# SEATTLE CITY COUNCIL

## Sustainability, City Light, Arts and Culture Committee

## Agenda

**Friday, January 17, 2025**

**9:30 AM**

**Council Chamber, City Hall**
**600 4th Avenue**
**Seattle, WA 98104**

**Alexis Mercedes Rinck, Chair**
**Cathy Moore, Vice-Chair**
**Rob Saka, Member**
**Dan Strauss, Member**

**Chair Info: 206-684-8808; AlexisMercedes.Rinck@seattle.gov**

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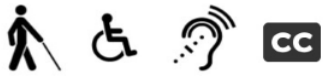


# SEATTLE CITY COUNCIL

## Sustainability, City Light, Arts and Culture Committee
## Agenda
## January 17, 2025 - 9:30 AM

**Meeting Location:**
Council Chamber, City Hall , 600 4th Avenue , Seattle, WA 98104

**Committee Website:**
https://www.seattle.gov/council/committees/sustainability-city-light-arts-and-culture

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.

Members of the public may register for remote or in-person Public Comment to address the Council. Details on how to provide Public Comment are listed below:

Remote Public Comment - Register online to speak during the Public Comment period at the meeting at https://www.seattle.gov/council/committees/public-comment
Online registration to speak will begin one hour before the 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.

In-Person Public Comment - Register to speak on the Public Comment sign-up sheet located inside Council Chambers at least 15 minutes prior to the meeting start time. 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.

Pursuant to Council Rule VI.C.10, members of the public providing public comment in Chambers will be broadcast via Seattle Channel.

Please submit written comments to all Councilmembers four hours prior to the meeting at Council@seattle.gov or at Seattle City Hall, Attn: Council Public Comment, 600 4th Ave., Floor 2, Seattle, WA 98104.

*Please Note: Times listed are estimated*

## A. Call To Order

## B. Approval of the Agenda

## C. Public Comment

## D. Items of Business

**1.** Appt 03049 **Reappointment of Rosita I. Romero as member, Museum Development Authority Governing Council, for a term to July 31, 2025.**

*Attachments:* Appointment Packet

**Briefing, Discussion, and Possible Vote**

**Presenter:** Chair Rinck

**2.** Appt 03050 **Appointment of Bruce E. Flory as member, City Light Review Panel, for a term to April 10, 2026.**

*Attachments:* Appointment Packet

*Supporting Documents:* Presentation

**Briefing, Discussion, and Possible Vote**

**Presenter:** Chair Rinck

**3.** Appt 03051 **Appointment of Ryan Monson as member, City Light Review Panel, for a term to April 12, 2027.**

*Attachments:* Appointment Packet

**Briefing, Discussion, and Possible Vote**

**Presenter:** Chair Rinck

**4.** Appt 03052 **Appointment of Toyin Olowu as member, City Light Review Panel, for a term to September 30, 2025.**

*Attachments:* Appointment Packet

**Briefing, Discussion, and Possible Vote**

**Presenter:** Chair Rinck

**5.** Res 32160 **A RESOLUTION relating to the City Light Department; adopting an updated 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 - Transportation Electrification Strategic Investment Plan (TESIP) 2025-2030
Att B - Memorandum from International Council on Clean Transportation

*Supporting Documents:* Summary and Fiscal Note
Summary Att A - Fleet Design Condensed Racial Equity Toolkit
Summary Att B - Multi-Family EV Charging Design Concept Condensed Racial Equity Toolkit
Summary Att C - Public Charging EV Racial Equity Toolkit
Presentation

**Briefing, Discussion, and Possible Vote**

**Presenters:** Craig Smith, David Logsdon, and Angela Song, Seattle City Light; Jenifer Chao, Director, Department of Neighborhoods

**6.** **Bomb Cyclone Storm Response and Recovery**

*Supporting Documents:* Presentation

**Briefing and Discussion**

**Presenters:** Mike Haynes and Brittany Barnwell, Seattle City Light

## E. Adjournment

# Legislation Text

**File #:** Appt 03049, **Version:** 1

Reappointment of Rosita I. Romero as member, Museum Development Authority Governing Council, for a term to July 31, 2025.

The Appointment Packet is provided as an attachment.

# City of Seattle Boards & Commissions Notice of Appointment

| | | |
|---|---|---|
| **Appointee Name:**<br>Rosita I. Romero | | |
| **Board/Commission Name:**<br><br>Museum Development Authority **Governing** Council | | **Position Title:**<br><br>Member |
| ☐ **Appointment** ***OR*** ☒ **Reappointment** | **Council Confirmation required?**<br>**(X)** Yes<br>☐ No | |
| **Appointing Authority:**<br>☐ Council<br>☒ Mayor<br>( ) Other: Seattle Art Museum | **Term of Office:**<br>8/1/2022<br>to<br>7/31/2025 | |
| **Residential Neighborhood:**<br>*Mercer Island* | **Zip Code:**<br>*98040* | **Contact Phone No.:**<br>[redacted] |
| **Background:**<br>*See attached Bio* | | |
| **Authorizing Signature (original signature):**<br><br>**Date Signed (appointed):**<br>December 5th, 2024 | **Appointing Signatory:**<br><br>Bruce A. Harrell<br>Mayor of Seattle | |

Rosa I. Romero, M.Ed.
(she-her)
[redacted]

Rosa I. Romero (Rosita Romero), born in Colombia, South America, has lived in the United States 54 years and of those, 40 years in the Seattle area.

