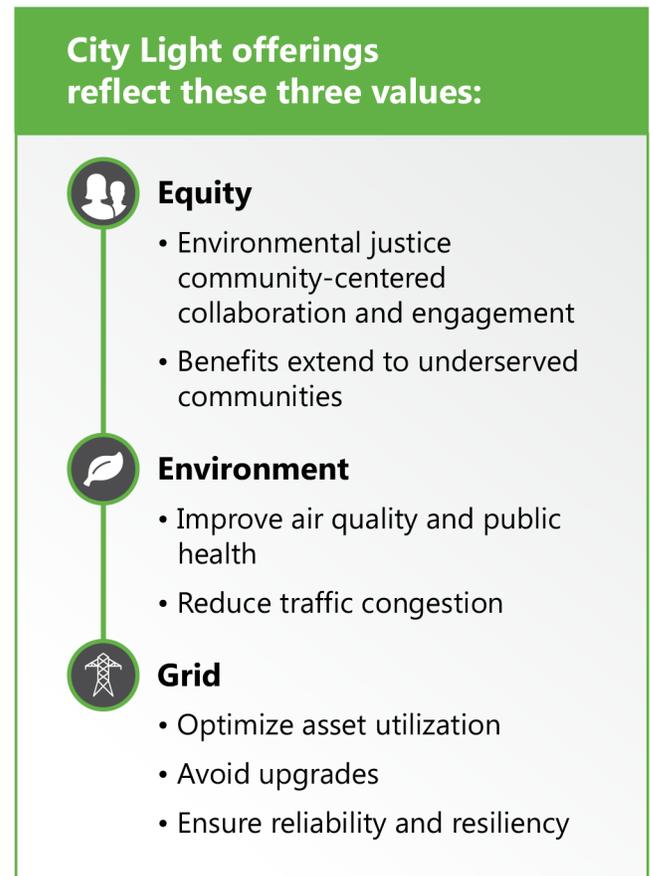
City Light strives to incorporate and elevate the voices of environmental justice communities who have traditionally been excluded in transportation electrification planning and development. By centering people and communities experiencing environmental inequities, community outreach and engagement will result in solutions that meet the needs of all our customers. This is critical to the long-term success of any City infrastructure improvement plan.

To ensure meaningful inclusion across our service area, City Light conducted a transportation electrification racial equity analysis, which included: (1) leveraging the City of Seattle's Race and Social Justice Initiative (RSJI) Racial Equity Toolkit and (2) conducting in-depth outreach and engagement.

RSJI Racial Equity Analysis

City Light conducted a comprehensive analysis of existing information on environmental justice communities' transportation electrification wants and needs. City Light reviewed relevant reports by regional stakeholders and

Figure 4. City Light transportation electrification values framework



community-based organizations as well as feedback from several sources, including the City's Environmental Justice Committee, community-based organizations and stakeholder surveys. See the attached Seattle City Light Transportation Electrification Strategic Investment Plan: 2021-2024 – Racial Equity Analysis Summary for more information.

Community and Stakeholder Outreach and Engagement

Seattle City Light is partnering with the Seattle Department of Neighborhoods to engage environmental justice communities. The input we received has informed the investment priorities included in Table 2 (page 13). The main priorities we have heard from environmental justice community leaders and stakeholder groups include:

- 1 Conduct customer and stakeholder outreach and awareness on transportation electrification:** Many environmental justice community members are unfamiliar with EVs. Communicating in local languages, highlighting communities of color in advertising and focusing on multimodal transportation electrification can help increase equitable access.³
- 2 Prioritize buses for electrification:** This was the number one priority for both community leaders and stakeholders. Low-income communities and communities of color are more likely to depend on buses for most, if not all, of their transportation needs.⁴ Electrifying public transit will benefit communities who most rely on public transit by reducing air and noise pollution where impacts are greatest.
- 3 Electrify commercial and local government fleets that run through the Duwamish Valley:** Environmental justice communities are exposed to—and concerned about—poor air quality and suffer from geographic and social health disparities. Commercial fleet electrification can reduce harmful tailpipe emissions in the Duwamish Valley.
- 4 Expand at-home and near-home charging for multifamily residents:** Currently, there is a lack of access to EV charging for multifamily units. Expanding at-home and near-home charging solutions for multifamily residents in environmental justice communities will increase equitable access to transportation electrification as 52 percent of City Light's customers are renters and a majority live in multifamily properties.
- 5 Electrify high-mileage ride-hailing vehicles:** High-mileage ride-hailing vehicles (e.g., TNCs and shared mobility, such as Lyft, Uber, taxis) drive three to five times more than regular passenger vehicles and electrifying them can have a large impact on tailpipe emissions.^{5,6} In addition, high-mileage ride-hailing vehicles are frequently driven by immigrants and members of communities of color and targeted incentives can increase equitable access to transportation electrification.^{7,8}

³Environmental Justice Committee. "EJC Feedback Summary on Drive Clean Seattle." July 2017.

⁴King County. "The Determinants of Equity: Identifying Indicators to Establish a Baseline of Equity in King County." January 2015. https://www.kingcounty.gov/~media/elected/executive/equity-social-justice/2015/The_Determinants_of_Equity_Report.ashx

⁵Puget Sound Clean Air Agency. "Electrifying Ride-Hailing in Seattle." September 2019. <https://www.pscleanair.gov/DocumentCenter/View/3976/Electrifying-Ride-Hailing-in-Seattle>

⁶Peter Slowik, Lina Fedirko and Nic Lutsey. "Assessing ride-hailing company commitments to electrification." International Council on Clean Transportation. February 2019. https://theicct.org/sites/default/files/publications/EV_Ridehailing_Commitment_20190220.pdf

⁷Puget Sound Clean Air Agency. "Electrifying Ride-Hailing in Seattle." September 2019. <https://www.pscleanair.gov/DocumentCenter/View/3976/Electrifying-Ride-Hailing-in-Seattle>

⁸Lyft. Economic Impact Report 2020. <https://www.lyftimpact.com/impact/drivers/expanded>

Table 1. Equity outcomes to guide City Light's strategic investments in transportation electrification

COMMUNITY COLLABORATION

Environmental justice communities see their wants and needs reflected in City Light transportation electrification programs.

HEALTHY PLANET, HEALTHY LIVES

Reduce tailpipe emissions that impact local air quality and public health where environmental justice communities live, learn, work and play. Reduce carbon emissions that have a disproportionate burden on the most vulnerable populations and communities.

EQUITABLE ACCESS

Environmental justice communities learn about our transportation electrification programs, can readily understand and access materials and resources, see themselves reflected in communications, and participate in and benefit from City Light's transportation electrification programs.

COMMUNITY ASSETS

City Light's programs invest in infrastructure that are community assets so environmental justice communities can enjoy the benefits of transportation electrification in their current neighborhoods.

ECONOMIC OPPORTUNITIES AND YOUTH PATHWAYS

City Light enables environmental justice communities to participate in and benefit from the local transportation electrification economy.

ELECTRICITY AFFORDABILITY

Widespread transportation electrification increases revenue to put downward pressure on electricity prices.

Community leaders and stakeholders have emphasized the importance of community engagement, collaboration and buy-in on public charging station development. Without proper public engagement, a public charging station may create conflicts between use of public space, increase housing costs, exacerbate community displacement or increase the risk of gentrification. Overall, multiple environmental justice groups emphasized the importance of considering and including anti-displacement strategies in infrastructure project designs so that communities can enjoy the benefits of transportation electrification and stay in place.

City Light will work to minimize harm and maximize benefits by engaging communities on public charging infrastructure developments. Through education and engagement, communities have an opportunity to learn about transportation electrification and its benefits. Collaborating with communities on site design, site location and pairing projects with other investments, can help to create infrastructure that is welcomed by the local community as an asset. See the attached Seattle City Light Transportation Electrification Strategic Investment Plan: 2021-2024 – Community and Stakeholder Outreach and Engagement Summary for more information.

Leading with our values and incorporating what we have heard from environmental justice communities and other stakeholders – including learning from the City of Seattle's Equity and Environment Agenda framework and the Duwamish Valley Action Plan – City Light has established six racial equity outcomes to guide its transportation electrification strategic investment priorities (Table 1).^{9,10} These outcomes build upon the values framework and will continue to guide City Light through program development and implementation. On-the-ground engagement and dialogue will be considered alongside in-depth technical analysis.

⁹Seattle Office of Sustainability and Environment. "Equity and Environment Agenda." <https://www.seattle.gov/Documents/Departments/Environment/EnvironmentalEquity/SeattleEquityAgenda.pdf>

¹⁰City of Seattle. "Duwamish Valley Action Plan" June 2018. http://greenspace.seattle.gov/wp-content/uploads/2018/06/DuwamishValleyActionPlan_June2018.pdf

ENVIRONMENT

Transportation accounts for two-thirds of carbon emissions in the greater Seattle area and is also associated with increased air, noise and surface water pollution. Diesel exhaust is often associated with negative health impacts, such as asthma. According to Public Health – Seattle & King County, the highest rates of asthma hospitalization are found in Beacon Hill, Southeast Seattle, Downtown and Central Seattle and some south King County communities, which are predominantly environmental justice communities. A recent study of national data found that long-term exposure to air pollution is associated with higher COVID-19 mortality rates,¹¹ and local data from Public Health – Seattle & King County show that the disease is disproportionately impacting communities of color with higher infection, hospitalization and death rates.¹²

Addressing health disparities and reaching the City's goal of carbon neutrality by 2050 will require City Light's investments to support electrification of all modes of transportation throughout the utility service area. Key partnerships, cost structures and programming are critical for enabling EV charging infrastructure and adoption with public transit agencies, companies managing large commercial fleets, shared mobility companies and drivers and personal vehicle owners.

Several partnerships and pilot efforts to advance transportation electrification are already in place. Utility investments will scale offerings and help the City make progress toward meeting its carbon reduction goals, while also reducing pollution and traffic congestion.

¹¹Xiao Wu, Rachel C. Nethery, Benjamin M. Sabath, Danielle Braun, Francesca Dominici. "Exposure to air pollution and COVID-19 mortality in the United States." April 2020. <https://www.medrxiv.org/content/10.1101/2020.04.05.20054502v2>

¹²Public Health Insider. "New Analysis Shows Pronounced Racial Inequities Among COVID-19 Cases, Hospitalizations and Deaths." Public Health – Seattle & King County. May 2020. <https://publichealthinsider.com/2020/05/01/new-analysis-shows-pronounced-racial-inequities-among-covid-19-cases-hospitalizations-and-deaths>



GRID VALUE

City Light's electric grid is a complex system of power generation, transmission and distribution assets. City Light's industry-leading legacy of conservation means there is sufficient power to meet increasing customer demand, but the infrastructure capacity to transmit, distribute and deliver electricity to meet transportation needs varies throughout the system. City Light seeks to meet the increased transportation load with intentional and directed investments, rather than reacting to market-driven demand that can put unpredictable stresses on the system and require inefficient short-term fixes. In making these investments, the utility must reimagine the very structure and architecture of the grid and its components and seek to use the best available techniques and technologies to optimize system performance and efficiency.

Implementing City Light's Transportation Electrification Strategic Investment Plan will result in greater return on this valuable publicly owned asset and thus drive more affordable electricity rates in the long term as demonstrated in both the Benefit Analysis and Strategy Report. Renewing the ability of the utility to continue to deliver public value over the coming decades depends on City Light making smart investments today that continue the utility's commitment to energy efficiency, integrate strategies for managing customer demand and support the deployment of transportation electrification at scale.

City Light is committed, as it looks to make these needed investments in grid modernization and technological innovation, to analyzing not solely the economic costs and benefits, but also the impacts on communities across its service area. Responsible innovation and modernization are driven by the utility's commitment to equity.



Strategic Investments

To help deliver on the City’s goals, City Light has started work, in partnership with regional agencies, communities and private companies, to electrify multimodal transportation. These initial partnerships and programs will require ongoing flexibility to build to the scale required. City Light’s pursuit of priorities outlined in this Plan will necessitate a dynamic portfolio of electrification investments. City Light seeks to respond to and build customer demand, continuously explore partnerships throughout our region, learn from and iterate on pilots, and build out grid capabilities. The utility is also focused on creating strategic partnerships to enable access to charging infrastructure and to reduce customer and market barriers to the adoption of electric vehicles across all vehicle types, including micro-mobility options like e-bikes and scooters.

City Light’s strategic investments are characterized as: program offerings—including customer-facing incentives, services, education and promotions—and electrification enablement—including the development of future-focused infrastructure needed to support transportation electrification.

Program Offerings

Having identified the core factors influencing transportation electrification investments, City Light will draw on our long history of developing, building and evaluating innovative, public-facing programs. City Light will continue to support transportation electrification through existing, expanded and new offerings that achieve our vision of equitable and electrified transportation to maximize community, environmental and electricity grid benefits. These offerings fall into three categories: incentives, services and education/promotion.

Incentives reduce barriers, encouraging customers to make decisions that support the overall goal of equitably electrifying transportation to benefit the grid. Financial incentives can be in the form of cash, rebates, financing, discounts, in-kind and/or turnkey/ready-made utility



contributions to reduce the cost barrier of customer-owned transportation electrification equipment. For example, incentives could include a cash rebate toward the purchase of a smart, networked Level-2 charging station.

Services are what City Light provides to encourage and enable transportation electrification and can include utility-owned and -operated charging infrastructure, rate design, technical support, priority service queues, interconnection policies, interdepartmental permitting coordination (i.e., with Seattle Department of Construction and Inspections and Seattle Department of Transportation) and information transparency. City Light’s Transportation Electrification Strategy Report identified customer service as a key intervention area to build upon existing services to accelerate transportation electrification.

Education & Promotions strengthen City Light’s—and the broader region’s—transportation electrification objectives through outreach, communication and engagement. Promotions could include advertising for the utility’s services, incentives or rebates. Education raises awareness about the customer, the grid and the community benefits of transportation electrification, such as how managed charging helps keep City Light’s electricity rates low. An example is “ride and drive” events for customers to learn more about electric buses or personal vehicles. Education and promotions are critical components of successful community engagement.

INVESTMENT PRIORITIES

Considering all types of program offerings and based on comprehensive analyses of technical research and community engagement, City Light has developed an initial prioritization of future investments to guide its support of regional transportation electrification. These priorities are directly informed by the Transportation Electrification Strategy Report recommendations (Figure 3, page 6) and have evolved with community input.

Table 2 (next page) outlines the broad areas where City Light will invest to deliver the types of program offerings outlined above—many of them in partnership with other public and private entities. The offerings and outcomes listed are not exhaustive, nor certain; these are examples of offerings and outcomes City Light could provide given regulatory authority. The table includes “equity outcomes” to incorporate accountability to communities. The next phase of community and stakeholder engagement (as described in City Light’s Community and Stakeholder Outreach and Engagement Summary) will continue to refine these priorities and uphold our commitment to community collaboration in program design and delivery.

City Light gathered feedback from community leaders and stakeholders on priorities most important to them for transportation electrification. The order of the priorities identified in Table 2 is a direct result of the feedback City Light received from 25 environmental justice community leaders and over 40 stakeholder groups. The priorities were informed by the racial equity analysis.



TRANSPORTATION USES	INVESTMENT PRIORITIES	EXAMPLE CITY LIGHT OFFERINGS	EQUITY OUTCOMES
 <p>All</p>	<p>Customer and stakeholder outreach and awareness</p>	<ul style="list-style-type: none"> • Information, education, events and resources on the benefits of electric vehicles 	<ul style="list-style-type: none"> • All customers have increased access to City Light’s transportation electrification educational materials and resources • Environmental justice community members see themselves reflected in communications
 <p>Public Transit (Buses, Ferries, Trains, Light Rail)</p>	<p>Electrify buses, ferries and other public transit</p>	<ul style="list-style-type: none"> • Financial incentives and technical assistance with site and design requirements to provide electric charging infrastructure for King County Metro, Washington State Ferries and other public transit • Partnerships with City of Seattle and King County departments to electrify first- and last-mile public transportation options, such as paratransit shuttles and e-mobility hubs 	<ul style="list-style-type: none"> • Transit riders and those who do not own or drive a personal vehicle participate in and benefit from City Light’s transportation electrification offerings
 <p>Commercial, Government & Non-Profit Fleets</p>	<p>Electrify commercial, local government and non-profit fleets</p>	<ul style="list-style-type: none"> • Financial incentives for electric charging infrastructure for companies that transport people, goods and services • Fee-based City Light-owned charging infrastructure for public and private fleet vehicles (such as school buses and solid waste vehicles) • Incentives and turn-key charging infrastructure for electrification of non-profit fleet vehicles 	<ul style="list-style-type: none"> • Communities with higher exposure to air pollution benefit from reduced tailpipe emissions that impact local air quality and public health

Table 2. Transportation electrification investment priorities, potential program offerings and equity outcomes

TRANSPORTATION USES	INVESTMENT PRIORITIES	EXAMPLE CITY LIGHT OFFERINGS	EQUITY OUTCOMES
 <p>Personal Mobility (Cars, Bikes, Scooters, etc.)</p>	Expand at-home and near-home charging	<ul style="list-style-type: none"> • Incentives, qualified installers and special payment terms to help reduce barriers to installing charging stations in multifamily housing • Near-home charging solutions for those with no access to off-street parking 	<ul style="list-style-type: none"> • Multifamily residents and those with no access to off-street parking participate in and benefit from City Light’s transportation electrification offerings
	Electrify high-mileage vehicles	<ul style="list-style-type: none"> • Provide lower costs to charge at different times of day that meet the needs of high-mileage vehicle drivers while benefiting the grid 	<ul style="list-style-type: none"> • High-mileage vehicle drivers, especially drivers in environmental justice communities, participate in and benefit from the local transportation electrification economy
	Accelerate transportation electrification adoption in environmental justice communities	<ul style="list-style-type: none"> • Charging infrastructure for community car share • Provide discounts toward the cost to charge electric vehicles for people with low to moderate incomes 	<ul style="list-style-type: none"> • Environmental justice communities collaborate with City Light and see their wants and needs reflected in City Light’s transportation electrification offerings
	Expand public fast charging	<ul style="list-style-type: none"> • Financial incentives to help reduce the upfront cost of public charging stations • Community collaboration on City Light-owned public charging stations 	<ul style="list-style-type: none"> • Communities collaborate with City Light to ensure that public charging infrastructure serves as a community asset
	Expand workplace charging	<ul style="list-style-type: none"> • Provide EV-ready electricity service to workplaces for future charging infrastructure 	<ul style="list-style-type: none"> • All customers benefit from more affordable electricity rates driven by widespread transportation electrification

Table 2 (continued). Transportation electrification investment priorities, potential program offerings and equity outcomes

PARTNERSHIPS AND PILOTS

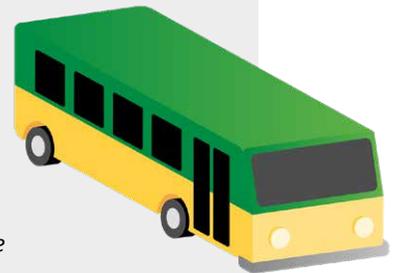
City Light has already established partnerships with other agencies, communities and private companies to implement key projects and innovative pilots in our priority investment areas. City Light will build upon these existing commitments to develop future offerings.

Public Transit: City Light is working with key partners from King County Metro and Washington State Ferries to study, plan for and build the necessary electrical infrastructure to support public transit electrification for buses and ferries as part of our commitment to citywide and regional transportation electrification.

guides the Port's efforts and investments to reduce fossil fuel usage and impacts at its maritime facilities.

Personal Mobility: City Light is expanding EV charging access for individuals' personal use as well as for those who use their personal vehicle as a source of income. City Light is installing more than 20 public fast chargers with the intent of addressing gaps in access and therefore mitigate a known barrier to EV adoption. Public fast charging will allow high-mileage ride-hailing vehicle drivers (e.g., TNCs and shared mobility, such as Lyft, Uber, taxis) to quickly recharge with clean electric power. In the residential space, City Light has a pilot program to install smart, networked Level 2 EV

King County Metro has committed to achieving a zero-emissions fleet by 2040 and has purchased its first round of battery-electric buses to reach this goal. King County Metro is prioritizing electrifying routes originating from its South Base in Tukwila. Critical to this is Metro's ability to charge buses to meet route demands and distances while not adversely impacting or overloading the electrical grid. Metro and City Light have been analyzing feasibility and capacity and requirements to plan for future infrastructure and begun making electrical capacity upgrades to support the South Base station's operations as these initial buses are phased in. Source: King County Metro.



Commercial & Government Fleets: City Light is partnering with PACCAR/Kenworth Truck Company to demonstrate the electrification of heavy-duty trucks along the UPS freight corridor between Seattle and Portland. This will reduce noise and improve air quality along high-traffic routes, many of which pass through low-income communities and communities of color. City Light also participated in the West Coast Clean Transit Corridor Initiative, an industry collaborative effort with nine electric utilities and two agencies representing more than two dozen municipal utilities along the West Coast to study the electrification of the I-5 corridor to support electric freight haulers and delivery trucks.

City Light is supporting government organizations such as the City of Seattle and the Port of Seattle to develop approaches for electrifying their large fleets that maximize grid interactivity. Further, City Light is supporting the Port of Seattle's Waterfront Clean Energy Strategic Plan, which

chargers at customers' homes using a lease-to-own model. To further grid stability and efficiency, City Light is gathering usage statistics from the chargers installed under this pilot to learn about the load and demand needs from at-home EV charging. Participants will be candidates for other City Light offerings, such as the rate pilots mentioned below to encourage charging at certain times of the day, resulting in increased efficiency and savings for both the customer and City Light.

Rates: Under the Rate Pilot Programs Ordinance (125957), City Light is conducting rate pilots to test new approaches to rate design that best meet the needs of our customers and provide value to the grid. These include two time-of-day rate pilots that enable transportation electrification by encouraging off-peak vehicle charging for residential and commercial customers. New rate designs will also benefit transit agency partners as they transition to battery electric buses, allowing them to save money on fuel expenses and

avoided maintenance.¹³ These rate pilots will launch in 2020 and will inform future rate design to continue to reduce barriers to transportation electrification, increase grid efficiency and offer cost-saving options to customers.

Technology Demonstration Pilots: City Light is working on a demonstration pilot to install power pedestals to provide electrical power to food trucks to replace their gas generators.

FUTURE OFFERINGS

The partnerships and pilots outlined above will yield both substantial learnings and quantifiable results. However, these activities alone will not be enough to meet existing policy goals or create the lasting structural fixes that will ensure equitable and reliable access to electric transportation and transit for all our customers.

These initial efforts must be augmented and accelerated as City Light learns from and scales pilot projects and technology demonstrations and continues to build partnerships. Specifically, City Light anticipates:

- Developing entirely new program offerings for customers.
- Driving higher customer adoption with incentives, rebates, discounts and through promotion.
- Integrating demand-side management components into new program offerings to avoid or reduce the need for traditional transmission and distribution upgrades and optimize the grid and City Light's resources.

- Exploring opportunities to increase customer access to substantial private capital investments in our region.
- Continuing to expand public charging infrastructure where there are gaps in private market investments to ensure access for all customers.

City Light will follow a metrics-based, stage-gate process to develop and manage customer-facing programs. The process helps determine when a customer-facing program should be explored, launched, modified or ended. To achieve the goals outlined within our values framework, our program and project development process will seek to align with the outcomes and metrics identified in section 5a of this Plan's RSJI Racial Equity Toolkit. These metrics may measure equitable access to transportation electrification, reduced carbon emissions, grid management outcomes, revenue generation, charging infrastructure investments and inclusive contracting outcomes. As we develop the portfolio and future offerings, we will work with stakeholders as feasible to develop metrics that will measure success and accountability.



¹³Horrox, J., and M. Casale. "Electric Buses in America: Lessons from Cities Pioneering Clean Transportation." U.S. PIRG Education Fund. 2019. https://uspirg.org/sites/pirg/files/reports/ElectricBusesInAmerica/US_Electric_bus_scrn.pdf

Electrification Enablement

In addition to the direct program offering investments and strategies outlined above, City Light plans to undertake efforts to reduce the barriers to electric transportation adoption and maximize its value for the grid and its customers. These efforts include a Master Infrastructure Plan and a Grid Modernization Plan.

City Light will develop the Master Infrastructure Plan in conjunction with the Seattle Department of Transportation and the Seattle Office of Planning and Community Development. This plan will seek to streamline the process for installation of EV charging infrastructure, including permitting, easements and an efficient and transparent interconnection and service upgrade process for new and existing customers installing charging infrastructure. These process innovations will enable expedient and safe installations.

Given the pace of customer adoption and the crucial tie to broader climate impacts, City Light is taking steps today to build the platform for fully electrified transportation in the future. In addition to being reliable, resilient, safe and clean, the electric grid needs to be dynamically controllable and offer customers more innovative and efficient energy choices.

In order for the grid to be a true public asset where the value of our investments accrue across the broadest group of customers, City Light must specifically direct investments to uplift and improve the lives of individuals in environmental justice communities.

Toward this end, City Light plans to deliver a Grid Modernization Plan by the end of 2020. This plan will provide the template for next generation grid architecture, outlining the initial investments that establish the foundation for the first "FutureGrid" in the Pacific Northwest.

This work to make the grid more flexible and efficient will be a decades-long effort that will benefit all of City Light's customers by:

- Empowering customers with new sources of information, related to their energy usage and options.
- Enhancing reliability and resiliency through implementation of new grid technologies.
- Identifying and building optimized electrification infrastructure.
- Managing the impacts of electrification infrastructure on the grid via demand-management strategies such as managed charging.
- Improving grid integration and enabling additional adoption of distributed energy resources.
- Building out the necessary, enabling backbone systems.

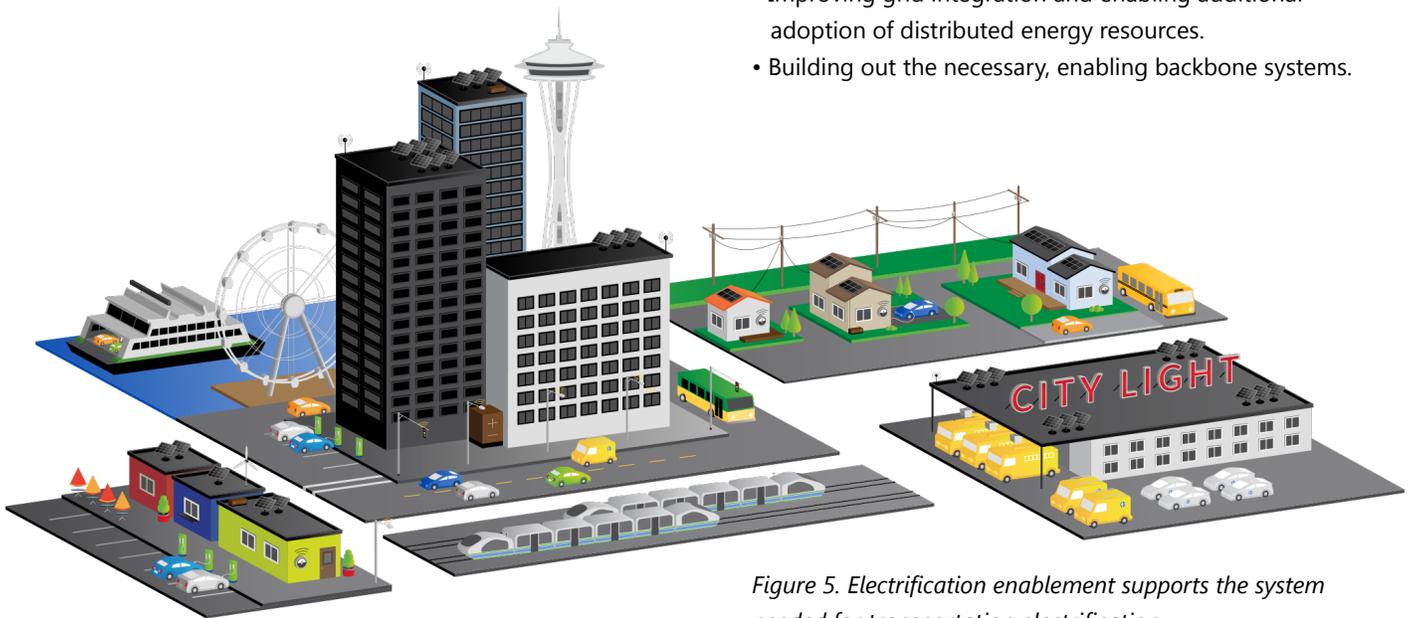


Figure 5. Electrification enablement supports the system needed for transportation electrification

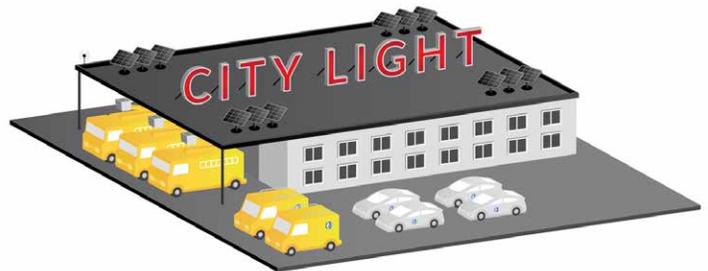
City Light will achieve these objectives by making strategic, phased investments in key areas, such as customer experience and data analytics, transmission and distribution modernization and automation, radio and cellular infrastructure and cybersecurity.

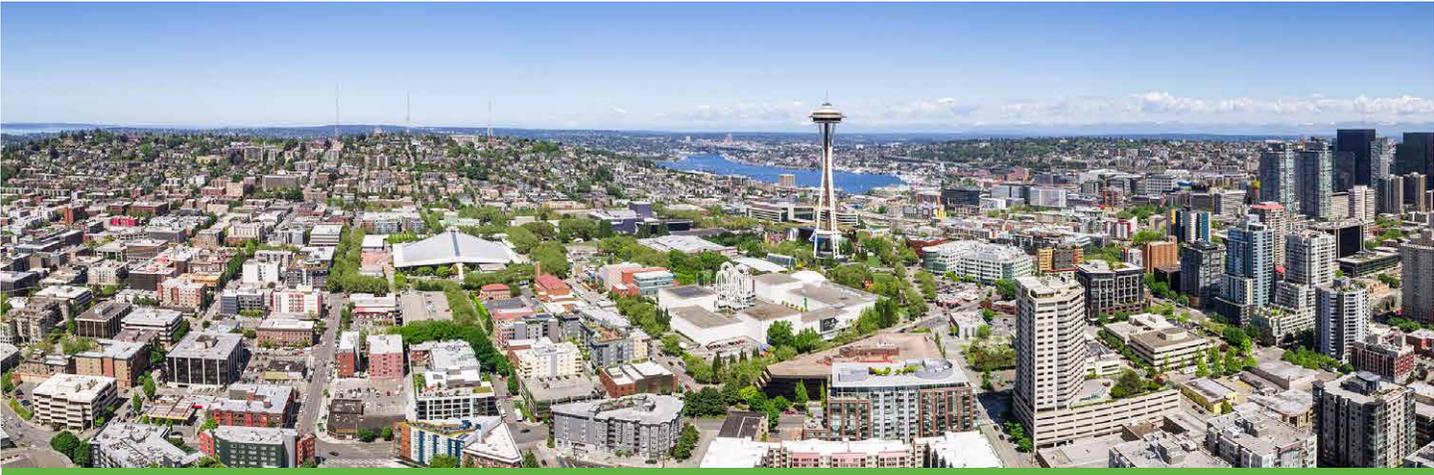
Distributed energy resources are grid-connected devices that generate (e.g., solar photovoltaic, wind), store and/or discharge (e.g., batteries), or otherwise contribute to electric power flows and their regulation. These devices can be owned by the utility, customers or other third parties, and may be utility-grade or comparatively smaller devices located behind-the-electric meter.

City Light seeks to begin this grid modernization effort now to prepare the grid for increased electrification. While doing so, the utility will tap into the innovations being developed around transmission and distribution system architecture, design and planning. The Grid Modernization Plan will allow EVs and other distributed energy resources to become true grid assets that flexibly match supply and demand. These investments are also crucial to maintain and enhance the reliability of the grid in a scenario where transportation needs are served by clean electricity rather than fossil fuels.

Financial Impacts

City Light anticipates both financial cost and benefit from the transition to transportation electrification. As more EVs charge within the service area, the utility sells more electric power. The retail revenue from the new sales are expected to be greater than the costs required to procure and deliver the additional electricity (as demonstrated by our Transportation Electrification Benefit Analysis summarized above in Section 2). This will eventually lower rates and provide overall benefit to customers. In the short term, however, achieving the future vision of innovative, customer-centric service delivery will require investments. Appropriations for any new or expanded capital projects that require additional funding will be approved through City Light’s standard budget process. Throughout the development of program offerings, the utility will ensure that certain transportation electrification offerings—specifically incentives, promotions and some utility services covered under the RCW 35.92.450—do not increase net costs to ratepayers by more than 0.25 percent. Budgetary authority for transportation electrification-related infrastructure investments, incentives or rebates will be included in City Light’s submitted budget(s). Additionally, where possible, City Light will pursue grant funding opportunities to supplement and provide the necessary resources to accelerate investment in electrification enablement.





Next Steps

The long-term effort of transportation electrification requires immediate action. City Light's carbon-neutral electricity is crucial to achieving the City's carbon-neutral goal by 2050. Now is the time to elevate communities and support the transition to a just economy by investing in program offerings and electrification enablement that will both accelerate market adoption and maximize the value that electrification brings to all of City Light's customers.

The timeline (Figure 6 on next page) depicts the transportation electrification milestones that City Light will achieve over the next two years and beyond, including:

- Rapid creation and deployment of new program offerings.
- Enabled electrification infrastructure delivered to our customers.
- Strong partnerships with key customers that expand and redefine the traditional relationship between customer and utility.
- A modernized grid that meets and manages increasing demand and enhanced customer choice.
- Established cross-departmental processes streamlining permitting and treatment of EV infrastructure.

Reporting

Consistent with reporting as part of City Light's Strategic Plan, City Light will track performance and report annually to the Mayor and the City Council on transportation electrification progress. City Light's Transportation Electrification portfolio will be managed to provide clear, quantifiable evidence of our progress as well as inform any needed portfolio adjustments to continue delivering on our commitments as a utility and as part of the City's broader transportation electrification initiative.



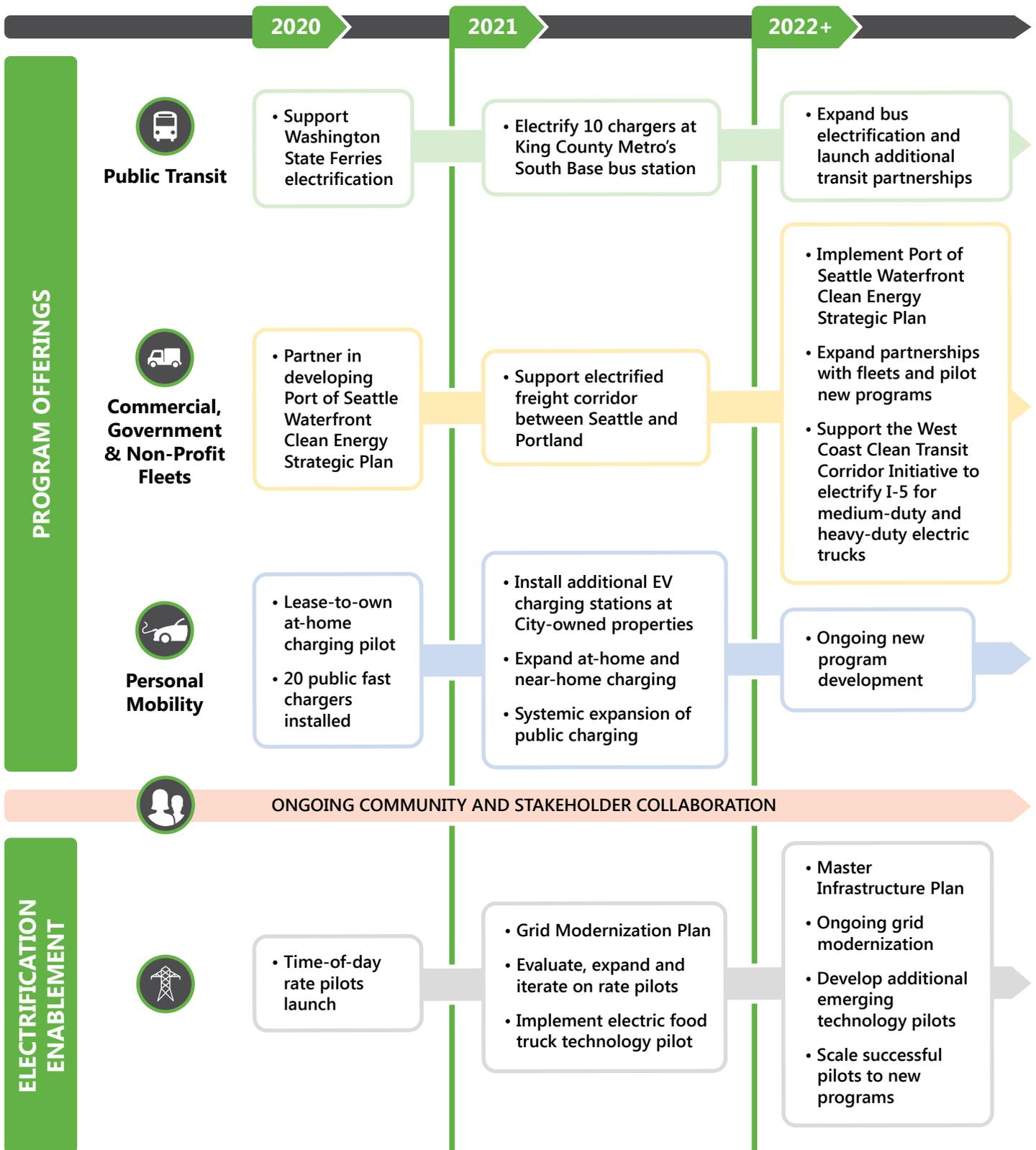


Figure 6. Milestones for City Light transportation electrification investments



Conclusion

City Light has long been committed to enabling customer choices and guaranteeing sustained public value is the utility’s core mission. As an increasing number of City Light customers are making the choice to electrify their fleets and personal vehicles based on a wide variety of factors, City Light has sought to understand and accelerate customer adoption of electric transportation in a manner that equitably and sustainably maximizes grid benefits for our customers since 2015. This Plan outlines the investment priorities City Light will undertake to ensure that the utility can honor its commitment to bringing maximum value and convenience to our customers as we work to enable this transformation. This will be an iterative, ongoing, long-term commitment—one in which City Light, and Seattle, are poised to lead the Pacific Northwest region into a clean, carbon-free energy future.





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AUGUST 2020

Seattle City Light Transportation Electrification Strategic Investment Plan: 2021-2024 – Community and Stakeholder Outreach and Engagement Summary

EXECUTIVE SUMMARY

Seattle City Light's Transportation Electrification Strategic Investment Plan: 2021-2024 – Community and Stakeholder Outreach and Engagement Summary describes our two-phase approach to community and stakeholder outreach and engagement. This approach was guided by City Light's Race and Social Justice Initiative (RSJI) and Environmental Equity Program. City Light's Transportation Electrification Strategic Investment Plan: 2021-2024 will serve all our customers and will target those with the most significant barriers to accessing the benefits of transportation electrification first. By centering equity in our outreach and engagement, the solutions that will result from the Transportation Electrification Strategic Investment Plan will be positioned to meet the needs of all our customers. The first phase of our outreach and engagement approach leads up to the Plan's review by City Council in Q3 2020. The second phase will follow City Council approval and is a long-term strategy to engage key audiences in the four-year Transportation Electrification Strategic Investment Plan. In this document, we detail our approach for each phase as well as our key findings from Phase 1.

City Light is partnering with the City of Seattle's Department of Neighborhoods to prioritize and engage environmental justice community leaders in Phase 1. Environmental justice communities refer to communities defined in the City of Seattle's Equity and Environment Agenda (EEA) and include communities most impacted by environmental inequities, including communities of color, immigrants,

refugees, people with low incomes, youth and English language learners.¹ The feedback and input we received during this process informed the investment priorities in City Light’s Transportation Electrification Strategic Investment Plan: 2021-2024. At a high level, here is what we heard from community leaders and stakeholders:

- 1. Conduct customer and stakeholder outreach and awareness on transportation electrification:** Many environmental justice community members are unfamiliar with electric vehicles (EVs). Furthermore, existing EV advertising leaves out people of color and focuses on white, single-occupancy vehicle owners. Communicating in local languages, highlighting communities of color and their artwork in advertising and focusing on multimodal transportation electrification can increase equitable access.²
- 2. Prioritize buses for electrification:** This was the number one priority for both community leaders and stakeholders. Low-income communities and communities of color are more likely to depend on buses for most, if not all, of their transportation needs.³ Electrifying public transit will benefit communities who most rely on public transit by reducing air and noise pollution where impacts are greatest.
- 3. Electrify commercial and local government fleets that run through the Duwamish Valley:** Environmental justice communities are exposed to—and concerned about—poor air quality and suffer from geographic and social health disparities like increased rates of asthma and shorter life expectancy. Commercial fleet electrification can reduce harmful tailpipe emissions in the Duwamish Valley. In addition, supporting nonprofit/small business fleet electrification is an opportunity to increase equitable access to transportation electrification.
- 4. Expand at-home and near-home charging for multifamily residents:** Currently, there is a lack of access to electric vehicle charging for multifamily units. Expanding at-home and near-home solutions for multifamily residents in environmental justice communities will increase equitable access to transportation electrification as 52 percent of City Light’s customers are renters and a majority live in multifamily properties.
- 5. Electrify high-mileage ride-hailing vehicles:** High-mileage ride-hailing vehicles (e.g., Lyft, Uber, taxis) drive three to five times more than regular passenger vehicles and electrifying them

¹ Seattle Office of Sustainability and Environment. “Equity and Environment Agenda.”

<https://www.seattle.gov/Documents/Departments/Environment/EnvironmentalEquity/SeattleEquityAgenda.pdf>

² Environmental Justice Committee. “EJC Feedback Summary on Drive Clean Seattle.” July 2017.

³ King County. “The Determinants of Equity: Identifying Indicators to Establish a Baseline of Equity in King County.” January 2015. https://www.kingcounty.gov/~media/elected/executive/equity-social-justice/2015/The_Determinants_of_Equity_Report.ashx

can have a large impact on tailpipe emissions.^{4,5} In addition, high-mileage ride-hailing vehicles are frequently driven by immigrants and members of communities of color and targeted incentives can increase equitable access to transportation electrification.^{6,7}

Community leaders and stakeholders have emphasized the importance of community engagement, collaboration and buy-in on public charging station development. Without proper public engagement, a public charging station may create conflicts between use of public space, increase housing costs, exacerbate community displacement or increase the risk of gentrification. Overall, multiple environmental justice groups emphasized the importance of considering and including anti-displacement strategies in infrastructure project designs so that communities can enjoy the benefits of transportation electrification and stay in place.

City Light will work to minimize harm and maximize benefits by engaging communities on public charging infrastructure developments. Through education and engagement, communities have an opportunity to learn about transportation electrification and its benefits. Collaborating with communities on site design, site location and pairing projects with other investments, can help to create infrastructure that is welcomed by the local community as an asset. In addition, environmental justice community leaders expressed a strong interest in transportation electrification investments that provide economic opportunities for communities of color.

Overall, we learned that customers want us to prioritize investments that maximize equitable access, a healthy planet and healthy lives, economic opportunities and youth pathways, community collaboration, community assets and rate affordability. We are confident that the Transportation Electrification Strategic Investment Plan will help us achieve these outcomes.

BACKGROUND

In July 2019, the Washington State legislature passed House Bill 1512, granting public utilities the authority to offer “incentive programs in the electrification of transportation for its customers, including the promotion of electric vehicle (EV) adoption and advertising programs to promote the utility’s services, incentives or rebates”⁸. The legislation adds a new section to RCW 35.92 which provides that

⁴ Puget Sound Clean Air Agency. “Electrifying Ride-Hailing in Seattle.” September 2019. <https://www.atlasevhub.com/wp-content/uploads/2019/09/Electrifying-Ride-hailing-in-Seattle-WWCC-Report.pdf>

⁵ Peter Slowik, Lina Fedirko and Nic Lutsey. “Assessing ride-hailing company commitments to electrification.” International Council on Clean Transportation. February 2019. https://theicct.org/sites/default/files/publications/EV_Ridehailing_Commitment_20190220.pdf

⁶ Puget Sound Clean Air Agency. “Electrifying Ride-Hailing in Seattle.” September 2019. <https://www.atlasevhub.com/wp-content/uploads/2019/09/Electrifying-Ride-hailing-in-Seattle-WWCC-Report.pdf>

⁷ Lyft. Economic Impact Report 2020. <https://www.lyftimpact.com/impact/drivers/expanded>

⁸ State of Washington. “House Bill 1512, State of Washington, 66th Legislature, 2019 Regular Session.” 2019. <http://lawfilesexternal.wa.gov/biennium/2019-20/Pdf/Bills/House%20Bills/1512.pdf>

the “governing authority of an electric utility formed under this chapter may adopt an electrification of transportation plan.” In response, City Light is developing a Transportation Electrification Strategic Investment Plan: 2021-2024 that details the investments City Light will make to expand equitable access to electric transportation, while reducing carbon emissions and bringing value to the grid and our customers over the next four years.

The Transportation Electrification Strategic Investment Plan, which will be updated every four years, will focus on solutions that align with City Light’s transportation electrification value framework of equity, environment and viewing the grid as an asset to deliver public good. Approval of the Plan will open the door to committing resources and making investments that will bolster and modernize our electric grid and enable public transit charging, support freight and commercial fleets and provide flexibility for personal mobility.

RACIAL EQUITY OUTCOMES

The City of Seattle’s Equity and Environment Agenda identifies communities most impacted by environmental inequities, including communities of color, immigrants, refugees, people with low incomes, youth and English language learners. City Light strives to incorporate and elevate the voices of environmental justice communities who have traditionally been excluded in transportation electrification planning and development. By centering people and communities experiencing environmental inequities, community outreach and engagement will result in solutions that meet the needs of all our customers. This is critical to the long-term success of any City infrastructure improvement plan.

City Light is dedicating space for environmental justice communities to participate in the development of the Transportation Electrification Strategic Investment Plan and transportation electrification programs, including identification of alternatives and preferred solutions.⁹ Collaboration with environmental justice communities will help City Light build infrastructure that is welcomed as a community asset and helps to realize prosperity in place for these communities. Robust and equitable transportation electrification programs can address cumulative impacts of multiple environmental hazards and social, economic and racial burdens; prepare these communities for climate change; and support connections between residents, workers, government agencies and industries.¹⁰

INTRODUCTION TO STAKEHOLDER ENGAGEMENT STRATEGY

To ensure meaningful inclusion across our service area, City Light conducted a transportation electrification racial equity analysis, guided by City Light's RSJI and Environmental Equity Program. This analysis included leveraging the City of Seattle’s RSJI Racial Equity Toolkit and conducting in-depth outreach and engagement. Step 2 of the RSJI Racial Equity Toolkit is to gather information from community members on how an issue benefits or burdens the community in terms of racial equity. City

⁹ International Association for Public Participation. “IAP2 Spectrum of Public Participation.” 2018. https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum_8.5x11_Print.pdf

¹⁰ Seattle Office of Sustainability and Environment. “Equity and Environment Agenda.” <https://www.seattle.gov/Documents/Departments/Environment/EnvironmentalEquity/SeattleEquityAgenda.pdf>

Light conducted a comprehensive review of existing information to identify impacted communities, as well as how transportation electrification could benefit or burden environmental justice communities. City Light developed some initial investment priorities and examples of potential program offerings based on this research to share with community leaders and stakeholders through in-depth outreach and engagement. This document outlines our community and stakeholder outreach and engagement strategy in two phases:

- **Phase 1:** City Light engaged key audiences for their initial feedback and input for the Transportation Electrification Strategic Investment Plan: 2021-2024. Specifically, City Light asked community leaders and stakeholders to weigh in on what potential program offerings and racial equity outcomes should be prioritized for investment and implementation. Table 1 in the Transportation Electrification Strategic Investment Plan shows the outcomes that will guide City Light’s strategic investments in transportation electrification. Table 2 in the Plan shows City Light’s investment priorities, potential program offerings and equity outcomes. City Light met with community leaders and stakeholders starting in the fall of 2019 and we will continue to meet with community-based organizations and stakeholder groups leading up to the delivery of the Transportation Electrification Strategic Investment Plan: 2021-2024 to City Council.
- **Phase 2:** Community outreach and engagement efforts in Phase 2 will be focused on more deep and meaningful engagement with community members. This will start with education about transportation electrification and building customer and stakeholder awareness about the benefits of electric transportation. City Light will engage communities through a collaborative process, with an emphasis on input and feedback for program design, development and implementation. Phase 2 will start once the Transportation Electrification Strategic Investment Plan has been approved by City Council and we will move forward with collaborating with community members.

METHODOLOGY

Key Audiences

City Light identified key audiences for outreach and engagement. Key audiences for the Community and Stakeholder Outreach and Engagement Strategy includes customers who:

- experience high barriers to accessing electric transportation
- represent environmental justice communities and those who have been historically excluded
- can help expand the market of potential electric vehicle owners
- can partner with City Light to manage grid impacts
- have a vested interest in furthering environmental sustainability through a lens of race and social justice

Engagement Approach

Each phase of engagement is grounded in an audience-centered approach. This approach is important to fostering an equitable process for inclusion and toward achieving meaningful, transformative action. This section outlines the approach used for each phase of outreach and engagement.

Phase 1

In Phase 1, City Light's Community and Stakeholder Outreach and Engagement Strategy was focused on in-person, in-depth small group or one-on-one conversations with key audiences. City Light planned, initiated and implemented an engagement strategy that successfully elicited key audience input from environmental justice community leaders and stakeholder organizations, including public and private entities, franchise cities, labor unions, advocacy groups, service providers and neighborhood associations. Representatives from over 50 groups were engaged in conversations centered on identifying transportation electrification investment priorities as well as stakeholder engagement considerations in the development of the Plan.

The discussions generated wide-reaching input from community leaders, concerned residents, business owners and neighborhood advocates that extended beyond the target topic of transportation electrification and prioritizing strategies. The findings from the Phase 1 Community and Stakeholder Outreach and Engagement Strategy are presented on page 15.

Environmental Justice Community Leaders

In Phase 1, City Light partnered with the Seattle Department of Neighborhoods to reach over 22 environmental justice community leaders at 16 different groups. This outreach was focused on leaders in the following neighborhoods: Beacon Hill, Central Area, Chinatown-International District, Delridge, Duwamish Valley/South Park, Lake City, Rainier Beach and Rainier Valley. City Light prioritized these meetings in our outreach and engagement efforts. We met with individuals at their offices or preferred location and during their preferred times. We asked community leaders how they would like to be engaged or participate in the process moving forward. The slide deck used for community leader meetings is available in Appendix A – Environmental Justice Community Leader Transportation Electrification Presentation.

Our strategy for meetings with community leaders adhered to the framework and utilized many of the best practices for community engagement as outlined in the Statement of Principles to Engage Environmental Justice Communities on Transportation Electrification, signed by the Seattle Office of Sustainability & Environment, Seattle City Light, Department of Transportation and Department of Neighborhoods on January 10, 2020.

For each meeting, City Light began engagement efforts by:

- Defining community goals and determining if the outreach effort was informing or engaging.
- Understanding and communicating what is already known and established (this included climate and transportation electrification project background for context).
- Being transparent about constraints that are not shapeable by communities.

- Being clear about what is being asked of communities, specifically the question(s) they are being asked in the context of what is open for communities to shape.
- Ensuring leadership was on board prior to conducting outreach.

City Light will continue to use this approach for Phase 2 meetings with environmental justice community members.

In parallel with City Light’s Phase 1 community engagement effort, the Seattle Office of Sustainability and Environment (OSE) partnered with the Environmental Coalition of South Seattle (ECOSS), a local community-based organization (CBO), to conduct interviews with a sample of environmental justice community leaders on communication and engagement preferences for transportation electrification projects, programs and policies in support of the 2019 Equity Plan for Drive Clean Seattle.

OSE and ECOSS found that environmental justice community leaders preferred communication about services, changes to policy and partnership opportunities via the following methods¹¹:

- Hire community liaisons to facilitate engagement by communicating in the primary languages of the communities
- In-person conversations
- Social Media
- Ads on buses

In addition, OSE and ECOSS found that these community leaders preferred to be involved in projects, plans and policies via the following formats⁸:

- Small working groups that meet regularly
- Work with organizations they are already involved with and trust to gather input
- Focus groups
- Gather input at a meeting the City already attends

City Light plans to leverage and build upon these approaches in its Phase 2 communication and engagement strategy.

Key Audience Stakeholders

City Light also conducted outreach to stakeholders in key audience groups. City Light focused on engaging multiple stakeholders from key audience groups for a diversity of perspectives. As part of our Phase 1 engagement efforts, City Light met with over 35 stakeholder groups. A sample slide deck used at a stakeholder meeting is available in Appendix B – Stakeholder Transportation Electrification Presentation.

¹¹ Drive Clean Seattle. “Equity Outreach.” Office of Sustainability and Environment. 2019.

Phase 2

The focus in Phase 2 will be on more deep and meaningful engagement with community members to develop program offerings. Continuing the community outreach and engagement efforts started in Phase 1 will be essential to educating and engaging customers, informing them of planned improvements and getting their buy-in and future participation in program offerings.

The collaborative approach we are envisioning will require a high level of interaction, in accordance with guidance from public health authorities (Public Health - Seattle and King County, Washington State Department of Health and the Centers for Disease Control and Prevention) regarding COVID-19, between City Light, community representatives and other City departments to fulfill the Transportation Electrification Strategic Investment Plan's outcomes. With this approach, City Light will work with community members to identify community concerns and collaborate on solutions. City Light will benefit from community input as well as increased knowledge of the Transportation Electrification Strategic Investment Plan's desired outcomes within local communities.

Our Phase 2 approach will continue efforts to reach out to and connect with a range of audiences. Collaboration time will be expanded and extended to achieve the desired outcomes and to nurture meaningful conversations. City Light will take this approach to achieve innovative, transformative action on behalf of the communities we serve.

This approach will generate a substantial amount of qualitative data from environmental justice community members and stakeholder groups. City Light will need to invest time to review, codify and analyze the growing body of qualitative input from community discussions and other data collection methods. The analysis is an iterative process to extract common themes as well as unique perspectives and outlier perceptions. Analysis of the qualitative data will help City Light understand community concerns and contribute to endorsement of the Transportation Electrification Strategic Investment Plan and to ensuring success of its implementation among diverse groups of customers.

Environmental Justice Communities

In Phase 2, engagement efforts to contact and connect with environmental justice community members will be two-fold:

- Expand the connections to additional groups that were not engaged in Phase 1 community conversations, especially in franchise cities and unincorporated King County.
- Extend the reach into key communities by reconnecting with environmental justice group representatives who offered initial input in Phase 1 discussions.

This is an essential component to establishing a collaborative exchange of information and to generating an effective alliance of engaged community partner organizations in developing City Light's offerings.

For each meeting, City Light will continue to use the best practices highlighted in the Statement of Principles to Engage Environmental Justice Communities on Transportation Electrification. The agreement states that City departments should:

- Prioritize equity in all actions.
- Focus on meeting communities where they are, in the languages they speak.
- Translate materials and offer interpretation services for community meetings in neighborhoods with large non-primary English-speaking populations.
- Build authentic relationships, form convening groups, partner with local community-based organizations and/or Department of Neighborhoods.
- Ask communities how they want to be engaged and adapt strategy as needed.
- Ensure project budget and scope supports equity including providing childcare, food, interpretation, stipends, etc., within legal guidelines.
- Coordinate with other City departments on opportunities for engagement on the topic of transportation electrification more broadly.

Key Audience Stakeholders

In Phase 2, City Light will identify additional stakeholder groups from across the transportation sector to engage with that will contribute varying perspectives on future program offerings. City Light will collect data through focused discussions with the additional stakeholders that have been identified.

City Light will establish a means to loop back with the stakeholder organizations in order to share information and build a working relationship. This will allow City Light to collect stakeholder feedback on an ongoing basis and contribute to overall awareness and understanding of the Transportation Electrification Strategic Investment Plan's desired outcomes while also promoting positive customer relationships.

Level of Engagement

When engaging key audiences, City Light used the Public Participation Spectrum as outlined by the International Association for Public Participation (IAP2) as a tool to aid in selecting the appropriate level of participation and defining the public's role in the process. As you move from left to right, the public has an increasing impact on the decision. In Phase 1, City Light focused on involving community leaders and stakeholders. For Phase 2, City Light will involve and collaborate with community members and stakeholders on what is shapeable within our program offerings.

IAP2's Public Participation Spectrum¹²

Increasing Impact on the Decision 					
	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
Public Participation Goal	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
Promise to the Public	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

¹² IAP2 International Federation. "IAP2 Spectrum of Public Participation 20181112_v1". 2018. https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum_8.5x11_Print.pdf

TRANSPORTATION ELECTRIFICATION STRATEGIC INVESTMENT PLAN STAKEHOLDER ENGAGEMENT STRATEGY: KEY AUDIENCES

This section outlines the key audiences that City Light has identified for community and stakeholder outreach and engagement.

KEY AUDIENCES	AUDIENCE DEFINITION	REASON FOR SELECTION	EXAMPLES OF AUDIENCE MEMBERS
Environmental Justice Communities	Environmental justice communities are made up of community members most impacted by environmental inequities including communities of color, immigrants and refugees, people with low incomes, youth and English language learners.	Environmental justice communities experience high barriers to accessing clean, electric transportation and have been traditionally excluded in the decision-making process when it comes to receiving the benefits of investment(s) in transportation electrification.	<p>Residents in the following neighborhoods represent many of the environmental justice communities in the City of Seattle:</p> <ul style="list-style-type: none"> • Central Area • Beacon Hill • Rainier Beach • Rainier Valley • South Park • Duwamish Valley • Lake City • Chinatown-International District • Delridge • University District • Haller Lake • Bitter Lake <p>The following cities and areas represent environmental justice communities in City Light’s service territory outside of the City of Seattle:</p> <ul style="list-style-type: none"> • SeaTac • Tukwila • Renton • Burien • Shoreline • White Center • Bryn Mawr-Skyway

<p>Environmental Justice Organizations</p>	<p>Environmental justice organizations work towards climate justice by organizing people and centering on racial justice and equity to make deep system changes and foster resilient and empowered communities.</p>	<p>Environmental justice organizations have established relationships with environmental justice communities and have conducted community-based participatory research on environmental justice communities’ wants and needs.</p>	<p>Local environmental justice organizations include:</p> <ul style="list-style-type: none"> • Puget Sound Sage • Transportation Choices Coalition • 350 Seattle • Got Green • Front and Centered • Duwamish River Cleanup Coalition
<p>Labor Unions/ Organized Labor/Labor Councils</p>	<p>Labor unions bargain collectively with employers over wages, benefits and rights.</p>	<p>Labor unions represent industries that may be impacted by City Light’s investments in transportation electrification including electrical workers.</p>	<p>Impacted labor unions and labor councils that represent the interests of organized labor include:</p> <ul style="list-style-type: none"> • International Brotherhood of Electric Workers (IBEW) Local 46 • IBEW Local 77 • Laborers Local 1239 • Martin Luther King County Labor Council • Electrical Industry Group Northwest
<p>Environmental Advocacy Organizations</p>	<p>Environmental advocacy organizations are nonprofit groups that work to influence policies and systems to accelerate clean energy solutions that reduce contribution to climate change.</p>	<p>Environmental advocacy organizations can influence if policies and programs are accepted by City Council.</p>	<p>Local environmental advocacy organizations include:</p> <ul style="list-style-type: none"> • Northwest Energy Coalition (NWEC) • Puget Sound Clean Air Agency • Climate Solutions • Emerald Cities • Rainier Valley Greenways

<p>Shared Mobility Companies & Transportation Network Companies (TNCs)</p>	<p>Shared Mobility Companies and TNCs use smart phone applications to link individual drivers with individuals who need transportation. They provide navigation, payment and other services.</p>	<p>TNCs contract many environmental justice community members including people of color and immigrants as drivers.^{13,14}</p>	<p>The following TNCs are present in Seattle:</p> <ul style="list-style-type: none"> • Lyft • Uber
<p>Taxi Companies</p>	<p>Taxi companies provide dispatch services to individual drivers for individuals who need transportation.</p>	<p>Taxi companies contract many environmental justice community members including people of color and immigrants as drivers.^{15,16}</p>	<p>The following taxi companies are present in Seattle:</p> <ul style="list-style-type: none"> • Orange Taxi Company • Seattle Yellow Cab
<p>Electric Vehicle Supply Equipment (EVSE) Companies and Electric Vehicle Service Providers (EVSPs)</p>	<p>EVSE companies manufacture electric vehicle charging stations for light-, medium- and heavy-duty charging. EVSPs develop software that sits on-top of the charging station, enabling end-users to use, pay for and track charging services.</p>	<p>EVSE companies and EVSPs will provide the equipment and software services for transportation electrification programs and services. City Light currently partners with two of these organizations.</p>	<p>The major EVSE companies are:</p> <ul style="list-style-type: none"> • Greenlots • ChargePoint • eMotorWerks/EnelX <p>The major EVSP companies are:</p> <ul style="list-style-type: none"> • Electrify America • EVGo • Tesla

¹³ Puget Sound Clean Air Agency. "Electrifying Ride-Hailing in Seattle." September 2019. <https://www.atlasevhub.com/wp-content/uploads/2019/09/Electrifying-Ride-hailing-in-Seattle-WWCC-Report.pdf>

¹⁴ Lyft. Economic Impact Report 2020. <https://www.lyftimpact.com/impact/drivers/expanded>

¹⁵ Interview with Seattle Yellow Cab on 2/4/2020.

¹⁶ Interview with Orange Taxi Company on 1/23/2020.

<p>Commercial, Local Government and Non-Profit Fleets</p>	<p>Commercial, local government and non-profit fleets are a collection of vehicles owned or leased by an individual or organization that support the business by transporting people, goods and services.</p>	<p>Several commercial, local government and non-profit fleets in City Light’s service territory are actively or planning to electrify their fleets. These fleets may create large local electrical loads.</p>	<p>Commercial, local government and non-profit fleets planning on electrifying include:</p> <ul style="list-style-type: none"> • King County Metro • UPS/PACCAR • Recology • Zipcar • Amazon • City of Seattle • University of Washington • UW Urban Freight Lab
<p>City Light Franchise Cities and Unincorporated King County</p>	<p>City Light franchise cities are cities within City Light’s service territory outside of the City of Seattle. Unincorporated King County is made up of census-designated places in King County that do not belong to a city.</p>	<p>Due to the cost of living in Seattle, some City Light customers have relocated and live in franchise cities and unincorporated King County. It is important to hear from all of City Light’s customers across our entire service territory.</p>	<p>Franchise cities include:</p> <ul style="list-style-type: none"> • Shoreline • Lake Forest Park • Burien • Renton • Tukwila • SeaTac • Normandy Park • Unincorporated King County: <ul style="list-style-type: none"> ○ White Center ○ Bryn Mawr-Skyway
<p>Public Agencies</p>	<p>Public agencies are agencies within the Pacific Northwest that play different roles in electrifying transportation regionally.</p>	<p>Regional alignment is critical to widespread transportation electrification.</p>	<p>Some of the public agencies that City Light is currently coordinating with or plans to coordinate with in the future include:</p> <ul style="list-style-type: none"> • King County • Washington State Ferries • Port of Seattle • State of Washington Department of Commerce • State of Washington Department of Ecology • Sound Transit

Seattle City Light Customers	City Light customers covers all City Light customers.	The Transportation Electrification Strategic Investment Plan impacts all customer groups. City Light's plan will serve all our customers and will target those with the most significant barriers to accessing the benefits of transportation electrification first. By centering equity in our outreach and engagement, the solutions that will result from the Transportation Electrification Strategic Investment Plan will be positioned to meet the needs of all our customers.	Seattle City Light customers include the following and those groups that speak on behalf of or serve our customers: <ul style="list-style-type: none"> • Residential • Business/Commercial/ Industrial • Owners/Property Managers • Affordable Housing Providers • Community Associations • Neighborhood Associations • Advocacy Groups • Low-Income Service Providers
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TRANSPORTATION ELECTRIFICATION STRATEGIC INVESTMENT PLAN STAKEHOLDER ENGAGEMENT KEY FINDINGS: PHASE 1

The first phase of the Stakeholder Engagement Strategy was focused on engaging the selected key audiences for the Transportation Electrification Strategic Investment Plan leading up to the delivery of the Strategic Investment Plan to City Council. The complete list of meetings is in Appendix C.

This section outlines feedback, input and priorities for the Plan from the community leaders and stakeholders City Light met with during Phase 1 outreach and engagement.

KEY FINDINGS

City Light conducted outreach to environmental justice communities along with other stakeholders to gather feedback on their priorities for City Light's Transportation Electrification Strategic Investment Plan. The following are key findings from our community and stakeholder outreach and engagement efforts in Phase 1. The priorities City Light heard are reflected in the Transportation Electrification Strategic Investment Plan's investment priorities framework.

Environmental Justice Community Leaders

Program Offerings

- **Electrify buses:** Electrify buses was the number one priority for environmental justice community leaders. Community leaders expressed a desire for improved and electrified public transit as community members primarily rely on public transit for getting around. One community group was supportive of transportation mode-shifting to reduce the overall number of vehicles on the road.
- **Customer and stakeholder outreach and awareness:** Increasing customer and stakeholder outreach and awareness was the second priority. They recommended integrating education in public school systems; exploring partnerships with car dealerships, electric vehicle service equipment (EVSE) suppliers and City departments; and hosting networking events, info sessions and ride and drive events. As an outreach approach, they recommended using storytelling, multi-media and demographic-specific tactics. Multiple community leaders emphasized the importance of involving community members and community-based organizations to be successful. One organization suggested training youth ambassadors on electric vehicle education.
- **Electrify commercial, local government and non-profit fleets:** As a third priority, community leaders identified commercial and local government fleet electrification as an opportunity to reduce tailpipe emissions in the Duwamish Valley. Multiple community leaders also identified nonprofit/small business fleet electrification as an opportunity to increase equitable access to transportation electrification. One leader supported electrifying school buses that park in the Duwamish Valley.
- **Accelerate transportation electrification adoption in environmental justice communities:** As a fourth priority, community leaders spoke to accelerating transportation electrification adoption in their communities to ensure that we include individuals who have been traditionally left out. One group mentioned that a lower rate for electric vehicle charging for low-income families could help achieve this. Another group was interested in Women Minority Business Enterprise (WMBE) ownership models for public charging stations.
- **Electric Vehicle Rate:** Community leaders also prioritized reducing the cost of charging and incentivizing the transition to electric vehicles through affordable rate structures.
- **Additional Commentary:**
 - Electrify King County Metro's Via to Transit, a pilot program that addresses the first- and last-mile to Link Light Rail in southeast Seattle.
 - Electrify drayage trucks¹⁷ driven by independent contractors that serve the Port of Seattle.
 - Provide financing for multifamily property owners to install electric vehicle charging stations.
 - Provide incentives to TNC drivers to adopt electric vehicles.
 - Provide support and incentives for public charging stations at community centers.

¹⁷ Drayage trucks are Class 8 heavy duty trucks that do local and regional shipping runs, usually in and out of ports.

- Provide more support for property owners to negotiate the City of Seattle’s system for installing charging stations.

Racial Equity Outcomes

- **Equitable Access:** Community leaders recommended City Light conduct in-language, inclusive, community- and generation-specific advertising, communications and engagement. In addition, leaders suggested we communicate through multi-media channels (e.g., Instagram, videos). One group emphasized the importance of connecting with community members in franchise cities in Phase 2 outreach and engagement.
- **Healthy Planet, Healthy Lives:** Community leaders requested that City Light prioritize communities most impacted by poor air quality first for investment and that we act quickly to address the climate crisis.
- **Economic Opportunities and Youth Pathways:** Community leaders prioritized providing investment, economic and job opportunities for environmental justice communities including apprenticeships and internships. One group spoke to City Light about supporting a ‘just transition’ to transportation electrification jobs for folks currently dependent on carbon-based infrastructure economic systems. Another recommendation was that we set supportive policies and reduce barriers in City Light contract procurement processes.
- **Community Collaboration/Community Assets:** Community leaders encouraged City Light to collaborate with community members on public charging infrastructure. Many requested we identify off-street parking lot/private property solutions rather than locating stations in the public right-of-way. One group requested we pair public charging investments with additional community investments, to help create infrastructure improvements that would feel like an asset to communities.

Environmental Justice Organizations

Program Offerings

- **Electrify buses:** The number one priority for environmental justice organizations was to improve, increase and electrify public transit options. Overall, environmental justice organizations expressed the need to invest in public transit over personal vehicles to increase equitable access to transportation electrification and reduce carbon emissions. In addition, one group wanted to see electrified buses with longer ranges that serve communities further out in King County. One organization identified that local environmental justice community members want local government to prioritize reduced public transit fares.¹⁸
- **Additional Commentary:**
 - Electrify services that provide first- and last-mile transit services to public transit like King County Metro’s Via to Transit and electric bus service to and from ferry terminals.
 - Invest in infrastructure to support electric foot ferries, such as the route of the Kitsap Fast Ferry.

¹⁸ Puget Sound Sage. “Powering the Transition.” 2020. https://www.pugetsoundsage.org/wp-content/uploads/2020/06/PugetSoundSage_PoweringTransition_June2020-1.pdf

- Electrify government and commercial car fleets. Provide charging infrastructure for vehicles that are co-located and/or in predictable locations.
- Electrify taxis and high-mileage rideshare vehicles as these vehicles have the highest city vehicle miles driven. Electrify drayage trucks driven by independent contractors that serve the Port of Seattle.
- Electrify school buses that park in the Duwamish Valley.
- Work with Seattle Parks and Recreation Department to replace mowers and blowers with electric or human-powered equivalents to reduce climate pollution and air pollution (particularly to benefit the health of the workers).¹⁹

Racial Equity Outcomes

- **Healthy Planet, Healthy Lives:** All environmental justice groups we met with emphasized the importance of improving air quality as environmental justice communities are disproportionately impacted by air pollution. Several environmental justice groups requested that City Light prioritize communities most impacted by poor air quality first for investment.
- **Economic Opportunities and Youth Pathways:** Multiple groups prioritized economic opportunities and youth pathways in the transition to electrified transportation. Environmental justice groups spoke to providing youth, apprenticeship and job pathways with good labor standards and livable wages to environmental justice communities.
- **Equitable Access:** Environmental justice organizations emphasized the importance of equitable access in offerings and Phase 2 outreach and engagement efforts:
 - When completing Phase 2 outreach and engagement, they recommended City Light identify the specific languages spoken in that community and ensure we have translated materials and language interpretation services available. One group shared there is an opportunity to connect with youth through video or other phone connections. In addition, one group communicated the importance of connecting with community-based organizations and community members in franchise cities.
 - Target drivers who have inadequate access to public transit and are reliant on cars because they have been displaced further out from their place of work and other services due to affordability.
- **Community Collaboration/Community Assets:** Multiple environmental justice groups emphasized the importance of pairing infrastructure investments with anti-displacement strategies so that communities can enjoy the benefits of transportation electrification and stay in place. One environmental justice group requested we pair public charging investments with additional investments, to help create infrastructure improvements that would feel like an asset to the local community.
- **Rate Affordability:** One environmental justice organization identified rate affordability as an important racial equity outcome. If their community member's energy bills increase by \$50 a

¹⁹ Letter from 350 Seattle on 2/13/2020.

month, community members will start to cut basic services like groceries, medicine, childcare, eldercare or rent/mortgage payments.²⁰

Labor Unions

Racial Equity Outcomes

- **Economic Opportunities and Youth Pathways:** The number one racial equity outcome for labor unions was Local Economies and Youth Pathways. Unions expressed concerns about job loss, re-training and workforce development in the shift to electric transportation. One union was interested in the development of apprentice programs for utility construction workers involved in the build-out of charging infrastructure. Another union recommended City Light include apprenticeship utilization requirements in bid specifications for our offerings. In addition, they recommended we target environmental justice community members for contracts and implementing youth pathways.
- **Additional Commentary:**
 - City Light should plan for how expanding transportation electrification will impact grid infrastructure and future transmission and distribution (T&D) investments
 - Stressed the need for an ongoing focus on safety for both customers and field crews as new energized services come online.

Environmental Advocacy Groups

Program Offerings

- **Electrify buses:** The number one priority for environmental advocacy groups was to electrify and expand public transit. One group voiced support for transportation mode-shifting to reduce the overall number of vehicles on the road.
- **Customer and stakeholder outreach and awareness:** Multiple groups recommended City Light focus on education and outreach to increase awareness and excitement around transportation electrification.
- **Electrify high-mileage vehicles:** Groups emphasized that TNC drivers drive three to five times more than regular passenger vehicles and electrifying these vehicles can have a large impact on tailpipe emissions. In addition, these vehicles are frequently driven by communities of color and targeted incentives can increase equitable access to transportation electrification. For electrifying high-mileage vehicles, organizations recommended providing at-home and near-home level 2 charging at residential charging rates or specific rates for TNC drivers. They also recommended adding public fast charging stations near pick up and drop off locations for TNC drivers, dedicated for their use, if possible. Multiple groups also recommended electrifying drayage trucks driven by independent contractors that serve the Port of Seattle.

²⁰ Puget Sound Sage. "Powering the Transition." 2020. https://www.pugetsoundsage.org/wp-content/uploads/2020/06/PugetSoundSage_PoweringTransition_June2020-1.pdf

- **Electrify commercial, local government and non-profit fleets:** Multiple environmental advocacy groups emphasized the importance of electrifying large and heavy-duty commercial and government fleets.
- **Expand at-home and near-home charging:** Multiple groups recommended that City Light include dedicated transportation electrification services to renters (specifically multifamily residents) as they make up 52% of the customers in our service territory. One encouraged City Light to invest in charging infrastructure on utility poles at at-home charging rates.
- **Electric Vehicle Rate:** Multiple groups spoke to the importance of electric vehicle charging rates. One group recommended City Light provide affordable electric vehicle charging. Another encouraged City Light to incentivize transportation electrification through rate structures.
- **Additional Commentary:**
 - Electrify King County Metro’s Via to Transit, a pilot program that addresses the first- and last-mile to Link Light Rail in southeast Seattle.
 - Focus on large capital projects that create jobs and support companies/groups with the biggest barriers to electrification.
 - Pair targeted electric vehicle education and community collaboration on public charging stations with an avenue for electric vehicle adoption in the communities, such as community carshare.

Racial Equity Outcomes

- One group recommended City Light collaborate with high-mileage vehicle drivers on public charging and right-size investments with their need for charging. Another group emphasized the importance of overall rate affordability.

Transportation Network Companies (TNCs)

Program Offerings

- **Public Charging:** One organization emphasized the importance of public fast charging (i.e., above 50 kWh). Drivers need to spend as little time charging as possible in order to reduce downtime and maximize money earned.

Taxi Companies

Program Offerings

- **Electrify high-mileage vehicles:** According to taxi companies, the most important aspect of electrifying high-mileage vehicles is making the transition cost effective. One organization expressed that at-home and near-home charging is the most important solution because drivers want to start their morning with a full tank and do not want to have to think about refueling downtown. Installing fleet fast chargers at taxi company headquarters might also be an effective solution for drivers to refuel but requires more investigation.

Electric Vehicle Supply Equipment (EVSE) Companies and Electric Vehicle Service Providers (EVSPs)

Program Offerings

- **Electric Vehicle Rate:** EVSE companies and EVSPs encouraged City Light to explore creative rate solutions that help make the business case for public charging stations.
- **Transportation Electrification Customer Service:** EVSE companies and EVSPs expressed concern around permitting and interconnection. They shared that City Light’s timeframe for interconnection can be too long and the lack of transparency around costs can slow down organizational infrastructure plans. One group requested standardized interconnection standards and rules for charging stations across utilities. A desire for a central point of contact or group focused on EVs at Seattle City Light was also expressed.
- **Additional Commentary:**
 - Partner with major corporations on education and outreach (specifically in workplaces).
 - Support infrastructure for buses, multifamily, high-mileage, workplace, public and fleet charging.

Commercial, Local Government and Non-Profit Fleets

Program Offerings

- **Electrify commercial, local government and non-profit fleets:** Fleets prioritized incentives for charging infrastructure. In addition, one group requested fast induction charging options for heavy-duty vehicles.
- **Electric Vehicle Rate:** Fleets expressed interest in incentives for charging, cheaper rates for overnight slow charging, demand charge holidays and electric vehicle-specific rates.
- **Transportation Electrification Customer Service:** Fleets prioritized improving the electrical permitting process for installing charging stations including reducing the number of steps it takes to obtain a permit, the time it takes to obtain a permit and the amount it costs. One group shared that City Light’s timeframe for interconnection can be too long and can slow down organizational infrastructure plans. They also shared that government facilities are often old and do not have sufficient power capacity to meet their electrification outcomes. They voiced that solutions are needed to help solve for this problem.
- **Additional Commentary:**
 - Increase access to charging stations throughout the service area so that government fleets have access to charging stations beyond a centralized hub to mitigate range anxiety and support government vehicles that do not return to base. Opportunity to site public charging stations at Seattle Public Utility pumping stations.
 - Support solutions for at-home charging for government issued vehicles. Currently, gift of public funds regulations prevents departments from investing in at-home charging solutions for take-home fleets, resulting in the need for internal combustion engine fleet vehicles.

Seattle City Light Franchise Cities

Program Offerings

- **Customer and stakeholder education and outreach:** Franchise cities were very supportive of education and outreach. Multiple cities identified events for City Light to attend and present at including Touch-a-Truck events, Green/Sustainability events, Resource Environmental Fairs and a Permit 'How To' Fair.
- **Expand public fast charging:** Franchise cities emphasized the importance of public charging for their residents. They recommended installing public chargers at city centers, community centers and in private parking lots.
- **Expand workplace charging:** Franchise cities also identified workplace charging as a priority. SeaTac specifically spoke to providing charging at the Seattle Tacoma International Airport's north employee parking lot, located within City Light's service territory.
- **Electrify buses:** Franchise cities supported electrifying buses that pass through their cities.
- **Electrify commercial, local government and non-profit fleets:** Franchise cities identified opportunities to electrify their city fleets. Specifically, they requested case studies and lessons learned from the City of Seattle's fleet electrification process including technical, operational and institutional support.
- **Additional Commentary:**
 - Electrify last mile to transit services including King County Metro's Via to Transit and TNCs.
 - Support at-home and near-home charging for multifamily residences by working with multifamily private property developers.

Public Agencies

Program Offerings

- **Electrify buses:** King County requested that City Light support them in meeting their bus electrification target.
- **Customer and stakeholder outreach and awareness:** One public agency recommended City Light emphasize education and outreach as a discrete investment.

Racial Equity Outcomes

- **Community Collaboration:** One agency recommended City Light focus on education and awareness before collaborating with communities on offerings to ensure community members are aware of transportation electrification and feel confident in their participation.

Seattle City Light Customers

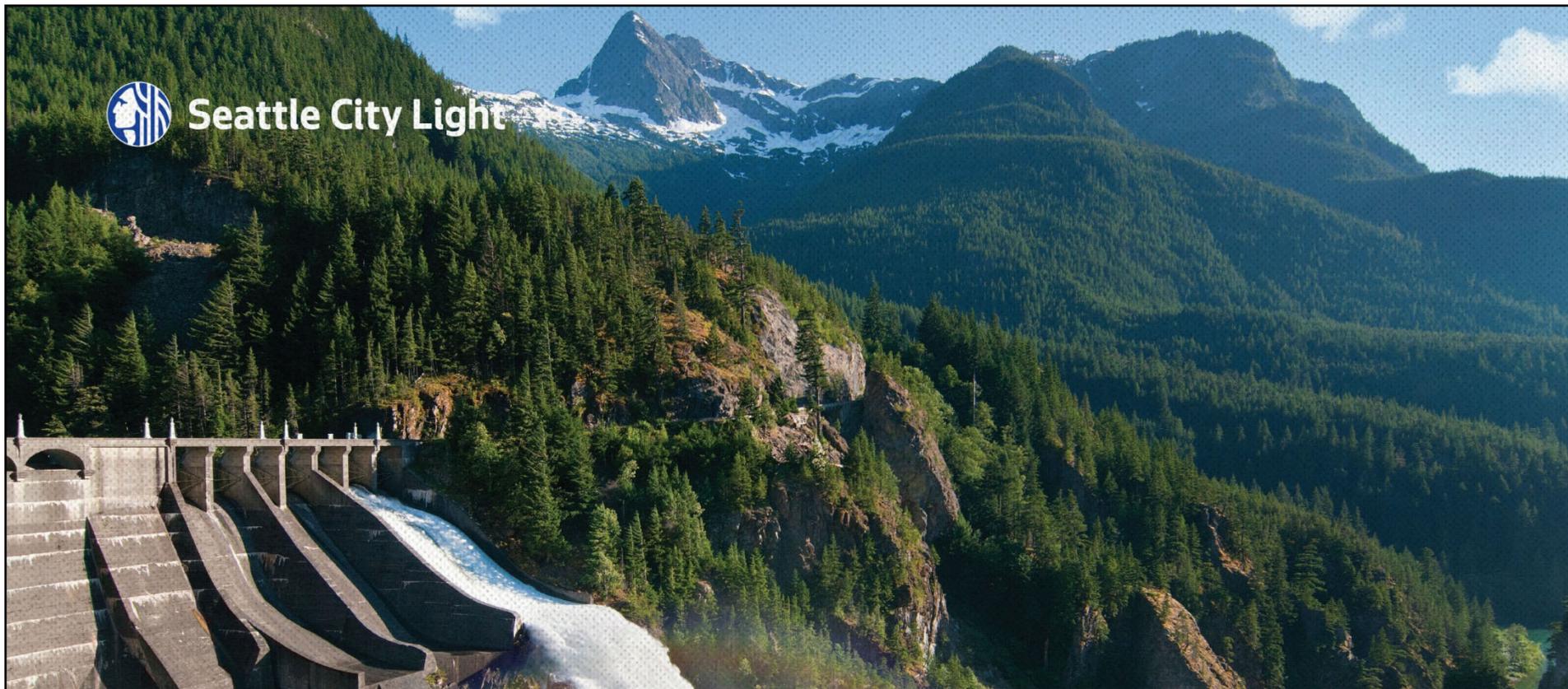
Program Offerings

- **Electrify buses, ferries and other public transit:** Multiple groups supported electrifying transit including buses and ferries.
- **Additional Commentary:**
 - Offer time-of-day rates that are lower for off-peak electric vehicle charging.
 - Provide education about transportation electrification.
 - Support access to charging stations for individuals without garages and TNC drivers.

- Collaborate with affordable housing on access to charging for residents.
- Provide workplace charging.
- Support charging options for electric bikes in public settings and at workplaces.

Racial Equity Outcomes

- **Community Collaboration:** Many customer groups requested that City Light locate public charging stations away from arterials, pedestrian, cycling and transit paths. One group recommended that City Light refrain from using right-of-way locations in areas of high population density and identify parking lot sites. They thought right-of-way locations would be less problematic in areas of lower population density. One group requested that City Light collaborate with communities of color and other environmental justice communities on public charging site locations and design.
- **Equitable Access:** One group recommended that City Light work with affordable housing to ensure affordability and equitable access to transportation electrification solutions.



TRANSPORTATION ELECTRIFICATION STRATEGIC INVESTMENT PLAN

Presentation for Community Leaders

Seattle City Light

SEATTLE CITY LIGHT QUICK FACTS

Service Area Population	906,595
Service Area Size	131 sq. mi.
Customers Served	460,609
Employees	1,770
Generation – City Light Dams	7

CUSTOMER SERVICE AREA MAP



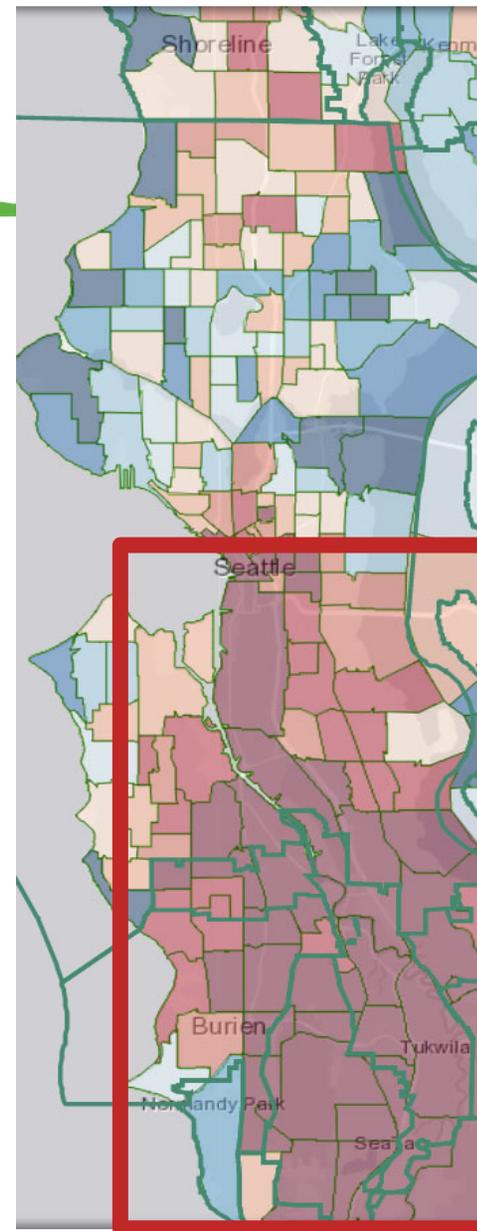
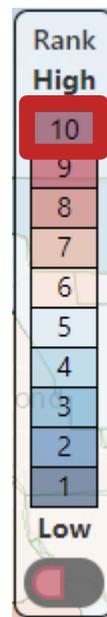
WHAT IS TRANSPORTATION ELECTRIFICATION?

- Moving people, goods, and services around the greater Seattle area using Seattle City Light's clean electricity
- Electrifying Seattle's entire transportation system
 - buses
 - personal vehicles
 - rideshare
 - ferries
 - heavy-duty vehicles
 - goods delivery
 - local government and commercial fleets

BREATHE EASIER

DIESEL POLLUTION

No dirty soot comes out of tailpipes of electric buses or cars.

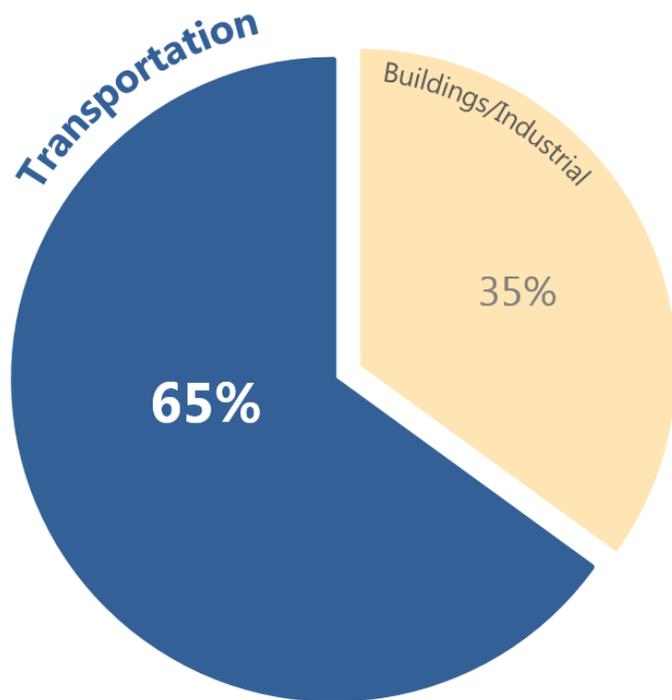


REDUCE IMPACT

GREENHOUSE GAS EMISSIONS



SEATTLE



Vehicles powered by our clean electricity have **zero carbon emissions** and **do not contribute to our climate pollution.**



SAVE MONEY

ELECTRIC VEHICLE FUELING PRICES

eGallon: Compare the costs of **driving** with **electricity**

What is eGallon?
It is the cost of fueling a vehicle with electricity compared to a similar vehicle that runs on gasoline.

Did you know?
On average, it costs about half as much to drive an electric vehicle.

Find out how much it costs to fuel an electric vehicle in your state

Washington

regular gasoline	2.62
electric eGallon	0.88

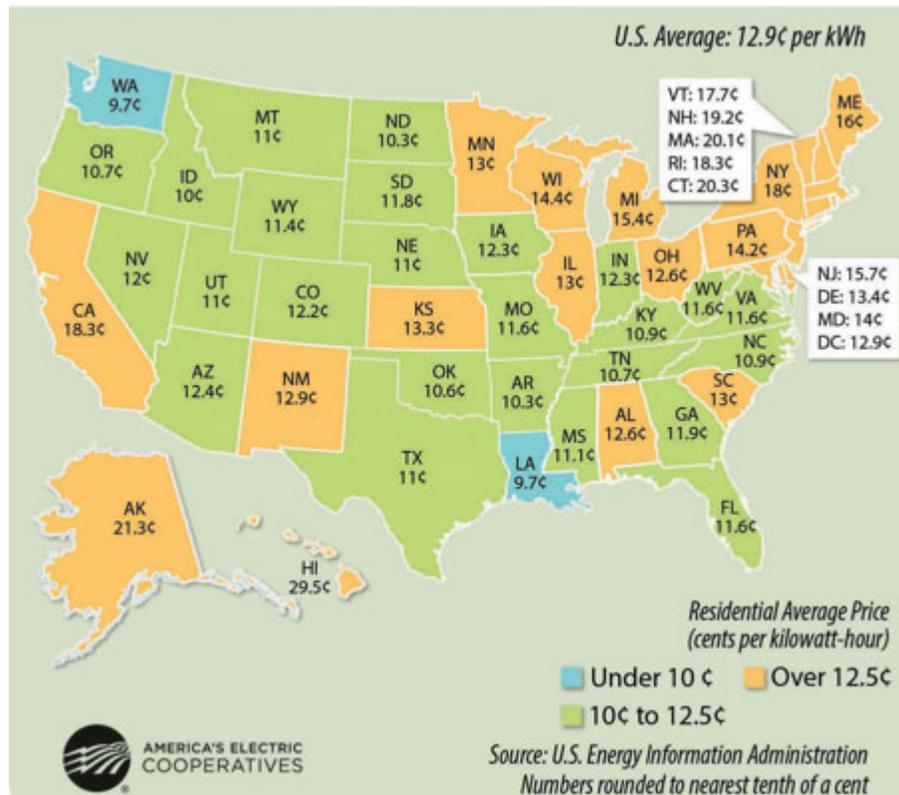
Data and Methodology
Updated: July 11, 2020

ENERGY.GOV

Electric vehicles have 50% average annual operating savings over gas-powered vehicles.

SAVE MONEY

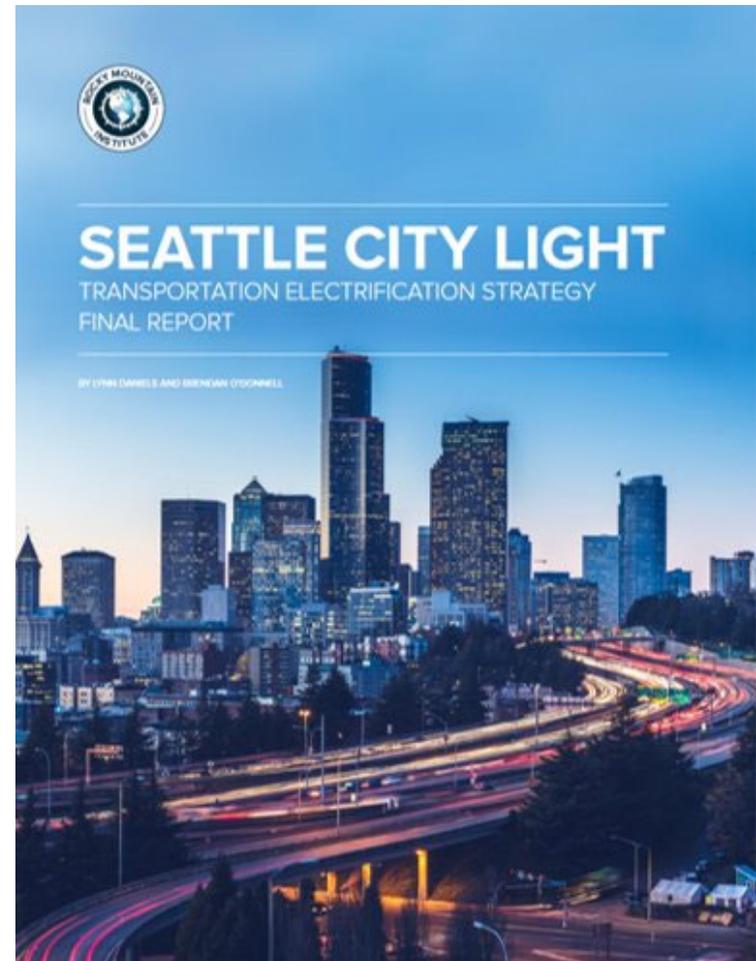
RESIDENTIAL ELECTRICAL PRICES



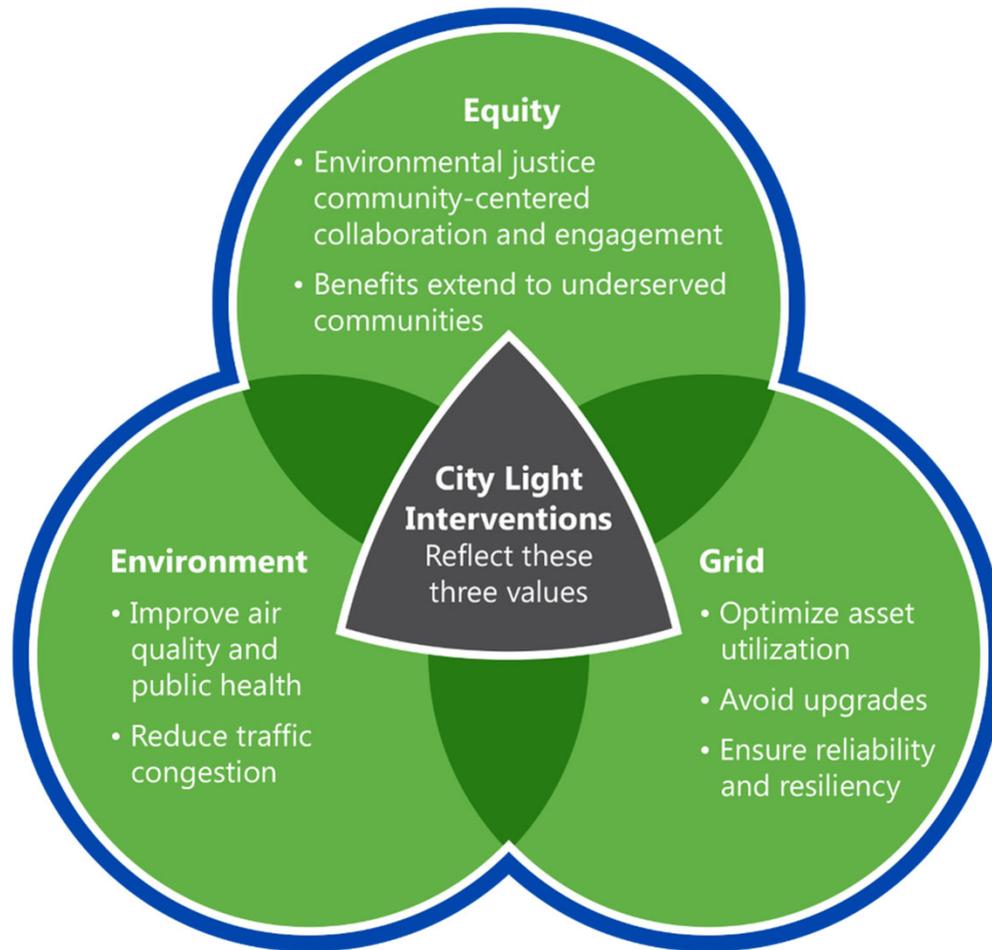
Mass adoption of electric vehicles can help **keep electricity prices low for all.**

CITY LIGHT'S ROLE

- Developing programs to enable and promote bus, car and truck electrification
- Reliable and affordable charging



CITY LIGHT'S VALUES FRAMEWORK



HOW CITY LIGHT IS EMBEDDING EQUITY



We are here!



WHAT WE'VE HEARD SO FAR

What We've Heard from Community	Potential Solutions from Community
Communities of color suffer from poor air quality and health disparities	Prioritize these areas for investments
Need increased/improved public transit	Provide charging infrastructure for buses
Most people are unfamiliar with EVs	Support community-based education
Many community members cannot afford cars	Provide charging infrastructure for community carsharing
Provide economic opportunities for communities of color	Support economic opportunities related to transportation electrification
Lack of access to charging for multifamily units	Provide at-home and near-home affordable charging solutions
Without proper planning, public charging may contribute to increased housing costs, exacerbate community displacement, and increase the risk of gentrification	Utilize community-based decision making for public charging infrastructure to design and locate stations with community input

RACIAL EQUITY GOALS

	Community Assets	City Light's programs invest in infrastructure that are community assets so Environmental Justice Communities can enjoy the benefits of transportation electrification in their current neighborhoods.
	Community Collaboration	Environmental Justice Communities see their wants and needs reflected in City Light transportation electrification programs.
	Healthy Planet, Healthy Lives	Reduce tailpipe emissions that impact local air quality and public health where Environmental Justice Communities live, learn, work and play. Reduce CO ₂ emissions that have a disproportionate burden on the most vulnerable populations and communities.
	Equitable Access	Environmental Justice Communities learn about our transportation electrification programs, can readily understand and access materials and resources, see themselves reflected in communications, and participate in and benefit from City Light programs.
	Economic Opportunities and Youth Pathways	City Light enables Environmental Justice Communities to participate in and benefit from the local transportation electrification economy.
	Electricity Affordability	Widespread transportation electrification increases revenue to put downward pressure on electricity prices.

 **Transportation Electrification**

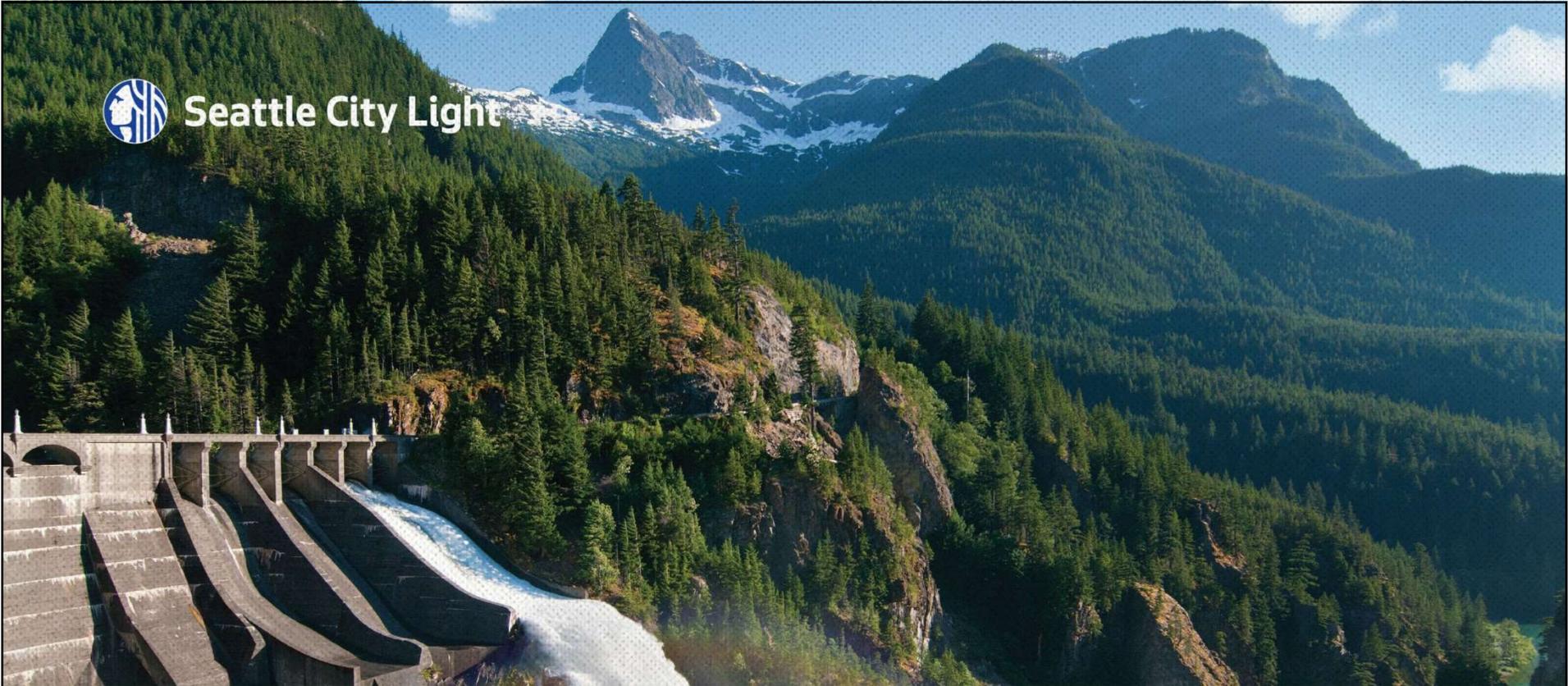
TRANSPORTATION USES	INVESTMENT PRIORITIES	EXAMPLE CITY LIGHT OFFERINGS
 All	Customer and stakeholder outreach and awareness	<ul style="list-style-type: none"> • Information, education, events and resources on the benefits of electric vehicles
 Public Transit (Buses, Ferries, Trains, Light Rail)	Electrify buses, ferries and other public transit	<ul style="list-style-type: none"> • Financial incentives and technical assistance with site and design requirements to provide electric charging infrastructure for King County Metro, Washington State Ferries and other public transit • Partnerships with City of Seattle and King County departments to electrify first- and last-mile public transportation options such as paratransit shuttles and e-mobility hubs
 Commercial, Government & Non-Profit Fleets	Electrify commercial, local government and non-profit fleets	<ul style="list-style-type: none"> • Financial incentives for electric charging infrastructure for companies that transport people, goods and services • Fee-based City Light-owned charging infrastructure for public and private fleet vehicles (such as school buses and solid waste vehicles) • Incentives and turn-key charging infrastructure for electrification of non-profit fleet vehicles
 Personal Mobility (Cars, Bikes, Scooters, etc.)	Expand at-home and near-home charging	<ul style="list-style-type: none"> • Incentives, qualified installers and special payment terms to help reduce barriers to installing charging stations in multifamily housing • Near-home charging solutions for those with no access to off-street parking
	Electrify high-mileage vehicles	<ul style="list-style-type: none"> • Provide lower costs to charge at different times of day that meet the needs of high-mileage vehicle drivers while benefiting the grid
	Accelerate transportation electrification adoption in environmental justice communities	<ul style="list-style-type: none"> • Charging infrastructure for community car share • Provide discounts toward the cost to charge electric vehicles for people with low to moderate incomes
	Expand public fast charging	<ul style="list-style-type: none"> • Financial incentives to help reduce the upfront cost of public charging stations • Community collaboration on City Light-owned public charging stations
	Expand workplace charging	<ul style="list-style-type: none"> • Provide EV-ready electricity service to workplaces for future charging infrastructure

QUESTIONS FOR YOU

- What is #1 for you? What should we make sure to include in the plan?
- Based on the options listed, how should we prioritize them? What is missing?
- How does this work fit in with other priorities for your organization or in your neighborhood?

NEXT STEPS

- When we get this approved, how would you like to be involved?
- Do you have suggestions for other organizations that we should plan to engage with?



 Seattle City Light

TRANSPORTATION ELECTRIFICATION STRATEGIC INVESTMENT PLAN

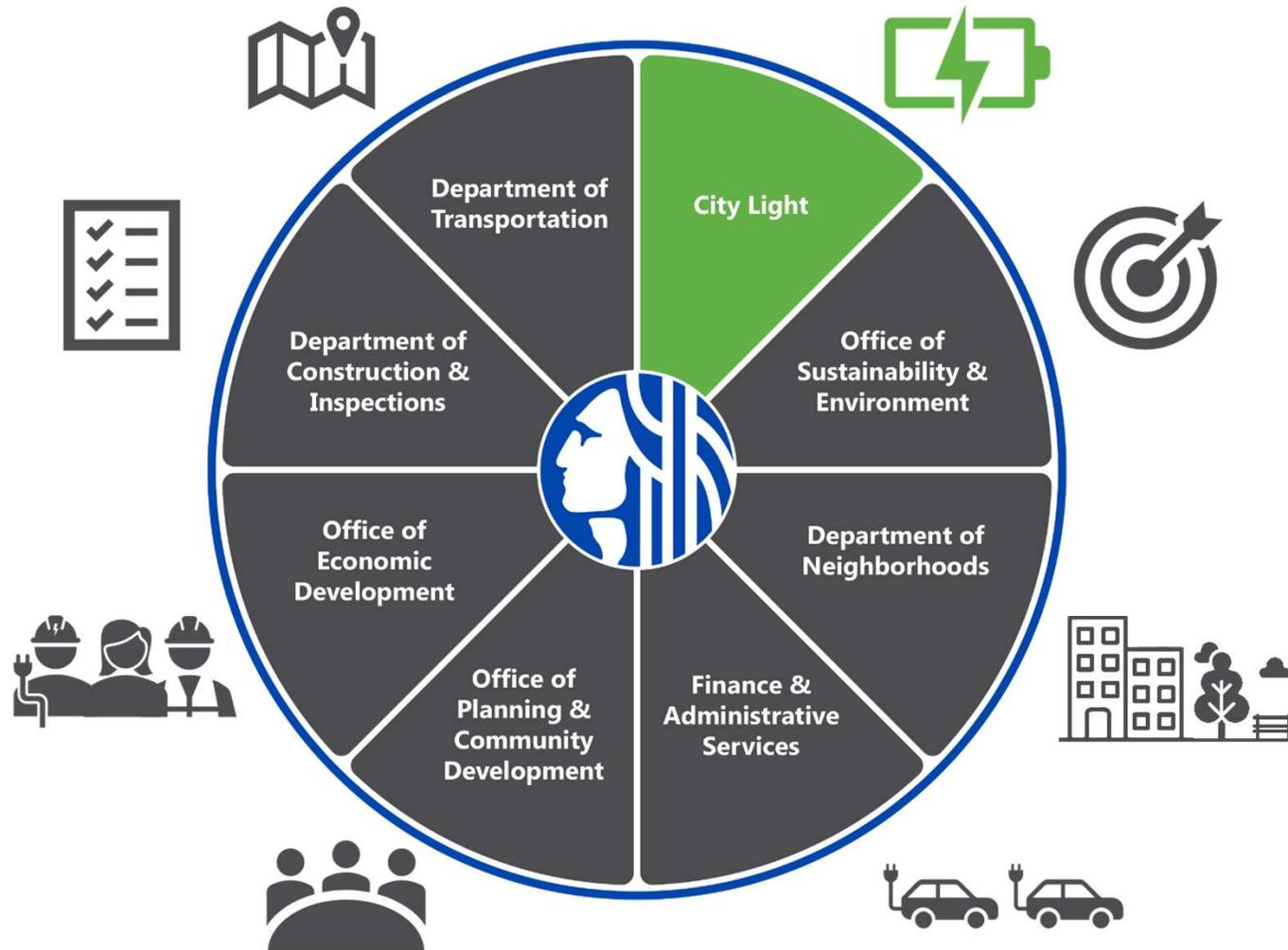
Presentation for Stakeholders

Seattle City Light

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 - heavy-duty vehicles
 - goods delivery
 - local government and commercial fleets

CITYWIDE COORDINATION ON TRANSPORTATION ELECTRIFICATION



BENEFITS



No dirty soot comes out of tailpipes of electric buses or cars.

Vehicles powered by our clean electricity have **zero carbon emissions** and **do not contribute to our climate pollution.**



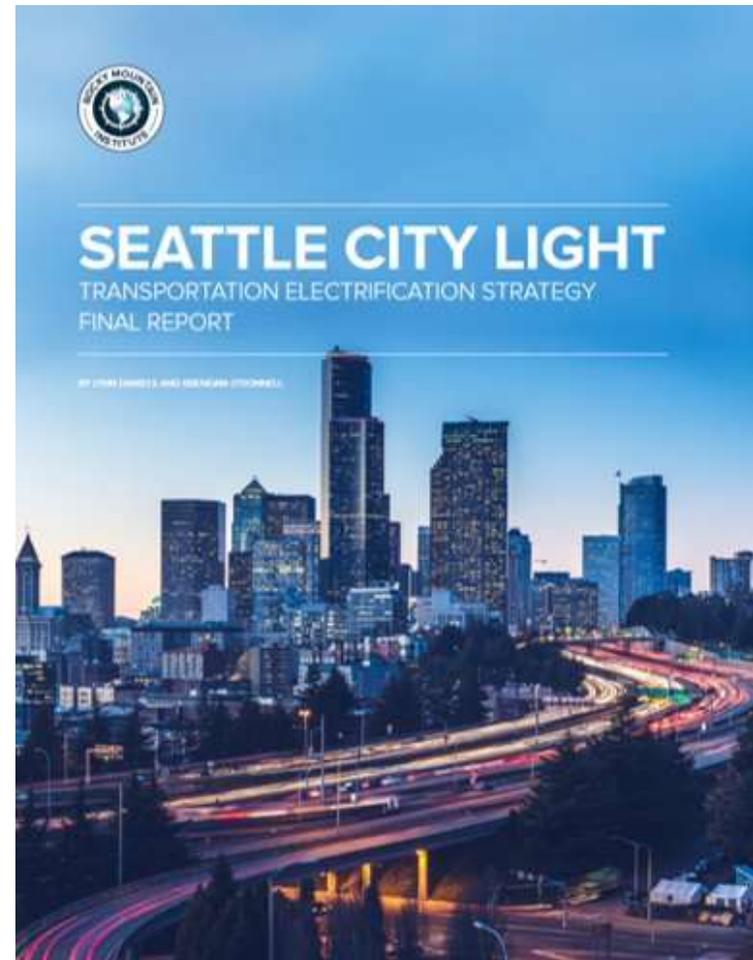
Average of **50% savings** in annual operating costs for electric vehicles over gas-powered vehicles.

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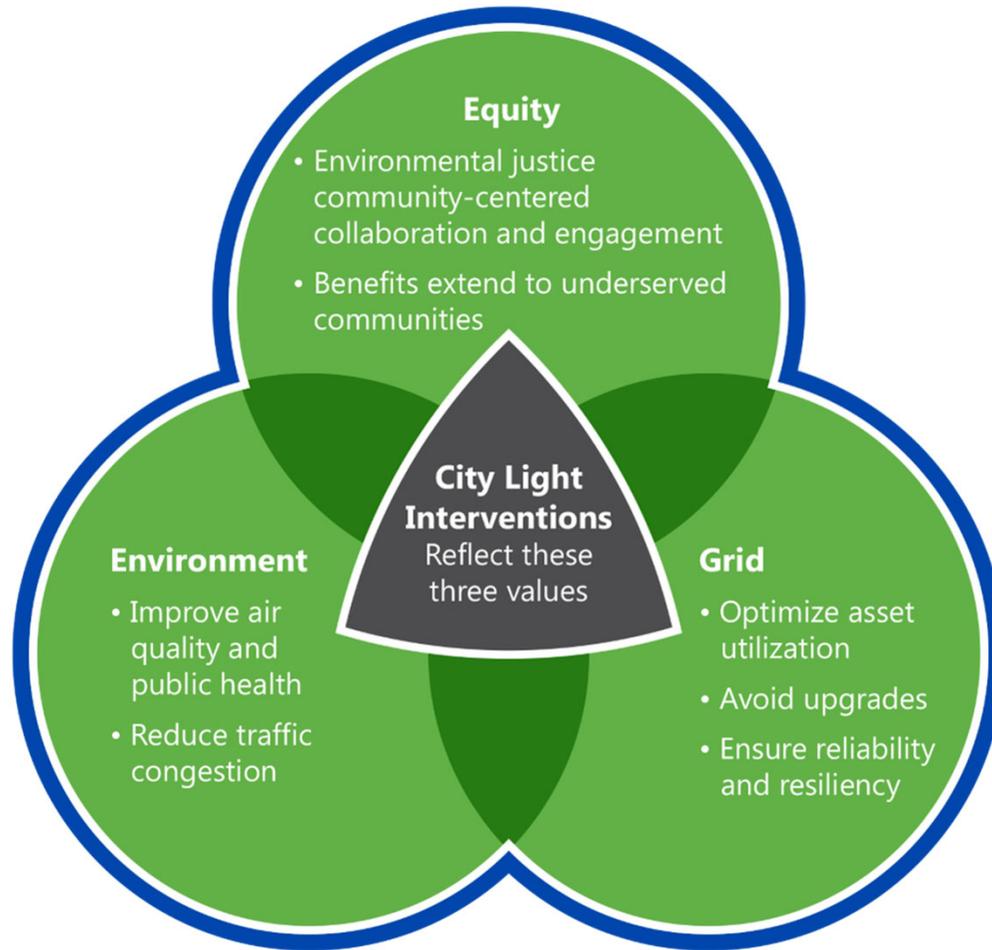


CITY LIGHT'S ROLE

- Developing programs to enable and promote bus, car and truck electrification
- Reliable and affordable charging
- Act on HB 1512's clear authority



CITY LIGHT'S VALUES FRAMEWORK



STRATEGIC UTILITY INTERVENTION AREAS



Invest in charging infrastructure with emphasis on universal **access** and expanding **coverage**



Develop new **rates** and improve customer **service** for the transportation market



Prepare for **medium & heavy-duty commercial fleet** electrification

EQUITY IN ENGAGEMENT



We are here!

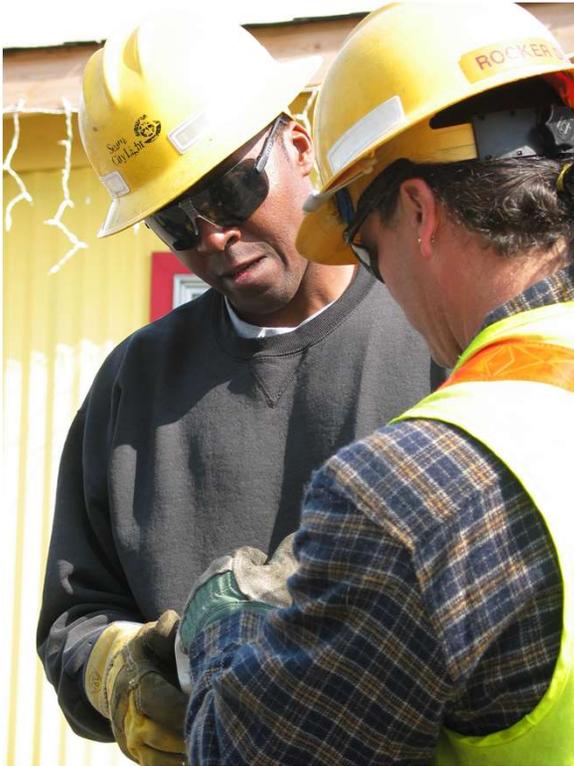
WHAT WE'VE HEARD SO FAR

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	Economic Opportunities and Youth Pathways	City Light enables Environmental Justice Communities to participate in and benefit from the local transportation electrification economy.
	Electricity Affordability	Widespread transportation electrification increases revenue to put downward pressure on electricity prices.

FUTURE OF WORK & WORKFORCE DEVELOPMENT



- **Guiding goal:** ensure utility workforce is well prepared to adapt to the changing energy landscape
 - Focus on infrastructure
 - Stay ahead of new and changing information and operational technologies
 - Collaborate and partner with labor unions on job training
 - Find ways to uplift communities through our efforts

 **Transportation Electrification**



TRANSPORTATION USES	INVESTMENT PRIORITIES	EXAMPLE CITY LIGHT OFFERINGS
 All	Customer and stakeholder outreach and awareness	<ul style="list-style-type: none"> • Information, education, events and resources on the benefits of electric vehicles
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	Expand workplace charging	<ul style="list-style-type: none"> • Provide EV-ready electricity service to workplaces for future charging infrastructure

WHAT IS CITY LIGHT DOING NOW?



Heavy Duty Pilots

King County Metro Transit & Kenworth/UPS



Residential Charging Pilot

Full-service program for equipment & install



Public Charging Pilot

Install 20 public DC fast charging stations

QUESTIONS FOR YOU

- What is #1 for you? What would your members want us to include in the plan?
- Based on the options listed, how should we prioritize them? What is missing?
- How does this work fit in with other priorities for your organizations and communities?

THANK YOU!



APPENDIX C: LIST OF COMMUNITY LEADER AND STAKEHOLDER MEETINGS

This appendix shows the meetings conducted in Phase 1 of our community outreach and engagement efforts by key audience.

Environmental Justice Community Leaders

Neighborhood	Organization	Meeting Status	Date
Central Area	Central Area Collaborative	Complete	9/20/2019
Central Area	New Hope Missionary Baptist Church	Complete	1/7/2020
Central Area	Northwest African American Museum	Complete	1/7/2020
Central Area	First African Methodist Episcopal Church	Complete	1/14/2020
Central Area	Byrd Barr Place	Complete	1/24/2020
Central Area	Historic Central Area Arts and Cultural District	Complete	2/10/2020
Beacon Hill	Greater Beacon Hill Council of Seattle	Complete	12/3/2019
Beacon Hill	Beacon Business Alliance	Complete	1/15/2020
Rainier Beach	Rainier Beach Action Coalition	Complete	2/25/2020
Rainier Valley	Rainier Valley Greenways	Complete	1/22/2020
Duwamish Valley	Duwamish River Cleanup Coalition	Complete	1/16/2020
Duwamish Valley	Green-Duwamish Watershed Symposium	Complete	2/24/2020
Lake City	Lake City Collective	Complete	12/18/2019
Chinatown- International District	Seattle Chinatown International District Preservation and Development Authority	Complete	1/22/2020
Chinatown- International District	InterIm Community Development Association	Complete	2/7/2020
Chinatown- International District	Chong Wa Benevolent Association	Complete	2/24/2020
Delridge/West Seattle	District 1 Community Network	Complete	1/8/2020

Environmental Justice Organizations

Organization	Meeting Status	Date
Puget Sound Sage	Complete	12/19/2019 1/29/2020
Transportation Choices Coalition	Complete	12/19/2019 1/29/2020
Duwamish River Cleanup Coalition	Complete	1/16/2020
350 Seattle	Complete	2/13/2020

Labor Unions and Labor Councils

Organization	Meeting Status	Date
IBEW Electricians Local 46	Complete	1/8/2020
Electrical Industry Group Northwest	Complete	1/8/2020
Martin Luther King County Labor Council	Complete	1/24/2020 2/19/2020
IBEW Local 77	Complete	2/10/2020
Laborers Local 1239	Complete	2/10/2020

Environmental Advocacy Groups

Organization	Meeting Status	Date
Northwest Energy Coalition (NWECC)	Complete	10/18/2019 12/12/2019
Puget Sound Clean Air Agency	Complete	1/13/2020
Climate Solutions	Complete	1/17/2020
Rainier Valley Greenways	Complete	1/22/2020

Transportation Network Companies (TNCs)

Organization	Meeting Status	Date
Lyft	Complete	11/12/2019

Taxi Companies

Organization	Meeting Status	Date
Orange Cab Company	Complete	1/23/2020
Seattle Yellow Cab	Complete	2/4/2020

Electric Vehicle Supply Equipment (EVSE) Companies and Electric Vehicle Service Providers (EVSPs)

Organization	Meeting Status	Date
EVGo	Complete	5/30/2019
ChargePoint	Complete	12/12/2019
Electrify America	Complete	12/3/2019
Greenlots	Complete	1/31/2020
eMotorWerks/EnelX	Complete	12/16/2019
Tesla	Complete	2/20/2020

Commercial, Local Government and Non-Profit Fleets

Organization	Meeting Status	Date
UW Urban Freight Lab	Complete	11/7/2019
UPS/PACCAR	Complete	8/13/2019 1/17/2020
Recology	Complete	1/16/2020
Waste Management	Complete	1/23/2020
Zipcar	Complete	1/23/2020
City of Seattle Fleet	Complete	12/2/2019
City Light Fleet	Complete	12/19/2019
Seattle Public Utilities Fleet	Complete	2/11/2020

Seattle City Light Franchise Cities

Organization	Meeting Status	Date
City of Lake Forest Park	Complete	12/6/2019
City of SeaTac	Complete	1/29/2020
City of Shoreline	Complete	1/31/2020

Public Agencies

Organization	Meeting Status	Date
King County	Complete	12/9/2019
State of Washington Department of Commerce	Complete	1/2/2020

Seattle City Light Customers

Organization	Meeting Status	Date
Jones Lang LaSalle (JLL)	Complete	1/7/2020
Seattle 2030 District	Complete	1/29/2020
District 1 Community Network	Complete	1/8/2020
Central Seattle Greenways	Complete	2/5/2020
Cascade Bicycle Club	Complete	2/7/2020
Phinney Ridge Community Council	Complete	7/23/2020
Greenwood Community Council	Complete	7/23/2020
Fremont Neighborhood Council	Complete	7/27/2020
43rd District Environmental Caucus	Complete	8/10/2020
Ballard District Council	Complete	8/12/2020
Laurelhurst Community Club	Scheduled	9/14/2020



JULY 2020

Seattle City Light Transportation Electrification Strategic Investment Plan: 2021-2024 – Racial Equity Analysis Summary

EXECUTIVE SUMMARY

Seattle City Light's Transportation Electrification Strategic Investment Plan: 2021-2024 – Racial Equity Analysis Summary provides an overview of City Light's research to understand and document the impacts of transportation electrification investments on environmental justice communities. Environmental justice communities refer to communities defined in the City of Seattle's Equity and Environment Agenda (EEA) and include communities most impacted by environmental inequities, including communities of color, immigrants, refugees, people with low incomes, youth and English language learners.¹ This analysis process was guided by City Light's Race and Social Justice Initiative (RSJI) and Environmental Equity Program. City Light's Transportation Electrification Strategic Investment Plan: 2021-2024 will serve all our customers and will target those with the most significant barriers to accessing the benefits of transportation electrification first. By centering equity in our outreach and engagement, the solutions that will result from the Transportation Electrification Strategic Investment Plan will be positioned to meet the needs of all our customers. In this document, we detail our key findings to support the development of City Light's Transportation Electrification Strategic Investment Plan.

¹ Seattle Office of Sustainability and Environment. "Equity and Environment Agenda."

<https://www.seattle.gov/Documents/Departments/Environment/EnvironmentalEquity/SeattleEquityAgenda.pdf>

City Light gathered and analyzed data from City of Seattle departments, regional published reports and communities on the benefits and burdens of transportation electrification on environmental justice communities. Leading with our values of equity, environment and grid as an asset to deliver public good and incorporating what we have heard from environmental justice communities and other stakeholders – including learning from the City of Seattle’s Equity and Environment Agenda framework and the Duwamish Valley Action Plan – City Light has established six racial equity outcomes to guide transportation electrification strategic investment priorities.^{2,3} Our outcomes are:

1. **Community Collaboration**

Environmental justice communities see their wants and needs reflected in City Light transportation electrification programs.

2. **Healthy Planet, Healthy Lives**

Reduce tailpipe emissions that impact local air quality and public health where environmental justice communities live, learn, work and play. Reduce carbon emissions that have a disproportionate burden on the most vulnerable populations and communities.

3. **Equitable Access**

Environmental justice communities learn about our transportation electrification programs, can readily understand and access materials and resources, see themselves reflected in communication and participate in and benefit from City Light’s transportation electrification programs.

4. **Community Assets**

City Light’s programs invest in infrastructure that are community assets so environmental justice communities can enjoy the benefits of transportation electrification in their current neighborhoods.

5. **Economic Opportunities and Youth Pathways**

City Light enables environmental justice communities to participate in and benefit from the local transportation electrification economy by providing youth, apprenticeship and job pathways with good labor standards and livable wages.

6. **Electricity Affordability**

Widespread transportation electrification increases revenue to put downward pressure on electricity prices.

² Seattle Office of Sustainability and Environment. “Equity and Environment Agenda.”

<https://www.seattle.gov/Documents/Departments/Environment/EnvironmentalEquity/SeattleEquityAgenda.pdf>

³ City of Seattle. “Duwamish Valley Action Plan” June 2018. http://greenspace.seattle.gov/wp-content/uploads/2018/06/DuwamishValleyActionPlan_June2018.pdf

The concerns and potential solutions offered by communities will be used to prioritize future transportation electrification investments and collaborate on strategies that increase opportunity and minimize harm to communities that have been most impacted by environmental inequities.

BACKGROUND

In July 2019, the Washington State legislature passed House Bill 1512, granting public utilities the authority to offer “incentive programs in the electrification of transportation for its customers, including the promotion of electric vehicle (EV) adoption and advertising programs to promote the utility’s services, incentives or rebates”⁴. The legislation adds a new section to RCW 35.92 which provides that the “governing authority of an electric utility formed under this chapter may adopt an electrification of transportation plan.” In response, City Light is developing a Transportation Electrification Strategic Investment Plan: 2021-2024 that details the investments City Light will make to expand equitable access to electric transportation, while reducing carbon emissions and bringing value to the grid and our customers over the next four years.

The Transportation Electrification Strategic Investment Plan, which will be updated every four years, will focus on solutions that align with City Light’s transportation electrification value framework of equity, environment and operating the grid as an asset to deliver public good. Approval of the Plan will open the door to committing resources and making investments that will bolster and modernize our electric grid and enable public transit charging, support freight and commercial fleets and provide flexibility for personal mobility.

RACIAL EQUITY OUTCOMES

Environmental justice communities refer to communities defined in the City of Seattle’s Equity and Environment Agenda (EEA) and include communities most impacted by environmental inequities, including communities of color, immigrants, refugees, people with low incomes, youth and English language learners.⁵ City Light strives to incorporate and elevate the voices of environmental justice communities who have traditionally been excluded in transportation electrification planning and development. By centering people and communities experiencing environmental inequities, community outreach and engagement will result in solutions that meet the needs of all our customers. This is critical to the long-term success of any City infrastructure improvement plan.

City Light is dedicating space for environmental justice communities to participate in the development of the Transportation Electrification Strategic Investment Plan and transportation electrification

⁴ State of Washington. “House Bill 1512, State of Washington, 66th Legislature, 2019 Regular Session.” 2019. <http://lawfilesexternal.wa.gov/biennium/2019-20/Pdf/Bills/House%20Bills/1512.pdf>

⁵ Seattle Office of Sustainability and Environment. “Equity and Environment Agenda.” <https://www.seattle.gov/Documents/Departments/Environment/EnvironmentalEquity/SeattleEquityAgenda.pdf>

programs, including identification of alternatives and preferred solutions.⁶ Collaboration with environmental justice communities will help City Light build infrastructure that is welcomed as a community asset and helps to realize prosperity in place for these communities. Robust and equitable transportation electrification programs can address cumulative impacts of multiple environmental hazards and social, economic and racial burdens; prepare these communities for climate change; and support connections between residents, workers, government agencies and industries.⁷

INTRODUCTION TO RACIAL EQUITY ANALYSIS

To ensure meaningful inclusion across our service area, City Light conducted a transportation electrification racial equity analysis, guided by City Light's RSJI and Environmental Equity Program. This analysis included: (1) leveraging the City of Seattle's Racial Equity Toolkit and (2) conducting in-depth outreach and engagement.

City Light used the City of Seattle's RSJI Racial Equity Toolkit to systematically understand the potential impacts of transportation electrification investments on racial equity and guide Plan development and implementation. City Light followed the steps below as part of the RSJI Racial Equity Toolkit.

- **Step 1: Set Outcomes**
- **Step 2: Involve Stakeholders + Analyze Data**
- **Step 3: Determine Benefit and/or Burden**
- **Step 4: Advance Opportunity or Minimize Harm**
- **Step 5: Evaluate**
- **Step 6: Report Back**

In the following sections, City Light outlines descriptions of and findings from each step.

STEP 1: SET OUTCOMES

In the first step of the RSJI Racial Equity Toolkit process, leadership communicates key community outcomes for racial equity to guide analysis. City Light's framework for racial equity outcomes is anchored in the City of Seattle's Equity and Environment Agenda framework and the Duwamish Valley

⁶ International Association for Public Participation. "IAP2 Spectrum of Public Participation." 2018. https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum_8.5x11_Print.pdf

⁷ Seattle Office of Sustainability and Environment. "Equity and Environment Agenda." <https://www.seattle.gov/Documents/Departments/Environment/EnvironmentalEquity/SeattleEquityAgenda.pdf>

Action Plan.^{8,9} City Light developed the following six racial equity outcomes to guide analysis and Plan development:

1. **Community Collaboration**
Environmental justice communities see their wants and needs reflected in City Light transportation electrification programs.
2. **Healthy Planet, Healthy Lives**
Reduce tailpipe emissions that impact local air quality and public health where environmental justice communities live, learn, work and play. Reduce carbon emissions that have a disproportionate burden on the most vulnerable populations and communities.
3. **Equitable Access**
Environmental justice communities learn about our transportation electrification programs, can readily understand and access materials and resources, see themselves reflected in communication and participate in and benefit from City Light’s transportation electrification programs.
4. **Community Assets**
City Light’s programs invest in infrastructure that are community assets so environmental justice communities can enjoy the benefits of transportation electrification in their current neighborhoods.
5. **Economic Opportunities and Youth Pathways**
City Light enables environmental justice communities to participate in and benefit from the local transportation electrification economy by providing youth, apprenticeship and job pathways with good labor standards and livable wages.
6. **Electricity Affordability**
Widespread transportation electrification increases revenue to put downward pressure on electricity prices.

STEP 2: INVOLVE STAKEHOLDERS + ANALYZE DATA

Step 2 of the RSJI Racial Equity Toolkit requires gathering information from communities and City Light staff on how the issue benefits or burdens communities in terms of racial equity. City Light conducted a comprehensive review of existing information to identify impacted communities, as well as how transportation electrification could benefit or burden environmental justice communities.

Environmental Justice Communities

⁸ Seattle Office of Sustainability and Environment. "Equity and Environment Agenda."

<https://www.seattle.gov/Documents/Departments/Environment/EnvironmentalEquity/SeattleEquityAgenda.pdf>

⁹ City of Seattle. "Duwamish Valley Action Plan" June 2018. http://greenspace.seattle.gov/wp-content/uploads/2018/06/DuwamishValleyActionPlan_June2018.pdf

City Light began with a demographic and geographic analysis and identified the following specific environmental justice communities in neighborhoods that could be impacted by transportation electrification investments within City Light’s service area:

- Beacon Hill
- Bitter Lake
- Bryn Mawr-Skyway
- Burien
- Central Area
- Chinatown-International District
- Delridge
- Haller Lake
- Lake City
- Rainier Beach
- Rainier Valley
- Renton
- SeaTac
- Shoreline
- South Park
- Tukwila
- University District
- White Center

Community and Stakeholder Involvement

City Light then reviewed relevant reports by regional stakeholders and community-based organizations related to transportation electrification, including:

- The **2018 Puget Sound Clean Air Agency Feasibility Study** identifying opportunities and barriers for low-income residents to purchasing EVs and designing a pilot to address them.
- The **2019 Puget Sound Clean Air Agency Electrifying Ride-Hailing in Seattle Report** examining the existing state of ride-hailing services electrification, including efforts by Uber and Lyft, along with local government and utility policies and incentives to encourage ride-hailing electrification.
- The 2020 Puget Sound Sage **Powering the Transition** report summarizing data and highlighting findings from listening sessions with community-based organizations, community surveys, and interviews with community leaders, union leaders and government partners about climate change, energy injustice and other systemic inequity.

To ensure community concerns and expertise were also part of the analysis, City Light reviewed reports and feedback from the following stakeholders, partners and community members:

- **Environmental Justice Committee (EJC).** In November 2016, March 2017 and May 2018, the EJC reviewed the work of the City of Seattle’s broader Drive Clean Seattle Initiative. In March 2017 specifically, the EJC brainstormed several program improvements, worked in groups to propose high-level recommendations and voted to prioritize the recommendations. These results were shared with stakeholders, including City Light’s EV charging pilot program teams.
- **Other City departments** engaging with communities on transportation electrification.
 - In 2019, City Light, the Office of Sustainability & Environment (OSE), Seattle Department of Transportation (SDOT) and the Department of Neighborhoods (DON) developed an

Engagement Principles Agreement to engage communities on transportation electrification in a consistent manner following a mutually agreed upon framework and best practices.

- Seattle City Light participated in the development of SDOT's 2018 *EVSE Roadmap for Shared Mobility Hubs*, which gathered input from communities on equitable deployment of EV charging stations in low-income communities and communities of color.
- City Light reviewed other RSJI Racial Equity Toolkit analyses conducted for City Light's Public and Residential EV Charging pilots, the City of Seattle's Drive Clean Seattle Initiative and SDOT's Electric Vehicle Charging in the Right-of-Way (EV CROW) program.
- **Other government partners** conducting equitable outreach, engagement and program development.
 - City Light consulted the *2016 King County Metro Guide to Creating Inclusive Campaigns*, which provides guidance to run a successful, inclusive marketing campaign in conjunction with the guidelines outlined in King County's Equity and Social Justice (ESJ) Strategic Plan.
 - City Light consulted King County's 2015 report on *The Determinants of Equity: Identifying Indicators to Establish a Baseline of Equity in King County* which provides data on low-income and community of color household transportation access and usage.
- **Community partner organizations:** City Light reviewed information and learnings from The Drive Clean Seattle-funded *Seattle Electric Vehicle Outreach and Education Campaign*. This campaign, led by ECOSS and Forth in 2018, focused on underserved communities in the greater Seattle area and engaged a wide spectrum of communities to educate them about EV benefits and gather information about their transportation situations.

City Light conducted direct outreach to communities about public charging, including community surveys, presentations and listening sessions at community events and meetings. City Light also reviewed community input gathered by the Seattle Office of Sustainability and Environment (OSE) during outreach events focused on the Drive Clean Seattle Initiative. These engagement opportunities are listed below.

Events & Meetings

- SEA-MAR; Fiestas Patrias South Park (2019 – OSE)
- The Coalition of Immigrants Refugees & Communities of Color (CIRCC); Eritrean Community Center (2019 - OSE)
- Hội Thánh Tin Lành Hy Vọng; Vietnamese Church (2019 - OSE)
- Magnuson Park Advisory Committee meeting (2018)
- Magnuson Park Open House (2019)
- Burien Open House (2019)
- West Seattle Transportation Coalition meeting (2019)
- Central Area Collaborative monthly meeting (2019)

- South Park Information and Resource Center (SPIARC) presentation (2019)
- SPIARC technology and education workshop (2018)
- Othello Station Community Action Team meeting (2018)
- Capitol Hill Community Council meeting (2018)
- Pike/Pine Urban Neighborhood Council meeting (2018)
- Capitol Hill Open House (2019)
- Big Day of Play (2018)
- Wallingford Community Council meeting (2018)
- Fremont Community Council meeting (2018)
- Gas Works Park Open House (2019)
- Central Area Collaborative discussion (2019)

Surveys

- West Seattle survey (2019)
- Madison-Miller neighborhood survey (2019)

Existing Racial Inequities

Through its analysis and outreach to understand transportation electrification impacts on environmental justice communities, City Light heard several concerns and observations as well as potential solutions offered by communities to mitigate for negative impacts and/or unintended consequences. These issues and solutions are summarized in the table below. City Light will be using this information and continuing to actively engage with communities as we begin to develop transportation electrification offerings and make infrastructure investments.

What We've Heard from Community	Potential Solutions from Community
Low-income communities and communities of color are more likely to depend on buses for most, if not all, of their transportation needs. ¹⁰	City Light should prioritize supporting charging infrastructure to electrify existing and expanded public transit including King County Metro buses, transit shuttles, Bus Rapid Transit routes, transit hubs, school buses, etc. ^{13,14}

¹⁰ King County. "The Determinants of Equity: Identifying Indicators to Establish a Baseline of Equity in King County." January 2015. https://www.kingcounty.gov/~media/elected/executive/equity-social-justice/2015/The_Determinants_of_Equity_Report.ashx

¹³ Puget Sound Sage. "Powering the Transition." 2020. https://www.pugetsoundsage.org/wp-content/uploads/2020/06/PugetSoundSage_PoweringTransition_June2020-1.pdf

¹⁴ Environmental Justice Committee. "EJC Feedback Summary on Drive Clean Seattle." July 2017.

What We've Heard from Community	Potential Solutions from Community
<p>People of color—especially African Americans and Native peoples—are much less likely to own vehicles than white households.¹¹</p> <p>Environmental justice communities want local governments to prioritize increasing public transit, reducing transit fares and electrifying public transit.¹²</p>	<p>Electrifying public transit would benefit communities who most rely on public transit by reducing air and noise pollution where impacts are greatest.</p>
<p>Many environmental justice community members are unfamiliar with electric vehicles.¹⁵</p> <p>EV advertising leaves out people of color.¹⁶</p> <p>Environmental justice community leaders feel very strongly about needing “education around electrification of transportation in their communities.”¹⁷</p>	<p>City Light should support targeted community-based education and outreach.¹⁸</p> <p>City Light should communicate in local languages and highlight communities of color, people and artwork in advertising.¹⁹</p> <p>EV education should include the importance of EVs, how to plan for charging an EV, what the costs will be of owning an EV and EV job opportunities.²⁰</p>

¹¹ King County. “The Determinants of Equity: Identifying Indicators to Establish a Baseline of Equity in King County.” January 2015. https://www.kingcounty.gov/~media/elected/executive/equity-social-justice/2015/The_Determinants_of_Equity_Report.ashx

¹² Puget Sound Sage. “Powering the Transition.” 2020. https://www.pugetsoundsage.org/wp-content/uploads/2020/06/PugetSoundSage_PoweringTransition_June2020-1.pdf

¹⁵ ECOSS, Forth and Drive Clean Seattle. “Seattle Electric Vehicle Outreach and Engagement Campaign.” 2018. <https://forthmobility.org/storage/app/media/Documents/seattleevoutreachecossfinalreport-1.pdf>

¹⁶ Environmental Justice Committee. “EJC Feedback Summary on Drive Clean Seattle.” July 2017.

¹⁷ Drive Clean. “Equity Outreach.” Office of Sustainability and Environment. 2019.

¹⁸ Puget Sound Clean Air Agency. “Facilitating Low Income Utilization of Electric Vehicles: A Feasibility Study.” December 2018. <https://www.pscleanair.org/DocumentCenter/View/3650/Community-Electric-Car-Sharing----Full-Report?bidId=>

¹⁹ Environmental Justice Committee. “EJC Feedback Summary on Drive Clean Seattle.” July 2017.

²⁰ Drive Clean. “Equity Outreach.” Office of Sustainability and Environment. 2019.

What We've Heard from Community	Potential Solutions from Community
Environmental justice communities are exposed to—and concerned about—poor air quality and suffer from geographic and social health disparities like increased rates of asthma and shorter life expectancy. ^{21,22}	City Light should prioritize environmental justice communities with poor air quality for investments. ²³
There is a lack of access to electric vehicle charging for multifamily units. ²⁴	City Light should provide at-home and near-home affordable charging solutions for multifamily residences.
Ride-hailing vehicles drive three to five times more distance than regular passenger vehicles and therefore electrifying them can have a large impact on tailpipe emissions. In addition, these vehicles are frequently driven by members of communities of color and targeted incentives can increase equitable access to transportation electrification. ^{25,26}	City Light should support charging infrastructure and fees specific to ride-hailing vehicles. ²⁷
Many environmental justice community members cannot afford (or have lending barriers) to purchase EVs, which are typically more expensive up front. ²⁸	Environmental justice communities support carsharing in areas not well served by

²¹ King County. "Current asthma among children King County, 2009-2013 average." King County Hospitals for a Healthier Community. January 2015. <http://www.kingcounty.gov/healthservices/health/data/~//media/health/publichealth/documents/indicators/ChronicIllness/CurrentAsthmaAmongChildren.ashx>

²² King County. "Life expectancy at birth King County, 2008-2012 average." King County Hospitals for a Healthier Community. January 2015. <http://www.kingcounty.gov/healthservices/health/data/~//media/health/publichealth/documents/indicators/LifeExpectancy/LifeExpectancy.ashx>

²³ Environmental Justice Committee. "EJC Feedback Summary on Drive Clean Seattle." July 2017.

²⁴ Office of Sustainability and Environment. "Racial Equity Toolkit." Drive Clean Seattle.

²⁵ PSCAA. "Electrifying Ride-Hailing in Seattle." September 2019. <https://www.atlasevhub.com/wp-content/uploads/2019/09/Electrifying-Ride-hailing-in-Seattle-WWCC-Report.pdf>

²⁶ Peter Slowik, Lina Fedirko, and Nic Lutsey, "Assessing ride-hailing company commitments to electrification," ICCT: February 2019, https://theicct.org/sites/default/files/publications/EV_Ridehailing_Commitment_20190220.pdf

²⁷ PSCAA. "Electrifying Ride-Hailing in Seattle." September 2019. <https://www.atlasevhub.com/wp-content/uploads/2019/09/Electrifying-Ride-hailing-in-Seattle-WWCC-Report.pdf>

²⁸ OSE. "Racial Equity Toolkit." Drive Clean Seattle.

What We've Heard from Community	Potential Solutions from Community
	public transit or for communities that cannot afford car ownership. ²⁹
Drivers for shared mobility companies, transportation network companies (TNCs) and truck drivers tend to be people of color, immigrants and refugees and could be negatively impacted by the transition from gasoline and diesel to electrified transportation. Internal combustion engine service jobs will also be reduced by transportation electrification. ^{30,31,32}	City Light should support transportation electrification job opportunities with good labor standards and livable wages for environmental justice communities, including hiring locally for charging infrastructure installation and maintenance, working with the Port, trucking and service industries on electrification initiatives and connecting environmental justice communities with training programs and opportunities. ^{33,34}
Without proper planning, a public charging station may contribute to increased housing costs, exacerbate community displacement and increase the risk of gentrification. ³⁵	City Light should utilize community-based decision making for public charging infrastructure to design and locate stations with community input that feel like assets. ³⁶

²⁹ Puget Sound Clean Air Agency. "Facilitating Low Income Utilization of Electric Vehicles: A Feasibility Study." December 2018. <https://www.pscleanair.org/DocumentCenter/View/3650/Community-Electric-Car-Sharing---Full-Report?bidId=>

³⁰ ECOSS, Forth and Drive Clean Seattle. "Seattle Electric Vehicle Outreach and Engagement Campaign." 2018. <https://forthmobility.org/storage/app/media/Documents/seattleevoutreachecossfinalreport-1.pdf>

³¹ Puget Sound Clean Air Agency. "Electrifying Ride-Hailing in Seattle." September 2019. <https://www.atlasevhub.com/wp-content/uploads/2019/09/Electrifying-Ride-hailing-in-Seattle-WWCC-Report.pdf>

³² Lyft. Economic Impact Report 2020. <https://www.lyftimpact.com/impact/drivers/expanded>

³³ ECOSS, Forth and Drive Clean Seattle. "Seattle Electric Vehicle Outreach and Engagement Campaign." 2018. <https://forthmobility.org/storage/app/media/Documents/seattleevoutreachecossfinalreport-1.pdf>

³⁴ Puget Sound Sage. "Powering the Transition." 2019. https://www.pugetsoundsage.org/wp-content/uploads/2020/06/PugetSoundSage_PoweringTransition_June2020-1.pdf

³⁵ Seattle Office of Sustainability and Environment. "2017 Drive Clean Seattle Implementation Strategy." June 2017.

³⁶ Seattle Department of Transportation. "EVSE Roadmap for Shared Mobility Hubs." November 2018. http://evsharedmobility.org/wp-content/uploads/2018/12/SDOT_EVSE_Roadmap_for_Shared_Mobility_Hubs.pdf

STEP 3: DETERMINE BENEFIT AND/OR BURDEN

Step 3 of the RSJI Racial Equity Toolkit involves analyzing how the policy, initiative, program, or budget issue will impact racial equity. City Light evaluated potential benefits as well as unintended consequences of transportation electrification investments and whether they aligned with the racial equity outcomes defined in Step 1.

Community Collaboration: City Light’s Transportation Electrification Strategic Investment Plan will shape transportation electrification work for the next four years. There is an opportunity to intentionally include environmental justice communities in program collaboration to ensure that communities can shape this work and help City Light maximize benefits for and minimize harm to environmental justice communities. A benefit of this approach is “greater power and ownership in the environmental and climate movement by people of color.”²⁷

Healthy Planet, Healthy Lives: Transportation electrification enables zero carbon emissions by using City Light’s carbon-neutral electricity. While this has global benefits in terms of preventing the existential threat of climate change, it has local benefits to environmental justice communities within City Light service area that are disproportionately vulnerable to climate change impacts such as flooding and heat waves. In addition, it enables zero tailpipe emissions, which improves local air quality.

Equitable Access: Seattle City Light’s Transportation Electrification Strategic Investment Plan is not just about developing solutions for passenger cars. It is a broad approach to supporting the electrification of transit, freight and other medium- and heavy-duty vehicles for people, goods and services. Program offerings, initiatives and education will support multimodal transportation options that impact (via air quality) or are used by environmental justice communities. A benefit of this approach is “the dissolution of the idea that electric vehicles are only for rich white people.”³⁷ It is important to note, however, that “an important unintended consequence of transportation electrification without good public policy is that the benefits accrue primarily to wealthy white people.”²⁷

Community Assets: Without proper planning, public charging installations may lead to gentrification and displacement of environmental justice communities through higher property values. With intentional planning, investments in transportation electrification can help uplift environmental justice communities by providing community assets that are designed by communities to drive economic development, education and clean air.

Economic Opportunities and Youth Pathways: City Light’s transportation electrification programs will invest in charging equipment that will require electricians for installation and maintenance. City Light will look for opportunities to hire Women & Minority Business Enterprise (WMBE) contractors for this

³⁷ Office of Sustainability and Environment. “Racial Equity Toolkit.” Drive Clean Seattle.

work. Another benefit of transportation electrification investment is “more money circulating in local economies as fuel dollars are kept at home rather than being sent to out-of-state oil companies.”²⁷ In a conversation with stakeholders, OSE found that, “one unintended consequence [of these programs is] the eventual decrease in the number of jobs which service internal combustion engine vehicles. Electric vehicles require much less maintenance than a gasoline or diesel vehicle.”²⁷

STEP 4: ADVANCE OPPORTUNITY OR MINIMIZE HARM

Step 4 of the Racial Equity Toolkit includes developing strategies to advance racial equity and/or minimize unintended consequences. To ensure that we deliver on our racial equity outcomes, City Light has identified strategies specific to transportation electrification investment for each outcome. They include:

Community Collaboration: City Light will include community voices in future program design and implementation processes through intentional and targeted stakeholder engagement. City Light will look to communities to identify additional transportation electrification portfolio offerings and prioritize them, ensuring we most effectively address environmental justice communities’ needs. City Light will also work with these communities to collaboratively design programs that impact their communities and develop solutions that better support them.

Healthy Planet, Healthy Lives: City Light will explore opportunities to create stronger partnerships and align equity initiatives across regional organizations that provide services to environmental justice communities to uplift race and social justice transportation electrification initiatives and improve public health.

Equitable Access: City Light “will seek to understand the general transportation needs of all community members.”³⁸ This will include discussions around which transportation electrification-related investments within City Light’s sphere of influence could best improve overall access and mobility. City Light will also explore opportunities to connect transportation electrification programs to environmental justice communities.

Community Assets: City Light will design programs with displacement risk in mind by connecting with community stakeholders early to consult on displacement concerns prior to site selection and exploring program design elements to limit displacement.

Economic Opportunities and Youth Pathways: City Light will engage environmental justice communities in transportation electrification and support them through the market transformation

³⁸ Seattle Department of Transportation. “EVSE Roadmap for Shared Mobility Hubs.” November 2018. http://evsharedmobility.org/wp-content/uploads/2018/12/SDOT_EVSE_Roadmap_for_Shared_Mobility_Hubs.pdf

process. This may include hiring locally from these communities and partnering with industries that heavily employ environmental justice community members on transportation electrification initiatives.

STEP 5 & 6: EVALUATE AND REPORT BACK

The final steps of the RSJI Racial Equity Toolkit include tracking and evaluating impacts on communities of color over time and reporting back on progress and lessons learned. City Light will be sharing information learned from this analysis and any unresolved issues with leadership and will continue to communicate with and involve stakeholders, documenting any unresolved issues.

City Light recognizes that authentic and successful community engagement and ability to make meaningful progress toward racial equity outcomes will be contingent on dedicating the time and resources needed for long-term relationship building. This will require buy-in from the highest levels of leadership both within City Light and on the City Council, adequate time and funding for engagement, as well as direction to move forward on policy and process changes that enable equitable transportation electrification investments.

Seattle City Light will develop program- and investment-specific metrics to evaluate progress on each of its racial equity outcomes, gathering stakeholder input first about what meaningful and appropriate metrics should be. City Light will also share lessons learned from community outreach efforts and ongoing inequities related to transportation electrification with other City departments and external partners.



SEATTLE CITY LIGHT

TRANSPORTATION ELECTRIFICATION STRATEGY

BY LYNN DANIELS AND BRENDAN O'DONNELL





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ABOUT ROCKY MOUNTAIN INSTITUTE

Rocky Mountain Institute (RMI)—an independent nonprofit founded in 1982—transforms global energy use to create a clean, prosperous, and secure low-carbon future. It engages businesses, communities, institutions, and entrepreneurs to accelerate the adoption of market-based solutions that cost-effectively shift from fossil fuels to efficiency and renewables. RMI has offices in Basalt and Boulder, Colorado; New York City; the San Francisco Bay Area; Washington, D.C.; and Beijing.

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EXECUTIVE SUMMARY

The market and policy landscape for transportation electrification is changing rapidly. Every month, automakers are announcing new electric models. Private developers are investing heavily in charging stations. In the heavy-duty sector, improving technologies and government targets are accelerating the electrification of buses, ferries, freight, and fleets. With such rapid change in this space, Seattle City Light seeks to refresh its approach with a clearer understanding of how best to play an enabling role and respond to opportunities as they emerge, while simultaneously aligning with organizational priorities and the broader mobility goals of the City of Seattle.

This work builds on City Light's initial efforts. In 2015, the utility completed a study with E3 Consulting to understand the effects of electric transportation. The study found that there is a net benefit for transportation electrification and that City Light's distribution system can largely handle the increase in projected transportation load. Based on these results, the utility has invested in two pilot programs for residential and public charging.

However, as adoption scales, so too must City Light's market presence and strategic vision. To address this need, this paper examines four primary issues: (1) values framework—the core priorities for City Light that will guide its investments; (2) market intelligence—the state of the electric mobility market; (3) impact to the business—the nuanced impacts of new transportation loads; and (4) recommendations—the interventions that City Light should pursue.

To identify core values, Rocky Mountain Institute (RMI) facilitated a workshop and focused working groups with City Light staff, resulting in three core values—grid, environment, and equity. City Light's goal is to have a portfolio of programs that reflects balance: some may combine all three values while some will be more targeted.

The market intelligence focused on understanding five electric mobility segments: personally owned vehicles, medium-duty trucks, heavy-duty trucks, buses, and shared mobility. Across all segments, battery price is the primary driver of initial cost. Vehicle costs are soon to reach a tipping point as batteries reach \$150/kWh in 2019 and manufacturers produce a growing number of vehicle models. Similarly, total cost of ownership will be heavily sensitive to fuel price.

The business impact analysis addressed how scale in these market segments will impact City Light's system. This study updated projections and reconfirmed that personal electric vehicle adoption and distributed fast charging are not anticipated to pose much risk for City Light to accommodate given its current grid capacity. However, spot loads associated with electrified buses or medium- and heavy-duty trucks have the very real potential to overwhelm available capacity and require grid upgrades. As electric bus and truck technologies rapidly improve, these segments are likely to electrify quickly because they are responsive to the favorable economics of electricity as fuel.

Given this state of the mobility market and City Light's core values, we provide the following recommended interventions for City Light to pursue.

EXHIBIT 1

Key Strategies for the Electric Transportation Market

<p>Invest in charging infrastructure with emphasis on universal access and expanding coverage</p> 	<p>Continue to drive the robust development of public charging.</p> <ul style="list-style-type: none"> • Deploy City Light-owned direct current fast chargers (DCFCs). • Explore make-ready investments or equipment incentives to support private DCFC deployment. <p>Support expanded residential and workplace charging with an emphasis on multiunit dwellings and underserved communities.</p> <ul style="list-style-type: none"> • Target customers for which cost and feasibility of charging are significant barriers. • Provide incentives and technical expertise for residential and workplace charger installation. <p>Support or invest in charging infrastructure for high-mileage applications, including carsharing and ridehailing.</p>
<p>Develop new rates and improve customer service for the transportation market</p> 	<p>Pursue rates that meet the needs of electric transportation customers.</p> <ul style="list-style-type: none"> • Explore and pilot transportation-specific rate designs. • Understand the impact of demand charges on large customers and DCFC operators. <p>Improve core City Light business processes for customers investing in charging.</p> <ul style="list-style-type: none"> • Create a streamlined and transparent interconnection and service upgrade process. • Consider new queues for electric vehicle customers. • Develop digital content to help customers make informed decisions. <p>Investigate the viability of managed charging.</p> <ul style="list-style-type: none"> • Establish standards for residential smart charging. • Explore demand-response programs.
<p>Prepare for heavy-duty electrification</p> 	<p>Support the aggressive electrification commitments of partner agencies and large customers.</p> <ul style="list-style-type: none"> • Partner directly with King County Metro, the Port of Seattle, and Washington State Ferries. • Develop a deep expertise of customer needs and respond with a broad suite of solutions—responsive rates, incentives, grid infrastructure, technology demonstrations, and siting analysis. • Proactively plan for large loads. <p>Anticipate how access to charging will influence urban freight and fleet markets.</p> <ul style="list-style-type: none"> • Monitor key market tipping point metrics and engage with local fleets. • Develop packaged charging solutions, including financing, make-ready investments, smart charging, and charging depots.

SEATTLE TRANSPORTATION ELECTRIFICATION—BACKGROUND



SEATTLE TRANSPORTATION ELECTRIFICATION—BACKGROUND

Seattle is experiencing the first wave of an electric transportation awakening. It is among the top metro areas outside of California with more than 8,000 registered electric vehicles (EVs),¹ representing 5% of new vehicle sales. Moreover, policy and environmental goals have moved government agencies and businesses to consider electrification of heavy-duty vehicles, such as buses, freight, and ferries.

Seattle City Light has a vested interest in understanding this market opportunity, thereby leveraging its abundant carbon-neutral electricity. In 2015, City Light completed a study in partnership with E3 Consulting that addressed the role of utilities in accelerating this market and the potential costs and benefits to City Light's system.² The study's three primary findings were:

1. There is a net benefit to the utility system of roughly \$1,250 per passenger EV over its lifetime. There is also a positive benefit from buses and other modes of heavy-duty transportation.
2. City Light's distribution network can largely accommodate the increase in load from considerable adoption of passenger EVs, although extremely large spot loads like bus-charging bases will remain highly site specific.
3. There is very strong customer demand, particularly for electrification of the shared transportation sector.

Based on this work, City Light's initial role has been to increase access to its carbon-neutral electricity through enabling charging infrastructure, including a commitment to two early market pilot programs: installing and owning 20 DC fast-charging stations and a residential pilot leveraging a lease model to install 200 home charging stations.

Since this initial study, the market and policy landscape has changed quickly, requiring City Light to broaden its approach. The following examples illustrate the pace of change in Seattle's electric transportation market:

- Washington state's passenger vehicle market continues to see strong growth, with 2016–2017 year-over-year market share increasing 31%.³ To support this, private charging developers, with support from the Washington State Department of Transportation (WSDOT) and the Seattle Department of Transportation (SDOT),⁴ are investing heavily in EV charging stations.
- Seattle's major public transit agency, King County Metro (Metro), has established a goal to fully electrify its fleet of more than 1,400 buses by 2040.⁵ To date, Metro operates 11 all-electric buses and has plans to procure 120 more by 2020.
- In 2017, the Port of Seattle established a strategic objective to be the greenest, most efficient port in North America, including carbon neutrality by 2050 on both direct and indirect sources of greenhouse gas emissions (GHGs).⁶ Supporting this effort, the Port has implemented a Clean Truck program, as a partner in the Northwest Seaport Alliance.⁷
- The City of Seattle has set an ambitious target of 30% EV adoption, along with a commitment to a fossil-fuel-free municipal fleet, both by 2030.⁸
- State legislation, specifically HB 1512 and potential future fuel standards, creates significant financial mechanisms for clean transportation investment from the utility sector.
- The city has committed to environmental equity through its Race and Social Justice Initiative,⁹ including a particular focus on transportation equity.¹⁰ As a city department, City Light has deepened its focus on historically marginalized communities and racial equity in its decision-making process.

In addition to changes in the market, City Light has been tasked by Seattle City Council to rethink its rate design and revenue requirement, to be completed by April 2019.¹¹ Key to this effort will be identifying

both new revenue opportunities and cost-reduction opportunities for upgrades to City Light’s system.

Therefore, City Light needs a clear vision for how the utility can play an enabling role that is aligned closely with the broader mobility goals of a rapidly developing city. City Light has partnered with Rocky Mountain Institute to investigate the changing transportation electrification landscape and identify a strategic vision. This effort includes team members from across the City Light organization as well as members from the Seattle Office of Sustainability & Environment (OSE) SDOT. This report identifies a set of interventions to best position City Light to take advantage of the opportunity that transportation electrification represents while minimizing risks of under or overinvesting.

OBJECTIVES OF THIS REPORT

- Establish a values framework to guide City Light strategy.
- Assess the electrified transportation market and policy landscape.
- Identify how transportation electrification will impact City Light.
- Recommend high-impact interventions for City Light to pursue.



2

VALUES FRAMEWORK



VALUES FRAMEWORK

Electric transportation has a sweeping set of potential benefits.¹² For City Light, designing and implementing programs, partnerships, and policies requires determining which are most important. In this section, we establish a values framework to ensure that market interventions are aligned to these values on behalf of City Light’s customers.

We have identified three core values for City Light—grid, environment, and equity. We define each below and highlight how they can be measured. Recognizing that not all value can be quantified, we highlight possible metrics below to consider and identify data needed to assess impacts.

The goal for City Light is to have a portfolio that reflects balance. Many programs will combine all three values, but some will be targeted. Certain programs might heavily prioritize equity, while some might focus on value to the utility system. However, each value is important and should be reflected in a portfolio approach.

1. GRID

Electric transportation at scale has the potential to bring great value to the electric grid. Vehicle charging can be a highly flexible and shiftable load. As such, it can make better use of the distribution system and integrate more variable renewable generation by matching supply with demand. However, without direction from City Light, these potential sources of value could become risks that ultimately require higher levels of infrastructure investment.

A City Light intervention that demonstrates grid benefit will:

- Ensure that transportation load is flexible and well aligned to the operation of the power system
- Avoid, defer, or minimize infrastructure upgrade costs
- Improve reliability and resiliency
- Deliver revenue sufficient to cover costs to serve transportation customers

Possible metrics to ensure benefits to City Light’s grid and ratepayers include:

- Electricity demand and load from electrified transportation
- Available distribution capacity at each feeder
- Utilization of available distribution capacity
- Cost recovery/return on City Light investment

2. ENVIRONMENT

The City has established a goal to be carbon-neutral by 2050. Because transportation emissions account for two-thirds of GHG emissions, the transportation sector must be heavily electrified to meet this commitment. This will require a broad focus on electrifying many modes of transport—fleets, freight and goods movement, personal and shared mobility, marine—to replace petroleum with City Light’s carbon-neutral electricity. In addition to carbon and other greenhouse gases, City Light should emphasize pollution from particulates.

A City Light intervention that is beneficial to the local environment will:

- Deliver the largest potential GHG savings benefit
- Prioritize high-usage vehicles and high-capacity modes to increase overall transportation system efficiency
- Positively impact areas with poor air quality or a history of significant environmental impacts

Possible metrics to evaluate and track to ensure benefits to the local environment include:

- GHG emissions reductions
- Electric passenger and freight vehicle miles traveled
- Air quality measures (e.g., particulate matter, ozone), including long-term and immediate exposure to emissions
- Adoption of electric vehicles in fleet and commercial applications

3. EQUITY

Though the City of Seattle has made great strides to be green, it faces the same challenge as the broader US environmental movement: structural and institutional racism continue to keep environmental benefits from reaching all people. It is primarily white, upper-income communities that shape and benefit from environmental policies, programs, and projects; and, it is disproportionately communities of color that are impacted by environmental hazards such as poor air quality and increased climate pollution. Electrified transportation has the potential to enable less costly transportation options and provide economic benefits to marginalized communities. As part of Seattle's commitment to eliminate racial disparities and achieve racial equity, the City launched the Race and Social Justice Initiative (RSJI) in 2004. City Light has additionally committed to advance racial and social justice through its Environmental Equity program.

Social justice is both process and outcome. To that end, an equitable City Light intervention will:

- Expand opportunity and access for underserved communities so that all people benefit from clean transportation
- Promote racially inclusive collaboration, ensuring that all communities are engaged in and have opportunities to lead the decision-making process to set environmental priorities
- Affect systemic change through institutional reform and changes to policies and practices
- Assess community conditions and the desired community impact using citywide tools such as the Racial Equity Toolkit

Possible metrics to evaluate and track to ensure equitable outcomes in underserved and marginalized communities include:

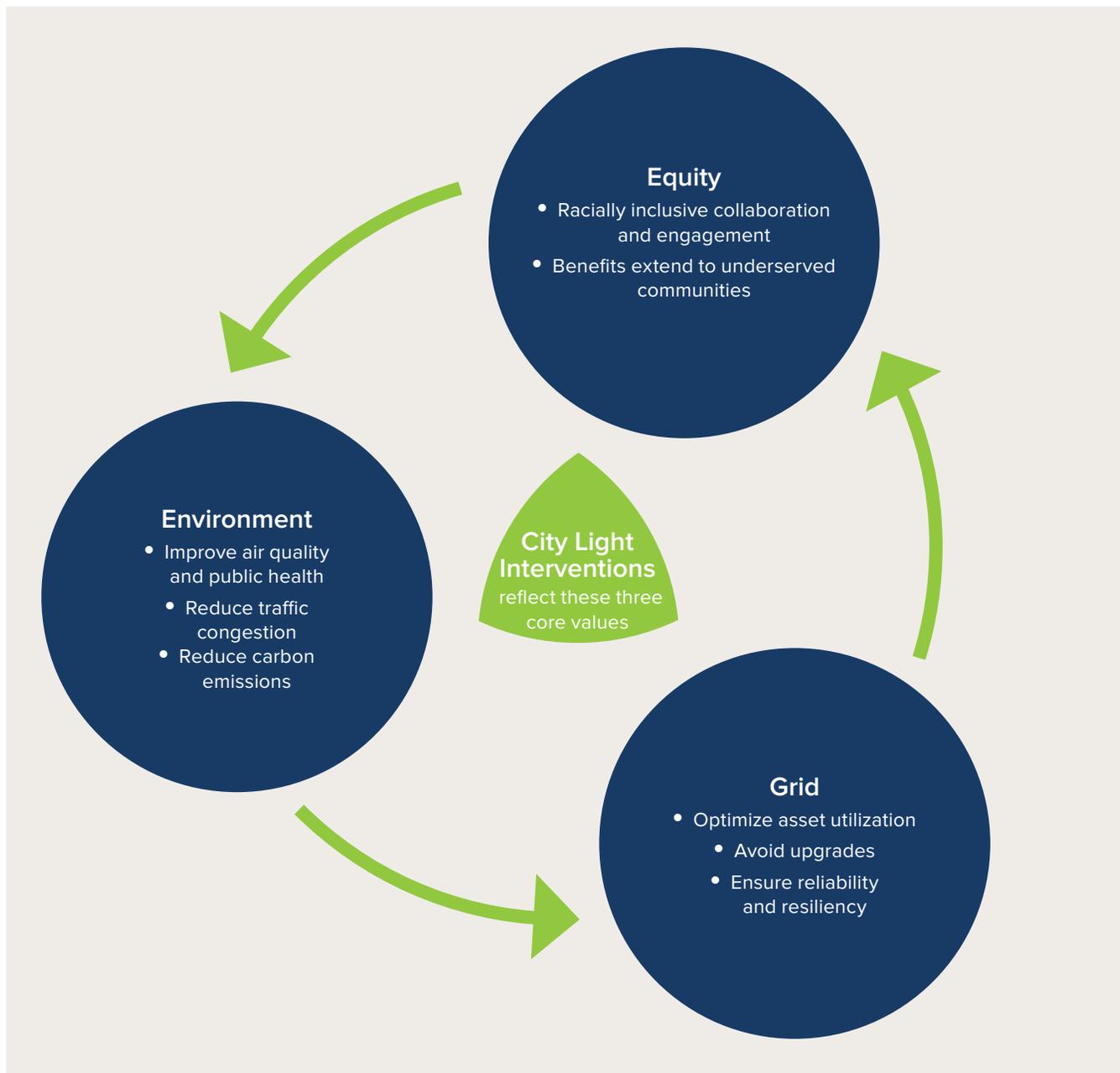
- Air quality measures in environmental justice communities
- Access to electrified transportation modes and charging infrastructure, for example number of residents within a certain distance of public charging
- Number of EV owners in environmental justice communities

BENEFITS TO THE CITY OF SEATTLE

In addition to these three core values, Seattle seeks to maintain its leadership in transportation electrification, ensuring that its clean hydropower is an accessible benefit to all citizens. Positioned to be the largest carbon-neutral transportation fuel provider in the state, City Light can be a catalyst for change for other communities and utilities. Through well-designed, equitable interventions that benefit its grid, ratepayers, and the local environment, City Light can transform the transportation sector through leadership and demonstration.

EXHIBIT 2

City Light's Core Values



3

MARKET INTELLIGENCE



MARKET INTELLIGENCE

In this section, we examine the electric transportation market in 2018 with projections to 2030 in order to identify:

- City Light partnership opportunities
- Interventions where City Light’s investment is essential and can be leveraged to have maximum impact
- Interventions where City Light’s investment is not needed or duplicative
- Ways City Light can improve EV charging network interoperability—the ability for City Light-owned charging stations to be used by any electric vehicle—and the customer experience

This section will look at trends and forecasts for adoption in five key market segments:

1. Personally owned passenger electric vehicles
2. Medium-duty electric trucks
3. Heavy-duty electric trucks
4. Electric buses
5. Electric, driverless mobility services

EXHIBIT 3

The Five Key Market Segments Examined



PERSONALLY OWNED CARS

The market for personally owned light-duty electric cars is approaching a tipping point where adoption could begin to increase rapidly: 2017 marked the first year with more than 1 million new EV sales globally, with 66% of those being battery electric.¹³ EV sales growth in the United States increased in 2018 with a compound annual growth rate of 81% despite domestic fuel prices remaining low and changes to the policy environment.¹⁴

The global battery-electric vehicle market is likely to continue its growth as automakers respond to more aggressive emissions targets and diesel bans in Europe and China, with global sales forecasts ranging from 5.7 million to 30 million units sold annually by 2030.¹⁵ Several market factors are shaping US demand for electric cars:

- **Electric vehicle model availability.** In the United States, the vast majority of available EVs—and thus sales—are small or midsize models (Tesla Model 3, Tesla Model S, Chevrolet Bolt, and Nissan Leaf are the highest sellers) with very few SUV or crossover options. In contrast, 45% of overall car sales in the United States are crossovers and SUVs. This is important because buyers will likely consider an EV purchase only if the vehicle fits their preferences and lifestyle. As a result, automakers have committed to electrify up to 289 vehicle models¹⁶ (including many crossover and SUV models) and invest at least \$90 billion in EV technologies over the next several years.¹
- **Upfront cost.** Lithium-ion battery pack costs continue to drop, averaging \$176/kWh in 2018 and projected to reach \$150/kWh or less in 2019,¹⁷ resulting in the upfront costs of EVs reaching parity with internal combustion engine vehicles on an unsubsidized basis by 2024.¹⁸ That being said,

parity in cost is insufficient to motivate customers to change technologies and incentives will continue to be an important policy lever.

- **Charging infrastructure.** Availability of public charging infrastructure could become a bottleneck that stalls market growth. Fortunately, the range of new EV models is typically greater than 200 miles per full charge, helping to eliminate range anxiety as a barrier to adoption; and roughly 60% of US households are detached single-family homes where home charging will be the most economical charging option.¹⁹ However, public charging will be driven by several needs: long-distance trips that exceed a vehicle's range; dense urban centers with limited parking space; and multiunit dwellings, where home charging is typically unavailable even with parking.

Because personally owned vehicles (POVs) are most likely to see strong adoption in the near term, the question of *how* they are charged—Level 2 versus direct current fast chargers (DCFCs)—will be of paramount interest for City Light and other utilities. In terms of charging speed, Level 2 charging will likely meet many EV owners' charging needs at home or workplace in the near term and the majority of chargers deployed to date have been Level 2. Moving forward, significant effort is focused on DCFCs, which have much higher installation and operating costs. Tesla, in particular, has built a nationwide network of fast charging stations for its customers, and EVgo recently installed its 1,000th fast charger. However, the national network of public chargers has large gaps.²⁰

Two important trends point to a greater need for both public and fast charging options: (1) to support

¹ Mercedes-Benz AWD electric SUV EQC will be available in the United States in 2020; Jaguar's i-Pace SUV in 2019; Tesla is shipping its Model X 75D; Audi is taking reservations for its electric E-Tron SUV; BMW announced its all-electric iX3 SUV for 2020. All models are expected to have more than 200 miles of range, charge up to 150 kW, and be priced in the \$70K–\$80K range.

new EV models with larger batteries and range, many drivers will demand a charging experience similar to refueling at a gas station (especially for cross-country travel where rapid recharging will be necessary); and (2) to enable EV adoption at scale for multiunit dwellings, the need for publicly available infrastructure will be all the more essential, since these households are less likely to have access to garage or off-street parking.ⁱⁱ

In addition to third-party charging infrastructure operators—such as ChargePoint, EVgo, Blink, Tesla, Greenlots, and SemaConnect—more utilities are beginning to invest in public charging infrastructure. California’s three largest investor-owned utilities (SDG&E, SCE, and PG&E) have submitted plans to support 60,000 Level 2 chargers and 234 DCFCs.²¹ Significant additional investment is needed over the next decade in public charging to meet demand, upward of 20 million chargers at a cost of \$10 billion, with about one-third being public.²²

- **Policy.** Policies can significantly impact the adoption of EVs in the United States, particularly by reducing the purchase costs for consumers, requiring public agency fleets to buy EVs, setting state targets for EV adoption, and encouraging and/or requiring automakers to manufacture more zero-emission vehicles. In the near term though, the US Environmental Protection Agency is likely to relax its vehicle emission standards; several states, including Washington, have joined California’s

lawsuit to preserve their right to set higher emissions standards.²³ The US federal government offers a tax credit up to \$7,500 for an EV purchase, but the three automakers representing the majority of US sales (Tesla, GM, and Nissan) are reaching the number of vehicles eligible for the full tax credit.²⁴ Additionally, many states have tax credits or rebates available, including Washington’s sales tax exemption reauthorized in 2019 by SHB 2042.²⁵

As these factors shape the US market, individual states are taking the lead in accelerating EV adoption. Washington state has the third-highest total annual sales and share of new vehicle sales that are electric with 7,068 EVs sold in 2017. With the majority of these sales in Seattle, the city is in a leadership position for car electrification. Further, Seattle’s electricity–gasoline price differential is more favorable to EVs: Seattle has one of the lowest electricity rates in the nation (~\$0.111/kWh) and the third-highest gasoline prices in the nation (\$3/gallon in January 2019);²⁶ this improves operational cost savings for EV owners, resulting in average annual savings of \$1,250 per vehicle.ⁱⁱⁱ Washington state ranks fourth in absolute terms of public charging availability with 1,861 chargers, 9% of which are DCFCs.²⁷

Using several years of EV registration data from Washington’s Department of Licensing, City Light has developed a methodology to create business-as-usual (BAU), aggressive, and conservative forecasts for the adoption of personally owned all-electric vehicles in Seattle.^{iv} As a standard approach for modeling

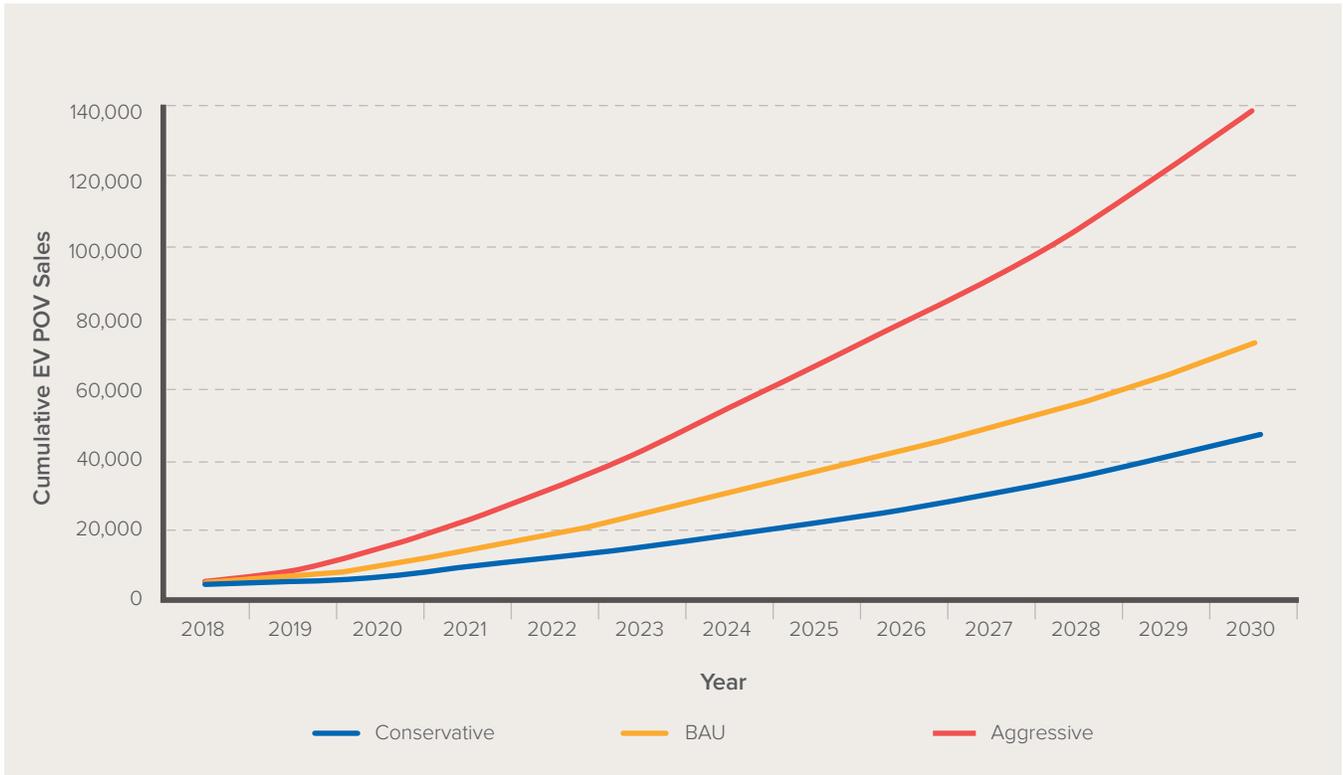
ⁱⁱ Unlike single-family homes, multiunit dwellings have a split incentive since a property manager would likely need to install, own, and operate on-site charging infrastructure. Property managers are unlikely to invest unless it puts them at a competitive advantage. This chicken-and-egg problem will perpetuate the demographic disparity in EV ownership as lower-income individuals live disproportionately in multiunit dwellings.