Studies:
B.A. Business Administration, Cali Colombia.
Montessori Teaching Certification. American Montessori Institute Kansas.
Art Therapy, Kansas University, Lawrence KS.
K-12 Teaching Certification Kansas University, Fort Hays, KS.
M.Ed. University of WA, Seattle, Washington.

Work:
Art and Spanish teaching to Pre-school and Elementary School children.
Teacher Trainer and supervisor at Seattle and Renton Community Colleges.
Propitiator and Director Art Gallery in Seattle for over 15 years.

Community Engagement:
Appointed by the Seattle Mayor to the Museum Development Authority and has served several terms since 2007.
Appointed by the Washington State Governor to two terms as State Art Commissioner.
Active Docent at Seattle Art Museum, (2013 co-chair for special exhibition).
Past Docent at Volunteer Park Conservatory, Seattle.
Past Docent and Volunteer at the Chinese Gardens, Seattle.
Past Co-chair Art Docents at Island Crest, elementary School in Mercer Island, WA.
Served as Board Member with Artist Trust, Seattle.
Served as an art procurement with PONCHO. Seattle.
Co-founder Viva la Musica Club, a Latino community engagement through music with the Seattle Symphony.
Co-founder and Life member of Mujeres of the Northwest, a professional Latinas support group to foster community involvement and social responsibility.
Co-founder Latinos Unidos por los Niños, a Seattle Children Hospital Guild.
Past member of the Visiting Committee for the School of Women Studies, University of Washington.
Steering Committee member at Casa Latina, Seattle.

Memberships:
Seattle Art Museum Docents.
American for the Arts.
Ikebana International and Senke School of Ikebana.
Puget Sound Mycological Society.

# Museum Development Authority Governing Council

## OCTOBER 2024

*9* Members: Pursuant to RCW 35.21.730 and Seattle Municipal Code 3.110, all members subject to City Council confirmation, *3*-year terms:

- *0* City Council-appointed
- *3* Mayor-appointed
- *6* Other Appointing Authority-appointed (specify):
  3 – Seattle Art Museum (SAM)
  3 – MDA Governing Council

### Roster:

| Position No. | Position Title | Name | Term Begin Date | Term End Date | Term # | Appointed By |
|---|---|---|---|---|---|---|
| 1. | Member | Rosita I. Romero | 8/1/22 | 7/31/25 | 6 | Mayor |
| 2. | Member | Robert Kaplan | 8/1/22 | 7/31/25 | 2 | SAM |
| 3. | Treasurer | Dorothy Mann | 8/1/22 | 7/31/25 | 11 | MDA Governing Council |
| 4. | Member | Vacant | | | | Mayor |
| 5. | Chair | Bob Strong | 7/12/24 | 7/11/27 | 7 | SAM |
| 6. | Member | Vacant | | | | MDA Governing Council |
| 7. | Member | Robert Flowers | 7/13/23 | 7/12/26 | 5 | Mayor |
| 8. | Vice Chair | Douglas Norberg | 7/13/23 | 7/12/26 | 10 | SAM |
| 9. | Member | Stephanie Ellis-Smith | 7/12/24 | 7/11/27 | 2 | MDA Governing Council |

Legislation Text

**File #:** Appt 03050, **Version:** 1

Appointment of Bruce E. Flory as member, City Light Review Panel, for a term to April 10, 2026.

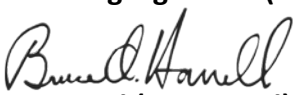
The Appointment Packet is provided as an attachment.

# City of Seattle Boards & Commissions Notice of Appointment

| | | |
|---|---|---|
| **Appointee Name:**<br>*Bruce E. Flory* | | |
| **Board/Commission Name**:<br>*City Light Review Panel* | | **Position Title:**<br>*Economist- Position 1* |
| ☒ **Appointment** ***OR*** ☐ **Reappointment** | **City Council Confirmation required?**<br>☒ Yes<br>☐ No | |
| **Appointing Authority:**<br>☐ City Council<br>☒ Mayor<br>☐ Other: *Fill in appointing authority* | **Term of Position: ***<br>4/11/2023<br>**to**<br>4/10/2026<br><br>☒ *Serving remaining term of a vacant position* | |
| **Residential Neighborhood:**<br>*District 5* | **Zip Code:**<br>*98125* | **Contact Phone No.:**<br>[redacted] |

**Background:**

Bruce Flory brings over 40 years of experience as a resource economist, primarily with Seattle Public Utilities (SPU), and holds a B.A. in Economics from the University of Washington and a Ph.D. in Economics and Agricultural Economics from the University of Wisconsin-Madison. During his 30-year tenure with the City, he led efforts in utility rate studies, financial analyses, water demand forecasting, and cost-effectiveness evaluations of water conservation programs. Bruce's expertise extends internationally, with consulting work in Indonesia, New Zealand, China, and the Philippines. A committed advocate for equity, he was an active member of SPU's Race and Social Justice Change Team and the Citywide Core Team. Since retiring in 2019, Bruce has continued contributing to regional water management through part-time work with the Cascade Water Alliance. His wealth of knowledge and dedication to public service make him an excellent candidate for Position 1 - Economist on the Seattle City Light Review Panel.

| | |
|---|---|
| **Authorizing Signature (original signature):**<br>  <br>**Date Signed (appointed):**<br><br>December 13th, 2024 | **Appointing Signatory:**<br>*Bruce A. Harrell*<br><br>*Mayor of Seattle* |

**Term begin and end date is fixed and tied to the position and not the appointment date.*

**BRUCE E. FLORY**

[redacted]

WORK EXPERIENCE

*Senior Economist,* Cascade Water Alliance, (6/20 to present): Provide economic and forecasting expertise. Develop new long-term water demand forecast for Transmission & Supply Plan.