ⁱⁱⁱ Assumes 3.5 miles/kWh for EV and 25 miles/gal for gasoline vehicle, for 12,000 miles traveled.

^{iv} We explore only battery-electric vehicles as these will have a more significant impact on City Light’s grid than plug-in hybrids. Recent announcements by GM and other market trends also indicate that, as more EV models are produced, consumers will shift away from hybrids (<https://www.greentechmedia.com/articles/read/why-general-motors-is-ditching-the-chevy-volt#gs.9=31pWo>).

EXHIBIT 4

EV POV Forecasts for Seattle City Light Service Territory



the adoption of new technology, City Light uses a generalized Bass diffusion model based on historic adoption rates of comparable technologies.^v The resulting forecasts are shown in Exhibit 4. With the most conservative set of assumptions, City Light will see a nearly 10-times increase in the number of POVs charging within its service territory, to 50,000 vehicles

by 2030. Using more aggressive assumptions, adoption may reach 140,000 vehicles by 2030. With that number of vehicles representing new annual load ranging from 117,000 MWh to 344,000 MWh, the charging behavior of the owners (e.g., off-peak at-home charging versus fast charging during peak hours) will be critically important.

^v For the conservative case, City Light uses the historic Seattle EV market growth rate of 1.7%; for the aggressive forecast, the adoption rate of diesel cars in Europe; and the BAU forecast uses parameters averaged across the historical EV, hybrid, and European diesel car adoption. Another key input is price elasticity: City Light assumes a 4% increase in adoption for every 1% decrease in EV price.

MEDIUM- AND HEAVY-DUTY TRUCKS

Battery-electric medium- and heavy-duty trucks (MDT and HDT)^{vi} are either on the road or nearing production today and are increasingly viable as a replacement for diesel commercial vehicles. Compared to electric cars, these vehicles have larger batteries and will likely charge in more concentrated geographical locations, resulting in higher potential impact on City Light's distribution grid. But, adoption of electric trucks is at a very early stage and will vary greatly depending on the specific use case for each vehicle. We have identified several important market factors that will influence truck electrification:

- **Total cost of ownership.** Fleet purchasing decisions, in contrast to personal vehicles, place greater weight on economics; in particular, whether the total cost of ownership (TCO) for an electric truck is less than that of a diesel. TCO is a function of many variables, including:
 - battery cost, density, and durability
 - production scale of electric trucks, since truck initial costs will fall as production scales up
 - the differential between electricity and diesel costs
 - use case (for example, short-haul or long-haul routes)
 - charging needs (for example, whether or not fleets can manage charging to minimize electricity costs)
 - costs to upgrade grid infrastructure borne by fleet operators
- **Charging infrastructure.** The availability of charging infrastructure will constrain which use cases are economically viable. For example, long-haul applications where daily miles traveled exceed battery capacity mean that trucks must fast charge on-route. To be viable, long-haul applications require a network of truck “mega-chargers”²⁸—a technology still in development—to enable these use cases. By contrast, short-haul trucks where battery size is

matched to daily miles traveled can return to a centralized depot for overnight charging.

- **Policy and regulatory environment.** Policies such as diesel bans and fuel economy mandates can drive adoption if they are well designed. As a cautionary tale, the Port of Seattle adopted emissions standards in 2008 that would require all drayage trucks to have a model year 2007 or later engine by 2018.²⁹ Currently, this emissions standard requirement is at 53% compliance, in large part because independent truck operators cannot afford new trucks (whereas large fleet operators have already upgraded their trucks). It is important that policies designed to support truck electrification take into consideration the actual use cases and ownership models to ensure greater compliance and success.
- **Fleet risk tolerance.** Larger fleets may adopt electric truck technologies more quickly because owners may have greater capital availability than smaller fleets and independent operators. However, the industry is generally conservative when adopting new technologies, often requiring established credibility through demonstrations. As such, truck electrification is likely to begin with small-scale production and pilots.
- **Model availability and manufacturer response.** Many electric trucks today are being produced on a small scale by start-ups whereas fleets may prefer that traditional manufacturers produce the vehicles.³⁰ As such, model availability will likely constrain adoption in the near term even if total cost of ownership reaches parity with diesel trucks for many use cases. Many traditional manufacturers are focusing on electric light-duty trucks due to the similarity of technology to passenger vehicles though many have announced plans to produce medium- and heavy-duty electric trucks.

^{vi} For this report, medium-duty trucks are considered Class 3–7 vehicles, with a gross vehicle weight rating from 10,001–33,000 pounds. Heavy-duty is considered Class 8 with gross vehicle weight rating of greater than 33,000 pounds.

What these factors point to is that electric trucks will be viable for certain use cases earlier than others. In particular, MDTs and HDTs with short-haul local and regional routes represent the best early adopter business case to electrify: they carry predictable weights over shorter, local routes; they return to the same distribution center at the end of the day where they can be charged overnight; and battery size can be matched to typical route length to minimize upfront costs. Long-haul routes, especially those served by HDTs, may be the last segment to electrify due to weight and range constraints. Trucks on typical long-haul diesel routes drive 200–500 miles a day, requiring on-route mega-chargers along major freight corridors.

Seattle is in a unique position to lead on truck electrification. In general, US diesel cost is low, meaning TCO parity is more difficult to obtain for electric trucks.³¹ Seattle’s comparatively low electricity prices, however, shift the electricity-diesel cost differential in favor of electric trucks and may drive greater local adoption compared to the rest of the United States.

Forecasts for the adoption of electric MDTs and HDTs are fairly speculative today and serve primarily to highlight a range of possible outcomes for which Seattle City Light should be prepared. Our approach estimates business-as-usual (BAU), aggressive, and conservative scenarios for the percentage of MDT and HDT truck sales that will be electric by 2030 based on the following:

- NACFE and McKinsey estimate a range of dates when TCO parity with diesel will be reached.³² We use this range as the starting point for when sales begin, with BAU adoption beginning at the middle of the range.
- We estimate a range of 10%–20% of MDT sales and 0%–2% of HDT sales in 2030 will be all-electric, based on the highest and lowest sales projections from several sources.³³
- We assume linear growth in sales.

PORT AND FERRY ELECTRIFICATION

The Northwest Seaport Alliance (NWSA)—comprised of the Ports of Seattle and Tacoma—established a goal to reduce diesel particulate matter by 80% by 2020 and greenhouse gas emissions by 15% by 2020. With more than 4,400 trucks representing 28% of GHG emissions at the Ports, cleaner trucks and cargo-handling equipment are a core component of that strategy. As of 2016, 40% of trucks were model year 2007 or newer, meeting emissions standards.³⁴ Although currently there are no explicit goals for truck electrification, City Light should stand ready to lead or support any NWSA programs to electrify vehicles at the Port of Seattle.

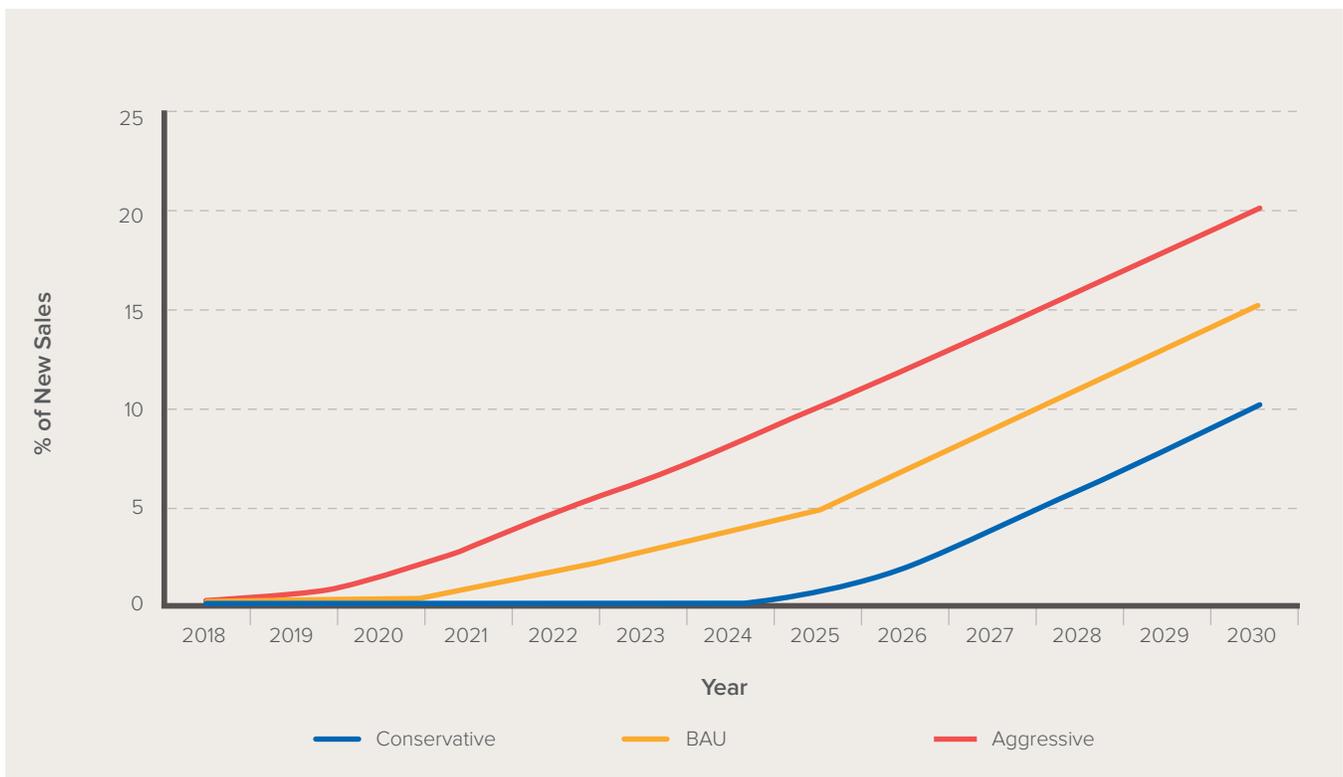
Ferry electrification is poised to move forward in 2019. The Washington State Department of Transportation ferry system is the largest in the nation and represents more than 50% of air pollution from harbor vessels. In parallel with the installation of charging infrastructure, a phased approach will enable all ferries to run fully on electric power by 2023. The power and energy requirements for these vehicles—an electric ferry launched in Norway was equipped with a 1 MWh battery with 1.2 MW fast charging—will require close partnership with City Light to ensure a successful fleet transition.

The most aggressive assumptions for medium-duty trucks, based on Washington State Department of Licensing data for new commercial vehicle registrations,^{vii} suggest 1,300 electric medium-duty trucks operating by 2025 with more than 4,000 in operation by 2030. The most conservative set of

assumptions results in negligible adoption through 2025 growing to 1,100 medium-duty electric trucks operating by 2030. For heavy-duty trucks, all forecasts project a negligible number of operating vehicles through 2030.

EXHIBIT 5

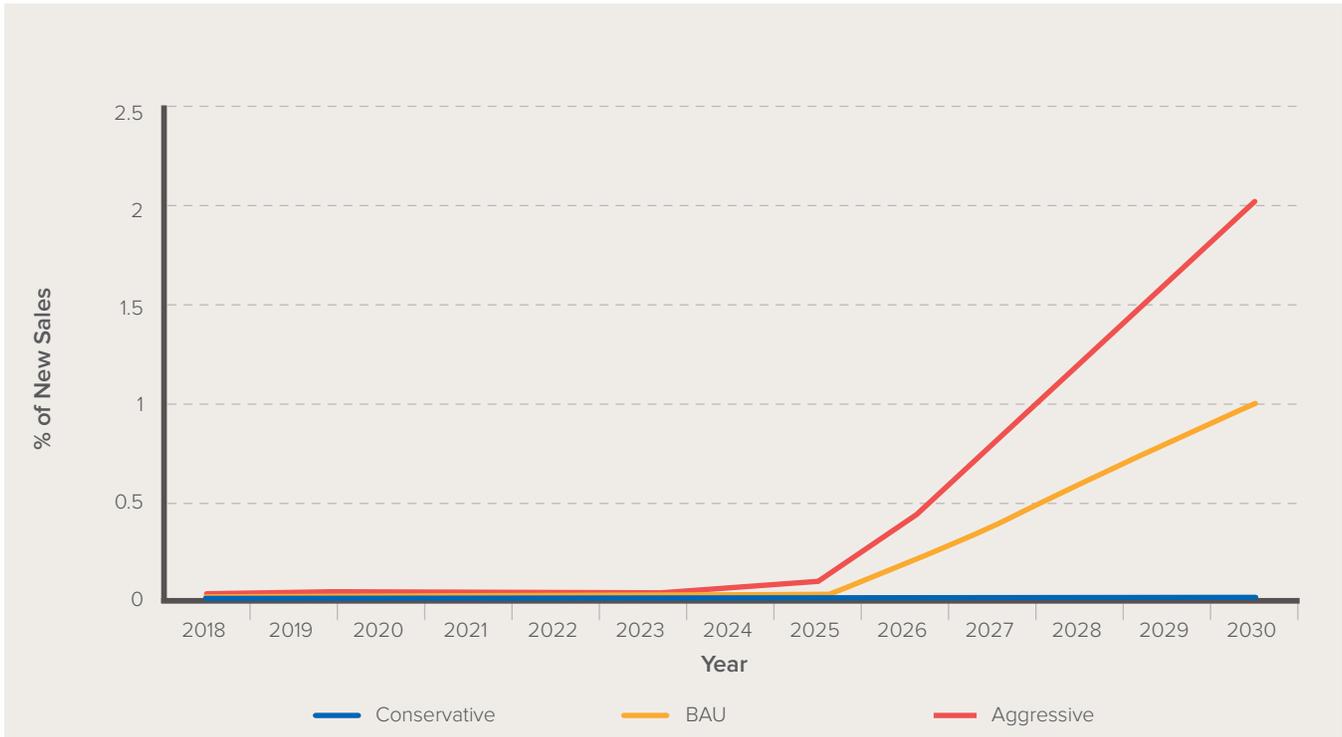
Forecasts for the Adoption of Medium-Duty Trucks in the Seattle City Light Service Territory



^{vii} Washington State Department of Licensing data does not report truck class, so we assume that Class-8 trucks represent approximately 7.5% of annual sales of all commercial trucks.

EXHIBIT 6

Forecasts for the Adoption of Heavy-Duty Trucks in the Seattle City Light Service Territory



ELECTRIC BUSES

Bus electrification is driven by similar market factors as for MDTs and HDTs, with several key differences:

- The higher upfront cost of electric buses—\$750,000 compared with a diesel bus at \$435,000³⁵—can potentially be offset by lower fuel and maintenance costs. However, the structure of electricity tariffs, in particular demand charges, strongly influences total cost of ownership for electric buses and, in some cases, can make them more expensive than diesel.
- Bus adoption may be driven by policy as cities could accept these higher upfront costs in favor of meeting environmental goals. In fact, many cities and transit agencies are announcing aggressive bus electrification goals (though actual procurement has been cautious with less than 1% of the total US bus fleet all-electric³⁶).

- There are some examples of technological or operational challenges, with electric buses unable to meet advertised range in certain climates and weather conditions or utilized on a route for which they are poorly suited. These may be isolated incidents, though, as transit agencies overcome the learning curve of adopting a new technology.
- Currently, 14 manufacturers are making electric bus models, including shuttle buses, double-decker buses, and articulated buses, indicating that the technology is available for increased adoption.³⁷

Despite these challenges, buses represent an ideal use case for electrification, similar to short-haul MDT applications. The average city bus travels 140 miles per day on a fixed route and returns to a centralized

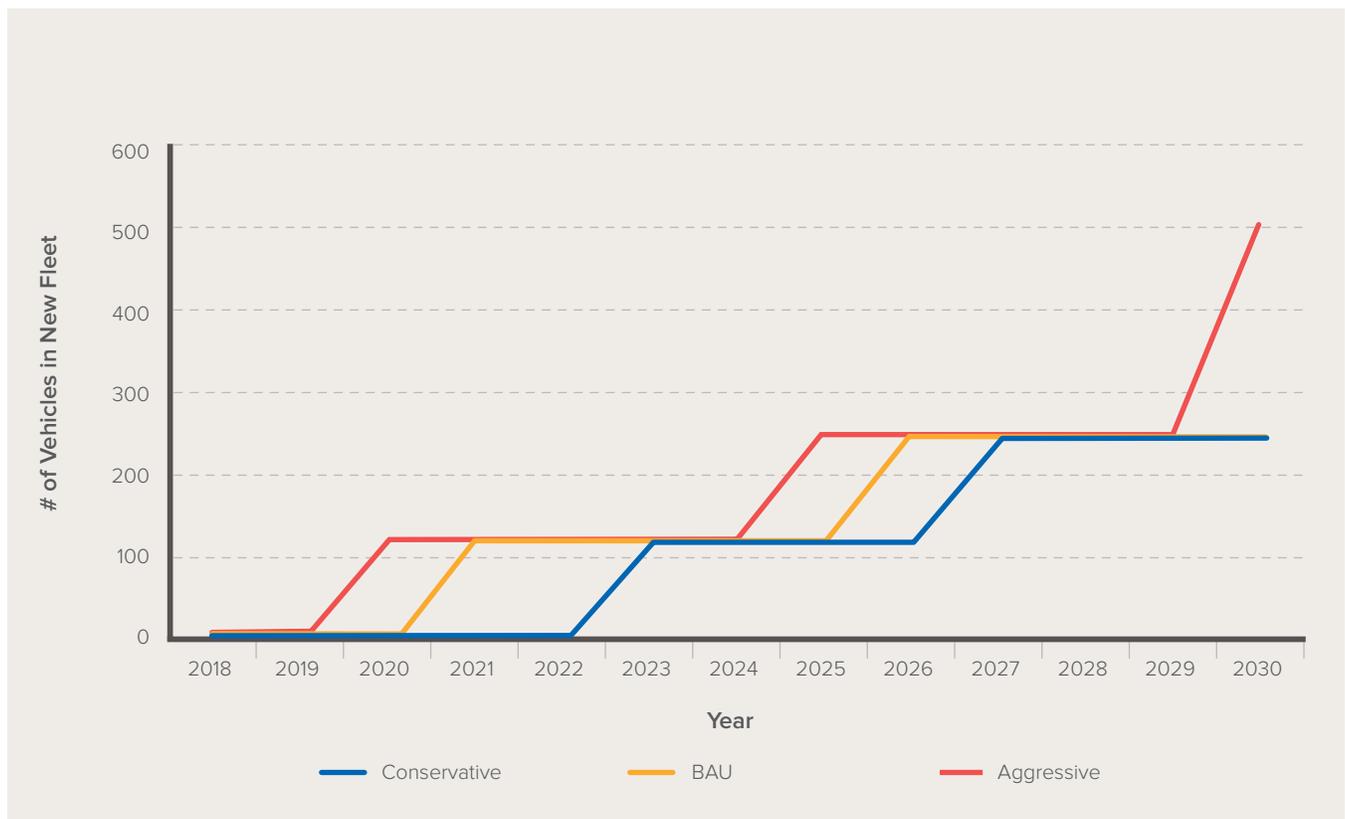
depot for overnight charging, so battery size can be matched to daily needs.

Seattle’s public transit agency, King County Metro (Metro), is a national leader in reducing emissions from its fleet and has a goal of full fleet electrification by 2040.³⁸ Metro has operated at least three electric buses since 2016 and will pilot an additional nine in

2019, with a commitment to purchase 120 by 2020. To project the adoption of electric buses in Seattle, we developed BAU, aggressive, and conservative forecasts based on these commitments as well as proposed interim goals.^{viii} In particular, the BAU case assumes the electrification goal is met by 2040, the aggressive case by 2034, and conservative case by 2045.

EXHIBIT 7

Forecast for Number of Electric Buses in Seattle City Light’s Service Territory to 2030



^{viii} Conversation with Danny Ilioiu. Proposed interim goals for KCM fleet electrification include: one bus base with 250 all-electric buses by 2025, and a second bus base with 250 additional buses by 2030.

DISRUPTION—SERVICE-BASED DRIVERLESS MOBILITY SERVICES

The possibility of fully autonomous vehicles has been receiving a significant amount of news coverage in the past few years, especially as mobility services such as Uber, Lyft, Car2Go, Zipcar, and others have been rapidly growing. Prognosticators in this space foresee a wide range of possible outcomes,³⁹ from vehicle ownership being replaced by driverless robotaxi services to meet all personal mobility needs, to a suite of mobility options (scooters, bikes, cars) that complement public transit and provide first- and last-mile options, to some coexistence of ownership- and service-based mobility paradigms.

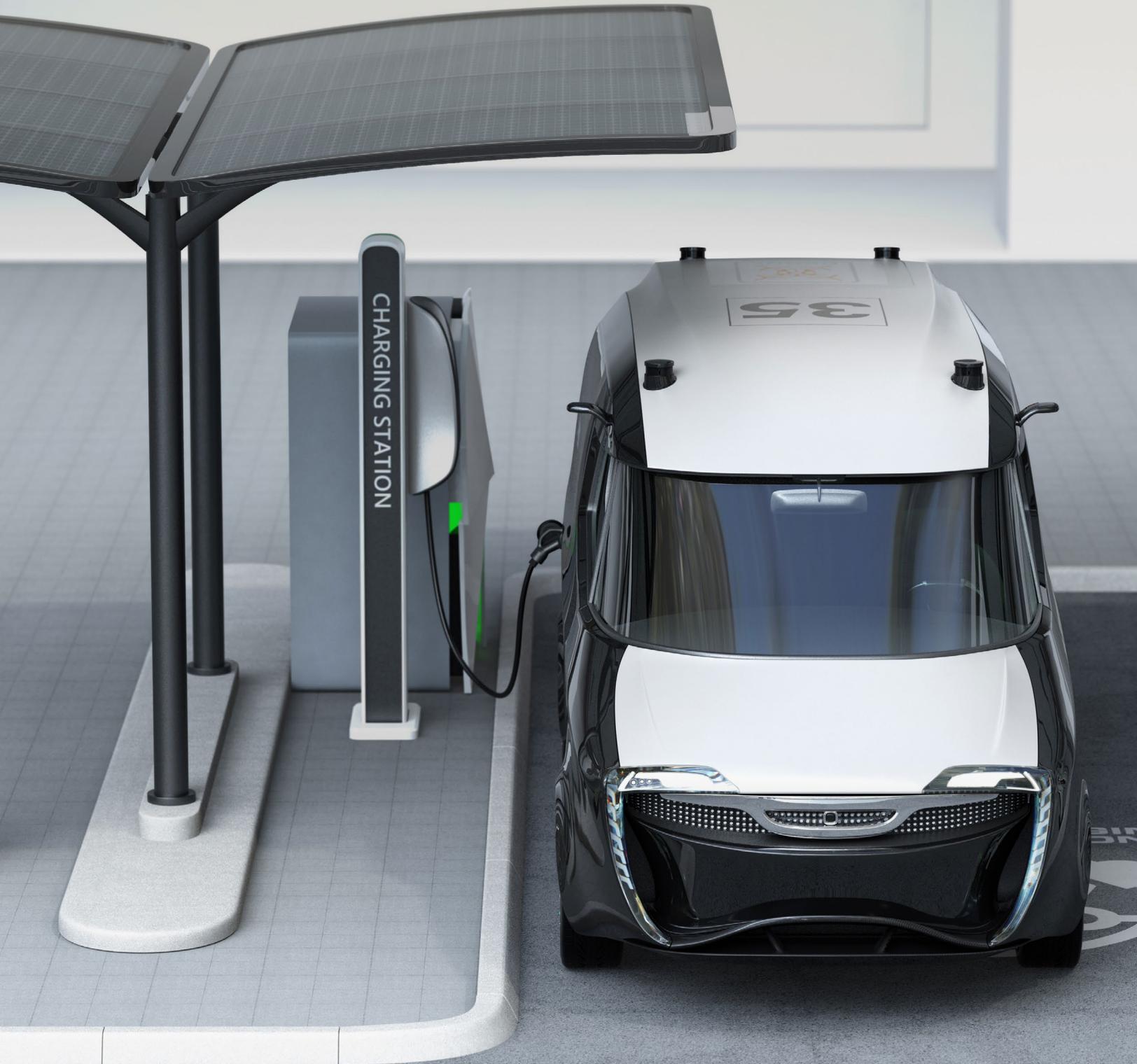
Autonomous, electric mobility-as-a-service has the opportunity to reduce personal mobility costs while creating trillions of dollars in new business opportunities and consumer savings. And this concept of an always-available fleet of robotaxis will result in higher utilization of the vehicles themselves (more miles traveled), while potentially requiring far fewer vehicles to serve a population's mobility needs (though this may depend on a user's willingness to share rides).⁴⁰ With these business models built around a centralized fleet operator, financial considerations will be key to decision-making and there will be a strong incentive for fleet operators to own all-electric fleets: operating expenses are the most important cost with high utilization vehicles, as operating costs can be significantly reduced.⁴¹

City Light has an opportunity to support electric, autonomous mobility services as new, predictable revenue streams where charging load can be managed

and optimized directly through relationships with fleet operators. Further, because many of these fleets will be light-duty vehicles, the per-vehicle grid impact is much less than that of electric trucks and buses.

Forecasts range widely on how this future plays out—from 95% of passenger miles service-based by 2030 to similar outcomes not being realized until the late 2030s (or later).⁴² At this time, it's unclear how the load of robotaxis might affect City Light's grid. What is clear is that Seattle-specific data shows consistent growth in ridehailing usage and associated vehicle miles traveled. Combined trips using Uber and Lyft have more than doubled between 2016 and 2018, topping 7 million trips during the first quarter of 2018. More data and pilots will be required with EV fleets in the future to understand how to optimize charging times while ensuring accessible vehicles for all trips on ridehailing services.

Given the early stage of this market segment, the results of pilots and success of new companies in this space has been mixed. For example, despite significant growth, Uber and Lyft are not yet profitable and have had several regulatory battles with cities in the US;⁴³ pilots with microtransit start-ups have had low ridership;⁴⁴ and a high-profile death caused by a driverless vehicle has called into question the readiness of autonomous technology for on-road pilot programs.⁴⁵ Despite these hurdles, there is significant global interest in the autonomous mobility future and its potential benefits. City Light should pay close attention to how this segment evolves over time to take advantage of opportunities to electrify these services.



IMPACTS TO SEATTLE CITY LIGHT

We examine how electrification will affect City Light so that we can understand how to address the associated risks, as a continuation of E3 Consulting’s cost-effectiveness study completed in 2015. We emphasize three types of impact:

1. Impact of transportation electrification loads on City Light’s grid
2. Financial impacts, especially limiting the need for system upgrades
3. Customer service impacts, including changes to City Light operations

IMPACTS OF POV ELECTRIFICATION

To estimate the impacts of increased adoption of electric POVs, we extend the hosting capacity analysis from City Light’s prior study with E3. Using EV registration data for each zip code in City Light’s service territory, we assume that the number of EVs registered in each zip code, as a percentage of EVs in City Light’s service territory, stays constant through 2030.^{ix} Using our electric POV adoption forecasts, we estimate how many EVs will be sold in City Light’s service territory each year then allocate these new EVs by zip code accordingly, out to 2030.

We base our analysis here on City Light’s current distribution planning. This assumes a managed charging load profile, such that the vast majority of new EV load growth occurs during off-peak hours. Most charging is via Level 2 chargers and assumes a demand of 6 kW per vehicle. We note that this represents an optimal set of assumptions as new Level 2 chargers allow for 21 kW charging and we cannot know how customers will actually charge their vehicles. However, City Light’s prior study with E3

examined in detail the revenue and cost difference between managed and unmanaged POV charging, and even unmanaged charging resulted in a net benefit to City Light.

The results of this analysis suggest that, for residential charging based on these assumptions, there will be minimal impact to City Light—in fact, there will be a net benefit, based even on our most aggressive POV adoption forecasts. There is, however, great uncertainty with this conclusion, and City Light will need to continually reexamine this result and proactively facilitate managed charging behavior. First, charging patterns and behaviors may change over time resulting in more charging events during peak hours or more drivers may prefer DCFCs. As electric vehicle supply equipment (EVSE) networks are built, the relative utilization of DCFCs versus Level 2 chargers will be an important metric to track. Second, some neighborhoods could see much greater adoption than anticipated, leading to a geographic concentration of charging loads.

With more and more City Light customers owning electric vehicles, the experience City Light offers for these customers will be an important consideration. This could include tailored customer service options such as EV-owner customer connection queues as well as new revenue opportunities through specific EV rates or packages for EV owners that might include support for on-site solar and/or storage.^x These service offerings will have to be balanced with the potential need for additional customer support staff and associated costs to serve this new customer base.

There are significant positive impacts to City Light as well. Given City Light’s ongoing rate redesign and

^{ix} We recognize the deficiencies of this assumption as it does not take into account population growth/shifts or that as EV costs go down, lower-income communities may increase adoption relative to today. And of course, City Light programs can explicitly target Seattle neighborhoods with lagging EV purchases to accelerate adoption.

^x Seattle City Light has designated queues for customer types (i.e., residential or commercial) with the potential to add new queues for new customer types.

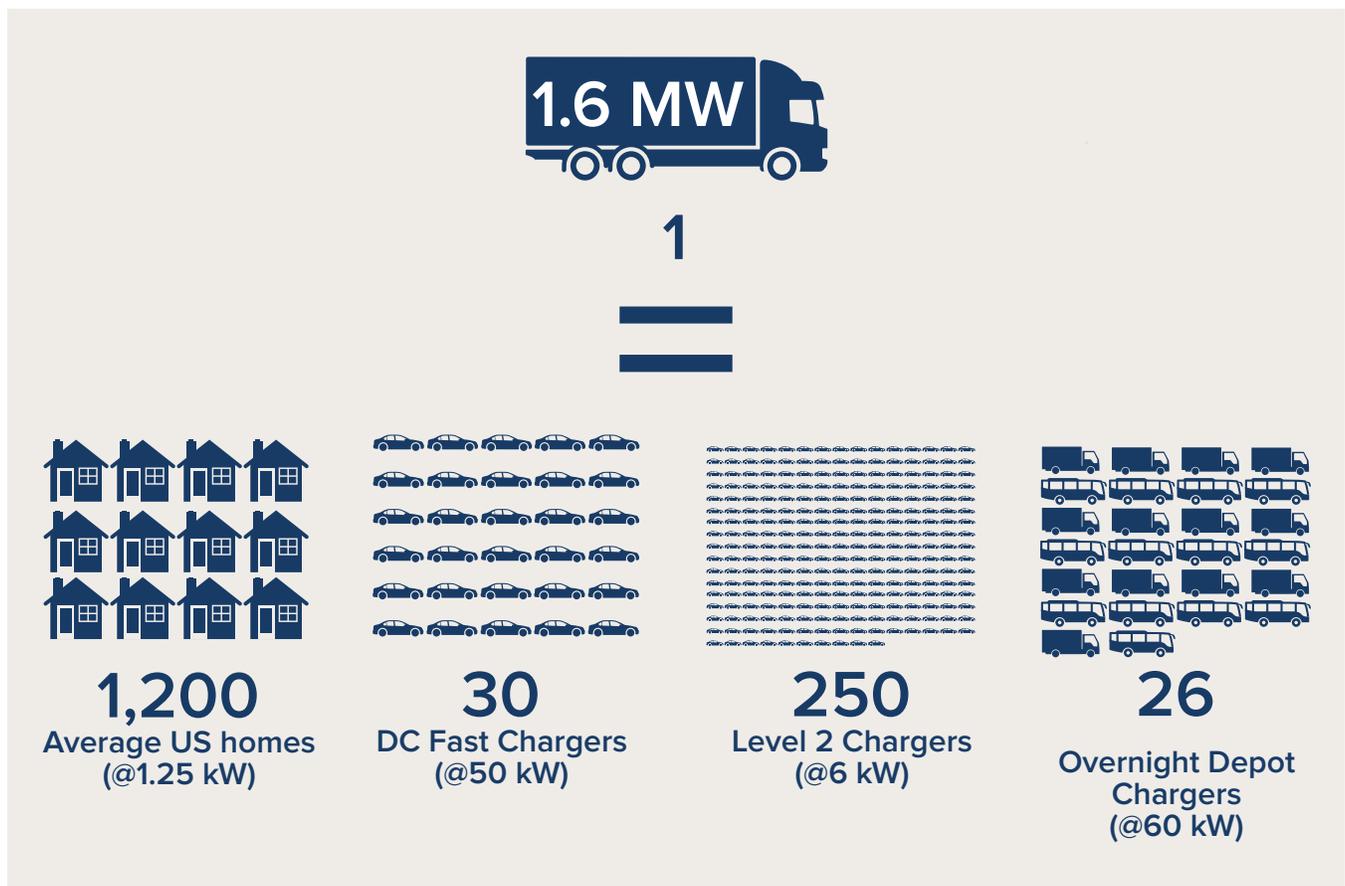
imperative to decrease rates, new revenue streams are needed to create downward rate pressure. In theory, EVs can put downward pressure on rates because of increased utilization of utility assets, with revenue from load growth exceeding costs. And since City Light’s generation mix is predominantly hydropower, the emissions profile of EVs charged on City Light’s grid has lower carbon and other greenhouse gas emissions compared with grids in other cities and states.

IMPACTS OF MEDIUM- AND HEAVY-DUTY TRUCK ELECTRIFICATION

Although trucks nationally represent only 4% of registered vehicles,⁴⁶ the impact of truck electrification to City Light may be significant. We demonstrate this in Exhibit 8, which shows the electricity demand for a single HDT mega-charging event compared with that of other appliances or vehicles.

EXHIBIT 8

Power Requirements (kW) of One Class-8 Truck “Mega-charging” Event (1,600 kW) Compared With Power Requirements of Other Vehicles and Homes



Electric trucks offer a double-edged sword in terms of their impact to the grid: they are likely to concentrate in industrial areas of cities making load planning simpler, but they draw significantly more power per charging event than POVs, potentially straining distribution grid capacity at those locations. If planned well, electric buses can improve grid asset utilization and present a new source of predictable revenue.

As noted above, fleet managers respond well to price signals that impact the total cost of ownership of their fleets. Many electric truck fleets will require their own infrastructure, which may make upfront costs prohibitively costly and require new financing mechanisms that reduce these costs for fleets. These costs and financing challenges may emerge as bottlenecks that slow overall truck electrification.

Utilities have a suite of tools that can be deployed to help accelerate and appropriately plan for truck electrification (in particular by influencing total electricity costs that can make or break the total cost of ownership for electric trucks). These include demand-charge relief, time-of-use rates, or other price signals to maximize off-peak charging, and innovative financing for on-site solar and/or storage at fleet charging depots. It is, however, uncertain how effective these approaches will be because, unlike POVs, electric trucks must charge according to vehicle operation schedules and electricity price signals may not be able to shift charging to off-peak hours. And, pairing electric truck charging depots with on-site solar and/or storage or smart charging systems will significantly increase upfront capital costs for fleet operators.

Because of the early stage of this market, it is difficult to estimate specific truck and ferry electrification impacts on City Light. Instead, we use the following approach:

For short-haul routes (primarily MDTs^{xi}):

1. Assume trucks with 100 kWh batteries charging at a 20–60 kW charge overnight at a centralized distribution center, for a typical 100-mile daily route.
2. Identify the location of most distribution centers and warehouses in Seattle (as a proxy for where charging will occur overnight) and identify distribution grid feeders assigned to these geographies. As shown in Exhibit 9, MDT charging will likely occur in Seattle's two large manufacturing and industrial centers (MICs): Ballard/Interbay Northend and Greater Duwamish (which includes the Port of Seattle).

As shown in Exhibit 10, we identified 61 feeders assigned to either the Duwamish or Ballard/Interbay MICs, 15 of which are at or above 90% loading. Based on the above assumptions, a large fleet of 200 medium-duty trucks charging overnight at a single depot will draw 4–12 MW. Since feeders and substations can be reconfigured to balance loads, fleets requiring 4 MW for overnight charging are likely to have minimal impact on City Light's grid. We note that capacity is only one indicator of impact on City Light's system, and other upgrades may be required even if there is available capacity. For example, at 4 MW for a single installation, there may be need to reconductor a lateral with an estimated cost of \$1,000/foot of overhead installation or \$1,500/foot for underground installation. However, for fleets on the higher end of the range (above 10 MW), system impact studies will be required as this size load may require a dedicated feeder.

^{xi} We note that HDTs are used for short-haul routes as well; however, depending on the route, fleet operators will be able to optimize battery size, so charging patterns and power demand will likely be comparable to MDTs.

EXHIBIT 9

Map of City Light Territory Depicting Manufacturing and Industrial Centers

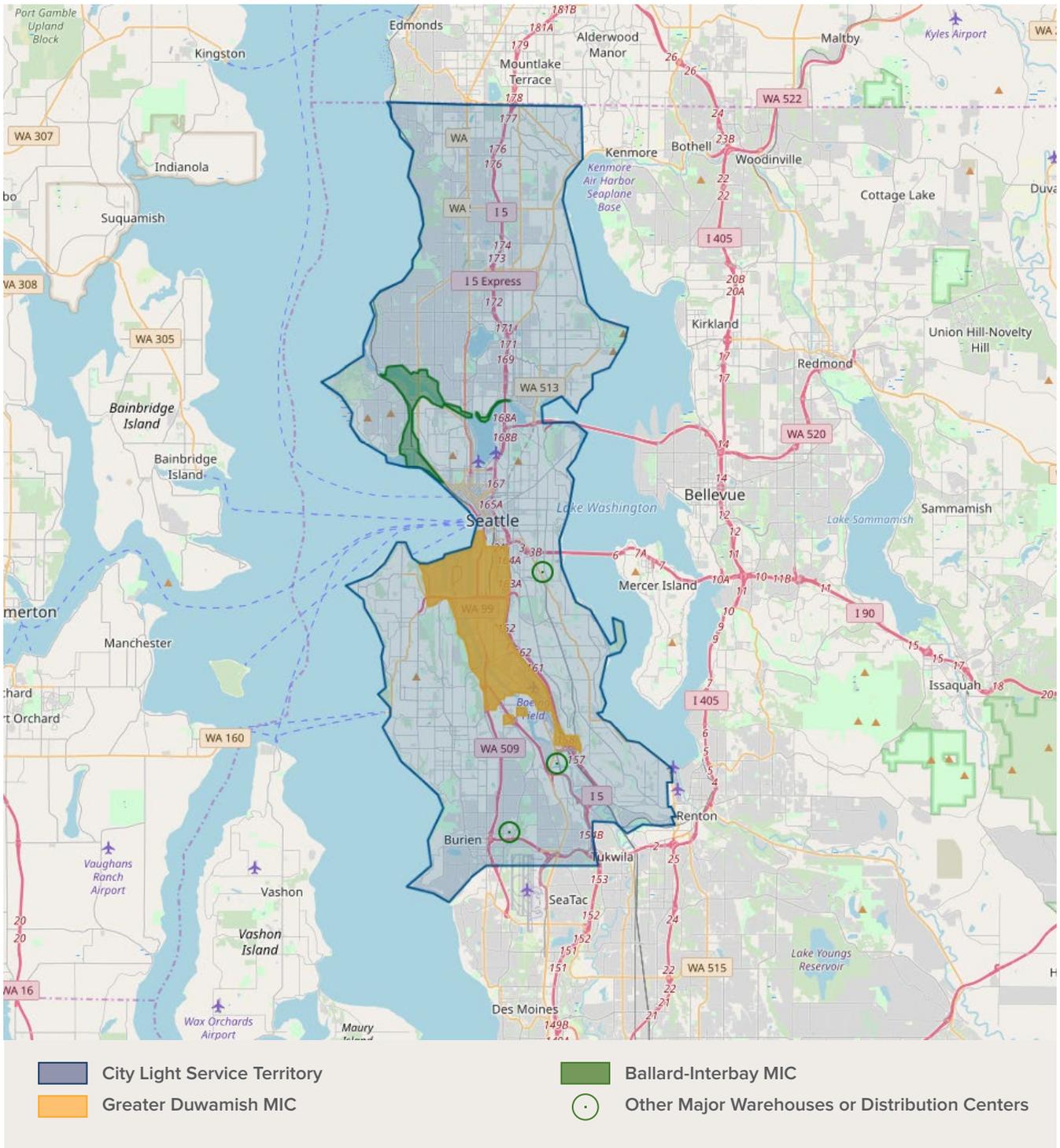
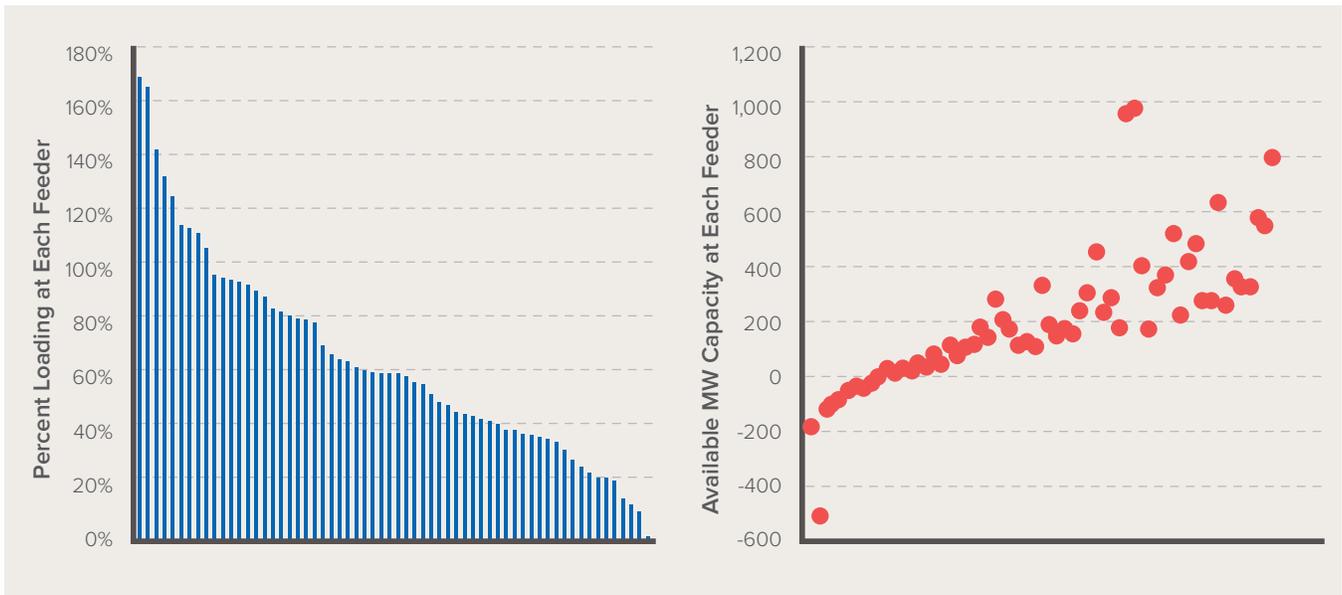


EXHIBIT 10

Percent Loading and Available Capacity (MW) at All Feeders Assigned to Either the Duwamish or Ballard/Interbay MICs. The X-Axis Represents Unique Feeder ID



For long-haul routes (primarily HDTs):

1. Assume that many trucks serving long-haul routes will mega-charge their 300–1,000 kWh batteries along major freight corridors, for a typical 200–500-mile daily route. Tesla has proposed a mega-charger providing 400 miles of range in 30 minutes, roughly a 1.6 MW load per charging event.
2. Identify the location of most freight traffic volumes in Seattle (as proxy for where mega-chargers may be located) and identify distribution grid feeders assigned to these geographies. As shown in Exhibit 11, the greatest freight traffic volumes projected to 2035 will be found in the two MICs and along WA State Route 99 north of downtown Seattle.⁴⁷

Of 24 feeders assigned along WA State Route 99 north of downtown Seattle, eight are at or above 90% loading. For fast charging of long-haul heavy-duty trucks, one truck charging could draw up to 2 MW of power over 30 minutes, so clustering these types of chargers could

have significant impact on City Light’s grid. With even a 10 MW load from five trucks charging simultaneously at a single location, there could be a need to reductor the feeder backbone.

These larger installations have the potential to significantly impact City Light’s system. However, fast charging for long-haul heavy-duty trucks is not expected until the late 2020s at earliest. Exhibit 12 demonstrates that there are some areas of constraint on City Light’s grid, but, overall, there is plenty of available capacity to handle these types of installations (notwithstanding some upgrades such as reductoring laterals or feeder backbones). Therefore, City Light must be proactive in supporting both location and operation of charging to minimize these impacts. This points to a clear impact on City Light’s customer service and the potential need for managers dedicated to fleets of trucks and buses, or a notification process so that City Light can be adequately informed and involved in fleet electrification planning.

EXHIBIT 11

Map of City Light Territory Depicting Regions and Corridors With Significant Freight Volume

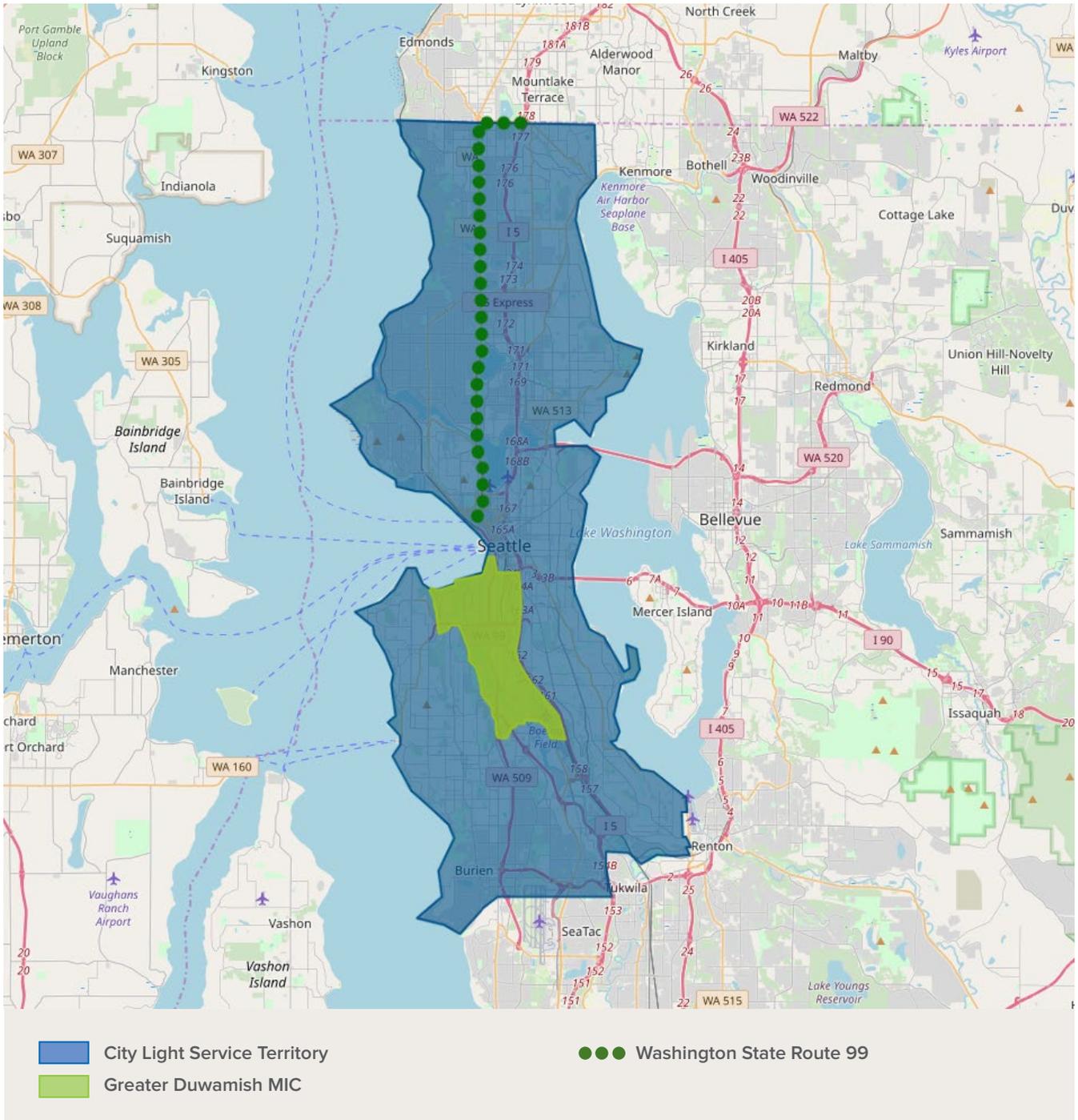
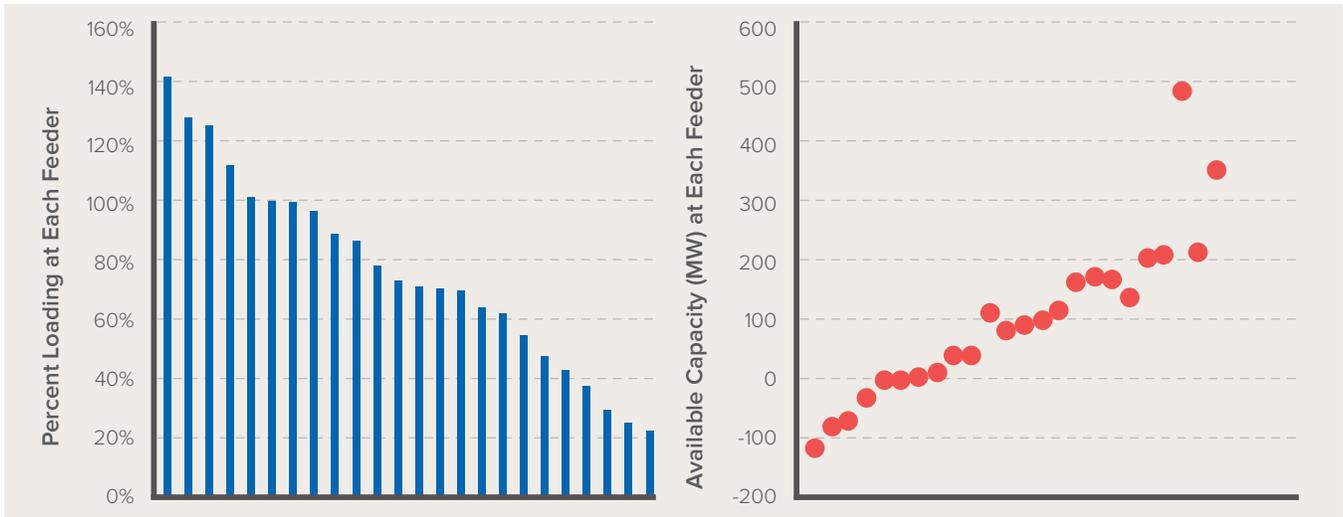


EXHIBIT 12

Percent Loading and Available Capacity (MW) at All Feeders Assigned to WA State Route 99 North of Downtown Seattle, Projected to Have the Greatest Freight Volume in City Light’s Territory by 2035. The X-Axis Represents Unique Feeder ID



IMPACTS OF BUS ELECTRIFICATION

The impacts to City Light from bus electrification are quite similar to those for medium- and heavy-duty trucks detailed above. However, the approach we follow to understand bus electrification impacts is based on Metro goals and anticipated charging behavior, based on its experience with electric buses since 2016. In particular:

1. Assume buses will primarily charge overnight at centralized bus bases. Most buses will travel a daily route of 100–140 miles with a battery size of 300–450 kWh. Overnight bus charging will occur at existing Metro bus bases. Metro will also install “opportunity chargers” for short, on-route charging events located at transit hubs, major transfer points, and the ends of major routes.
2. Identify grid distribution feeders assigned to Metro bus bases, as shown in Exhibit 13.

In Exhibit 14, of the 20 feeders identified that serve Metro bus bases and transit centers, five of the feeders are at or above 90% capacity. Although this appears to show constrained capacity to serve new electric bus load, even a bus base of 250 electric buses charging simultaneously overnight would peak between 10 and 30 MW;^{xii} all but two feeders have this much capacity available. However, any installation of this size will require a system impact study to determine if a dedicated feeder or other upgrades are required. For example, a recently completed impact study for an interim bus base for Metro estimated that upgrade costs (to replace existing overhead conductors and install regulator or capacitor banks) would be approximately \$2.2 million.

^{xii} Assuming 40–120 kW charge rate overnight.

EXHIBIT 13

Map of City Light Service Territory Depicting Bus Base Locations and Opportunity Charging Locations at Transit Centers

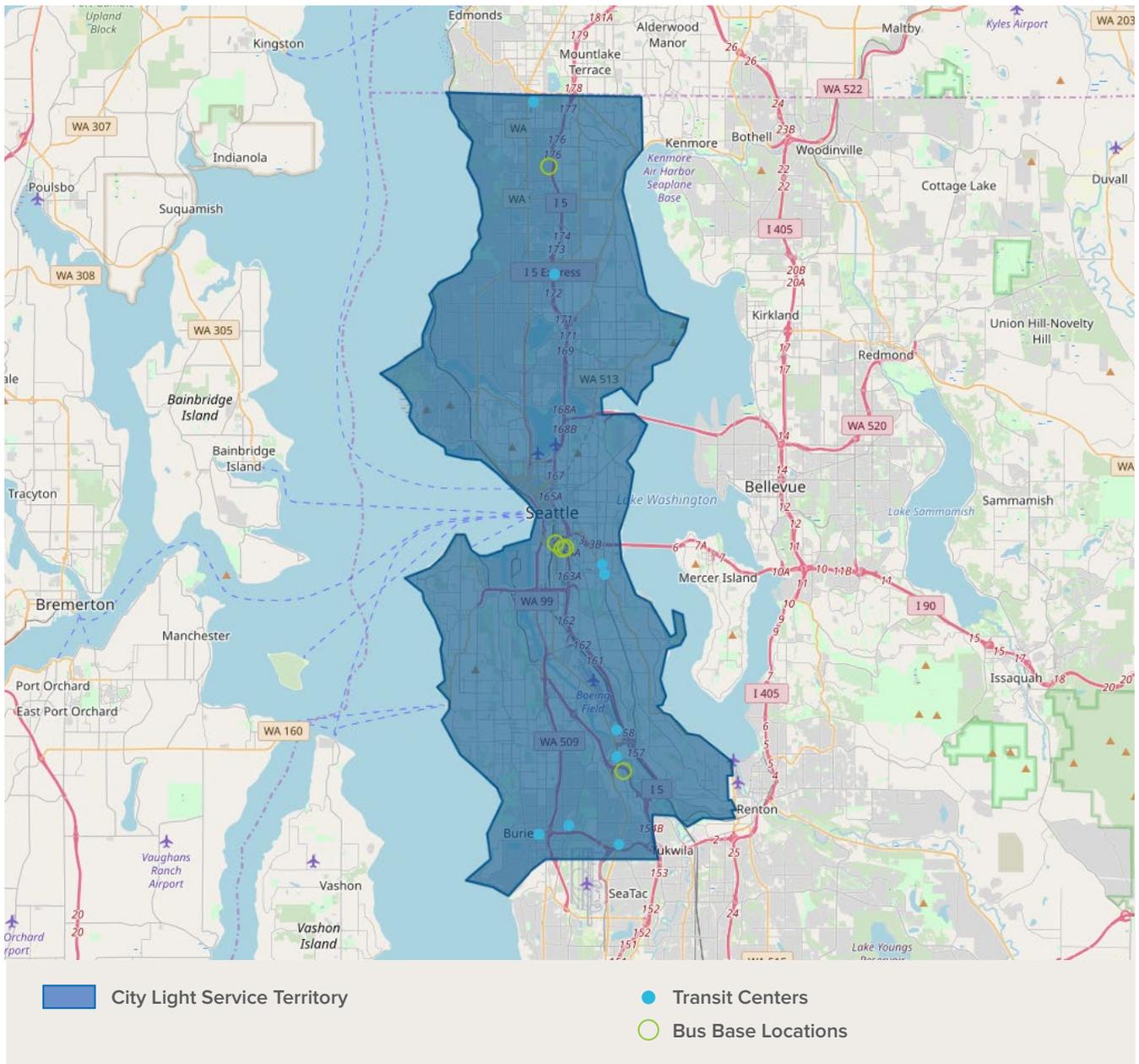
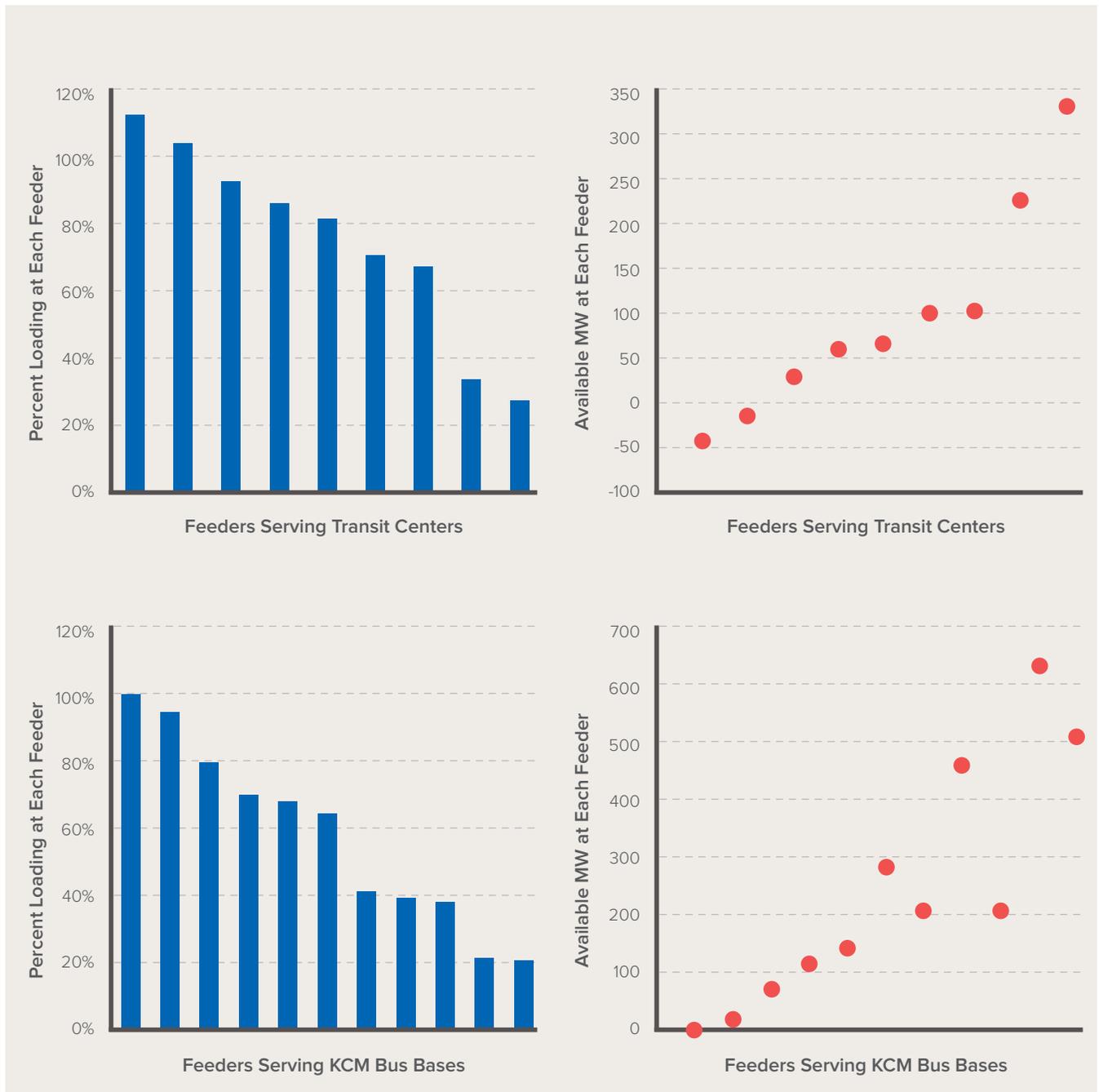


EXHIBIT 14

Feeders Assigned to Metro Bus Bases and Transit Centers and the Percent Loading and Available Capacity on Each. The X-Axis Represents Unique Feeder ID



5

SEATTLE CITY LIGHT INTERVENTIONS



SEATTLE CITY LIGHT INTERVENTIONS

City Light has many options available to it to accelerate the electric transportation market. Given limited resources and the need to maximize impact, this section identifies interventions that City Light should prioritize.

CRITICAL MARKET INDICATORS

Potential interventions are tightly linked to market evolution. We have identified three critical indicators to inform which forecast (BAU, aggressive, conservative) is aligned with actual adoption. Based on market research and expert interviews, we have identified three key market indicators to watch for as leading signs of accelerating electric transportation adoption.

EXHIBIT 15

Critical Market indicators

INDICATOR	IMPORTANCE	KEY METRIC, TODAY	TIPPING POINT
BATTERY COST	Batteries are 30%–40% of vehicle upfront cost and the primary driver of TCO.	\$176/kWh for the battery pack.	For both cars and trucks, \$150/kWh for the battery pack. ⁴⁸
MODEL AVAILABILITY	28% of light-duty vehicles sold annually are small or midsize cars, 10% are SUVs, and 35% are crossovers. ⁴⁹ Many gasoline car drivers won't purchase an EV unless it suits their needs and lifestyle. For trucks, few commercial models are available today.	50% of electric POV sales from January to July 2018 were for five models available from three manufacturers. ⁵⁰ These are Tesla's Model 3, Model S, and Model X, Chevrolet Bolt, and Nissan Leaf.	One electric SUV and one electric crossover model available from the majority of automakers, priced consistently within their category. ⁵¹ For trucks and buses, look for case studies that validate TCO savings for electric trucks and buses, especially as new models become available.
FUEL PRICE	For POVs, higher gasoline prices may lead to greater sensitivity to fuel economy and increase purchases of more fuel-efficient vehicles. The diesel-electricity price differential directly impacts value proposition for truck and bus fleet operators.	Seattle 2018 gasoline price ranged from \$3.00 to \$3.50. Seattle 2018 diesel price ranged from \$3.00 to \$3.20.	At roughly \$5/gallon gasoline or diesel, individuals and fleet operators begin to more heavily weigh fuel efficiency measures. This can be heavily driven by both market forces and policy.

IMPORTANT MARKET ENABLERS

In addition to the critical indicators, many other changes in the market will be important as enablers of transportation electrification. City Light should monitor these in addition to the critical indicators in order to have a more complete sense of where the market is going.

EXHIBIT 16

Important Market Enablers

MARKET ENABLER	IMPORTANCE	METRIC TO WATCH
ADVERTISING SPEND ON EV MODELS BY AUTOMAKERS	Proxy for competition for sales. ⁵²	Amount spent as a percentage of gasoline-vehicle advertising.
MULTIUNIT HOUSING EV-CHARGING BUSINESS MODELS	In Seattle, 34% of all housing is multiunit apartments, ⁵³ representing an opportunity to vastly expand the POV market.	Percentage of multiunit housing with on-site charging planned, under construction, or available.
PRODUCTION SCALE OF ELECTRIC TRUCKS	Production scale reduces upfront costs.	Percentage of trucks manufactured annually that are all-electric.
AUTONOMOUS VEHICLE PILOT PROGRAMS	Highly utilized driverless vehicles, for example those used for mobility services such as Uber and Lyft, are most cost-effective when electric. Autonomous technology can greatly accelerate the growth of EV miles traveled.	Autonomous vehicle programs that scale beyond pilots.
COSTS FOR EV CHARGING INFRASTRUCTURE, INCLUDING DC FAST CHARGING	Impacts TCO for POV owners where charging is primarily done at home and truck/bus fleets charged at fleet-owned depots.	Cost of infrastructure and installation.
PUBLIC CHARGING AVAILABILITY	Important for POV adoption to reduce range anxiety. Mega-charging may be critical for long-haul trucking applications.	Number of public Level 2 chargers and DCFCs. Announced plans to install mega-chargers on major freight corridors.
POLICY (STATE AND MUNICIPAL)	Policy incentives and mandates can alter the value proposition across markets.	State targets for EVs on the road, tax incentives, low-carbon fuel standard.

INTERVENTIONS

Market trends point to an increasingly electrified transportation future. Even in our most conservative forecast, the number of POVs in Seattle doubles by 2021 and the market share of electric trucks and buses could be even larger given their greater sensitivity to price and policy signals. Building on the work of other utilities grappling with this market transformation,^{xiii} we identify a set of interventions that City Light should pursue to prepare for even the most conservative

forecasts, while positioning City Light to take advantage of more aggressive adoption. These interventions are designed to align to City Light’s core values and positioning in the market:

- A.** Invest in charging infrastructure with emphasis on universal access and expanding coverage
- B.** Develop new rates and improve customer service for the transportation market
- C.** Prepare for heavy-duty electrification

EXHIBIT 17

INVEST IN CHARGING INFRASTRUCTURE WITH EMPHASIS ON UNIVERSAL ACCESS AND EXPANDING COVERAGE

1. Continue to drive the robust development of public charging.



Business Reason:

Electric utility investment is necessary to complement the private market in creating a robust and accessible network of DCFC stations. Consumer desire for fast charging and its currently limited availability is a bottleneck to greater adoption of EVs, a barrier that City Light can directly influence across market segments.

Connection to Values Framework:

Addressing gaps in the EVSE network increases adoption and creates downward rate pressures for all customers.

City Light Actions:

- Based on gap analysis and stakeholder engagement,^{xiv} deploy City Light-owned DCFCs to satisfy underserved or undercapitalized markets where private network operators are less likely to invest.
- Explore make-ready investments in grid infrastructure or equipment incentives to support private DCFC deployment that aligns with City Light’s core values.

^{xiii} Other sources for utility best practices include: https://www.betterenergy.org/wp-content/uploads/2018/04/MTEC_White_Paper_April_2018-1-1.pdf; <https://www.raponline.org/wp-content/uploads/2017/06/RAP-regulatory-considerations-transportation-electrification-2017-may.pdf>; https://www.swenergy.org/data/sites/1/media/documents/publications/documents/How_Leading_Utillities_Are_Embracing_EVs_Feb-2016.pdf; and https://www.theicct.org/sites/default/files/publications/Power-utility-best-practices-EVs_white-paper_14022017_vF.pdf.

^{xiv} Specifically, an EVSE infrastructure gap analysis to identify future DCFC and Level 2 charging needs by matching the anticipated number of on-road vehicles to the number of charging stations needed to meet that load, assuming one or more ratios for Level 2 versus DCFC in future years. Gaps are indicated where there is need for charging infrastructure in City Light territory but private network operators are not planning to build.

EXHIBIT 17 (CONTINUED)

INVEST IN CHARGING INFRASTRUCTURE WITH EMPHASIS ON UNIVERSAL ACCESS AND EXPANDING COVERAGE

2. Support expanded residential and workplace charging with an emphasis on multiunit dwellings and underserved communities.

**Business Reason:**

City Light can expand who can benefit from electric transportation by targeting customers for which cost and feasibility are significant barriers. This is particularly true in multiunit dwellings and for residents without access to low-cost charging solutions where they live or work.

Connection to Values Framework:

Creating benefits to the environment by reducing barriers to EV ownership and expanding the market of potential EV owners. This enables greater access to City Light's clean electricity for transportation applications and reduces emissions, especially in communities with poor air quality.

City Light Actions:

- Provide incentives for residential installations, focusing on multiunit dwellings and considering higher levels of support in target markets.
- Develop creative solutions for customers without dedicated off-street parking.
- Provide incentives and technical expertise for commercial or industrial customers to install workplace chargers.
- Participate in current efforts by City of Seattle to revise building codes and EVSE standards. Potentially provide technical assistance or financing to support compliance with updated codes.

3. Invest in charging infrastructure for high-mileage applications.

**Business Reason:**

Market trends point to rapid change over the next decade in personal mobility with a potential shift away from vehicle ownership. City Light should position itself to accelerate electrification of these new business models as they emerge and encourage scale.

Connection to Values Framework:

Electric mobility services have the potential to provide a lower-cost mobility option for Seattle residents for whom vehicle ownership is prohibitively expensive or transit coverage is poor. More affordable mobility expands access and opportunities for residents of lower-income communities.

City Light Actions:

- Support shared (eventually driverless) mobility electrification. This could include charging infrastructure installed at designated Uber/Lyft pick-up and drop-off points or new rates specifically designed for shared mobility.
- Support charging for carsharing or other equity-focused programs, such as EV community carsharing. For example, rebates or incentives for charging infrastructure installation located at carshare parking spaces.

EXHIBIT 18

DEVELOP NEW RATES AND IMPROVE CUSTOMER SERVICE FOR THE TRANSPORTATION MARKET

1. Pursue rates that meet the needs of electric transportation customers.



Business Reason:

To accelerate transportation electrification, City Light should strive to make the cost of charging highly competitive with gasoline. With significant EV adoption (especially for trucks and buses), unmanaged charging poses risks to City Light’s grid in terms of capacity and stability during peak hours—risks that City Light can directly mitigate with rate design.

Connection to Values Framework:

Creates benefits to the environment by supporting increased adoption of EVs (and associated reductions in emissions) by improving total cost of ownership for EVs. Creates grid benefits by mitigating impacts from peak-hour charging, minimizing need for upgrades. Better use of grid assets can lower utility and ratepayer costs.

City Light Actions:

- Explore and pilot time-of-use or other creative transportation-specific rate designs across all EV market segments.
- Understand the impact of demand charges on large customers (e.g., transit providers) and DCFC operators and explore options for relief to ensure fast charging network profitability.

2. Improve core City Light business processes for customers investing in charging.



Business Reason:

City Light needs to ensure a seamless customer experience for easy access to electricity as fuel. This builds on its existing expertise as a trusted advisor and leverages the utility’s investments in customer service systems.

Connection to Values Framework:

For EV owners, the utility is their fuel provider. Interactions with the utility can make or break the user experience. Positive customer experience leads to positive word of mouth which can boost EV adoption and allow earlier realization of environmental benefits.

City Light Actions:

- Create a streamlined and transparent interconnection and service upgrade process for new and existing customers to install charging infrastructure.
- Consider new queues for EV customers, in addition to City Light’s existing queues for residential, commercial, and industrial customers requesting service.
- Develop digital content that helps customers make informed decisions about their investment in electric transportation.

EXHIBIT 18 (CONTINUED)

DEVELOP NEW RATES AND IMPROVE CUSTOMER SERVICE FOR THE TRANSPORTATION MARKET

3. Investigate the viability of managed charging.

**Business Reason:**

While City Light's system can largely accommodate the increase in load from considerable adoption of EVs, large spot loads could pose a challenge. It is necessary to understand how to manage this challenge at scale.

Connection to Values Framework:

Ensures equity by allowing City Light to experiment with optimal means to mitigate grid and ratepayer impacts. In particular, to ensure EV owners pay their fair share of costs and are not subsidized by non-EV owning ratepayers.

City Light Actions:

- In collaboration with industry partners, establish standards for residential smart charging.
- Explore demand-response programs. Especially if City Light anticipates increased solar or wind generation, consider use of the EV load as a distributed energy resource to improve grid flexibility and determine how to compensate EV owners for this value.

EXHIBIT 19

PREPARE FOR HEAVY-DUTY ELECTRIFICATION

1. Support the aggressive electrification commitments of partner agencies and large customers.

**Business Reason:**

While these customers have set bold targets to electrify, many aspects of implementing nascent technology at scale remain a challenge. City Light is well positioned to offer technical assistance and a broad range of support for charging infrastructure.

Connection to Values Framework:

Electrification of institution customers leads to substantial emissions reductions, especially to historically impacted neighborhoods. Transit, in particular, is an ideal way to ensure all customers benefit from electric transportation.

City Light Actions:

- Partner directly with King County Metro, the Port of Seattle, and Washington State Ferries to enable their transition to electricity.
- Develop a deep expertise of customer needs and respond with a broad suite of solutions, including responsive rates, incentives, grid infrastructure, technology demonstrations, and siting analysis.
- Proactively plan for these large loads and minimize costs and potential constraints on City Light's grid.

EXHIBIT 19 (CONTINUED)
PREPARE FOR HEAVY-DUTY ELECTRIFICATION

2. Anticipate how access to charging will influence urban freight and fleet markets.



Business Reason:

As an emerging market segment, there is a great deal of uncertainty around the scale and speed of electrification. City Light can lead by exploring novel solutions that address the barriers to charging in this market.

Connection to Values Framework:

Diesel trucks have outsized emissions relative to the percentage of vehicles they represent on the road. Electric trucks can immediately improve air quality and benefit the environment, especially in industrial zones and residential communities near them.

City Light Actions:

- Monitor tipping point metrics, particularly model availability for delivery and truck applications, and engage with local fleets.
- Similar to the approach for transit agencies, devote resources to better understand the use cases for charging in the freight/heavy-duty industry.
- Get creative with packaged charging solutions, including financing, make-ready investments, smart charging, and incentives.

ENDNOTES



INTERSTATE 5 SOUTH
Tacoma
Portland
↓ ↓

To INTERSTATE 90 EAST
Bellevue
Spokane
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ENDNOTES

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SUMMARY and FISCAL NOTE*

Department:	Dept. Contact/Phone:	CBO Contact/Phone:
Seattle City Light	Emeka Anyanwu / 684-3718	Greg Shiring 386-4085

** Note that the Summary and Fiscal Note describes the version of the bill or resolution as introduced; final legislation including amendments may not be fully described.*

1. BILL SUMMARY

Legislation Title: A RESOLUTION relating to the City Light Department; adopting a Transportation Electrification Strategic Investment Plan for the City Light Department that will guide the development of the utility’s infrastructure strategy and investment priorities related to the electrification of transportation.

Summary and background of the Legislation: This Resolution adopts City Light’s Transportation Electrification Strategic Investment Plan. With the passage of SHB 1512 and the adoption of RCW 35.92.450, City Light is now allowed to offer “incentive programs in the electrification of transportation for its customers, including the promotion of electric vehicle adoption and advertising programs to promote the utility’s services, incentives, or rebates.” The authority to offer such programs is dependent upon the governing authority of the utility to adopt an electrification of transportation plan. This resolution adopts a four-year Transportation Electrification Strategic Investment Plan for City Light that will guide the development and implementation of the utility’s electrification of transportation infrastructure strategy and investment priorities.

2. CAPITAL IMPROVEMENT PROGRAM

Does this legislation create, fund, or amend a CIP Project? ___ Yes X No
The legislation, in isolation, does not create, fund, or amend a CIP Project. Through its Transportation Electrification Strategic Investment Plan, the Department will initiate the development of the utility’s transportation electrification infrastructure investments, incentives, and rebates, but the authority established by this legislation does not create any CIP Projects. Appropriations for any new or expanded CIP projects will be done through City Light’s budget process. All spending associated with the Transportation Electrification Strategic Investment Plan will adhere to RCW 35.92.450 in that utility outreach and investment in the electrification of transportation infrastructure does not increase net costs to ratepayers in excess of one-quarter of one percent.

3. SUMMARY OF FINANCIAL IMPLICATIONS

Does this legislation amend the Adopted Budget? ___ Yes X No

Does the legislation have other financial impacts to the City of Seattle that are not reflected in the above, including direct or indirect, short-term or long-term costs?

The adoption of this Resolution does not have direct financial impacts to the City of Seattle. All changes to appropriations will be done through City Light’s budget process. Budgetary

authority for transportation electrification-related infrastructure investments, incentives, or rebates will be included in City Light's submitted budget(s). The Department will adhere to the guidance found in RCW 35.92.450 to make investments in the electrification of transportation infrastructure that does not increase net costs to ratepayers in excess of one-quarter of one percent.

Is there financial cost or other impacts of *not* implementing the legislation?

N/A

4. OTHER IMPLICATIONS

a. Does this legislation affect any departments besides the originating department?

No.

b. Is a public hearing required for this legislation?

No.

c. Does this legislation require landlords or sellers of real property to provide information regarding the property to a buyer or tenant?

No.

d. Is publication of notice with *The Daily Journal of Commerce* and/or *The Seattle Times* required for this legislation?

No.

e. Does this legislation affect a piece of property?

No.

f. Please describe any perceived implication for the principles of the Race and Social Justice Initiative. Does this legislation impact vulnerable or historically disadvantaged communities? What is the Language Access plan for any communications to the public?

The development of programs or services associated with the Transportation Electrification Strategic Investment Plan will be developed in consultation with stakeholders, community partners, and a wide range of customers. This work will be accomplished in a manner to uphold the utility's and the City of Seattle's core values of race and social justice, equity, and environmental stewardship.

g. If this legislation includes a new initiative or a major programmatic expansion: What are the specific long-term and measurable goal(s) of the program? How will this legislation help achieve the program's desired goal(s).

N/A

List attachments/exhibits below:

None.



TRANSPORTATION ELECTRIFICATION STRATEGIC INVESTMENT PLAN

Presentation to
Transportation & Utilities Committee

Seattle City Light | September 25, 2020



MAIN TAKEAWAYS



Listen to communities to set priorities



Transit is a top priority



Just say no to 1:1 ICE to EV

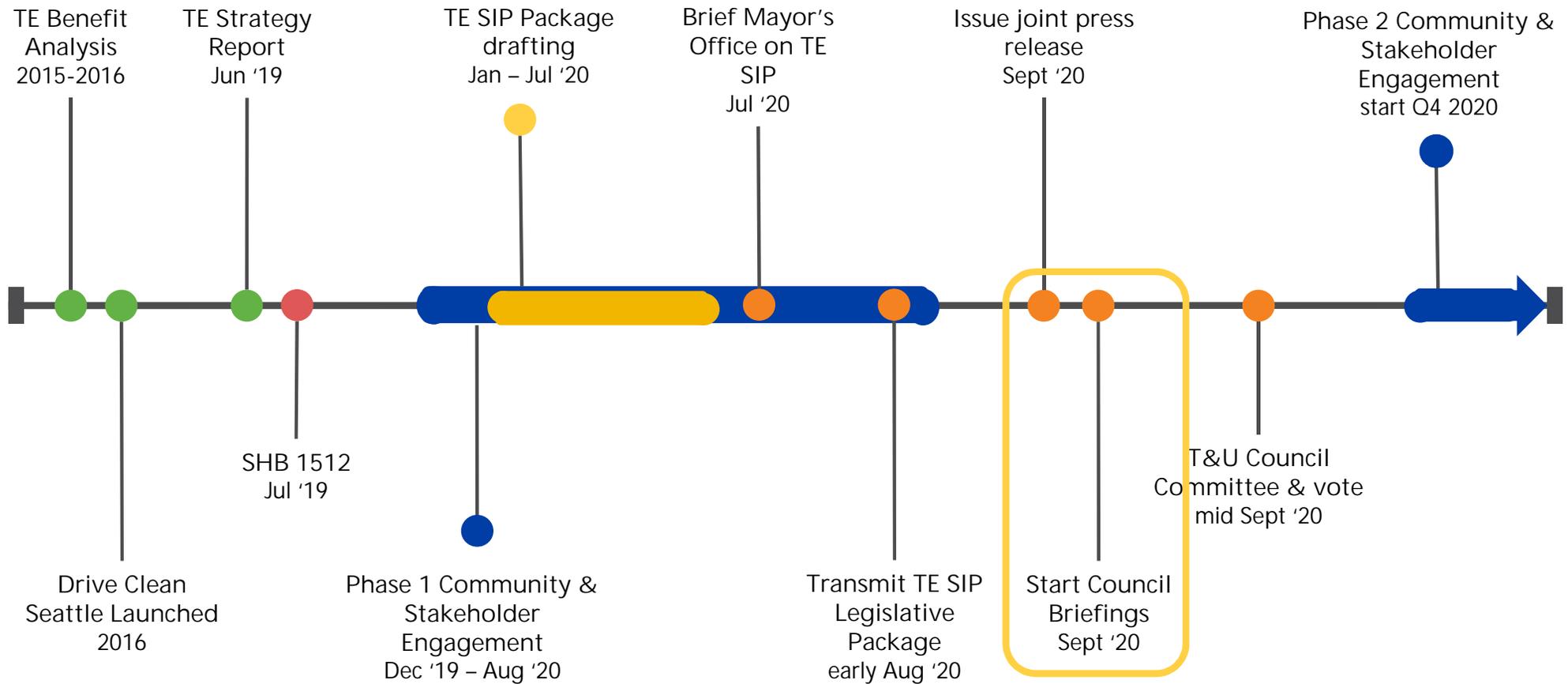


The grid is the platform

CITYWIDE COORDINATION ON TRANSPORTATION ELECTRIFICATION

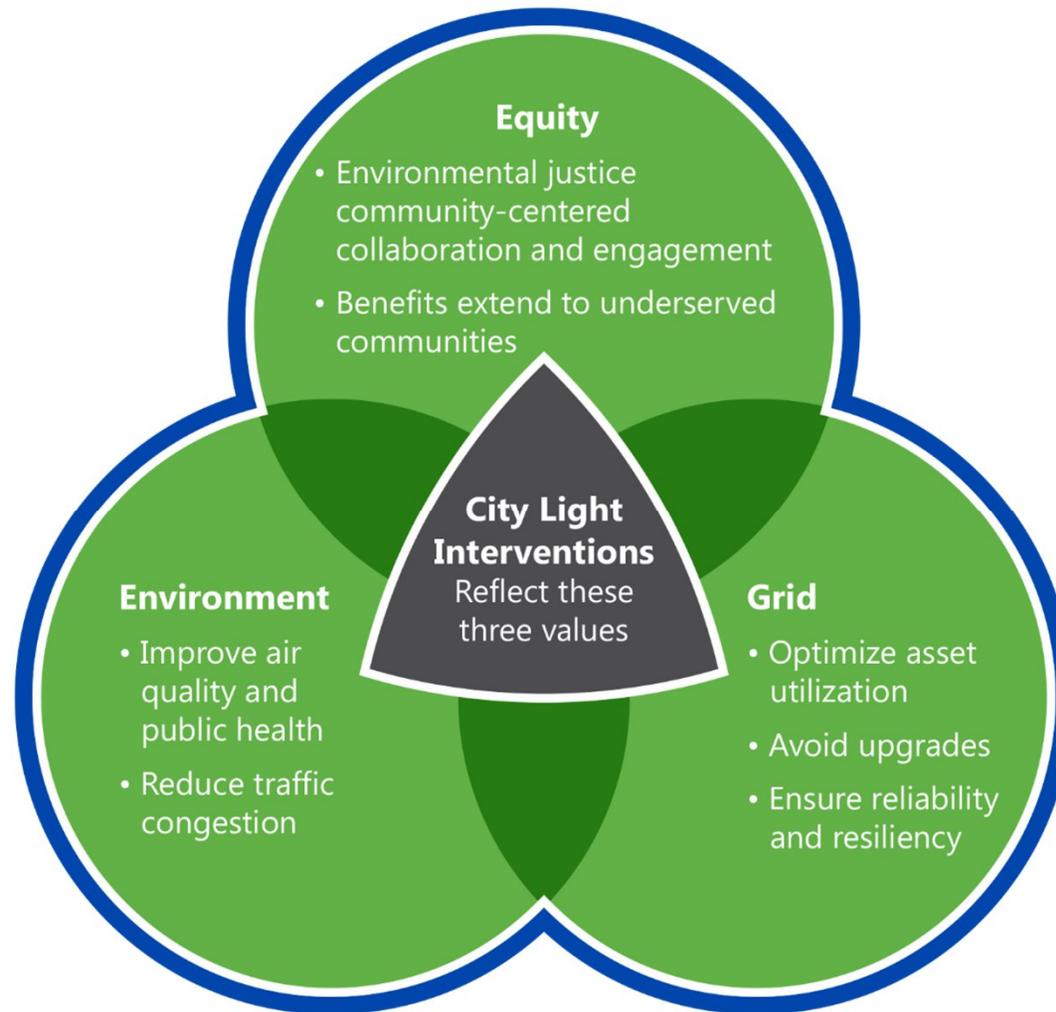


CITY LIGHT'S PATH TO TRANSPORTATION ELECTRIFICATION



*TE SIP = Transportation Electrification Strategic Investment Plan

TRANSPORTATION ELECTRIFICATION VALUES FRAMEWORK



ENGAGING WITH COMMUNITY & STAKEHOLDERS

25

Environmental justice
community leaders

4

Environmental
justice organizations

8

Major commercial
fleets

4

Environmental
advocacy organizations

5

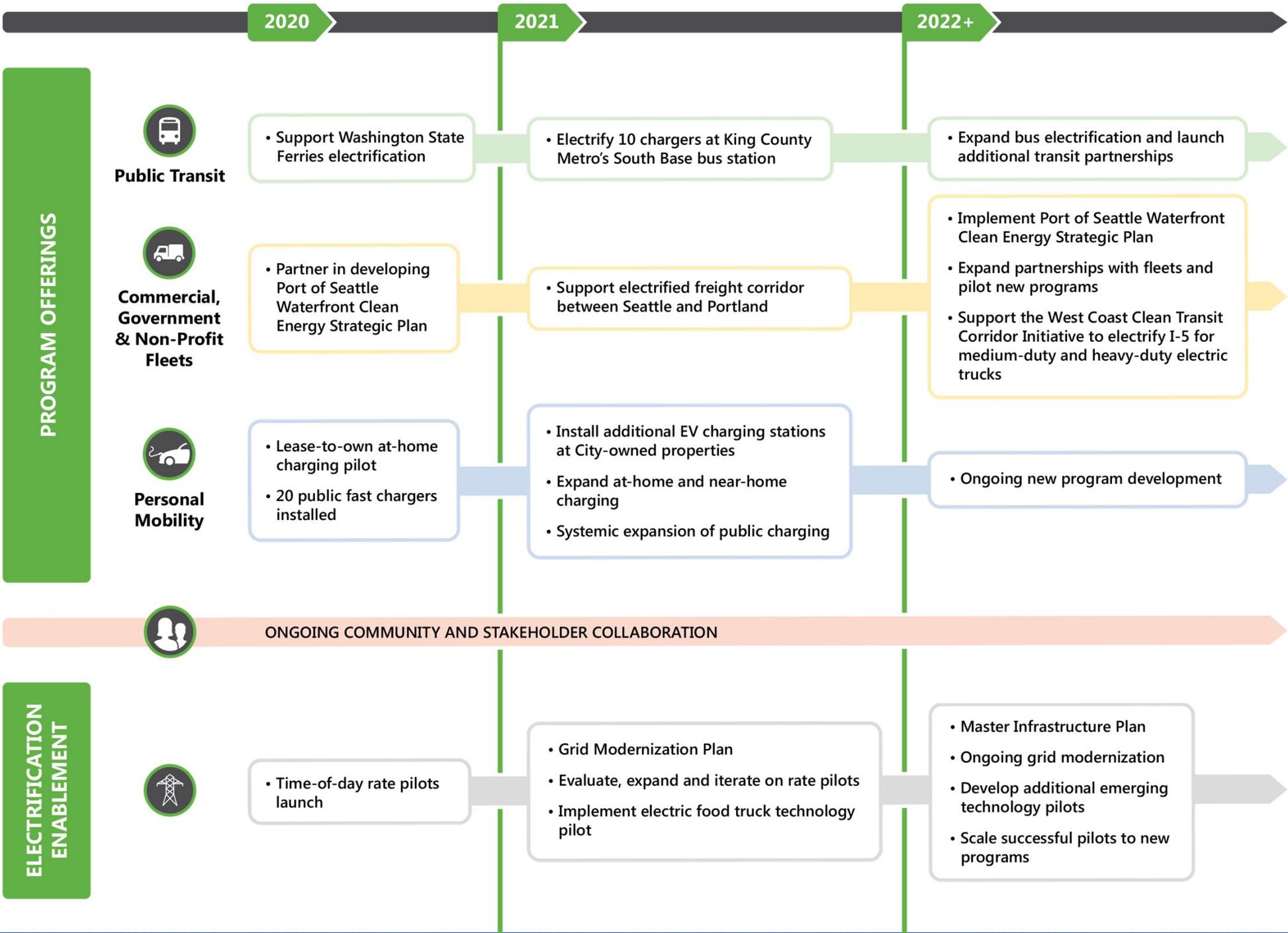
Labor unions and
labor councils

3

Shared Mobility,
Transportation Network
Companies (TNCs) &
taxi companies

TE STRATEGIC INVESTMENT PRIORITIES

TRANSPORTATION USES	INVESTMENT PRIORITIES	EQUITY OUTCOMES
 All	Customer and stakeholder outreach and awareness	<ul style="list-style-type: none"> All customer-owners have increased access to City Light's transportation electrification educational materials and resources Environmental justice community members see themselves reflected in communications
 Public Transit (Buses, Ferries, Trains, Light Rail)	Electrify buses, ferries and other public transit	<ul style="list-style-type: none"> Transit riders and those who do not own or drive a personal vehicle participate in and benefit from City Light's transportation electrification offerings
 Commercial, Government & Non-Profit Fleets	Electrify commercial, local government and non-profit fleets	<ul style="list-style-type: none"> Communities with higher exposure to air pollution benefit from reduced tailpipe emissions that impact local air quality and public health
 Personal Mobility (Cars, Bikes, Scooters, etc.)	Expand at-home and near-home charging	<ul style="list-style-type: none"> Multifamily residents and those with no access to off-street parking participate in and benefit from City Light's transportation electrification offerings
	Electrify high-mileage vehicles	<ul style="list-style-type: none"> High-mileage vehicle drivers, especially drivers in environmental justice communities, participate in and benefit from the local transportation electrification economy
	Accelerate transportation electrification adoption in environmental justice communities	<ul style="list-style-type: none"> Environmental justice communities collaborate with City Light and see their wants and needs reflected in City Light's transportation electrification offerings
	Expand public fast charging	<ul style="list-style-type: none"> Communities collaborate with City Light to ensure that public charging infrastructure serves as a community asset
	Expand workplace charging	<ul style="list-style-type: none"> All customers benefit from more affordable electricity rates driven by widespread transportation electrification



RELATED LEGISLATION AT COUNCIL – ‘ONE SITE, ONE SERVICE’ REVISIONS

- What is it?
 - SMC section 21.49.090, City Light policy entitled “Single Site, single service” – commonly known as “One site, one service”).
- Why does it exist?
 - Policy was originally created for safety and efficiency; but as currently applied, has become a barrier to effective customer service.
- What does this legislation do?
 - Proposed legislation clarifies Seattle City Light’s discretion to allow additional services on a parcel.
 - Helps improve a key City Light’s service process related to development of EV charging sites and demonstrates commitment to process improvements to enable transportation electrification.