*Strategic Advisor/Supervising Economist,* Seattle Public Utilities, (7/15 to 7/19): Managing team of economists in Strategic Asset Management Division added to Principle Economist duties.

*Principal Economist*, Seattle Public Utilities, (1/05 to 6/15): Conducted benefit-cost analysis and prepared business cases, developed and improved water demand forecasting model, analyzed impacts of climate change on water demand and supply, quantified effectiveness of conservation programs, served on multiple national and regional committees addressing water resource issues including reclaimed water.

*Strategic Advisor*, Seattle Public Utilities, (11/99 to 12/04): Assessed regional water supply and demand, participated in the regional water supply planning process, forecast long-term retail and wholesale water demand, designed water rates, tracked actual and forecast water and sewer revenues, and contributed to development of new wholesale water sales contracts.

*Senior Economist*, Seattle Water Department/Seattle City Light/Seattle Public Utilities, (8/91 - 10/99): Produced water demand forecasts, revised and documented long range forecast model integrating water demand forecasts, supply options, revenue requirements, and rate projections. Designed water rates, conducted benefit-cost analysis of capital projects and cost of service analysis, tracked actual and forecast water revenues, and collaborated in the utility's water supply planning process.

*Energy Research and Evaluation Analyst*, Seattle City Light, (8/90 - 7/91): Created and managed databases, developed a model of monthly cash balances and interest rates to produce long range forecast of interest earnings for Financial Planning Model.

*Planning and Development Specialist*, Seattle Water Department Conservation Office, (6/89 - 7/90): Designed, conducted and analyzed customer surveys, planned and coordinated pilot water conservation programs and developed research designs for their evaluation. Negotiated and managed consultant contracts.

*Research Scientist*, Swaziland Ministry of Agriculture and Cooperatives and University of Wisconsin Land Tenure Center, (6/86 - 10/87)

*Graduate Research Assistant/Teaching Assistant*, University of Wisconsin-Madison, (9/81 - 5/86)

*Research Consultant* for Washington State Fire Marshall, Seattle Chamber of Commerce (9/78 - 7/80)

*Research Analyst*, Seattle Chamber of Commerce, (9/75 - 9/78)

ACADEMIC BACKGROUND

Ph.D. Economics/Agricultural Economics (joint degree), University of Wisconsin-Madison, 1986.
Major Fields: Resource Economics, Development Economics.
Minor Field: Public Finance.
B.A. Economics, University of Washington, 1975.

# City Light Review Panel

9 Members: Pursuant to Ordinance 123256, all members subject to City Council confirmation, 3-year terms:

- 4 City Council- appointed
- 5 Mayor- appointed

## Roster:

| *D | **G | RD | Position No. | Position Title | Name | Term Begin Date | Term End Date | Term # | Appointed By |
|---|---|---|---|---|---|---|---|---|---|
| 6 | M | 5 | 1. | Economist | Bruce E. Flory | 4/11/23 | 4/10/26 | 1 | Mayor |
| | | | 2. | Financial Analyst | | 4/12/23 | 4/11/26 | | City Council |
| 6 | F | 1 | 3. | Non-Profit Representative | Kerry Meade | 5/1/24 | 4/30/27 | 2 | Mayor |
| 1 | M | 6 | 4. | Residential Customer Representative | Leo Lam | 10/1/22 | 9/30/25 | 2 | City Council |
| 6 | M | n/a | 5. | Commercial Customer Representative | Ryan Monson | 4/13/24 | 4/12/27 | 1 | Mayor |
| 2 | M | n/a | 6. | Industrial Customer Representative | Toyin Olowu | 10/1/22 | 9/30/25 | 1 | City Council |
| 5 | F | n/a | 7. | Low-Income Customer Representative | Oksana Savolyuk | 4/12/24 | 4/11/27 | 2 | Mayor |
| 1 | F | 6 | 8. | Member at Large | Thien-Di Do | 10/1/22 | 9/30/25 | 1 | City Council |
| 6 | M | n/a | 9. | Suburban Franchise Representative | Joel Paisner | 5/1/24 | 4/30/27 | 2 | Mayor |

SELF-IDENTIFIED DIVERSITY CHART

| | Male (1) | Female (2) | Transgender (3) | NB/O/U (4) | Asian (5) | Black/ African American (6) | Hispanic/ Latino (7) | American Indian/ Alaska Native (8) | Other (9) | Caucasian/ Non-Hispanic | Pacific Islander | Middle Eastern | Multiracial |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mayor | 3 | 2 | | | | | | | 1 | 4 | | | |
| Council | 2 | 2 | | | 2 | 1 | | | | 1 | | | |
| Other | | | | | | | | | | | | | |
| Total | 5 | 4 | | | 2 | 1 | | | 1 | 5 | | | |

Key:

*D List the corresponding *Diversity Chart* number (1 through 9)
**G List *gender*, M= Male, F= Female, T= Transgender, NB= Non-Binary, O= Other, U= Unknown
RD Residential Council District number 1 through 7 or N/A