QUESTIONS?



September 23, 2020

MEMORANDUM

To: Transportation and Utilities Committee
From: Eric McConaghy, Analyst
Subject: City Light's Transportation Electrification Strategic Plan Legislation

On September 25, 2020, the Transportation and Utilities Committee (Committee) will discuss and may vote on legislation related to [City Light's Transportation Electrification Strategic Investment Plan \(Plan\)](#). The legislation consists of [Resolution 31971](#) and [Council Bill \(C.B.\) 119895](#).

City Light staff will brief the Committee and answer questions on this matter during the meeting. This memorandum provides background on the two pieces of legislation, describes each and identifies potential Council decisions that would be affected by the approval of Resolution 31971 and C.B. 119895.

Background

The Washington State Legislature passed during the 2019 Session, and the Governor signed, [Substitute House Bill \(SHB\) 1512](#) dealing with electrification of transportation. SHB 1512 created [Revised Code of Washington \(RCW\) 35.92.450](#), which provides that the "governing authority of an electric utility...may adopt an electrification of transportation plan" and allows for an electric utility to offer "incentive programs in the electrification of transportation for its customers, including the promotion of electric vehicle adoption and advertising programs to promote the utility's services, incentives, or rebates."

As an electric utility, City Light may take advantage of the power granted in RCW 35.92.450 provided these requirements are met:

1. Council adopts the Plan and
2. City Light's "utility outreach and investment in the electrification of transportation infrastructure does not increase net costs to ratepayers in excess of one-quarter of one percent."

Description of Legislation

Adopting Resolution 31971 would meet the first requirement listed above by adopting the Plan. It would also:

- Request the General Manager and Chief Executive Officer of City Light continue to consult with other City departments, stakeholders, community partners, and customers on specific initiatives, programs, services, and incentives in furtherance of the Plan; and
- Call for City Light to submit an annual report to the Mayor and City Council on progress of implementation and further development of the Plan; and
- Document that City Light will continue to review and update the Plan at least every four years.

Approving C.B. 119895 would add a new Chapter 21.53 to the Seattle Municipal Code (SMC) authorizing City Light to offer incentive programs in the electrification of transportation for its customers. SMC 21.53 would also constrain City Light's budget authority for transportation electrification-related infrastructure investments, incentives, or rebates to the limit imposed by RCW 35.92.450 shown in the second requirement above. Finally, SMC 21.53 would mandate that City Light "submit an annual report to the Mayor and City Council on progress of implementation and further development of the (Plan)."

One example of an incentive is a cash rebate for a City Light customer toward the purchase of a charging station for a vehicle. Providing electric vehicle-ready electricity service to workplaces for future charging infrastructure is an example of transportation electrification-related infrastructure. The Plan lists many more examples of implementation actions and investments on pages 13 and 14.

Future Expectations

City Light has emphasized equity in the approach to outreach on the Plan and it would be consistent with Council's priorities to expect this to continue. Therefore, Council would likely look for evidence of City Light implementing the Plan through actions that increase equity and environmental justice.

Also, before deciding on future electric rates and budget appropriations, Council would likely expect City Light to provide sufficient information demonstrating that spending to implement the Plan would not increase net costs to ratepayers in excess of one-quarter of one percent. This information would include, at least, an accounting the costs of infrastructure spending related to transportation electrification, incentives and rebates. Council would also likely wish to know the amount of infrastructure spending to:

- Maintain existing, aging assets (poles, wires, substations, etc.);
- Build and improve infrastructure necessary to support the electrification of transportation and
- Build and improve infrastructure necessary to meet future demand for power and the transmission of power anticipated with increasing electrification overall.

Next Steps

If Council adopts the Plan via Resolution 31971 and authorizes City Light to implement the Plan by passing C.B. 119895, then Central Staff anticipates any appropriations or positions needed to implement the plan to be proposed in the Mayor's 2021 Proposed Budget, or in future budget legislation.

cc: Dan Eder, Interim Director of Central Staff



Legislation Text

File #: CB 119895, **Version:** 1

CITY OF SEATTLE

ORDINANCE _____

COUNCIL BILL _____

AN ORDINANCE relating to the City Light Department; granting authority for the Department to offer incentive programs in the electrification of transportation for its customers, including the promotion of electric vehicle adoption and advertising programs to promote the utility’s services, incentives, or rebates; and adding a new Chapter 21.53 to the Seattle Municipal Code.

WHEREAS, The City of Seattle, through its City Light Department (“City Light”), is interested in supporting the electrification of transportation across its service territory; and

WHEREAS, in its 2019 session the Washington State Legislature passed, and the Governor signed, SHB 1512 (the “legislation”) relating to electrification of transportation by amending or creating new sections to chapter 35.92 RCW; and

WHEREAS, the Legislature found that “programs for the electrification of transportation have the potential to allow electric utilities to optimize the use of electric grid infrastructure, improve the management of electric loads, and better manage the integration of variable renewable energy resources” (§1(1) of the legislation); and

WHEREAS, the Legislature found that “state policy can achieve the greatest return on investment in reducing greenhouse gas emissions and improving air quality by expediting the transition to alternative fuel vehicles, including electric vehicles” (§1(2) of the legislation); and

WHEREAS, the Legislature further recognized that each electric utility, depending on its unique circumstances, can determine an appropriate role in the development of electrification of transportation infrastructure; and

WHEREAS, the legislation created what was codified as RCW 35.92.450, which provides that the “governing authority of an electric utility formed under this chapter may adopt an electrification of transportation plan”; and

WHEREAS, RCW 35.92.450 also allows for an electric utility to offer “incentive programs in the electrification of transportation for its customers, including the promotion of electric vehicle adoption and advertising programs to promote the utility’s services, incentives, or rebates”, provided that “utility outreach and investment in the electrification of transportation infrastructure does not increase net costs to ratepayers” consistent with rules set forth in RCW 35.92.450; and

WHEREAS, City Light has created a Transportation Electrification Strategic Investment Plan aligned with the legislation and the RCW; and

WHEREAS, the Transportation Electrification Strategic Investment Plan has been developed using best practice methods in concert with a wide range of stakeholders and community groups; and

WHEREAS, the adoption of the Transportation Electrification Strategic Investment Plan represents a key milestone in City Light’s overall transition to the “utility of the future” that meets its customer-owners’ needs how they choose and in an efficient, innovative, and future-focused manner rooted in equity and social justice; and

WHEREAS, the City Council has reviewed the Transportation Electrification Strategic Investment Plan and the results of customer and stakeholder engagement; and

WHEREAS, the City Council has reviewed the terms and conditions set forth in this ordinance and has determined that the supporting reasoning is sound and prudent; NOW, THEREFORE,

BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:

Section 1. A new Chapter 21.53 is added to the Seattle Municipal Code as follows:

CHAPTER 21.53 TRANSPORTATION ELECTRIFICATION

21.53.010 Short title

This Chapter 21.53 shall constitute the “Transportation Electrification Authority” and may be cited as such.

21.53.015 Authority for transportation electrification

The Department is authorized to offer incentive programs in the electrification of transportation for its customers, including the promotion of electric vehicle adoption and advertising programs to promote the utility’s programs, services, incentives or rebates, provided that City Light’s outreach and investment in the electrification of transportation infrastructure does not increase net costs to ratepayers consistent with rules set forth in RCW 35.92.450.

21.53.020 Budget authority

Budget authority for transportation electrification-related infrastructure investments, incentives, or rebates will be included in the Department’s submitted budget(s) and consistent with RCW 35.92.450.

21.53.025 Reporting

The Department shall submit an annual report to the Mayor and City Council on progress of implementation and further development of the overall Transportation Electrification Strategic Investment Plan.

Section 2. This ordinance shall take effect and be in force 30 days after its approval by the Mayor, but if not approved and returned by the Mayor within ten days after presentation, it shall take effect as provided by Seattle Municipal Code Section 1.04.020.

Passed by the City Council the _____ day of _____, 2020, and signed by me in open session in authentication of its passage this _____ day of _____, 2020.

President _____ of the City Council

Approved by me this _____ day of _____, 2020.

Jenny A. Durkan, Mayor

Filed by me this _____ day of _____, 2020.

Monica Martinez Simmons, City Clerk

(Seal)

SUMMARY and FISCAL NOTE*

Department:	Dept. Contact/Phone:	CBO Contact/Phone:
Seattle City Light	Emeka Anyanwu 684-3718	Greg Shiring 386-4085

** Note that the Summary and Fiscal Note describes the version of the bill or resolution as introduced; final legislation including amendments may not be fully described.*

1. BILL SUMMARY

Legislation Title: AN ORDINANCE relating to the City Light Department; granting authority for the Department to offer incentive programs in the electrification of transportation for its customers, including the promotion of electric vehicle adoption and advertising programs to promote the utility’s services, incentives, or rebates; and adding a new Chapter 21.53 to the Seattle Municipal Code.

Summary and background of the Legislation: This Ordinance provides City Light with the authority to offer electrification of transportation-related incentive programs, services, incentives or rebates. This authority is aligned with the recent adoption of RCW 35.92.450 that allows City Light to offer “incentive programs in the electrification of transportation for its customers, including the promotion of electric vehicle adoption and advertising programs to promote the utility’s services, incentives, or rebates.” Seattle City Light is seeking to create a new chapter in the Seattle Municipal Code to codify this authority.

This Ordinance is also aligned with a Resolution to adopt City Light’s Transportation Electrification Strategic Investment Plan.

2. CAPITAL IMPROVEMENT PROGRAM

Does this legislation create, fund, or amend a CIP Project? ___ Yes **X** No
The legislation, in isolation, does not create, fund, or amend a CIP Project. Through its Transportation Electrification Strategic Investment Plan, the Department will initiate the development of the utility’s transportation electrification infrastructure investments, incentives, and rebates, but the authority established by this legislation does not create any CIP Projects. Appropriations for any new or expanded CIP projects will be done through City Light’s budget process. All spending associated with the Transportation Electrification Strategic Investment Plan will adhere to RCW 35.92.450 in that utility outreach and investment in the electrification of transportation infrastructure does not increase net costs to ratepayers in excess of one-quarter of one percent.

3. SUMMARY OF FINANCIAL IMPLICATIONS

Does this legislation amend the Adopted Budget? ___ Yes **X** No

Does the legislation have other financial impacts to the City of Seattle that are not reflected in the above, including direct or indirect, short-term or long-term costs?

The adoption of this Ordinance does not have direct financial impacts to the City of Seattle. All changes to appropriations will be done through City Light's budget process. Budgetary authority for transportation electrification-related infrastructure investments, incentives, or rebates will be included in City Light's submitted budget(s). The Department will adhere to the guidance found in RCW 35.92.450 to make investments in the electrification of transportation infrastructure that does not increase net costs to ratepayers in excess of one-quarter of one percent.

Is there financial cost or other impacts of *not* implementing the legislation?

No.

4. OTHER IMPLICATIONS

a. Does this legislation affect any departments besides the originating department?

No.

b. Is a public hearing required for this legislation?

No

c. Does this legislation require landlords or sellers of real property to provide information regarding the property to a buyer or tenant?

No

d. Is publication of notice with *The Daily Journal of Commerce* and/or *The Seattle Times* required for this legislation?

No

e. Does this legislation affect a piece of property?

No.

f. Please describe any perceived implication for the principles of the Race and Social Justice Initiative. Does this legislation impact vulnerable or historically disadvantaged communities? What is the Language Access plan for any communications to the public?

The development of programs or services associated with the Transportation Electrification Strategic Investment Plan will be developed in consultation with stakeholders, community partners, and a wide range of customers. This work will be accomplished in a manner to uphold the utility's and the City of Seattle's core values of race and social justice, equity, and environmental stewardship.

g. If this legislation includes a new initiative or a major programmatic expansion: What are the specific long-term and measurable goal(s) of the program? How will this legislation help achieve the program's desired goal(s). N/A

List attachments/exhibits below: None.



Legislation Text

File #: Inf 1691, **Version:** 1

Amendment to SMC 21.49.090 which currently imposes a barrier to the efficient and timely deployment of electric vehicle (“EV”) charging sites; SCL proposes legislation clarifying Seattle City Light’s discretion to allow additional services on a parcel.

CITY OF SEATTLE

ORDINANCE _____

COUNCIL BILL _____

..title

AN ORDINANCE relating to the City Light Department; amending Section 21.49.090 of the Seattle Municipal Code to clarify the Department’s discretion to allow additional services on a parcel as it deems necessary to provide adequate service to customers.

..body

WHEREAS, in the context of its Transportation Electrification Strategic Investment Plan, the City Light Department (the “Department”) wishes both to enable its customer-owners’ energy choices and to facilitate the electrification of transportation pursuant to authority granted to the utility in 2019 by the State of Washington; and

WHEREAS, feedback from the Department’s customer-owners indicates that application of Seattle Municipal Code (SMC) Section 21.49.090 under a policy entitled “Single Site, Single Service” (commonly known as “One site, one service”) poses a barrier to the efficient and timely deployment of electric vehicle (“EV”) charging sites throughout the Department’s service area and to designing and implementing solutions that serve other needs of customer-owners; and

WHEREAS, the Department has determined that a modification to SMC 21.49.090 will better meet the Department’s needs and transportation electrification goals while at the same time ensuring that services are properly engineered and safeguarding the safety of the utility’s field personnel, emergency first responders, and the general public; NOW,

THEREFORE,

BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:

Section 1. Section 21.49.090 of the Seattle Municipal Code, last amended by Ordinance 123988, is amended as follows:

1 **21.49.090 Rate, meter reading, and billing provisions**

2 * * *

3 B. (~~(Single meter, single)~~) Individually metered service. All rates in this Chapter 21.49
4 apply to electricity supplied through a single meter to individual customers at each building or
5 premises not separated by intervening property, streets, or alleys commonly used as public
6 thoroughfares. (~~(At the option of)~~) In the Department's sole discretion, however, two or more
7 physically and mechanically connected buildings used for a single business function under one
8 ownership may be supplied through one point of delivery and one meter even though they are
9 separated by intervening property or a street or alley, where such service is necessary for
10 efficient deployment of utility-owned facilities. Two buildings merely joined by a walkway or
11 mall across the street, alley, or public thoroughfare will not be allowed a single service and meter
12 for both. In the event two or more premises under one ownership that are physically and
13 mechanically connected, used for a single business function, and supplied through one point of
14 delivery and one meter, undergo a change in ownership, so that each premises is separately
15 owned, each premises will require a single service pursuant to this Chapter 21.49. Each building
16 owner(s) will be responsible for the conversion to a single meter at its sole expense. Such
17 conversion will be subject to the installation charges set out in subsection 21.49.110.T.
18 Exceptions to the requirement for single meter, single service may be provided through the
19 Department's authority granted in Section 21.49.130. No exception shall be granted for services
20 with demand greater than that defined under Section 21.49.052.

21 C. Added service. At the sole discretion of the Department, (~~(any)~~) and subject to
22 efficient deployment of utility assets, the Department may supply additional services on a given
23 premise such as is deemed necessary for customer use. Any additional service supplied to the

1 ~~same customer in the same structure~~ premises at different voltage or phase shall be separately
2 metered and billed, and the customer shall pay for the installation of the service.

3 D. Totalizing multiple meters. The Department may waive the application of rates to each
4 meter and permit the reading of two or more meters at a single contiguous location to be totaled
5 for billing purposes when the premises are billed for electric service under residential, large
6 general service or high demand general service rate schedules, as defined in Sections 21.49.057
7 and 21.49.058, and the Department determines that the maintenance of adequate service and/or
8 that the Department's convenience requires more than one meter for each type of service or load
9 classification.

10 * * *

1 Section 2. This ordinance shall take effect and be in force 30 days after its approval by
2 the Mayor, but if not approved and returned by the Mayor within ten days after presentation, it
3 shall take effect as provided by Seattle Municipal Code Section 1.04.020.

4 Passed by the City Council the _____ day of _____, 2020,
5 and signed by me in open session in authentication of its passage this ____ day of
6 _____, 2020.

7 _____
8 President _____ of the City Council

9 Approved by me this _____ day of _____, 2020.
10 _____
11 Jenny A. Durkan, Mayor

12 Filed by me this _____ day of _____, 2020.
13 _____
14 Monica Martinez Simmons, City Clerk

15 (Seal)

RELATED LEGISLATION AT COUNCIL – ‘ONE SITE, ONE SERVICE’ REVISIONS

- **What is it?**
 - SMC section 21.49.090, City Light policy entitled “Single Site, single service” – commonly known as “One site, one service”).
- **Why does it exist?**
 - Policy was originally created for safety and efficiency; but as currently applied, has become a barrier to effective customer service.
- **What does this legislation do?**
 - Proposed legislation clarifies Seattle City Light’s discretion to allow additional services on a parcel.
 - Helps improve a key City Light’s service process related to development of EV charging sites and demonstrates commitment to process improvements to enable transportation electrification.



Legislation Text

File #: CB 119899, Version: 1

CITY OF SEATTLE

ORDINANCE _____

COUNCIL BILL _____

AN ORDINANCE relating to the City Light Department; amending Section 21.49.125 of the Seattle Municipal Code; updating the City Light Department's Open Access Transmission Tariff and rates to meet changes in costs and regulations.

WHEREAS, the City Light Department ("City Light") has committed to voluntarily provide transmission service to eligible customers since passage of the Federal Energy Policy Act of 1992; and

WHEREAS, City Light supports federal policies regarding open access to the interstate transmission system; and

WHEREAS, in 2009, City Light established an Open Access Transmission Tariff (OATT) based on the Federal Energy Regulatory Commission's ("FERC") *Pro Forma* Open Access Transmission Tariff ("Pro Forma"); and

WHEREAS, City Light's revisions to 2009 OATT terms and conditions account for City Light participation in the California Independent System Operator ("CAISO") Energy Imbalance Market ("EIM") and adopt appropriate Pro Forma revisions; and

WHEREAS, City Light's revisions to 2009 OATT rates and charges reflect 2018 financials and consistency with FERC's Pro Forma rate methodology; and

WHEREAS, the 2020 OATT will continue to provide comparable terms, conditions, and pricing to transmission services that City Light provides itself; NOW, THEREFORE,

BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:

Section 1. Section 21.49.125 of the Seattle Municipal Code, enacted by Ordinance 123125, is amended

to read as follows:

21.49.125 Open Access transmission tariff, rates, and interconnection procedures (Schedules 1 through 10, Attachments A, B, C, D, E F, J, K, L, M, Q)

The Department shall offer an open access transmission tariff (“OATT”). Due to the excessive length of the OATT, it is not codified. (~~However, a copy of the OATT, including its Schedules 1 through 9, Attachments A through L, and Generator Interconnection Procedures and Agreements, is available at the Seattle City Clerk’s Office and can also be found on the Department’s public web page.~~) Schedules 1 through 10 of the OATT are available to Eligible Customers as defined in Subsection 1.25 of the tariff.

Section 2. The General Manager and Chief Executive Officer of the City Light Department (“City Light”) shall issue and administer the 2020 Open Access Transmission Tariff (OATT). As such, the General Manager and Chief Executive Officer may revise terms and conditions of the OATT as necessary or convenient to preserve and enhance reliability, accommodate changes to industry standards and business practices, and meet obligations under state and federal laws and regulations.

Section 3. Due to the length of the OATT, the complete text of the tariff is posted electronically on Seattle.gov.

Section 4. The Seattle City Council delegates authority to City Light, as the Transmission Provider, to create rules and regulations regarding the OATT and to modify the OATT as needed. The General Manager and Chief Executive Officer of City Light is authorized to execute Generator Interconnection Agreements in the form attached to the OATT.

Section 5. Sections 1 through 4 of this ordinance shall take effect and be in force on January 1, 2021.

Section 6. This ordinance shall take effect and be in force 30 days after its approval by the Mayor, but if not approved and returned by the Mayor within ten days after presentation, it shall take effect as provided by Seattle Municipal Code Section 1.04.020.

Passed by the City Council the _____ day of _____, 2020, and signed by

me in open session in authentication of its passage this ____ day of _____, 2020.

President _____ of the City Council

Approved by me this ____ day of _____, 2020.

Jenny A. Durkan, Mayor

Filed by me this ____ day of _____, 2020.

Monica Martinez Simmons, City Clerk

(Seal)

Attachments:

Attachment A - Seattle City Light Pro Forma Open Access Transmission Tariff

Attachment B - Generator Interconnection Procedures (GIP)

Attachment C - Generator Interconnection Agreement (GIA)

**SEATTLE CITY LIGHT
PRO FORMA OPEN ACCESS
TRANSMISSION TARIFF**

DRAFT

DRAFT

I. COMMON SERVICE PROVISIONS**1 Definitions****1.1 Affiliate:**

With respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

1.2 Ancillary Services:

Those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility Practice.

1.3 Application:

A request by an Eligible Customer for transmission service pursuant to the provisions of the Tariff.

1.4 Balancing Authority (BA):

The responsible entity that integrates resource plans ahead of time, maintains Demand and resource balance within a Balancing Authority Area, and supports interconnection frequency in real time.

1.5 Balancing Authority Area (BAA):

The collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area. For the purposes of this Tariff, BAA shall have the same meaning as “Control Area.”

1.6 Balancing Authority Area Resource:

A resource owned by Transmission Provider or voluntarily contracted for by Transmission Provider to provide EIM Available Balancing Capacity that can provide regulation and load following services to enable the SCL EIM Entity to meet reliability criteria. No resource unaffiliated with the SCL EIM Entity shall be a Balancing Authority Area Resource solely on the basis of one or more of the following reasons: (1) the resource flows on a Point-to-Point Transmission Service reservation; and/or (2) the resource is an Interconnection Customer under the Tariff.

1.7 Bid Cost Recovery (BCR):

The MO EIM settlements process through which SCL EIM Participating Resources recover their bid costs.

1.8 California Independent System Operator Corporation or CAISO:

The state-chartered, California non-profit public benefit corporation that operates the transmission facilities of all CAISO participating transmission owners and dispatches certain generating units and loads. The CAISO is the

MO for EIM.

1.9 CAISO BAA:

The collection of generation, transmission, and loads within the metered boundaries of the CAISO Balancing Authority Area.

1.10 Commission:

The Federal Energy Regulatory Commission.

1.11 Completed Application:

An Application that satisfies all of the information and other requirements of the Tariff, including any required deposit.

1.12 Control Area:

For the purposes of this Tariff, Control Area shall have the same meaning as “Balancing Authority Area” or “BAA.” An electric power system or combination of electric power systems to which a common automatic generation control scheme is applied in order to:

1. match, at all times, the power output of the generators within the electric power system(s) and capacity and energy purchased from entities outside the electric power system(s), with the load within the electric power system(s);
2. maintain scheduled interchange with other Control Areas, within the limits of Good Utility Practice;

3. maintain the frequency of the electric power system(s) within reasonable limits in accordance with Good Utility Practice; and
4. provide sufficient generating capacity to maintain operating reserves in accordance with Good Utility Practice.

1.13 Curtailment:

A reduction in firm or non-firm transmission service in response to a transfer capability shortage as a result of system reliability conditions.

1.14 Delivering Party:

The entity supplying capacity and energy to be transmitted at Point(s) of Receipt.

1.15 Designated Agent:

Any entity that performs actions or functions on behalf of the Transmission Provider, an Eligible Customer, or the Transmission Customer required under the Tariff.

1.16 Direct Assignment Facilities:

Facilities or portions of facilities that are constructed by the Transmission Provider for the sole use/benefit of a particular Transmission Customer requesting service under the Tariff. Direct Assignment Facilities shall be specified in the Service Agreement that governs service to the Transmission Customer.

1.17 Dispatch Instruction:

An instruction by the MO for an action with respect to a specific SCL EIM Participating Resource or Balancing Authority Area Resource for increasing or decreasing its energy supply or demand.

1.18 Dispatch Operating Point:

The expected operating point, in MW, of a SCL EIM Participating Resource that has received a Dispatch Instruction from the MO or a Balancing Authority Area Resource to which the SCL EIM Entity has relayed a Dispatch Instruction received from the MO. For purposes of Attachment Q of this Tariff, the Dispatch Operating Point means the change, in MW output, of: (i) a SCL EIM Participating Resource due to an EIM bid being accepted and the SCL EIM Participating Resource receiving a Dispatch Instruction or (ii) a Balancing Authority Area Resource for which a Dispatch Instruction has been issued by the CAISO with respect to EIM Available Balancing Capacity. The Dispatch Operating Point is expressed either as a negative MW quantity for the downward movement of generation, or a positive MW quantity for the upward movement of generation.

1.19 Dynamic Transfer:

The provision of the real-time monitoring, telemetering, computer software, hardware, communications, engineering, energy accounting (including

inadvertent Interchange), and administration required to electronically move all or a portion of the real energy services associated with a generator or load out of one BAA into another. A Dynamic Transfer can be either:

- (1) a Dynamic Schedule: a telemetered reading or value that is updated in real time and used as a schedule in the AGC/ACE equation and the integrated value of which is treated as an after-the-fact schedule for Interchange accounting purposes; or
- (2) a Pseudo-Tie: a functionality by which the output of a generating unit physically interconnected to the electric grid in a native BAA is telemetered to and deemed to be produced in an attaining BAA that provides BA services for and exercises BA jurisdiction over the generating unit.

1.20 Energy Imbalance Market or EIM:

The real-time market to manage transmission congestion and optimize procurement of imbalance energy (positive or negative) to balance supply and demand deviations for the EIM Area through economic bids submitted by EIM Participating Resource Scheduling Coordinators in the fifteen-minute and five-minute markets.

1.21 EIM Area:

The combination of SCL's BAA, the CAISO BAA, and the BAAs of any other EIM Entities.

1.22 EIM Available Balancing Capacity:

Any upward or downward capacity from a Balancing Authority Area

Resource that has not been bid into the EIM and is included in the SCL EIM Entity's Resource Plan.

1.23 EIM Entity:

A BA, other than the SCL EIM Entity, that enters into the MO's proforma EIM Entity Agreement to enable the EIM to occur in its BAA.

1.24 EIM Transfer:

The transfer of real-time energy resulting from an EIM Dispatch Instruction: (1) between the SCL BAA and the CAISO BAA; (2) between the SCL BAA and an EIM Entity BAA; or (3) between the CAISO BAA and an EIM Entity BAA using transmission capacity available in the EIM.

1.25 Eligible Customer:

- i. Any electric utility (including the Transmission Provider and any power marketer), Federal power marketing agency, or any person generating electric energy for sale or resale is an Eligible Customer under the Tariff. Electric energy sold or produced by such entity may be electric energy produced in the United States, Canada or Mexico. However, with respect to transmission service that the Commission is prohibited from ordering by Section 212(h) of the Federal Power Act,

such entity is eligible only if the service is provided pursuant to a state requirement that the Transmission Provider offer the unbundled transmission service, or pursuant to a voluntary offer of such service by the Transmission Provider.

- ii. Any retail customer taking unbundled transmission service pursuant to a state requirement that the Transmission Provider offer the transmission service, or pursuant to a voluntary offer of such service by the Transmission Provider, is an Eligible Customer under the Tariff.

1.26 e-Tag:

An electronic tag associated with a schedule in accordance with the requirements of the North American Electric Reliability Corporation (NERC), the Western Electricity Coordinating Council (WECC), or the North American Energy Standards Board (NAESB).

1.27 Facilities Study:

An engineering study conducted by the Transmission Provider to determine the required modifications to the Transmission Provider's Transmission System, including the cost and scheduled completion date for such modifications, that will be required to provide the requested transmission service.

1.28 Firm Point-To-Point Transmission Service:

Transmission Service under this Tariff that is reserved and/or scheduled between specified Points of Receipt and Delivery pursuant to Part II of this Tariff.

1.29 Flexible Ramping Forecast Movement:

A resource's change in forecasted output between market intervals for purposes of the Flexible Ramping Product.

1.30 Flexible Ramping Product:

The costs associated with meeting a requirement, established by the MO, that may be enforced in the MO's EIM optimization to ensure that the unit commitment or dispatch of resources for intervals beyond the applicable commitment or dispatch period provide for the availability of required capacity for dispatch in subsequent real-time dispatch intervals.

1.31 Flexible Ramping Uncertainty Award:

A resource's award for meeting a Flexible Ramping Uncertainty Requirement under the Flexible Ramping Product.

1.32 Flexible Ramping Uncertainty Requirement:

Flexible ramping capability to meet the Flexible Ramping Product requirements established by the MO.

1.33 Forecast Data:

Information provided by Transmission Customers regarding expected load (as determined pursuant to Section 4.2.4.3 of Attachment Q of this Tariff), generation, Intrachange, and Interchange (as specified in Section 4.2.4 of Attachment Q and the SCL EIM BP). The Transmission Customer Base Schedule includes Forecast Data that is used by the SCL EIM Entity as the baseline by which to measure Imbalance Energy for purposes of EIM settlement.

1.34 Good Utility Practice:

Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region, including those practices required by Federal Power Act section 215(a)(4).

1.35 Hourly Pricing Proxy:

The on-peak or off-peak price reported for the Intercontinental Exchange

(ICE) Mid-Columbia Firm Power Index for the hour in which Transmission Service is provided. In the event that Transmission Service is provided during a time where no volumes are reported at the Mid-Columbia hub, the most recent firm on-peak and off-peak prices will be carried forward. If ICE permanently ceases to report day-ahead pricing at the Mid-Columbia hub, or if the methodology used to determine the index at the Mid-Columbia hub is materially modified, Transmission Provider shall select a permanent replacement index, reported by a reputable third party, that reflects the actual same-day firm transactions at the Mid-Columbia hub.

1.36 Imbalance Energy:

The deviation of supply or demand from the Transmission Customer Base Schedule, positive or negative, as measured by metered generation, metered load, or real-time Interchange or Intrachange schedules.

1.37 Instructed Imbalance Energy (IIE):

There are three scenarios that can lead to settlement of imbalance as IIE: (1) operational adjustments of the Transmission Customer's affected Interchange or Intrachange, which includes changes by the Transmission Customer after T-57; (2) resource imbalances created by Manual Dispatch or an EIM Available Balancing Capacity dispatch; or (3) an adjustment to resource imbalances created by adjustments to resource forecasts pursuant to Section

11.5 of the MO Tariff. IIE will be settled at either the RTD or FMM price at the applicable PNode depending on the nature and timing of the imbalance.

1.38 Interchange:

E-Tagged energy transfers from, to, or through the SCL BAA or other BAAs, not including EIM Transfers.

1.39 Interconnection Customer:

Any Eligible Customer (or its Designated Agent) that executes an agreement to receive generation interconnection service pursuant to Attachment M of this Tariff.

1.40 Interruption:

A reduction in non-firm transmission service due to economic reasons pursuant to Section 15.7.

1.41 Intrachange:

E-Tagged energy transfers within the SCL BAA, not including real-time actual energy flows associated with EIM Dispatch Instructions.

1.42 Load Aggregation Point (LAP):

A set of Pricing Nodes that is used for the submission of bids and settlement of demand in the EIM.

1.43 Locational Marginal Price (LMP):

The marginal cost (\$/MWh) of serving the next increment of demand at that PNode consistent with existing transmission constraints and the performance characteristics of resources.

1.44 Long-Term Firm Point-To-Point Transmission Service:

Firm Point-To-Point Transmission Service under Part II of the Tariff with a term of one year or more.

1.45 Manual Dispatch:

An operating order issued by the SCL EIM Entity to a Transmission Customer with a SCL EIM Participating Resource or a Non-Participating Resource in SCL's BAA, outside of the EIM optimization, when necessary to address reliability or operational issues in SCL's BAA that the EIM is not able to address through economic dispatch and congestion management.

1.46 Market Operator (MO):

The entity responsible for operation, administration, settlement, and oversight of the EIM.

1.47 Measured Demand:

Includes (1) Metered Demand plus (2) e-Tagged export volumes from the SCL BAA (excluding EIM Transfers).

1.48 Metered Demand:

Metered load volumes in SCL's BAA.

1.49 MO Tariff:

Those portions of the MO's approved tariff, as such tariff may be modified from time to time, that specifically apply to the operation, administration, settlement, and oversight of the EIM.

1.50 Native Load Customers:

The wholesale and retail power customers of the Transmission Provider on whose behalf the Transmission Provider, by statute, franchise, regulatory requirement, or contract, has undertaken an obligation to construct and operate the Transmission Provider's system to meet the reliable electric needs of such customers.

1.51 Network Upgrades:

Modifications or additions to transmission-related facilities that are integrated with and support the Transmission Provider's overall Transmission System for the general benefit of all users of such Transmission System.

1.52 Non-Firm Point-To-Point Transmission Service:

Point-To-Point Transmission Service under the Tariff that is reserved and scheduled on an as-available basis and is subject to Curtailment or Interruption as set forth in Section 15.7 under Part II of this Tariff. Non-Firm Point-To-Point Transmission Service is available on a stand-alone basis for periods ranging from one hour to one month.

1.53 Non-Firm Sale:

An energy sale for which receipt or delivery may be interrupted for any reason or no reason, without liability on the part of either the buyer or seller.

1.54 Non-Participating Resource:

A resource in SCL's BAA that is not an SCL EIM Participating Resource.

1.55 Operating Hour:

The hour when the EIM runs and energy is supplied to load.

1.56 Part I:

Tariff Definitions and Common Service Provisions contained in Sections 2 through 13.

1.57 Part II:

Tariff Sections 14 through 28 pertaining to Point-To-Point Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.58 Parties:

The Transmission Provider and the Transmission Customer receiving service under the Tariff.

1.59 Point(s) of Delivery:

Point(s) on the Transmission Provider's Transmission System where capacity and energy transmitted by the Transmission Provider will be made available to

the Receiving Party under Part II of the Tariff. The Point(s) of Delivery shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

1.60 Point(s) of Receipt:

Point(s) of interconnection on the Transmission Provider's Transmission System where capacity and energy will be made available to the Transmission Provider by the Delivering Party under Part II of the Tariff. The Point(s) of Receipt shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

1.61 Point-To-Point Transmission Service:

The reservation and transmission of capacity and energy on either a firm or non-firm basis from the Point(s) of Receipt to the Point(s) of Delivery under Part II of the Tariff.

1.62 Power Purchaser:

The entity that is purchasing the capacity and energy to be transmitted under the Tariff.

1.63 Pre-Confirmed Application:

An Application that commits the Eligible Customer to execute a Service Agreement upon receipt of notification that the Transmission Provider can provide the requested Transmission Service.

1.64 Pricing Node (PNode):

A single network node or subset of network nodes where a physical injection or withdrawal is modeled by the MO and for which the MO calculates an LMP that is used for financial settlements by the MO and the SCL EIM Entity.

1.65 Real Power Losses:

Electrical losses associated with the use of the Transmission Provider's Transmission System and, where applicable, the use of the Transmission Provider's distribution system. Such losses are provided for in Sections 16.7 of the Tariff and settled financially under Schedule 10.

1.66 Receiving Party:

The entity receiving the capacity and energy transmitted by the Transmission Provider to Point(s) of Delivery.

1.67 Regional Transmission Group (RTG):

A voluntary organization of transmission owners, transmission users and other entities approved by the Commission to efficiently coordinate transmission planning (and expansion), operation and use on a regional (and interregional) basis.

1.68 Reserved Capacity:

The maximum amount of capacity and energy that the Transmission Provider

agrees to transmit for the Transmission Customer over the Transmission Provider's Transmission System between the Point(s) of Receipt and the Point(s) of Delivery under Part II of the Tariff. Reserved Capacity shall be expressed in terms of whole megawatts on a 60 minute interval (commencing on the clock hour) basis.

1.69 Resource Plan:

The combination of load, resource and Interchange components of the Transmission Customer Base Schedule, ancillary services plans of the SCL EIM Entity, bid ranges submitted by SCL EIM Participating Resources, and the EIM Available Balancing Capacity of Balancing Authority Area Resources.

1.70 SCL:

The municipal electric utility, operated by The City of Seattle, by and through its City Light Department, a Washington municipal corporation. SCL is the Transmission Provider under this Tariff.

1.71 SCL BAA:

Refers to the BAA operated by SCL.

1.72 SCL BAA Transmission Owner:

A transmission owner, other than the SCL EIM Entity, who owns transmission facilities in SCL's BAA.

1.73 SCL EIM Business Practice (SCL EIM BP):

The business practice posted on the Transmission Provider's Transmission Service Website that contains procedures related to Transmission Provider's implementation of EIM and the rights and obligations of Transmission Customers and Interconnection Customers related to EIM.

1.74 SCL EIM Entity:

The Transmission Provider in performance of its role as an EIM Entity under the MO Tariff and this Tariff, including, but not limited to, Attachment Q.

1.75 SCL EIM Entity Scheduling Coordinator:

The Transmission Provider or the entity selected by the Transmission Provider who is certified by the MO and who entered into the MO's pro forma EIM Entity Scheduling Coordinator Agreement.

1.76 SCL EIM Participating Resource:

A resource or a portion of a resource: (1) that has been certified in accordance with Attachment Q by the SCL EIM Entity as eligible to participate in the EIM; and (2) for which the generation owner and/or operator entered into the MO's pro forma EIM Participating Resource Agreement.

1.77 SCL EIM Participating Resource Scheduling Coordinator:

A Transmission Customer with one or more SCL EIM Participating

Resource(s) or a third-party designated by the Transmission Customer with one or more SCL EIM Participating Resource(s), that is certified by the MO and entered into the MO's pro forma EIM Participating Resource Scheduling Coordinator Agreement.

1.78 SCL Interchange Rights Holder:

A Transmission Customer who has informed the SCL EIM Entity that it is electing to make reserved firm transmission capacity available for EIM Transfers without compensation.

1.79 Seattle City Council:

The legislative body of The City of Seattle, WA, which acts as the governing board of the Transmission Provider.

1.80 Service Agreement:

The initial agreement and any amendments or supplements thereto entered into by the Transmission Customer and the Transmission Provider for service under the Tariff.

1.81 Service Commencement Date:

The date the Transmission Provider begins to provide service pursuant to the terms of an executed Service Agreement, or the date the Transmission Provider begins to provide service in accordance with Section 16.3.

1.82 Short-Term Firm Point-To-Point Transmission Service:

Firm Point-To-Point Transmission Service under Part II of the Tariff with a term of less than one year.

1.83 System Condition:

A specified condition on the Transmission Provider's system or on a neighboring system, such as a constrained transmission element or flowgate, that may trigger Curtailment of Long-Term Firm Point-to-Point Transmission Service using the curtailment priority pursuant to Section 14.6. Such conditions must be identified in the Transmission Customer's Service Agreement.

1.84 System Impact Study:

An assessment by the Transmission Provider of: (i) the adequacy of the Transmission System to accommodate a request for either Firm Point-To-Point Transmission Service and (ii) whether any additional costs may be incurred in order to provide transmission service.

1.85 Third-Party Sale:

Any sale for resale in interstate commerce to a Power Purchaser.

1.86 Transmission Customer:

Any Eligible Customer (or its Designated Agent) that: (i) executes a Service Agreement, or (ii) submits to Dispute Resolution Procedures of Section 12 any

of the terms and conditions of the Service Agreement on which the Eligible Customer and Transmission Provider cannot agree. This term is used in the Part I Common Service Provisions to include customers receiving transmission service under Part II of this Tariff.

1.87 Transmission Customer Base Schedule:

An energy schedule that provides Transmission Customer hourly-level Forecast Data and other information that is used by the SCL EIM Entity as the baseline by which to measure Imbalance Energy for purposes of EIM settlement. The term “Transmission Customer Base Schedule” as used in this Tariff may refer collectively to the components of such schedule (resource, Interchange, Intrachange, and load determined pursuant to Section 4.2.4.3 of Attachment Q) or any individual components of such schedule.

1.88 Transmission Provider:

Seattle City Light or SCL.

1.89 Transmission Provider’s Monthly Transmission System Peak:

The maximum firm usage of the Transmission Provider’s Transmission System in a calendar month.

1.90 Transmission Service:

Point-To-Point Transmission Service provided under Part II of the Tariff on a firm and non-firm basis.

1.91 Transmission Service Website:

A publicly accessible webpage or collection of webpages on or accessible through Transmission Provider's website (www.seattle.gov/light) on which information and links relevant to Transmission Service under this Tariff are posted.

1.92 Transmission System:

The facilities owned, controlled or operated by the Transmission Provider that are used to provide transmission service under Part II of the Tariff.

1.93 Uninstructed Imbalance Energy (UIE):

For Non-Participating Resources in an EIM Entity BAA, the MO shall calculate UIE as either: (1) the algebraic difference between the resource's five-minute meter data and the resource component of the Transmission Customer Base Schedule, or, if applicable, (2) the five-minute meter data and any Manual Dispatch or EIM Available Balancing Capacity dispatch. For Transmission Customers with load in the SCL EIM Entity's BAA, the SCL EIM Entity shall calculate UIE as the algebraic difference between the Transmission Customer's actual hourly load and the Transmission Customer Base Schedule.

1.94 Variable Energy Resource:

A device for the production of electricity that is characterized by an energy

source that: (1) is renewable, (2) cannot be stored by the facility owner or operator, and (3) has variability that is beyond the control of the facility owner or operator.

2 Initial Allocation and Renewal Procedures

2.1 Initial Allocation of Available Transfer Capability:

For purposes of determining whether existing capability on the Transmission Provider's Transmission System is adequate to accommodate a request for firm service under this Tariff, all Completed Applications for new firm transmission service received during the initial 60 day period commencing with the effective date of the Tariff will be deemed to have been filed simultaneously. A fair and impartial lottery will be conducted by the Transmission Provider to assign priorities for Completed Applications filed simultaneously. All Completed Applications for firm transmission service received after the initial 60 day period shall be assigned a priority pursuant to Section 14.2.

2.2 Reservation Priority For Existing Firm Service Customers:

Existing firm service customers (wholesale requirements and transmission-only, with a contract term of five years or more) have the right to continue to take transmission service from the Transmission Provider when the contract expires, rolls over or is renewed. This transmission reservation priority is independent of whether the existing customer continues to purchase capacity

and energy from the Transmission Provider or elects to purchase capacity and energy from another supplier. If at the end of the contract term, the Transmission Provider's Transmission System cannot accommodate all of the requests for transmission service, the existing firm service customer must agree to accept a contract term at least equal to a competing request by any new Eligible Customer and to pay the Transmission Provider's then current rates for such service; provided that, the firm service customer shall have a right of first refusal at the end of such service only if the new contract is for five years or more. The existing firm service customer must provide notice to the Transmission Provider whether it will exercise its right of first refusal no less than one year prior to the expiration date of its transmission service agreement. This transmission reservation priority for existing firm service customers is an ongoing right that may be exercised at the end of all firm contract terms of five years or longer.

3 Ancillary Services

Ancillary Services are needed with Transmission Service to maintain reliability within and among the Control Areas affected by the Transmission Service. The Transmission Provider is required to provide (or offer to arrange with the local Control Area operator as discussed below), and the Transmission Customer is required to purchase, the following Ancillary Services: (i) Scheduling, System Control and Dispatch, and (ii) Reactive Supply and Voltage Control from

Generation or Other Sources.

The Transmission Provider is required to offer to provide (or offer to arrange with the local Control Area operator as discussed below) the following Ancillary Services only to the Transmission Customer serving load within the Transmission Provider's Control Area: (i) Regulation and Frequency Response, (ii) Energy Imbalance, (iii) Operating Reserve - Spinning, and (iv) Operating Reserve - Supplemental. The Transmission Customer serving load within the Transmission Provider's Control Area is required to acquire these Ancillary Services, whether from the Transmission Provider, from a third party, or by self-supply.

The Transmission Provider is required to provide (or offer to arrange with the local Control Area Operator as discussed below), to the extent it is physically feasible to do so from its resources or from resources available to it, Generator Imbalance Service when Transmission Service is used to deliver energy from a generator located within its Control Area. The Transmission Customer using Transmission Service to deliver energy from a generator located within the Transmission Provider's Control Area is required to acquire Generator Imbalance Service, whether from the Transmission Provider, from a third party, or by self-supply.

The Transmission Customer may not decline the Transmission Provider's offer of Ancillary Services unless it demonstrates that it has acquired the Ancillary

Services from another source. The Transmission Customer must list in its Application which Ancillary Services it will purchase from the Transmission Provider. A Transmission Customer that exceeds its firm reserved capacity at any Point of Receipt or Point of Delivery or an Eligible Customer that uses Transmission Service at a Point of Receipt or Point of Delivery that it has not reserved is required to pay for all of the Ancillary Services identified in this section that were provided by the Transmission Provider associated with the unreserved service. The Transmission Customer or Eligible Customer will pay for Ancillary Services based on the amount of transmission service it used but did not reserve.

If the Transmission Provider is providing transmission service but is not a Control Area operator, it may be unable to provide some or all of the Ancillary Services. In this case, the Transmission Provider can fulfill its obligation to provide Ancillary Services by acting as the Transmission Customer's agent to secure these Ancillary Services from the Control Area operator. The Transmission Customer may elect to: (i) have the Transmission Provider act as its agent, (ii) secure the Ancillary Services directly from the Control Area operator, or (iii) secure the Ancillary Services (discussed in Schedules 3, 4, 5, 6 and 9) from a third party or by self-supply when technically feasible.

The Transmission Provider shall specify the rate treatment and all related terms and conditions in the event of an unauthorized use of Ancillary Services by

the Transmission Customer.

The specific Ancillary Services, prices and/or compensation methods are described on the Schedules that are attached to and made a part of the Tariff.

Three principal requirements apply to discounts for Ancillary Services provided by the Transmission Provider in conjunction with its provision of transmission service as follows: (1) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the Transmission Service Website, (2) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an Affiliate's use) must occur solely by posting on the Transmission Service Website, and (3) once a discount is negotiated, details must be immediately posted on the Transmission Service Website. A discount agreed upon for an Ancillary Service must be offered for the same period to all Eligible Customers on the Transmission Provider's system. Sections 3.1 through 3.7 below list the seven Ancillary Services.

3.1 Scheduling, System Control and Dispatch Service:

The rates and/or methodology are described in Schedule 1.

3.2 Reactive Supply and Voltage Control from Generation or Other Sources Service:

The rates and/or methodology are described in Schedule 2.

3.3 Regulation and Frequency Response Service:

Where applicable, the rates and/or methodology are described in Schedule 3.

3.4 Energy Imbalance Service:

Where applicable, the rates and/or methodology are described in Schedule 4.

3.5 Operating Reserve - Spinning Reserve Service:

Where applicable, the rates and/or methodology are described in Schedule 5.

3.6 Operating Reserve - Supplemental Reserve Service:

Where applicable, the rates and/or methodology are described in Schedule 6.

3.7 Generator Imbalance Service:

Where applicable, the rates and/or methodology are described in Schedule 9.

4 Transmission Service Website

The Transmission Provider shall post on the Transmission Service Website an electronic link to all rules, standards and practices that: (i) relate to the terms and conditions of transmission service, (ii) are not subject to a North American Energy Standards Board (NAESB) copyright restriction, and (iii) are not otherwise included in this Tariff. The Transmission Provider shall post on the Transmission Service Website an electronic link to the NAESB website where any rules, standards and practices that are protected by copyright may be obtained. The Transmission Provider shall provide a minimum of 45 days advance notice to Transmission Customers and eligible Customers (which notice may be given by posting on the Transmission Service Website and must be given by formal written notice (hard copy or electronic) to each Transmission Customer currently receiving service under this Tariff) any additions, deletions or modifications to the

Transmission Provider's rules, standards, and practices associated with this Tariff, the associated effective date, and any additional implementation procedures that the Transmission Provider deems appropriate.

In the event transmission capability is insufficient to accommodate a request for firm transmission service, additional studies may be required as provided by this Tariff pursuant to Section 19.

5 Tax-Exempt Bonds

5.1 Facilities Financed by Tax-Exempt Bonds:

The Transmission Provider utilizes state and federal income tax-exempt financial instruments on an ongoing basis to fund the ownership and operation of its transmission system. Notwithstanding any other provision of this Tariff, the Transmission Provider shall not be required to provide transmission service to any Eligible Customer pursuant to this Tariff if the provision of such transmission service would jeopardize the tax-exempt status of any bond(s) used to finance the Transmission Provider's facilities that would be used in providing such transmission service. If the Transmission Provider determines that the provision of transmission service requested by an Eligible Customer would jeopardize the tax-exempt status of any bond(s) used to finance its facilities that would be used in providing such transmission service, it shall so advise the Eligible Customer and shall not be obligated to provide service.

6 Reciprocity

A Transmission Customer receiving transmission service under this Tariff agrees to provide comparable transmission service that it is capable of providing to the Transmission Provider on similar terms and conditions over facilities used for the transmission of electric energy owned, controlled or operated by the Transmission Customer and over facilities used for the transmission of electric energy owned, controlled or operated by the Transmission Customer's corporate Affiliates. A Transmission Customer that is a member of, or takes transmission service from, a power pool, Regional Transmission Group, Regional Transmission Organization (RTO), Independent System Operator (ISO) or other transmission organization approved by the Commission for the operation of transmission facilities also agrees to provide comparable transmission service to the transmission-owning members of such power pool and Regional Transmission Group, RTO, ISO or other transmission organization on similar terms and conditions over facilities used for the transmission of electric energy owned, controlled or operated by the Transmission Customer and over facilities used for the transmission of electric energy owned, controlled or operated by the Transmission Customer's corporate Affiliates.

This reciprocity requirement applies not only to the Transmission Customer that obtains transmission service under the Tariff, but also to all parties to a transaction that involves the use of transmission service under the Tariff, including

the power seller, buyer and any intermediary, such as a power marketer. This reciprocity requirement also applies to any Eligible Customer that owns, controls or operates transmission facilities that uses an intermediary, such as a power marketer, to request transmission service under the Tariff. If the Transmission Customer does not own, control or operate transmission facilities, it must include in its Application a sworn statement of one of its duly authorized officers or other representatives that the purpose of its Application is not to assist an Eligible Customer to avoid the requirements of this provision.

7 Billing and Payment

7.1 Billing Procedure:

Within a reasonable time after the first day of each month, the Transmission Provider shall submit an invoice to the Transmission Customer for the charges for all services furnished under the Tariff during the preceding month. The invoice shall be paid by the Transmission Customer within 20 days of receipt.

All payments shall be made in immediately available funds payable to the Transmission Provider, or by wire transfer to a bank named by the Transmission Provider.

7.2 Interest and Charges on Unpaid Balances:

Interest on any unpaid amounts (including amounts placed in escrow) shall be charged at 1% per billing period in accordance with the methodology specified for unpaid balances for Transmission Provider's retail accounts

specified in Departmental Policy and Procedure 500 P III-302, section 2.6.

Interest on delinquent amounts shall be calculated from the due date of the bill to the date of payment. When payments are made by mail, bills shall be considered as having been paid on the date of receipt by the Transmission Provider.

7.3 Customer Default:

In the event the Transmission Customer fails, for any reason other than a billing dispute as described below, to make payment to the Transmission Provider on or before the due date as described above, and such failure of payment is not corrected within 30 calendar days after the Transmission Provider notifies the Transmission Customer to cure such failure, a default by the Transmission Customer shall be deemed to exist. Upon the occurrence of a default, the Transmission Provider may initiate Dispute Resolution under Section 12 of this Tariff. In the event of a billing dispute between the Transmission Provider and the Transmission Customer, the Transmission Provider will continue to provide service under the Service Agreement as long as the Transmission Customer: (i) continues to make all payments not in dispute, and (ii) pays into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If the Transmission Customer fails to meet these two requirements for continuation of service, then the Transmission Provider may provide notice to the Transmission

Customer of its intention to suspend service in 60 days.

8 Accounting for the Transmission Provider's Use of the Tariff

The Transmission Provider shall record the following amounts, as outlined below.

8.1 Transmission Revenues:

Include in a separate operating revenue account or subaccount the revenues it receives from Transmission Service when making Third-Party Sales under Part II of the Tariff.

8.2 Study Costs and Revenues:

Include in a separate transmission operating expense account or subaccount, costs properly chargeable to expense that are incurred to perform any System Impact Studies or Facilities Studies which the Transmission Provider conducts to determine if it must construct new transmission facilities or upgrades necessary for its own uses, including making Third-Party Sales under the Tariff; and include in a separate operating revenue account or subaccount the revenues received for System Impact Studies or Facilities Studies performed when such amounts are separately stated and identified in the Transmission Customer's billing under the Tariff.

9 Change to the Tariff by the Transmission Provider

Nothing contained in the Tariff or any Service Agreement shall be construed as affecting in any way the right of the Transmission Provider to

unilaterally make a change in rates, terms and conditions, charges, classification of service, Service Agreement, rule or regulation. The Transmission Provider shall give Transmission Customers a minimum of 45 days' notice of any proposed changes (which notice may be given by posting on the Transmission Service Website and must be given by formal written notice (hard copy or electronic) to each Transmission Customer currently receiving service under this Tariff). The Transmission Provider may also implement, modify or change applicable rules within its authority as delegated by the Seattle City Council.

The Transmission Customer shall have the right to appear at any public meeting related to a proposed modification of this Tariff or any Service Agreement to support or challenge existing provisions of or proposed modifications to this Tariff or any Service Agreement, and nothing contained in this Tariff or any Service Agreement shall be construed as affecting in any way the ability of any Transmission Customer receiving service under this Tariff to exercise its rights to challenge, in a public process, any changes, revisions, or modifications made by the Seattle City Council, and/or to exercise any rights it may have under the Federal Power Act.

10 Force Majeure and Indemnification

10.1 Force Majeure:

An event of Force Majeure means any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any Curtailment, order, regulation or

restriction imposed by governmental military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include an act of negligence or intentional wrongdoing.

Neither the Transmission Provider nor the Transmission Customer will be considered in default as to any obligation under this Tariff if prevented from fulfilling the obligation due to an event of Force Majeure. However, a Party whose performance under this Tariff is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations under this Tariff. In no case shall the unavailability of funds be deemed to be a Force Majeure event.

10.2 Indemnification:

The Transmission Customer shall at all times indemnify, defend, and save the Transmission Provider harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demands, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the Transmission Provider's performance of its obligations under this Tariff on behalf of the Transmission Customer, except in cases of gross negligence or intentional wrongdoing by the Transmission Provider.

11 Creditworthiness

The Transmission Provider will specify its Creditworthiness procedures in Attachment L.

12 Dispute Resolution Procedures

12.1 Internal Dispute Resolution Procedures:

Any dispute between a Transmission Customer and the Transmission Provider involving transmission service under the Tariff shall be referred to a designated senior representative of the Transmission Provider and a senior representative of the Transmission Customer for resolution on an informal basis as promptly as practicable. In the event the designated representatives are unable to resolve the dispute within 30 days (or such other period as the Parties may agree upon) by mutual agreement, such dispute may, with the written consent of the Transmission Provider and the Transmission Customer, be submitted to mediation. Either Party may exercise such remedies as are available at law, in equity, or by statute.

12.2 Costs:

Each Party shall be responsible for its own costs incurred during the mediation process and for one half the cost of the single mediator jointly chosen by the Parties.

12.3 Rights Under The Federal Power Act:

Nothing in this section shall restrict the rights of any party to file a Complaint with the Commission under relevant provisions of the Federal Power Act. If

the attempted informal dispute resolution fails or the formal dispute resolution process is not undertaken, either Party may exercise whatever rights and remedies it may have in equity or law.

13 EIM Disputes

13.1 Disputes between the SCL EIM Entity and a Transmission Customer or Interconnection Customer Related to Allocation of Charges or Payments from the MO

To the extent a dispute arises between the SCL EIM Entity and a Transmission Customer or Interconnection Customer regarding the SCL EIM Entity's implementation of this Tariff's provisions regarding the manner in which the SCL EIM Entity allocates charges or payments from the MO, the parties shall follow the dispute resolution procedures in Section 12 of this Tariff.

13.2 Disputes between the MO and SCL EIM Participating Resource Scheduling Coordinators Related to EIM Charges and Payments Directly With the MO

Disputes involving settlement statements between the MO and SCL EIM Participating Resource Scheduling Coordinators shall be resolved directly with the MO in accordance with the dispute resolution process outlined in the MO Tariff. A Transmission Customer with an SCL EIM Participating Resource shall provide notice to the SCL EIM Entity if it raises a dispute with the MO, and such notice shall be provided in accordance with the process set forth in the SCL EIM BP.

13.3 Disputes between the MO and the SCL EIM Entity

The SCL EIM Entity may raise disputes with the MO regarding the settlement statements it receives from the MO in accordance with the process specified in the MO Tariff.

13.4 Disputes Regarding MO Changes or Payments to the SCL EIM Entity Raised by Transmission Customers or Interconnection Customers

To the extent a dispute arises regarding a MO charge or a MO payment to the SCL EIM Entity that is subsequently charged or paid by the SCL EIM Entity to a Transmission Customer or an Interconnection Customer, and such Transmission Customer or Interconnection Customer wishes to raise a dispute with the MO, the SCL EIM Entity shall file a dispute on behalf of such Transmission Customer or Interconnection Customer in accordance with the MO Tariff and work with the Transmission Customer or the Interconnection Customer to resolve the dispute pursuant to the process specified in the MO Tariff.

II. POINT-TO-POINT TRANSMISSION SERVICE**Preamble**

The Transmission Provider will provide Firm and Non-Firm Point-To-Point Transmission Service pursuant to the applicable terms and conditions of this Tariff. Point-To-Point Transmission Service is for the receipt of capacity and energy at

designated Point(s) of Receipt and the transmission of such capacity and energy to designated Point(s) of Delivery.

14 Nature of Firm Point-To-Point Transmission Service

14.1 Term:

The minimum term of Firm Point-To-Point Transmission Service shall be one day and the maximum term shall be specified in the Service Agreement.

14.2 Reservation Priority:

- (i) Long-Term Firm Point-To-Point Transmission Service shall be available on a first-come, first-served basis, i.e., in the chronological sequence in which each Transmission Customer has requested service.
- (ii) Reservations for Short-Term Firm Point-To-Point Transmission Service will be conditional based upon the length of the requested transaction or reservation. However, Pre-Confirmed Applications for Short-Term Point-to-Point Transmission Service will receive priority over earlier-submitted requests that are not Pre-Confirmed and that have equal or shorter duration. Among requests or reservations with the same duration and, as relevant, pre-confirmation status (pre-Confirmed, confirmed, or not confirmed), priority will be given to an Eligible Customer's request or reservation that offers the highest price, followed by

the date and time of the request or reservation.

- (iii) If the Transmission System becomes oversubscribed, requests for service may preempt competing reservations up to the following conditional reservation deadlines: one day before the commencement of daily service, one week before the commencement of weekly service, and one month before the commencement of monthly service. Before the conditional reservation deadline, if available transfer capability is insufficient to satisfy all requests and reservations, an Eligible Customer with a reservation for shorter term service or equal duration service and lower price has the right of first refusal to match any longer term request or equal duration service with a higher price before losing its reservation priority. A longer term competing request for Short-Term Firm Point-To-Point Transmission Service will be granted if the Eligible Customer with the right of first refusal does not agree to match the competing request within 24 hours (or earlier if necessary to comply with the scheduling deadlines provided in section 14.8) from being notified by the Transmission Provider of a longer-term competing request for Short-Term Firm Point-To-Point Transmission Service. When a longer duration request preempts multiple shorter duration reservations, the

shorter duration reservations shall have simultaneous opportunities to exercise the right of first refusal. Duration, price and time of response will be used to determine the order by which the multiple shorter duration reservations will be able to exercise the right of first refusal. After the conditional reservation deadline, service will commence pursuant to the terms of Part II of the Tariff.

- (iv) Firm Point-To-Point Transmission Service will always have a reservation priority over Non-Firm Point-To-Point Transmission Service under the Tariff. All Long-Term Firm Point-To-Point Transmission Service will have equal reservation priority with Native Load Customers. Reservation priorities for existing firm service customers are provided in Section 2.2.

14.3 Use of Firm Transmission Service by the Transmission Provider:

The Transmission Provider will be subject to the rates, terms and conditions of Part II of the Tariff when making Third-Party Sales under executed agreements. The Transmission Provider will maintain separate accounting, pursuant to Section 8, for any use of the Point-To-Point Transmission Service to make Third-Party Sales.

14.4 Service Agreements:

The Transmission Provider shall offer a standard form Firm Point-To-Point Transmission Service Agreement (Attachment A) to an Eligible Customer when it submits a Completed Application for Long-Term Firm Point-To-Point Transmission Service. The Transmission Provider shall offer a standard form Firm Point-To-Point Transmission Service Agreement (Attachment A) to an Eligible Customer when it first submits a Completed Application for Short-Term Firm Point-To-Point Transmission Service pursuant to the Tariff. An Eligible Customer that uses Transmission Service at a Point of Receipt or Point of Delivery that it has not reserved and that has not executed a Service Agreement will be deemed, for purposes of assessing any appropriate charges and penalties, to have executed the appropriate Service Agreement. The Service Agreement shall, when applicable, specify any conditional curtailment options selected by the Transmission Customer. Where the Service Agreement contains conditional curtailment options and is subject to a biennial reassessment as described in Section 16.4, the Transmission Provider shall provide the Transmission Customer notice of any changes to the curtailment conditions no less than 90 days prior to the date for imposition of new curtailment conditions. Concurrent with such notice, the Transmission Provider shall provide the Transmission Customer with the reassessment study and a narrative description of the study, including the reasons for changes to the number of hours per year or System Conditions under which conditional

curtailment may occur.

14.5 Transmission Customer Obligations for Facility Additions or Redispatch Costs:

In cases where the Transmission Provider determines that the Transmission System is not capable of providing Firm Point-To-Point Transmission Service without (1) degrading or impairing the reliability of service to Native Load Customers and other Transmission Customers taking Firm Point-To-Point Transmission Service, or (2) interfering with the Transmission Provider's ability to meet prior firm contractual commitments to others, the Transmission Provider will be obligated to expand or upgrade its Transmission System pursuant to the terms of Section 16.4. The Transmission Customer must agree to compensate the Transmission Provider for any necessary transmission facility additions pursuant to the terms of Section 28. To the extent the Transmission Provider can relieve any system constraint by redispatching the Transmission Provider's resources, it shall do so, provided that the Eligible Customer agrees to compensate the Transmission Provider pursuant to the terms of Section 28 and agrees to either (i) compensate the Transmission Provider for any necessary transmission facility additions or (ii) accept the service subject to a biennial reassessment by the Transmission Provider of redispatch requirements as described in Section 16.4. Any redispatch, Network Upgrade or Direct Assignment Facilities costs to be charged to the

Transmission Customer on an incremental basis under the Tariff will be specified in the Service Agreement prior to initiating service.

14.6 Curtailment of Firm Transmission Service:

In the event that a Curtailment on the Transmission Provider's Transmission System, or a portion thereof, is required to maintain reliable operation of such system and the system directly and indirectly interconnected with Transmission Provider's Transmission System, Curtailments will be made on a non-discriminatory basis to the transaction(s) that effectively relieve the constraint. Transmission Provider may elect to implement such Curtailments pursuant to the Transmission Loading Relief procedures specified in Attachment J. If multiple transactions require Curtailment, to the extent practicable and consistent with Good Utility Practice, the Transmission Provider will curtail service to Transmission Customers taking Firm Point-To-Point Transmission Service on a basis comparable to the curtailment of service to the Transmission Provider's Native Load Customers. All Curtailments will be made on a non-discriminatory basis, however, Non-Firm Point-To-Point Transmission Service shall be subordinate to Firm Transmission Service. Long-Term Firm Point-to-Point Service subject to conditions described in Section 16.4 shall be curtailed with secondary service in cases where the conditions apply, but otherwise will be curtailed on a pro rata basis with other Firm Transmission Service. When the Transmission

Provider determines that an electrical emergency exists on its Transmission System and implements emergency procedures to Curtail Firm Transmission Service, the Transmission Customer shall make the required reductions upon request of the Transmission Provider. However, the Transmission Provider reserves the right to Curtail, in whole or in part, any Firm Transmission Service provided under the Tariff when, in the Transmission Provider's sole discretion, an emergency or other unforeseen condition impairs or degrades the reliability of its Transmission System. The Transmission Provider will notify all affected Transmission Customers in a timely manner of any scheduled Curtailments. Transmission Provider shall take necessary measures to ensure reliability in SCL's BAA in accordance with Section 6 of Attachment Q.

14.7 Classification of Firm Transmission Service:

- (a) The Transmission Customer taking Firm Point-To-Point Transmission Service may (1) change its Receipt and Delivery Points to obtain service on a non-firm basis consistent with the terms of Section 23.1 or (2) request a modification of the Points of Receipt or Delivery on a firm basis pursuant to the terms of Section 23.2.
- (b) The Transmission Customer may purchase transmission service to make sales of capacity and energy from multiple generating units

that are on the Transmission Provider's Transmission System.

For such a purchase of transmission service, the resources will be designated as multiple Points of Receipt, unless the multiple generating units are at the same generating plant in which case the units would be treated as a single Point of Receipt.

- (c) The Transmission Provider shall provide firm deliveries of capacity and energy from the Point(s) of Receipt to the Point(s) of Delivery. Each Point of Receipt at which firm transmission capacity is reserved by the Transmission Customer shall be set forth in the Firm Point-To-Point Service Agreement for Long-Term Firm Transmission Service along with a corresponding capacity reservation associated with each Point of Receipt. Points of Receipt and corresponding capacity reservations shall be as mutually agreed upon by the Parties for Short-Term Firm Transmission. Each Point of Delivery at which firm transfer capability is reserved by the Transmission Customer shall be set forth in the Firm Point-To-Point Service Agreement for Long-Term Firm Transmission Service along with a corresponding capacity reservation associated with each Point of Delivery. Points of Delivery and corresponding capacity reservations shall be as mutually agreed upon by the Parties for Short-Term Firm

Transmission. The greater of either: (1) the sum of the capacity reservations at the Point(s) of Receipt, or (2) the sum of the capacity reservations at the Point(s) of Delivery shall be the Transmission Customer's Reserved Capacity. The Transmission Customer will be billed for its Reserved Capacity under the terms of Schedule 7. The Transmission Customer may not exceed its firm capacity reserved at each Point of Receipt and each Point of Delivery except as otherwise specified in Section 23. The Transmission Provider shall specify the rate treatment and all related terms and conditions applicable in the event that a Transmission Customer (including Third-Party Sales by the Transmission Provider) exceeds its firm reserved capacity at any Point of Receipt or Point of Delivery or uses Transmission Service at a Point of Receipt or Point of Delivery that it has not reserved.

14.8 Scheduling of Firm Point-To-Point Transmission Service:

Schedules for the Transmission Customer's Firm Point-To-Point Transmission Service must be submitted to the Transmission Provider no later than 10:00 a.m. of the day prior to commencement of such service. Schedules submitted after 10:00 a.m. will be accommodated, if practicable. Hour-to-hour schedules of any capacity and energy that is to be delivered must be stated in

increments of 1,000 kW per hour. Transmission Customers within the Transmission Provider's service area with multiple requests for Transmission Service at a Point of Receipt, each of which is under 1,000 kW per hour, may consolidate their service requests at a common point of receipt into units of 1,000 kW per hour for scheduling and billing purposes. Scheduling changes will be permitted up to 20 minutes before the start of the next clock hour provided that the Delivering Party and Receiving Party also agree to the schedule modification. The Transmission Provider will furnish to the Delivering Party's system operator, hour-to-hour schedules equal to those furnished by the Receiving Party (unless reduced for losses) and shall deliver the capacity and energy provided by such schedules. Should the Transmission Customer, Delivering Party or Receiving Party revise or terminate any schedule, such party shall immediately notify the Transmission Provider, and the Transmission Provider shall have the right to adjust accordingly the schedule for capacity and energy to be received and to be delivered.

15 Nature of Non-Firm Point-To-Point Transmission Service

15.1 Term:

Non-Firm Point-To-Point Transmission Service will be available for periods ranging from one hour to one month. However, an Eligible Customer requesting Non-Firm Point-To-Point Transmission Service will be entitled to reserve a sequential term of service (such as a sequential monthly term

without having to wait for the initial term to expire before requesting another monthly term) so that the total time period for which the reservation applies is greater than one month, subject to the requirements of Section 19.3.

15.2 Reservation Priority:

Non-Firm Point-To-Point Transmission Service shall be available from transfer capability in excess of that needed for reliable service to Native Load Customers and other Transmission Customers taking Long-Term and Short-Term Firm Point-To-Point Transmission Service. A higher priority will be assigned first to requests or reservations with a longer duration of service and second to Pre-Confirmed Applications. In the event the Transmission System is constrained, competing requests of the same Pre-Confirmation status and equal duration will be prioritized based on the highest price offered by the Eligible Customer for the Transmission Service. Eligible Customers that have already reserved shorter term service have the right of first refusal to match any longer term request before being preempted. A longer term competing request for Non-Firm Point-To-Point Transmission Service will be granted if the Eligible Customer with the right of first refusal does not agree to match the competing request: (a) immediately for hourly Non-Firm Point-To-Point Transmission Service after notification by the Transmission Provider; and (b) within 24 hours (or earlier if necessary to comply with the scheduling deadlines provided in section 15.6) for Non-Firm Point-To-Point

Transmission Service other than hourly transactions after notification by the Transmission Provider. Non-Firm Point-To-Point Transmission Service over secondary Point(s) of Receipt and Point(s) of Delivery will have the lowest reservation priority under the Tariff.

15.3 Use of Non-Firm Point-To-Point Transmission Service by the Transmission Provider:

The Transmission Provider will be subject to the rates, terms and conditions of Part II of the Tariff when making Third-Party Sales under executed agreements. The Transmission Provider will maintain separate accounting, pursuant to Section 8, for any use of Non-Firm Point-To-Point Transmission Service to make Third-Party Sales.

15.4 Service Agreements:

The Transmission Provider shall offer a standard form Non-Firm Point-To-Point Transmission Service Agreement (Attachment B) to an Eligible Customer when it first submits a Completed Application for Non-Firm Point-To-Point Transmission Service pursuant to the Tariff.

15.5 Classification of Non-Firm Point-To-Point Transmission Service:

Non-Firm Point-To-Point Transmission Service shall be offered under terms and conditions contained in Part II of the Tariff. The Transmission Provider undertakes no obligation under the Tariff to plan its Transmission System in order to have sufficient capacity for Non-Firm Point-To-Point Transmission

Service. Parties requesting Non-Firm Point-To-Point Transmission Service for the transmission of firm power do so with the full realization that such service is subject to availability and to Curtailment or Interruption under the terms of the Tariff. The Transmission Provider shall specify the rate treatment and all related terms and conditions applicable in the event that a Transmission Customer (including Third-Party Sales by the Transmission Provider) exceeds its non-firm capacity reservation. Non-Firm Point-To-Point Transmission Service shall include transmission of energy on an hourly basis and transmission of scheduled short-term capacity and energy on a daily, weekly or monthly basis, but not to exceed one month's reservation for any one Application, under Schedule 8.

15.6 Scheduling of Non-Firm Point-To-Point Transmission Service:

Schedules for Non-Firm Point-To-Point Transmission Service must be submitted to the Transmission Provider no later than 10:00 a.m. of the day prior to commencement of such service. Schedules submitted after 10:00 a.m. will be accommodated, if practicable. Hour-to-hour schedules of energy that is to be delivered must be stated in increments of 1,000 kW per hour.

Transmission Customers within the Transmission Provider's service area with multiple requests for Transmission Service at a Point of Receipt, each of which is under 1,000 kW per hour, may consolidate their schedules at a common Point of Receipt into units of 1,000 kW per hour. Scheduling

changes will be permitted up to 20 minutes before the start of the next clock hour, provided that the Delivering Party and Receiving Party also agree to the schedule modification. The Transmission Provider will furnish to the Delivering Party's system operator, hour-to-hour schedules equal to those furnished by the Receiving Party (unless reduced for losses) and shall deliver the capacity and energy provided by such schedules. Should the Transmission Customer, Delivering Party or Receiving Party revise or terminate any schedule, such party shall immediately notify the Transmission Provider, and the Transmission Provider shall have the right to adjust accordingly the schedule for capacity and energy to be received and to be delivered.

15.7 Curtailment or Interruption of Service:

The Transmission Provider reserves the right to Curtail, in whole or in part, Non-Firm Point-To-Point Transmission Service provided under the Tariff for reliability reasons when an emergency or other unforeseen condition threatens to impair or degrade the reliability of its Transmission System or the systems directly and indirectly interconnected with Transmission Provider's Transmission System. Transmission Provider may elect to implement such Curtailments pursuant to the Transmission Loading Relief procedures specified in Attachment J. The Transmission Provider reserves the right to Interrupt, in whole or in part, Non-Firm Point-To-Point Transmission Service provided under the Tariff for economic reasons in order to accommodate: (1) a

request for Firm Transmission Service, (2) a request for Non-Firm Point-To-Point Transmission Service of greater duration, (3) a request for Non-Firm Point-To-Point Transmission Service of equal duration with a higher price, or (4) transmission service for Firm Point-to-Point Transmission Service during conditional curtailment periods as described in Section 16.4. The Transmission Provider also will discontinue or reduce service to the Transmission Customer to the extent that deliveries for transmission are discontinued or reduced at the Point(s) of Receipt. Where required, Curtailments or Interruptions will be made on a non-discriminatory basis to the transaction(s) that effectively relieve the constraint, however, Non-Firm Point-To-Point Transmission Service shall be subordinate to Firm Transmission Service. If multiple transactions require Curtailment or Interruption, to the extent practicable and consistent with Good Utility Practice, Curtailments or Interruptions will be made to transactions of the shortest term (e.g., hourly non-firm transactions will be Curtailed or Interrupted before daily non-firm transactions and daily non-firm transactions will be Curtailed or Interrupted before weekly non-firm transactions). Non-Firm Point-To-Point Transmission Service over secondary Point(s) of Receipt and Point(s) of Delivery will have a lower priority than any Non-Firm Point-To-Point Transmission Service under the Tariff. The Transmission Provider will provide advance notice of Curtailment or Interruption where such notice

can be provided consistent with Good Utility Practice. Transmission Provider will take necessary measures to ensure reliability in SCL's BAA in accordance with Section 6 of Attachment Q.

16 Service Availability

16.1 General Conditions:

The Transmission Provider will provide Firm and Non-Firm Point-To-Point Transmission Service over, on or across its Transmission System to any Transmission Customer that has met the requirements of Section 17.

16.2 Determination of Available Transfer Capability:

A description of the Transmission Provider's specific methodology for assessing available transfer capability posted on the Transmission Service Website is contained in Attachment C of the Tariff. In the event sufficient transfer capability may not exist to accommodate a service request, the Transmission Provider will respond by performing a System Impact Study.

16.3 Initiating Service in the Absence of an Executed Service Agreement:

If the Transmission Provider and the Transmission Customer requesting Firm or Non-Firm Point-To-Point Transmission Service cannot agree on all the terms and conditions of the Point-To-Point Service Agreement, upon written request from the Transmission Customer, the Transmission Provider and Transmission Customer shall submit the disputed terms and conditions in

accordance with the dispute resolution processes in Section 12 of this Tariff. The Transmission Provider shall commence providing Transmission Service under an unexecuted Point-To-Point Service Agreement containing terms and conditions deemed appropriate by the Transmission Provider for the requested Transmission Service subject to the Transmission Customer agreeing to (i) compensate the Transmission Provider under rates ultimately determined to be comparable, and (ii) comply with the terms and conditions of the Tariff including posting appropriate security deposits in accordance with the terms of Section 18.3.

16.4 Obligation to Provide Transmission Service that Requires Expansion or Modification of the Transmission System, Redispatch or Conditional Curtailment:

- (a) If the Transmission Provider determines that it cannot accommodate a Completed Application for Firm Point-To-Point Transmission Service because of insufficient capability on its Transmission System, the Transmission Provider will use due diligence to expand or modify its Transmission System to provide the requested Firm Transmission Service, consistent with its planning obligations in Attachment K, provided the Transmission Customer agrees to compensate the Transmission Provider for such costs pursuant to the terms of Section 28. The Transmission Provider will conform to Good Utility Practice and its planning

obligations in Attachment K, in determining the need for new facilities and in the design and construction of such facilities. The obligation applies only to those facilities that the Transmission Provider has the right to expand or modify.

- (b) If the Transmission Provider determines that it cannot accommodate a Completed Application for Long-Term Firm Point-To-Point Transmission Service because of insufficient capability on its Transmission System, the Transmission Provider will use due diligence to provide redispatch from its own resources until: (i) Network Upgrades are completed for the Transmission Customer, (ii) the Transmission Provider determines through a biennial reassessment that it can no longer reliably provide the redispatch, or (iii) the Transmission Customer terminates the service because of redispatch changes resulting from the reassessment. A Transmission Provider shall not unreasonably deny self-provided redispatch or redispatch arranged by the Transmission Customer from a third-party resource.
- (c) If the Transmission Provider determines that it cannot accommodate a Completed Application for Long-Term Firm Point-To-Point Transmission Service because of insufficient

capability on its Transmission System, the Transmission Provider will offer the Firm Transmission Service with the condition that the Transmission Provider may curtail the service prior to the curtailment of other Firm Transmission Service for a specified number of hours per year or during System Condition(s). If the Transmission Customer accepts the service, the Transmission Provider will use due diligence to provide the service until: (i) Network Upgrades are completed for the Transmission Customer, (ii) the Transmission Provider determines through a biennial reassessment that it can no longer reliably provide such service, or (iii) the Transmission Customer terminates the service because the reassessment increased the number of hours per year of conditional curtailment or changed the System Conditions.

16.5 Deferral of Service:

The Transmission Provider may defer providing service until it completes construction of new transmission facilities or upgrades needed to provide Firm Point-To-Point Transmission Service whenever the Transmission Provider determines that providing the requested service would, without such new facilities or upgrades, impair or degrade reliability to any existing firm services.

16.6 Other Transmission Service Schedules:

Eligible Customers receiving transmission service under other agreements with the Transmission Provider may continue to receive transmission service under those agreements until such time as those agreements terminate pursuant to their terms and conditions or are replaced.

16.7 Real Power Losses:

Real Power Losses are associated with all transmission service. The Transmission Provider is not obligated to provide Real Power Losses. The Transmission Customer shall compensate Transmission Provider for losses associated with all transmission service as provided in Schedule 10. The applicable Real Power Loss factors are: 1.9%.

17 Transmission Customer Responsibilities**17.1 Conditions Required of Transmission Customers:**

Point-To-Point Transmission Service shall be provided by the Transmission Provider only if the following conditions are satisfied by the Transmission Customer:

- (a) The Transmission Customer has pending a Completed Application for service;
- (b) The Transmission Customer meets the creditworthiness criteria set forth in Section 11;
- (c) The Transmission Customer will have arrangements in place for

any other transmission service necessary to effect the delivery from the generating source to the Transmission Provider prior to the time service under Part II of the Tariff commences;

- (d) The Transmission Customer agrees to pay for any facilities constructed and chargeable to such Transmission Customer under Part II of the Tariff, whether or not the Transmission Customer takes service for the full term of its reservation;
- (e) The Transmission Customer provides the information required by the Transmission Provider's planning process established in Attachment K;
- (f) The Transmission Customer has executed a Point-To-Point Service Agreement or has agreed to receive service pursuant to Section 15.3; and
- (g) The Transmission Customer must comply with the requirements of Attachment Q regarding the EIM.

17.2 Transmission Customer Responsibility for Third-Party Arrangements:

Any scheduling arrangements that may be required by other electric systems shall be the responsibility of the Transmission Customer requesting service.

The Transmission Customer shall provide, unless waived by the Transmission Provider, notification to the Transmission Provider identifying such systems

and authorizing them to schedule the capacity and energy to be transmitted by the Transmission Provider pursuant to Part II of the Tariff on behalf of the Receiving Party at the Point of Delivery or the Delivering Party at the Point of Receipt. However, the Transmission Provider will undertake reasonable efforts to assist the Transmission Customer in making such arrangements, including without limitation, providing any information or data required by such other electric system pursuant to Good Utility Practice.

18 Procedures for Arranging Firm Point-To-Point Transmission Service

18.1 Application:

A request for Firm Point-To-Point Transmission Service for periods of one year or longer must contain a written Application to: Seattle City Light, Attn: Director, Transmission & Distribution Engineering, 700 Fifth Avenue, Suite 3200, Seattle, WA 98104-5031, at least 60 days in advance of the calendar month in which service is to commence. The Transmission Provider will consider requests for such firm service on shorter notice when feasible.

Requests for firm service for periods of less than one year shall be subject to expedited procedures that shall be negotiated between the Parties within the time constraints provided in Section 18.5. All Firm Point-To-Point Transmission Service requests should be submitted by entering the information listed below in email to oatt@seattle.gov. This electronic method will provide a time-stamped record for establishing the priority of the

Application.

18.2 Completed Application:

A Completed Application shall provide, at minimum, all of the following information included in 18 CFR § 2.20 including but not limited to the following:

- (i) The identity, address, telephone number, email address, and facsimile number of the entity requesting service;
- (ii) A statement that the entity requesting service is, or will be upon commencement of service, an Eligible Customer under the Tariff;
- (iii) The location of the Point(s) of Receipt and Point(s) of Delivery and the identities of the Delivering Parties and the Receiving Parties;
- (iv) The location of the generating facility(ies) supplying the capacity and energy and the location of the load ultimately served by the capacity and energy transmitted. The Transmission Provider will treat this information as confidential except to the extent that disclosure of this information is required by this Tariff, by law or regulatory or judicial order, for reliability purposes pursuant to Good Utility Practice or pursuant to RTG transmission information sharing agreements. The Transmission Provider shall treat this information consistent with its adopted standards of

- conduct policy;
- (v) A description of the supply characteristics of the capacity and energy to be delivered;
 - (vi) An estimate of the capacity and energy expected to be delivered to the Receiving Party;
 - (vii) The Service Commencement Date and the term of the requested Transmission Service;
 - (viii) The transmission capacity requested for each Point of Receipt and each Point of Delivery on the Transmission Provider's Transmission System; customers may combine their requests for service in order to satisfy the minimum transmission capacity requirement;
 - (ix) A statement indicating that, if the Eligible Customer submits a Pre-Confirmed Application, the Eligible Customer will execute a Service Agreement upon receipt of notification that the Transmission Provider can provide the requested Transmission Service; and
 - (x) Any additional information required by the Transmission Provider's planning process established in Attachment K.

The Transmission Provider shall treat this information consistent with its adopted standards of conduct policy.

18.3 Deposit:

A Completed Application for Firm Point-To-Point Transmission Service also shall include a deposit of either one month's charge for Reserved Capacity or the full charge for Reserved Capacity for service requests of less than one month. If the Application is rejected by the Transmission Provider because it does not meet the conditions for service as set forth herein, or in the case of requests for service arising in connection with losing bidders in a Request For Proposals (RFP), said deposit shall be returned with interest less any reasonable costs incurred by the Transmission Provider in connection with the review of the losing bidder's Application. The deposit also will be returned with interest less any reasonable costs incurred by the Transmission Provider if the Transmission Provider is unable to complete new facilities needed to provide the service. If an Application is withdrawn or the Eligible Customer decides not to enter into a Service Agreement for Firm Point-To-Point Transmission Service, the deposit shall be refunded in full, with interest, less reasonable costs incurred by the Transmission Provider to the extent such costs have not already been recovered by the Transmission Provider from the Eligible Customer. The Transmission Provider will provide to the Eligible Customer a complete accounting of all costs deducted from the refunded deposit, which the Eligible Customer may contest if there is a dispute concerning the deducted costs. Deposits associated with construction of new

facilities are subject to the provisions of Section 20. If a Service Agreement for Firm Point-To-Point Transmission Service is executed, the deposit, with interest, will be returned to the Transmission Customer upon expiration or termination of the Service Agreement for Firm Point-To-Point Transmission Service. Applicable interest shall be calculated in accordance with the methodology specified for interest on deposits in the electric service connection provisions in the Seattle Municipal Code, 21.49. The interest rate is earned at the rate of interest on the City's cash pool for the period during which the balance was held. Interest shall be calculated from the day the deposit check is credited to the Transmission Provider's account.