*Diversity information is self-identified and is voluntary.*

# Seattle City Light Review Panel Appointments

## Sustainability, City Light, Arts & Culture Committee

January 17, 2025

Seattle City Light

# City Light Review Panel

- Nine-member volunteer panel representing customers and partners
- Appointed by Council or Mayor, charter set by resolution
- Panel guides and provides input on strategic planning, financial planning, and rate proposals

**Leo Lam**
Residential Cust. Rep
**Panel Chair**

**Joel Paisner**
Suburban Cities Rep
**Panel Co-Chair**

**Kerry Meade**
Non-Profit Energy Efficiency Rep

**Bruce Flory**
Economist

**Thien-Di Do**
Member at Large

**Oksana Savolyuk**
Low-Income Cust. Rep

**Toyin Olowu**
Industrial Cust. Rep

**Ryan Monson**
Commercial Cust. Rep

**Vacant**
Financial Analyst 2

# Today's Action – Confirm Three Appointments

Position 1 – Bruce Flory

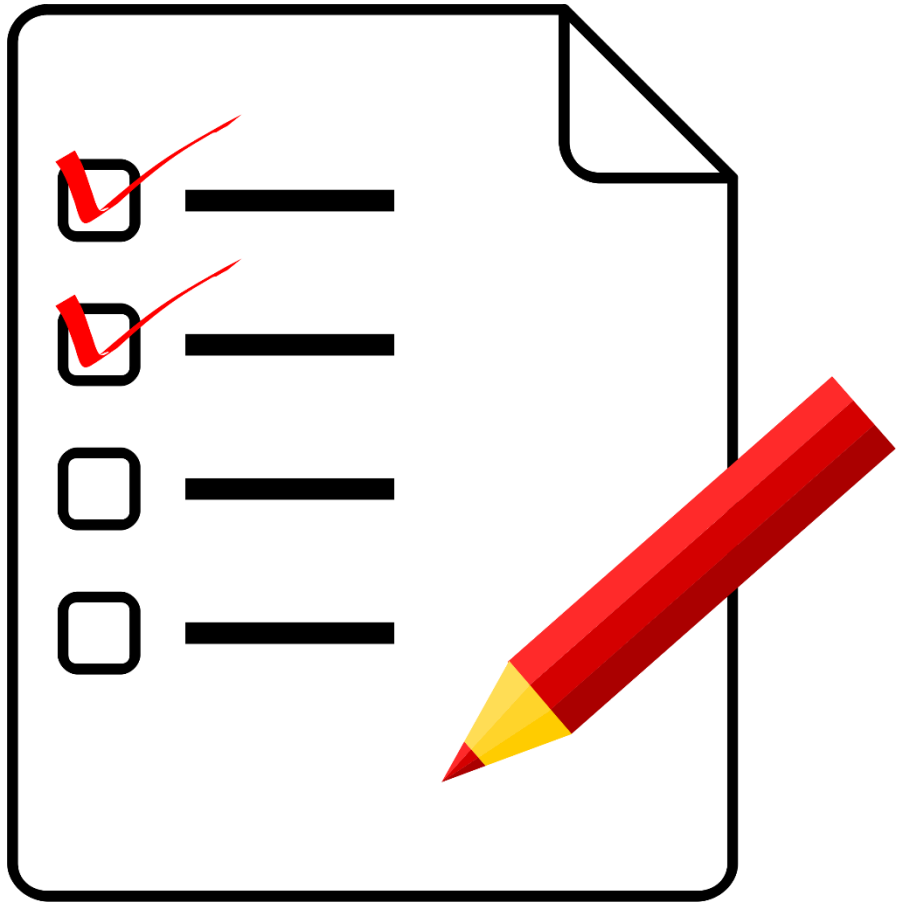
Economist

Position 5 – Ryan Monson

Commercial Customer Rep

Position 6 – Toyin Olowu

Industrial Customer Rep



# Questions & Comments

Seattle City Light

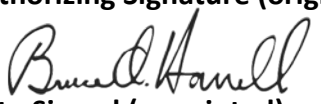
Legislation Text

**File #:** Appt 03051, **Version:** 1

Appointment of Ryan Monson as member, City Light Review Panel, for a term to April 12, 2027.

The Appointment Packet is provided as an attachment.

# City of Seattle Boards & Commissions Notice of Appointment

| | | |
|---|---|---|
| **Appointee Name:**<br>*Ryan Monson* | | |
| **Board/Commission Name**:<br>*City Light Review Panel* | | **Position Title:**<br>*Commercial Customer Representative - Position 5* |
| ☒ **Appointment** ***OR*** ☐ **Reappointment** | **City Council Confirmation required?**<br>☒ Yes<br>☐ No | |
| **Appointing Authority:**<br>☐ City Council<br>☒ Mayor<br>☐ Other: *Fill in appointing authority* | **Term of Position: ***<br>4/13/2024<br>**to**<br>4/12/2027<br><br>☒ *Serving remaining term of a vacant position* | |
| **Residential Neighborhood:**<br>*N/A* | **Zip Code:**<br>**98391** | **Contact Phone No.:**<br>[redacted] |
| **Background:**<br>Ryan Monson, General Manager of Sabey Data Centers' Seattle campus, oversees a 1.2-million-square-foot facility powered by 54 megawatts of utility energy. With over a decade of experience in energy infrastructure and sustainability, he is committed to fostering innovation and resilience. Representing a key commercial customer in Seattle City Light's service area, Ryan seeks to contribute his expertise to the Review Panel as the Commercial Customer Representative (Position 5), aligning infrastructure goals with community and technological growth. | | |
| **Authorizing Signature (original signature):**<br>  <br>**Date Signed (appointed):**<br>December 13th, 2024 | **Appointing Signatory:**<br>*Bruce A. Harrell*<br>*Mayor of Seattle* | |

**Term begin and end date is fixed and tied to the position and not the appointment date.*

# Ryan Monson

## Current Title/Position

General Manager, Sabey Data Centers – Seattle

## Responsibilities

With more than a decade of experience at Sabey Data Centers and a background in electrical construction, Ryan Monson serves as the General Manager of SDC – Seattle.
In this capacity, Ryan leads initiatives to increase client satisfaction, maximize occupancy, facilitate campus development and ensure financial growth. An invaluable leader in the organization, Ryan's expertise in managing critical infrastructure has been a key element of Sabey's success in the region.

## Data Center Management Experience

Before stepping into his current role, Ryan spent seven years as Data Center Operations Manager at Sabey, where he oversaw end-to-end data center operations with a focus on achieving 100% uptime and maintaining energy efficiency.

He directed a 24x7x365 operations team, streamlined the change management process, supported the commissioning of mission-critical equipment and provided in-depth variance reports and budget analyses. His commitment to operational excellence and team leadership has been pivotal in ensuring the reliability and performance of Sabey's facilities.

## Professional Background

Ryan's career began with 14-years as a journeyman electrician. During this time, he managed large crews on a wide range of electrical projects throughout Washington. This hands-on experience in electrical systems and facility operations has equipped him with the technical expertise and leadership acumen required to oversee critical infrastructure. His knowledge of both technical and strategic aspects of data center management continues to drive innovation and excellence in his current role.

# City Light Review Panel

9 Members: Pursuant to Ordinance 123256, all members subject to City Council confirmation, 3-year terms:

- 4 City Council- appointed
- 5 Mayor- appointed

## Roster:

| *D | **G | RD | Position No. | Position Title | Name | Term Begin Date | Term End Date | Term # | Appointed By |
|---|---|---|---|---|---|---|---|---|---|
| 6 | M | 5 | 1. | Economist | Bruce Flory | 4/11/23 | 4/10/26 | 1 | Mayor |
| | | | 2. | Financial Analyst | | 4/12/23 | 4/11/26 | | City Council |
| 6 | F | 1 | 3. | Non-Profit Representative | Kerry Meade | 5/1/24 | 4/30/27 | 2 | Mayor |
| 1 | M | 6 | 4. | Residential Customer Representative | Leo Lam | 10/1/22 | 9/30/25 | 2 | City Council |
| 6 | M | n/a | 5. | Commercial Customer Representative | Ryan Monson | 4/13/24 | 4/12/27 | 1 | Mayor |
| 2 | M | n/a | 6. | Industrial Customer Representative | Toyin Olowu | 10/1/22 | 9/30/25 | 1 | City Council |
| 5 | F | n/a | 7. | Low-Income Customer Representative | Oksana Savolyuk | 4/12/24 | 4/11/27 | 2 | Mayor |
| 1 | F | 6 | 8. | Member at Large | Thien-Di Do | 10/1/22 | 9/30/25 | 1 | City Council |
| 6 | M | n/a | 9. | Suburban Franchise Representative | Joel Paisner | 5/1/24 | 4/30/27 | 2 | Mayor |

SELF-IDENTIFIED DIVERSITY CHART

| | Male (1) | Female (2) | Transgender (3) | NB/O/U (4) | Asian (5) | Black/ African American (6) | Hispanic/ Latino (7) | American Indian/ Alaska Native (8) | Other (9) | Caucasian/ Non-Hispanic | Pacific Islander | Middle Eastern | Multiracial |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mayor | 3 | 2 | | | | | | | 1 | 4 | | | |
| Council | 2 | 2 | | | 2 | 1 | | | | 1 | | | |
| Other | | | | | | | | | | | | | |
| Total | 5 | 4 | | | 2 | 1 | | | 1 | 5 | | | |

Key:

*D List the corresponding *Diversity Chart* number (1 through 9)
**G List *gender*, M= Male, F= Female, T= Transgender, NB= Non-Binary, O= Other, U= Unknown
RD Residential Council District number 1 through 7 or N/A

*Diversity information is self-identified and is voluntary.*

# Legislation Text

**File #:** Appt 03052, **Version:** 1

Appointment of Toyin Olowu as member, City Light Review Panel, for a term to September 30, 2025.

The Appointment Packet is provided as an attachment.

# City of Seattle Boards & Commissions Notice of Appointment

| | | |
|---|---|---|
| **Appointee Name:**<br>*Toyin Olowu* | | |
| **Board/Commission Name:**<br>*City Light Review Panel* | | **Position Title:**<br>*Industrial Customer Representative - Position 6* |
| ☒ **Appointment** ***OR*** ☐ **Reappointment** | **City Council Confirmation required?**<br>☒ Yes<br>☐ No | |
| **Appointing Authority:**<br>☒ City Council<br>☐ Mayor<br>☐ Other: *Fill in appointing authority* | **Term of Position: ***<br>10/1/2022<br>**to**<br>9/30/2025<br>☒ *Serving remaining term of a vacant position* | |
| **Residential Neighborhood:**<br>*Kent, WA* | **Zip Code:**<br>**98032** | **Contact Phone No.:**<br>[redacted] |

**Background:**

Toyin Olowu, Finance Manager and Controller at Nucor Seattle Steel Division, oversees operations for one of SCL's largest industrial customers, contributing $29M in 2023 electricity payments and employing 300 people locally.