18.4 Notice of Deficient Application:

If an Application fails to meet the requirements of the Tariff, the Transmission Provider shall notify the entity requesting service within 15 days of receipt of the reasons for such failure. The Transmission Provider will attempt to remedy minor deficiencies in the Application through informal communications with the Eligible Customer. If such efforts are unsuccessful, the Transmission Provider shall return the Application, along with any deposit, with interest. Upon receipt of a new or revised Application that fully complies with the requirements of Part II of the Tariff, the Eligible Customer shall be assigned a new priority consistent with the date of the new or revised Application.

18.5 Response to a Completed Application:

Following receipt of a Completed Application for Firm Point-To-Point Transmission Service, the Transmission Provider shall make a determination of available transfer capability as required in Section 16.2. The Transmission Provider shall notify the Eligible Customer as soon as practicable, but not later than 30 days after the date of receipt of a Completed Application either (i) if it will be able to provide service without performing a System Impact Study or (ii) if such a study is needed to evaluate the impact of the Application pursuant to Section 20.1. Responses by the Transmission Provider must be made as soon as practicable to all completed applications (including applications by its own merchant function) and the timing of such responses must be made on a non-discriminatory basis.

18.6 Execution of Service Agreement:

Whenever the Transmission Provider determines that a System Impact Study is not required and that the service can be provided, it shall notify the Eligible Customer as soon as practicable but no later than 30 days after receipt of the Completed Application. Where a System Impact Study is required, the provisions of Section 20 will govern the execution of a Service Agreement. Failure of an Eligible Customer to execute and return the Service Agreement or request service under the unexecuted service agreement pursuant to Section 16.3, within 15 days after it is tendered by the Transmission Provider will be

deemed a withdrawal and termination of the Application and any deposit submitted shall be refunded with interest. Nothing herein limits the right of an Eligible Customer to file another Application after such withdrawal and termination.

18.7 Extensions for Commencement of Service:

The Transmission Customer can obtain, subject to availability, up to five one-year extensions for the commencement of service. The Transmission Customer may postpone service by paying a non-refundable annual reservation fee equal to one-month's charge for Firm Transmission Service for each year or fraction thereof within 15 days of notifying the Transmission Provider it intends to extend the commencement of service. If during any extension for the commencement of service an Eligible Customer submits a Completed Application for Firm Transmission Service, and such request can be satisfied only by releasing all or part of the Transmission Customer's Reserved Capacity, the original Reserved Capacity will be released unless the following condition is satisfied. Within 30 days, the original Transmission Customer agrees to pay the Firm Point-To-Point transmission rate for its Reserved Capacity concurrent with the new Service Commencement Date. In the event the Transmission Customer elects to release the Reserved Capacity, the reservation fees or portions thereof previously paid will be forfeited.

19 Procedures for Arranging Non-Firm Point-To-Point Transmission

Service**19.1 Application:**

Eligible Customers seeking Non-Firm Point-To-Point Transmission Service must submit a written Completed Application to: Seattle City Light, Attn: Director, Transmission & Distribution Engineering, 700 Fifth Avenue, Suite 3200, Seattle, WA 98104-5031, at least 60 days in advance of the calendar month in which service is to commence. Additionally, Eligible Customers should submit a written Completed Application by email to oatt@seattle.gov in order to provide a time-stamped record for establishing the service priority of the Application.

19.2 Completed Application:

A Completed Application shall provide, at a minimum, all of the following information included in 18 CFR § 2.20 including but not limited to the following:

- (i) The identity, address, telephone number, email address, and facsimile number of the entity requesting service;
- (ii) A statement that the entity requesting service is, or will be upon commencement of service, an Eligible Customer under the Tariff;
- (iii) The Point(s) of Receipt and the Point(s) of Delivery;
- (iv) The maximum amount of capacity requested at each Point of Receipt and Point of Delivery; and

- (v) The proposed dates and hours for initiating and terminating transmission service hereunder.

In addition to the information specified above, when required to properly evaluate system conditions, the Transmission Provider also may ask the Transmission Customer to provide the following:

- (vi) The electrical location of the initial source of the power to be transmitted pursuant to the Transmission Customer's request for service; and
- (vii) The electrical location of the ultimate load.

The Transmission Provider will treat this information in (vi) and (vii) as confidential at the request of the Transmission Customer except to the extent that disclosure of this information is required by this Tariff, by law or regulatory or judicial order, for reliability purposes pursuant to Good Utility Practice, or pursuant to RTG transmission information sharing agreements.

The Transmission Provider shall treat this information consistent with its adopted standards of conduct policy.

- (viii) A statement indicating that, if the Eligible Customer submits a Pre-Confirmed Application, the Eligible Customer will execute a Service Agreement upon receipt of notification that the Transmission Provider can provide the requested Transmission Service.

19.3 Reservation of Non-Firm Point-To-Point Transmission Service:

Requests for monthly service shall be submitted no earlier than 60 days before service is to commence; requests for weekly service shall be submitted no earlier than 14 days before service is to commence, requests for daily service shall be submitted no earlier than two days before service is to commence, and requests for hourly service shall be submitted no earlier than noon the day before service is to commence. Requests for service received later than 2:00 p.m. prior to the day service is scheduled to commence will be accommodated if practicable.

19.4 Determination of Available Transfer Capability:

Following receipt of a tendered schedule the Transmission Provider will make a determination on a non-discriminatory basis of available transfer capability pursuant to Section 16.2. Such determination shall be made as soon as reasonably practicable after receipt, but not later than the following time periods for the following terms of service: (i) 30 minutes for hourly service, (ii) 30 minutes for daily service, (iii) four hours for weekly service, and (iv) two days for monthly service. .

20 Additional Study Procedures For Firm Point-To-Point Transmission Service Requests**20.1 Notice of Need for System Impact Study:**

After receiving a request for service, the Transmission Provider shall

determine on a non-discriminatory basis whether a System Impact Study is needed. A description of the Transmission Provider's methodology for completing a System Impact Study is provided in Attachment D. If the Transmission Provider determines that a System Impact Study is necessary to accommodate the requested service, it shall so inform the Eligible Customer, as soon as practicable. Once informed, the Eligible Customer shall timely notify the Transmission Provider if it elects to have the Transmission Provider study redispatch or conditional curtailment as part of the System Impact Study. If notification is provided prior to tender of the System Impact Study Agreement, the Eligible Customer can avoid the costs associated with the study of these options. The Transmission Provider shall within 30 days of receipt of a Completed Application, tender a System Impact Study Agreement pursuant to which the Eligible Customer shall agree to reimburse the Transmission Provider for performing the required System Impact Study. For a service request to remain a Completed Application, the Eligible Customer shall execute the System Impact Study Agreement and return it to the Transmission Provider within 15 days. If the Eligible Customer elects not to execute the System Impact Study Agreement, its application shall be deemed withdrawn and its deposit, pursuant to Section 18.3, shall be returned with interest.

20.2 System Impact Study Agreement and Cost Reimbursement:

- (i) The System Impact Study Agreement will clearly specify the Transmission Provider's estimate of the actual cost, and time for completion of the System Impact Study. The charge shall not exceed the actual cost of the study. In performing the System Impact Study, the Transmission Provider shall rely, to the extent reasonably practicable, on existing transmission planning studies. The Eligible Customer will not be assessed a charge for such existing studies; however, the Eligible Customer will be responsible for charges associated with any modifications to existing planning studies that are reasonably necessary to evaluate the impact of the Eligible Customer's request for service on the Transmission System.
- (ii) If in response to multiple Eligible Customers requesting service in relation to the same competitive solicitation, a single System Impact Study is sufficient for the Transmission Provider to accommodate the requests for service, the costs of that study shall be pro-rated among the Eligible Customers.
- (iii) For System Impact Studies that the Transmission Provider conducts on its own behalf, the Transmission Provider shall record the cost of the System Impact Studies pursuant to Section

20.

20.3 System Impact Study Procedures:

Upon receipt of an executed System Impact Study Agreement, the Transmission Provider will use due diligence to complete the required System Impact Study within a 60 day period. The System Impact Study shall identify: (1) any system constraints, identified with specificity by transmission element or flowgate, (2) redispatch options (when requested by an Eligible Customer) including an estimate of the cost of redispatch, (3) conditional curtailment options (when requested by an Eligible Customer) including the number of hours per year and the System Conditions during which conditional curtailment may occur, and (4) additional Direct Assignment Facilities or Network Upgrades required to provide the requested service. For customers requesting the study of redispatch options, the System Impact Study shall: (1) identify all resources located within the Transmission Provider's Control Area that can significantly contribute toward relieving the system constraint, and (2) provide a measurement of each resource's impact on the system constraint. If the Transmission Provider possesses information indicating that any resource outside its Control Area could relieve the constraint, it shall identify each such resource in the System Impact Study. In the event that the Transmission Provider is unable to complete the required System Impact Study within such time period, it shall so notify the Eligible Customer and

provide an estimated completion date along with an explanation of the reasons why additional time is required to complete the required studies. A copy of the completed System Impact Study and related work papers shall be made available to the Eligible Customer as soon as the System Impact Study is complete. The Transmission Provider will use the same due diligence in completing the System Impact Study for an Eligible Customer as it uses when completing studies for itself. The Transmission Provider shall notify the Eligible Customer immediately upon completion of the System Impact Study if the Transmission System will be adequate to accommodate all or part of a request for service or that no costs are likely to be incurred for new transmission facilities or upgrades. In order for a request to remain a Completed Application, within 15 days of completion of the System Impact Study the Eligible Customer must execute a Service Agreement or request service under the unexecuted Service Agreement pursuant to Section 16.3, or the Application shall be deemed terminated and withdrawn.

20.4 Facilities Study Procedures:

If a System Impact Study indicates that additions or upgrades to the Transmission System are needed to supply the Eligible Customer's service request, the Transmission Provider, within 30 days of the completion of the System Impact Study, shall tender to the Eligible Customer a Facilities Study Agreement pursuant to which the Eligible Customer shall agree to reimburse

the Transmission Provider for performing the required Facilities Study. For a service request to remain a Completed Application, the Eligible Customer shall execute the Facilities Study Agreement and return it to the Transmission Provider within 15 days. If the Eligible Customer elects not to execute the Facilities Study Agreement, its application shall be deemed withdrawn and its deposit, pursuant to Section 18.3, shall be returned with interest. Upon receipt of an executed Facilities Study Agreement, the Transmission Provider will use due diligence to complete the required Facilities Study within a 60 day period. If the Transmission Provider is unable to complete the Facilities Study in the allotted time period, the Transmission Provider shall notify the Transmission Customer and provide an estimate of the time needed to reach a final determination along with an explanation of the reasons that additional time is required to complete the study. When completed, the Facilities Study will include a good faith estimate of” (i) the cost of Direct Assignment Facilities to be charged to the Transmission Customer, (ii) the Transmission Customer's appropriate share of the cost of any required Network Upgrades as determined pursuant to the provisions of Part II of the Tariff, and (iii) the time required to complete such construction and initiate the requested service. The Transmission Customer shall provide the Transmission Provider with a letter of credit or other reasonable form of security acceptable to the Transmission Provider equivalent to the costs of new facilities or upgrades consistent with

commercial practices as established by the Uniform Commercial Code. The Transmission Customer shall have 30 days to execute a Service Agreement or request service under the unexecuted Service Agreement and provide the required letter of credit or other form of security or the request will no longer be a Completed Application and shall be deemed terminated and withdrawn.

20.5 Facilities Study Modifications:

Any change in design arising from inability to site or construct facilities as proposed will require development of a revised good faith estimate. New good faith estimates also will be required in the event of new statutory or regulatory requirements that are effective before the completion of construction or other circumstances beyond the control of the Transmission Provider that significantly affect the final cost of new facilities or upgrades to be charged to the Transmission Customer pursuant to the provisions of Part II of the Tariff.

20.6 Due Diligence in Completing New Facilities:

The Transmission Provider shall use due diligence to add necessary facilities or upgrade its Transmission System within a reasonable time. The Transmission Provider will not upgrade its existing or planned Transmission System in order to provide the requested Firm Point-To-Point Transmission Service if doing so would impair system reliability or otherwise impair or

degrade existing firm service.

20.7 Partial Interim Service:

If the Transmission Provider determines that it will not have adequate transfer capability to satisfy the full amount of a Completed Application for Firm Point-To-Point Transmission Service, the Transmission Provider nonetheless shall be obligated to offer and provide the portion of the requested Firm Point-To-Point Transmission Service that can be accommodated without addition of any facilities and through redispatch. However, the Transmission Provider shall not be obligated to provide the incremental amount of requested Firm Point-To-Point Transmission Service that requires the addition of facilities or upgrades to the Transmission System until such facilities or upgrades have been placed in service.

20.8 Expedited Procedures for New Facilities:

In lieu of the procedures set forth above, the Eligible Customer shall have the option to expedite the process by requesting the Transmission Provider to tender at one time, together with the results of required studies, an “Expedited Service Agreement” pursuant to which the Eligible Customer would agree to compensate the Transmission Provider for all costs incurred pursuant to the terms of the Tariff. In order to exercise this option, the Eligible Customer shall request in writing an expedited Service Agreement covering all of the

above-specified items within 30 days of receiving the results of the System Impact Study identifying needed facility additions or upgrades or costs incurred in providing the requested service. While the Transmission Provider agrees to provide the Eligible Customer with its best estimate of the new facility costs and other charges that may be incurred, such estimate shall not be binding and the Eligible Customer must agree in writing to compensate the Transmission Provider for all costs incurred pursuant to the provisions of the Tariff. The Eligible Customer shall execute and return such an Expedited Service Agreement within 15 days of its receipt or the Eligible Customer's request for service will cease to be a Completed Application and will be deemed terminated and withdrawn.

21 Procedures if The Transmission Provider is Unable to Complete New Transmission Facilities for Firm Point-To-Point Transmission Service

21.1 Delays in Construction of New Facilities:

If any event occurs that will materially affect the time for completion of new facilities, or the ability to complete them, the Transmission Provider shall promptly notify the Transmission Customer. In such circumstances, the Transmission Provider shall within 30 days of notifying the Transmission Customer of such delays, convene a technical meeting with the Transmission Customer to evaluate the alternatives available to the Transmission Customer. The Transmission Provider also shall make available to the Transmission Customer studies and work papers related to the delay, including all

information that is in the possession of the Transmission Provider that is reasonably needed by the Transmission Customer to evaluate any alternatives.

21.2 Alternatives to the Original Facility Additions:

When the review process of Section 20.1 determines that one or more alternatives exist to the originally planned construction project, the Transmission Provider shall present such alternatives for consideration by the Transmission Customer. If, upon review of any alternatives, the Transmission Customer desires to maintain its Completed Application subject to construction of the alternative facilities, it may request the Transmission Provider to submit a revised Service Agreement for Firm Point-To-Point Transmission Service. If the alternative approach solely involves Non-Firm Point-To-Point Transmission Service, the Transmission Provider shall promptly tender a Service Agreement for Non-Firm Point-To-Point Transmission Service providing for the service. In the event the Transmission Provider concludes that no reasonable alternative exists and the Transmission Customer disagrees, the Transmission Customer may seek relief under the dispute resolution procedures pursuant to Section 12.

21.3 Refund Obligation for Unfinished Facility Additions:

If the Transmission Provider and the Transmission Customer mutually agree that no other reasonable alternatives exist and the requested service cannot be

provided out of existing capability under the conditions of Part II of the Tariff, the obligation to provide the requested Firm Point-To-Point Transmission Service shall terminate and any deposit made by the Transmission Customer shall be returned with interest. Applicable interest shall be calculated in accordance with the methodology specified for interest on deposits in the electric service connection provisions in the Seattle Municipal Code, 21.49. The interest rate is earned at the rate of interest on the City's cash pool for the period during which the balance was held. Interest shall be calculated from the day the deposit check is credited to the Transmission Provider's account. However, the Transmission Customer shall be responsible for all prudently incurred costs by the Transmission Provider through the time construction was suspended.

22 Provisions Relating to Transmission Construction and Services on the Systems of Other Utilities

22.1 Responsibility for Third-Party System Additions:

The Transmission Provider shall not be responsible for making arrangements for any necessary engineering, permitting, and construction of transmission or distribution facilities on the system(s) of any other entity or for obtaining any regulatory approval for such facilities. The Transmission Provider will undertake reasonable efforts to assist the Transmission Customer in obtaining such arrangements, including without limitation, providing any information or data required by such other electric system pursuant to Good Utility Practice.

22.2 Coordination of Third-Party System Additions:

In circumstances where the need for transmission facilities or upgrades is identified pursuant to the provisions of Part II of the Tariff, and if such upgrades further require the addition of transmission facilities on other systems, the Transmission Provider shall have the right to coordinate construction on its own system with the construction required by others. The Transmission Provider, after consultation with the Transmission Customer and representatives of such other systems, may defer construction of its new transmission facilities, if the new transmission facilities on another system cannot be completed in a timely manner. The Transmission Provider shall notify the Transmission Customer in writing of the basis for any decision to defer construction and the specific problems which must be resolved before it will initiate or resume construction of new facilities. Within 60 days of receiving written notification by the Transmission Provider of its intent to defer construction pursuant to this section, the Transmission Customer may challenge the decision in accordance with the dispute resolution procedures pursuant to Section 12.

23 Changes in Service Specifications**23.1 Modifications on a Non-Firm Basis:**

The Transmission Customer taking Firm Point-To-Point Transmission Service may request the Transmission Provider to provide transmission service on a

non-firm basis over Receipt and Delivery Points other than those specified in the Service Agreement (“Secondary Receipt and Delivery Points”), in amounts not to exceed its firm capacity reservation, without incurring an additional Non-Firm Point-To-Point Transmission Service charge or executing a new Service Agreement, subject to the following conditions.

- (a) Service provided over Secondary Receipt and Delivery Points will be non-firm only, on an as-available basis and will not displace any firm or non-firm service reserved or scheduled by third-parties under the Tariff or by the Transmission Provider on behalf of its Native Load Customers.
- (b) The sum of all Firm and non-firm Point-To-Point Transmission Service provided to the Transmission Customer at any time pursuant to this section shall not exceed the Reserved Capacity in the relevant Service Agreement under which such services are provided.
- (c) The Transmission Customer shall retain its right to schedule Firm Point-To-Point Transmission Service at the Receipt and Delivery Points specified in the relevant Service Agreement in the amount of its original capacity reservation.
- (d) Service over Secondary Receipt and Delivery Points on a non-firm basis shall not require an Application for Non-Firm Point-

To-Point Transmission Service under the Tariff. However, all other requirements of Part II of the Tariff (except as to transmission rates) shall apply to transmission service on a non-firm basis over Secondary Receipt and Delivery Points.

23.2 Modification on a Firm Basis:

Any request by a Transmission Customer to modify Receipt and Delivery Points on a firm basis shall be treated as a new request for service in accordance with Section 18 hereof, except that such Transmission Customer shall not be obligated to pay any additional deposit if the capacity reservation does not exceed the amount reserved in the existing Service Agreement.

While such new request is pending, the Transmission Customer shall retain its priority for service at the existing firm Point(s) of Receipt or Point(s) Delivery specified in its Service Agreement.

24 Sale or Assignment of Transmission Service

24.1 Procedures for Assignment or Transfer of Service:

(a) A Transmission Customer may sell, assign, or transfer all or a portion of its rights under its Service Agreement, but only to another Eligible Customer (the Assignee). The Transmission Customer that sells, assigns or transfers its rights under its Service Agreement is hereafter referred to as the Reseller.

Compensation to Resellers shall be at rates established by agreement between the Reseller and the Assignee.

(b) The Assignee must execute a service agreement with the Transmission Provider governing reassignments of transmission service prior to the date on which the reassigned service commences. The Transmission Provider shall charge the Reseller, as appropriate, at the rate stated in the Reseller's Service Agreement with the Transmission Provider and credit the Reseller with the price reflected in the Assignee's Service Agreement with the Transmission Provider; provided that, such credit shall be reversed in the event of non-payment by the Assignee. If the Assignee does not request any change in the Point(s) of Receipt or the Point(s) of Delivery, or a change in any other term or condition set forth in the original Service Agreement, the Assignee will receive the same services as did the Reseller and the priority of service for the Assignee will be the same as that of the Reseller. The Assignee will be subject to all terms and conditions of this Tariff. If the Assignee requests a change in service, the reservation priority of service will be determined by the Transmission Provider pursuant to Section 14.2.

24.2 Limitations on Assignment or Transfer of Service:

If the Assignee requests a change in the Point(s) of Receipt or Point(s) of Delivery, or a change in any other specifications set forth in the original Service Agreement, the Transmission Provider will consent to such change subject to the provisions of the Tariff, provided that the change will not impair the operation and reliability of the Transmission Provider's generation,

transmission, or distribution systems. The Assignee shall compensate the Transmission Provider for performing any System Impact Study needed to evaluate the capability of the Transmission System to accommodate the proposed change and any additional costs resulting from such change. The Reseller shall remain liable for the performance of all obligations under the Service Agreement, except as specifically agreed to by the Transmission Provider and the Reseller through an amendment to the Service Agreement.

24.3 Information on Assignment or Transfer of Service:

In accordance with Section 4, all sales or assignments of capacity must be received in a written notice through email, fax, or mail and posted on the Transmission Service Website on or before the date the reassigned service commences and are subject to Section 24.1.

25 Metering and Power Factor Correction at Receipt and Delivery Points(s)

25.1 Transmission Customer Obligations:

Unless otherwise agreed, the Transmission Customer shall be responsible for installing and maintaining compatible metering and communications equipment to accurately account for the capacity and energy being transmitted under Part II of the Tariff and to communicate the information to the Transmission Provider. Such equipment shall remain the property of the Transmission Customer.

25.2 Transmission Provider Access to Metering Data:

The Transmission Provider shall have access to metering data, which may reasonably be required to facilitate measurements and billing under the Service Agreement.

25.3 Power Factor:

Unless otherwise agreed, the Transmission Customer is required to maintain a power factor within the same range as the Transmission Provider pursuant to Good Utility Practices. The power factor requirements are specified in the Service Agreement where applicable.

26 Compensation for Transmission Service

Rates for Firm and Non-Firm Point-To-Point Transmission Service are provided in the Schedules appended to the Tariff: Firm Point-To-Point Transmission Service (Schedule 7); and Non-Firm Point-To-Point Transmission Service (Schedule 8). The Transmission Provider shall use Part II of the Tariff to make its Third-Party Sales. The Transmission Provider shall account for such use at the applicable Tariff rates, pursuant to Section 8.

27 Stranded Cost Recovery

Reserved

28 Compensation for New Facilities and Redispatch Costs

Whenever a System Impact Study performed by the Transmission Provider in connection with the provision of Firm Point-To-Point Transmission Service identifies the need for new facilities, the Transmission Customer shall be

responsible for such costs. Whenever a System Impact Study performed by the Transmission Provider identifies capacity constraints that may be relieved by redispatching the Transmission Provider's resources to eliminate such constraints, the Transmission Customer shall be responsible for the redispatch costs.

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SCHEDULE 1**Scheduling, System Control and Dispatch Service**

This service is required to schedule the movement of power through, out of, within, or into a Control Area. This service can be provided only by the operator of the Control Area in which the transmission facilities used for transmission service are located. Scheduling, System Control and Dispatch Service is to be provided directly by the Transmission Provider (if the Transmission Provider is the Control Area operator) or indirectly by the Transmission Provider making arrangements with the Control Area operator that performs this service for the Transmission Provider's Transmission System. The Transmission Customer must purchase this service from the Transmission Provider or the Control Area operator.

The charges for Scheduling, System Control and Dispatch Service are to be based on the rates set forth below. To the extent the Control Area operator performs this service for the Transmission Provider, charges to the Transmission Customer are to reflect only a pass-through of the costs charged to the Transmission Provider by that Control Area operator.

The charges for Scheduling, System Control and Dispatch Service Charges will be assessed in accordance with this Tariff at a rate not to exceed:

- | | |
|---------------------|--|
| 1) Yearly Service | \$7.2409 per kW of Reserved Capacity per year |
| 2) Monthly delivery | \$0.6034 per kW of Reserved Capacity per month |
| 3) Weekly delivery | \$0.1392 per kW of Reserved Capacity per week |

- | | |
|--------------------|---|
| 4) Daily delivery | \$0.0278 per kW of Reserved Capacity per day |
| 5) Hourly delivery | \$1.7406 per MW of Reserved Capacity per hour |

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SCHEDULE 1A**EIM Administrative Service**

This service recovers the administrative costs assessed by the CAISO as the MO of the EIM to the SCL EIM Entity in accordance with Sections 4.5.1.1.4, 4.5.1.3, 11.22.8, and 29.11(i) of the MO Tariff (EIM Administrative Costs). All Transmission Customers purchasing Long Term Firm Point-to-Point Transmission Service, Short-Term Firm Point-to-Point Transmission Service, or Non-Firm Point-to-Point Transmission Service from the Transmission Provider shall be required to acquire EIM Administrative Service from the Transmission Provider.

EIM Administrative Costs assigned to the SCL EIM Entity shall be sub-allocated to Transmission Customers on the basis of Measured Demand for the time period in which the EIM Administrative Costs were incurred.

SCHEDULE 2**Reactive Supply and Voltage Control from
Generation or Other Sources Service**

In order to maintain transmission voltages on the Transmission Provider's transmission facilities within acceptable limits, generation facilities and non-generation resources capable of providing this service that are under the control of the Control Area operator are operated to produce (or absorb) reactive power. Thus, Reactive Supply and Voltage Control from Generation or Other Sources Service must be provided for each transaction on the Transmission Provider's transmission facilities. The amount of Reactive Supply and Voltage Control from Generation or Other Sources Service that must be supplied with respect to the Transmission Customer's transaction will be determined based on the reactive power support necessary to maintain transmission voltages within limits that are generally accepted in the region and consistently adhered to by the Transmission Provider.

Reactive Supply and Voltage Control from Generation or Other Sources Service is to be provided directly by the Transmission Provider (if the Transmission Provider is the Control Area operator) or indirectly by the Transmission Provider making arrangements with the Control Area operator that performs this service for the Transmission Provider's Transmission System. The Transmission Customer must purchase this service from the Transmission Provider or the Control Area operator.

The charges for such service will be based on the rates set forth below. To the

extent the Control Area operator performs this service for the Transmission Provider, charges to the Transmission Customer are to reflect only a pass-through of the costs charged to the Transmission Provider by the Control Area operator.

The charges for Reactive Supply and Voltage Control from Generation or Other Sources Service will be assessed in accordance with this Tariff as follows:

- Initial rate is \$0 if power factor is between 0.97 and 1.0.
- Customers with an unsatisfactory power factor will be charged \$0.0015 power factor charge per kVarh.
- Generators must comply with Western Electricity Coordinating Council standards for voltage control and reactive power delivery.

SCHEDULE 3

Regulation and Frequency Response Service

Regulation and Frequency Response Service is necessary to provide for the continuous balancing of resources (generation and interchange) with load and for maintaining scheduled Interconnection frequency at sixty cycles per second (60 Hz). Regulation and Frequency Response Service is accomplished by committing on-line generation whose output is raised or lowered (predominantly through the use of automatic generating control equipment) and by other non-generation resources capable of providing this service as necessary to follow the moment-by-moment changes in load. The obligation to maintain this balance between resources and load lies with the Transmission Provider (or the Control Area operator that performs this function for the Transmission Provider). The Transmission Provider must offer this service when the transmission service is used to serve load within its Control Area.

The Transmission Customer must either purchase this service from the Transmission Provider or make alternative comparable arrangements to satisfy its Regulation and Frequency Response Service obligation. The Transmission Provider will take into account the speed and accuracy of regulation resources in its determination of Regulation and Frequency Response reserve requirements, including as it reviews whether a self-supplying Transmission Customer has made alternative comparable arrangements. Upon request by the self-supplying Transmission Customer, the Transmission Provider will share with the Transmission Customer its reasoning and any

related data used to make the determination of whether the Transmission Customer has made alternative comparable arrangements. The amount of and charges for Regulation and Frequency Response Service are set forth below. To the extent the Control Area operator performs this service for the Transmission Provider, charges to the Transmission Customer are to reflect only a pass-through of the costs charged to the Transmission Provider by that Control Area operator

Regulation and Frequency Response service as provided under this Tariff is only applicable to Point(s) of Delivery associated with loads located within the Transmission Provider's Control Area. Scheduling requirements at interconnections between the Transmission Provider's Control Area and other Control Areas shall be in accordance with NERC and WECC guidelines regarding Control Area operations.

The charges for Regulation and Frequency Response will be assessed in accordance with this Tariff at a rate not to exceed:

- | | |
|---------------------|--|
| 1) Yearly Service | \$5.6922 per kW of Reserved Capacity per year |
| 2) Monthly delivery | \$0.4743 per kW of Reserved Capacity per month |
| 3) Weekly delivery | \$0.1095 per kW of Reserved Capacity per week |
| 4) Daily delivery | \$0.0219 per kW of Reserved Capacity per day |
| 5) Hourly delivery | \$1.3683 per MW of Reserved Capacity per hour |

The total charge for Regulation and Frequency Response Service in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified in section (4) [daily] above times the highest amount in Megawatts of Reserved Capacity in

any hour during such day. In addition, the total charge for Regulation and Frequency Response Service in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified in section (3) [weekly] above times the highest amount in Megawatts of Reserved Capacity in any hour or day during such week.

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SCHEDULE 4**Energy Imbalance Service**

This Schedule 4 shall apply during such hours when the Transmission Provider is participating in the EIM and when the EIM has not been suspended. In accordance with Section 10 of Attachment Q of this Tariff, Schedule 4A shall apply during such hours when the Transmission Provider is not participating in the EIM and when the EIM has been suspended.

Energy Imbalance Service is provided when a difference occurs between the scheduled and the actual delivery of energy to a load located within a Control Area over a single hour. The Transmission Provider must offer this service when the transmission service is used to serve load within its Control Area. The Transmission Customer must either purchase this service from the Transmission Provider or make alternative comparable arrangements, which may include use of non-generation resources capable of providing this service, to satisfy its Energy Imbalance Service obligation. To the extent the Control Area operator performs this service for the Transmission Provider, charges to the Transmission Customer are to reflect only a pass-through of the costs charged to the Transmission Provider by that Control Area operator..

A Transmission Customer shall be charged or pay for Energy Imbalance Service measured as the deviation of the Transmission Customer's metered load compared to the load component of the Transmission Customer Base Schedule (as determined pursuant to Section 4.2.4 of Attachment Q of this Tariff) settled as UIE for the period of the deviation

at the applicable LAP price where the load is located, as determined by the MO under Section 29.11(b)(3)(C) of the MO Tariff.

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SCHEDULE 4A**Energy Imbalance Service when EIM Suspended**

In accordance with Section 10 of Attachment Q of this Tariff, this Schedule 4A shall apply during such hours when the Transmission Provider is not participating in the EIM and when the EIM has been suspended. Schedule 4 shall apply during such hours when the Transmission Provider is participating in the EIM and when the EIM has not been suspended.

Energy Imbalance Service is provided when a difference occurs between the scheduled and the actual delivery of energy to a load located within a Control Area over a single hour. The Transmission Provider must offer this service when the transmission service is used to serve load within its Control Area. The Transmission Customer must either purchase this service from the Transmission Provider or make alternative comparable arrangements, which may include use of non-generation resources capable of providing this service, to satisfy its Energy Imbalance Service obligation. To the extent the Control Area operator performs this service for the Transmission Provider, charges to the Transmission Customer are to reflect only a pass-through of the costs charged to the Transmission Provider by that Control Area operator.

The Transmission Provider may charge a Transmission Customer a penalty for either hourly energy imbalances under this Schedule or a penalty for hourly generator imbalances under Schedule 9 for imbalances occurring during the same hour, but not both unless the imbalances aggravate rather than offset each other. The Transmission Provider shall establish

charges for energy imbalance based on the deviation bands as follows: (i) deviations within +/- 1.5 percent (with a minimum of 2 MW) of the scheduled transaction to be applied hourly to any energy imbalance that occurs as a result of the Transmission Customer's scheduled transaction(s) will be netted on a monthly basis and settled financially, at the end of the month, at 100 percent of incremental or decremental cost; (ii) deviations greater than +/- 1.5 percent up to 7.5 percent (or greater than 2 MW up to 10 MW) of the scheduled transaction to be applied hourly to any energy imbalance that occurs as a result of the Transmission Customer's scheduled transaction(s) will be settled financially, at the end of each month, at 110 percent of incremental cost or 90 percent of decremental cost, and (iii) deviations greater than +/- 7.5 percent (or 10 MW) of the scheduled transaction to be applied hourly to any energy imbalance that occurs as a result of the Transmission Customer's scheduled transaction(s) will be settled financially, at the end of each month, at 125 percent of incremental cost or 75 percent of decremental cost.

For purposes of this Schedule, incremental cost and decremental cost represent the Transmission Provider's actual average hourly cost of the last 10 MW dispatched for any purpose, e.g., to supply the Transmission Provider's Native Load Customers, correct imbalances, or make off-system sales, based on the replacement cost of fuel, unit heat rates, start-up costs (including any commitment and redispatch costs), incremental operation and maintenance costs, and purchased and interchange power costs and taxes, as applicable.

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SCHEDULE 5**Operating Reserve - Spinning Reserve Service**

Spinning Reserve Service is needed to serve load immediately in the event of a system contingency. Spinning Reserve Service may be provided by generating units that are on-line and loaded at less than maximum output and by non-generation resources capable of providing this service. The Transmission Provider must offer this service when the transmission service is used to serve load within its Control Area. The Transmission Customer must either purchase this service from the Transmission Provider or make alternative comparable arrangements to satisfy its Spinning Reserve Service obligation. The amount of and charges for Spinning Reserve Service are set forth below. To the extent the Control Area operator performs this service for the Transmission Provider, charges to the Transmission Customer are to reflect only a pass-through of the costs charged to the Transmission Provider by that Control Area operator.

Charges for Operating Reserve – Spinning Reserve Service will be assessed in accordance with this Tariff at a rate not to exceed \$24.7379/MWh of Spinning Reserve Capacity.

SCHEDULE 6**Operating Reserve - Supplemental Reserve Service**

Supplemental Reserve Service is needed to serve load in the event of a system contingency; however, it is not available immediately to serve load but rather within a short period of time. Supplemental Reserve Service may be provided by generating units that are on-line but unloaded, by quick-start generation or by interruptible load or other non-generation resources capable of providing this service. The Transmission Provider must offer this service when the transmission service is used to serve load within its Control Area. The Transmission Customer must either purchase this service from the Transmission Provider or make alternative comparable arrangements to satisfy its Supplemental Reserve Service obligation. The amount of and charges for Supplemental Reserve Service are set forth below. To the extent the Control Area operator performs this service for the Transmission Provider, charges to the Transmission Customer are to reflect only a pass-through of the costs charged to the Transmission Provider by that Control Area operator.

Charges for Operating Reserve – Supplemental Reserve Service will be assessed in accordance with this Tariff at a rate not to exceed \$24.7379/MWh of Supplemental Reserve Capacity.

SCHEDULE 7**Long-Term Firm and Short-Term Firm Point-To-Point
Transmission Service**

The Transmission Customer shall compensate the Transmission Provider each month for Firm Point-to-Point Reserved Capacity at the sum of the applicable charges set forth below:

- 1) Yearly Delivery: \$18.6769 per kW of Reserved Capacity per year.
- 2) Monthly Delivery: \$1.5564 per kW of Reserved Capacity per month.
- 3) Weekly Delivery: \$0.3592 per kW of Reserved Capacity per week.
- 4) Daily Delivery: \$0.0718 per kW of Reserved Capacity per day.
- 5) Hourly Delivery: \$4.4896 per MW of Reserved Capacity per hour.

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified in section (3) above times the highest amount in kilowatts of Reserved Capacity in any day during such week.

Discounts: Three principal requirements apply to discounts for transmission service as follows: (1) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the Transmission Service Website, (2) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an Affiliate's use) must occur solely by posting on the Transmission Service Website, and (3) once a discount is negotiated, details must be

immediately posted on the Transmission Service Website. For any discount agreed upon for service on a path, from point(s) of receipt to point(s) of delivery, the Transmission Provider must offer the same discounted transmission service rate for the same time period to all Eligible Customers on all unconstrained transmission paths that go to the same point(s) of delivery on the Transmission System.

Resales: The rates and rules governing charges and discounts stated above shall not apply to resales of transmission service, compensation for which shall be governed by section 24.1 of the Tariff.

Overrun Charges: Transmission Provider will assess a charge for unauthorized use of transmission service. The charge will be applied to use in excess of the reservation amount (“the overrun”), which shall be the difference between the maximum integrated hourly amount of transmission service actually used by the customer less the amount of transmission service the customer has reserved for such hour. The charge assessed shall be equal to two times the current maximum allowable rate of the applicable Firm Point-to-Point Transmission Service at the time of the unauthorized use, assessed against the hour with the highest level of use during the time period in which the overrun occurred. If no transmission service has been reserved for such hour, and it is determined that the customer has used Transmission Provider transmission, the customer will be charged the Overrun Charge. Ancillary Services will be charged in connection with the unauthorized use of transmission service and will be based on the actual period of the overrun.

SCHEDULE 8**Non-Firm Point-To-Point Transmission Service**

The Transmission Customer shall compensate the Transmission Provider for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth below:

- 1) **Monthly delivery:** \$1.5564 per kW of Reserved Capacity per month.
- 2) **Weekly delivery:** \$0.3592 per kW of Reserved Capacity per week.
- 3) **Daily delivery:** \$0.0718 per kW of Reserved Capacity per day.

The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified in section (2) above times the highest amount in kilowatts of Reserved Capacity in any day during such week.

- 4) **Hourly delivery:** The basic charge shall be that agreed upon by the Parties at the time this service is reserved and in no event shall exceed \$4.4896 per MWh of Reserved Capacity. The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified in section (3) above times the highest amount in kilowatts of Reserved Capacity in any hour during such day.

In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified in section (2) above times the highest amount in kilowatts of Reserved Capacity in any hour during such week.

Discounts: Three principal requirements apply to discounts for transmission service as follows: (1) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the Transmission Service Website, (2) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an Affiliate's use) must occur solely by posting on the Transmission Service Website, and (3) once a discount is negotiated, details must be immediately posted on the Transmission Service Website. For any discount agreed upon for service on a path, from point(s) of receipt to point(s) of delivery, the Transmission Provider must offer the same discounted transmission service rate for the same time period to all Eligible Customers on all unconstrained transmission paths that go to the same point(s) of delivery on the Transmission System.

Resales: The rates and rules governing charges and discounts stated above shall not apply to resales of transmission service, compensation for which shall be governed by section 24.1 of the Tariff.

SCHEDULE 9**Generator Imbalance Service**

This schedule 9 shall apply during such hours when the Transmission Provider is participating in the EIM and when the EIM has not been suspended. In accordance with Section 10 of Attachment Q of this Tariff, Schedule 9A shall apply during such hours when the Transmission Provider is not participating in the EIM and when the EIM has been suspended.

Generator Imbalance Service is provided when a difference occurs between the output of a generator located in the Transmission Provider's Control Area that is not an SCL EIM Participating Resource and the resource component of the Transmission Customer Base Schedule from that generator to (1) another Control Area or (2) a load within the Transmission Provider's Control Area over a single hour. The Transmission Provider must offer this service, to the extent it is physically feasible to do so from its resources or from resources available to it, when Transmission Service is used to deliver energy from a generator located within its Control Area.

The Transmission Customer must either purchase this service from the Transmission Provider or make alternative comparable arrangements, which may include use of non-generation resources capable of providing this service, to satisfy its Generator Imbalance Service obligation. To the extent the Control Area operator performs this service for the Transmission Provider, charges to the Transmission Customer are to reflect only a pass-through of the costs charged to the Transmission Provider by that

Control Area Operator.

The Transmission Provider shall establish charges for Generator Imbalance Service as follows (the following provisions do not apply to Transmission Customers which have received a Manual Dispatch or EIM Available Balancing Capacity dispatch or which have communicated physical changes in the output of resources to the MO):

A Transmission Customer shall be charged or paid for Generator Imbalance Service measured as the deviation of the Transmission Customer's metered generation compared to the resource component of the Transmission Customer Base Schedule settled as UIE by the MO for the period of the deviation at the applicable PNode RTD price where the generator is located, as determined by the MO under Section 29.11(b)(3)(B) of the MO Tariff.

The following provisions shall apply to Transmission Customers which have received a Manual Dispatch or EIM Available Balancing Capacity dispatch, or which have communicated physical changes in the output of resources to the MO or for other reasons imbalance energy is calculated by the MO:

- (1) (a) A Transmission Customer shall be charged or paid for Generator Imbalance Service measured as the deviation of the Transmission Customer's metered generation compared to the Manual Dispatch amount, the EIM Available Balancing Capacity dispatch amount, or physical changes in the output of resources incorporated by the MO in the FMM or for other instructions by the MO, as UIE calculated by the MO for the period of the deviation at the

applicable PNode RTD price where the generator is located, as determined by the MO under Section 29.11(b)(3)(B) of the MO Tariff; or

(b) A Transmission Customer shall be charged or paid for Generator Imbalance Service measured as the deviation of the Transmission Customer's metered generation compared to the Manual Dispatch amount, the EIM Available Balancing Capacity dispatch amount, or physical changes in the output of resources incorporated by the MO in RTD or for other instructions by the MO, as UIE calculated by the MO for the period of the deviation at the applicable PNode RTD price where the generator is located, as determined by the MO under Section 29.11(b)(3)(B) of the MO Tariff; and

- (2) (a) A Transmission Customer shall be charged or paid for Generator Imbalance Service measured as the deviation of either the Manual Dispatch amount, the EIM Available Balancing Capacity dispatch amount, or physical changes in the output of resources incorporated by the MO in the FMM or for other instructions by the MO, compared to the resource component of the Transmission Customer Base Schedule, as IIE calculated by the MO for the period of the deviation at the applicable PNode FMM price where the generator is located, as determined by the MO under Section 29.11(b)(1)(A)(ii) of the MO Tariff; or

(b) Generator Imbalance Service measured as the deviation of either the Manual Dispatch amount, the EIM Available Balancing Capacity dispatch amount, or physical changes in the output of resources incorporated by the MO in RTD or for other instructions by the MO, compared to the FMM schedule, as IIE calculated by the MO for the period of the deviation at the applicable PNode RTD price where the generator is located, as determined by the MO under Section 29.11(b)(2)(A)(ii) of the MO Tariff.

Applicability to Interconnection Customers: To the extent the Interconnection Customer is a different entity than the Transmission Customer and controls the output of a generator located in the Transmission Provider's Control Area, the Interconnection Customer may be subject to charges for Generator Imbalance Service (rather than the Transmission Customer) in accordance with this Schedule 9.

SCHEDULE 9A**Generator Imbalance Service When EIM Suspended**

In accordance with Section 10 of Attachment Q of this Tariff, this Schedule 9A shall apply during such hours when the Transmission Provider is not participating in the EIM and when the EIM has been suspended. Schedule 9 shall apply during such hours when the Transmission Provider is participating in the EIM and when the EIM has not been suspended.

Generator Imbalance Service is provided when a difference occurs between the output of a generator located in the Transmission Provider's Control Area and a delivery schedule from that generator to (1) another Control Area or (2) a load within the Transmission Provider's Control Area over a single hour. An Interconnection Customer, as defined in Attachment M or N of the Tariff, as applicable, must pay imbalance charges in accordance with this Schedule. The Transmission Provider must offer this service, to the extent it is physically feasible to do so from its resources or from resources available to it, when Transmission Service is used to deliver energy from a generator located within its Control Area.

The Transmission Customer must either purchase this service from the Transmission Provider or make alternative comparable arrangements, which may include use of non-generation resources capable of providing this service, to satisfy its Generator Imbalance Service obligation. To the extent the Control Area operator performs this service for the Transmission Provider, charges to the Transmission Customer are to

reflect only a pass-through of the costs charged to the Transmission Provider by that Control Area Operator.

The Transmission Provider may charge a Transmission Customer a penalty for either hourly generator imbalances under this Schedule or a penalty for hourly energy imbalances under Schedule 4 for imbalances occurring during the same hour, but not both unless the imbalances aggravate rather than offset each other.

The Transmission Provider shall establish charges for generator imbalance based on the deviation bands as follows: (i) deviations within +/- 1.5 percent (with a minimum of 2 MW) of the scheduled transaction to be applied hourly to any generator imbalance that occurs as a result of the Transmission Customer's scheduled transaction(s) will be netted on a monthly basis and settled financially, at the end of each month, at 100 percent of incremental or decremental cost, (ii) deviations greater than +/- 1.5 percent up to 7.5 percent (or greater than 2 MW up to 10 MW) of the scheduled transaction to be applied hourly to any generator imbalance that occurs as a result of the Transmission Customer's scheduled transaction(s) will be settled financially, at the end of each month, at 110 percent of incremental cost or 90 percent of decremental cost, and (iii) deviations greater than +/- 7.5 percent (or 10 MW) of the scheduled transaction to be applied hourly to any generator imbalance that occurs as a result of the Transmission Customer's scheduled transaction(s) will be settled at 125 percent of incremental cost or 75 percent of decremental cost, except that an intermittent resource will be exempt from this deviation band and will pay the deviation band charges for all deviations greater than the larger of

1.5 percent or 2 MW. An intermittent resource, for the limited purpose of this Schedule is an electric generator that is not dispatchable and cannot store its fuel source and therefore cannot respond to changes in system demand or respond to transmission security constraints.

Notwithstanding the foregoing, deviations from scheduled transactions in order to respond to directives by the Transmission Provider, a balancing authority, or a reliability coordinator shall not be subject to the deviation bands identified above and, instead, shall be settled financially, at the end of the month, at 100 percent of incremental and decremental cost. Such directives may include instructions to correct frequency decay, respond to a reserve sharing event, or change output to relieve congestion.

For purposes of this Schedule, incremental cost and decremental cost will be based on an hourly energy index in the Pacific Northwest. If no adequate hourly index exists, an alternative index will be used. The index to be used will be posted on the Transmission Service Website at least 30 days prior to use for determining the incremental cost.

Applicability to Interconnection Customers: To the extent the Interconnection Customer is a different entity than the Transmission Customer and controls the output of a generator located in the Transmission Provider's Control Area, the Interconnection Customer may be subject to charges for Generator Imbalance Service (rather than the Transmission Customer) in accordance with this Schedule 9A.

SCHEDULE 10**Real Power Losses**

The Transmission Customer taking Firm Point-to-Point or Non-Firm Point-to-Point Transmission Service, excluding Energy Imbalance Service and Generator Imbalance Service, shall reimburse the Transmission Provider for Real Power Losses as provided in Section 16.7 of this Tariff. The Transmission Customer must financially settle for Real Power Losses by reimbursement as specified herein.

Settlement of Real Power Losses associated with Energy Imbalance Service shall be pursuant to Schedule 4 of this Tariff, and settlement of Real Power Losses associated with Generator Imbalance Service shall be pursuant to Schedule 9 of this Tariff. The procedures to determine the amount of Real Power Losses associated with a Transmission Customer's Base Schedule, as well as the reimbursement for Real Power Losses, are set forth below.

The amount of Real Power Losses assessed to a Transmission Customer in a given hour shall be the product of such Transmission Customer Base Schedule during the hour in MWhs and the applicable loss factor provided in Sections 16.7.

The Transmission Customer shall compensate the Transmission Provider at a rate equal to the amount of Real Power Losses assessed to such Transmission Customer in a given hour multiplied by the hourly LAP price for the SCL BAA in that hour as established by the MO under section 29.11 (b)(3)(C) of the MO Tariff.

In the event that Transmission Provider is not participating in the EIM, the EIM has been suspended, or Transmission Customer Base Schedules or LAP prices are otherwise

unavailable to calculate Real Power Losses as described above, the amount of Real Power Losses assessed to the Transmission Customer shall be the product of the actual transmission service provided (scheduled service less any curtailments, corrections or adjustments mutually agreed on by the Transmission Provider and the Transmission Customer) during each hour in MWhs and the applicable loss factor provided in Sections 16.7.

The Transmission Customer shall compensate the Transmission Provider at a rate equal to the amount of Real Power Losses calculated pursuant to the preceding paragraph multiplied by the published IntercontinentalExchange® (“ICE”) Mid-C index price (“MidC Index Price”) applicable to the hour of service (i.e., the “Peak Mid-C Index Price” for service during peak hours, and the “Off-Peak Mid-C Index Price” for service during offpeak hours).

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ATTACHMENT A**Form Of Service Agreement For
Firm Point-To-Point Transmission Service**

- 1.0 This Service Agreement, dated as of _____, is entered into, by and between _____ (the Transmission Provider), and _____ (“Transmission Customer”).
- 2.0 The Transmission Customer has been determined by the Transmission Provider to have a Completed Application for Firm Point-To-Point Transmission Service under the Tariff.
- 3.0 The Transmission Customer has provided to the Transmission Provider an Application deposit in accordance with the provisions of Section 18.3 of the Tariff.
- 4.0 Service under this agreement shall commence on the later of (1) the requested service commencement date or (2) the date on which construction of any Direct Assignment Facilities and/or Network Upgrades are completed. Service under this agreement shall terminate on such date as mutually agreed upon by the parties.
- 5.0 The Transmission Provider agrees to provide and the Transmission Customer agrees to take and pay for Firm Point-To-Point Transmission Service in accordance with the provisions of Part II of the Tariff and this Service Agreement.
- 6.0 Any notice or request made to or by either Party regarding this Service Agreement shall be made to the representative of the other Party as indicated below.

Transmission Provider:

Transmission Customer:

7.0 The Tariff is incorporated herein and made a part hereof.

IN WITNESS WHEREOF, the Parties have caused this Service Agreement to be executed by their respective authorized officials.

Transmission Provider:

By: _____
Name Title Date

Transmission Customer:

By: _____
Name Title Date

Specifications For Long-Term Firm Point-To-Point
Transmission Service

- 1.0 Term of Transaction: _____
Start Date: _____
Termination Date: _____
- 2.0 Description of capacity and energy to be transmitted by Transmission Provider including the electric Control Area in which the transaction originates.

- 3.0 Point(s) of Receipt: _____
Delivering Party: _____
- 4.0 Point(s) of Delivery: _____
Receiving Party: _____
- 5.0 Maximum amount of capacity and energy to be transmitted (Reserved Capacity): _____
- 6.0 Designation of party(ies) subject to reciprocal service obligation: _____

- 7.0 Name(s) of any Intervening Systems providing transmission service: _____

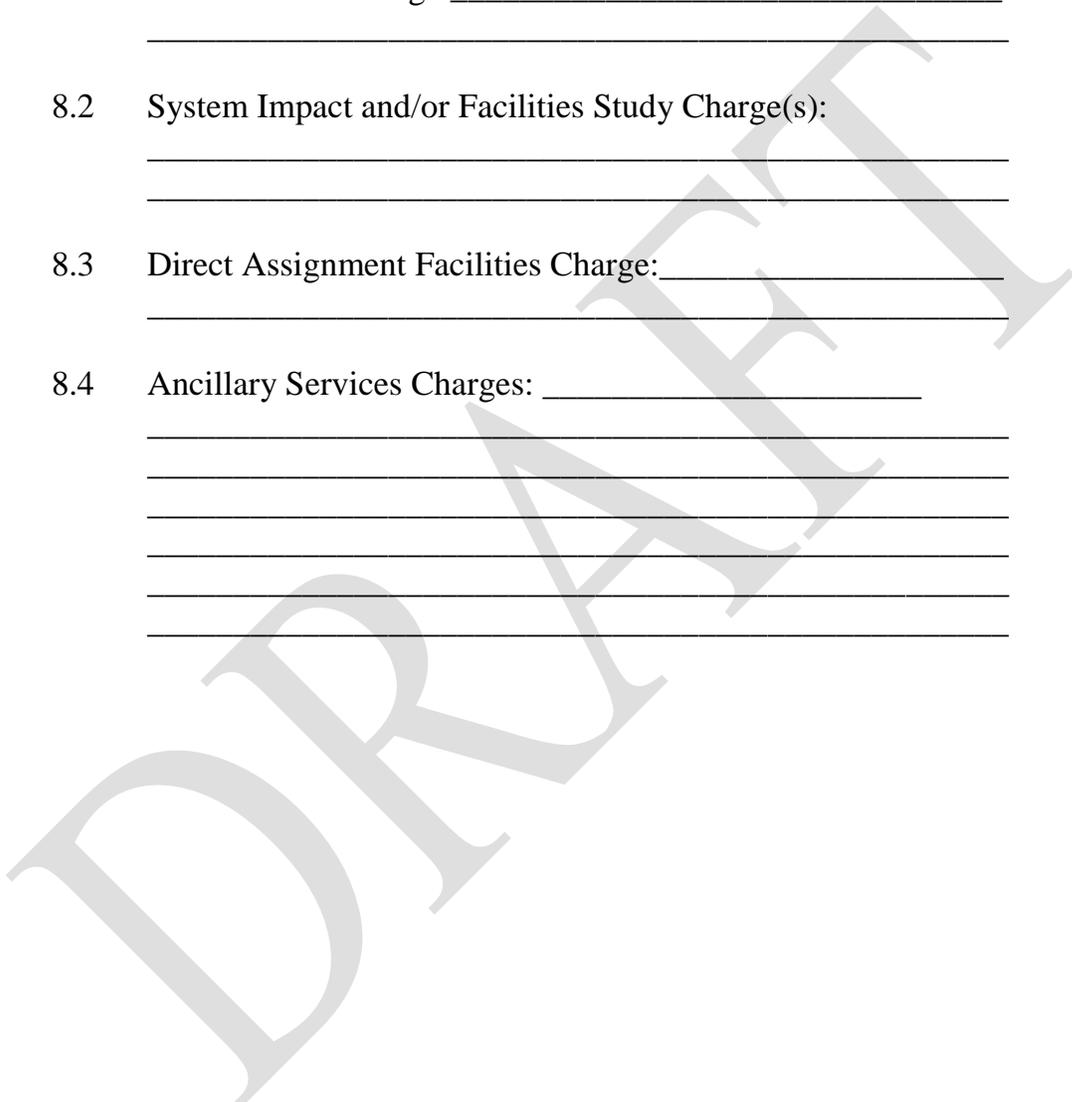
8.0 Service under this Agreement may be subject to some combination of the charges detailed below. (The appropriate charges for individual transactions will be determined in accordance with the terms and conditions of the Tariff.)

8.1 Transmission Charge: _____

8.2 System Impact and/or Facilities Study Charge(s):

8.3 Direct Assignment Facilities Charge: _____

8.4 Ancillary Services Charges: _____



ATTACHMENT A-1**Form Of Service Agreement For
The Resale, Reassignment Or Transfer Of
Point-To-Point Transmission Service**

- 1.0 This Service Agreement, dated as of _____, is entered into, by and between _____ (the Transmission Provider), and _____ (the Assignee).
- 2.0 The Assignee has been determined by the Transmission Provider to be an Eligible Customer under the Tariff pursuant to which the transmission service rights to be transferred were originally obtained.
- 3.0 The terms and conditions for the transaction entered into under this Service Agreement shall be subject to the terms and conditions of Part II of the Transmission Provider's Tariff, except for those terms and conditions negotiated by the Reseller of the reassigned transmission capacity (pursuant to Section 24.1 of this Tariff) and the Assignee include: contract effective and termination dates, the amount of reassigned capacity or energy, point(s) of receipt and delivery. Changes by the Assignee to the Reseller's Points of Receipt and Points of Delivery will be subject to the provisions of Section 24.2 of this Tariff.
- 4.0 The Transmission Provider shall continue to charge the Reseller under Schedule 7 in accordance with the Reseller's Service Agreement with the Transmission Provider. The Assignee shall pay the Reseller for Reserved Capacity but will pay the Transmission Provider for Ancillary Services (Schedules 1 through 7 and 10) in accordance with Assignee's Service Agreement.
- 5.0 Any notice or request made to or by either Party regarding this Service Agreement shall be made to the representative of the other Party as indicated below.

Transmission Provider:

Assignee:

6.0 The Tariff is incorporated herein and made a part hereof.

IN WITNESS WHEREOF, the Parties have caused this Service Agreement to be executed by their respective authorized officials.

Transmission Provider:

By: _____
Name Title Date

Assignee:

By: _____
Name Title Date

Specifications For The Resale, Reassignment Or Transfer of
Long-Term Firm Point-To-Point Transmission Service

- 1.0 Term of Transaction: _____
Start Date: _____
Termination Date: _____
- 2.0 Description of capacity and energy to be transmitted by Transmission Provider including the electric Control Area in which the transaction originates.

- 3.0 Point(s) of Receipt: _____
Delivering Party: _____
- 4.0 Point(s) of Delivery: _____
Receiving Party: _____
- 5.0 Maximum amount of reassigned capacity: _____
- 6.0 Designation of party(ies) subject to reciprocal service obligation: _____

- 7.0 Name(s) of any Intervening Systems providing transmission service: _____

8.0 Service under this Agreement may be subject to some combination of the charges detailed below. (The appropriate charges for individual transactions will be determined in accordance with the terms and conditions of the Tariff.)

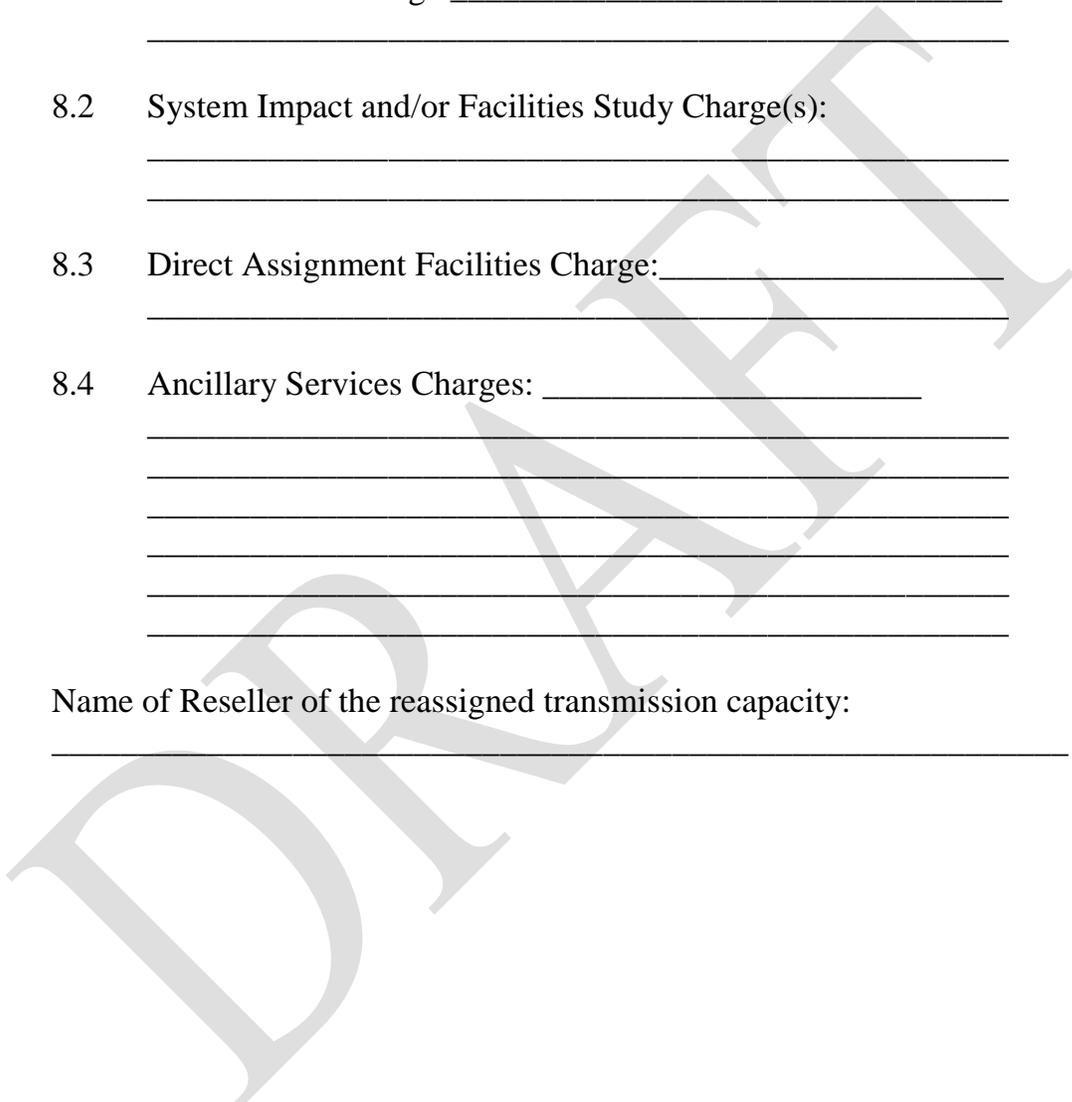
8.1 Transmission Charge: _____

8.2 System Impact and/or Facilities Study Charge(s):

8.3 Direct Assignment Facilities Charge: _____

8.4 Ancillary Services Charges: _____

9.0 Name of Reseller of the reassigned transmission capacity:



ATTACHMENT B**Form Of Service Agreement For Non-Firm Point-To-Point
Transmission Service**

- 1.0 This Service Agreement, dated as of _____, is entered into, by and between _____ (the Transmission Provider), and _____ (Transmission Customer).
- 2.0 The Transmission Customer has been determined by the Transmission Provider to be a Transmission Customer under Part II of the Tariff and has filed a Completed Application for Non-Firm Point-To-Point Transmission Service in accordance with Section 18.2 of the Tariff.
- 3.0 Service under this Agreement shall be provided by the Transmission Provider upon request by an authorized representative of the Transmission Customer.
- 4.0 The Transmission Customer agrees to supply information the Transmission Provider deems reasonably necessary in accordance with Good Utility Practice in order for it to provide the requested service.
- 5.0 The Transmission Provider agrees to provide and the Transmission Customer agrees to take and pay for Non-Firm Point-To-Point Transmission Service in accordance with the provisions of Part II of the Tariff and this Service Agreement.
- 6.0 Any notice or request made to or by either Party regarding this Service Agreement shall be made to the representative of the other Party as indicated below.

Transmission Provider:

Transmission Customer:

7.0 The Tariff is incorporated herein and made a part hereof.

IN WITNESS WHEREOF, the Parties have caused this Service Agreement to be executed by their respective authorized officials.

Transmission Provider:

By: _____
Name Title Date

Transmission Customer:

By: _____
Name Title Date

ATTACHMENT C

Methodology To Assess Available Transfer Capability

Transmission Provider will calculate Available Transfer Capability (ATC) using System Impact Studies performed for specific Transmission Service Requests (TSR) as it works to build more robust methodology and tools to calculate ATC.

DRAFT

ATTACHMENT D**Methodology for Completing a System Impact Study**

Upon receipt of a request for service pursuant to the applicable terms and conditions of this Tariff, Transmission Provider will complete a System Impact Study associated with the requested transmission service. The study procedure will use Good Utility Practice and the engineering and operating principles, standards, guidelines, and criteria of Transmission Provider, WECC, NERC, or any similar organization that may exist in the future of which Transmission Provider is then a member.

Transmission Provider shall use its sole discretion as to the scope, details and methods used to perform the Study. If necessary, a meeting between Transmission Provider and applicant shall be held as soon as practical after execution of the System Impact Study Agreement to: (a) review the application and any known issue that could affect the scope of the study, and (b) develop a scope of study. The location of the meeting shall be at Transmission Provider's offices unless the parties mutually agree to another location.

Transmission Provider will complete a System Impact Study using, to the extent consistently applied by Transmission Provider, the criteria and process for assessing the capability of the Transmission System as detailed in Sections 4 and 5 of Transmission Provider's then most recent FERC Form 715 submittal.

In determining the level of capacity available for new Firm Point-To-Point Transmission Service requests, Transmission Provider may exclude, from capacity to be made available for new Firm Point-To-Point Transmission Service requests, that capacity needed to meet (i) then current and reasonably forecasted load of Native Load Customers, (ii) then existing commitments to Transmission Provider or others of Firm Point-To-Point Transmission Service under this Tariff, (iii) previously received pending Applications for Firm Point-To-Point Transmission Service under this Tariff, and (iv) then existing firm obligations under other tariffs, contracts and rate schedules.

ATTACHMENT E

Index Of Point-To-Point Transmission Service Customers

<u>Customer</u>	<u>Date of Service Agreement</u>
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ATTACHMENT J

Procedures for Addressing Parallel Flows

Procedures available at the request of customer.

DRAFT

ATTACHMENT K

Transmission Planning Process

This Attachment K is pending formalization of planning requirements that conform with Transmission Provider's engagement in NorthernGrid.

DRAFT

ATTACHMENT L**Creditworthiness Procedures**

For the purpose of determining the ability of the Transmission Customer to meet its obligations related to service hereunder, the Transmission Provider may require reasonable credit review procedures. This review shall be made in accordance with standard commercial practices and must specify quantitative and qualitative criteria to determine the level of secured and unsecured credit.

TRANSMISSION CREDIT POLICY

The following is the Transmission Credit Policy for the Transmission Provider. The Transmission Provider is a department of The City of Seattle. This Transmission Credit Policy may be updated periodically and is administered by the Transmission Provider's Risk Oversight Group ("Risk").

Prior to the Transmission Provider entering into or renewing an agreement substantially in the form of Attachment A, A-1 or B to the OATT (each agreement, a "Transmission Service Agreement"), the credit worthiness of the Transmission Customer must be analyzed by Risk. Risk will inform the Transmission Provider when credit has been approved. After the Transmission Service Agreement is signed, Risk will establish the Transmission Customer in the Transmission Provider's credit and risk reporting system.

The table below lists the current maximum unsecured credit limits for the Transmission Provider's Transmission Customers. Credit limits will be set based on the following factors: the lower of the credit ratings from Standard & Poor's Ratings Services and Moody's Investors Service, as categorized in the table below; and Risk's assessments of the Transmission Customer's financial strength and ability to pay on a timely basis.

Category	Standard & Poor's Ratings Services	Moody's Investors Service	Maximum Unsecured Credit Limit (a)
Prime & High Investment Grade	AA- or above	Aa3 or above	Not to exceed \$5,000,000
Upper Medium Investment Grade	A+, A, A-	A1, A2, A3	Not to exceed \$3,000,000
Lower Medium Investment Grade	BBB+, BBB	Baa1, Baa2	Not to exceed \$1,000,000
Borderline Investment Grade and Non-Investment Grade	BBB- or below	Baa3 or below	\$0
Subsidiary with Parent Guaranty Acceptable to Department	Above Ratings Apply To Parent	Above Ratings Apply to Parent	Above Credit Limits Apply To Parent
Non-Rated Company (Parent and/or Subsidiary)			Letter of Credit acceptable to Department or Pre-Payment

- (a) Proviso: Limit must not to exceed 1.00% of the Transmission Service Customer's most recent tangible net worth as published in its most recent audited financial statements.

Once a Transmission Customer's credit limit has been reached, no additional sales under the Transmission Service Agreement may be made until payment or additional credit assurance is received. Additional credit assurance may be provided in the following forms: (1) an acceptable irrevocable Letter of Credit; (2) an acceptable Payment Guaranty; or (3) prepayment.

An acceptable irrevocable Letter of Credit for the benefit of The City of Seattle must meet the following criteria: (1) it must be from a United States office of a commercial bank or trust company organized under the laws of the United States of America or a political subdivision thereof or from a foreign bank with a branch office located in the United States and (2) the Letter of Credit provider must have at least an "A" credit rating from two or more major credit rating agencies.

The Transmission Provider will be notified when credit levels change and/or additional credit assurance is required. The posting of additional credit assurance or the curing of Risk's determination of non-creditworthiness is required within 1 business day of notification. Upon request, Risk will provide a written explanation for any change in credit levels or assurance requirements.

Exposures are measured as a rolling 60-day notional exposure. If at any time a Transmission Customer fails to pay unsecured amounts owed to the Transmission Provider, the customer's credit is reduced to zero.

Contested determinations of credit or assurance requirements may be discussed with Risk's Credit Representative at 206-233-2756. The Transmission Provider's Risk Oversight Group has final determination over contested transmission credit matters.

ATTACHMENT M

Generation Interconnection Procedures (GIP)

(Place holder due to size. See attachment.)

DRAFT

**ATTACHMENT M – Appendix 6
Generator Interconnection Agreement (GIA)**

((Place holder due to size. See attachment.))

DRAFT

ATTACHMENT Q**Energy Imbalance Market****Section 1. General Provision - Purpose and Effective Date of Attachment Q**

This Attachment Q provides for Transmission Provider's participation as the SCL EIM Entity in the EIM administered by the MO. Capitalized terms are defined in Section I of this Tariff. If not defined in this Tariff, defined terms may be contained in the MO Tariff. Attachment Q shall be in effect for as long as SCL EIM Entity participates in the EIM and until all settlements are finalized resulting from such implementation.

This Attachment Q shall apply to: (1) all Transmission Customers and Interconnection Customers, as applicable, with new and existing service agreements under Part II and Attachment M of this Tariff, (2) all Transmission Customers with legacy transmission agreements that pre-existed this Tariff and that expressly incorporate by reference the applicability of Transmission Provider's Tariff and/or this Attachment Q in particular, and (3) Transmission Provider's use of the transmission system for service to Native Load Customers. To the extent an Interconnection Customer controls the output of a generator located in SCL's BAA, the SCL EIM Entity may require the Interconnection Customer to comply with requirements in this Attachment Q applicable to Transmission Customers to the extent that the SCL EIM Entity makes a determination, that such Interconnection Customer is the more appropriate party to satisfy the requirements of Attachment Q than any Transmission Customer.

This Attachment Q shall work in concert with the provisions of the MO Tariff implementing the EIM to support operation of the EIM. To the extent that this Attachment Q is inconsistent with a provision in the remainder of this Tariff with regard to the SCL EIM Entity's administration of the EIM, this Attachment Q shall prevail.

This Attachment Q governs the relationship between the SCL EIM Entity and all Transmission Customers and Interconnection Customers subject to this Tariff. This Attachment Q does not establish privity between Transmission Customers and the MO or make a Transmission Customer subject to the MO Tariff. Any Transmission Customer duties and obligations related to the EIM are those identified in this Tariff, unless the Transmission Customer voluntarily elects to participate directly in the EIM as an SCL EIM Participating Resource, in which case the MO Tariff provisions for EIM Participating Resources and EIM Participating Resource Scheduling Coordinators shall also apply.

Section 2. Election of Transmission Customers to become SCL EIM Participating Resources

The decision of a Transmission Customer to participate in the EIM with resources as SCL

EIM Participating Resources is voluntary. A Transmission Customer that chooses to have a resource become an SCL EIM Participating Resource must satisfy the following:

- (1) Meet the requirements specified in Section 3 of this Attachment Q, and the SCL EIM BP;
- (2) Become or retain a MO-certified EIM Participating Resource Scheduling Coordinator; and
- (3) Follow the application and certification process specified in this Attachment Q and the SCL EIM BP posted on the Transmission Service Website.

Transmission Customers which own or control multiple resources may elect to have any or all of their resources be SCL EIM Participating Resources, in which case any resources that are not elected by the Transmission Customer to be SCL EIM Participating Resources shall be treated as Non-Participating Resources for purposes of this Attachment Q.

Section 3. Eligibility to be an SCL EIM Participating Resource

3.1 Internal Resources - Transmission Rights

Resources owned or controlled by Transmission Customers and located within the metered boundaries of SCL's BAA are eligible to become SCL EIM Participating Resources.

The Transmission Customer that owns or controls the resource must have transmission rights associated with either (i) a Service Agreement for Firm Point-to-Point Transmission Service or (ii) a Service Agreement for Non-Firm Point-to-Point Transmission Service, and such Transmission Customer elects to participate in the EIM.

3.2 Resources External to SCL's BAA

3.2.1 Use of Pseudo-Ties

A resource owned or controlled by a Transmission Customer that is not physically located inside the metered boundaries of SCL's BAA may participate in the EIM as an SCL EIM Participating Resource if the Transmission Customer: (1) implements a Pseudo-Tie into SCL's BAA, consistent with SCL's EIM BP posted on the Transmission Service Website; (2) has arranged firm transmission over any third-party transmission systems to an SCL BAA intertie boundary equal to the amount of energy that will be Dynamically Transferred through a Pseudo-Tie into SCL's BAA, consistent with SCL's EIM BP posted on the Transmission Service Website; and (3) has secured transmission service rights consistent

with Section 3.1 of this Attachment Q.

3.2.2 Pseudo-Tie Costs

Pseudo-Tie implementation costs shall be allocated in a manner consistent with the treatment of Network Upgrades and Direct Assignment Facilities to facilitate a Pseudo-Tie into SCL's BAA.

3.3 Application and Certification of SCL EIM Participating Resources

3.3.1 Application

To register a resource to become an SCL EIM Participating Resource, an applicant must submit a completed application and shall provide a deposit of \$1,500 for the SCL EIM Entity to process the application. Upon completion of processing the completed application, the SCL EIM Entity shall charge and the applicant shall pay the actual costs of the application processing. Any difference between the deposit and the actual costs of the application processing shall be paid by or refunded (without interest) to the SCL EIM Participating Resource applicant, as appropriate.

At the time of application, any SCL EIM Participating Resource applicant must elect to perform the duties of either a CAISO Metered Entity or Scheduling Coordinator Metered Entity, consistent with the MO's requirements, as applicable.

3.3.2 Processing the Application

The SCL EIM Entity shall make a determination as to whether to accept or reject the application within 45 days of receipt of the application. At minimum, the SCL EIM Entity shall validate through the application that the SCL EIM Participating Resource applicant has satisfied Sections 3.1 and 3.2 of this Attachment Q, as applicable, and met minimum telemetry and metering requirements, as set forth in the MO's requirements and the SCL EIM BP. Within 45 days of receipt of the application and in accordance with the process outlined in the SCL EIM BP, the SCL EIM Entity may request additional information and will attempt to resolve any minor deficiencies in the application with the Transmission Customer. The SCL EIM Entity may extend the 45-day period to accommodate the resolution of minor deficiencies in the application in order to make a determination on an application.

If the SCL EIM Entity approves the application, it shall send notification of approval to both the SCL EIM Participating Resource applicant and the MO.

If the SCL EIM Entity rejects the application, the SCL EIM Entity shall send

notification stating the grounds for rejection to the SCL EIM Participating Resource applicant. Upon request, the SCL EIM Entity may provide guidance to the applicant as to how the SCL EIM Participating Resource applicant may cure the grounds for the rejection. In the event that the SCL EIM Entity has granted an extension of the 45-day period but the applicant has neither provided the additional requested information nor otherwise resolved identified deficiencies within six months of the SCL EIM Entity's initial receipt of the application, the application shall be deemed rejected by the SCL EIM Entity.

If an application is rejected, the SCL EIM Participating Resource applicant may resubmit its application at any time (including submission of a new processing fee deposit).

3.3.3 Certification Notice

Upon approval of an application and in accordance with the process specified in the SCL EIM BP, certification by the SCL EIM Entity of the SCL EIM Participating Resource to participate in the EIM shall occur once the Transmission Customer has demonstrated and the MO has confirmed that the Transmission Customer has:

- (1) Met the MO's criteria to become an EIM Participating Resource and executed the MO's pro forma EIM Participating Resource Agreement;
- (2) Qualified to become or retained the services of a MO-certified EIM Participating Resource Scheduling Coordinator;
- (3) Met the necessary metering requirements of this Tariff and Section 29.10 of the MO Tariff, and the EIM Participating Resource Scheduling Coordinator has executed the MO's pro forma Meter Service Agreement for Scheduling Coordinators; and
- (4) Met communication and data requirements of this Tariff and Section 29.6 of the MO Tariff, and has the ability to receive and implement Dispatch Instructions every five minutes from the MO.

Upon receiving notice from the MO of the completion of the enumerated requirements by the Transmission Customer, the SCL EIM Entity shall provide notice to both the Transmission Customer with an SCL EIM Participating Resource and the MO that the SCL EIM Participating Resource is certified and therefore eligible to participate in the EIM.

3.3.4 Status of Resource Pending Certification

If the Transmission Customer: (i) has submitted an application for a resource to be an SCL EIM Participating Resource but the application has not been approved; or (ii) the resource has not yet been certified by the SCL EIM Entity consistent with Section 3.3.3 of

this Attachment Q, the resource shall be deemed to be a Non-Participating Resource.

3.3.5 Notice and Obligation to Report a Change in Information

Each Transmission Customer with an SCL EIM Participating Resource has an ongoing obligation to inform the SCL EIM Entity of any changes to any of the information submitted as part of the application process under this Attachment Q. This information includes, but is not limited to:

- (1) Any change in the SCL EIM Participating Resource Scheduling Coordinator representing the resource;
- (2) Any change in the ownership or control of the resource;
- (3) Any change to the physical characteristics of the resource required to be reported to the MO in accordance with Section 29.4(c)(4)(C) of the MO Tariff; or
- (4) If either the MO terminates the participation of the SCL EIM Participating Resource in the EIM or the Transmission Customer has terminated the SCL EIM Participating Resource's participation in the EIM; in either case, that resource shall be considered to be a Non-Participating Resource for purposes of this Tariff, including Attachment Q.

Section 4. Roles and Responsibilities

4.1 Transmission Provider as the SCL EIM Entity and the SCL EIM Entity Scheduling Coordinator

4.1.1 Responsibilities

4.1.1.1 Identification of EIM Entity Scheduling Coordinator

The SCL EIM Entity can serve as the SCL EIM Entity Scheduling Coordinator or retain a third party to perform such role. If the SCL EIM Entity is not the SCL EIM Entity Scheduling Coordinator, the SCL EIM Entity shall communicate to the SCL EIM Entity Scheduling Coordinator the information required by the SCL EIM Entity Scheduling Coordinator to fulfill its responsibilities in the EIM.

The SCL EIM Entity Scheduling Coordinator shall coordinate and facilitate the EIM in accordance with the requirements of the MO Tariff. The SCL EIM Entity Scheduling Coordinator must meet the certification requirements of the MO and enter into any necessary MO agreements.

4.1.1.2 Processing SCL EIM Participating Resource Applications

The SCL EIM Entity shall be responsible for processing applications of Transmission Customers seeking authorization to participate in the EIM with resources as SCL EIM Participating Resources in accordance with Section 3.3 of this Attachment Q.

4.1.1.3 Determination of EIM Implementation Decisions for SCL's BAA

The SCL EIM Entity is solely responsible for making any decisions with respect to EIM participation that the MO requires of EIM Entities. The SCL EIM Entity has made the following determinations:

- (1) Eligibility requirements: Eligibility requirements are set forth in Section 3 of Attachment Q.
- (2) Load Aggregation Point(s): There shall be one LAP for SCL's BAA.
- (3) MO load forecast: The SCL EIM Entity shall utilize the MO load forecast but shall retain the right to provide the load forecast to the MO in accordance with the MO Tariff.
- (4) MO metering agreements: The SCL EIM Entity and all Transmission Customers with SCL EIM Participating Resources shall become either a CAISO Scheduling Coordinator Metered Entity or CAISO Metered Entity in accordance with Section 29.10 of the MO Tariff. The SCL EIM Entity shall be a Scheduling Coordinator Metered Entity on behalf of all Transmission Customers with Non-Participating Resources in accordance with Section 29.10 of the MO Tariff.

4.1.1.4 SCL EIM Business Practice

The SCL EIM Entity shall establish and revise, as necessary, procedures to facilitate implementation and operation of the EIM through the SCL EIM BP that shall be posted on the Transmission Service Website.

4.1.1.5 Determination to Take Corrective Actions or Permanently Terminate Participation in the EIM

The SCL EIM Entity may take corrective actions in SCL's BAA in accordance with the requirements of Section 10.3 of Attachment Q.

In addition, the SCL EIM Entity, in its sole and absolute discretion, may permanently

terminate its participation in the EIM by providing notice of termination to the MO pursuant to applicable agreements, in accordance with the requirements of Section 10.2 of Attachment Q.

4.1.2 Responsibilities of the SCL EIM Entity to Provide Required Information

4.1.2.1 Provide Modeling Data to the MO

The SCL EIM Entity shall provide the MO information associated with transmission facilities within SCL's BAA, including, but not limited to, network constraints and associated limits that must be observed in SCL's BAA network and interties with other BAAs.

4.1.2.2 Registration

The SCL EIM Entity shall register all Non-Participating Resources with the MO. The SCL EIM Entity may choose to obtain default energy bids from the MO for Non-Participating Resources that are Balancing Authority Area Resources. The SCL EIM Entity shall update this information in accordance with the MO's requirements as revised information is received from Transmission Customers with Non-Participating Resources in accordance with Section 4.2.1.2 of this Attachment Q.

4.1.3 Day-to-Day EIM Operations

4.1.3.1 Submission of Transmission Customer Base Schedule, Forecast Data for Non-Participating Resources that are Variable Energy Resources, and Resource Plans

The SCL EIM Entity is responsible for providing the data required by the MO in accordance with Section 29.34 of the MO Tariff, including but not limited to: (1) hourly Transmission Customer Base Schedules; (2) Forecast Data for SRP EIM Non-Participating Resources that are Variable Energy Resources; and (3) Resource Plans.

4.1.3.2 Communication of Manual Dispatch Information

The SCL EIM Entity shall inform the MO of a Manual Dispatch by providing adjustment information for the affected resources in accordance with Section 29.34 of the MO Tariff.

4.1.3.3 Confirmation

The MO shall calculate, and the SCL EIM Entity shall confirm, actual values for

Dynamic Schedules reflecting EIM Transfers to the MO within 60 minutes after completion of the Operating Hour to ensure the e-Tag author will be able to update these values in accordance with WECC policies and industry standards through an update to the e-Tag. If WECC policies and industry standards are modified such that the 60 minute time frame set forth in the preceding sentence is no longer sufficient to enable compliance with the WECC policies and industry standards, Transmission Provider shall specify in its EIM BP the applicable time frame necessary to remain compliant.

4.1.3.4 Dispatch of EIM Available Balancing Capacity of An Non-Participating Resource

Upon notification by the MO, the SCL EIM Entity shall notify the Non-Participating Resource of the Dispatch Operating Point for any EIM Available Balancing Capacity from the Non-Participating Resource, except in circumstances in which the SCL EIM Entity determines the additional capacity is not needed for the BAA or has taken other actions to meet the capacity need.

4.1.4 Provision of Meter Data

The SCL EIM Entity shall submit load, resource, and Interchange meter data to the MO in accordance with the format and timeframes required in the MO Tariff on behalf of Transmission Customers with Non-Participating Resources, loads, and Interchange.

4.1.5 Settlement of MO Charges and Payments

The SCL EIM Entity shall be responsible for financial settlement of all charges and payments allocated by the MO to the SCL EIM Entity. The SCL EIM Entity shall sub-allocate EIM charges and payments in accordance with Schedules 1, 4 and 9 of this Tariff or Section 8 of Attachment Q, as applicable.

4.1.6 Dispute Resolution with the MO

The SCL EIM Entity shall manage dispute resolution with the MO for the SCL EIM Entity settlement statements consistent with Section 29.13 of the MO Tariff, Section 12 of this Tariff, and the SCL EIM BP. Transmission Customers with SCL EIM Participating Resources shall manage dispute resolution with the MO for any settlement statements they receive directly from the MO.

4.2 Transmission Customer Responsibilities

The following Transmission Customers must comply with the information requirements of this section: (1) Transmission Customers with an SCL EIM Participating

Resource; (2) Transmission Customers with a Non-Participating Resource; (3) Transmission Customers with load within SCL's BAA; and (4) subject to the limitations identified in Section 4.2.4.5.1 of this Attachment Q, Transmission Customers wheeling through SCL's BAA.

4.2.1 Initial Registration Data

4.2.1.1 Transmission Customers with an SCL EIM Participating Resource

A Transmission Customer with an SCL EIM Participating Resource shall provide the SCL EIM Entity with the data necessary to meet the requirements established by the MO to register all resources with the MO as required by Section 29.4(e)(4)(D) of the MO Tariff.

4.2.1.2 Transmission Customers with Non-Participating Resources

A Transmission Customer with Non-Participating Resources shall provide the SCL EIM Entity with data necessary to meet the requirements established by the MO as required by Section 29.4(c)(4)(C) of the MO Tariff.

4.2.2 Responsibility to Update Required Data

4.2.2.1 Transmission Customers with an SCL EIM Participating Resource

Each Transmission Customer with an SCL EIM Participating Resource has an ongoing obligation to inform the MO and SCL EIM Entity of any changes to any of the information submitted by the Transmission Customer provided under Section 4.2.1 of this Attachment Q that reflects changes in operating characteristics as required by Section 29.4(e)(4)(D) of the MO Tariff.

4.2.2.2 Transmission Customers with Non-Participating Resources

Each Transmission Customer with a Non-Participating Resource has an ongoing obligation to inform the SCL EIM Entity of any changes to any of the information submitted by the Transmission Customer with a Non-Participating Resource provided under Section 4.2.1 of this Attachment Q.

4.2.3 Outages

Transmission Customers with SCL EIM Participating Resources and Transmission Customers with Non-Participating Resources shall be required to provide planned and unplanned outage information for their resources in accordance with Section 7 of this Attachment Q.

4.2.4 Submission of Transmission Customer Base Schedule

Every Transmission Customer (including Transmission Customers which do not have any resources or load within SCL's BAA) shall submit the Transmission Customer Base Schedule to the SCL EIM Entity. This submission must include Forecast Data on all resources, Interchange, and Intrachange which balance to the Transmission Customer's anticipated load, as applicable. If the Transmission Customer does not serve load within SCL's BAA, submission of the Transmission Customer Base Schedule shall include Forecast Data on all resources, Interchange, and Intrachange which shall balance to the Transmission Customer's anticipated actual generation within SCL's BAA. The submissions shall be in the format and within the timing requirements established by the MO and the SCL EIM Entity as required in Section 4.2.4.5 of this Attachment Q and the SCL EIM BP.

4.2.4.1 Transmission Customers with an SCL EIM Participating Resource or Non-Participating Resource in the SCL BAA

A Transmission Customer with an SCL EIM Participating Resource or a Non-Participating Resource is not required to submit Forecast Data for:

- (1) Resources located in SCL's BAA that are less than three MW; or
- (2) Behind-the-meter generation which is not contained in the MO's network model.

Each SCL EIM Participating Resource Scheduling Coordinator shall provide to the SCL EIM Entity:

- (1) The energy bid range data (without price information) of the respective resources it represents that are participating in the EIM; and
- (2) Dispatch Operating Point data of the respective resources it represents that are participating in the EIM.

4.2.4.2 Transmission Customers with Non-Participating Resources that are Variable Energy Resources

4.2.4.2.1 Resource Forecasts

A Transmission Customer with a Non-Participating Resource that is a Variable Energy Resource shall submit (i) resource Forecast Data with hourly granularity and (ii) resource Forecast Data with 5-minute or 15-minute granularity. A Transmission Customer with a Non-Participating Resource that is a Variable Energy Resource shall provide, at minimum, a three-hour rolling forecast with 15-minute granularity, updated every 15 minutes, and may provide, in the alternative, a three-hour rolling forecast with 5-minute granularity, updated every 5 minutes.