With experience implementing cost-saving measures like demand response programs, Toyin combines financial expertise with a commitment to sustainability and competitive rates. His insights and leadership make him an excellent fit as the Industrial Customer Representative (Position 6) on the Seattle City Light Review Panel.

| | |
|---|---|
| **Authorizing Signature (original signature):**<br>Alexis Mercedes Rinck<br>**Date Signed (appointed):**<br>12/20/24 | **Appointing Signatory:**<br>*Alexis Mercedes Rinck*<br>*Councilmember- Position 8* |

**Term begin and end date is fixed and tied to the position and not the appointment date.*

Toyin Olowu has over 20 years of experience in manufacturing spanning a variety of roles. Toyin joined Nucor in 2022 and has been the Controller for Nucor Steel Seattle since early 2024. His previous positions include Controller, Vulcraft Utah (Nucor), Brigham City, UT; Controller, Terex (Genie Industries), Moses Lake, WA; Director of Finance, DS Smith Paper & Packaging, Columbia, SC; and Senior Manager of Operations Accounting at Textron Specialized Vehicles, Augusta, GA.

Toyin has a BA in Mathematics and Philosophy from University of Illinois, MA in Mathematics and a MS in Accounting from University of Houston.

Toyin and his wife Jenn live in Kent, WA. Toyin and Jenn enjoy traveling, camping, and spending time with their 3 dogs (Niles, Delilah and Trippie) and cat (Genevieve).

# City Light Review Panel

9 Members: Pursuant to Ordinance 123256, all members subject to City Council confirmation, 3-year terms:

- 4 City Council- appointed
- 5 Mayor- appointed

## Roster:

| *D | **G | RD | Position No. | Position Title | Name | Term Begin Date | Term End Date | Term # | Appointed By |
|---|---|---|---|---|---|---|---|---|---|
| 6 | M | 5 | 1. | Economist | Bruce Flory | 4/11/23 | 4/10/26 | 1 | Mayor |
| | | | 2. | Financial Analyst | | 4/12/23 | 4/11/26 | | City Council |
| 6 | F | 1 | 3. | Non-Profit Representative | Kerry Meade | 5/1/24 | 4/30/27 | 2 | Mayor |
| 1 | M | 6 | 4. | Residential Customer Representative | Leo Lam | 10/1/22 | 9/30/25 | 2 | City Council |
| 6 | M | n/a | 5. | Commercial Customer Representative | Ryan Monson | 4/13/24 | 4/12/27 | 1 | Mayor |
| 2 | M | n/a | 6. | Industrial Customer Representative | Toyin Olowu | 10/1/22 | 9/30/25 | 1 | City Council |
| 5 | F | n/a | 7. | Low-Income Customer Representative | Oksana Savolyuk | 4/12/24 | 4/11/27 | 2 | Mayor |
| 1 | F | 6 | 8. | Member at Large | Thien-Di Do | 10/1/22 | 9/30/25 | 1 | City Council |
| 6 | M | n/a | 9. | Suburban Franchise Representative | Joel Paisner | 5/1/24 | 4/30/27 | 2 | Mayor |

SELF-IDENTIFIED DIVERSITY CHART

| | Male (1) | Female (2) | Transgender (3) | NB/ O/ U (4) | Asian (5) | Black/ African American (6) | Hispanic/ Latino (7) | American Indian/ Alaska Native (8) | Other (9) | Caucasian/ Non-Hispanic | Pacific Islander | Middle Eastern | Multiracial |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mayor | 3 | 2 | | | | | | | 1 | 4 | | | |
| Council | 2 | 2 | | | 2 | 1 | | | | 1 | | | |
| Other | | | | | | | | | | | | | |
| Total | 5 | 4 | | | 2 | 1 | | | 1 | 5 | | | |

Key:

*D List the corresponding *Diversity Chart* number (1 through 9)

**G List *gender*, **M**= Male, **F**= Female, **T**= Transgender, **NB**= Non-Binary, **O**= Other, **U**= Unknown

RD Residential Council District number 1 through 7 or N/A

*Diversity information is self-identified and is voluntary.*

**File #:** Res 32160, **Version:** 1

**CITY OF SEATTLE**

**RESOLUTION _____**

A RESOLUTION relating to the City Light Department; adopting an updated 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 the electrification of transportation; and

WHEREAS, the Legislature found that reducing greenhouse gas emissions and improving air quality can best be achieved by expediting the transition to alternative fuel vehicles, including electric vehicles; 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, the City Light Department ("City Light") created a Transportation Electrification Strategic Investment Plan ("TESIP"), which was adopted by City Council on October 5, 2020, through the passage of Resolution 31971; and

WHEREAS, Resolution 31971 stated that City Light "will continue to review and update the Transportation Electrification Strategic Investment Plan at least every four years"; and

WHEREAS, City Light has now updated the TESIP for the years 2025 through 2030 ("the 2025 TESIP"), which will continue to guide the development and implementation of the utility's electrification of transportation infrastructure strategy and investment priorities; and

WHEREAS, Ordinance 127145, passed by City Council on November 21, 2014, amended the reporting requirements for several City departments, including removing the "review and update" requirement on City Light for the TESIP from Resolution 31971, while maintaining the annual reporting requirement; and

WHEREAS, City Light completed the review and update of the TESIP consistent with the requirement in Resolution 31971 before Ordinance 127145 was passed; and