4.2.4.2.2 Method of submission

A Transmission Customer with a Non-Participating Resource that is a Variable Energy Resource shall submit resource Forecast Data consistent with this Section 4.2.4.2 using any one of the following methods:

- (1) The Transmission Customer may elect to use the SCL EIM Entity's Variable Energy Resource reliability forecast prepared for Variable Energy Resources within SCL's BAA, which shall be considered to be the basis for physical changes in the output of the resource communicated to the MO, for purposes of settlement pursuant to Schedule 9 of this Tariff;
- (2) The Transmission Customer may elect to self-supply the Forecast Data and provide such data to the SCL EIM Entity, which shall be considered to be the basis for physical changes in the output of the resource communicated to the MO, for purposes of settlement pursuant to Schedule 9 of this Tariff; or
- (3) The Transmission Customer may elect that the MO produce Forecast Data for the Variable Energy Resource, made available to the Transmission Customer in a manner consistent with Section 29.11 (j)(1) of the MO Tariff, which shall be considered to be the basis for physical changes in the output of the resource communicated to the MO, for purposes of settlement pursuant to Schedule 9 of this Tariff.

4.2.4.2.3 Timing of submission

A Transmission Customer with a Non-Participating Resource that is a Variable Energy Resource must elect one of the above methods prior to the date the Non-Participating Resource commences operation within the metered boundaries of SCL's BAA. A Transmission Customer with a Non-Participating Resource that is a Variable Energy

Resource may change its election by providing advance notice to the SCL EIM Entity. To the extent a Transmission Customer with a Non-Participating Resource that is a Variable Energy Resource elects subsection (2) in 4.2.4.2.2 above, and such Transmission Customer fails to submit resource Forecast Data for any time interval as required by this Section 4.2.4.2 of this Attachment Q, the SCL EIM Entity shall apply method (1) for purposes of settlement pursuant to Schedule 9 of this Tariff.

4.2.4.3 Transmission Customers with Load

As set forth in Sections 4.2.4 of this Attachment Q, a Transmission Customer is required to submit Forecast Data on all resources, Interchange, and Intrachange which balance to the Transmission Customer's anticipated load, as applicable. For purposes of settling Energy Imbalance Service pursuant to Schedule 4 of this Tariff, the SCL EIM Entity shall calculate the load component of the Transmission Customer Base Schedule as the resource Forecast Data net of its Interchange Forecast Data and net of its Intrachange Forecast Data, as applicable.

4.2.4.4 Transmission Customers Without Resources or Load in SCL's BAA

A Transmission Customer which does not have any resources or load within SCL's BAA shall submit a Transmission Customer Base Schedule that includes Interchange and Intrachange Forecast Data to the SCL EIM Entity.

4.2.4.5 Timing of Transmission Customer Base Schedules Submission

4.2.4.5.1 Preliminary Submission of Transmission Customer Base Schedules by Transmission Customers with Resources Or Load in the SCL BAA.

Transmission Customers with resources or load in the SCL BAA shall submit their initial Transmission Customer Base Schedules 7 days prior to each Operating Day ("T - 7 days"). Transmission Customers may modify the proposed Transmission Customer Base Schedule at any time but shall submit at least one update by 10 a.m. of the day before the Operating Day.

4.2.4.5.2 Final Submissions of Transmission Customer Base Schedules

Transmission Customers shall submit proposed final Transmission Customer Base Schedules, at any time but no later than 77 minutes prior to each Operating Hour ("T-77"). Transmission Customers may modify Transmission Customer Base Schedules up to and until 57 minutes prior to the Operating Hour ("T-57"). As of 55 minutes prior to each

Operating Hour (“T-55”), the Transmission Customer Base Schedule data for the Operating Hour will be considered financially binding and Transmission Customers may not submit further changes. If the Transmission Customer fails to enter a Forecast Data value, the default will be 0 MW for that Operating Hour.

4.2.5 Metering for Transmission Customers with Non-Participating Resources

To assess imbalance, the MO shall disaggregate meter data into 5-minute intervals if the meter intervals are not already programmed to 5-minute intervals pursuant to a Transmission Customer’s applicable interconnection requirements associated with any agreement pursuant to Attachment M of this Tariff. To the extent that a Transmission Customer owns the meter or communication to the meter, the Transmission Customer shall be responsible to maintain accurate and timely data accessible for the SCL EIM Entity to comply with Section 4.1.4 of this Attachment Q.

Section 5. Transmission Operations

5.1 Provision of Information Regarding Real-Time Status of the Transmission Provider’s Transmission System

The SCL EIM Entity shall provide the MO information on the following:

- (1) real time data for the Transmission System and inerties; and
- (2) any changes to transmission capacity and the Transmission System due to operational circumstances.

5.2 Provision of EIM Transfer Capacity by an SCL Interchange Rights Holder

The SCL EIM Entity shall facilitate the provision of transmission capacity for EIM Transfers offered by an SCL Interchange Rights Holder by providing the MO with information about the amounts made available by the SCL Interchange Rights Holder for EIM Transfers. The provision of EIM Transfer capacity shall be implemented through the SCL Interchange Rights Holder’s submission of an e-Tag by 75 minutes prior to the Operating Hour (“T-75”).

The SCL Interchange Rights Holder shall include on the e-Tag the OASIS identification reservation number(s) associated with the transmission rights made available for EIM Transfers and shall also include the Market Operator, all transmission providers, and path operators associated with the OASIS identification reservation number(s) identified on the e-Tag. The SCL Interchange Rights Holder’s rights associated with the submitted e-

Tag shall be available for the EIM, subject to approval of the e-Tag by all required e-Tag approval entities. The amount made available for EIM Transfers shall never exceed the SCL Interchange Rights Holder's transmission rights.

5.3 Provision of EIM Transfer Capability by the SCL EIM Entity

The SCL EIM Entity shall facilitate the provision of transmission capacity for EIM Transfers by providing the MO with information about the amounts available for EIM Transfers utilizing Available Transfer Capability ("ATC"). Such amounts shall be in addition to any amounts made available by SCL Interchange Rights Holders pursuant to Section 5.2 of this Attachment Q. The provision of EIM Transfer capacity corresponding to ATC shall be implemented by 40 minutes prior to the Operating Hour ("T-40") by the SCL EIM Entity. The SCL EIM Entity shall include an e-Tag, with an OASIS identification reservation number(s) created for EIM Transfers utilizing ATC, and shall also include the MO, all transmission providers, and path operators associated with the OASIS identification reservation number(s) identified in the e-Tag. The amount of ATC indicated on the e-Tag will be based upon the lower of the amount of ATC calculated by each EIM Entity at that interface by T-40. The ATC associated with the submitted e-Tag shall be available for the EIM, subject to approval of the e-Tag by all required e-Tag approval entities.

Section 6. System Operations Under Normal and Emergency Conditions

6.1 Compliance with Reliability Standards

Participation in the EIM shall not modify, change, or otherwise alter the manner in which the Transmission Provider operates its Transmission System consistent with applicable reliability standards, including adjustments.

Participation in the EIM shall not modify, change, or otherwise alter the obligations of the SCL EIM Entity, Transmission Customers with SCL EIM Participating Resources, or Transmission Customers with Non-Participating Resources to comply with applicable reliability standards.

The SCL EIM Entity shall remain responsible for the following:

- (1) Maintaining appropriate operating reserves and for its obligations pursuant to any reserve sharing group agreements;
- (2) NERC and WECC responsibilities including, but not limited to, informing the Reliability Coordinator of issues within SCL's BAA, in accordance with applicable reliability standards;

- (3) Processing e-Tags and managing schedule curtailments at the interties; and
- (4) Monitoring and managing real-time flows within system operating limits on all transmission facilities within SCL's BAA, including facilities of SCL BAA Transmission Owners. If requested by a Transmission Customer that is also an SCL BAA Transmission Owner, the SCL EIM Entity will provide additional information or data related to EIM operation as it may relate to facilities of an SCL BAA Transmission Owner.

6.2 Good Utility Practice

The SCL EIM Entity, Transmission Customers with Non-Participating Resources, and Transmission Customers with SCL EIM Participating Resources shall comply with Good Utility Practice with respect to this Tariff, including Attachment Q.

6.3 Management of Contingencies and Emergencies

6.3.1 EIM Disruption

If the MO declares an EIM disruption in accordance with Section 29.7(j) of the MO Tariff, the SCL EIM Entity shall, in accordance with Section 29.7(j)(4) of the MO Tariff, promptly inform the MO of actions taken in response to the EIM disruption by providing adjustment information, updates to e-Tags, transmission limit adjustments, or outage and derate information, as applicable.

6.3.2 Manual Dispatch

The SCL EIM Entity may issue a Manual Dispatch order to a Transmission Customer with an SCL EIM Participating Resource or a Non-Participating Resource in SCL's BAA, to address reliability or operational issues in SCL's BAA that the EIM is not able to address through normal economic dispatch and congestion management.

The SCL EIM Entity shall inform the MO of a Manual Dispatch as soon as possible.

Section 7. Outages

7.1. SCL EIM Entity Transmission Outages

7.1.1 Planned Transmission Outages and Known Derates

The SCL EIM Entity shall submit information regarding planned transmission

outages and known derates to the MO's outage management system in accordance with Section 29.9(b) of the MO Tariff. The SCL EIM Entity shall update the submittal if there are changes to the transmission outage plan.

7.1.2 Unplanned Transmission Outages

The SCL EIM Entity shall submit information as soon as possible regarding unplanned transmission outages or derates to the MO's outage management system in accordance with Section 29.9(e) of the MO Tariff.

7.2 SCL BAA Transmission Owner Outages

Transmission Customers that are also SCL BAA Transmission Owners shall provide the SCL EIM Entity with planned and unplanned transmission outage data. Planned outages shall be reported to the SCL EIM Entity. The SCL EIM Entity shall communicate information regarding planned and unplanned outages of SCL BAA Transmission Owner facilities to the MO as soon as practicable upon receipt of the information from the SCL BAA Transmission Owner.

7.3 SCL EIM Participating Resource Outages

7.3.1 Planned SCL EIM Participating Resource Outages and Known Derates

SCL EIM Participating Resource Scheduling Coordinators shall submit information regarding planned resource outages and known derates to the SCL EIM Entity. Planned outages and known derates shall be reported to the SCL EIM Entity 7 or more days in advance and preferably at least 30 days in advance of the outage or known derate. The SCL EIM Entity shall then submit this outage information to the MO's outage management system in accordance with Section 29.9(c) of the MO Tariff. SCL EIM Participating Resource Scheduling Coordinators shall update the submittal if there are changes to the resource outage plan.

7.3.2 Unplanned SCL EIM Participating Resource Outages or Derates

In the event of an unplanned outage required to be reported under Section 29.9(e) of the MO Tariff, the SCL EIM Participating Resource Scheduling Coordinator is responsible for notifying the SCL EIM Entity of required changes. The SCL EIM Entity shall then submit this information to the MO's outage management system. Changes in availability of 10 MW or 5% of Pmax (whichever is greater) lasting 15 minutes or longer must be reported to the SCL EIM Entity. The SCL EIM Entity shall then submit this information to the MO's outage management system.

7.4 Outages of Transmission Customers with Non-Participating Resources

7.4.1 Planned Outages and Known Derates of Transmission Customers with Non- Participating Resources

Transmission Customers with Non-Participating Resources shall report information regarding planned outages and known derates of resources to the SCL EIM Entity. The Transmission Customer with a Non-Participating Resource shall update the submittal if there are changes to the resource's outage plan.

The SCL EIM Entity shall submit planned resource outages and known derates of Non- Participating Resources to the MO's outage management system in accordance Section 29.9(c) of the MO Tariff.

7.4.2 Unplanned Outages of or Derates Resources of Transmission Customers with Non- Participating Resources

Unplanned outages of resources of a Transmission Customer with Non-Participating Resources shall be reported to the SCL EIM Entity.

In the event of a forced outage required to be reported under Section 29.9(e) of the MO Tariff, the SCL EIM Entity is responsible for notifying the MO of required changes through the MO's outage management system. Changes in availability of 10 MW or 5% of the element's normal system operating limits (whichever is greater) lasting 15 minutes or longer must be reported to the SCL EIM Entity. The SCL EIM Entity shall then submit this information to the MO's outage management system.

Section 8. EIM Settlements and Billing

The SCL EIM BP shall include information on the specific charge codes applicable to EIM settlement.

8.1 Instructed Imbalance Energy (IIE)

The SCL EIM Entity shall settle as IIE imbalances that result from (1) operational adjustments of a Transmission Customer's affected base generation schedule or Interchange, which includes changes by a Transmission Customer after T-57, (2) resource imbalances created by Manual Dispatch or an EIM Available Balancing Capacity dispatch, (3) an adjustment to resource imbalances created by adjustments to resource forecasts, or (4) other reasons. IIE is calculated by the MO pursuant to Section 11.5 of the MO Tariff and using the RTD or FMM price at the applicable PNode. Any allocations to the SCL EIM Entity pursuant to

Section 29.11(b)(1) and (2) of the MO Tariff for IIE that is not otherwise recovered under Schedule 9 of this Tariff shall be settled directly with each Transmission Customer according to this Section 8.1.

8.2 Uninstructed Imbalance Energy (UIE)

Any charges or payments to the SCL EIM Entity pursuant to Section 29.11(b)(3)(B) and (C) of the MO Tariff for UIE not otherwise recovered under Schedule 4 or Schedule 9 shall not be sub-allocated to Transmission Customers.

8.3 Unaccounted for Energy (UFE)

Any charges to the SCL EIM Entity pursuant to Section 29.11(c) of the MO Tariff for UFE shall not be sub-allocated to Transmission Customers.

8.4 Charges for Under-Scheduling or Over-Scheduling Load

8.4.1 Under-Scheduling Load

Any charges to the SCL EIM Entity pursuant to Section 29.1 1(d)(1) of the MO Tariff for underscheduling load shall be assigned to the Transmission Customers subject to Schedule 4 based on each Transmission Customer's respective under-scheduling imbalance ratio share, which is the ratio of the Transmission Customer's under-scheduled load imbalance amount relative to all other Transmission Customers' under-scheduled load imbalance amounts who have under-scheduled load for the Operating Hour, expressed as a percentage.

8.4.2 Over-Scheduling Load

Any charges to the SCL EIM Entity pursuant to Section 29.1 1(d)(2) of the MO Tariff for overscheduling load shall be assigned to the Transmission Customers subject to Schedule 4 based on each Transmission Customer's respective over-scheduling imbalance ratio share, which is the ratio of the Transmission Customer's over-scheduled load imbalance amount relative to all other Transmission Customers' over-scheduled load imbalance amounts who have over-scheduled load for the Operating Hour, expressed as a percentage.

8.4.3 Distribution of Under-Scheduling or Over-Scheduling Proceeds

Any payment to the SCL EIM Entity pursuant to Section 29.1 1(d)(3) of the MO Tariff shall be distributed to Transmission Customers that were not subject to underscheduling or overscheduling charges during the Trading Day on the basis of Metered

Demand and in accordance with the procedures outlined in the SCL EIM BP.

8.5 EIM Uplifts

8.5.1 EIM BAA Real-Time Market Neutrality (Real-Time Imbalance Energy Offset - BAA)

Any charges to the SCL EIM Entity pursuant to Section 29.1 1(e)(3) of the MO Tariff for EIM BAA real-time market neutrality shall be sub-allocated to Transmission Customers on the basis of Measured Demand.

8.5.2 EIM Entity BAA Real-Time Congestion Offset

Any charges to the SCL EIM Entity pursuant to Section 29.11 (e)(2) of the MO Tariff for the EIM real-time congestion offset shall be allocated to Transmission Customers on the basis of Measured Demand.

8.5.3 EIM Entity Real-Time Marginal Cost of Losses Offset

Any charges to the SCL EIM Entity pursuant to Section 29.1 1(e)(4) of the MO Tariff for real-time marginal cost of losses offset shall be sub-allocated to Transmission Customers on the basis of Measured Demand.

8.5.4 EIM Neutrality Settlement

Any charges to the SCL EIM Entity pursuant to Section 29.11 (e)(5) of the MO Tariff for EIM neutrality settlement shall be sub-allocated as follows:

Description	Allocation
Neutrality Adjustment (monthly and daily)	Measured Demand
Rounding Adjustment (monthly and daily)	Measured Demand

8.5.5 Real-Time Bid Cost Recovery

Any charges to the SCL EIM Entity pursuant to Section 29.11(f) of the MO Tariff for EIM real-time bid cost recovery shall be sub-allocated to Transmission Customers on the basis of Measured Demand.

8.5.6 Flexible Ramping Product

Any charges or payments to the SCL EIM Entity pursuant to Section 29.11(p) of the MO Tariff for the Flexible Ramping Product shall be sub-allocated to Transmission Customers on the basis as follows:

Description	Allocation
Flexible Ramping Forecasted Movement Resource Settlement	Measured Demand
Flexible Ramping Forecasted Movement Demand Allocation	Measured Demand
Daily Flexible Ramping Uncertainty Award (in both upward and downward directions)	Measured Demand
Monthly Flexible Ramping Uncertainty Award (in both upward and downward directions)	Measured Demand
Any other Flexible Ramping Product charges or payments	Measured Demand

8.5.7 Inaccurate or Late Actual Settlement Quality Meter Data Penalty

To the extent the SCL EIM Entity incurs a penalty for inaccurate or late actual settlement quality meter data, pursuant to Section 37.11.1 of the MO Tariff, the SCL EIM Entity shall directly assign the penalty to the offending Transmission Customer.

8.5.8 Other EIM Settlement Provisions

Any charges to the SCL EIM Entity pursuant to the MO Tariff for the EIM settlement shall be sub-allocated. The charges shown in the following table shall be sub-allocated as follows:

Description	Allocation
Invoice Deviation (distribution and allocation)	SCL EIM Entity
Generator Interconnection Process Forfeited Deposit Allocation	SCL EIM Entity
Default Invoice Interest Payment	SCL EIM Entity
Default Invoice Interest Charge	SCL EIM Entity
Invoice Late Payment Penalty	SCL EIM Entity

Financial Security Posting (Collateral) Late Payment Penalty	SCL EIM Entity
Shortfall Receipt Distribution	Metered Demand
Shortfall Reversal	Metered Demand
Shortfall Allocation	Metered Demand
Default Loss Allocation	Metered Demand

8.6 MO Tax Liabilities

Any charges to the SCL EIM Entity pursuant to Section 29.22(a) of the MO Tariff for MO tax liability as a result of the EIM shall be sub-allocated to those Transmission Customers triggering the tax liability.

8.7 EIM Transmission Service Charges

There shall be no incremental transmission charge assessed for transmission use related to the EIM. Participating Resources and Balancing Authority Area Resources will not incur Overrun charges solely as a result of EIM Dispatch Instruction.

8.8 Variable Energy Resource Forecast Charge

Any costs incurred by the SCL EIM Entity related to the preparation and submission of resource Forecast Data for a Transmission Customer with a Non-Participating Resource electing either method (1) or (2), as set forth in Section 4.2.4.2.2 of this Attachment Q, shall be allocated to the Transmission Customer with a Non-Participating Resource electing to use either such method. For a Transmission Customer with a Non-Participating Resource electing method (3), as set forth in Section 4.2.4.2.2 of this Attachment Q any charges to the SCL EIM Entity pursuant to Section 29.1 1(j)(1) of the MO Tariff for Variable Energy Resource forecast charges shall be suballocated to the Transmission Customer with a Non-Participating Resource requesting such forecast.

8.9 EIM Payment Calendar

Pursuant to Section 29.11(l) of the MO Tariff, the SCL EIM Entity shall be subject to the MO's payment calendar for issuing settlement statements, exchanging invoice funds, submitting meter data, and submitting settlement disputes to the MO. The SCL EIM Entity shall follow Section 7 of this Tariff for issuing invoices regarding the EIM.

8.10 EIM Residual Balancing Account

To the extent that MO EIM-related charges or payments to the SCL EIM Entity are not

captured elsewhere in Attachment Q, Schedules 1, 4, and 9 of this Tariff, or this Section 8, those charges or payments shall be placed in a balancing account.

8.11 Market Validation and Price Correction

If the MO modifies the SCL EIM Entity settlement statement in accordance with the MO's market validation and price correction procedures in the MO Tariff, the SCL EIM Entity reserves the right to make corresponding or similar changes to the charges and payments sub-allocated under this Attachment Q.

8.12 Allocation of Operating Reserves

8.12.1 Payments

Any payments to the SCL EIM Entity pursuant to Section 29.1 1(n)(1) of the MO Tariff for operating reserve obligations shall be sub-allocated to Transmission Customers with SCL EIM Participating Resources in the SCL BAA for Operating Hours during which EIM Transfers from the SCL BAA to another BAA occurred. Payments shall be sub-allocated on a ratio-share basis, defined as the proportion of the volume of Operating Reserves provided by an SCL EIM Participating Resource in the SCL BAA dispatched during the Operating Hour compared to the total volume of Operating Reserves provided by all SCL EIM Participating Resources dispatched in the SCL BAA for the Operating Hour.

8.12.2 Charges

Any charges to the SCL EIM Entity pursuant to Section 29.1 1(n)(2) of the MO Tariff for operating reserve obligations shall not be sub-allocated to Transmission Customers.

Section 9. Compliance

9.1 Provision of Data

Transmission Customers with SCL EIM Participating Resources and SCL EIM Participating Resource Scheduling Coordinators are responsible for complying with information requests they receive directly from the EIM market monitor or regulatory authorities concerning EIM activities.

A Transmission Customer with SCL EIM Participating Resources or a Transmission Customer with Non-Participating Resources must provide the SCL EIM Entity with all data necessary to respond to information requests received by the SCL EIM Entity from the MO, the EIM market monitor, or regulatory authorities concerning EIM activities.

If the SCL EIM Entity is required by applicable laws or regulations, or in the course of administrative or judicial proceedings, to disclose information that is otherwise required to be maintained in confidence, the SCL EIM Entity may disclose such information; provided, however, that upon the SCL EIM Entity learning of the disclosure requirement and, if possible, prior to making such disclosure, the SCL EIM Entity shall notify any affected party of the requirement and the terms thereof. The party can, at its sole discretion and own cost, direct any challenge to or defense against the disclosure requirement.

The SCL EIM Entity shall treat all Transmission Customer and Interconnection Customer data and information provided to it as market-sensitive and confidential, unless the SCL EIM Entity is otherwise allowed or required to disclose.

9.2 Rules of Conduct

These rules of conduct are intended to provide fair notice of the conduct expected and to provide an environment in which all parties may participate in the EIM on a fair and equal basis.

Transmission Customers must:

1. Comply with Dispatch Instructions and SCL EIM Entity operating orders in accordance with Good Utility Practice. If some limitation prevents the Transmission Customer from fulfilling the action requested by the MO or the SCL EIM Entity, the Transmission Customer must immediately and directly communicate the nature of any such limitation to the SCL EIM Entity;
2. Submit bids for resources that are reasonably expected to both be and remain available and capable of performing at the levels specified in the bid, based on all information that is known or should have been known at the time of submission;
3. Notify the MO and/or the SCL EIM Entity, as applicable, of outages in accordance with Section 7 of this Attachment Q;
4. Provide complete, accurate, and timely meter data to the SCL EIM Entity in accordance with the metering and communication requirements of this Tariff, and maintain responsibility to ensure the accuracy of such data communicated by any customer-owned metering or communications systems. To the extent such information is not accurate or timely when

provided to the SCL EIM Entity, the Transmission Customer shall be responsible for any consequence on settlement and billing;

5. Provide information to the SCL EIM Entity, including the information requested in Sections 4.2.1, 4.2.2, 4.2.3, 4.2.4 and 9.1 of this Attachment Q, by the applicable deadlines; and
6. Utilize commercially reasonable efforts to ensure that forecasts are accurate and based on all information that is known or should have been known at the time of submission to the SCL EIM Entity.

9.3 Enforcement

The SCL EIM Entity may send notice of a violation of Section 9.2 of this Attachment Q to the CAISO Department of Market Monitoring, or FERC. Nothing in this Section 9 is meant to limit the SCL EIM Entity from pursuing any other remedy before FERC or any applicable judicial, governmental, or administrative body.

Section 10. Market Contingencies

10.1 Temporary Suspension by the MO

In the event that the MO implements a temporary suspension in accordance with Section 29.1 (d)(1) of the MO Tariff, including the actions identified in Section 29.1 (d)(5), the SCL EIM Entity shall utilize Schedules 4, 9, 10, and Section 16.7 of this Tariff until the temporary suspension is no longer in effect or, if the MO determines to extend the suspension, for a period of time sufficient to process termination of the SCL EIM Entity's participation in the EIM in accordance with Section 29.1(d)(2) of the MO Tariff.

10.2 Termination of Participation in EIM by the SCL EIM Entity

If the SCL EIM Entity submits a notice of termination of its participation in the EIM to the MO in accordance with the applicable agreements and Section 4.1.1.5 of this Attachment Q, in order to mitigate price exposure during the 180-day period between submission of the notice and the termination effective date, the SCL EIM Entity may invoke the following corrective actions by requesting that the MO:

1. Prevent EIM Transfers and separate the SCL EIM Entity's BAA from operation of the EIM in the EIM Area; and
2. Suspend settlement of EIM charges with respect to the SCL EIM Entity.

Once such corrective actions are implemented by the MO, the SCL EIM Entity shall utilize Schedules 4, 9, and 10, and Section 16.7 of this Tariff.

If the SCL EIM Entity takes action under this Section 10.2, the SCL EIM Entity shall notify the MO and Transmission Customers.

10.3 Corrective Actions Taken by the SCL EIM Entity for Temporary Contingencies

The SCL EIM Entity may declare a temporary contingency and invoke corrective actions for the EIM when in its judgment:

1. Operational circumstances (including a failure of the EIM to produce feasible results in SCL's BAA) have caused or are in danger of causing an abnormal system condition in SCL's BAA that requires immediate action to prevent loss of load, equipment damage, or tripping system elements that might result in cascading outages, or to restore system operation to meet the applicable Reliability Standards and reliability criteria established by NERC and WECC; or
2. Communications between the MO and the SCL EIM Entity are disrupted and prevent the SCL EIM Entity, the SCL EIM Entity Scheduling Coordinator, or an SCL EIM Participating Resource Scheduling Coordinator from accessing MO systems to submit or receive information.

10.3.1 Corrective Actions for Temporary Contingencies

If either of the above temporary contingencies occurs, the SCL EIM Entity may invoke the following corrective actions by requesting that the MO:

- (1) Prevent EIM Transfers and separate the SCL's EIM Entity's BAA from operation of the EIM in the EIM Area; and/or
- (2) Suspend settlement of EIM charges with respect to the SCL EIM Entity.

When corrective action under 10.3.1 (2) is implemented or if the MO Tariff requires the use of these temporary schedules to set an administrative price, the SCL EIM Entity shall utilize Schedules 4, 9, 10, and Section 16.7 of this Tariff.

If the SCL EIM Entity takes action under this Section 10.3, the SCL EIM Entity shall notify the MO and Transmission Customers. The SCL EIM Entity and the MO shall cooperate to resolve the temporary contingency event and restore full EIM operations as soon as is practicable.

APPENDIX M

**GENERATOR INTERCONNECTION
PROCEDURES (GIP)**

including

**GENERATOR INTERCONNECTION
AGREEMENT (GIA)**

Generator Interconnection Procedures

(GIP)

DRAFT

Section 1. Definitions

Adverse System Impact shall mean the negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.

Affected System shall mean an electric system other than the Transmission Provider's Transmission System that may be affected by the proposed interconnection.

Affected System Operator shall mean the entity that operates an Affected System.

Affiliate shall mean, with respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

Ancillary Services shall mean those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility Practice.

Applicable Laws and Regulations shall mean all duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

Applicable Reliability Council shall mean the reliability council applicable to the Transmission System to which the Generating Facility is directly interconnected.

Applicable Reliability Standards shall mean the requirements and guidelines of NERC, the Applicable Reliability Council, and the Control Area of the Transmission System to which the Generating Facility is directly interconnected.

Balancing Authority (BA) shall mean the responsible entity that integrates resource plans ahead of time, maintains Demand and resource balance within a Balancing Authority Area, and supports Interconnection frequency in real time.

Balancing Authority Area (BAA) shall mean the collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area. For the purpose

of this GIP, BAA shall have the same meaning as “Control Area.”

Base Case shall mean the base case power flow, short circuit, and stability data bases used for the Interconnection Studies by the Transmission Provider or Interconnection Customer.

Breach shall mean the failure of a Party to perform or observe any material term or condition of the Generator Interconnection Agreement.

Breaching Party shall mean a Party that is in Breach of the Generator Interconnection Agreement.

Business Day shall mean Monday through Friday, excluding Federal Holidays.

Calendar Day shall mean any day including Saturday, Sunday or a Federal Holiday.

Clustering shall mean the process whereby a group of Interconnection Requests is studied together, instead of serially, for the purpose of conducting the Interconnection System Impact Study.

Commercial Operation shall mean the status of a Generating Facility that has commenced generating electricity for sale, excluding electricity generated during Trial Operation.

Commercial Operation Date of a unit shall mean the date on which the Generating Facility commences Commercial Operation as agreed to by the Parties pursuant to Appendix E to the Generator Interconnection Agreement.

Confidential Information shall mean any confidential, proprietary or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy or compilation relating to the present or planned business of a Party, which is designated as confidential by the Party supplying the information, whether conveyed orally, electronically, in writing, through inspection, or otherwise.

Control Area shall mean an electrical system or systems bounded by interconnection metering and telemetry, capable of controlling generation to maintain its interchange schedule with other Control Areas and contributing to frequency regulation of the interconnection. A Control Area must be certified by an Applicable Reliability Council. For the purpose of this GIP, Control Area shall have the same meaning as “BAA” or “Balancing Authority Area.”

Default shall mean the failure of a Breaching Party to cure its Breach in

accordance with Article 17 of the Generator Interconnection Agreement.

Dispute Resolution shall mean the procedure for resolution of a dispute between the Parties in which they will attempt to resolve the dispute under Section 13.5 of this procedure.

Distribution System shall mean the Transmission Provider’s facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries directly from nearby generators or from interchanges with higher voltage transmission networks which transport bulk power over longer distances. The voltage levels at which distribution systems operate differ among areas.

Distribution Upgrades shall mean the additions, modifications, and upgrades to the Transmission Provider’s Distribution System at or beyond the Point of Interconnection to facilitate interconnection of the Generating Facility and render the transmission service necessary to affect Interconnection Customer’s wholesale sale of electricity in interstate commerce. Distribution Upgrades do not include Interconnection Facilities.

Effective Date shall mean the date on which the Generator Interconnection Agreement becomes effective upon execution by the Parties.

Emergency Condition shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of a Transmission Provider, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to Transmission Provider’s Transmission “here” System, Transmission Provider’s Interconnection Facilities or the electric systems of others to which the Transmission Provider’s Transmission “here” System is directly connected; or (3) that, in the case of Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility or Interconnection Customer’s Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions; provided that Interconnection Customer is not obligated by the Generator Interconnection Agreement to possess black start capability.

Energy Resource Interconnection Service shall mean an Interconnection Service that allows the Interconnection Customer to connect its Generating Facility to the Transmission Provider’s Transmission System to be eligible to deliver the Generating Facility’s electric output using the existing firm or nonfirm capacity of the Transmission Provider’s Transmission System on an as available basis. Energy Resource Interconnection Service in and of itself does not convey transmission service.

Engineering & Procurement (E&P) Agreement shall mean an agreement that authorizes the Transmission Provider to begin engineering and procurement of long lead- time items necessary for the establishment of the interconnection in order to advance the implementation of the Interconnection Request.

Environmental Law shall mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

Federal Power Act shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a *et seq.*

FERC shall mean the Federal Energy Regulatory Commission (Commission) or its successor.

Force Majeure shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include acts of negligence or intentional wrongdoing by the Party claiming Force Majeure.

Generating Facility shall mean Interconnection Customer's device for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

Generating Facility Capacity shall mean the net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple energy production devices.

Generator Interconnection Agreement (GIA) shall mean the form of interconnection agreement applicable to an Interconnection Request pertaining to a Generating Facility that is included in the Transmission Provider's Tariff.

Generator Interconnection Procedures (GIP) shall mean the interconnection procedures applicable to an Interconnection Request pertaining to a Generating Facility that are included in the Transmission Provider's Tariff.

Good Utility Practice shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost

consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

Governmental Authority shall mean any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include Interconnection Customer, Transmission Provider, or any Affiliate thereof.

Hazardous Substances shall mean any chemicals, materials or substances defined as or included in the definition of “hazardous substances,” “hazardous wastes,” “hazardous materials,” “hazardous constituents,” “restricted hazardous materials,” “extremely hazardous substances,” “toxic substances,” “radioactive substances,” “contaminants,” “pollutants,” “toxic pollutants” or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

Initial Synchronization Date shall mean the date upon which the Generating Facility is initially synchronized and upon which Trial Operation begins.

In-Service Date shall mean the date upon which the Interconnection Customer reasonably expects it will be ready to begin use of the Transmission Provider’s Interconnection Facilities to obtain back feed power.

Interconnection Customer shall mean any entity, including the Transmission Provider, Transmission Owner, that proposes to interconnect its Generating Facility with the Transmission Provider’s Transmission System.

Interconnection Customer’s Interconnection Facilities shall mean all facilities and equipment, as identified in Appendix A of the Generator Interconnection Agreement, that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the Transmission Provider’s Transmission System. Interconnection Customer’s Interconnection Facilities are sole use facilities.

Interconnection Facilities shall mean the Transmission Provider’s Interconnection Facilities and the Interconnection Customer’s Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the Transmission Provider’s Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

Interconnection Facilities Study shall mean a study conducted by the Transmission Provider or a third party consultant for the Interconnection Customer to determine a list of facilities (including Transmission Provider’s Interconnection Facilities and Network Upgrades as identified in the Interconnection System Impact Study), the cost of those facilities, and the time required to interconnect the Generating Facility with the Transmission Provider’s Transmission System. The scope of the study is defined in Section 8 of the Generator Interconnection Procedures.

Interconnection Facilities Study Agreement shall mean the form of agreement contained in Appendix 4 of the Generator Interconnection Procedures for conducting the Interconnection Facilities Study.

Interconnection Feasibility Study shall mean a preliminary evaluation of the system impact and cost of interconnecting the Generating Facility to the Transmission Provider’s Transmission System, the scope of which is described in Section 6 of the Generator Interconnection Procedures.

Interconnection Feasibility Study Agreement shall mean the form of agreement contained in Appendix 2 of the Generator Interconnection Procedures for conducting the Interconnection Feasibility Study.

Interconnection Request shall mean an Interconnection Customer’s request, in the form of Appendix 1 to the Generator Interconnection Procedures, in accordance with the Tariff, to interconnect a new Generating Facility, or to increase the capacity of, or make a Material Modification to the operating characteristics of, an existing Generating Facility that is interconnected with the Transmission Provider’s Transmission System.

Interconnection Service shall mean the service provided by the Transmission Provider associated with interconnecting the Interconnection Customer’s Generating Facility to the Transmission Provider’s Transmission System and enabling it to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Generator Interconnection Agreement and, if applicable, the Transmission Provider’s Tariff.

Interconnection Study shall mean any of the following studies: the Interconnection Feasibility Study, the Interconnection System Impact Study, and the Interconnection Facilities Study described in the Generator Interconnection Procedures.

Interconnection System Impact Study shall mean an engineering study that evaluates the impact of the proposed interconnection on the safety and reliability of Transmission Provider’s Transmission System and, if applicable, an Affected System. The study shall identify and detail the system impacts that would result if the Generating Facility were interconnected without project modifications or system modifications, focusing on the Adverse System Impacts identified in the Interconnection Feasibility Study, or to study potential impacts, including but not limited to those identified in the Scoping Meeting as described in the Generator Interconnection Procedures.

Interconnection System Impact Study Agreement shall mean the form of agreement contained in Appendix 3 of the Generator Interconnection Procedures for conducting the Interconnection System Impact Study.

IRS shall mean the Internal Revenue Service.

Joint Operating Committee shall be a group made up of representatives from Interconnection Customers and the Transmission Provider to coordinate operating and technical considerations of Interconnection Service.

Loss shall mean any and all losses relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party’s performance, or non-performance of its obligations under the Generator Interconnection Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnifying Party.

Material Modification shall mean those modifications that have a material impact on the cost or timing of any Interconnection Request with a later queue priority date.

Metering Equipment shall mean all metering equipment installed or to be installed at the Generating Facility pursuant to the Generator Interconnection Agreement at the metering points, including but not limited to instrument transformers, MWh-meters, data acquisition equipment, transducers, remote terminal unit, communications equipment, phone lines, and fiber optics.

NERC shall mean the North American Electric Reliability Council or its successor organization.

Network Upgrades shall mean the additions, modifications, and upgrades to the Transmission Provider's Transmission System required at or beyond the point at which the Interconnection Facilities connect to the Transmission Provider's Transmission System to accommodate the interconnection of the Generating Facility to the Transmission Provider's Transmission System.

Notice of Dispute shall mean a written notice of a dispute or claim that arises out of or in connection with the Generator Interconnection Agreement or its performance.

Optional Interconnection Study shall mean a sensitivity analysis based on assumptions specified by the Interconnection Customer in the Optional Interconnection Study Agreement.

Optional Interconnection Study Agreement shall mean the form of agreement contained in Appendix 5 of the Generator Interconnection Procedures for conducting the Optional Interconnection Study.

Party or Parties shall mean Transmission Provider, Transmission Owner, Interconnection Customer or any combination of the above.

Point of Change of Ownership shall mean the point, as set forth in Appendix A to the Generator Interconnection Agreement, where the Interconnection Customer's Interconnection Facilities connect to the Transmission Provider's Interconnection Facilities.

Point of Interconnection shall mean the point, as set forth in Appendix A to the Generator Interconnection Agreement, where the Interconnection Facilities connect to the Transmission Provider's Transmission System.

Provisional Interconnection Service shall mean Interconnection Service provided by Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to Transmission Provider's Transmission System and enabling that Transmission System to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Provisional Generator Interconnection Agreement and, if applicable, the Tariff.

Provisional Generator Interconnection Agreement shall mean the interconnection agreement for Provisional Interconnection Service established

between Transmission Provider and/or the Transmission Owner and the Interconnection Customer. This agreement shall take the form of the Generator Interconnection Agreement, modified for provisional purposes.

Queue Position shall mean the order of a valid Interconnection Request, relative to all other pending valid Interconnection Requests, that is established based upon the date and time of receipt of the valid Interconnection Request by the Transmission Provider.

Reasonable Efforts shall mean, with respect to an action required to be attempted or taken by a Party under the Generator Interconnection Agreement, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

Scoping Meeting shall mean the meeting between representatives of the Interconnection Customer and Transmission Provider conducted for the purpose of discussing alternative interconnection options, to exchange information including any transmission data and earlier study evaluations that would be reasonably expected to impact such interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

Site Control shall mean documentation reasonably demonstrating: (1) ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing the Generating Facility; (2) an option to purchase or acquire a leasehold site for such purpose; or (3) an exclusivity or other business relationship between Interconnection Customer and the entity having the right to sell, lease or grant Interconnection Customer the right to possess or occupy a site for such purpose.

Stand Alone Network Upgrades shall mean Network Upgrades that are not part of an Affected System that an Interconnection Customer may construct without affecting day-to-day operations of the Transmission System during their construction. Both the Transmission Provider and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the Generator Interconnection Agreement. If the Transmission Provider and Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the Transmission Provider must provide the Interconnection Customer a written technical explanation outlining why the Transmission Provider does not consider the Network Upgrade to be a Stand Alone Network Upgrade within 15 days of its determination.

Surplus Interconnection Service shall mean any unneeded portion of Interconnection Service established in a Generator Interconnection Agreement, such that if Surplus Interconnection Service is utilized, the total amount of

Interconnection Service at the Point of Interconnection would remain the same.

Surplus Interconnection Service System Impact Study Agreement shall mean an agreement for surplus interconnection service system impact study, similar in form to Appendix 2 of this GIP, obligating the Surplus Interconnection Customer to pay actual costs of the Surplus Interconnection Service System Impact Study.

System Protection Facilities shall mean the equipment, including necessary protection signal communications equipment, required to protect (1) the Transmission Provider's Transmission System Transmission System customers and Distribution System customers from faults or other electrical disturbances occurring at the Generating Facility and (2) the Generating Facility from faults or other electrical system disturbances occurring on the Transmission Provider's Transmission System or on other delivery systems or other generating systems to which the Transmission Provider's Transmission System is directly connected.

Tariff shall mean the Transmission Provider's Tariff through which open access transmission service and Interconnection Service are offered, and as amended or supplemented from time to time, or any successor tariff.

Transmission Owner shall mean an entity that owns, leases or otherwise possesses an interest in the portion of the Transmission System at the Point of Interconnection and may be a Party to the Generator Interconnection Agreement to the extent necessary.

Transmission Provider shall mean The City of Seattle, through its City Light Department. The term Transmission Provider should be read to include the Transmission Owner when the Transmission Owner is separate from the Transmission Provider.

Transmission Provider's Interconnection Facilities shall mean all facilities and equipment owned, controlled, or operated by the Transmission Provider from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the Generator Interconnection Agreement, including any modifications, additions or upgrades to such facilities and equipment. Transmission Provider's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

Transmission Service Website shall mean a publicly accessible webpage or collection of webpages on or accessible through Transmission Provider's website (www.seattle.gov/light) on which information and links relevant to Transmission Service under this GIP are posted.

Transmission System shall mean the facilities owned, controlled or operated by the Transmission Provider or Transmission Owner that are used to provide transmission service under the Tariff.

Trial Operation shall mean the period during which Interconnection Customer is engaged in on-site test operations and commissioning of the Generating Facility prior to Commercial Operation.

Section 2. Scope and Application

2.1 Application of Generator Interconnection Procedures. Sections 2 through 13 apply to processing an Interconnection Request pertaining to a Generating Facility.

2.2 Comparability.

Transmission Provider shall receive, process and analyze all Interconnection Requests in a timely manner as set forth in this GIP. Transmission Provider will use the same Reasonable Efforts in processing and analyzing Interconnection Requests from all Interconnection Customers, whether the Generating Facilities are owned by Transmission Provider, its subsidiaries or Affiliates or others.

2.3 Base Case Data.

Transmission Provider shall maintain base power flow, short circuit and stability databases, including all underlying assumptions, and contingency list on a password-protected website, subject to confidentiality provisions in GIP Section 13.1. In addition, Transmission Provider shall maintain network models and underlying assumptions on a password-protected website. Such network models and underlying assumptions should reasonably represent those used during the most recent interconnection study and be representative of current system conditions. The Transmission Provider posts this information on a password-protected website, and a link to the information is provided on the Transmission Service Website. Transmission Provider is permitted to exercise reasonable judgement in order to protect grid security in determining which Interconnection Customers, Transmission Service Website users and password-protected website users will be required to sign a confidentiality agreement and thereby secure the release of commercially sensitive information or information the Transmission Provider determines should be defined as Critical Energy Infrastructure Information in the Base Case data. To assist in such reasonable judgement, the Transmission Provider may require entities seeking to

enter into confidentiality agreement such information as is required in 18 C.F.R. Sec. 388.113(g)(5)(i). Such databases and lists, hereinafter referred to as Base Cases, shall include all (1) generation projects and (2) transmission projects, including merchant transmission projects that are proposed for the Transmission System for which a transmission expansion plan has been submitted and approved by the applicable authority.

2.4 No Applicability to Transmission Service.

Nothing in this GIP shall constitute a request for transmission service or confer upon an Interconnection Customer any right to receive transmission service.

2.5 EIM Requirements

The Interconnection Customer shall have a continuing duty to comply with Attachment Q of this Tariff, as applicable.

Section 3. Interconnection Requests

3.1 General.

An Interconnection Customer shall submit to Transmission Provider an Interconnection Request in the form of Appendix 1 to this GIP and a refundable deposit of \$10,000. Transmission Provider shall apply the deposit toward the cost of an Interconnection Feasibility Study.

Interconnection Customer shall submit a separate Interconnection Request for each site and may submit multiple Interconnection Requests for a single site. Interconnection Customer must submit a deposit with each Interconnection Request even when more than one request is submitted for a single site. An Interconnection Request to evaluate one site at two different voltage levels shall be treated as two Interconnection Requests.

At Interconnection Customer's option, Transmission Provider and Interconnection Customer will identify alternative Point(s) of Interconnection and configurations at the Scoping Meeting to evaluate in this process and attempt to eliminate alternatives in a reasonable fashion given resources and information available. Interconnection Customer will select the definitive Point(s) of Interconnection to be studied no later than the execution of the Interconnection Feasibility Study Agreement.

3.2 Interconnection Service.

3.2.1 Energy Resource Interconnection Service.

3.2.1.1 The Product. Energy Resource Interconnection Service allows Interconnection Customer to connect the Generating Facility to the Transmission System and be eligible to deliver the Generating Facility’s output using the existing firm or non-firm capacity of the Transmission System on an “as available” basis. Energy Resource Interconnection Service does not in and of itself convey any right to deliver electricity to any specific customer or Point of Delivery.

3.2.1.2 The Study. The study consists of short circuit/fault duty, steady state (thermal and voltage) and stability analyses. The short circuit/fault duty analysis would identify direct Interconnection Facilities required and the Network Upgrades necessary to address short circuit issues associated with the Interconnection Facilities. The stability and steady state studies would identify necessary upgrades to allow full output of the proposed Generating Facility and would also identify the maximum allowed output, at the time the study is performed, of the interconnecting Generating Facility without requiring additional Network Upgrades.

3.3 Utilization of Surplus Interconnection Service.

Transmission Provider must provide a process that allows an Interconnection Customer to utilize or transfer Surplus Interconnection Service at an existing Point of Interconnection. The original Interconnection Customer or one of its affiliates shall have priority to utilize Surplus Interconnection Service. If the existing Interconnection Customer or one of its affiliates does not exercise its priority, then that service may be made available to other potential Interconnection Customers.

3.3.1 Surplus Interconnection Service Requests.

Surplus Interconnection Service requests may be made by the existing Interconnection Customer whose Generating Facility is already interconnected or one of its affiliates. Surplus Interconnection Service requests also may be made by another Interconnection Customer. Transmission Provider shall provide a process for evaluating

Interconnection Requests for Surplus Interconnection Service. Studies for Surplus Interconnection Service shall consist of reactive power, short circuit/fault duty, stability analyses, and any other appropriate studies. Steady-state (thermal/voltage) analyses may be performed as necessary to ensure that all required reliability conditions are studied. If the Surplus Interconnection Service was not studied under off-peak conditions, off-peak steady state analyses shall be performed to the required level necessary to demonstrate reliable operation of the Surplus Interconnection Service. If the original System Impact Study is not available for the Surplus Interconnection Service, both off-peak and peak analysis may need to be performed for the existing Generating Facility associated with the request for Surplus Interconnection Service. The reactive power, short circuit/fault duty, stability, and steady-state analyses for Surplus Interconnection Service will identify any additional Interconnection Facilities and/or Network Upgrades necessary.

3.3.2 Submitting A Surplus Interconnection Service Request

Any Surplus Interconnection Customer identified in Section 3.3.1 must first submit, in writing to Transmission Provider, a request for Surplus Interconnection Service. A completed request will consist of the following:

- a) A cover letter stating: (i) the identity of the Customer seeking Surplus Interconnection Service; (ii) the existing Point of Interconnection it wishes to use for Surplus Interconnection Service, the identity of the original/existing Interconnection Customer whose Generating Facility is already interconnected to the Transmission Provider's Transmission System at such Point of Interconnection, (iii) the Surplus Customer's affiliation, if any, to the original/existing Interconnection Customer, and (iv) the amount of Surplus Interconnection Service the Surplus Interconnection Customer seeks to use;
- b) A completed Appendix 1 of the GIP;
- c) A Letter of Intent, signed by the original/existing Interconnection Customer, indicating: (i) such existing Interconnection Customer's intent to allow a specified portion of its original interconnection service to be used by the Surplus Interconnection Customer; (ii) the specified amount of Surplus Interconnection Service it is making

available; (iii) when such Surplus Interconnection Service will be available; (iv) any conditions under which such Surplus Interconnection Service may be used; and (v) if the Surplus Interconnection Customer is anyone other than the original/existing Interconnection Customer or an affiliate of the original/existing Interconnection Customer, the letter must also include a statement that existing interconnection Customer is waiving its priority right, on behalf of itself and any affiliate, to utilize such Surplus Interconnection; and

- d) Modeling data (in a format acceptable to Transmission Provider) for the Surplus Interconnection Service that it is requesting.

If the Surplus Interconnection Customer fails to provide a completed request to the Transmission Provider, Transmission Provider will notify Surplus Interconnection Customer of the deficiencies and Surplus Interconnection Customer will have 15 business days, from the date on the Notice, to cure any deficiencies. Failure to timely cure all deficiencies will result in a deemed withdrawal of the request for Surplus Interconnection Service.

Following receipt of a completed Surplus Interconnection Service Request, Transmission Provider will process such Surplus Interconnection Service Request on an expedited basis and separately from other request pending in its interconnection queue. To do so, however, Customer shall have the obligation to timely provide, to Transmission Provider, such other information as the Transmission Provider may reasonably request.

3.3.3 Scoping Meeting

Within 10 business days after receipt of a valid Interconnection Request for Surplus Interconnection Service, Transmission Provider shall establish a date agreeable to original/existing Interconnection Customer and any affiliated or third-party Surplus Interconnection Customer for the Scoping Meeting, and such date shall be no later than 30 calendar days from receipt of the valid Interconnection Request for Surplus Interconnection Service, unless otherwise mutually agreed upon by the parties. The purpose of the Scoping Meeting shall be to discuss the Surplus Interconnection Service that the original/existing Interconnection Customer is making available at such Point of Interconnection, and to exchange information including any studies and transmission data that would reasonably be expected

to impact such interconnection. Transmission Provider, original/existing Interconnection Customer and Surplus Interconnection Customer will bring to the meeting any System Impact Study and Facilities Studies that may have been performed for the original/existing Interconnection Customer, any existing GIA, and such technical data, including, but not limited to: (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues as may be reasonably required to accomplish the purpose of the meeting. Transmission Provider, original/existing Interconnection Customer and Surplus Interconnection Customer will also bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting. On the basis of the meeting, Surplus Interconnection Customer shall provide to Transmission Provider its preferred plan of service for its use of Surplus Interconnection Service.

3.3.4 Surplus Interconnection Service System Impact Study

Following the Scoping Meeting and provided the original Interconnection Customer's System Impact Study is available, Transmission Provider will determine if the original System Impact Study is sufficient to evaluate the request for Surplus Interconnection Service. If the original System Impact Study is not available, or available but insufficient to enable to Transmission Provider to evaluate the Surplus Interconnection Request, then, within 10 business days, the Surplus Interconnection Customer will be provided a Surplus Interconnection Service System Impact Study Agreement (similar in form to that of Appendix 2 of this GIP) obligating the Surplus Interconnection Customer to pay the actual costs of the surplus interconnection service system impact study.

3.3.4.1 Within 30 calendar days of receipt of the Surplus Interconnection Service System Impact Study Agreement from Transmission Provider, the surplus interconnection customer will execute the Surplus Interconnection Service System Impact Study Agreement and shall return it to Transmission Provider, along with a deposit in the amount of \$50,000, or the request shall be deemed withdrawn.

3.3.4.2 Upon receipt of the executed Surplus Interconnection Service System Impact Study Agreement and deposit, Transmission Provider shall initiate the System Impact Study. The Surplus Interconnection Service System Impact Study shall consist of

reactive power, short circuit/fault duty, stability analyses, harmonic analysis, and any other studies deemed appropriate by Transmission Provider. As an example, Steady-state (thermal/voltage) analyses may be performed as necessary to ensure that all required reliability conditions are studied. Transmission Provider shall utilize existing studies to the extent practicable in performing the Surplus Interconnection Service System Impact Study. The resulting Surplus Interconnection Service System Impact Study will identify any additional Interconnection Facilities and findings that would affect eligibility for Surplus Interconnection Service (i.e. the need for Network Upgrades). Transmission Provider shall use Reasonable Efforts to complete the Surplus Interconnection Service System Impact Study and issue the report within 90 calendar days after the receipt of the Surplus Interconnection System Impact Study Agreement, all modeling data, and required study deposit. At the request of Surplus Interconnection Customer or at any time the Transmission Provider determines that it will not complete the Surplus Interconnection Service System Impact Study report within the 90 calendar days, the Transmission Provider shall notify the Surplus Interconnection Customer and provide an estimated completion date and an explanation of the reasons why additional time is required.

3.3.4.3 Within 10 business days of providing a Surplus Interconnection Service System Impact Study report to the Surplus Interconnection Customer, the Transmission Provider, original/existing Interconnection Customer and Surplus Interconnection Customer shall meet to discuss the results of the Surplus Interconnection Service System Impact Study. Alternatively, the Surplus Interconnection Customer may waive this meeting.

3.3.5 Surplus Interconnection Service Facilities Study

3.3.5.1 If any Interconnection Facilities and/or control technologies are identified as necessary in the Surplus Interconnection Service System Impact Study report for the utilization of the Surplus Interconnection Service, simultaneously with the delivery of the Surplus Interconnection Service System Impact Study report to Surplus Interconnection Customer, Transmission Provider shall provide to Surplus Interconnection Customer a Surplus Interconnection Service facilities study agreement (similar in form to that of Appendix 3A to this GIP). The Surplus Interconnection Service Facilities Study Agreement shall

provide that the Surplus Interconnection Customer shall compensate Transmission Provider for the actual cost of the Surplus Interconnection Service Facilities Study.

3.3.5.2 Surplus Interconnection Customer shall execute the Surplus Interconnection Service facilities study agreement and deliver the executed Surplus Interconnection Service facilities study agreement to Transmission Provider within 30 calendar days after its receipt, together with an additional \$50,000 deposit to be used in preparation of the Surplus Interconnection Service facilities study and report.

3.3.5.3 Transmission Provider shall utilize existing studies to the extent practicable in performing the Surplus Interconnection Service Interconnection facilities study. Transmission Provider shall use Reasonable Efforts to complete the Surplus Interconnection Service Facilities Study and issue the report within 90 calendar days after the receipt of the Surplus Interconnection Service facilities study agreement and required study deposit, with a +/- 20 percent cost estimate contained in the Surplus Interconnection Service Interconnection Facilities Study report. If the Transmission Provider is unable to complete the Surplus Interconnection Service Facilities Study within the time required, it shall notify the Surplus Interconnection Customer and provide an estimated completion date and an explanation of the reasons why additional time is required.

3.3.5.4 Within 10 Business Days of providing a Surplus Interconnection Service Facilities Study to the Surplus Interconnection Customer, the Transmission Provider, original/existing Interconnection Customer and Surplus Interconnection Customer shall meet to discuss the results of the Surplus Interconnection Service Facilities Study. Alternatively, the Surplus Interconnection Customer may waive this meeting

3.3.6 Surplus Interconnection Service Generator Interconnection Agreement

3.3.6.1 Within 45 Calendar Days of tendering the Surplus Interconnection Service Facilities Study, or the Surplus Interconnection System Impact Study if no additional interconnection facilities or control technologies are required the Transmission Provider shall tender a draft Amended and Restated GIA, together with draft appendices completed (to the extent

practicable) to the original/existing Interconnection Customer and the Surplus Interconnection Customer that will be utilizing the Surplus Interconnection Service. The draft Amended and Restated GIA shall be in the form of the Original Interconnection Customer's FERC-approved GIA and modified only to acknowledge and address aspects necessary to accommodate Surplus Interconnection Service for the Surplus Interconnection Customer. The existing and Surplus Interconnection Customers shall provide comments to Transmission Provider within 30 Calendar Days.

3.3.6.2 The Transmission Provider, existing interconnection customer, and Surplus Interconnection Customer shall negotiate any disputed provisions of the appendices to the draft Amended and Restated GIA for not more than 60 Calendar Days after tender of the draft Amended and Restated GIA. If the Surplus Interconnection Customer determines that negotiations are at an impasse, it may request termination of the negotiations at any time after tender of the draft GIA pursuant to Section 11.1 and request submission of the unexecuted GIA with FERC or initiate Dispute Resolution procedures pursuant to Section 13.5. If Surplus Interconnection Customer requests termination of the negotiations, but within 60 Calendar Days thereafter fails to either request the filing of the unexecuted GIA or initiate Dispute Resolution, it shall be deemed to have withdrawn its Surplus Interconnection Service Request. Unless otherwise agreed by the parties, if Surplus Interconnection Customer has not executed the GIA, requested filing of an unexecuted GIA, or initiated Dispute Resolution procedures pursuant to Section 13.5 within 60 Calendar Days of tender of Amended and Restated GIA, it shall be deemed to have withdrawn its Surplus Interconnection Service Request. Transmission Provider shall provide to the existing interconnection customer and the Surplus Interconnection Customer a final Amended and Restated GIA within 15 Business Days after the completion of the negotiation process.

3.3.6.3 As soon as practicable, but not later than 15 Business Days after execution of the Amended and Restated GIA or the request to file an unexecuted Amended and Restated GIA, the Transmission Provider shall file the Amended and Restated GIA with FERC, together with its explanation of any matters as to which the parties to the GIA disagree and support for the costs that Transmission Provider proposes to charge to the Surplus

Interconnection Customer under the Amended and Restated GIA. An unexecuted Amended and Restated GIA should contain terms and conditions deemed appropriate by Transmission Provider for the completed Surplus Interconnection Service Request. If the parties agree to proceed with design, procurement, and construction of facilities and upgrades under the agreed-upon terms of the unexecuted Amended and Restated GIA, they may proceed pending FERC action.

3.4 Valid Interconnection Request.

3.4.1 Initiating an Interconnection Request.

To initiate an Interconnection Request, Interconnection Customer must submit all of the following: (i) a \$10,000 deposit, (ii) a completed application in the form of Appendix 1, and (iii) demonstration of Site Control or a posting of an additional deposit of \$10,000. Such deposits shall be applied toward any Interconnection Studies pursuant to the Interconnection Request. If Interconnection Customer demonstrates Site Control within the cure period specified in Section 3.4.3 after submitting its Interconnection Request, the additional deposit shall be refundable; otherwise, all such deposit(s), additional and initial, become non-refundable.

The expected In-Service Date of the new Generating Facility or increase in capacity of the existing Generating Facility shall be no more than the process window for the regional expansion planning period (or in the absence of a regional planning process, the process window for Transmission Provider's expansion planning period) not to exceed seven years from the date the Interconnection Request is received by Transmission Provider, unless Interconnection Customer demonstrates that engineering, permitting and construction of the new Generating Facility or increase in capacity of the existing Generating Facility will take longer than the regional expansion planning period. The In-Service Date may succeed the date the Interconnection Request is received by Transmission Provider by a period up to ten years, or longer where Interconnection Customer and Transmission Provider agree, such agreement not to be unreasonably withheld.

3.4.2 Acknowledgment of Interconnection Request.

Transmission Provider shall acknowledge receipt of the Interconnection Request within five Business Days of receipt of the request and attach a copy of the received Interconnection Request to

the acknowledgement.

3.4.3 Deficiencies in Interconnection Request.

An Interconnection Request will not be considered to be a valid request until all items in Section 3.4.1 have been received by Transmission Provider. If an Interconnection Request fails to meet the requirements set forth in Section 3.4.1, Transmission Provider shall notify Interconnection Customer within five Business Days of receipt of the initial Interconnection Request of the reasons for such failure and that the Interconnection Request does not constitute a valid request. Interconnection Customer shall provide Transmission Provider the additional requested information needed to constitute a valid request within 10 Business Days after receipt of such notice. Failure by Interconnection Customer to comply with this Section 3.4.3 shall be treated in accordance with Section 3.7.

3.4.4 Scoping Meeting.

Within 10 Business Days after receipt of a valid Interconnection Request, Transmission Provider shall establish a date agreeable to Interconnection Customer for the Scoping Meeting, and such date shall be no later than 30 Calendar Days from receipt of the valid Interconnection Request, unless otherwise mutually agreed upon by the Parties.

The purpose of the Scoping Meeting shall be to discuss alternative interconnection options, to exchange information including any transmission data that would reasonably be expected to impact such interconnection options, to analyze such information and to determine the potential feasible Points of Interconnection.

Transmission Provider and Interconnection Customer will bring to the meeting such technical data, including, but not limited to: (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues as may be reasonably required to accomplish the purpose of the meeting. Transmission Provider and Interconnection Customer will also bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting. On the basis of the meeting, Interconnection Customer shall designate its Point of Interconnection, pursuant to Section 6.1, and one or more available alternative Point(s) of Interconnection. The duration of the meeting shall be sufficient to accomplish its purpose.

3.5. Transmission Service Website.

3.5.1 Transmission Provider will maintain on its Transmission Service Website a list of all Interconnection Requests. The list will identify, for each Interconnection Request: (i) the maximum summer and winter megawatt electrical output; (ii) the location by county and state; (iii) the station or transmission line or lines where the interconnection will be made; (iv) the projected In-Service Date; (v) the status of the Interconnection Request, including Queue Position;; (vi) the availability of any studies related to the Interconnection Request; (vii) the date of the Interconnection Request; (viii) the type of Generating Facility to be constructed (combined cycle, base load or combustion turbine and fuel type); and (ix) for Interconnection Requests that have not resulted in a completed interconnection, an explanation as to why it was not completed. The list will not disclose the identity of Interconnection Customer until Interconnection Customer executes an GIA or requests that service be provided pursuant to an unexecuted GIA, subject to Dispute Resolution, consistent with Section 11, below. Before holding a Scoping Meeting, Transmission Provider shall post on its Transmission Service Website an advance notice of its intent to do so. Transmission Provider shall post to its Transmission Service Website site any deviations from the study timelines set forth herein. Interconnection Study reports and Optional Interconnection Study reports shall be posted to Transmission Provider’s Transmission Service Website site subsequent to the meeting between Interconnection Customer and Transmission Provider to discuss the applicable study results. Transmission Provider shall also post any known deviations in the Generating Facility’s In- Service Date.

3.6 Coordination with Affected Systems.

Transmission Provider will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems with Affected System Operators and, if possible, include those results (if available) in its applicable Interconnection Study within the time frame specified in this GIP. Transmission Provider will include such Affected System Operators in all meetings held with Interconnection Customer as required by this GIP. Interconnection Customer will cooperate with Transmission Provider in all matters related to the conduct of studies and the determination of modifications to Affected Systems. A Transmission Provider which may be an Affected System shall cooperate with Transmission Provider with whom interconnection has been requested in all matters related to the conduct of studies and the determination of modifications to Affected Systems.

3.7 Withdrawal.

Interconnection Customer may withdraw its Interconnection Request at any time by written notice of such withdrawal to Transmission Provider. In addition, if Interconnection Customer fails to adhere to all requirements of this GIP, except as provided in Section 13.5 (Disputes), Transmission Provider shall deem the Interconnection Request to be withdrawn and shall provide written notice to Interconnection Customer of the deemed withdrawal and an explanation of the reasons for such deemed withdrawal. Upon receipt of such written notice, Interconnection Customer shall have 15 Business Days in which to either respond with information or actions that cures the deficiency or to notify Transmission Provider of its intent to pursue Dispute Resolution.

Withdrawal shall result in the loss of Interconnection Customer's Queue Position. If an Interconnection Customer disputes the withdrawal and loss of its Queue Position, then during Dispute Resolution, Interconnection Customer's Interconnection Request is eliminated from the queue until such time that the outcome of Dispute Resolution would restore its Queue Position. An Interconnection Customer that withdraws or is deemed to have withdrawn its Interconnection Request shall pay to Transmission Provider all costs that Transmission Provider prudently incurs with respect to that Interconnection Request prior to Transmission Provider's receipt of notice described above. Interconnection Customer must pay all monies due to Transmission Provider before it is allowed to obtain any Interconnection Study data or results.

Transmission Provider shall (i) update the Queue Position posting on its Transmission Service Website and (ii) refund to Interconnection Customer any portion of Interconnection Customer's deposit or study payments that exceeds the costs that Transmission Provider has incurred, including interest. In the event of such withdrawal, Transmission Provider, subject to the confidentiality provisions of Section 13.1, shall provide, at Interconnection Customer's request, all information that Transmission Provider developed for any completed study conducted up to the date of withdrawal of the Interconnection Request.

Section 4. Queue Position

4.1 General.

Transmission Provider shall assign a Queue Position based upon the date and time of receipt of the valid Interconnection Request; provided that, if the sole reason an Interconnection Request is not valid is the lack of required information on the application form, and Interconnection Customer provides such information in accordance with Section 3.4.3, then Transmission

Provider shall assign Interconnection Customer a Queue Position based on the date the application form was originally filed. Moving a Point of Interconnection shall result in a lowering of Queue Position if it is deemed a Material Modification under Section 4.4.3. The Queue Position of each Interconnection Request will be used to determine the order of performing the Interconnection Studies and determination of cost responsibility for the facilities necessary to accommodate the Interconnection Request. A higher queued Interconnection Request is one that has been placed “earlier” in the queue in relation to another Interconnection Request that is lower queued.

Transmission Provider may allocate the cost of the common upgrades for clustered Interconnection Requests without regard to Queue Position.

4.2 Clustering.

At Transmission Provider’s option, Interconnection Requests may be studied serially or in clusters for the purpose of the Interconnection System Impact Study.

Clustering shall be implemented on the basis of Queue Position. If Transmission Provider elects to study Interconnection Requests using Clustering, all Interconnection Requests received within a period not to exceed 180 Calendar Days, hereinafter referred to as the “Queue Cluster Window” shall be studied together. The deadline for completing all Interconnection System Impact Studies for which an Interconnection System Impact Study Agreement has been executed during a Queue Cluster Window shall be in accordance with Section 7.4, for all Interconnection Requests assigned to the same Queue Cluster Window. Transmission Provider may study an Interconnection Request separately to the extent warranted by Good Utility Practice based upon the electrical remoteness of the proposed Generating Facility.

Clustering Interconnection System Impact Studies shall be conducted in such a manner to ensure the efficient implementation of the applicable regional transmission expansion plan in light of the Transmission System’s capabilities at the time of each study.

The Queue Cluster Window shall have a fixed time interval based on fixed annual opening and closing dates. Any changes to the established Queue Cluster Window interval and opening or closing dates shall be announced with a posting on Transmission Provider’s Transmission Service Website beginning at least 180 Calendar Days in advance of the change and continuing thereafter through the end date of the first Queue Cluster Window that is to be modified.

4.3 Transferability of Queue Position.

An Interconnection Customer may transfer its Queue Position to another entity only if such entity acquires the specific Generating Facility identified in the Interconnection Request and the Point of Interconnection does not change.

4.4 Modifications.

Interconnection Customer shall submit to Transmission Provider, in writing, modifications to any information provided in the Interconnection Request. Interconnection Customer shall retain its Queue Position if the modifications are in accordance with Sections 4.4.1, 4.4.2 or 4.4.5, or are determined not to be Material Modifications pursuant to Section 4.4.3.

Notwithstanding the above, during the course of the Interconnection Studies, either Interconnection Customer or Transmission Provider may identify changes to the planned interconnection that may improve the costs and benefits (including reliability) of the interconnection, and the ability of the proposed change to accommodate the Interconnection Request. To the extent the identified changes are acceptable to Transmission Provider and Interconnection Customer, such acceptance not to be unreasonably withheld, Transmission Provider shall modify the Point of Interconnection and/or configuration in accordance with such changes and proceed with any re-studies necessary to do so in accordance with Section 6.4, Section 7.6 and Section 8.5 as applicable and Interconnection Customer shall retain its Queue Position.

4.4.1 Prior to the return of the executed Interconnection System Impact Study Agreement to Transmission Provider, modifications permitted under this Section shall include specifically: (a) a decrease of up to 60 percent of electrical output (MW) of the proposed project, through either (1) a decrease in plant size or (2) a decrease in Interconnection Service level (consistent with the process described in Section 3.1) accomplished by applying Transmission Provider- approved injection-limiting equipment; (b) modifying the technical parameters associated with the Generating Facility technology or the Generating Facility step-up transformer impedance characteristics; and (c) modifying the interconnection configuration.

For plant increases, the incremental increase in plant output will go to the end of the queue for the purposes of cost allocation and study analysis.

- 4.4.2** Prior to the return of the executed Interconnection Facility Study Agreement to Transmission Provider, the modifications permitted under this Section shall include specifically: (a) additional 15 percent decrease of electrical output of the proposed project through either (1) a decrease in plant size (MW) or (2) a decrease in Interconnection Service level (consistent with the process described in Section 3.1) accomplished by applying Transmission Provider- approved injection-limiting equipment; and (b) Generating Facility technical parameters associated with modifications to Generating Facility technology and transformer impedances; provided, however, the incremental costs associated with those modifications are the responsibility of the requesting Interconnection Customer.
- 4.4.3** Prior to making any modification other than those specifically permitted by Sections 4.4.1, 4.4.2, and 4.4.5, Interconnection Customer may first request that Transmission Provider evaluate whether such modification is a Material Modification. In response to Interconnection Customer’s request, Transmission Provider shall evaluate the proposed modifications prior to making them and inform Interconnection Customer in writing of whether the modifications would constitute a Material Modification. Any change to the Point of Interconnection, except those deemed acceptable under Sections 4.4.1, 6.1, 7.2 or so allowed elsewhere, shall constitute a Material Modification. Interconnection Customer may then withdraw the proposed modification or proceed with a new Interconnection Request for such modification.
- 4.4.4** Upon receipt of Interconnection Customer’s request for modification permitted under this Section 4.4, Transmission Provider shall commence and perform any necessary additional studies as soon as practicable, but in no event shall Transmission Provider commence such studies later than 30 Calendar Days after receiving notice of Interconnection Customer’s request. Any additional studies resulting from such modification shall be done at Interconnection Customer’s cost.
- 4.4.5** Extensions of less than three cumulative years in the Commercial Operation Date of the Generating Facility to which the Interconnection Request relates are not material and should be handled through construction sequencing.

Section 5. Procedures for Interconnection Requests Submitted Prior to Effective Date of Generator Interconnection Procedures

5.1 Queue Position for Pending Requests.

5.1.1 Any Interconnection Customer assigned a Queue Position prior to the effective date of this GIP shall retain that Queue Position.

5.1.1.1 If an Interconnection Study Agreement has not been executed as of the effective date of this GIP, then such Interconnection Study, and any subsequent Interconnection Studies, shall be processed in accordance with this GIP.

5.1.1.2 If an Interconnection Study Agreement has been executed prior to the effective date of this GIP, such Interconnection Study shall be completed in accordance with the terms of such agreement. With respect to any remaining studies for which an Interconnection Customer has not signed an Interconnection Study Agreement prior to the effective date of the GIP, Transmission Provider must offer Interconnection Customer the option of either continuing under Transmission Provider’s existing interconnection study process or going forward with the completion of the necessary Interconnection Studies (for which it does not have a signed Interconnection Studies Agreement) in accordance with this GIP.

5.1.1.3 If an GIA has been executed before the effective date of the GIP, then the GIA would be grandfathered.

5.1.2 Transition Period.

To the extent necessary, Transmission Provider and Interconnection Customers with an outstanding request (i.e., an Interconnection Request for which an GIA has not been executed as of the effective date of this GIP) shall transition to this GIP within a reasonable period of time not to exceed 60 Calendar Days. The use of the term “outstanding request” herein shall mean any Interconnection Request, on the effective date of this GIP: (i) that has been submitted but not yet accepted by Transmission Provider; (ii) where the related interconnection agreement has not yet been executed or service commenced under an unexecuted agreement, subject to Dispute Resolution consistent with Section 11, below, (iii) where the relevant

Interconnection Study Agreements have not yet been executed, or (iv) where any of the relevant Interconnection Studies are in process but not yet completed. Any Interconnection Customer with an outstanding request as of the effective date of this GIP may request a reasonable extension of any deadline, otherwise applicable, if necessary to avoid undue hardship or prejudice to its Interconnection Request. A reasonable extension shall be granted by Transmission Provider to the extent consistent with the intent and process provided for under this GIP.

5.2 New Transmission Provider.

If Transmission Provider transfers control of its Transmission System to a successor Transmission Provider during the period when an Interconnection Request is pending, the original Transmission Provider shall transfer to the successor Transmission Provider any amount of the deposit or payment with interest thereon that exceeds the cost that it incurred to evaluate the request for interconnection. Any difference between such net amount and the deposit or payment required by this GIP shall be paid by or refunded to the Interconnection Customer, as appropriate. The original Transmission Provider shall coordinate with the successor Transmission Provider to complete any Interconnection Study, as appropriate, that the original Transmission Provider has begun but has not completed. If Transmission Provider has tendered a draft GIA to Interconnection Customer but Interconnection Customer has neither executed the GIA nor requested under Section 11 below that service commence under an unexecuted GIA, subject to Dispute Resolution, unless otherwise provided, Interconnection Customer must complete negotiations with the successor Transmission Provider.

Section 6. Interconnection Feasibility Study

6.1 Interconnection Feasibility Study Agreement.

Simultaneously with the acknowledgement of a valid Interconnection Request Transmission Provider shall provide to Interconnection Customer an Interconnection Feasibility Study Agreement in the form of Appendix 2. The Interconnection Feasibility Study Agreement shall specify that Interconnection Customer is responsible for the actual cost of the Interconnection Feasibility Study. Within five (5) Business Days following the Scoping Meeting Interconnection Customer shall specify for inclusion in the attachment to the Interconnection Feasibility Study Agreement the Point(s) of Interconnection and any reasonable alternative Point(s) of Interconnection. Within five (5) Business Days following Transmission Provider's receipt of such designation, Transmission Provider shall tender to Interconnection Customer the Interconnection Feasibility Study Agreement

signed by Transmission Provider, which includes a good faith estimate of the cost for completing the Interconnection Feasibility Study.

Interconnection Customer shall execute and deliver to Transmission Provider the Interconnection Feasibility Study Agreement along with a \$10,000 deposit no later than 30 Calendar Days after its receipt.

On or before the return of the executed Interconnection Feasibility Study Agreement to Transmission Provider, Interconnection Customer shall provide the technical data called for in Appendix 1, Attachment A.

If the Interconnection Feasibility Study uncovers any unexpected result(s) not contemplated during the Scoping Meeting, a substitute Point of Interconnection identified by either Interconnection Customer or Transmission Provider, and acceptable to the other, such acceptance not to be unreasonably withheld, will be substituted for the designated Point of Interconnection specified above without loss of Queue Position, and Re-studies shall be completed pursuant to Section 6.4 as applicable. For the purpose of this Section 6.1, if Transmission Provider and Interconnection Customer cannot agree on the substituted Point of Interconnection, then Interconnection Customer may direct that one of the alternatives as specified in the Interconnection Feasibility Study Agreement, as specified pursuant to Section 3.4.4, shall be the substitute.

If Interconnection Customer and Transmission Provider agree to forgo the Interconnection Feasibility Study, Transmission Provider will initiate an Interconnection System Impact Study under Section 7 of this GIP and apply the \$10,000 deposit towards the Interconnection System Impact Study.

6.2 Scope of Interconnection Feasibility Study.

The Interconnection Feasibility Study shall preliminarily evaluate the feasibility of the proposed interconnection to the Transmission System.

The Interconnection Feasibility Study will consider the Base Case as well as all generating facilities (and with respect to (iii), any identified Network Upgrades) that, on the date the Interconnection Feasibility Study is commenced: (i) are directly interconnected to the Transmission System; (ii) are interconnected to Affected Systems and may have an impact on the Interconnection Request; (iii) have a pending higher queued Interconnection Request to interconnect to the Transmission System; and (iv) have no Queue Position but have executed an GIA or requested under Section 11 below the initiation of service under an unexecuted GIA, subject to Dispute Resolution. The Interconnection Feasibility Study will consist of

a power flow and short circuit analysis. The Interconnection Feasibility Study will provide a list of facilities and a non-binding good faith estimate of cost responsibility and a non-binding good faith estimated time to construct.

6.3 Interconnection Feasibility Study Procedures.

Transmission Provider shall utilize existing studies to the extent practicable when it performs the study. Transmission Provider shall use Reasonable Efforts to complete the Interconnection Feasibility Study no later than 45 Calendar Days after Transmission Provider receives the fully executed Interconnection Feasibility Study Agreement. At the request of Interconnection Customer or at any time Transmission Provider determines that it will not meet the required time frame for completing the Interconnection Feasibility Study, Transmission Provider shall notify Interconnection Customer as to the schedule status of the Interconnection Feasibility Study. If Transmission Provider is unable to complete the Interconnection Feasibility Study within that time period, it shall notify Interconnection Customer and provide an estimated completion date with an explanation of the reasons why additional time is required. Upon request, Transmission Provider shall provide Interconnection Customer supporting documentation, workpapers and relevant power flow, short circuit and stability databases for the Interconnection Feasibility Study, subject to confidentiality arrangements consistent with Section 13.1.

Transmission Provider shall study the Interconnection Request at the level of service requested by the Interconnection Customer, unless otherwise required to study the full Generating Facility Capacity due to safety or reliability concerns.

6.3.1 Meeting with Transmission Provider.

Within 10 Business Days of providing an Interconnection Feasibility Study report to Interconnection Customer, Transmission Provider and Interconnection Customer shall meet to discuss the results of the Interconnection Feasibility Study.

6.4 Re-Study.

If Re-Study of the Interconnection Feasibility Study is required due to a higher queued project dropping out of the queue, or a modification of a higher queued project subject to Section 4.4, or re-designation of the Point of Interconnection pursuant to Section 6.1 Transmission Provider shall notify Interconnection Customer in writing. Such Re-Study shall take not longer than 45 Calendar Days from the date of the notice. Any cost of Re-Study shall be borne by the Interconnection Customer being

re- studied.

Section 7. Interconnection System Impact Study

7.1 Interconnection System Impact Study Agreement.

Unless otherwise agreed, pursuant to the Scoping Meeting provided in Section 3.4.4, simultaneously with the delivery of the Interconnection Feasibility Study to Interconnection Customer, Transmission Provider shall provide to Interconnection Customer an Interconnection System Impact Study Agreement in the form of Appendix 3 to this GIP. The Interconnection System Impact Study Agreement shall provide that Interconnection Customer shall compensate Transmission Provider for the actual cost of the Interconnection System Impact Study. Within three Business Days following the Interconnection Feasibility Study results meeting, Transmission Provider shall provide to Interconnection Customer a non-binding good faith estimate of the cost and timeframe for completing the Interconnection System Impact Study.

7.2 Execution of Interconnection System Impact Study Agreement.

Interconnection Customer shall execute the Interconnection System Impact Study Agreement and deliver the executed Interconnection System Impact Study Agreement to Transmission Provider no later than 30 Calendar Days after its receipt along with demonstration of Site Control, and a \$50,000 deposit.

If Interconnection Customer does not provide all such technical data when it delivers the Interconnection System Impact Study Agreement, Transmission Provider shall notify Interconnection Customer of the deficiency within five Business Days of the receipt of the executed Interconnection System Impact Study Agreement and Interconnection Customer shall cure the deficiency within 10 Business Days of receipt of the notice, provided, however, such deficiency does not include failure to deliver the executed Interconnection System Impact Study Agreement or deposit.

If the Interconnection System Impact Study uncovers any unexpected result(s) not contemplated during the Scoping Meeting and the Interconnection Feasibility Study, a substitute Point of Interconnection identified by either Interconnection Customer or Transmission Provider, and acceptable to the other, such acceptance not to be unreasonably withheld, will be substituted for the designated Point of Interconnection specified above without loss of Queue Position, and restudies shall be completed pursuant to Section 7.6 as applicable. For the purpose of this Section 7.2, if Transmission Provider and Interconnection Customer cannot agree on the

substituted Point of Interconnection, then Interconnection Customer may direct that one of the alternatives as specified in the Interconnection Feasibility Study Agreement, as specified pursuant to Section 3.4.4, shall be the substitute.

7.3 Scope of Interconnection System Impact Study.

The Interconnection System Impact Study shall evaluate the impact of the proposed interconnection on the reliability of the Transmission System. The Interconnection System Impact Study will consider the Base Case as well as all generating facilities (and with respect to (iii) below, any identified Network Upgrades associated with such higher queued interconnection) that, on the date the Interconnection System Impact Study is commenced: (i) are directly interconnected to the Transmission System; (ii) are interconnected to Affected Systems and may have an impact on the Interconnection Request; (iii) have a pending higher queued Interconnection Request to interconnect to the Transmission System; and (iv) have no Queue Position but have executed an GIA or requested the initiation of service pursuant to Section 11 below under an unexecuted GIA and subject to Dispute Resolution .

The Interconnection System Impact Study will consist of a short circuit analysis, a stability analysis, and a power flow analysis. The Interconnection System Impact Study will state the assumptions upon which it is based; state the results of the analyses; and provide the requirements or potential impediments to providing the requested interconnection service, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the interconnection. For purposes of determining necessary Interconnection Facilities and Network Upgrades, the System Impact Study shall consider the level of Interconnection Service requested by the Interconnection Customer, unless otherwise required to study the full Generating Facility Capacity due to safety or reliability concerns. The Interconnection System Impact Study will provide a list of facilities that are required as a result of the Interconnection Request and a non-binding good faith estimate of cost responsibility and a non-binding good faith estimated time to construct.

7.4 Interconnection System Impact Study Procedures

Transmission Provider shall coordinate the Interconnection System Impact Study with any Affected System that is affected by the Interconnection Request pursuant to Section 3.6 above. Transmission Provider shall utilize existing studies to the extent practicable when it performs the study. Transmission Provider shall use Reasonable Efforts to complete the

Interconnection System Impact Study within 90 Calendar Days after the receipt of the Interconnection System Impact Study Agreement or notification to proceed, study payment, and technical data. If Transmission Provider uses Clustering, Transmission Provider shall use Reasonable Efforts to deliver a completed Interconnection System Impact Study within 90 Calendar Days after the close of the Queue Cluster Window.

At the request of Interconnection Customer or at any time Transmission Provider determines that it will not meet the required time frame for completing the Interconnection System Impact Study, Transmission Provider shall notify Interconnection Customer as to the schedule status of the Interconnection System Impact Study. If Transmission Provider is unable to complete the Interconnection System Impact Study within the time period, it shall notify Interconnection Customer and provide an estimated completion date with an explanation of the reasons why additional time is required. Upon request, Transmission Provider shall provide Interconnection Customer all supporting documentation, workpapers and relevant pre-Interconnection Request and post-Interconnection Request power flow, short circuit and stability databases for the Interconnection System Impact Study, subject to confidentiality arrangements consistent with Section 13.1.

7.5 Meeting with Transmission Provider.

Within 10 Business Days of providing an Interconnection System Impact Study report to Interconnection Customer, Transmission Provider and Interconnection Customer shall meet to discuss the results of the Interconnection System Impact Study.

7.6 Re-Study.

If Re-Study of the Interconnection System Impact Study is required due to a higher queued project dropping out of the queue, or a modification of a higher queued project subject to Section 4.4, or re-designation of the Point of Interconnection pursuant to Section 7.2 Transmission Provider shall notify Interconnection Customer in writing. Such Re-Study shall take no longer than 60 Calendar Days from the date of notice. Any cost of Re-Study shall be borne by the Interconnection Customer being re-studied.

Section 8. Interconnection Facilities Study

8.1 Interconnection Facilities Study Agreement.

Simultaneously with the delivery of the Interconnection System Impact Study to Interconnection Customer, Transmission Provider shall provide to Interconnection Customer an Interconnection Facilities Study Agreement in

the form of Appendix 4 to this GIP. The Interconnection Facilities Study Agreement shall provide that Interconnection Customer shall compensate Transmission Provider for the actual cost of the Interconnection Facilities Study. Within three Business Days following the Interconnection System Impact Study results meeting, Transmission Provider shall provide to Interconnection Customer a non-binding good faith estimate of the cost and timeframe for completing the Interconnection Facilities Study.

Interconnection Customer shall execute the Interconnection Facilities Study Agreement and deliver the executed Interconnection Facilities Study Agreement to Transmission Provider within 30 Calendar Days after its receipt, together with the required technical data and the greater of \$100,000 or Interconnection Customer's portion of the estimated monthly cost of conducting the Interconnection Facilities Study.

8.1.1 Transmission Provider shall invoice Interconnection Customer on a monthly basis for the work to be conducted on the Interconnection Facilities Study each month. Interconnection Customer shall pay invoiced amounts within 30 Calendar Days of receipt of invoice. Transmission Provider shall continue to hold the amounts on deposit until settlement of the final invoice.

8.2 Scope of Interconnection Facilities Study.

The Interconnection Facilities Study shall specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the Interconnection System Impact Study in accordance with Good Utility Practice to physically and electrically connect the Interconnection Facility to the Transmission System. The Interconnection Facilities Study shall also identify the electrical switching configuration of the connection equipment, including, without limitation: the transformer, switchgear, meters, and other station equipment,; the nature and estimated cost of any Transmission Provider's Interconnection Facilities and Network Upgrades necessary to accomplish the interconnection; and an estimate of the time required to complete the construction and installation of such facilities. The Facilities Study will also identify any potential control equipment for requests for Interconnection Service that are lower than the Generating Facility Capacity.

8.3 Interconnection Facilities Study Procedures.

Transmission Provider shall coordinate the Interconnection Facilities Study with any Affected System pursuant to Section 3.6 above. Transmission Provider shall utilize existing studies to the extent practicable in performing the Interconnection Facilities Study. Transmission Provider shall use

Reasonable Efforts to complete the study and issue a draft Interconnection Facilities Study report to Interconnection Customer within the following number of days after receipt of an executed Interconnection Facilities Study Agreement: 90 Calendar Days, with no more than a +/- 20 percent cost estimate contained in the report; or 180 Calendar Days, if Interconnection Customer requests a +/- 10 percent cost estimate.

At the request of Interconnection Customer or at any time Transmission Provider determines that it will not meet the required time frame for completing the Interconnection Facilities Study, Transmission Provider shall notify Interconnection Customer as to the schedule status of the Interconnection Facilities Study. If Transmission Provider is unable to complete the Interconnection Facilities Study and issue a draft Interconnection Facilities Study report within the time required, it shall notify Interconnection Customer and provide an estimated completion date and an explanation of the reasons why additional time is required.

Interconnection Customer may, within 30 Calendar Days after receipt of the draft report, provide written comments to Transmission Provider, which Transmission Provider shall include in the final report. Transmission Provider shall issue the final Interconnection Facilities Study report within 15 Business Days of receiving Interconnection Customer's comments or promptly upon receiving Interconnection Customer's statement that it will not provide comments. Transmission Provider may reasonably extend such fifteen-day period upon notice to Interconnection Customer if Interconnection Customer's comments require Transmission Provider to perform additional analyses or make other significant modifications prior to the issuance of the final Interconnection Facilities Report. Upon request, Transmission Provider shall provide Interconnection Customer supporting documentation, workpapers, and databases or data developed in the preparation of the Interconnection Facilities Study, subject to confidentiality arrangements consistent with Section 13.1.

8.4 Meeting with Transmission Provider.

Within 10 Business Days of providing a draft Interconnection Facilities Study report to Interconnection Customer, Transmission Provider and Interconnection Customer shall meet to discuss the results of the Interconnection Facilities Study.

8.5 Re-Study.

If Re-Study of the Interconnection Facilities Study is required due to a higher queued project dropping out of the queue or a modification of a higher queued project pursuant to Section 4.4, Transmission Provider

shall so notify Interconnection Customer in writing. Such Re-Study shall take no longer than 60 Calendar Days from the date of notice. Any cost of Re-Study shall be borne by the Interconnection Customer being re-studied.

Section 9. Engineering & Procurement ('E&P') Agreement.

Prior to executing a GIA, an Interconnection Customer may, in order to advance the implementation of its interconnection, request and Transmission Provider shall offer the Interconnection Customer, an E&P Agreement that authorizes Transmission Provider to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection. However, Transmission Provider shall not be obligated to offer an E&P Agreement if Interconnection Customer is in Dispute Resolution as a result of an allegation that Interconnection Customer has failed to meet any milestones or comply with any prerequisites specified in other parts of the GIP. The E&P Agreement is an optional procedure and it will not alter the Interconnection Customer's Queue Position or In- Service Date. The E&P Agreement shall provide for Interconnection Customer to pay the cost of all activities authorized by Interconnection Customer and to make advance payments or provide other satisfactory security for such costs.

Interconnection Customer shall pay the cost of such authorized activities and any cancellation costs for equipment that is already ordered for its interconnection, which cannot be mitigated as hereafter described, whether or not such items or equipment later become unnecessary. If Interconnection Customer withdraws its application for interconnection or either Party terminates the E&P Agreement, to the extent the equipment ordered can be canceled under reasonable terms, Interconnection Customer shall be obligated to pay the associated cancellation costs. To the extent that the equipment cannot be reasonably canceled, Transmission Provider may elect: (i) to take title to the equipment, in which event Transmission Provider shall refund Interconnection Customer any amounts paid by Interconnection Customer for such equipment and shall pay the cost of delivery of such equipment, or (ii) to transfer title to and deliver such equipment to Interconnection Customer, in which event Interconnection Customer shall pay any unpaid balance and cost of delivery of such equipment.

Section 10. Optional Interconnection Study

10.1 Optional Interconnection Study Agreement.

On or after the date when Interconnection Customer receives

Interconnection System Impact Study results, Interconnection Customer may request, and Transmission Provider shall perform a reasonable number of Optional Studies. The request shall describe the assumptions that Interconnection Customer wishes Transmission Provider to study within the scope described in Section 10.2. Within five Business Days after receipt of a request for an Optional Interconnection Study, Transmission Provider shall provide to Interconnection Customer an Optional Interconnection Study Agreement in the form of Appendix 5.

The Optional Interconnection Study Agreement shall: (i) specify the technical data that Interconnection Customer must provide for each phase of the Optional Interconnection Study, (ii) specify Interconnection Customer's assumptions as to which Interconnection Requests with earlier queue priority dates will be excluded from the Optional Interconnection Study case and assumptions as to the type of interconnection service for Interconnection Requests remaining in the Optional Interconnection Study case, and (iii) Transmission Provider's estimate of the cost of the Optional Interconnection Study. To the extent known by Transmission Provider, such estimate shall include any costs expected to be incurred by any Affected System whose participation is necessary to complete the Optional Interconnection Study. Notwithstanding the above, Transmission Provider shall not be required as a result of an Optional Interconnection Study request to conduct any additional Interconnection Studies with respect to any other Interconnection Request.

Interconnection Customer shall execute the Optional Interconnection Study Agreement within 10 Business Days of receipt and deliver the Optional Interconnection Study Agreement, the technical data and a \$10,000 deposit to Transmission Provider.

10.2 Scope of Optional Interconnection Study.

The Optional Interconnection Study will consist of a sensitivity analysis based on the assumptions specified by Interconnection Customer in the Optional Interconnection Study Agreement. The Optional Interconnection Study will also identify Transmission Provider's Interconnection Facilities and the Network Upgrades, and the estimated cost thereof, that may be required to provide transmission service or Interconnection Service based upon the results of the Optional Interconnection Study. The Optional Interconnection Study shall be performed solely for informational purposes. Transmission Provider shall use Reasonable Efforts to coordinate the study with any Affected Systems that may be affected

by the types of Interconnection Services that are being studied. Transmission Provider shall utilize existing studies to the extent practicable in conducting the Optional Interconnection Study.

10.3 Optional Interconnection Study Procedures.

The executed Optional Interconnection Study Agreement, the prepayment, and technical and other data called for therein must be provided to Transmission Provider within 10 Business Days of Interconnection Customer receipt of the Optional Interconnection Study Agreement.

Transmission Provider shall use Reasonable Efforts to complete the Optional Interconnection Study within a mutually agreed upon time period specified within the Optional Interconnection Study Agreement. If Transmission Provider is unable to complete the Optional Interconnection Study within such time period, it shall notify Interconnection Customer and provide an estimated completion date and an explanation of the reasons why additional time is required. Any difference between the study payment and the actual cost of the study shall be paid to Transmission Provider or refunded to Interconnection Customer, as appropriate. Upon request, Transmission Provider shall provide Interconnection Customer supporting documentation and workpapers and databases or data developed in the preparation of the Optional Interconnection Study, subject to confidentiality arrangements consistent with Section 13.1.

Section 11. Generator Interconnection Agreement (GIA)

11.1 Tender.

Interconnection Customer shall tender comments on the draft Interconnection Facilities Study Report within 30 Calendar Days of receipt of the report. Within 30 Calendar Days after the comments are submitted, Transmission Provider shall tender a draft GIA, together with draft appendices. The draft GIA shall be in the form of Transmission Provider's approved standard form GIA, which is in Appendix 6.

Interconnection Customer shall execute and return the completed draft appendices within 30 Calendar Days.

11.2 Negotiation.

Notwithstanding Section 11.1, at the request of Interconnection Customer Transmission Provider shall begin negotiations with Interconnection Customer concerning the appendices to the GIA at any time after

Interconnection Customer executes the Interconnection Facilities Study Agreement. Transmission Provider and Interconnection Customer shall negotiate concerning any disputed provisions of the appendices to the draft GIA for not more than 60 Calendar Days after tender of the final Interconnection Facilities Study Report. If Interconnection Customer determines that negotiations are at an impasse, it may request termination of the negotiations at any time after tender of the draft GIA pursuant to Section 11.1 and request that service commence under an unexecuted GIA subject to Dispute Resolution procedures pursuant to Section 13.5. If Interconnection Customer requests termination of the negotiations, but within 60 Calendar Days thereafter fails to request the initiation of service under the unexecuted GIA and the initiation of Dispute Resolution, it shall be deemed to have withdrawn its Interconnection Request. Unless otherwise agreed by the Parties, if Interconnection Customer has not executed the GIA, or requested service under an unexecuted GIA, and initiated Dispute Resolution procedures pursuant to Section 13.5 within 60 Days of tender of completed draft GIA appendices, it shall be deemed to have withdrawn its Interconnection Request. Transmission Provider shall provide to Interconnection Customer a final GIA within 15 Business Days after the completion of the negotiation process.

11.3 Execution and Filing.

Within 15 Business Days after receipt of the final GIA, Interconnection Customer shall provide Transmission Provider (A) reasonable evidence that continued Site Control or (B) posting of \$250,000, non-refundable additional security, which shall be applied toward future construction costs. At the same time, Interconnection Customer also shall provide reasonable evidence that one or more of the following milestones in the development of the Generating Facility, at Interconnection Customer election, has been achieved: (i) the execution of a contract for the supply or transportation of fuel to the Generating Facility; (ii) the execution of a contract for the supply of cooling water to the Generating Facility; (iii) execution of a contract for the engineering for, procurement of major equipment for, or construction of, the Generating Facility; (iv) execution of a contract for the sale of electric energy or capacity from the Generating Facility; or (v) application for an air, water, or land use permit.

Interconnection Customer shall either: (i) execute two originals of the tendered GIA and return them to Transmission Provider; or (ii) submit a written request to initiate Dispute Resolution. An unexecuted GIA should contain terms and conditions deemed appropriate by Transmission Provider for the Interconnection Request. If the Parties agree to proceed with design, procurement, and construction of facilities

and upgrades under the agreed-upon terms of the unexecuted GIA, they may proceed pending Dispute Resolution.

11.4 Commencement of Interconnection Activities.

If Interconnection Customer executes the final GIA, Transmission Provider and Interconnection Customer shall perform their respective obligations in accordance with the terms of the GIA. Upon submission of an unexecuted GIA to Dispute Resolution, Interconnection Customer and Transmission Provider shall promptly comply with the unexecuted GIA, subject to modification in Dispute Resolution.

Section 12. Construction of Transmission Provider’s Interconnection Facilities and Network Upgrades

12.1 Schedule.

Transmission Provider and Interconnection Customer shall negotiate in good faith concerning a schedule for the construction of Transmission Provider’s Interconnection Facilities and the Network Upgrades.

12.2 Construction Sequencing.

12.2.1 General.

In general, the In-Service Date of an Interconnection Customers seeking interconnection to the Transmission System will determine the sequence of construction of Network Upgrades.

12.2.2 Advance Construction of Network Upgrades that are an Obligation of an Entity other than Interconnection Customer.

An Interconnection Customer with an GIA, in order to maintain its In-Service Date, may request that Transmission Provider advance to the extent necessary the completion of Network Upgrades that: (i) were assumed in the Interconnection Studies for such Interconnection Customer, (ii) are necessary to support such In-Service Date, and (iii) would otherwise not be completed, pursuant to a contractual obligation of an entity other than Interconnection Customer that is seeking interconnection to the Transmission System, in time to support such In-Service Date. Upon such request, Transmission Provider will use Reasonable Efforts to advance

the construction of such Network Upgrades to accommodate such request; provided that Interconnection Customer commits to pay Transmission Provider: (i) any associated expediting costs and (ii) the cost of such Network Upgrades.

As requested, Transmission Provider will refund to Interconnection Customer both the expediting costs and the cost of Network Upgrades, in accordance with Article 11.4 of the GIA. Consequently, the entity with a contractual obligation to construct such Network Upgrades shall be obligated to pay only that portion of the costs of the Network Upgrades that Transmission Provider has not refunded to Interconnection Customer. Payment by that entity shall be due on the date that it would have been due had there been no request for advance construction. Transmission Provider shall forward to Interconnection Customer the amount paid by the entity with a contractual obligation to construct the Network Upgrades as payment in full for the outstanding balance owed to Interconnection Customer. Transmission Provider then shall refund to that entity the amount that it paid for the Network Upgrades, in accordance with Article 11.4 of the GIA.

12.2.3 Advancing Construction of Network Upgrades that are Part of an Expansion Plan of the Transmission Provider.
An Interconnection Customer with an GIA, in order to maintain its In-Service Date, may request that Transmission Provider advance to the extent necessary the completion of Network Upgrades that: (i) are necessary to support such In-Service Date and (ii) would otherwise not be completed, pursuant to an expansion plan of Transmission Provider, in time to support such In-Service Date. Upon such request, Transmission Provider will use Reasonable Efforts to advance the construction of such Network Upgrades to accommodate such request; provided that Interconnection Customer commits to pay Transmission Provider any associated expediting costs. Interconnection Customer shall be entitled to transmission credits, if any, for any expediting costs paid.

12.2.4 Amended Interconnection System Impact Study.
An Interconnection System Impact Study will be amended to determine the facilities necessary to support the requested In-Service Date. This amended study will include those transmission and Generating Facilities that are expected to be

in service on or before the requested In- Service Date.

Section 13. Miscellaneous

13.1 Confidentiality.

Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by either of the Parties to the other prior to the execution of an GIA.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Party receiving the information that the information is confidential.

If requested by either Party, the other Party shall provide in writing, the basis for asserting that the information referred to in this Section warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

The release of Confidential Information shall be subject to Applicable Laws and Regulation and Applicable Reliability Standards.

13.1.1 Scope.

Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of the GIA; or (6) is required, in accordance with Section 13.1.6, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is

necessary in any legal proceeding establishing rights and obligations under the

GIA. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Party that it no longer is confidential. Interconnection Customer acknowledges that Transmission Provider is subject to Washington’s Public Records Act, R.C.W. § 42.56 *et seq.*

13.1.2 Release of Confidential Information.

Neither Party shall release or disclose Confidential Information to any other person, except to its Affiliates (limited by the Standards of Conduct requirements), employees, consultants, or to parties who may be or considering providing financing to or equity participation with Interconnection Customer, or to potential purchasers or assignees of Interconnection Customer, on a need-to-know basis in connection with these procedures, unless such person has first been advised of the confidentiality provisions of this Section 13.1 and has agreed to comply with such provisions.

Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Section 13.1.

13.1.3 Rights.

Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Party. The disclosure by each Party to the other Party of Confidential Information shall not be deemed a waiver by either Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

13.1.4 No Warranties.

By providing Confidential Information, neither Party makes any warranties or representations as to its accuracy or completeness. In addition, by supplying Confidential Information, neither Party obligates itself to provide any particular information or Confidential Information to the other Party nor to enter into any further agreements or

proceed with any other relationship or joint venture.

13.1.5 Standard of Care.

Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Party under these procedures or its regulatory requirements.

13.1.6 Order of Disclosure.

If required by law, or a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires either Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Party with prompt notice of such request(s) or requirement(s) so that the other Party may seek an appropriate protective order or waive compliance with the terms of the GIA. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose.

13.1.7 Remedies.

The Parties agree that monetary damages would be inadequate to compensate a Party for the other Party's Breach of its obligations under this Section 13.1. Each Party accordingly agrees that the other Party shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Section 13.1, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the Breach of this Section 13.1, but shall be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with

this Section 13.1.

13.1.8 Disclosure to FERC, its Staff, or a State.

Notwithstanding anything in this Section 13.1 to the contrary, and pursuant to 18 CFR section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to the GIP, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 CFR section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Party prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other Party to the GIA when its is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time either of the Parties may respond before such information would be made public, pursuant to 18 CFR section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner, consistent with applicable state rules and regulations.

13.1.9 Subject to the exception in Section 13.1.8, any information that a Party claims is competitively sensitive, commercial or financial information (“Confidential Information”) shall not be disclosed by the other Party to any person not employed or retained by the other Party, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Party, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this GIP or as a transmission service provider or a Control Area operator including disclosing the Confidential Information to an RTO or ISO or to a subregional, regional or national reliability organization or planning group. The Party asserting confidentiality shall notify the other Party in writing of the information it claims is confidential. Prior to any disclosures of the other Party’s Confidential Information under this

subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing.

13.1.10 This provision shall not apply to any information that was or is hereafter in the public domain (except as a result of a Breach of this provision).

13.1.11 Transmission Provider shall, at Interconnection Customer's election, destroy, in a confidential manner, or return the Confidential Information provided at the time of Confidential Information is no longer needed.

13.2 Delegation of Responsibility.

Transmission Provider may use the services of subcontractors as it deems appropriate to perform its obligations under this GIP. Transmission Provider shall remain primarily liable to Interconnection Customer for the performance of such subcontractors and compliance with its obligations of this GIP. The subcontractor shall keep all information provided confidential and shall use such information solely for the performance of such obligation for which it was provided and no other purpose.

13.3 Obligation for Study Costs.

Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Interconnection Studies. Any difference between the study deposit and the actual cost of the applicable Interconnection Study shall be paid by or refunded, except as otherwise provided herein, to Interconnection Customer or offset against the cost of any future Interconnection Studies associated with the applicable Interconnection Request prior to beginning of any such future Interconnection Studies. Any invoices for Interconnection Studies shall include a detailed and itemized accounting of the cost of each Interconnection Study. Interconnection Customer shall pay any such undisputed costs within thirty (30) Calendar Days of receipt of an invoice therefor. Transmission Provider shall not be obligated to perform or continue to perform any studies unless Interconnection Customer has paid all undisputed amounts in compliance herewith.

13.4 Third Parties Conducting Studies.

If (i) at the time of the signing of an Interconnection Study Agreement there is disagreement as to the estimated time to complete an Interconnection Study, (ii) Interconnection Customer receives notice pursuant to Sections 6.3,

7.4 or 8.3 that Transmission Provider will not complete an Interconnection Study within the applicable timeframe for such Interconnection Study, or (iii) Interconnection Customer receives neither the Interconnection Study nor a notice under Sections 6.3, 7.4 or 8.3 within the applicable timeframe for such Interconnection Study, then Interconnection Customer may require Transmission Provider to utilize a third party consultant reasonably acceptable to Interconnection Customer and Transmission Provider to perform such Interconnection Study under the direction of Transmission Provider. At other times, Transmission Provider may also utilize a third party consultant to perform such Interconnection Study, either in response to a general request of Interconnection Customer, or on its own volition.

In all cases, use of a third party consultant shall be in accord with Article 26 of the GIA (Subcontractors) and limited to situations where Transmission Provider determines that doing so will help maintain or accelerate the study process for Interconnection Customer's pending Interconnection Request and not interfere with Transmission Provider's progress on Interconnection Studies for other pending Interconnection Requests. In cases where Interconnection Customer requests use of a third party consultant to perform such Interconnection Study, Interconnection Customer and Transmission Provider shall negotiate all of the pertinent terms and conditions, including reimbursement arrangements and the estimated study completion date and study review deadline. Transmission Provider shall convey all workpapers, data bases, study results and all other supporting documentation prepared to date with respect to the Interconnection Request as soon as soon as practicable upon Interconnection Customer's request subject to the confidentiality provision in Section 13.1. In any case, such third party contract may be entered into with either Interconnection Customer or Transmission Provider at Transmission Provider's discretion.

In the case of (iii) Interconnection Customer maintains its right to submit a claim to Dispute Resolution to recover the costs of such third party study. Such third party consultant shall be required to comply with this GIP, Article 26 of the GIA (Subcontractors), and the relevant Tariff procedures and protocols as would apply if Transmission Provider were to conduct the Interconnection Study and shall use the information provided to it solely for purposes of performing such services and for no other purposes. Transmission Provider shall cooperate with such third party consultant and Interconnection Customer to complete and issue the Interconnection Study in the shortest reasonable time.

13.5 Disputes.

13.5.1 Submission.

In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with the GIA, the GIP, or their performance, such Party (the “disputing Party”) shall provide the other Party with written notice of the dispute or claim (“Notice of Dispute”). Such dispute or claim shall be referred to a designated senior representative of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within 30 Calendar Days of the other Party’s receipt of the Notice of Dispute, such claim or dispute may be resolved in accordance with the formal Dispute Resolution procedures set forth above, or upon the mutual written agreement of the Parties the Dispute may be submitted to mediation.. In the event the Parties do not agree to submit such claim or dispute to mediation, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with the terms of this GIP.

13.5.2 Costs.

Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

13.5 Tax Exempt Bonds.

13.5.1 Facilities Financed by Tax Exempt Bonds.

The Transmission Provider utilizes state and federal income tax-exempt financial instruments on an ongoing basis to fund the ownership and operation of its transmission system. Notwithstanding any other provision of this GIA and GIP, Transmission Provider shall not be required to provide Interconnection Service to Interconnection Customer pursuant to this GIA and GIP if the provision of such Transmission Service would jeopardize the tax-exempt status of any bond(s) used to finance Transmission Provider’s facilities that would be used in providing such Interconnection Service. If the Transmission Provider determines that the provision of transmission service requested by an Interconnection Customer

would jeopardize the tax-exempt status of any bond(s) used to finance its facilities that would be used in providing such transmission service, it shall so advise the Interconnection Customer and shall not be obligated to provide service.

**APPENDIX 1 to GIP
INTERCONNECTION REQUEST FOR
A GENERATING FACILITY**

1. The undersigned Interconnection Customer submits this request to interconnect its Generating Facility with Transmission Provider’s Transmission System pursuant to a Tariff.
2. This Interconnection Request is for (check one):
 A proposed new Generating Facility.
 An increase in the generating capacity or a Material Modification of an existing Generating Facility.
3. Reserved:
4. Reserved

5. Interconnection Customer provides the following information:
 - a. Address or location of the proposed new Generating Facility site (to the extent known) or, in the case of an existing Generating Facility, the name and specific location of the existing Generating Facility;
 - b. Maximum summer at ____degrees C and winter at____degrees C megawatt electrical output of the proposed new Generating Facility or the amount of megawatt increase in the generating capacity of an existing Generating Facility;
 - c. General description of the equipment configuration;
 - d. Commercial Operation Date (Day, Month, and Year);
 - e. Name, address, telephone number, and e-mail address of Interconnection Customer’s contact person;
 - f. Approximate location of the proposed Point of Interconnection (optional);
 - g. Interconnection Customer Data (set forth in Attachment A) and
 - h. Primary frequency response operating range for electric storage resources.
 - i. Requested capacity (in MW) of Interconnection Service (if lower than the Generating Facility Capacity).
6. Applicable deposit amount as specified in the GIP.
7. Evidence of Site Control as specified in the GIP (check one)
 Is attached to this Interconnection Request
 Will be provided at a later date in accordance with this GIP
8. This Interconnection Request shall be submitted to the representative indicated below:

Seattle City Light, Attn: Director, Transmission & Distribution
Engineering, 700 Fifth Avenue, Suite 3200, Seattle, WA 98104-5031
9. Representative of Interconnection Customer to contact: [To be completed by

Interconnection Customer] _____

10. This Interconnection Request is submitted by:

Name of Interconnection Customer: _____

By (signature): _____

Name (type or print): _____

Title: _____

Date: _____

DRAFT

GENERATING FACILITY DATA UNIT

RATINGS

kVA _____ °F _____ Voltage _____ Power Factor _____

 Speed (RPM) _____ Connection (e.g. Wye) _____
 Short Circuit Ratio _____ Frequency, Hertz _____
 Stator Amperes at Rated kVA _____ Field Volts _____ Max
 Turbine MW _____ °F _____

Primary frequency response operating range for electric storage resources:

Minimum State of Charge: _____

Maximum State of Charge: _____

COMBINED TURBINE-GENERATOR-EXCITER INERTIA DATA

Inertia Constant, H = _____ kW
 sec/kVA Moment-of-Inertia, $WR^2 =$ _____ lb. ft.²

REACTANCE DATA (PER UNIT-RATED KVA)

	DIRECT AXIS	QUADRATURE AXIS
Synchronous – saturated	X_{dv} _____	X_{qv} _____
Synchronous – unsaturated	X_{di} _____	X_{qi} _____
Transient – saturated	X'_{dv} _____	X'_{qv} _____
Transient – unsaturated	X'_{di} _____	X'_{qi} _____
Subtransient – saturated	X''_{dv} _____	X''_{qv} _____
Subtransient – unsaturated	X''_{di} _____	X''_{qi} _____
Negative Sequence – saturated	X_{2v} _____	
Negative Sequence – unsaturated	X_{2i} _____	

Zero Sequence – saturated	X_{0v}	_____
Zero Sequence – unsaturated	X_{0i}	_____
Leakage Reactance	X_{lm}	_____

DRAFT

FIELD TIME CONSTANT DATA (SEC)

Open Circuit	T'_{do}	_____	T'_{qo}	_____
Three-Phase Short Circuit Transient	T'_{d3}	_____	T'_q	_____
Line to Line Short Circuit Transient	T'_{d2}	_____		
Line to Neutral Short Circuit Transient	T'_{d1}	_____		
Short Circuit Subtransient	T''_d	_____	T''_q	_____
Open Circuit Subtransient	T''_{do}	_____	T''_{qo}	_____

ARMATURE TIME CONSTANT DATA (SEC)

Three Phase Short Circuit	T_{a3}	_____
Line to Line Short Circuit	T_{a2}	_____
Line to Neutral Short Circuit	T_{a1}	_____

NOTE: If requested information is not applicable, indicate by marking “N/A.”

**MW CAPABILITY AND PLANT CONFIGURATION
GENERATING FACILITY DATA**

ARMATURE WINDING RESISTANCE DATA (PER UNIT)

Positive	R_1	_____
Negative	R_2	_____
Zero	R_0	_____

Rotor Short Time Thermal Capacity $I_2^2t =$ _____

Field Current at Rated kVA, Armature Voltage and PF = _____ amps

Field Current at Rated kVA and Armature Voltage, 0 PF = _____ amps

Three Phase Armature Winding Capacitance = _____ microfarad

Field Winding Resistance = _____ ohms _____ °C

Armature Winding Resistance (Per Phase) = _____ ohms _____ °C

CURVES

Provide Saturation, Vee, Reactive Capability, Capacity Temperature Correction curves. Designate normal and emergency Hydrogen Pressure operating range for multiple curves.

GENERATOR STEP-UP TRANSFORMER DATA RATINGS

Capacity Self-cooled/
Maximum
Nameplate
_____/_____kVA

Voltage Ratio (Generator Side/System side/Tertiary)
_____/_____/_____kV

Winding Connections (Low V/High V/Tertiary V (Delta or Wye))
_____/_____/_____

Fixed Taps Available _____

Present Tap Setting

IMPEDANCE

Positive Z_1 (on self-cooled kVA rating) _____% _____X/R

Zero Z_0 (on self-cooled kVA rating) _____% _____X/R

EXCITATION SYSTEM DATA

Identify appropriate IEEE model block diagram of excitation system and power system stabilizer (PSS) for computer representation in power system stability simulations and the corresponding excitation system and PSS constants for use in the model.

GOVERNOR SYSTEM DATA

Identify appropriate IEEE model block diagram of governor system for computer representation in power system stability simulations and the corresponding governor system constants for use in the model.

WIND GENERATORS

Number of generators to be interconnected pursuant to this Interconnection Request:

Elevation: _____ _____ Single Phase _____ Three

Phase Inverter manufacturer, model name, number, and version:

List of adjustable setpoints for the protective equipment or software:

Note: A completed General Electric Company Power Systems Load Flow (PSLF) data sheet or other compatible formats, such as IEEE and PTI power flow models, must be supplied with the Interconnection Request. If other data sheets are more appropriate to the proposed device, then they shall be provided and discussed at Scoping Meeting.

INDUCTION GENERATORS

- (*) Field Volts: _____
- (*) Field Amperes: _____
- (*) Motoring Power (kW): _____
- (*) Neutral Grounding Resistor (If Applicable): _____
- (*) I_2^2t or K (Heating Time Constant): _____
- (*) Rotor Resistance: _____
- (*) Stator Resistance: _____
- (*) Stator Reactance: _____
- (*) Rotor Reactance: _____
- (*) Magnetizing Reactance: _____
- (*) Short Circuit Reactance: _____
- (*) Exciting Current: _____
- (*) Temperature Rise: _____
- (*) Frame Size: _____
- (*) Design Letter: _____
- (*) Reactive Power Required In Vars (No Load): _____ (*)
- Reactive Power Required In Vars (Full Load): _____ (*)
- Total Rotating Inertia, H: _____ Per Unit on KVA Base

Note: Please consult Transmission Provider prior to submitting the Interconnection Request to determine if the information designated by (*) is required.

APPENDIX 2 to GIP INTERCONNECTION FEASIBILITY STUDY AGREEMENT

THIS AGREEMENT is made and entered into this ___ day of _____, 20___, by and between _____, a _____ organized and existing under the laws of the State of _____, (“Interconnection Customer,”) and The City Of Seattle, City Light Department, a Washington municipal corporation (“Transmission Provider “). Interconnection Customer and Transmission Provider each may be referred to as a “Party,” or collectively as the “Parties.”

RECITALS

WHEREAS, Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer dated __; and

WHEREAS, Interconnection Customer desires to interconnect the Generating Facility with the Transmission System; and

WHEREAS, Interconnection Customer has requested Transmission Provider to perform an Interconnection Feasibility Study to assess the feasibility of interconnecting the proposed Generating Facility to the Transmission System, and of any Affected Systems;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider’s approved GIP.
- 2.0 Interconnection Customer elects and Transmission Provider shall cause to be performed an Interconnection Feasibility Study consistent with Section 6.0 of this GIP in accordance with the Tariff.
- 3.0 The scope of the Interconnection Feasibility Study shall be subject to the assumptions set forth in Attachment A to this Agreement.

- 4.0 The Interconnection Feasibility Study shall be based on the technical information provided by Interconnection Customer in the Interconnection Request, as may be modified as the result of the Scoping Meeting. Transmission Provider reserves the right to request additional technical information from Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection Feasibility Study and as designated in accordance with Section 3.4.4 of the GIP. If, after the designation of the Point of Interconnection pursuant to Section 3.4.4 of the GIP, Interconnection Customer modifies its Interconnection Request pursuant to Section 4.4, the time to complete the Interconnection Feasibility Study may be extended.
- 5.0 The Interconnection Feasibility Study report shall provide the following information:
- preliminary identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
 - preliminary identification of any thermal overload or voltage limit violations resulting from the interconnection; and
 - preliminary description and non-bonding estimated cost of facilities required to interconnect the Generating Facility to the Transmission System and to address the identified short circuit and power flow issues.
- 6.0 Interconnection Customer shall provide a deposit of \$10,000 for the performance of the Interconnection Feasibility Study.
- Upon receipt of the Interconnection Feasibility Study Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Interconnection Feasibility Study.
- Any difference between the deposit and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate.
- 7.0 Miscellaneous. The Interconnection Feasibility Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, and that are consistent with regional

practices, Applicable Laws and Regulations, and the organizational nature of the Transmission Provider. All of these provisions shall be determined by the Transmission Provider and, to the extent practicable, shall be consistent with the provisions of the GIP and the GIA.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

[Insert name of Transmission Provider or Transmission Owner, if applicable]

By: _____ By: _____

Title: _____ Title: _____

Date: _____ Date: _____

[Insert name of Interconnection Customer]

By: _____

Title: _____

Date: _____

**Attachment A to
Appendix 2
Interconnection
Feasibility
Study
Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE
INTERCONNECTION FEASIBILITY STUDY**

The Interconnection Feasibility Study will be based upon the information set forth in the Interconnection Request and agreed upon in the Scoping Meeting held on _____:

- Designation of Point of Interconnection and configuration to be studied.
- Designation of alternative Point(s) of Interconnection and configuration.

[Above assumptions to be completed by Interconnection Customer and other assumptions to be provided by Interconnection Customer and Transmission Provider]

**APPENDIX 3 to GIP
INTERCONNECTION SYSTEM IMPACT STUDY
AGREEMENT**

THIS AGREEMENT is made and entered into this ___ day of _____, 20___ by and between _____, a _____ organized and existing under the laws of the State of _____, (“Interconnection Customer,”) The City Of Seattle, City Light Department, a Washington municipal corporation (“Transmission Provider “). Interconnection Customer and Transmission Provider each may be referred to as a “Party,” or collectively as the “Parties.”

RECITALS

WHEREAS, Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer dated _____; and

WHEREAS, Interconnection Customer desires to interconnect the Generating Facility with the Transmission System;

WHEREAS, Transmission Provider has completed an Interconnection Feasibility Study (the “Feasibility Study”) and provided the results of said study to Interconnection Customer (This recital to be omitted if Transmission Provider does not require the Interconnection Feasibility Study.); and

WHEREAS, Interconnection Customer has requested Transmission Provider to perform an Interconnection System Impact Study to assess the impact of interconnecting the Generating Facility to the Transmission System, and of any Affected Systems;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider’s approved GIP.
- 2.0 Interconnection Customer elects and Transmission Provider shall cause to be performed an Interconnection System Impact Study consistent

with Section 7.0 of this GIP in accordance with the Tariff.

- 3.0 The scope of the Interconnection System Impact Study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 The Interconnection System Impact Study will be based upon the results of the Interconnection Feasibility Study and the technical information provided by Interconnection Customer in the Interconnection Request, subject to any modifications in accordance with Section 4.4 of the GIP. Transmission Provider reserves the right to request additional technical information from Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection Customer System Impact Study. If Interconnection Customer modifies its designated Point of Interconnection, Interconnection Request, or the technical information provided therein is modified, the time to complete the Interconnection System Impact Study may be extended.
- 5.0 The Interconnection System Impact Study report shall provide the following information:
 - identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
 - identification of any thermal overload or voltage limit violations resulting from the interconnection;
 - identification of any instability or inadequately damped response to system disturbances resulting from the interconnection and
 - description and non-binding, good faith estimated cost of facilities required to interconnect the Generating Facility to the Transmission System and to address the identified short circuit, instability, and power flow issues.
- 6.0 Interconnection Customer shall provide a deposit of \$50,000 for the performance of the Interconnection System Impact Study. Transmission Provider's good faith estimate for the time of completion of the Interconnection System Impact Study is [insert date].

Upon receipt of the Interconnection System Impact Study, Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Interconnection System Impact Study.

Any difference between the deposit and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate.

- 7.0 Miscellaneous. The Interconnection System Impact Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, that are consistent with regional practices, Applicable Laws and Regulations and the organizational nature of the Transmission Provider. All of these provisions shall be determined by the Transmission Provider and, to the extent practicable, shall be consistent with the provisions of the GIP and the GIA.

IN WITNESS THEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

[Insert name of Transmission Provider or Transmission Owner, if applicable]

By: _____ By: _____

Title: _____ Title: _____

Date: _____ Date: _____

[Insert name of Interconnection Customer]

By: _____

Title: _____

Date: _____

**Attachment A To Appendix
3 Interconnection System
Impact Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE
INTERCONNECTION SYSTEM IMPACT STUDY**

The Interconnection System Impact Study will be based upon the results of the Interconnection Feasibility Study, subject to any modifications in accordance with Section 4.4 of the GIP, and the following assumptions:

Designation of Point of Interconnection and configuration to be studied.
Designation of alternative Point(s) of Interconnection and configuration.

[Above assumptions to be completed by Interconnection Customer and other assumptions to be provided by Interconnection Customer and Transmission Provider]

APPENDIX 4 to GIP INTERCONNECTION SERVICE FACILITIES STUDY AGREEMENT

THIS AGREEMENT is made and entered into this ___ day of _____, 20__ by and between _____, a _____ organized and existing under the laws of the State of _____, (“Interconnection Customer,”) and The City Of Seattle, City Light Department, a Washington municipal corporation (“Transmission Provider “). Interconnection Customer and Transmission Provider each may be referred to as a “Party,” or collectively as the “Parties.”

RECITALS

WHEREAS, Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer dated ___; and

WHEREAS, Interconnection Customer desires to interconnect the Generating Facility with the Transmission System;

WHEREAS, Transmission Provider has completed an Interconnection System Impact Study (the “System Impact Study”) and provided the results of said study to Interconnection Customer; and

WHEREAS, Interconnection Customer has requested Transmission Provider to perform an Interconnection Facilities Study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the Interconnection System Impact Study in accordance with Good Utility Practice to physically and electrically connect the Generating Facility to the Transmission System.

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider’s approved GIP.

- 2.0 Interconnection Customer elects and Transmission Provider shall cause an Interconnection Facilities Study consistent with Section 8.0 of this GIP to be performed in accordance with the Tariff.
- 3.0 The scope of the Interconnection Facilities Study shall be subject to the assumptions set forth in Attachment A and the data provided in Attachment B to this Agreement.
- 4.0 The Interconnection Facilities Study report (i) shall provide a description, estimated cost of (consistent with Attachment A), schedule for required facilities to interconnect the Generating Facility to the Transmission System and (ii) shall address the short circuit, instability, and power flow issues identified in the Interconnection System Impact Study.
- 5.0 Interconnection Customer shall provide a deposit of \$100,000 for the performance of the Interconnection Facilities Study. The time for completion of the Interconnection Facilities Study is specified in Attachment A.

Transmission Provider shall invoice Interconnection Customer on a monthly basis for the work to be conducted on the Interconnection Facilities Study each month. Interconnection Customer shall pay invoiced amounts within 30 Calendar Days of receipt of invoice. Transmission Provider shall continue to hold the amounts on deposit until settlement of the final invoice.

- 6.0 Miscellaneous. The Interconnection Facility Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, and that are consistent with regional practices, Applicable Laws and Regulations, and the organizational nature of the Transmission Provider. All of these provisions shall be determined by the Transmission Provider and, to the extent practicable, shall be consistent with the provisions of the GIP and the GIA.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

[Insert name of Transmission Provider or Transmission Owner, if applicable]

By: _____ By: _____

Title: _____ Title: _____

Date: _____ Date: _____

[Insert name of Interconnection Customer]

By: _____

Title: _____

Date: _____

**Attachment A To Appendix 4
Interconnection Facilities
Study Agreement**

**INTERCONNECTION CUSTOMER SCHEDULE ELECTION FOR
CONDUCTING THE INTERCONNECTION FACILITIES STUDY**

Transmission Provider shall use Reasonable Efforts to complete the study and issue a draft Interconnection Facilities Study report to Interconnection Customer within the following number of days after of receipt of an executed copy of this Interconnection Facilities Study Agreement:

- 90 Calendar Days with no more than a +/- 20 percent cost estimate contained in the report, or
- 180 Calendar Days with no more than a +/- 10 percent cost estimate contained in the report.

**Attachment B to Appendix 4
Interconnection Facilities
Study Agreement**

**DATA FORM TO BE PROVIDED BY INTERCONNECTION
CUSTOMER WITH THE
INTERCONNECTION FACILITIES STUDY AGREEMENT**

Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

One set of metering is required for each generation connection to the new ring bus or existing Transmission Provider station. Number of generation connections:

On the one line diagram indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one line diagram indicate the location of auxiliary power. (Minimum load on CT/PT) Amps

Will an alternate source of auxiliary power be available during CT/PT maintenance?
 Yes No

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? Yes No (Please indicate on one line diagram).

What type of control system or PLC will be located at Interconnection Customer's Generating Facility?

What protocol does the control system or PLC use?

Please provide a 7.5-minute quadrangle of the site. Sketch the plant, station, transmission line, and property line.

Physical dimensions of the proposed interconnection station:

Bus length from generation to interconnection station:

Line length from interconnection station to Transmission Provider’s transmission line.

Tower number observed in the field. (Painted on tower leg)*

Number of third party easements required for transmission lines*:

* To be completed in coordination with Transmission

Provider. Is the Generating Facility in the Transmission Provider’s service area?

Yes No Local provider:

Please provide proposed schedule dates:

Begin Construction Date:

Generator step-up transformer back feed power Date:

 receives

Generation Testing Date:

Commercial Operation Date:

APPENDIX 5 to GIP OPTIONAL INTERCONNECTION STUDY AGREEMENT

THIS AGREEMENT is made and entered into this ___ day of _____, 20__ by and between _____, a _____ organized and existing under the laws of the State of _____, (“Interconnection Customer,”) and The City Of Seattle, City Light Department, a Washington municipal corporation (“Transmission Provider “). Interconnection Customer and Transmission Provider each may be referred to as a “Party, ” or collectively as the “Parties.”

RECITALS

WHEREAS, Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer dated _____;

WHEREAS, Interconnection Customer is proposing to establish an interconnection with the Transmission System; and

WHEREAS, Interconnection Customer has submitted to Transmission Provider an Interconnection Request; and

WHEREAS, on or after the date when Interconnection Customer receives the Interconnection System Impact Study results, Interconnection Customer has further requested that Transmission Provider prepare an Optional Interconnection Study;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider’s approved GIP.
- 2.0 Interconnection Customer elects and Transmission Provider shall cause an Optional Interconnection Study consistent with Section 10.0 of this GIP to be performed in accordance with the Tariff.

- 3.0 The scope of the Optional Interconnection Study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 The Optional Interconnection Study shall be performed solely for informational purposes.
- 5.0 The Optional Interconnection Study report shall provide a sensitivity analysis based on the assumptions specified by Interconnection Customer in Attachment A to this Agreement. The Optional Interconnection Study will identify Transmission Provider's Interconnection Facilities and the Network Upgrades, and the estimated cost thereof, that may be required to provide transmission service or interconnection service based upon the assumptions specified by Interconnection Customer in Attachment A.
- 6.0 Interconnection Customer shall provide a deposit of \$10,000 for the performance of the Optional Interconnection Study. Transmission Provider's good faith estimate for the time of completion of the Optional Interconnection Study is ___/___/____.

Upon receipt of the Optional Interconnection Study, Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Optional Study.

Any difference between the initial payment and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate.

- 7.0 Miscellaneous. The Optional Interconnection Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, and that are consistent with regional practices, Applicable Laws and Regulations, and the organizational nature of the Transmission Provider. All of these provisions shall be determined by the Transmission Provider and, to the extent practicable, shall be consistent with the provisions of the GIP and the GIA.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

[Insert name of Transmission Provider or Transmission Owner, if applicable]

By: _____ By: _____

Title: _____ Title: _____

Date: _____ Date: _____

[Insert name of Interconnection Customer]

By: _____

Title: _____

Date: _____

**APPENDIX 6 to GIP
GENERATOR INTERCONNECTION AGREEMENT (SEE GIA)**

DRAFT

APPENDIX 7

INTERCONNECTION PROCEDURES FOR A WIND GENERATING PLANT

Appendix 7 sets forth procedures specific to a wind generating plant. All other requirements of this GIP continue to apply to wind generating plant interconnections.

A. Special Procedures Applicable to Wind Generators

The wind plant Interconnection Customer, in completing the Interconnection Request required by section 3.3 of this GIP, may provide to the Transmission Provider a set of preliminary electrical design specifications depicting the wind plant as a single equivalent generator. Upon satisfying these and other applicable Interconnection Request conditions, the wind plant may enter the queue and receive the base case data as provided for in this GIP.

No later than six months after submitting an Interconnection Request completed in this manner, the wind plant Interconnection Customer must submit completed detailed electrical design specifications and other data (including collector system layout data) needed to allow the Transmission Provider to complete the System Impact Study.

**Appendix 6 to the Generator
Interconnection Procedures**

GENERATOR INTERCONNECTION AGREEMENT (GIA)

DRAFT

GENERATOR INTERCONNECTION AGREEMENT

THIS GENERATOR INTERCONNECTION AGREEMENT (“Agreement”) is made and entered into this day of _____ 20____, by and between _____, a _____ organized and existing under the laws of the State/Commonwealth of _____ (“Interconnection Customer” with a Generating Facility), and The City Of Seattle, City Light Department, a Washington municipal corporation (“Transmission Provider and/or Transmission Owner”). Interconnection Customer and Transmission Provider each may be referred to as a “Party” or collectively as the “Parties.”

Recitals

WHEREAS, Transmission Provider operates the Transmission System; and

WHEREAS, Interconnection Customer intends to own, lease and/or control and operate the Generating Facility identified as a Generating Facility in Appendix C to this Agreement; and,

WHEREAS, Interconnection Customer and Transmission Provider have agreed to enter into this Agreement for the purpose of interconnecting the Generating Facility with the Transmission System;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein, it is agreed:

When used in this Generator Interconnection Agreement, terms with initial capitalization that are not defined in Article 1 shall have the meanings specified in the Article in which they are used or the Open Access Transmission Tariff (Tariff).

Article 1. Definitions

Adverse System Impact shall mean the negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.

Affected System shall mean an electric system other than the Transmission Provider's Transmission System that may be affected by the proposed interconnection.

Affected System Operator shall mean the entity that operates an Affected System.

Affiliate shall mean, with respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

Ancillary Services shall mean those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility Practice.

Applicable Laws and Regulations shall mean all duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

Applicable Reliability Council shall mean the reliability council applicable to the Transmission System to which the Generating Facility is directly interconnected.

Applicable Reliability Standards shall mean the requirements and guidelines of NERC, the Applicable Reliability Council, and the Control Area of the Transmission System to which the Generating Facility is directly interconnected.

Balancing Authority (BA) shall mean the responsible entity that integrates resource plans ahead of time, maintains Demand and resource balance within a Balancing Authority Area, and supports Interconnection frequency in real time.

Balancing Authority Area (BAA) shall mean the collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area. For the purpose of this Tariff BAA shall have the same meaning as "Control Area."

Base Case shall mean the base case power flow, short circuit, and stability data bases used for the Interconnection Studies by the Transmission Provider or Interconnection Customer.

Breach shall mean the failure of a Party to perform or observe any material term or condition of the Generator Interconnection Agreement.

Breaching Party shall mean a Party that is in Breach of the Generator Interconnection Agreement.

Business Day shall mean Monday through Friday, excluding Federal Holidays.

Calendar Day shall mean any day including Saturday, Sunday or a Federal Holiday.

Clustering shall mean the process whereby a group of Interconnection Requests is studied together, instead of serially, for the purpose of conducting the Interconnection System Impact Study.

Commercial Operation shall mean the status of a Generating Facility that has commenced generating electricity for sale, excluding electricity generated during Trial Operation.

Commercial Operation Date of a unit shall mean the date on which the Generating Facility commences Commercial Operation as agreed to by the Parties pursuant to Appendix E to the Generator Interconnection Agreement.

Confidential Information shall mean any confidential, proprietary or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy or compilation relating to the present or planned business of a Party, which is designated as confidential by the Party supplying the information, whether conveyed orally, electronically, in writing, through inspection, or otherwise.

Control Area shall mean an electrical system or systems bounded by interconnection metering and telemetry, capable of controlling generation to maintain its interchange schedule with other Control Areas and contributing to frequency regulation of the interconnection. A Control Area must be certified by the Applicable Reliability Council. For the purpose of this Tariff, Control Area shall have the same meaning as “Balancing Authority Area” or “BAA.”

Default shall mean the failure of a Breaching Party to cure its Breach in

accordance with Article 17 of the Generator Interconnection Agreement.

Dispute Resolution shall mean the procedure for resolution of a dispute between the Parties in which they will attempt to resolve the dispute under Article 27 of this agreement.

Distribution System shall mean the Transmission Provider's facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries directly from nearby generators or from interchanges with higher voltage transmission networks which transport bulk power over longer distances. The voltage levels at which distribution systems operate differ among areas.

Distribution Upgrades shall mean the additions, modifications, and upgrades to the Transmission Provider's Distribution System at or beyond the Point of Interconnection to facilitate interconnection of the Generating Facility and render the transmission service necessary to effect Interconnection Customer's wholesale sale of electricity in interstate commerce. Distribution Upgrades do not include Interconnection Facilities.

Effective Date shall mean the date on which the Generator Interconnection Agreement becomes effective upon execution by the Parties.

Emergency Condition shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of a Transmission Provider, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to Transmission Provider's Transmission System, Transmission Provider's Interconnection Facilities or the electric systems of others to which the Transmission Provider's Transmission System is directly connected; or (3) that, in the case of Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility or Interconnection Customer's Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions; provided, that Interconnection Customer is not obligated by the Generator Interconnection Agreement to possess black start capability.

Energy Resource Interconnection Service shall mean an Interconnection Service that allows the Interconnection Customer to connect its Generating Facility to the Transmission Provider's Transmission System to be eligible to deliver the Generating Facility's electric output using the existing firm or nonfirm capacity of the Transmission Provider's Transmission System on an as available basis. Energy Resource Interconnection Service in and of itself does not convey transmission service.

Engineering & Procurement (E&P) Agreement shall mean an agreement that authorizes the Transmission Provider to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection in order to advance the implementation of the Interconnection Request.

Environmental Law shall mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

Federal Power Act shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a *et seq.*

FERC shall mean the Federal Energy Regulatory Commission (Commission) or its successor.

Force Majeure shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include acts of negligence or intentional wrongdoing by the Party claiming Force Majeure.

Generating Facility shall mean Interconnection Customer's device for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

Generating Facility Capacity shall mean the net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple energy production devices.

Generator Interconnection Agreement (GIA) shall mean the form of interconnection agreement applicable to an Interconnection Request pertaining to a Generating Facility that is included in the Transmission Provider's Tariff.

Generator Interconnection Procedures (GIP) shall mean the interconnection procedures applicable to an Interconnection Request pertaining to a Generating Facility that are included in the Transmission Provider's Tariff.

Good Utility Practice shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good

business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

Governmental Authority shall mean any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include Interconnection Customer, Transmission Provider, or any Affiliate thereof.

Hazardous Substances shall mean any chemicals, materials or substances defined as or included in the definition of “hazardous substances,” “hazardous wastes,” “hazardous materials,” “hazardous constituents,” “restricted hazardous materials,” “extremely hazardous substances,” “toxic substances,” “radioactive substances,” “contaminants,” “pollutants,” “toxic pollutants” or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

Initial Synchronization Date shall mean the date upon which the Generating Facility is initially synchronized and upon which Trial Operation begins.

In-Service Date shall mean the date upon which the Interconnection Customer reasonably expects it will be ready to begin use of the Transmission Provider’s Interconnection Facilities to obtain back feed power.

Interconnection Customer shall mean any entity, including the Transmission Provider, Transmission Owner, that proposes to interconnect its Generating Facility with the Transmission Provider’s Transmission System.

Interconnection Customer’s Interconnection Facilities shall mean all facilities and equipment, as identified in Appendix A of the Generator Interconnection Agreement, that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the Transmission Provider’s Transmission System. Interconnection Customer’s Interconnection Facilities are sole use facilities.

Interconnection Facilities shall mean the Transmission Provider's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the Transmission Provider's Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

Interconnection Facilities Study shall mean a study conducted by the Transmission Provider or a third party consultant for the Interconnection Customer to determine a list of facilities (including Transmission Provider's Interconnection Facilities and Network Upgrades as identified in the Interconnection System Impact Study), the cost of those facilities, and the time required to interconnect the Generating Facility with the Transmission Provider's Transmission System. The scope of the study is defined in Section 8 of the Generator Interconnection Procedures.

Interconnection Facilities Study Agreement shall mean the form of agreement contained in Appendix 4 of the Generator Interconnection Procedures for conducting the Interconnection Facilities Study.

Interconnection Feasibility Study shall mean a preliminary evaluation of the system impact and cost of interconnecting the Generating Facility to the Transmission Provider's Transmission System, the scope of which is described in Section 6 of the Generator Interconnection Procedures.

Interconnection Feasibility Study Agreement shall mean the form of agreement contained in Appendix 2 of the Generator Interconnection Procedures for conducting the Interconnection Feasibility Study.

Interconnection Request shall mean an Interconnection Customer's request, in the form of Appendix 1 to the Generator Interconnection Procedures, in accordance with the Tariff, to interconnect a new Generating Facility, or to increase the capacity of, or make a Material Modification to the operating characteristics of, an existing Generating Facility that is interconnected with the Transmission Provider's Transmission System.

Interconnection Service shall mean the service provided by the Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to the Transmission Provider's Transmission System and enabling it to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Generator Interconnection Agreement and, if applicable, the Transmission Provider's Tariff.

Interconnection Study shall mean any of the following studies: the Interconnection Feasibility Study, the Interconnection System Impact Study, and the Interconnection Facilities Study described in the Generator Interconnection Procedures.

Interconnection System Impact Study shall mean an engineering study that evaluates the impact of the proposed interconnection on the safety and reliability of Transmission Provider's Transmission System and, if applicable, an Affected System. The study shall identify and detail the system impacts that would result if the Generating Facility were interconnected without project modifications or system modifications, focusing on the Adverse System Impacts identified in the Interconnection Feasibility Study, or to study potential impacts, including but not limited to those identified in the Scoping Meeting as described in the Generator Interconnection Procedures.

Interconnection System Impact Study Agreement shall mean the form of agreement contained in Appendix 3 of the Generator Interconnection Procedures for conducting the Interconnection System Impact Study.

IRS shall mean the Internal Revenue Service.

Joint Operating Committee shall be a group made up of representatives from Interconnection Customers and the Transmission Provider to coordinate operating and technical considerations of Interconnection Service.

Loss shall mean any and all losses relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's performance, or non-performance of its obligations under the Generator Interconnection Agreement on behalf of the Indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the Indemnifying Party.

Material Modification shall mean those modifications that have a material impact on the cost or timing of any Interconnection Request with a later queue priority date.

Metering Equipment shall mean all metering equipment installed or to be installed at the Generating Facility pursuant to the Generator Interconnection Agreement at the metering points, including but not limited to instrument transformers, MWh-meters, data acquisition equipment, transducers, remote terminal unit, communications equipment, phone lines, and fiber optics.

NERC shall mean the North American Electric Reliability Council or its

successor organization.

Network Upgrades shall mean the additions, modifications, and upgrades to the Transmission Provider's Transmission System required at or beyond the point at which the Interconnection Facilities connect to the Transmission Provider's Transmission System to accommodate the interconnection of the Generating Facility to the Transmission Provider's Transmission System.

Notice of Dispute shall mean a written notice of a dispute or claim that arises out of or in connection with the Generator Interconnection Agreement or its performance.

Optional Interconnection Study shall mean a sensitivity analysis based on assumptions specified by the Interconnection Customer in the Optional Interconnection Study Agreement.

Optional Interconnection Study Agreement shall mean the form of agreement contained in Appendix 5 of the Generator Interconnection Procedures for conducting the Optional Interconnection Study.

Party or Parties shall mean Transmission Provider, Transmission Owner, Interconnection Customer or any combination of the above.

Point of Change of Ownership shall mean the point, as set forth in Appendix A to the Generator Interconnection Agreement, where the Interconnection Customer's Interconnection Facilities connect to the Transmission Provider's Interconnection Facilities.

Point of Interconnection shall mean the point, as set forth in Appendix A to the Generator Interconnection Agreement, where the Interconnection Facilities connect to the Transmission Provider's Transmission System.

Provisional Interconnection Service shall mean Interconnection Service provided by Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to Transmission Provider's Transmission System and enabling that Transmission System to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Provisional Generator Interconnection Agreement and, if applicable, the Tariff.

Provisional Generator Interconnection Agreement shall mean the interconnection agreement for Provisional Interconnection Service established between Transmission Provider and/or the Transmission Owner and the Interconnection Customer. This agreement shall take the form of the Generator Interconnection

Agreement, modified for provisional purposes.

Queue Position shall mean the order of a valid Interconnection Request, relative to all other pending valid Interconnection Requests, that is established based upon the date and time of receipt of the valid Interconnection Request by the Transmission Provider.

Reasonable Efforts shall mean, with respect to an action required to be attempted or taken by a Party under the Generator Interconnection Agreement, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

Scoping Meeting shall mean the meeting between representatives of the Interconnection Customer and Transmission Provider conducted for the purpose of discussing alternative interconnection options, to exchange information including any transmission data and earlier study evaluations that would be reasonably expected to impact such interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

Site Control shall mean documentation reasonably demonstrating: (1) ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing the Generating Facility; (2) an option to purchase or acquire a leasehold site for such purpose; or (3) an exclusivity or other business relationship between Interconnection Customer and the entity having the right to sell, lease or grant Interconnection Customer the right to possess or occupy a site for such purpose.

Stand Alone Network Upgrades shall mean Network Upgrades that an Interconnection Customer may construct without affecting day-to-day operations of the Transmission System during their construction. Both the Transmission Provider and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the Generator Interconnection Agreement.

Surplus Interconnection Service shall mean any unneeded portion of Interconnection Service established in a Generator Interconnection Agreement, such that if Surplus Interconnection Service is utilized the total amount of Interconnection Service at the Point of Interconnection would remain the same

System Protection Facilities shall mean the equipment, including necessary protection signal communications equipment, required to protect (1) the Transmission Provider's Transmission System from faults or other electrical disturbances occurring at the Generating Facility and (2) the Generating Facility from faults or other electrical system disturbances occurring on the Transmission

Provider's Transmission System or on other delivery systems or other generating systems to which the Transmission Provider's Transmission System is directly connected.

Tariff shall mean the Transmission Provider's Tariff through which open access transmission service and Interconnection Service are offered, as amended or supplemented from time to time, or any successor tariff.

Transmission Owner shall mean an entity that owns, leases or otherwise possesses an interest in the portion of the Transmission System at the Point of Interconnection and may be a Party to the Generator Interconnection Agreement to the extent necessary.

Transmission Provider shall mean The City of Seattle, City Light Department. The term Transmission Provider should be read to include the Transmission Owner when the Transmission Owner is separate from the Transmission Provider.

Transmission Provider's Interconnection Facilities shall mean all facilities and equipment owned, controlled or operated by the Transmission Provider from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the Generator Interconnection Agreement, including any modifications, additions or upgrades to such facilities and equipment. Transmission Provider's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

Transmission System shall mean the facilities owned, controlled or operated by the Transmission Provider or Transmission Owner that are used to provide transmission service under the Tariff.

Trial Operation shall mean the period during which Interconnection Customer is engaged in on-site test operations and commissioning of the Generating Facility prior to Commercial Operation.

Variable Energy Resource shall mean a device for the production of electricity that is characterized by an energy source that: (1) is renewable; (2) cannot be stored by the facility owner or operator; and (3) has variability that is beyond the control of the facility owner or operator.

Article 2. Effective Date, Term, and Termination

2.1 Effective Date. This GIA shall become effective upon execution by the Parties.

2.2 Term of Agreement. Subject to the provisions of Article 2.3, this GIA shall remain in effect for a period of 10 years from the Effective Date or such other longer period as Interconnection Customer may request (Term to be specified in individual agreements) and shall be automatically renewed for each successive one-year period thereafter.

2.3 Termination Procedures.

2.3.1 Written Notice. This GIA may be terminated by Interconnection Customer after giving Transmission Provider 90 Calendar Days advance written notice, or by Transmission Provider after the Generating Facility permanently ceases Commercial Operation.

2.3.2 Default. Either Party may terminate this GIA in accordance with Article 17.

2.3.3 Notwithstanding Articles 2.3.1 and 2.3.2, no termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, and Dispute Resolution, if such procedure has been invoked under this agreement, has been resolved in favor of the terminating party.

2.4 Termination Costs. If a Party elects to terminate this Agreement pursuant to Article 2.3 above, each Party shall pay all costs incurred (including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment) or charges assessed by the other Party, as of the date of the other Party's receipt of such notice of termination, that are the responsibility of the Terminating Party under this GIA. In the event of termination by a Party, the Parties shall use commercially Reasonable Efforts to mitigate the costs, damages and charges arising as a consequence of termination. Upon termination of this GIA, unless otherwise determined by Dispute Resolution:

2.4.1 With respect to any portion of Transmission Provider's Interconnection Facilities that have not yet been constructed or installed, Transmission Provider shall to the extent possible and with Interconnection Customer's authorization cancel any pending orders of, or return, any materials or equipment for, or contracts for construction of, such facilities; provided that in the event Interconnection Customer elects not to authorize such cancellation, Interconnection Customer shall assume all payment obligations with respect to such materials, equipment, and contracts, and Transmission Provider shall deliver such material and equipment, and, if necessary, assign such contracts, to Interconnection Customer as soon as

practicable, at Interconnection Customer's expense. To the extent that Interconnection Customer has already paid Transmission Provider for any or all such costs of materials or equipment not taken by Interconnection Customer, Transmission Provider shall promptly refund such amounts to Interconnection Customer, less any costs, including penalties incurred by Transmission Provider to cancel any pending orders of or return such materials, equipment, or contracts.

If an Interconnection Customer terminates this GIA, it shall be responsible for all costs incurred in association with that Interconnection Customer's interconnection, including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment, and other expenses including any Network Upgrades for which Transmission Provider has incurred expenses and has not been reimbursed by Interconnection Customer.

2.4.2 Transmission Provider may, at its option, retain any portion of such materials, equipment, or facilities that Interconnection Customer chooses not to accept delivery of, in which case Transmission Provider shall be responsible for all costs associated with procuring such materials, equipment, or facilities.

2.4.3 With respect to any portion of the Interconnection Facilities, and any other facilities already installed or constructed pursuant to the terms of this GIA, Interconnection Customer shall be responsible for all costs associated with the removal, relocation or other disposition or retirement of such materials, equipment, or facilities.

2.5 Disconnection. Upon termination of this GIA, the Parties will take all appropriate steps to disconnect the Generating Facility from the Transmission System. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this GIA or such non-terminating Party otherwise is responsible for these costs under this GIA.

2.6 Survival. This GIA shall continue in effect after termination to the extent necessary to provide for final billings and payments and for costs incurred hereunder, including billings and payments pursuant to this GIA; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this GIA was in effect; and to permit each Party to have access to the lands of the other Party pursuant to this GIA or other applicable agreements, to disconnect, remove or salvage its own facilities and

equipment.

Article 3. Regulatory Filings

Reserved.

Article 4. Scope of Service

4.1 Interconnection Product Options. Interconnection Customer has selected the following (checked) type of Interconnection Service:

4.1.1 Energy Resource Interconnection Service.

4.1.1.1 The Product. Energy Resource Interconnection Service allows Interconnection Customer to connect the Generating Facility to the Transmission System and be eligible to deliver the Generating Facility's output using the existing firm or non-firm capacity of the Transmission System on an "as available" basis. To the extent Interconnection Customer wants to receive Energy Resource Interconnection Service, Transmission Provider shall construct facilities identified in Attachment A.

4.1.1.2 Transmission Delivery Service Implications. Under Energy Resource Interconnection Service, Interconnection Customer will be eligible to inject power from the Generating Facility into and deliver power across the interconnecting Transmission Provider's Transmission System on an "as available" basis up to the amount of MWs identified in the applicable stability and steady state studies to the extent the upgrades initially required to qualify for Energy Resource Interconnection Service have been constructed. Where eligible to do so (e.g., PJM, ISO-NE, NYISO), Interconnection Customer may place a bid to sell into the market up to the maximum identified Generating Facility output, subject to any conditions specified in the interconnection service approval, and the Generating Facility will be dispatched to the extent Interconnection Customer's bid clears. In all other instances, no transmission delivery service from the Generating Facility is assured, but Interconnection Customer may obtain Point-to-Point Transmission Service, pursuant to Transmission Provider's

Tariff, up to the maximum output identified in the stability and steady state studies. In those instances, in order for Interconnection Customer to obtain the right to deliver or inject energy beyond the Generating Facility Point of Interconnection or to improve its ability to do so, transmission delivery service must be obtained pursuant to the provisions of Transmission Provider's Tariff. The Interconnection Customer's ability to inject its Generating Facility output beyond the Point of Interconnection, therefore, will depend on the existing capacity of Transmission Provider's Transmission System at such time as a transmission service request is made that would accommodate such delivery. The provision of firm Point-to-Point Transmission Service may require the construction of additional Network Upgrades.

- 4.2 Provision of Service.** Transmission Provider shall provide Interconnection Service for the Generating Facility at the Point of Interconnection.
- 4.3 Performance Standards.** Each Party shall perform all of its obligations under this GIA in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice, and to the extent a Party is required or prevented or limited in taking any action by such regulations and standards, such Party shall not be deemed to be in Breach of this GIA for its compliance therewith. Additionally, the Interconnection Customer shall have a continuing duty to comply with Attachment Q of this Tariff, as applicable.
- 4.4 No Transmission Delivery Service.** The execution of this GIA does not constitute a request for, nor the provision of, any transmission delivery service under Transmission Provider's Tariff, and does not convey any right to deliver electricity to any specific customer or Point of Delivery.
- 4.5 Interconnection Customer Provided Services.** The services provided by Interconnection Customer under this GIA are set forth in Article 9.6 and Article 13.5.1. Interconnection Customer shall be paid for such services in accordance with Article 11.6.

Article 5. Interconnection Facilities Engineering, Procurement, and Construction

- 5.1 Options.** Unless otherwise mutually agreed to between the Parties, Interconnection Customer shall select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either the Standard

Option or Alternate Option set forth below for completion of Transmission Provider's Interconnection Facilities and Network Upgrades as set forth in Appendix A, Interconnection Facilities and Network Upgrades, and such dates and selected option shall be set forth in Appendix B, Milestones..

5.1.1 Standard Option. Transmission Provider shall design, procure, and construct Transmission Provider's Interconnection Facilities and Network Upgrades, using Reasonable Efforts to complete Transmission Provider's Interconnection Facilities and Network Upgrades by the dates set forth in Appendix B, Milestones. Transmission Provider shall not be required to undertake any action which is inconsistent with its standard safety practices, its material and equipment specifications, its design criteria and construction procedures, its labor agreements, and Applicable Laws and Regulations. In the event Transmission Provider reasonably expects that it will not be able to complete Transmission Provider's Interconnection Facilities and Network Upgrades by the specified dates, Transmission Provider shall promptly provide written notice to Interconnection Customer and shall undertake Reasonable Efforts to meet the earliest dates thereafter. Interconnection Customer understands and agrees that Transmission Provider shall not be responsible for any delays.

5.1.2 Alternate Option. If the dates designated by Interconnection Customer are acceptable to Transmission Provider, Transmission Provider shall so notify Interconnection Customer within 30 Calendar Days, and shall assume responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities by the designated dates.

5.1.3 Option to Build. If the dates designated by Interconnection Customer are not acceptable to Transmission Provider, Transmission Provider shall so notify Interconnection Customer within thirty (30) Calendar Days, and unless the Parties agree otherwise, Interconnection Customer shall have the option to assume responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades on the dates specified in Article 5.1.2. Transmission Provider and Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify such Stand Alone Network Upgrades in Appendix A. Except for Stand Alone Network Upgrades, Interconnection Customer shall have no right to construct Network Upgrades under this option.

5.1.4 Negotiated Option. If the Interconnection Customer elects not to exercise its option under Article 5.1.3, Option to Build, Interconnection Customer

shall so notify Transmission Provider within 30 Calendar Days, the Parties shall in good faith attempt to negotiate terms and conditions (including revision of the specified dates, the provision of incentives, or the procurement and construction of a portion of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades by Interconnection Customer) pursuant to which Transmission Provider is responsible for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Network Upgrades. If the Parties are unable to reach agreement on such terms and conditions, Transmission Provider shall assume responsibility for the design, procurement and construction of all facilities other than Transmission Provider's Interconnection Facilities and Network Upgrades pursuant to 5.1.1, Standard Option.

5.2 General Conditions Applicable to Option to Build. If Interconnection Customer assumes responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades,

- (1) Interconnection Customer shall engineer, procure equipment, and construct Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades (or portions thereof) using Good Utility Practice and using standards and specifications provided in advance by Transmission Provider;
- (2) Interconnection Customer's engineering, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of law and Applicable Reliability Standards to which Transmission Provider would be subject in the engineering, procurement or construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades;
- (3) Transmission Provider shall review and approve the engineering design, equipment acceptance tests, and the construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades; Transmission Provider's review and approval shall be for Transmission Provider's purposes only, and nothing in this provision shall relieve Interconnection Customer's obligation to design, engineer and construct in compliance with all applicable laws, codes and permits;
- (4) prior to commencement of construction, Interconnection Customer shall provide to Transmission Provider a schedule for construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades, and

shall promptly respond to requests for information from Transmission Provider;

(5) at any time during construction, Transmission Provider shall have the right to gain unrestricted access to Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades and to conduct inspections of the same;

(6) at any time during construction, should any phase of the engineering, equipment procurement, or construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades not meet the standards and specifications provided by Transmission Provider, Interconnection Customer shall be obligated to remedy deficiencies in that portion of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades;

(7) Interconnection Customer shall indemnify Transmission Provider for claims arising from Interconnection Customer's construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades under the terms and procedures applicable to Article 18.1 Indemnity;

(8) Interconnection Customer shall transfer control of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades to Transmission Provider;

(9) Unless Parties otherwise agree, Interconnection Customer shall transfer ownership of Transmission Provider's Interconnection Facilities and Stand-Alone Network Upgrades to Transmission Provider;

(10) Transmission Provider shall approve and accept for operation and maintenance Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades to the extent engineered, procured, and constructed in accordance with this Article 5.2; and

(11) Interconnection Customer shall deliver to Transmission Provider "as-built" drawings, information, and any other documents that are reasonably required by Transmission Provider to assure that the Interconnection Facilities and Stand-Alone Network Upgrades are built to the standards and specifications required by Transmission Provider.

(12) If Interconnection Customer exercises the Option to Build pursuant to

Article 5.1.3, Interconnection Customer shall pay Transmission Provider the agreed upon amount of [\$ PLACEHOLDER] for Transmission Provider to execute the responsibilities enumerated to Transmission Provider under Article 5.2. Transmission Provider shall invoice Interconnection Customer for this total amount to be divided on a monthly basis pursuant to Article 12.

5.3 Power System Stabilizers. The Interconnection Customer shall procure, install, maintain and operate Power System Stabilizers in accordance with the guidelines and procedures established by the Applicable Reliability Council. Transmission Provider reserves the right to reasonably establish minimum acceptable settings for any installed Power System Stabilizers, subject to the design and operating limitations of the Generating Facility. If the Generating Facility's Power System Stabilizers are removed from service or not capable of automatic operation, Interconnection Customer shall immediately notify Transmission Provider's system operator, or its designated representative. The requirements of this paragraph shall not apply to wind generators.

5.4 Equipment Procurement. If responsibility for construction of Transmission Provider's Interconnection Facilities or Network Upgrades is to be borne by Transmission Provider, then Transmission Provider shall commence design of Transmission Provider's Interconnection Facilities or Network Upgrades and procure necessary equipment as soon as practicable after all of the following conditions are satisfied, unless the Parties otherwise agree in writing:

5.4.1 Transmission Provider has completed the Facilities Study pursuant to the Facilities Study Agreement;

5.4.2 Transmission Provider has received written authorization to proceed with design and procurement from Interconnection Customer by the date specified in Appendix B, Milestones; and

5.4.3 Interconnection Customer has provided security to Transmission Provider in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

5.5 Construction Commencement. Transmission Provider shall commence construction of Transmission Provider's Interconnection Facilities and Network Upgrades for which it is responsible as soon as practicable after the following additional conditions are satisfied:

5.5.1 Approval of the appropriate Governmental Authority has been obtained for any facilities requiring regulatory approval;

- 5.5.2** Necessary real property rights and rights-of-way have been obtained, to the extent required for the construction of a discrete aspect of Transmission Provider's Interconnection Facilities and Network Upgrades;
- 5.5.3** Transmission Provider has received written authorization to proceed with construction from Interconnection Customer by the date specified in Appendix B, Milestones; and
- 5.5.4** Interconnection Customer has provided security to Transmission Provider in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.
- 5.6 Work Progress.** The Parties will keep each other advised periodically as to the progress of their respective design, procurement and construction efforts. Either Party may, at any time, request a progress report from the other Party. If, at any time, Interconnection Customer determines that the completion of Transmission Provider's Interconnection Facilities will not be required until after the specified In-Service Date, Interconnection Customer will provide written notice to Transmission Provider of such later date upon which the completion of Transmission Provider's Interconnection Facilities will be required.
- 5.7 Information Exchange.** As soon as reasonably practicable after the Effective Date, the Parties shall exchange information regarding the design and compatibility of the Parties' Interconnection Facilities and compatibility of the Interconnection Facilities with Transmission Provider's Transmission System, and shall work diligently and in good faith to make any necessary design changes.
- 5.8 Other Interconnection Options.**
- 5.8.1 Limited Operation.** If any of Transmission Provider's Interconnection Facilities or Network Upgrades are not reasonably expected to be completed prior to the Commercial Operation Date of the Generating Facility, Transmission Provider shall, upon the request and at the expense of Interconnection Customer, perform operating studies on a timely basis to determine the extent to which the Generating Facility and Interconnection Customer's Interconnection Facilities may operate prior to the completion of Transmission Provider's Interconnection Facilities or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and this GIA. Transmission Provider shall permit Interconnection Customer to operate the Generating Facility and Interconnection Customer's Interconnection Facilities in accordance with the results of such studies.

5.8.2 Provisional Interconnection Service. Upon the request of Interconnection Customer, and prior to completion of requisite Interconnection Facilities, Network Upgrades, Distribution Upgrades, or System Protection Facilities Transmission Provider may execute a Provisional Generator Interconnection Agreement or Interconnection Customer may request the filing of an unexecuted Provisional Generator Interconnection Agreement with the Interconnection Customer for limited Interconnection Service at the discretion of Transmission Provider based upon an evaluation that will consider the results of available studies. Transmission Provider shall determine, through available studies or additional studies as necessary, whether stability, short circuit, thermal, and/or voltage issues would arise if Interconnection Customer interconnects without modifications to the Generating Facility or Transmission System. Transmission Provider shall determine whether any Interconnection Facilities, Network Upgrades, Distribution Upgrades, or System Protection Facilities that are necessary to meet the requirements of NERC, or any applicable Regional Entity for the interconnection of a new, modified and/or expanded Generating Facility are in place prior to the commencement of Interconnection Service from the Generating Facility. Where available studies indicate that such, Interconnection Facilities, Network Upgrades, Distribution Upgrades, and/or System Protection Facilities that are required for the interconnection of a new, modified and/or expanded Generating Facility are not currently in place, Transmission Provider will perform a study, at the Interconnection Customer's expense, to confirm the facilities that are required for Provisional Interconnection Service. The maximum permissible output of the Generating Facility in the Provisional Generator Interconnection Agreement shall be studied and updated [on a frequency determined by Transmission Provider and at the Interconnection Customer's expense]. Interconnection Customer assumes all risk and liabilities with respect to changes between the Provisional Generator Interconnection Agreement and the Generator Interconnection Agreement, including changes in output limits and Interconnection Facilities, Network Upgrades, Distribution Upgrades, and/or System Protection Facilities cost responsibilities.

5.9 Interconnection Customer's Interconnection Facilities ('ICIF').

Interconnection Customer shall, at its expense, design, procure, construct, own and install the ICIF, as set forth in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

5.9.1 Interconnection Customer's Interconnection Facility Specifications. Interconnection Customer shall submit initial specifications for the ICIF, including System Protection Facilities, to Transmission Provider at least 180 Calendar Days prior to the Initial

Synchronization Date; and final specifications for review and comment at least 90 Calendar Days prior to the Initial Synchronization Date. Transmission Provider shall review such specifications to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Transmission Provider and comment on such specifications within 30 Calendar Days of Interconnection Customer's submission. All specifications provided hereunder shall be deemed confidential.

5.9.2 Transmission Provider's Review. Transmission Provider's review of Interconnection Customer's final specifications shall not be construed as confirming, endorsing, or providing a warranty as to the design, fitness, safety, durability or reliability of the Generating Facility, or the ICIF. Interconnection Customer shall make such changes to the ICIF as may reasonably be required by Transmission Provider, in accordance with Good Utility Practice, to ensure that the ICIF are compatible with the technical specifications, operational control, and safety requirements of Transmission Provider.

5.9.3 ICIF Construction. The ICIF shall be designed and constructed in accordance with Good Utility Practice. Within 120 Calendar Days after the Commercial Operation Date, unless the Parties agree on another mutually acceptable deadline, Interconnection Customer shall deliver to Transmission Provider "as-built" drawings, information and documents for the ICIF, such as: a one-line diagram, a site plan showing the Generating Facility and the ICIF, plan and elevation drawings showing the layout of the ICIF, a relay functional diagram, relaying AC and DC schematic wiring diagrams and relay settings for all facilities associated with Interconnection Customer's step-up transformers, the facilities connecting the Generating Facility to the step-up transformers and the ICIF, and the impedances (determined by factory tests) for the associated step-up transformers and the Generating Facility. The Interconnection Customer shall provide Transmission Provider specifications for the excitation system, automatic voltage regulator, Generating Facility control and protection settings, transformer tap settings, and communications, if applicable.

5.10 Transmission Provider's Interconnection Facilities Construction. Transmission Provider's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Upon request, within 120 Calendar Days after the Commercial Operation Date, unless the Parties agree on

another mutually acceptable deadline, Transmission Provider shall deliver to Interconnection Customer the following “as-built” drawings, information and documents for Transmission Provider’s Interconnection Facilities [include appropriate drawings and relay diagrams].

Transmission Provider will obtain control of Transmission Provider’s Interconnection Facilities and Stand Alone Network Upgrades upon completion of such facilities.

- 5.11 Access Rights.** Upon reasonable notice and supervision by a Party, and subject to any required or necessary regulatory approvals, a Party (“Granting Party”) shall furnish at no cost to the other Party (“Access Party”) any rights of use, licenses, rights of way and easements with respect to lands owned or controlled by the Granting Party, its agents (if allowed under the applicable agency agreement), or any Affiliate, that are necessary to enable the Access Party to obtain ingress and egress to construct, operate, maintain, repair, test (or witness testing), inspect, replace or remove facilities and equipment to: (i) interconnect the Generating Facility with the Transmission System; (ii) operate and maintain the Generating Facility, the Interconnection Facilities and the Transmission System; and (iii) disconnect or remove the Access Party’s facilities and equipment upon termination of this GIA. In exercising such licenses, rights of way and easements, the Access Party shall not unreasonably disrupt or interfere with normal operation of the Granting Party’s business and shall adhere to the safety rules and procedures established in advance, as may be changed from time to time, by the Granting Party and provided to the Access Party.
- 5.12 Lands of Other Property Owners.** If any part of Transmission Provider or Transmission Owner’s Interconnection Facilities and/or Network Upgrades is to be installed on property owned by persons other than Interconnection Customer or Transmission Provider or Transmission Owner, Transmission Provider or Transmission Owner shall at Interconnection Customer’s expense use efforts, similar in nature and extent to those that it typically undertakes on its own behalf, including use of its eminent domain authority, and to the extent consistent with state law, to procure from such persons any rights of use, licenses, rights of way and easements that are necessary to construct, operate, maintain, test, inspect, replace or remove Transmission Provider or Transmission Owner’s Interconnection Facilities and/or Network Upgrades upon such property.
- 5.13 Permits.** The GIA shall specify the allocation of the responsibilities of Transmission Provider or Transmission Owner and Interconnection Customer to obtain all permits, licenses and authorizations that are necessary to accomplish the interconnection in compliance with Applicable Laws and Regulations.

Transmission Provider or Transmission Owner and Interconnection Customer shall cooperate with each other in good faith in obtaining all permits, licenses, and authorizations. With respect to this paragraph, Transmission Provider or Transmission Owner shall provide permitting assistance to Interconnection Customer comparable to that provided to Transmission Provider's own generation.

5.14 Early Construction of Base Case Facilities. Interconnection Customer may request Transmission Provider to construct, and Transmission Provider shall construct, using Reasonable Efforts to accommodate Interconnection Customer's In-Service Date, all or any portion of any Network Upgrades required for Interconnection Customer to be interconnected to the Transmission System which are included in the Base Case of the Facilities Study for Interconnection Customer, and which also are required to be constructed for another Interconnection Customer, but where such construction is not scheduled to be completed in time to achieve Interconnection Customer's In-Service Date.

5.15 Suspension. Interconnection Customer reserves the right, upon written notice to Transmission Provider, to suspend at any time all work by Transmission Provider associated with the construction and installation of Transmission Provider's Interconnection Facilities and/or Network Upgrades required under this GIA with the condition that Transmission System shall be left in a safe and reliable condition in accordance with Good Utility Practice and Transmission Provider's safety and reliability criteria. In such event, Interconnection Customer shall be responsible for all reasonable and necessary costs which Transmission Provider (i) has incurred pursuant to this GIA prior to the suspension and (ii) incurs in suspending such work, including any costs incurred to perform such work as may be necessary to ensure the safety of persons and property and the integrity of the Transmission System during such suspension and, if applicable, any costs incurred in connection with the cancellation or suspension of material, equipment and labor contracts which Transmission Provider cannot reasonably avoid; provided, however, that prior to canceling or suspending any such material, equipment or labor contract, Transmission Provider shall obtain Interconnection Customer's authorization to do so.

Transmission Provider shall invoice Interconnection Customer for such costs pursuant to Article 12 and shall use due diligence to minimize its costs. In the event Interconnection Customer suspends work by Transmission Provider required under this GIA pursuant to this Article 5.16, and has not requested Transmission Provider to recommence the work required under this GIA on or before the expiration of three years following commencement of such suspension, this GIA shall be deemed terminated. The three-year period shall begin on the

date the suspension is requested, or the date of the written notice to Transmission Provider, if no effective date is specified.

5.16 Taxes.

5.16.1 Interconnection Customer Payments Not Taxable. The Parties intend that all payments or property transfers made by Interconnection Customer to Transmission Provider for the installation of Transmission Provider's Interconnection Facilities and the Network Upgrades shall be non-taxable consistent with the status of Transmission Provider as a municipal entity under applicable tax law and regulations.

5.16.2 Indemnification for the Cost Consequences of Current Tax Liability Imposed Upon the Transmission Provider. Notwithstanding Article 5.17.1, Interconnection Customer shall protect, indemnify and hold harmless Transmission Provider from the cost consequences of any tax liability imposed against Transmission Provider as the result of payments, property transfers, or use of Transmission Provider's facilities by Interconnection Customer under this GIA, as well as any interest and penalties, other than interest and penalties attributable to any delay caused by Transmission Provider.

5.16.3 Transmission Owners Who Are Not Transmission Providers. If Transmission Provider is not the same entity as the Transmission Owner, then (i) all references in this Article 5.17 to Transmission Provider shall be deemed also to refer to and to include the Transmission Owner, as appropriate, and (ii) this GIA shall not become effective until such Transmission Owner shall have agreed in writing to assume all of the duties and obligations of Transmission Provider under this Article 5.17 of this GIA.

5.17 Tax Status. Each Party shall cooperate with the other to maintain the other Party's tax status. Nothing in this GIA is intended to adversely affect any Transmission Provider's tax exempt status with respect to the issuance of bonds.

5.18 Modification.

5.19.1 General. Either Party may undertake modifications to its facilities. If a Party plans to undertake a modification that reasonably may be expected to affect the other Party's facilities, that Party shall provide to the other Party sufficient information regarding such modification so that the other Party may evaluate the potential impact of such modification prior to commencement of the work. Such information shall be deemed to be confidential hereunder and shall include

information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Generating Facility. The Party desiring to perform such work shall provide the relevant drawings, plans, and specifications to the other Party at least ninety (90) Calendar Days in advance of the commencement of the work or such shorter period upon which the Parties may agree, which agreement shall not unreasonably be withheld, conditioned or delayed.

In the case of Generating Facility modifications that do not require Interconnection Customer to submit an Interconnection Request, Transmission Provider shall provide, within 30 Calendar Days (or such other time as the Parties may agree), an estimate of any additional modifications to the Transmission System, Transmission Provider's Interconnection Facilities or Network Upgrades necessitated by such Interconnection Customer modification and a good faith estimate of the costs thereof.

- 5.19.2 Standards.** Any additions, modifications, or replacements made to a Party's facilities shall be designed, constructed and operated in accordance with this GIA, Applicable Reliability Standard and Good Utility Practice.
- 5.19.3 Modification Costs.** Interconnection Customer shall not be directly assigned for the costs of any additions, modifications, or replacements that Transmission Provider makes to Transmission Provider's Interconnection Facilities or the Transmission System to facilitate the interconnection of a third party to Transmission Provider's Interconnection Facilities or the Transmission System, or to provide transmission service to a third party under Transmission Provider's Tariff. Interconnection Customer shall be responsible for the costs of any additions, modifications, or replacements to Interconnection Customer's Interconnection Facilities that may be necessary to maintain or upgrade such Interconnection Customer's Interconnection Facilities consistent with Applicable Laws and Regulations, Applicable Reliability Standards or Good Utility Practice.

Article 6. Testing and Inspection

- 6.1 Pre-Commercial Operation Date Testing and Modifications.** Prior to the Commercial Operation Date, Transmission Provider shall test Transmission

Provider's Interconnection Facilities and Network Upgrades and Interconnection Customer shall test the Generating Facility and Interconnection Customer's Interconnection Facilities to ensure their safe and reliable operation. Similar testing may be required after initial operation. Each Party shall make any modifications to its facilities that are found to be necessary as a result of such testing. Interconnection Customer shall bear the cost of all such testing and modifications. Interconnection Customer shall generate test energy at the Generating Facility only if it has arranged for the delivery of such test energy.

- 6.2 Post-Commercial Operation Date Testing and Modifications.** Each Party shall at its own expense perform routine inspection and testing of its facilities and equipment in accordance with Good Utility Practice as may be necessary to ensure the continued interconnection of the Generating Facility with the Transmission System in a safe and reliable manner. Each Party shall have the right, upon advance written notice, to require reasonable additional testing of the other Party's facilities, at the requesting Party's expense, as may be in accordance with Good Utility Practice.
- 6.3 Right to Observe Testing.** Each Party shall notify the other Party in advance of its performance of tests of its Interconnection Facilities. The other Party has the right, at its own expense, to observe such testing.
- 6.4 Right to Inspect.** Each Party shall have the right, but shall have no obligation to: (i) observe the other Party's tests and/or inspection of any of its System Protection Facilities and other protective equipment, including Power System Stabilizers; (ii) review the settings of the other Party's System Protection Facilities and other protective equipment; and (iii) review the other Party's maintenance records relative to the Interconnection Facilities, the System Protection Facilities and other protective equipment. A Party may exercise these rights from time to time as it deems necessary upon reasonable notice to the other Party. The exercise or non-exercise by a Party of any such rights shall not be construed as an endorsement or confirmation of any element or condition of the Interconnection Facilities or the System Protection Facilities or other protective equipment or the operation thereof, or as a warranty as to the fitness, safety, desirability, or reliability of same. Any information that a Party obtains through the exercise of any of its rights under this Article 6.4 shall be deemed to be Confidential Information and treated pursuant to Article 22 of this GIA.

Article 7. Metering

- 7.1 General.** Each Party shall comply with the Applicable Reliability Council requirements. Unless otherwise agreed by the Parties, Transmission Provider shall

install Metering Equipment at the Point of Interconnection prior to any operation of the Generating Facility and shall own, operate, test and maintain such Metering Equipment. Power flows to and from the Generating Facility shall be measured at or, at Transmission Provider's option, compensated to, the Point of Interconnection. Transmission Provider shall provide metering quantities, in analog and/or digital form, to Interconnection Customer upon request. Interconnection Customer shall bear all reasonable documented costs associated with the purchase, installation, operation, testing and maintenance of the Metering Equipment.

- 7.2 Check Meters.** Interconnection Customer, at its option and expense, may install and operate, on its premises and on its side of the Point of Interconnection, one or more check meters to check Transmission Provider's meters. Such check meters shall be for check purposes only and shall not be used for the measurement of power flows for purposes of this GIA, except as provided in Article 7.4 below. The check meters shall be subject at all reasonable times to inspection and examination by Transmission Provider or its designee. The installation, operation and maintenance thereof shall be performed entirely by Interconnection Customer in accordance with Good Utility Practice.
- 7.3 Standards.** Transmission Provider shall install, calibrate, and test revenue quality Metering Equipment in accordance with applicable ANSI standards.
- 7.4 Testing of Metering Equipment.** Transmission Provider shall inspect and test all Transmission Provider-owned Metering Equipment upon installation and at least once every two years thereafter. If requested to do so by Interconnection Customer, Transmission Provider shall, at Interconnection Customer's expense, inspect or test Metering Equipment more frequently than every two years. Transmission Provider shall give reasonable notice of the time when any inspection or test shall take place, and Interconnection Customer may have representatives present at the test or inspection. If at any time Metering Equipment is found to be inaccurate or defective, it shall be adjusted, repaired or replaced at Interconnection Customer's expense, in order to provide accurate metering, unless the inaccuracy or defect is due to Transmission Provider's failure to maintain, then Transmission Provider shall pay. If Metering Equipment fails to register, or if the measurement made by Metering Equipment during a test varies by more than two percent from the measurement made by the standard meter used in the test, Transmission Provider shall adjust the measurements by correcting all measurements for the period during which Metering Equipment was in error by using Interconnection Customer's check meters, if installed. If no such check meters are installed or if the period cannot be reasonably ascertained, the adjustment shall be for the period immediately preceding the test of the Metering

Equipment equal to one-half the time from the date of the last previous test of the Metering Equipment.

- 7.5 Metering Data.** At Interconnection Customer's expense, the metered data shall be telemetered to one or more locations designated by Transmission Provider and one or more locations designated by Interconnection Customer. Such telemetered data shall be used, under normal operating conditions, as the official measurement of the amount of energy delivered from the Generating Facility to the Point of Interconnection.

Article 8. Communications

- 8.1 Interconnection Customer Obligations.** Interconnection Customer shall maintain satisfactory operating communications with Transmission Provider's Transmission System dispatcher or representative designated by Transmission Provider. Interconnection Customer shall provide standard voice line, dedicated voice line and facsimile communications at its Generating Facility control room or central dispatch facility through use of either the public telephone system, or a voice communications system that does not rely on the public telephone system. Interconnection Customer shall also provide the dedicated data circuit(s) necessary to provide Interconnection Customer data to Transmission Provider as set forth in Appendix D, Security Arrangements Details. The data circuit(s) shall extend from the Generating Facility to the location(s) specified by Transmission Provider. Any required maintenance of such communications equipment shall be performed by Interconnection Customer. Operational communications shall be activated and maintained under, but not be limited to, the following events: system paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances, and hourly and daily load data.
- 8.2 Remote Terminal Unit.** Prior to the Initial Synchronization Date of the Generating Facility, a Remote Terminal Unit, or equivalent data collection and transfer equipment acceptable to the Parties, shall be installed by Interconnection Customer, or by Transmission Provider at Interconnection Customer's expense, to gather accumulated and instantaneous data to be telemetered to the location(s) designated by Transmission Provider through use of a dedicated point-to-point data circuit(s) as indicated in Article 8.1. The communication protocol for the data circuit(s) shall be specified by Transmission Provider. Instantaneous bi-directional analog real power and reactive power flow information must be telemetered directly to the location(s) specified by Transmission Provider.