WHEREAS, City Light will report to City Council annually regarding the implementation of the TESIP; and

WHEREAS, in developing the 2025 TESIP, City Light has once again undertaken broad customer and stakeholder engagement across communities and sectors consistent with community and state standards, including the City's Race and Social Justice Initiative and Washington's Healthy Environment for All Act, and in collaboration with the Department of Neighborhoods and the Office of Sustainability and Environment to get input for the Transportation Electrification Strategic Investment Plan; and

WHEREAS, the 2025 TESIP draws on the findings of a strategy report City Light developed in collaboration with the International Council on Clean Transportation, which informs and projects the charging infrastructure needs in the light, medium, and heavy-duty vehicle sectors included as Attachment B to this resolution; and

WHEREAS, the 2025 TESIP 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 and Environment's Equity and Environment Agenda; and

WHEREAS, the overall benefits of the 2025 TESIP 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 2025 TESIP is aligned with and will contribute to the success of the overarching Citywide Transportation Electrification Blueprint; and

WHEREAS, the City Council has reviewed the 2025 TESIP; 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 2025 Transportation Electrification Strategic Investment Plan ("2025 TESIP"), 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 2025 TESIP. In formulating and developing its implementation strategy, City Light will ensure that it upholds the values of equity, the environment, and the grid.

Adopted by the City Council the _____ day of _____, 2025, and signed by me in open session in authentication of its adoption this _____ day of _____, 2025.

_____

President _____ of the City Council

The Mayor concurred the _____ day of _____, 2025.

_____

Bruce A. Harrell, Mayor

Filed by me this _____ day of _____, 2025.

_____

Scheereen Dedman, City Clerk

(Seal)

Attachments:
Attachment A - Transportation Electrification Strategic Investment Plan (TESIP) 2025-2030
Attachment B - Memorandum from International Council on Clean Transportation

2025 – 2030

# Transportation Electrification Strategic Investment Plan

Seattle City Light

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# Letter from Dawn Lindell, General Manager and CEO

At Seattle City Light, we are helping drive the groundbreaking shift towards a cleaner, more sustainable transportation future. Transportation is Seattle's leading cause of climate pollution. It accounts for nearly two-thirds of the greenhouse gas emissions in our region. Electrifying transportation is one of the most impactful steps to reach our region's sustainability goals and combat climate change.

The move away from fossil fuels to the electrification of transportation has grown rapidly in recent years and is reshaping the mobility landscape and energy systems. This shift set the stage for City Light's Transportation Electrification Strategic Investment Plan.

Adopted in 2020, the plan works to ensure all our customers can experience the benefits of electric mobility — from residential customers with electric vehicles (EVs) to businesses transitioning to electric fleets to multifamily customers looking to install EV chargers at their properties. We're also partnering with government agencies to electrify public transit, including buses and passenger ferries, and collaborating with the maritime industry to provide shore power for cruise and cargo ships.

This update to the original plan, which was developed with extensive community and industry input, builds on our work to advance the adoption of electric transportation and modernize our electric grid to serve growing electrical loads.

City Light is uniquely positioned to lead in this transition with our renewable energy sources, strong climate commitments, and customers eager to embrace innovation. This strategy guides the next five-year phase of our work to transform our region's mobility future and ensure an equitable transition away from fossil fuels. Electrification also improves the health of our communities and creates jobs.

City Light cannot undertake this journey alone. This work will require close collaboration with customers, community organizations, policymakers, and business leaders. Together, I'm confident we can successfully electrify our transportation sector, make our communities better places to live and work, and preserve our environment for generations to come. Join us in creating a shared energy future!

Dawn Lindell
General Manager and CEO
Seattle City Light

# Executive Summary

Seattle City Light is continuing to embark on the transformation of transportation. For over a century, we have been a public power provider; now, we have the honor of serving as a transportation fuel provider for our customers.

Transportation is the largest source of statewide greenhouse gas emissions and air pollution, which cause numerous negative health impacts on our communities. Electrifying transportation systems offers a significant opportunity to address these impacts while providing economic benefits to our region. Today, one in four new vehicle sales in King County are electric.[1] City Light must rise to the occasion to create a clean, renewable, and affordable energy future. We had several accomplishments during our first Transportation Electrification Strategic Investment Plan, including completing over 160 charger installations.

This updated Transportation Electrification Strategic Investment Plan describes City Light's focus areas and priorities as we continue investing in charging infrastructure, the grid, and communities. We are committed to investing in Puget Sound's transportation system to shift towards a cleaner, healthier, and more equitable environment.

## INFRASTRUCTURE

City Light infrastructure investments will continue to respond to market forces and customer needs, with a strategic focus on building more charging stations, increasing equitable access to charging, and improving customer experience.

| | |
|---|---|
| Ensure customers have equitable access to reliable, convenient public charging throughout our service area.<br>**Public Charging** | Provide rebates and technical assistance to households facing at-home charging barriers.<br>**Home Charging** |
| Support employee charging for small, women-owned, and minority-owned businesses.<br>**Workplace Charging** | Partner with transit providers to plan, design, and fund electrification projects.<br>**Transit** |
| Provide technical assistance and financial incentives for businesses, nonprofits, and public entities to electrify vehicle fleets.<br>**Commercial Charging** | Coordinate with regional maritime, railroad, and aviation industries to support electrification projects.<br>**Non-Road Vehicles** |

[1] *Department of Energy: https://afdc.energy.gov/vehicle-registration*

## TRANSPORTATION ELECTRIFICATION ENABLEMENT

As the electric transition accelerates, City Light will prioritize creating a ready and resilient grid and strategies to plan and manage new electric loads. Another important focus area is resourcing the transition that's underway, which will be accomplished through strategies centered on partnership and collaboration.