Each Party will promptly advise the other Party if it detects or otherwise learns of any metering, telemetry or communications equipment errors or malfunctions that

require the attention and/or correction by the other Party. The Party owning such equipment shall correct such error or malfunction as soon as reasonably feasible.

8.3 No Annexation. Any and all equipment placed on the premises of a Party shall be and remain the property of the Party providing such equipment regardless of the mode and manner of annexation or attachment to real property, unless otherwise mutually agreed by the Parties.

8.4 Provision of Data from a Variable Energy Resource. The Interconnection Customer whose Generating Facility is a Variable Energy Resource shall provide meteorological and forced outage data to the Transmission Provider to the extent necessary for the Transmission Provider's development and deployment of power production forecasts for that class of Variable Energy Resources. The Interconnection Customer with a Variable Energy Resource having wind as the energy source, at a minimum, will be required to provide the Transmission Provider with site-specific meteorological data including: temperature, wind speed, wind direction, and atmospheric pressure. The Interconnection Customer with a Variable Energy Resource having solar as the energy source, at a minimum, will be required to provide the Transmission Provider with site-specific meteorological data including: temperature, atmospheric pressure, and irradiance. The Transmission Provider and Interconnection Customer whose Generating Facility is a Variable Energy Resource shall mutually agree to any additional meteorological data that are required for the development and deployment of a power production forecast. The Interconnection Customer whose Generating Facility is a Variable Energy Resource also shall submit data to the Transmission Provider regarding all forced outages to the extent necessary for the Transmission Provider's development and deployment of power production forecasts for that class of Variable Energy Resources. The exact specifications of the meteorological and forced outage data to be provided by the Interconnection Customer to the Transmission Provider, including the frequency and timing of data submittals, shall be made taking into account the size and configuration of the Variable Energy Resource, its characteristics, location, and its importance in maintaining generation resource adequacy and transmission system reliability in its area. All requirements for meteorological and forced outage data must be commensurate with the power production forecasting employed by the Transmission Provider. Such requirements for meteorological and forced outage data are set forth in Appendix C, Interconnection Details, of this GIA, as they may change from time to time.

Article 9. Operations

9.1 General. Each Party shall comply with the Applicable Reliability Council

requirements. Each Party shall provide to the other Party all information that may reasonably be required by the other Party to comply with Applicable Laws and Regulations and Applicable Reliability Standards.

- 9.2 Control Area Notification.** At least three months before Initial Synchronization Date, Interconnection Customer shall notify Transmission Provider in writing of the Control Area in which the Generating Facility will be located. If Interconnection Customer elects to locate the Generating Facility in a Control Area other than the Control Area in which the Generating Facility is physically located, and if permitted to do so by the relevant transmission tariffs, all necessary arrangements, including but not limited to those set forth in Article 7 and Article 8 of this GIA, and remote Control Area generator interchange agreements, if applicable, and the appropriate measures under such agreements, shall be executed and implemented prior to the placement of the Generating Facility in the other Control Area.
- 9.3 Transmission Provider Obligations.** Transmission Provider shall cause the Transmission System and Transmission Provider's Interconnection Facilities to be operated, maintained and controlled in a safe and reliable manner and in accordance with this GIA. Transmission Provider may provide operating instructions to Interconnection Customer consistent with this GIA and Transmission Provider's operating protocols and procedures as they may change from time to time. Transmission Provider will consider changes to its operating protocols and procedures proposed by Interconnection Customer.
- 9.4 Interconnection Customer Obligations.** Interconnection Customer shall at its own expense operate, maintain and control the Generating Facility and Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this GIA. Interconnection Customer shall operate the Generating Facility and Interconnection Customer's Interconnection Facilities in accordance with all applicable requirements of the Control Area of which it is part, as such requirements are set forth in Appendix C, Interconnection Details, of this GIA. Appendix C, Interconnection Details, will be modified to reflect changes to the requirements as they may change from time to time. Either Party may request that the other Party provide copies of the requirements set forth in Appendix C, Interconnection Details, of this GIA.
- 9.5 Start-Up and Synchronization.** Consistent with the Parties' mutually acceptable procedures, Interconnection Customer is responsible for the proper synchronization of the Generating Facility to Transmission Provider's Transmission System.

9.6 Reactive Power and Primary Frequency Response.

9.6.1 Power Factor Design Criteria.

9.6.1.1 Synchronous Generation. Interconnection Customer shall design the Generating Facility to maintain a composite power delivery at continuous rated power output at the Point of Interconnection at a power factor within the range of 0.95 leading to 0.95 lagging, unless the Transmission Provider has established different requirements that apply to all synchronous generators in the Control Area on a comparable basis.

9.6.1.2 Non-Synchronous Generation. Interconnection Customer shall design the Generating Facility to maintain a composite power delivery at continuous rated power output at the high-side of the generator substation at a power factor within the range of 0.95 leading to 0.95 lagging, unless the Transmission Provider has established a different power factor range that applies to all non-synchronous generators in the Control Area on a comparable basis. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two. This requirement shall only apply to newly interconnecting non-synchronous generators that have not yet executed a Facilities Study Agreement as of the effective date of the Final Rule establishing this requirement (Order No. 827).

9.6.2 Voltage Schedules. Once Interconnection Customer has synchronized the Generating Facility with the Transmission System, Transmission Provider shall require Interconnection Customer to operate the Facility to produce or absorb reactive power within the design limitations of the Generating Facility set forth in Article 9.6.1 (Power Factor Design Criteria). Transmission Provider's voltage schedules shall treat all sources of reactive power in the Control Area in an equitable and not unduly discriminatory manner. Transmission Provider shall exercise Reasonable Efforts to provide Interconnection Customer with such schedules at least one (1) day in advance, and may make changes to such schedules as necessary to maintain the reliability of the Transmission System. Interconnection Customer shall operate the Generating Facility to maintain the specified output voltage or power factor at the Point of Interconnection within

the design limitations of the Generating Facility set forth in Article 9.6.1 (Power Factor Design Criteria). If Interconnection Customer is unable to maintain the specified voltage or power factor, it shall promptly notify the System Operator.

9.6.2.1 Voltage Regulators. Whenever the Generating Facility is operated in parallel with the Transmission System and voltage regulators are capable of operation, Interconnection Customer shall operate the Generating Facility with its voltage regulators in automatic operation. If the Generating Facility's voltage regulators are not capable of such automatic operation, Interconnection Customer shall immediately notify Transmission Provider's system operator, or its designated representative, and ensure that such Generating Facility's reactive power production or absorption (measured in MVARs) are within the design capability of the Generating Facility's generating unit(s) and steady state stability limits.

Interconnection Customer shall not cause its Generating Facility to disconnect automatically or instantaneously from the Transmission System or trip any generating unit comprising the Generating Facility for an under or over frequency condition unless the abnormal frequency condition persists for a time period beyond the limits set forth in ANSI/IEEE Standard C37.106, or such other standard as applied to other generators in the Control Area on a comparable basis.

9.6.3 Payment for Reactive Power. Transmission Provider is required to pay Interconnection Customer for reactive power that Interconnection Customer provides or absorbs from the Generating Facility when Transmission Provider requests Interconnection Customer to operate its Generating Facility outside the range specified in Article 9.6.1, provided that if Transmission Provider pays its own generators for reactive power service within the specified range, it must also pay Interconnection Customer. Payments shall be pursuant to Article 11.6 or such other agreement to which the Parties have otherwise agreed.

9.6.4 Primary Frequency Response. Interconnection Customer shall ensure the primary frequency response capability of its Generating Facility by installing, maintaining, and operating a functioning governor or equivalent controls. The term "functioning governor or equivalent controls" as used herein shall mean the required hardware and/or software that provides frequency responsive real power control with the ability to sense changes in

system frequency and autonomously adjust the Generating Facility's real power output in accordance with the droop and deadband parameters and in the direction needed to correct frequency deviations. Interconnection Customer is required to install a governor or equivalent controls with the capability of operating: (1) with a maximum 5 percent droop and ± 0.036 Hz deadband; or (2) in accordance with the relevant droop, deadband, and timely and sustained response settings from an approved NERC Reliability Standard providing for equivalent or more stringent parameters. The droop characteristic shall be: (1) based on the nameplate capacity of the Generating Facility, and shall be linear in the range of frequencies between 59 to 61 Hz that are outside of the deadband parameter; or (2) based on an approved NERC Reliability Standard providing for an equivalent or more stringent parameter. The deadband parameter shall be: the range of frequencies above and below nominal (60 Hz) in which the governor or equivalent controls is not expected to adjust the Generating Facility's real power output in response to frequency deviations. The deadband shall be implemented: (1) without a step to the droop curve, that is, once the frequency deviation exceeds the deadband parameter, the expected change in the Generating Facility's real power output in response to frequency deviations shall start from zero and then increase (for under-frequency deviations) or decrease (for over-frequency deviations) linearly in proportion to the magnitude of the frequency deviation; or (2) in accordance with an approved NERC Reliability Standard providing for an equivalent or more stringent parameter. Interconnection Customer shall notify Transmission Provider that the primary frequency response capability of the Generating Facility has been tested and confirmed during commissioning. Once Interconnection Customer has synchronized the Generating Facility with the Transmission System, Interconnection Customer shall operate the Generating Facility consistent with the provisions specified in Sections 9.6.4.1 and 9.6.4.2 of this Agreement. The primary frequency response requirements contained herein shall apply to both synchronous and non-synchronous Generating Facilities.

9.6.4.1 Governor or Equivalent Controls. Whenever the Generating Facility is operated in parallel with the Transmission System, Interconnection Customer shall operate the Generating Facility with its governor or equivalent controls in service and responsive to frequency. Interconnection Customer shall: (1) in coordination with Transmission Provider and/or the relevant balancing authority, set the deadband parameter to: (1) a maximum of ± 0.036 Hz and set the droop parameter to a maximum of 5 percent; or (2) implement the relevant droop and deadband settings from an approved NERC Reliability

Standard that provides for equivalent or more stringent parameters. Interconnection Customer shall be required to provide the status and settings of the governor or equivalent controls to Transmission Provider and/or the relevant balancing authority upon request. If Interconnection Customer needs to operate the Generating Facility with its governor or equivalent controls not in service, Interconnection Customer shall immediately notify Transmission Provider and the relevant balancing authority, and provide both with the following information: (1) the operating status of the governor or equivalent controls (i.e., whether it is currently out of service or when it will be taken out of service); (2) the reasons for removing the governor or equivalent controls from service; and (3) a reasonable estimate of when the governor or equivalent controls will be returned to service. Interconnection Customer shall make Reasonable Efforts to return its governor or equivalent controls into service as soon as practicable. Interconnection Customer shall make Reasonable Efforts to keep outages of the Generating Facility's governor or equivalent controls to a minimum whenever the Generating Facility is operated in parallel with the Transmission System.

9.6.4.2 Timely and Sustained Response. Interconnection Customer shall ensure that the Generating Facility's real power response to sustained frequency deviations outside of the deadband setting is automatically provided and shall begin immediately after frequency deviates outside of the deadband, and to the extent the Generating Facility has operating capability in the direction needed to correct the frequency deviation. Interconnection Customer shall not block or otherwise inhibit the ability of the governor or equivalent controls to respond and shall ensure that the response is not inhibited, except under certain operational constraints including, but not limited to, ambient temperature limitations, physical energy limitations, outages of mechanical equipment, or regulatory requirements. The Generating Facility shall sustain the real power response at least until system frequency returns to a value within the deadband setting of the governor or equivalent controls. A Commission-approved Reliability Standard with equivalent or more stringent requirements shall supersede the above requirements.

9.6.4.3 Exemptions. Generating Facilities that are regulated

by the United States Nuclear Regulatory Commission shall be exempt from Sections 9.6.4, 9.6.4.1, and 9.6.4.2 of this Agreement. Generating Facilities that are behind the meter generation that is sized-to-load (i.e., the thermal load and the generation are near-balanced in real-time operation and the generation is primarily controlled to maintain the unique thermal, chemical, or mechanical output necessary for the operating requirements of its host facility) shall be required to install primary frequency response capability in accordance with the droop and deadband capability requirements specified in Section 9.6.4, but shall be otherwise exempt from the operating requirements in Sections 9.6.4, 9.6.4.1, 9.6.4.2, and 9.6.4.4 of this Agreement.

9.6.4.4. Electric Storage Resources. Interconnection Customer interconnecting an electric storage resource shall establish an operating range in Appendix C of its GIA that specifies a minimum state of charge and a maximum state of charge between which the electric storage resource will be required to provide primary frequency response consistent with the conditions set forth in Sections 9.6.4, 9.6.4.1, 9.6.4.2 and 9.6.4.3 of this Agreement. Appendix C shall specify whether the operating range is static or dynamic, and shall consider (1) the expected magnitude of frequency deviations in the interconnection; (2) the expected duration that system frequency will remain outside of the deadband parameter in the interconnection; (3) the expected incidence of frequency deviations outside of the deadband parameter in the interconnection; (4) the physical capabilities of the electric storage resource; (5) operational limitations of the electric storage resource due to manufacturer specifications; and (6) any other relevant factors agreed to by Transmission Provider and Interconnection Customer, and in consultation with the relevant transmission owner or balancing authority as appropriate. If the operating range is dynamic, then Appendix C must establish how frequently the operating range will be reevaluated and the factors that may be considered during its reevaluation.

Interconnection Customer's electric storage resource is required to provide timely and sustained primary frequency response consistent with Section 9.6.4.2 of this Agreement when it is online and dispatched to inject electricity to the

Transmission System and/or receive electricity from the Transmission System. This excludes circumstances when the electric storage resource is not dispatched to inject electricity to the Transmission System and/or dispatched to receive electricity from the Transmission System. If Interconnection Customer's electric storage resource is charging at the time of a frequency deviation outside of its deadband parameter, it is to increase (for over-frequency deviations) or decrease (for under-frequency deviations) the rate at which it is charging in accordance with its droop parameter. Interconnection Customer's electric storage resource is not required to change from charging to discharging, or vice versa, unless the response necessitated by the droop and deadband settings requires it to do so and it is technically capable of making such a transition.

9.7 Outages and Interruptions.

9.7.1 Outages.

9.7.1.1 Outage Authority and Coordination. Each Party may in accordance with Good Utility Practice in coordination with the other Party remove from service any of its respective Interconnection Facilities, Network Upgrades, or Transmission Facilities that may impact the other Party's facilities as necessary to perform maintenance or testing or to install or replace equipment. Absent an Emergency Condition, the Party scheduling a removal of such facility(ies) from service will use Reasonable Efforts to schedule such removal on a date and time mutually acceptable to the Parties. In all circumstances, any Party planning to remove such facility(ies) from service shall use Reasonable Efforts to minimize the effect on the other Party of such removal.

9.7.1.2 Outage Schedules. Transmission Provider shall post scheduled outages of its transmission facilities on the OASIS. Interconnection Customer shall submit its planned maintenance schedules for the Generating Facility to Transmission Provider for a minimum of a rolling twenty- four month period. Interconnection Customer shall update its planned maintenance schedules as necessary. Transmission Provider may request

Interconnection Customer to reschedule its maintenance as necessary to maintain the reliability of the Transmission System; provided, however, adequacy of generation supply shall not be a criterion in determining Transmission System reliability. Transmission Provider shall compensate Interconnection Customer for any additional direct costs that Interconnection Customer incurs as a result of having to reschedule maintenance, including any additional overtime, breaking of maintenance contracts or other costs above and beyond the cost Interconnection Customer would have incurred absent Transmission Provider's request to reschedule maintenance. Interconnection Customer will not be eligible to receive compensation, if during the 12 months prior to the date of the scheduled maintenance, Interconnection Customer had modified its schedule of maintenance activities.

9.7.1.3 Outage Restoration. If an outage on a Party's Interconnection Facilities or Network Upgrades adversely affects the other Party's operations or facilities, the Party that owns or controls the facility that is out of service shall use Reasonable Efforts to promptly restore such facility(ies) to a normal operating condition consistent with the nature of the outage. The Party that owns or controls the facility that is out of service shall provide the other Party, to the extent such information is known, information on the nature of the Emergency Condition, an estimated time of restoration, and any corrective actions required. Initial verbal notice shall be followed up as soon as practicable with written notice explaining the nature of the outage.

9.7.2 Interruption of Service. If required by Good Utility Practice to do so, Transmission Provider may require Interconnection Customer to interrupt or reduce deliveries of electricity if such delivery of electricity could adversely affect Transmission Provider's ability to perform such activities as are necessary to safely and reliably operate and maintain the Transmission System. The following provisions shall apply to any interruption or reduction permitted under this Article 9.7.2:

9.7.2.1 The interruption or reduction shall continue only for so long as reasonably necessary under Good Utility Practice;

9.7.2.2 Any such interruption or reduction shall be made on an

equitable, non-discriminatory basis with respect to all generating facilities directly connected to the Transmission System;

9.7.2.3 When the interruption or reduction must be made under circumstances which do not allow for advance notice, Transmission Provider shall notify Interconnection Customer by telephone as soon as practicable of the reasons for the curtailment, interruption, or reduction, and, if known, its expected duration. Telephone notification shall be followed by written notification as soon as practicable;

9.7.2.4 Except during the existence of an Emergency Condition, when the interruption or reduction can be scheduled without advance notice, Transmission Provider shall notify Interconnection Customer in advance regarding the timing of such scheduling and further notify Interconnection Customer of the expected duration. Transmission Provider shall coordinate with Interconnection Customer using Good Utility Practice to schedule the interruption or reduction during periods of least impact to Interconnection Customer and Transmission Provider;

9.7.2.5 The Parties shall cooperate and coordinate with each other to the extent necessary in order to restore the Generating Facility, Interconnection Facilities, and the Transmission System to their normal operating state, consistent with system conditions and Good Utility Practice.

9.7.3 Under-Frequency and Over Frequency Conditions. The Transmission System is designed to automatically activate a load-shed program as required by the Applicable Reliability Council in the event of an under- frequency system disturbance. Interconnection Customer shall implement under-frequency and over-frequency relay set points for the Generating Facility as required by the Applicable Reliability Council to ensure “ride through” capability of the Transmission System. Generating Facility response to frequency deviations of pre-determined magnitudes, both under-frequency and over-frequency deviations, shall be studied and coordinated with Transmission Provider in accordance with Good Utility Practice. The term “ride through” as used herein shall mean the ability of a Generating Facility to stay connected to and synchronized with the Transmission System during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice.

9.7.4 System Protection and Other Control Requirements.

- 9.7.4.1 System Protection Facilities.** Interconnection Customer shall, at its expense, install, operate and maintain System Protection Facilities as a part of the Generating Facility or Interconnection Customer's Interconnection Facilities. Transmission Provider shall install at Interconnection Customer's expense any System Protection Facilities that may be required on Transmission Provider's Interconnection Facilities or the Transmission System as a result of the interconnection of the Generating Facility and Interconnection Customer's Interconnection Facilities.
- 9.7.4.2** Each Party's protection facilities shall be designed and coordinated with other systems in accordance with Good Utility Practice.
- 9.7.4.3** Each Party shall be responsible for protection of its facilities consistent with Good Utility Practice.
- 9.7.4.4** Each Party's protective relay design shall incorporate the necessary test switches to perform the tests required in Article 6. The required test switches will be placed such that they allow operation of lockout relays while preventing breaker failure schemes from operating and causing unnecessary breaker operations and/or the tripping of Interconnection Customer's units.
- 9.7.4.5** Each Party will test, operate and maintain System Protection Facilities in accordance with Good Utility Practice.
- 9.7.4.6** Prior to the In-Service Date, and again prior to the Commercial Operation Date, each Party or its agent shall perform a complete calibration test and functional trip test of the System Protection Facilities. At intervals suggested by Good Utility Practice and following any apparent malfunction of the System Protection Facilities, each Party shall perform both calibration and functional trip tests of its System Protection Facilities. These tests do not require the tripping of any in-service generation unit. These tests do, however, require that all protective relays and lockout contacts be activated.

9.7.5 Requirements for Protection. In compliance with Good Utility Practice, Interconnection Customer shall provide, install, own, and maintain relays, circuit breakers and all other devices necessary to remove any fault contribution of the Generating Facility to any short circuit occurring on the Transmission System not otherwise isolated by Transmission Provider's equipment, such that the removal of the fault contribution shall be coordinated with the protective requirements of the Transmission System. Such protective equipment shall include, without limitation, a disconnecting device or switch with load-interrupting capability located between the Generating Facility and the Transmission System at a site selected upon mutual agreement (not to be unreasonably withheld, conditioned or delayed) of the Parties. Interconnection Customer shall be responsible for protection of the Generating Facility and Interconnection Customer's other equipment from such conditions as negative sequence currents, over- or under-frequency, sudden load rejection, over- or under-voltage, and generator loss-of-field. Interconnection Customer shall be solely responsible to disconnect the Generating Facility and Interconnection Customer's other equipment if conditions on the Transmission System could adversely affect the Generating Facility.

9.7.6 Power Quality. Neither Party's facilities shall cause excessive voltage flicker nor introduce excessive distortion to the sinusoidal voltage or current waves as defined by ANSI Standard C84.1-1989, in accordance with IEEE Standard 519, or any applicable superseding electric industry standard. In the event of a conflict between ANSI Standard C84.1-1989, or any applicable superseding electric industry standard, ANSI Standard C84.1-1989, or the applicable superseding electric industry standard, shall control.

9.8 Switching and Tagging Rules. Each Party shall provide the other Party a copy of its switching and tagging rules that are applicable to the other Party's activities. Such switching and tagging rules shall be developed on a non-discriminatory basis. The Parties shall comply with applicable switching and tagging rules, as amended from time to time, in obtaining clearances for work or for switching operations on equipment.

9.9 Use of Interconnection Facilities by Third Parties.

9.9.1 Purpose of Interconnection Facilities. Except as may be required by Applicable Laws and Regulations, or as otherwise agreed to among the Parties, the Interconnection Facilities shall be constructed for the sole

purpose of interconnecting the Generating Facility to the Transmission System and shall be used for no other purpose.

9.9.2 Third Party Users. If required by Applicable Laws and Regulations or if the Parties mutually agree, such agreement not to be unreasonably withheld, to allow one or more third parties to use Transmission Provider's Interconnection Facilities, or any part thereof, Interconnection Customer will be entitled to compensation for the capital expenses it incurred in connection with the Interconnection Facilities based upon the pro rata use of the Interconnection Facilities by Transmission Provider, all third party users, and Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually-agreed upon methodology. In addition, cost responsibility for ongoing costs, including operation and maintenance costs associated with the Interconnection Facilities, will be allocated between Interconnection Customer and any third party users based upon the pro rata use of the Interconnection Facilities by Transmission Provider, all third party users, and Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually agreed upon methodology. If the issue of such compensation or allocation cannot be resolved through such negotiations, it shall be submitted to Dispute Resolution.

9.10 Disturbance Analysis Data Exchange. The Parties will cooperate with one another in the analysis of disturbances to either the Generating Facility or Transmission Provider's Transmission System by gathering and providing access to any information relating to any disturbance, including information from oscillography, protective relay targets, breaker operations and sequence of events records, and any disturbance information required by Good Utility Practice.

Article 10. Maintenance

10.1 Transmission Provider Obligations. Transmission Provider shall maintain the Transmission System and Transmission Provider's Interconnection Facilities in a safe and reliable manner and in accordance with this GIA.

10.2 Interconnection Customer Obligations. Interconnection Customer shall maintain the Generating Facility and Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this GIA.

10.3 Coordination. The Parties shall confer regularly to coordinate the planning, scheduling and performance of preventive and corrective maintenance on the Generating Facility and the Interconnection Facilities.

- 10.4 Secondary Systems.** Each Party shall cooperate with the other in the inspection, maintenance, and testing of control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers that directly affect the operation of a Party's facilities and equipment which may reasonably be expected to impact the other Party. Each Party shall provide advance notice to the other Party before undertaking any work on such circuits, especially on electrical circuits involving circuit breaker trip and close contacts, current transformers, or potential transformers.
- 10.5 Operating and Maintenance Expenses.** Subject to the provisions herein addressing the use of facilities by others, and except for operations and maintenance expenses associated with modifications made for providing interconnection or transmission service to a third party and such third party pays for such expenses, Interconnection Customer shall be responsible for all reasonable expenses including overheads, associated with: (1) owning, operating, maintaining, repairing, and replacing Interconnection Customer's Interconnection Facilities; and (2) operation, maintenance, repair and replacement of Transmission Provider's Interconnection Facilities.

Article 11. Performance Obligation

- 11.1 Interconnection Customer Interconnection Facilities.** Interconnection Customer shall design, procure, construct, install, own and/or control Interconnection Customer Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at its sole expense.
- 11.2 Transmission Provider's Interconnection Facilities.** Transmission Provider or Transmission Owner shall design, procure, construct, install, own and/or control the Transmission Provider's Interconnection Facilities described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades, at the sole expense of the Interconnection Customer.
- 11.3 Network Upgrades and Distribution Upgrades.** Transmission Provider or Transmission Owner shall design, procure, construct, install, and own the Network Upgrades and Distribution Upgrades described in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades. The Interconnection Customer shall be responsible for all costs related to Distribution Upgrades. Unless Transmission Provider or Transmission Owner elects to fund the capital for

the Network Upgrades, they shall be solely funded by Interconnection Customer.

11.4 Transmission Credits.

11.4.1 Repayment of Amounts Advanced for Network Upgrades. Interconnection Customer shall be entitled to a cash repayment, equal to the total amount paid to Transmission Provider and Affected System Operator, if any, for the Network Upgrades, including any tax gross-up or other tax-related payments associated with Network Upgrades, to be paid to Interconnection Customer on a dollar-for-dollar basis for the non-usage sensitive portion of transmission charges, as payments are made under Transmission Provider's Tariff and Affected System's Tariff for transmission services with respect to the Generating Facility. Any repayment shall include interest calculated at a reasonable rate from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment pursuant to this subparagraph. Interconnection Customer may assign such repayment rights to any person.

Notwithstanding the foregoing, Interconnection Customer, Transmission Provider, and Affected System Operator may adopt any alternative payment schedule that is mutually agreeable so long as Transmission Provider and Affected System Operator take one of the following actions no later than five years from the Commercial Operation Date: (1) return to Interconnection Customer any amounts advanced for Network Upgrades not previously repaid, or (2) declare in writing that Transmission Provider or Affected System Operator will continue to provide payments to Interconnection Customer pursuant to this subparagraph until all amounts advanced for Network Upgrades have been repaid.

11.4.2 Special Provisions for Affected Systems. Nothing in this agreement shall obligate Transmission Provider to compensate an Affected System for the cost of any impact allegedly caused in furtherance of this agreement or by virtue of any activity undertaken by Interconnection Customer. Further, nothing in this agreement shall obligate Transmission Provider to provide for refunds, credits or repayment of any costs paid by Interconnection Customer to an Affected System. Unless Transmission Provider provides, under the GIA, for the repayment of amounts advanced to Affected System Operator for Network Upgrades, Interconnection

Customer and Affected System Operator shall enter into an agreement that provides for such repayment. The agreement shall specify the terms governing payments to be made by Interconnection Customer to the Affected System Operator as well as the repayment by the Affected System Operator.

11.4.3 Notwithstanding any other provision of this GIA, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, transmission congestion rights, or transmission credits, that Interconnection Customer, shall be entitled to, now or in the future under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain cash reimbursements or transmission credits for transmission service that is not associated with the Generating Facility.

11.5 Provision of Security. At least 30 Calendar Days prior to the commencement of the procurement, installation, or construction of a discrete portion of a Transmission Provider's Interconnection Facilities, Network Upgrades, or Distribution Upgrades, Interconnection Customer shall provide Transmission Provider, at Interconnection Customer's option, a guarantee, a surety bond, letter of credit or other form of security that is reasonably acceptable to Transmission Provider and is consistent with the Uniform Commercial Code of the jurisdiction identified in Article 14.2.1. Such security for payment shall be in an amount sufficient to cover the costs for constructing, procuring and installing the applicable portion of Transmission Provider's Interconnection Facilities, Network Upgrades, or Distribution Upgrades and shall be reduced on a dollar-for-dollar basis for payments made to Transmission Provider for these purposes.

In addition:

11.5.1 The guarantee must be made by an entity that meets the creditworthiness requirements of Transmission Provider, and contain terms and conditions that guarantee payment of any amount that may be due from Interconnection Customer, up to an agreed-to maximum amount.

11.5.2 The letter of credit must be issued by a financial institution reasonably acceptable to Transmission Provider and must specify a reasonable expiration date.

11.5.3 The surety bond must be issued by an insurer reasonably acceptable to Transmission Provider and must specify a reasonable expiration date.

11.6 Interconnection Customer Compensation. If Transmission Provider requests or directs Interconnection Customer to provide a service pursuant to Articles 9.6.3 (Payment for Reactive Power), or 13.5.1 of this GIA, Transmission Provider shall compensate Interconnection Customer in accordance with Interconnection Customer's applicable rate schedule then in effect unless the provision of such service(s) is subject to an RTO or ISO FERC-approved rate schedule. Interconnection Customer shall serve Transmission Provider or RTO or ISO with any filing of a proposed rate schedule at the time of such filing with FERC. To the extent that no rate schedule is in effect at the time the Interconnection Customer is required to provide or absorb any Reactive Power under this GIA, Transmission Provider agrees to compensate Interconnection Customer in such amount as would have been due Interconnection Customer had the rate schedule been in effect at the time service commenced; provided, however, that such rate schedule must be filed at FERC or other appropriate Governmental Authority within 60 Calendar Days of the commencement of service.

11.6.1 Interconnection Customer Compensation for Actions During Emergency Condition. Transmission Provider or RTO or ISO shall compensate Interconnection Customer for its provision of real and reactive power and other Emergency Condition services that Interconnection Customer provides to support the Transmission System during an Emergency Condition in accordance with Article 11.6.

Article 12. Invoice

12.1 General. Each Party shall submit to the other Party, on a monthly basis, invoices of amounts due for the preceding month. Each invoice shall state the month to which the invoice applies and fully describe the services and equipment provided. The Parties may discharge mutual debts and payment obligations due and owing to each other on the same date through netting, in which case all amounts a Party owes to the other Party under this GIA, including interest payments or credits, shall be netted so that only the net amount remaining due shall be paid by the owing Party.

12.2 Final Invoice. Within six months after completion of the construction of Transmission Provider's Interconnection Facilities and the Network Upgrades, Transmission Provider shall provide an invoice of the final cost of the construction of Transmission Provider's Interconnection Facilities and the Network Upgrades

and shall set forth such costs in sufficient detail to enable Interconnection Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. Transmission Provider shall refund to Interconnection Customer any amount by which the actual payment by Interconnection Customer for estimated costs exceeds the actual costs of construction within 30 Calendar Days of the issuance of such final construction invoice.

12.3 Payment. Invoices shall be rendered to the paying Party at the address specified in Appendix F. The Party receiving the invoice shall pay the invoice within 30 Calendar Days of receipt. All payments shall be made in immediately available funds payable to the other Party, or by wire transfer to a bank named and account designated by the invoicing Party. Payment of invoices by either Party will not constitute a waiver of any rights or claims either Party may have under this GIA.

12.4 Disputes. In the event of a billing dispute between Transmission Provider and Interconnection Customer, Transmission Provider shall continue to provide Interconnection Service under this GIA as long as Interconnection Customer: (i) continues to make all payments not in dispute; and (ii) pays to Transmission Provider or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If Interconnection Customer fails to meet these two requirements for continuation of service, then Transmission Provider may provide notice to Interconnection Customer of a Default pursuant to Article 17. Within 30 Calendar Days after the resolution of the dispute, the Party that owes money to the other Party shall pay the amount due with interest calculated in accord with the methodology set forth in FERC's regulations at 18 CFR § 35.19a(a)(2)(iii).

Article 13. Emergencies

13.1 Definition. "Emergency Condition" shall mean a condition or situation: (i) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (ii) that, in the case of Transmission Provider, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to the Transmission System, Transmission Provider's Interconnection Facilities or the Transmission Systems of others to which the Transmission System is directly connected; or (iii) that, in the case of Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility or Interconnection Customer's Interconnection Facilities' System restoration and black start shall be considered Emergency Conditions; provided, that Interconnection Customer is not obligated by this GIA to possess black start capability.

13.2 Obligations. Each Party shall comply with the Emergency Condition procedures of the applicable ISO/RTO, NERC, the Applicable Reliability Council, Applicable Laws and Regulations, and any emergency procedures agreed to by the Joint Operating Committee.

13.3 Notice. Transmission Provider shall notify Interconnection Customer promptly when it becomes aware of an Emergency Condition that affects Transmission Provider's Interconnection Facilities or the Transmission System that may reasonably be expected to affect Interconnection Customer's operation of the Generating Facility or Interconnection Customer's Interconnection Facilities. Interconnection Customer shall notify Transmission Provider promptly when it becomes aware of an Emergency Condition that affects the Generating Facility or Interconnection Customer's Interconnection Facilities that may reasonably be expected to affect the Transmission System or Transmission Provider's Interconnection Facilities. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of Interconnection Customer's or Transmission Provider's facilities and operations, its anticipated duration and the corrective action taken and/or to be taken. The initial notice shall be followed as soon as practicable with written notice.

13.4 Immediate Action. Unless, in Interconnection Customer's reasonable judgment, immediate action is required, Interconnection Customer shall obtain the consent of Transmission Provider, such consent to not be unreasonably withheld, prior to performing any manual switching operations at the Generating Facility or Interconnection Customer's Interconnection Facilities in response to an Emergency Condition either declared by Transmission Provider or otherwise regarding the Transmission System.

13.5 Transmission Provider Authority.

13.5.1 General. Transmission Provider may take whatever actions or inactions with regard to the Transmission System or Transmission Provider's Interconnection Facilities it deems necessary during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Transmission System or Transmission Provider's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service.

Transmission Provider shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Generating Facility or

Interconnection Customer's Interconnection Facilities. Transmission Provider may, on the basis of technical considerations, require the Generating Facility to mitigate an Emergency Condition by taking actions necessary and limited in scope to remedy the Emergency Condition, including, but not limited to, directing Interconnection Customer to shut-down, start-up, increase or decrease the real or reactive power output of the Generating Facility; implementing a reduction or disconnection pursuant to Article 13.5.2; directing Interconnection Customer to assist with blackstart (if available) or restoration efforts; or altering the outage schedules of the Generating Facility and Interconnection Customer's Interconnection Facilities. Interconnection Customer shall comply with all of Transmission Provider's operating instructions concerning Generating Facility real power and reactive power output within the manufacturer's design limitations of the Generating Facility's equipment that is in service and physically available for operation at the time, in compliance with Applicable Laws and Regulations.

13.5.2 Reduction and Disconnection. Transmission Provider may reduce Interconnection Service or disconnect the Generating Facility or Interconnection Customer's Interconnection Facilities, when such, reduction or disconnection is necessary under Good Utility Practice due to Emergency Conditions. These rights are separate and distinct from any right of curtailment of Transmission Provider pursuant to Transmission Provider's Tariff. When Transmission Provider can schedule the reduction or disconnection in advance, Transmission Provider shall notify Interconnection Customer of the reasons, timing and expected duration of the reduction or disconnection.

Transmission Provider shall coordinate with Interconnection Customer using Good Utility Practice to schedule the reduction or disconnection during periods of least impact to Interconnection Customer and Transmission Provider. Any reduction or disconnection shall continue only for so long as reasonably necessary under Good Utility Practice. The Parties shall cooperate with each other to restore the Generating Facility, the Interconnection Facilities, and the Transmission System to their normal operating state as soon as practicable consistent with Good Utility Practice.

13.6 Interconnection Customer Authority. Consistent with Good Utility Practice and

the GIA and the GIP, Interconnection Customer may take actions or inactions with regard to the Generating Facility or Interconnection Customer's Interconnection Facilities during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Generating Facility or Interconnection Customer's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service. Interconnection Customer shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Transmission System and Transmission Provider's Interconnection Facilities. Transmission Provider shall use Reasonable Efforts to assist Interconnection Customer in such actions.

13.7 Limited Liability. Except as otherwise provided in Article 11.6.1 of this GIA, neither Party shall be liable to the other for any action it takes in responding to an Emergency Condition so long as such action is made in good faith and is consistent with Good Utility Practice.

Article 14. Regulatory Requirements and Governing Law

14.1 Regulatory Requirements. Each Party's obligations under this GIA shall be subject to its receipt of any required approval or certificate from one or more Governmental Authorities in the form and substance satisfactory to the applying Party, or the Party making any required filings with, or providing notice to, such Governmental Authorities, and the expiration of any time period associated therewith. Each Party shall in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this GIA shall require Interconnection Customer to take any action that could result in its inability to obtain, or its loss of, status or exemption under the Federal Power Act, the Public Utility Holding Company Act of 1935, as amended, or the Public Utility Regulatory Policies Act of 1978.

14.2 Governing Law.

14.2.1 The validity, interpretation and performance of this GIA and each of its provisions shall be governed by the laws of the state of Washington.

14.2.2 This GIA is subject to all Applicable Laws and Regulations.

14.2.3 Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, rules, or regulations of a Governmental Authority.

Article 15. Notices.

15.1 General. Unless otherwise provided in this GIA, any notice, demand or request required or permitted to be given by either Party to the other and any instrument required or permitted to be tendered or delivered by either Party in writing to the other shall be effective when delivered and may be so given, tendered or delivered, by recognized national courier, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, electronically mailed, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

Either Party may change the notice information in this GIA by giving 5 Business Days written notice prior to the effective date of the change.

15.2 Billings and Payments. Billings and payments shall be sent to the addresses set out in Appendix F.

15.3 Alternative Forms of Notice. Any notice or request required or permitted to be given by a Party to the other and not required by this Agreement to be given in writing may be so given by telephone, facsimile or email to the telephone numbers and email addresses set out in Appendix F.

15.4 Operations and Maintenance Notice. Each Party shall notify the other Party in writing of the identity of the person(s) that it designates as the point(s) of contact with respect to the implementation of Articles 9 and 10.

Article 16. Force Majeure

16.1 Force Majeure.

16.1.1 Economic hardship is not considered a Force Majeure event.

16.1.2 Neither Party shall be considered to be in Default with respect to any obligation hereunder, (including obligations under Article 4), other than the obligation to pay money when due, if prevented from fulfilling such obligation by Force Majeure. A Party unable to fulfill any obligation hereunder (other than an obligation to pay money when due) by reason of Force Majeure shall give notice and the full particulars of such Force Majeure to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given pursuant to this article shall be confirmed in writing as soon as reasonably possible and

shall specifically state full particulars of the Force Majeure, the time and date when the Force Majeure occurred and when the Force Majeure is reasonably expected to cease. The Party affected shall exercise due diligence to remove such disability with reasonable dispatch, but shall not be required to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or other labor disturbance.

Article 17. Default

17.1 Default

17.1.1 General. No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of Force Majeure as defined in this GIA or the result of an act of omission of the other Party. Upon a Breach, the non-breaching Party shall give written notice of such Breach to the breaching Party. Except as provided in Article 17.1.2, the breaching Party shall have 30 Calendar Days from receipt of the Default notice within which to cure such Breach; provided however, if such Breach is not capable of cure within 30 Calendar Days, the breaching Party shall commence such cure within 30 Calendar Days after notice and continuously and diligently complete such cure within 90 Calendar Days from receipt of the Default notice; and, if cured within such time, the Breach specified in such notice shall cease to exist.

17.1.2 Right to Terminate. If a Breach is not cured as provided in this article, or if a Breach is not capable of being cured within the period provided for herein, the non-breaching Party shall have the right to declare a Default and terminate this GIA by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this GIA, to recover from the breaching Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this article will survive termination of this GIA.

Article 18. Indemnity, Consequential Damages and Insurance

18.1 Indemnity. To the maximum extent allowed by law, including R.C.W. § 35.32A.090, the Parties shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and

actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or inactions of its obligations under this GIA on behalf of the Indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

18.1.1 Indemnified Person. If an Indemnified Person is entitled to indemnification under this Article 18 as a result of a claim by a third party, and the Indemnifying Party fails, after notice and reasonable opportunity to proceed under Article 18.1, to assume the defense of such claim, such Indemnified Person may at the expense of the Indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

18.1.2 Indemnifying Party. If an Indemnifying Party is obligated to indemnify and hold any Indemnified Person harmless under this Article 18, the amount owing to the Indemnified Person shall be the amount of such Indemnified Person's actual Loss, net of any insurance or other recovery.

18.1.3 Indemnity Procedures. Promptly after receipt by an Indemnified Person of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in Article 18.1 may apply, the Indemnified Person shall notify the Indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the Indemnifying Party.

The Indemnifying Party shall have the right to assume the defense thereof with counsel designated by such Indemnifying Party and reasonably satisfactory to the Indemnified Person. If the defendants in any such action include one or more Indemnified Persons and the Indemnifying Party and if the Indemnified Person reasonably concludes that there may be legal defenses available to it and/or other Indemnified Persons which are different from or additional to those available to the Indemnifying Party, the Indemnified Person shall have the right to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the Indemnifying Party shall only be required to pay the fees and expenses of one additional attorney to represent an Indemnified

Person or Indemnified Persons having such differing or additional legal defenses.

The Indemnified Person shall be entitled, at its expense, to participate in any such action, suit or proceeding, the defense of which has been assumed by the Indemnifying Party.

Notwithstanding the foregoing, the Indemnifying Party (i) shall not be entitled to assume and control the defense of any such action, suit or proceedings if and to the extent that, in the opinion of the Indemnified Person and its counsel, such action, suit or proceeding involves the potential imposition of criminal liability on the Indemnified Person, or there exists a conflict or adversity of interest between the Indemnified Person and the Indemnifying Party, in such event the Indemnifying Party shall pay the reasonable expenses of the Indemnified Person, and (ii) shall not settle or consent to the entry of any judgment in any action, suit or proceeding without the consent of the Indemnified Person, which shall not be reasonably withheld, conditioned or delayed.

18.2 Consequential Damages. Other than the Liquidated Damages heretofore described, in no event shall either Party be liable under any provision of this GIA for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

18.3 Insurance. Each party shall, at its own expense, maintain in force throughout the period of this GIA, and until released by the other Party, the following minimum insurance coverages, with insurers authorized to do business in the state where the Point of Interconnection is located:

18.3.1 Employers' Liability and Workers' Compensation Insurance providing statutory benefits in accordance with the laws and regulations of the state in which the Point of Interconnection is located.

18.3.2 Commercial General Liability Insurance including premises and operations, personal injury, broad form property damage, broad form blanket contractual liability coverage (including coverage for

the contractual indemnification) products and completed operations coverage, coverage for explosion, collapse and underground hazards, independent contractors coverage, coverage for pollution to the extent normally available and punitive damages to the extent normally available and a cross liability endorsement, with minimum limits of One Million Dollars (\$1,000,000) per occurrence/One Million Dollars (\$1,000,000) aggregate combined single limit for personal injury, bodily injury, including death and property damage.

18.3.3 Comprehensive Automobile Liability Insurance for coverage of owned and non-owned and hired vehicles, trailers or semi-trailers designed for travel on public roads, with a minimum, combined single limit of One Million Dollars (\$1,000,000) per occurrence for bodily injury, including death, and property damage.

18.3.4 Excess Public Liability Insurance over and above the Employers' Liability Commercial General Liability and Comprehensive Automobile Liability Insurance coverage, with a minimum combined single limit of Twenty Million Dollars (\$20,000,000) per occurrence/Twenty Million Dollars (\$20,000,000) aggregate, unless otherwise agreed to by Transmission Provider.

18.3.5 The Interconnection Customer's Commercial General Liability Insurance, Comprehensive Automobile Insurance and Excess Public Liability Insurance policies shall name the Transmission Provider, its parent, and their respective directors, officers, agents, servants and employees ("Other Party Group") as additional insured. The Interconnection Customer's policies shall contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this GIA against the Other Party Group and provide thirty (30) Days advance written notice to the Other Party Group prior to anniversary date of cancellation or any material change in coverage or condition.

18.3.6 The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Excess Public Liability Insurance policies shall contain provisions that specify that the policies are primary and shall apply to such extent without consideration for other policies separately carried and shall state that each insured is provided coverage as though a separate policy had been issued to each, except the insurer's liability shall not be increased beyond the amount for which the insurer

would have been liable had only one insured been covered. Each Party shall be responsible for its respective deductibles or retentions.

- 18.3.7** The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Excess Public Liability Insurance policies, if written on a Claims First Made Basis, shall be maintained in full force and effect for two (2) years after termination of this GIA, which coverage may be in the form of tail coverage or extended reporting period coverage if agreed by the Parties.
- 18.3.8** The requirements contained herein as to the types and limits of all insurance to be maintained by the Parties are not intended to and shall not in any manner, limit or qualify the liabilities and obligations assumed by the Parties under this GIA.
- 18.3.9** Within 10 days following execution of this GIA, and as soon as practicable after the end of each fiscal year or at the renewal of the insurance policy and in any event within ninety (90) days thereafter, each Party shall provide certification of all insurance required in this GIA, executed by each insurer or by an authorized representative of each insurer.
- 18.3.10** Notwithstanding the foregoing, each Party may self-insure to meet the minimum insurance requirements of Articles 18.3.2 through 18.3.8 to the extent it maintains a self-insurance program; provided that, either (1) such Party's senior secured debt is rated at investment grade or better by Standard & Poor's and that its self-insurance program meets the minimum insurance requirements of Articles 18.3.2 through 18.3.8; or (2) such Party's self-insurance program is part of a state approved self-insurance program for municipalities. For a Party that exercises option (1), for any period of time that a Party's senior secured debt is unrated by Standard & Poor's or is rated at less than investment grade by Standard & Poor's, such Party shall comply with the insurance requirements applicable to it under Articles 18.3.2 through 18.3.9. In the event that a Party is permitted to self-insure pursuant to this article, it shall notify the other Party that it meets the requirements to self-insure and that its self-

insurance program meets the minimum insurance requirements in a manner consistent with that specified in Article 18.3.9.

- 18.3.11** The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage arising out of this GIA.

Article 19. Assignment

- 19.1 Assignment.** This GIA may be assigned by either Party only with the written consent of the other; provided that either Party may assign this GIA without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this GIA; and provided further that Interconnection Customer shall have the right to assign this GIA, without the consent of Transmission Provider, for collateral security purposes to aid in providing financing for the Generating Facility, provided that Interconnection Customer will promptly notify Transmission Provider of any such assignment. Any financing arrangement entered into by Interconnection Customer pursuant to this article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify Transmission Provider of the date and particulars of any such exercise of assignment right(s), including providing the Transmission Provider with proof that it meets the requirements of Articles 11.5 and 18.3. Any attempted assignment that violates this article is void and ineffective. Any assignment under this GIA shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

Article 20. Severability

- 20.1 Severability.** If any provision in this GIA is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision, agreement or covenant of this GIA; provided that if Interconnection Customer (or any third party, but only if such third party is not acting at the direction of Transmission Provider) seeks and obtains such a final determination with respect to any provision of the Alternate Option (Article 5.1.2), or the Negotiated Option (Article 5.1.4), then none of these provisions shall

thereafter have any force or effect and the Parties' rights and obligations shall be governed solely by the Standard Option (Article 5.1.1).

Article 21. Comparability

21.1 Comparability. The Interconnection Customer will comply with all applicable comparability and code of conduct laws, rules and regulations, as amended from time to time. The Transmission Provider acknowledges that its ability to take advantage of reciprocal utility access under FERC Order Nos. 888, and progeny, may depend on its compliance with relevant comparability and code of conduct rules and regulations, as amended by FERC from time to time.

Article 22. Confidentiality

22.1 Confidentiality. Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by either of the Parties to the other prior to the execution of this GIA.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Party receiving the information that the information is confidential. Interconnection Customer acknowledges that Transmission Provider is subject to Washington's Public Records Act, R.C.W. § 42.56 *et. seq.*

If requested by either Party, the other Party shall provide in writing, the basis for asserting that the information referred to in this Article 22 warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

22.1.1 Term. During the term of this GIA, and for a period of three years after the expiration or termination of this GIA, except as otherwise provided in this Article 22, each Party shall hold in confidence and shall not disclose to any person Confidential Information.

22.1.2 Scope. Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party;

(2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of this GIA; or (6) is required, in accordance with Article 22.1.7 of the GIA, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under this GIA. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Party that it no longer is confidential.

22.1.3 Release of Confidential Information. Neither Party shall release or disclose Confidential Information to any other person, except to its Affiliates (limited by the Standards of Conduct requirements), subcontractors, employees, consultants, or to parties who may be or considering providing financing to or equity participation with Interconnection Customer, or to potential purchasers or assignees of Interconnection Customer, on a need-to-know basis in connection with this GIA, unless such person has first been advised of the confidentiality provisions of this Article 22 and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Article 22.

22.1.4 Rights. Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Party. The disclosure by each Party to the other Party of Confidential Information shall not be deemed a waiver by either Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

22.1.5 No Warranties. By providing Confidential Information, neither Party makes any warranties or representations as to its accuracy or completeness. In addition, by supplying Confidential Information, neither Party obligates itself to provide any particular information or

Confidential Information to the other Party nor to enter into any further agreements or proceed with any other relationship or joint venture.

- 22.1.6 Standard of Care.** Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Party under this GIA or its regulatory requirements.
- 22.1.7 Order of Disclosure.** If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires either Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Party with prompt notice of such request(s) or requirement(s) so that the other Party may seek an appropriate protective order or waive compliance with the terms of this GIA. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose.
- 22.1.8 Termination of Agreement.** Upon termination of this GIA for any reason, each Party shall, within 10 Calendar Days of receipt of a written request from the other Party, use Reasonable Efforts to destroy, erase, or delete (with such destruction, erasure, and deletion certified in writing to the other Party) or return to the other Party, without retaining copies thereof, any and all written or electronic Confidential Information received from the other Party.
- 22.1.9 Remedies.** The Parties agree that monetary damages would be inadequate to compensate a Party for the other Party's Breach of its obligations under this Article 22. Each Party accordingly agrees that the other Party shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Article 22, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the Breach of this Article 22, but shall be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate

business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article 22.

22.1.10 Disclosure to FERC, its Staff, or a State. Notwithstanding anything in this Article 22 to the contrary, and pursuant to 18 CFR section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this GIA, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 CFR section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Party to this GIA prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other Party to the GIA when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time either of the Parties may respond before such information would be made public, pursuant to 18 CFR section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

22.1.11 Subject to the exception in Article 22.1.10, any information that a Party claims is competitively sensitive, commercial or financial information under this GIA (“Confidential Information”) shall not be disclosed by the other Party to any person not employed or retained by the other Party, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Party, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this GIA or as a transmission service provider or a Control Area operator including disclosing the Confidential Information to an RTO or ISO or to a regional or national reliability organization. The Party asserting confidentiality shall notify the other Party in writing of the information it claims is confidential. Prior to any disclosures of the other Party’s Confidential Information

under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing.

Article 23. Environmental Releases

23.1 Each Party shall notify the other Party, first orally and then in writing, of the release of any Hazardous Substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party shall: (i) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than twenty-four hours after such Party becomes aware of the occurrence; and (ii) promptly furnish to the other Party copies of any publicly available reports filed with any Governmental Authorities addressing such events.

Article 24. Information Requirements

24.1 Information Acquisition. Transmission Provider and Interconnection Customer shall submit specific information regarding the electrical characteristics of their respective facilities to each other as described below and in accordance with Applicable Reliability Standards.

24.2 Information Submission by Transmission Provider. The initial information submission by Transmission Provider shall occur no later than 180 Calendar Days prior to Trial Operation and shall include Transmission System information necessary to allow Interconnection Customer to select equipment and meet any system protection and stability requirements, unless otherwise agreed to by the Parties. On a monthly basis Transmission Provider shall provide Interconnection Customer a status report on the construction and installation of Transmission Provider's Interconnection Facilities and Network Upgrades, including, but not limited to, the following information: (1) progress to date; (2) a description of the activities since the last report (3) a description of the action items for the next period; and (4) the delivery status of equipment ordered.

24.3 Updated Information Submission by Interconnection Customer. The updated information submission by Interconnection Customer, including manufacturer information, shall occur no later than 180 Calendar Days prior to the Trial Operation. Interconnection Customer shall submit a completed copy of the Generating Facility data requirements contained in Appendix 1 to the GIP. It shall also include any additional information provided to Transmission Provider for the

Feasibility and Facilities Study. Information in this submission shall be the most current Generating Facility design or expected performance data. Information submitted for stability models shall be compatible with Transmission Provider standard models. If there is no compatible model, Interconnection Customer will work with a consultant mutually agreed to by the Parties to develop and supply a standard model and associated information.

If Interconnection Customer's data is materially different from what was originally provided to Transmission Provider pursuant to the Interconnection Study Agreement between Transmission Provider and Interconnection Customer, then Transmission Provider will conduct appropriate studies to determine the impact on Transmission Provider Transmission System based on the actual data submitted pursuant to this Article 24.3. The Interconnection Customer shall not begin Trial Operation until such studies are completed.

24.4 Information Supplementation. Prior to the Operation Date, the Parties shall supplement their information submissions described above in this Article 24 with any and all "as-built" Generating Facility information or "as-tested" performance information that differs from the initial submissions or, alternatively, written confirmation that no such differences exist. The Interconnection Customer shall conduct tests on the Generating Facility as required by Good Utility Practice such as an open circuit "step voltage" test on the Generating Facility to verify proper operation of the Generating Facility's automatic voltage regulator.

Unless otherwise agreed, the test conditions shall include: (1) Generating Facility at synchronous speed; (2) automatic voltage regulator on and in voltage control mode; and (3) a five percent change in Generating Facility terminal voltage initiated by a change in the voltage regulators reference voltage.

Interconnection Customer shall provide validated test recordings showing the responses of Generating Facility terminal and field voltages. In the event that direct recordings of these voltages is impractical, recordings of other voltages or currents that mirror the response of the Generating Facility's terminal or field voltage are acceptable if information necessary to translate these alternate quantities to actual Generating Facility terminal or field voltages is provided. Generating Facility testing shall be conducted and results provided to Transmission Provider for each individual generating unit in a station.

Subsequent to the Operation Date, Interconnection Customer shall provide Transmission Provider any information changes due to equipment replacement, repair, or adjustment. Transmission Provider shall provide Interconnection Customer any information changes due to equipment replacement, repair or adjustment in the directly connected substation or any adjacent Transmission Provider-owned substation that may affect Interconnection Customer's

Interconnection Facilities equipment ratings, protection or operating requirements. The Parties shall provide such information no later than 30 Calendar Days after the date of the equipment replacement, repair or adjustment.

Article 25. Information Access and Audit Rights

25.1 Information Access. Each Party (the “disclosing Party”) shall make available to the other Party information that is in the possession of the disclosing Party and is necessary in order for the other Party to: (i) verify the costs incurred by the disclosing Party for which the other Party is responsible under this GIA; and (ii) carry out its obligations and responsibilities under this GIA. The Parties shall not use such information for purposes other than those set forth in this Article 25.1 and to enforce their rights under this GIA.

25.2 Reporting of Non-Force Majeure Events. Each Party (the “notifying Party”) shall notify the other Party when the notifying Party becomes aware of its inability to comply with the provisions of this GIA for a reason other than a Force Majeure event. The Parties agree to cooperate with each other and provide necessary information regarding such inability to comply, including the date, duration, reason for the inability to comply, and corrective actions taken or planned to be taken with respect to such inability to comply. Notwithstanding the foregoing, notification, cooperation or information provided under this article shall not entitle the Party receiving such notification to allege a cause for anticipatory breach of this GIA.

25.3 Audit Rights. Subject to the requirements of confidentiality under Article 22 of this GIA, each Party shall have the right, during normal business hours, and upon prior reasonable notice to the other Party, to audit at its own expense the other Party’s accounts and records pertaining to either Party’s performance or either Party’s satisfaction of obligations under this GIA. Such audit rights shall include audits of the other Party’s costs, calculation of invoiced amounts, Transmission Provider’s efforts to allocate responsibility for the provision of reactive support to the Transmission System, Transmission Provider’s efforts to allocate responsibility for interruption or reduction of generation on the Transmission System, and each Party’s actions in an Emergency Condition. Any audit authorized by this article shall be performed at the offices where such accounts and records are maintained and shall be limited to those portions of such accounts and records that relate to each Party’s performance and satisfaction of obligations under this GIA. Each Party shall keep such accounts and records for a period equivalent to the audit rights periods described in Article 25.4.

25.4 Audit Rights Periods.

25.4.1 Audit Rights Period for Construction-Related Accounts and Records. Accounts and records related to the design, engineering, procurement, and construction of Transmission Provider's Interconnection Facilities and Network Upgrades shall be subject to audit for a period of twenty-four months following Transmission Provider's issuance of a final invoice in accordance with Article 12.2.

25.4.2 Audit Rights Period for All Other Accounts and Records. Accounts and records related to either Party's performance or satisfaction of all obligations under this GIA other than those described in Article 25.4.1 shall be subject to audit as follows: (i) for an audit relating to cost obligations, the applicable audit rights period shall be twenty-four months after the auditing Party's receipt of an invoice giving rise to such cost obligations; and (ii) for an audit relating to all other obligations, the applicable audit rights period shall be twenty-four months after the event for which the audit is sought.

25.5 Audit Results. If an audit by a Party determines that an overpayment or an underpayment has occurred, a notice of such overpayment or underpayment shall be given to the other Party together with those records from the audit which support such determination.

Article 26. Subcontractors

26.1 General. Nothing in this GIA shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this GIA; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this GIA in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

26.2 Responsibility of Principal. The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this GIA. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall Transmission Provider be liable for the actions or inactions of Interconnection Customer or its subcontractors with respect to obligations of Interconnection Customer under Article 5 of this GIA. Any applicable obligation imposed by this GIA upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of

such Party.

26.3 No Limitation by Insurance. The obligations under this Article 26 will not be limited in any way by any limitation of subcontractor's insurance.

Article 27. Disputes

27.1 Submission. In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with this GIA or its performance, such Party (the "disputing Party") shall provide the other Party with written notice of the dispute or claim ("Notice of Dispute"). Such dispute or claim shall be referred to a designated senior representative of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within 30 Calendar Days of the other Party's receipt of the Notice of Dispute, such dispute may be submitted to a mutually agreed-upon mediation. In the event that no resolution is reached, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with the germs of this GIA.

27.2 Costs. Each Party shall be responsible for its own costs incurred during the dispute process.

Article 28. Representations, Warranties, and Covenants

28.1 General. Each Party makes the following representations, warranties and covenants:

28.1.1 Good Standing. Such Party is duly organized, validly existing and in good standing under the laws of the state in which it is organized, formed, or incorporated, as applicable; that it is qualified to do business in the state or states in which the Generating Facility, Interconnection Facilities and Network Upgrades owned by such Party, as applicable, are located; and that it has the corporate power and authority to own its properties, to carry on its business as now being conducted and to enter into this GIA and carry out the transactions contemplated hereby and perform and carry out all covenants and obligations on its part to be performed under and pursuant to this GIA.

28.1.2 Authority. Such Party has the right, power and authority to enter into this GIA, to become a Party hereto and to perform its

obligations hereunder. This GIA is a legal, valid and binding obligation of such Party, enforceable against such Party in accordance with its terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws affecting creditors' rights generally and by general equitable principles (regardless of whether enforceability is sought in a proceeding in equity or at law).

28.1.3 No Conflict. The execution, delivery and performance of this GIA does not violate or conflict with the organizational or formation documents, or bylaws or operating agreement, of such Party, or any judgment, license, permit, order, material agreement or instrument applicable to or binding upon such Party or any of its assets.

28.1.4 Consent and Approval. Such Party has sought or obtained, or, in accordance with this GIA will seek or obtain, each consent, approval, authorization, order, or acceptance by any Governmental Authority in connection with the execution, delivery and performance of this GIA, and it will provide to any Governmental Authority notice of any actions under this GIA that are required by Applicable Laws and Regulations.

Article 29. Joint Operating Committee

29.1 Joint Operating Committee. Except in the case of ISOs and RTOs, Transmission Provider shall constitute a Joint Operating Committee to coordinate operating and technical considerations of Interconnection Service. At least six (6) months prior to the expected Initial Synchronization Date, Interconnection Customer and Transmission Provider shall each appoint one representative and one alternate to the Joint Operating Committee. Each Interconnection Customer shall notify Transmission Provider of its appointment in writing. Such appointments may be changed at any time by similar notice. The Joint Operating Committee shall meet as necessary, but not less than once each calendar year, to carry out the duties set forth herein. The Joint Operating Committee shall hold a meeting at the request of either Party, at a time and place agreed upon by the representatives. The Joint Operating Committee shall perform all of its duties consistent with the provisions of this GIA. Each Party shall cooperate in providing to the Joint Operating Committee all information required in the performance of the Joint Operating Committee's duties. All decisions and agreements, if any, made by the Joint Operating Committee, shall be evidenced in writing. The duties of the Joint Operating Committee shall include the following:

- 29.1.1 Establish data requirements and operating record requirements.
- 29.1.2 Review the requirements, standards, and procedures for data acquisition equipment, protective equipment, and any other equipment or software.
- 29.1.3 Annually review the one year forecast of maintenance and planned outage schedules of Transmission Provider's and Interconnection Customer's facilities at the Point of Interconnection.
- 29.1.4 Coordinate the scheduling of maintenance and planned outages on the Interconnection Facilities, the Generating Facility and other facilities that impact the normal operation of the interconnection of the Generating Facility to the Transmission System.
- 29.1.5 Ensure that information is being provided by each Party regarding equipment availability.
- 29.1.6 Perform such other duties as may be conferred upon it by mutual agreement of the Parties.

Article 30. Miscellaneous

- 30.1 **Binding Effect.** This GIA and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.
- 30.2 **Conflicts.** In the event of a conflict between the body of this GIA and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this GIA shall prevail and be deemed the final intent of the Parties.
- 30.3 **Rules of Interpretation.** This GIA, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this GIA, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this GIA), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any Applicable Laws and Regulations means such

Applicable Laws and Regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article of this GIA or such Appendix to this GIA, or such Section to the GIP or such Appendix to the GIP, as the case may be; (6) “hereunder”, “hereof”, “herein”, “hereto” and words of similar import shall be deemed references to this GIA as a whole and not to any particular Article or other provision hereof or thereof; (7) “including” (and with correlative meaning “include”) means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, “from” means “from and including”, “to” means “to but excluding” and “through” means “through and including.”

30.4 Entire Agreement. This GIA, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this GIA. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, either Party’s compliance with its obligations under this GIA.

30.5 No Third Party Beneficiaries. This GIA is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

30.6 Waiver. The failure of a Party to this GIA to insist, on any occasion, upon strict performance of any provision of this GIA will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this GIA shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this GIA. Termination or Default of this GIA for any reason by Interconnection Customer shall not constitute a waiver of Interconnection Customer’s legal rights to obtain an interconnection from Transmission Provider. Any waiver of this GIA shall, if requested, be provided in writing.

30.7 Headings. The descriptive headings of the various Articles of this GIA have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this GIA.

- 30.8 Multiple Counterparts.** This GIA may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.
- 30.9 Amendment.** The Parties may by mutual agreement amend this GIA by a written instrument duly executed by the Parties.
- 30.10 Modification by the Parties.** The Parties may by mutual agreement amend the Appendices to this GIA by a written instrument duly executed by the Parties. Such amendment shall become effective and a part of this GIA upon satisfaction of all Applicable Laws and Regulations.
- 30.11 No Partnership.** This GIA shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

IN WITNESS WHEREOF, the Parties have executed this GIA in duplicate originals, each of which shall constitute and be an original effective Agreement between the Parties.

[Insert name of Transmission Provider or Transmission Owner, if applicable]

By: _____ By: _____

Title: _____ Title: _____

Date: _____ Date: _____

[Insert name of Interconnection Customer]

By: _____

Title: _____

Date: _____

DRAFT

Appendix A to GIA

Interconnection Facilities, Network Upgrades and Distribution Upgrades

1. Interconnection Facilities:

(a) [insert Interconnection Customer's Interconnection Facilities]:

(b) [insert Transmission Provider's Interconnection Facilities]:

2. Network Upgrades:

(a) [insert Stand Alone Network Upgrades]:

(b) [insert Other Network Upgrades]:

3. Distribution Upgrades:

Appendix B to GIA

Milestones

DRAFT

Appendix C to GIA
Interconnection Details

DRAFT

Appendix D to GIA Security

Arrangements Details

Infrastructure security of Transmission System equipment and operations and control hardware and software is essential to ensure day-to-day Transmission System reliability and operational security. FERC will expect all Transmission Providers, market participants, and Interconnection Customers interconnected to the Transmission System to comply with the recommendations offered by the President's Critical Infrastructure Protection Board and, eventually, best practice recommendations from the electric reliability authority. All public utilities will be expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

DRAFT

Appendix E to GIA
Commercial Operation Date

This Appendix E is a part of the GIA between Transmission Provider and Interconnection Customer.

[Date]

[Transmission Provider Address]

Re: _____ Generating Facility Dear

_____:

On **[Date]** **[Interconnection Customer]** has completed Trial Operation of Unit No.____. This letter confirms that **[Interconnection Customer]** commenced Commercial Operation of Unit No.____at the Generating Facility, effective as of **[Date plus one day]**.

Thank you.

[Signature]

[Interconnection Customer Representative]

Appendix F to GIA

Addresses for Delivery of Notices and Billings

Notices:

Transmission Provider:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

Billings and Payments:

Transmission Provider:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

Alternative Forms of Delivery of Notices (telephone, facsimile or email):

Transmission Provider:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

APPENDIX G

RESERVED

DRAFT

SUMMARY and FISCAL NOTE*

Department:	Dept. Contact/Phone:	CBO Contact/Phone:
City Light Department	Melissa Skelton (206) 615-1568	Greg Shiring (206) 386-4085

* Note that the Summary and Fiscal Note describes the version of the bill or resolution as introduced; final legislation including amendments may not be fully described.

1. BILL SUMMARY

Legislation Title: AN ORDINANCE relating to the City Light Department; amending Section 21.49.125 of the Seattle Municipal Code; updating the City Light Department's Open Access Transmission Tariff and rates to meet changes in costs and regulations.

Summary and background of the Legislation: In 2009, the City Light Department (City Light) adopted an Open Access Transmission Tariff (OATT) mirroring the *pro forma* OATT established by the Federal Energy Regulatory Commission (FERC) to govern use of City Light's transmission system. City Light's OATT has not been utilized, however City Light intends to transition legacy transmission agreements to the OATT. Furthermore, City Light's entrance into the California Independent System Operator's (CAISO) Energy Imbalance Market (EIM) required conforming modifications to the City Light OATT.

City Light's 2009 OATT was reviewed to: (1) adopt standard *pro forma* revisions to the OATT; (2) update OATT language to accommodate City Light's participation in the CAISO EIM; and (3) update rates after a thorough examination of OATT rates and methodology, based on FERC wholesale OATT policy to allocate proportionate costs to transmission. City Light is not subject to the jurisdiction of FERC under the Federal Power Act, however City Light models its OATT after the FERC *pro forma* as it aligns with the standard utility industry practice. City Light adopted minor modifications from the *pro forma* to account for City Light's status as a consumer-owned municipal utility.

This OATT legislation will have minimal or no financial impacts for City Light. City Light has existing/legacy contracts with Puget Sound Energy and Snohomish Public Utility District No. 1 that bundled both generation and transmission components. The OATT unbundles these and thus the OATT rates are for the transmission component only. The OATT methodology provides rates for cost-based transmission service, and City Light expects a neutral fiscal impact.

2. CAPITAL IMPROVEMENT PROGRAM

Does this legislation create, fund, or amend a CIP Project? ___ Yes X No

3. SUMMARY OF FINANCIAL IMPLICATIONS

Does this legislation amend the Adopted Budget? ___ Yes X No

Does the legislation have other financial impacts to the City of Seattle that are not reflected in the above, including direct or indirect, short-term or long-term costs?

No.

Is there financial cost or other impacts of *not* implementing the legislation?

No.

4. OTHER IMPLICATIONS

a. Does this legislation affect any departments besides the originating department?

No.

b. Is a public hearing required for this legislation?

No.

c. Does this legislation require landlords or sellers of real property to provide information regarding the property to a buyer or tenant?

No.

d. Is publication of notice with *The Daily Journal of Commerce* and/or *The Seattle Times* required for this legislation?

No.

e. Does this legislation affect a piece of property?

No.

f. Please describe any perceived implication for the principles of the Race and Social Justice Initiative. Does this legislation impact vulnerable or historically disadvantaged communities? What is the Language Access plan for any communications to the public?

None.

g. If this legislation includes a new initiative or a major programmatic expansion: What are the specific long-term and measurable goal(s) of the program? How will this legislation help achieve the program's desired goal(s)?

N/A.

List attachments/exhibits below:

None.



Seattle City Light

Seattle City Council Transportation & Utilities Committee

2020 City Light Open Access Transmission Tariff
Council Bill No. 119899

Melissa Skelton & Cathy Leone-Woods

September 25, 2020

PRESENTATION OVERVIEW

- Introduction
- OATT: The Past & The Present
- Key Policy Affirmations & Provisions
- Wholesale Transmission Rates
- OATT: The Future

INTRODUCTION TO OATT

An Open Access Transmission Tariff governs how others can transmit their electricity between points on our transmission system/lines.

1. Uniform master agreements / terms & conditions
2. Generation interconnection
3. Wholesale transmission service

OATT: THE PAST & THE PRESENT

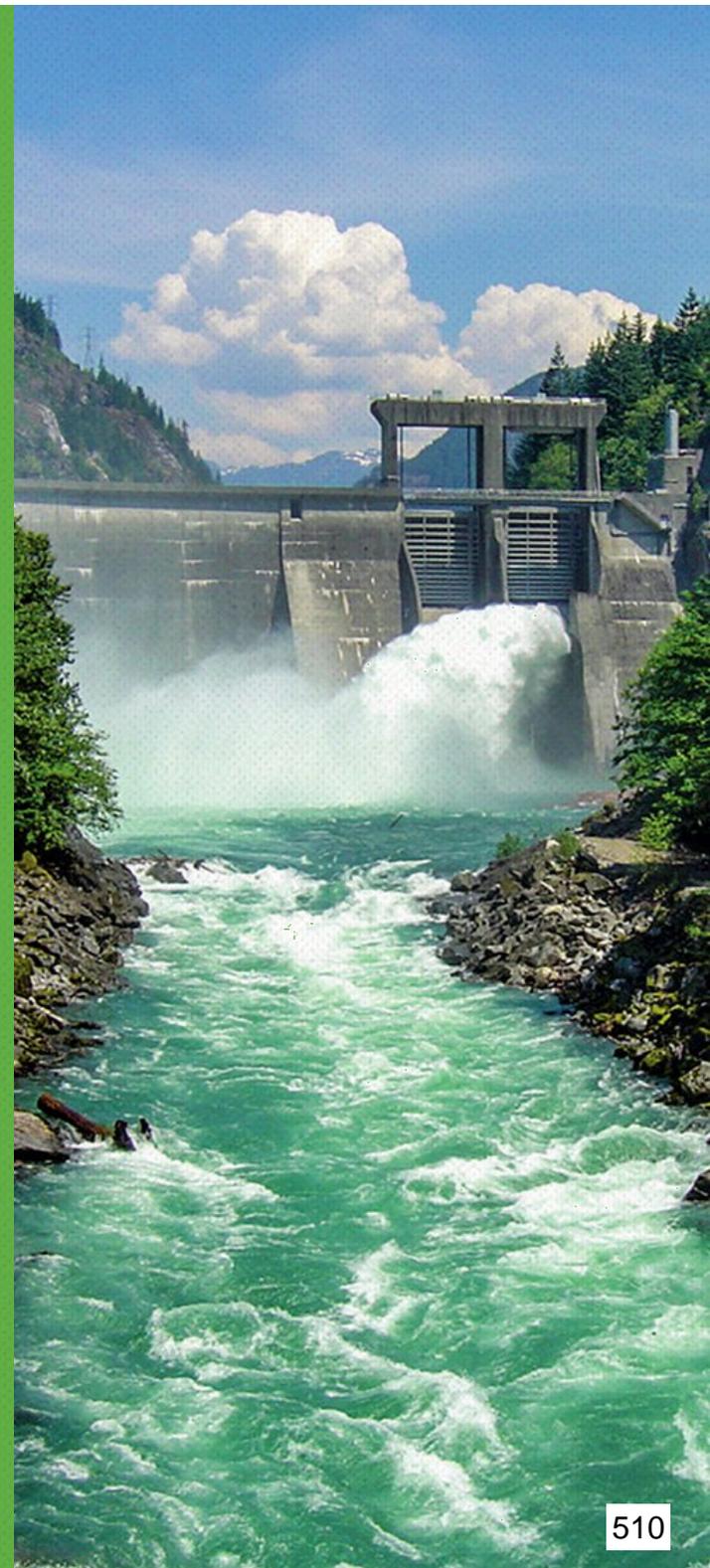
- City Light – 2009 OATT
 - Agreement with FERC/public power
- Change in business needs
 - Updates over last 10 years
 - Legacy contracts expiring
 - CAISO EIM entrant requirements
- Comprehensive examination
 - Legal: Terms & conditions
 - Rates: Methodology review





Seattle City Light

OATT: KEY POLICY DECISIONS



2020 OATT – KEY POLICY AFFIRMATIONS

- Own transmission facilities
- Provide wholesale transmission service
 - Previously through legacy agreements
- Transparent, non-discriminatory service comparable to what we provide ourselves
- Modeled after the FERC pro forma (template)
 - Regulatory, administrative, legal, or financial requirements applicable to City Light.
 - Operational conditions based on geographic location; business functions; transmission facilities; transmission access / use.

2020 OATT – PROVISIONS



- Pro forma (template)
- Municipal modifications
 - Point-to-Point Transmission
 - CAISO EIM Provisions
 - NorthernGrid Planning Process (anticipatory)
- Wholesale transmission rates review

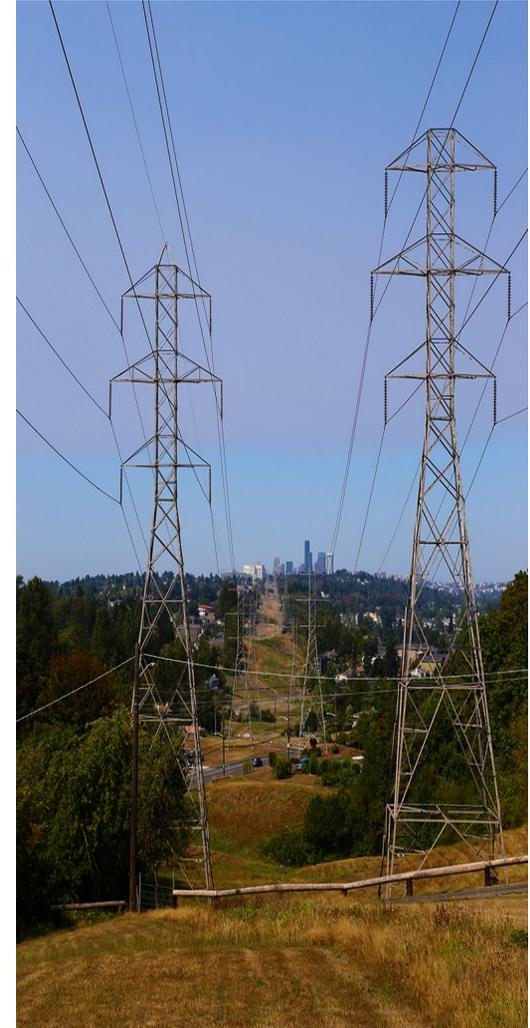
2020 OATT – WHOLESALE TRANSMISSION RATES

- OATT rates consultant
- Transmission rate schedules
 - Comprehensive revision
 - FERC wholesale OATT policy
 - 2018 financials
- Rates naturally increasing from 2009 OATT
 - Cost-based requirement
 - Inclusion of all transmission lines
 - Corrected OATT rates methodology from consultant



OATT: THE FUTURE

- OATT updated, then what?
 - Begin Implementation
 - Transmission website
 - Implement service agreements
 - Perform system studies
 - Financial accounting
 - Standards of conduct
 - Accommodate EIM
 - Rate work
 - Available Transmission Capacity
 - Business practices



QUESTIONS?





Legislation Text

File #: CB 119898, Version: 1

CITY OF SEATTLE

ORDINANCE _____

COUNCIL BILL _____

AN ORDINANCE relating to the City Light Department; amending subsection 21.49.086.D of the Seattle Municipal Code to define the Net Wholesale Revenue target used in Rate Stabilization Account operations for 2021-2024.

WHEREAS, the City established the City Light Rate Stabilization Account (RSA) within the Light Fund in part to buffer the City Light Department and its ratepayers from shortfalls in the amount of Net Wholesale Revenue actually earned relative to that specified in budgets and assumed in electricity rates; and

WHEREAS, Ordinance 123260 established a funding mechanism for the RSA and rules for its operation; and

WHEREAS, the City Light 2019-2024 Strategic Plan, adopted by Resolution 31819, identified targets for Net Wholesale Revenue of \$50 million in 2021 and \$40 million in 2022 through 2024; and

WHEREAS, the outlook for 2021 Net Wholesale Revenue assumes a higher volume of surplus electricity sales resulting from an anticipated reduction in 2021 retail consumption due to the COVID-19 pandemic and associated economic downturn; and

WHEREAS, Net Wholesale Revenue values of \$60 million in 2021 and \$40 million in 2022 are consistent with assumptions used to develop City Light's Proposed Budget for 2021-2022; and

WHEREAS, it is expected that in 2021, the City Council may reconsider spending plans, the targets for Net Wholesale Revenue, and the retail electricity rates to support them for future years as part of an update of City Light's Strategic Plan; NOW, THEREFORE,

BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:

Section 1. Subsection 21.49.086.D of the Seattle Municipal Code, last amended by Ordinance 125710,

is amended as follows:

21.49.086 Rate Stabilization Account

* * *

D. Baseline for the Net Wholesale Revenue forecast: The Net Wholesale Revenue forecast shall be ((~~\$55 million for 2019 and \$50 million for 2020~~)) \$60 million in 2021 and \$40 million in 2022 through 2024.

The forecast shall be the amount of Net Wholesale Revenue assumed by the City Council for the purpose of establishing Department rates and budgets. ((~~The City Council will determine Net Wholesale Revenue forecasts for subsequent years prior to adopting Department rates for those years.~~))

The annual forecast for each year will be distributed over the quarters of the year as follows:

1. ((~~35~~)) Thirty-five percent for January 1 to March 31;
2. ((~~20~~)) Twenty percent for April 1 to June 30;
3. ((~~15~~)) Fifteen percent for July 1 to September 30; and
4. ((~~30~~)) Thirty percent for October 1 to December 31.

The amounts determined in this way will be the quarterly Net Wholesale Revenue forecasts for the purpose of subsection 21.49.086.E and will be reported by the Department in its annual budget proposals.

* * *

Section 2. This ordinance shall take effect and be in force 30 days after its approval by the Mayor, but if not approved and returned by the Mayor within ten days after presentation, it shall take effect as provided by Seattle Municipal Code Section 1.04.020.

Passed by the City Council the _____ day of _____, 2020, and signed by me in open session in authentication of its passage this ____ day of _____, 2020.

President _____ of the City Council

Approved by me this _____ day of _____, 2020.

Jenny A. Durkan, Mayor

Filed by me this _____ day of _____, 2020.

Monica Martinez Simmons, City Clerk

(Seal)

SUMMARY and FISCAL NOTE*

Department:	Dept. Contact/Phone:	CBO Contact/Phone:
Seattle City Light	Chris Ruffini/684-4649	Gregory Shiring/386-4085

* Note that the Summary and Fiscal Note describes the version of the bill or resolution as introduced; final legislation including amendments may not be fully described.

1. BILL SUMMARY

Legislation Title: AN ORDINANCE relating to the City Light Department; amending subsection 21.49.086.D of the Seattle Municipal Code to define the Net Wholesale Revenue target used in Rate Stabilization Account operations for 2021-2024.

Summary and background of the Legislation: This ordinance sets Net Wholesale Revenue (NWR) targets to be used in the Rate Stabilization Account (RSA) mechanism established in ordinance 123260. These NWR targets are consistent with NWR assumptions in City Light's Proposed 2021-2022 Budget.

City Light's 2019-2024 Strategic Plan, adopted by City Council on July 9, 2018 via resolution 31819 included NWR targets of \$50 million in 2021 and \$40 million in 2022-2024. The 2021 target assumed in the 2021 Proposed Budget is \$10 million higher than the 2021 amount in the Adopted 2019-2024 Strategic Plan. This increase is reflective of higher expected net wholesale revenue due to a substantial reduction in the outlook of City Light's retail load resulting from the COVID-19 pandemic and associated economic downturn. The \$40 million NWR targets for 2022-2024 are consistent with the Adopted Strategic Plan. City Council may reconsider these targets in the future.

2. CAPITAL IMPROVEMENT PROGRAM

Does this legislation create, fund, or amend a CIP Project? Yes No

3. SUMMARY OF FINANCIAL IMPLICATIONS

Does this legislation amend the Adopted Budget? Yes No

Does the legislation have other financial impacts to The City of Seattle that are not reflected in the above, including direct or indirect, short-term or long-term costs?
The NWR targets will impact the size and timing of potential RSA surcharges on retail rates. In general, lower targets reduce the probability of RSA surcharges.

Is there financial cost or other impacts of *not* implementing the legislation?
Not implementing this legislation would prevent the legal requirements for the Rate Stabilization Account mechanism to work as legislated.

4. OTHER IMPLICATIONS

- a. **Does this legislation affect any departments besides the originating department?**
No
- b. **Is a public hearing required for this legislation?**
No
- c. **Does this legislation require landlords or sellers of real property to provide information regarding the property to a buyer or tenant?**
No
- d. **Is publication of notice with *The Daily Journal of Commerce* and/or *The Seattle Times* required for this legislation?**
No
- e. **Does this legislation affect a piece of property?**
No
- f. **Please describe any perceived implication for the principles of the Race and Social Justice Initiative. Does this legislation impact vulnerable or historically disadvantaged communities? What is the Language Access plan for any communications to the public?**
N/A
- g. **If this legislation includes a new initiative or a major programmatic expansion: What are the specific long-term and measurable goal(s) of the program? How will this legislation help achieve the program's desired goal(s)?**
N/A

List attachments/exhibits below:

None.



Net Wholesale Revenue Target 2021-24

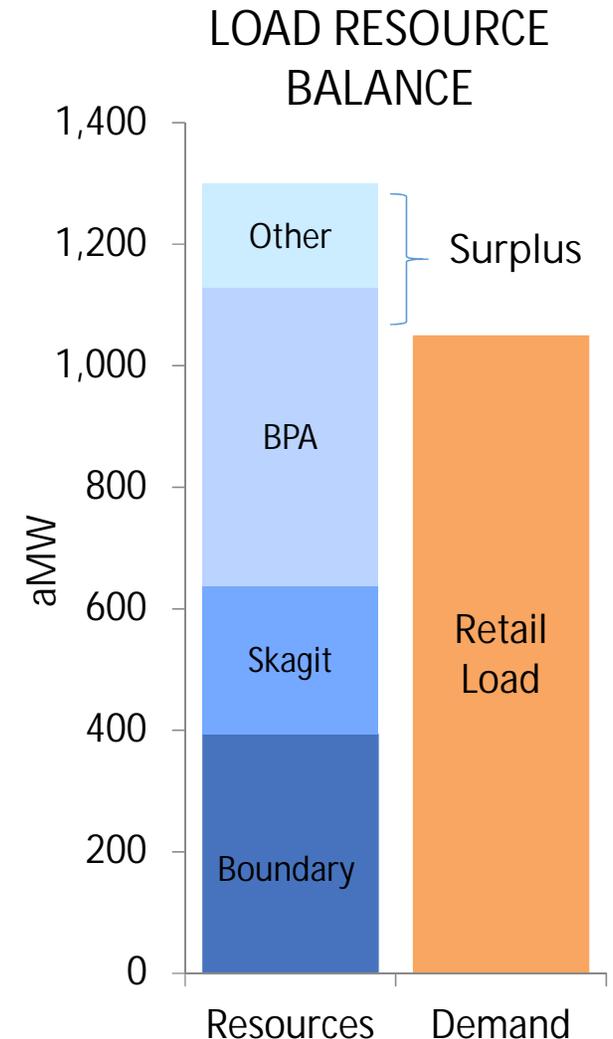
Transportation & Utilities
Committee Special Meeting

September 25, 2020

What is Net Wholesale

Revenue?

- City Light sources more electricity than needed to serve retail customer-owners
 - “Long” portfolio hedges against market risks
- Net wholesale revenues (NWR) is revenues from surplus power sales
 - NWR supplements retail revenues, which helps keep rates low
 - Amount of revenue realized each year is hard to predict and budget
 - External drivers:



Rate Stabilization Account (RSA)

- The RSA is a restricted reserve that buffers net wholesale revenues (NWR).
- Funds are deposited/withdrawn from the RSA when NWR is higher/lower than baseline. Automatic rate surcharges refill RSA if it becomes depleted.

\$ Million	Actual				Forecast	
	2016	2017	2018	2019	2020	2021
Net Wholesale Revenue (NWR) Budgeted	60.0	60.0	60.0	55.0	50.0	60.0
Net Wholesale Revenue Actual/Forecast	53.2	50.5	49.9	15.5	48.4	73.6
Net Wholesale Revenue Surplus (Shortfall)	(6.8)	(9.5)	(10.1)	(39.5)	(1.6)	13.6
RSA Starting Balance	91.0	91.1	93.4	96.9	74.2	97.2
RSA Transfers, Net for NWR Deviations	(6.8)	(9.5)	(10.1)	(39.5)	(1.6)	13.6
RSA Surcharge Revenue	4.4	11.2	11.5	14.2	23.7	5.4
Transfers (Interest, True-ups)	2.5	0.5	2.1	2.6	1.0	1.7
RSA Ending Balance	91.1	93.4	96.9	74.2	97.2	117.9
Total Change in the RSA	0.1	2.3	3.5	(22.8)	23.1	20.6

Setting a NWR Baseline

- Ordinance establishes a target or baseline NWR for RSA operations
 - Typically aligns with budget/rates/strategic plan
- Higher baseline in 2021 supported by fundamentals
 - Lower retail sales due to pandemic response will translate to higher volume
 - Strong market prices in 2021
 - Incremental revenues from Western Energy Imbalance Market (WEIM)
- Baseline of \$40M for 2022-2024
 - Could be updated in future budget cycles if needed

	2020	2021	2022	2023	2024
Baseline	\$50M	\$60M	\$40M	\$40M	\$40M
Actual/Forecast	\$48M	\$74M	\$52M	na	na

Rate & RSA Outlook

RATE CHANGES

RSA/BPA changes offset to a small rate decrease

No rate change, pending budget adoption

Rate decreases are forecasted for 2021 as RSA surcharges are lifted

Nov 2019 – RSA	+1.5%
Nov 2019 – BPA	-1.9%
Jan 2020 – General	+4.7%
Jan 2021 – General*	0%
Feb 2021 – RSA*	-1.5%
May 2021 – RSA*	-1.5%

* Prospective forecast



Seattle City Light