Raise customer awareness of time-of-use rates and managed charging technologies.

**Load Management**

Address the challenges of large-scale electrification with improved customer support and industry engagement.

**Grid Investments**

Pursue external funding for electrification projects and build community awareness of these opportunities.

**Funding Resources**

Coordinate with legislators, regulators, and franchise cities on transportation electrification policy.

**Policy Coordination**

Build career pathways and invest in initiatives supporting green jobs and local business opportunity.

**Workforce Development**

## COMMUNITY AND STAKEHOLDERS

City Light will expand our existing commitment to and collaboration with community partners, inviting them to help shape solutions to community-identified transportation electrification priorities. A strategic focus on co-empowerment requires jointly planning a greater number of projects and outreach efforts with community partners, as well as increasing communications and engagement to support community needs.

Strengthen project partnerships with communities and stakeholders through sustained collaboration and accountability, streamlined internal processes, and improved admin support.

**Community & Partnerships**

Increase communications efforts, especially for overburdened communities and in-person engagements, to build relationships with and address the priorities of communities.

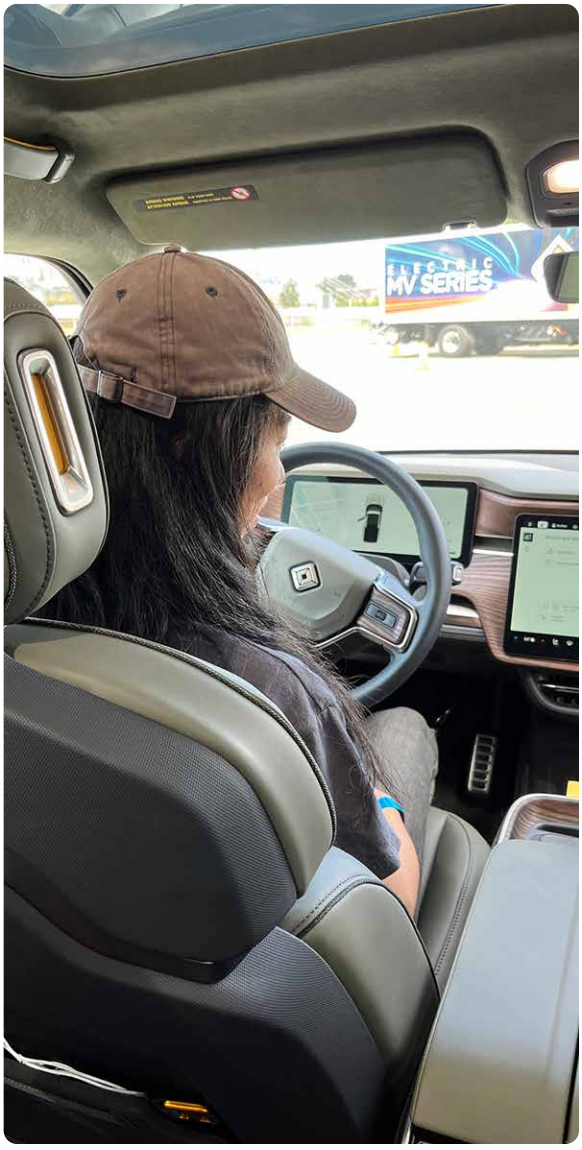
**Outreach & Engagement**

# Context

Transportation is an essential service and a fundamental human need. As affordable housing becomes more distant from community and economic centers, human services and medical care become more diffused, and goods are increasingly procured through e-commerce, transportation is even more of an essential lifeline.[2]

At the same time, fossil fuel-powered transportation is the largest source of greenhouse gas emissions in Washington state and in City Light's service area. These emissions not only contribute to climate change and pollute the environment, but they also harm the health of individuals and the public at large. Diesel and gasoline emissions, which increase as demand for transportation services grow, can cause negative health impacts like asthma, cancer, and stroke.[3]

As a provider of low-carbon transportation fuel, City Light is uniquely positioned to promote electric transportation services that greatly reduce the impacts of climate change while supporting community prosperity and connectivity. Due to our low-carbon electric grid and the reduced tailpipe emissions and growing local economic opportunities associated with the transition from fossil fuels, transportation electrification brings a host of benefits. While the electric transition has direct and indirect benefits to all, overburdened communities and vulnerable populations stand to benefit the most.[4]




*Community partner, ECOSS, attending ride and drive at Green Transportation Summit and Expo. Courtesy of ECOSS.*

*[2] Urban Institute | Upward Mobility Initiative: https://upward-mobility.urban.org/framework/neighborhoods/transportation#*

*[3] HEI Panel on the Health Effects of Traffic-Related Air Pollution: https://www.healtheffects.org/publication/traffic-related-air-pollution-critical-review-literature-emissions-exposure-and-health*

*[4] The RCW 70A.02.010 (HEAL Act) includes definitions of "overburdened communities" and "vulnerable populations." These terms are also used in the Clean Energy Transformation Act, the Climate Commitment Act, and other climate change policies and programs.*

**Transportation electrification covers all services and systems that move people and goods.**

On-road

Non-road

Rail

Aviation

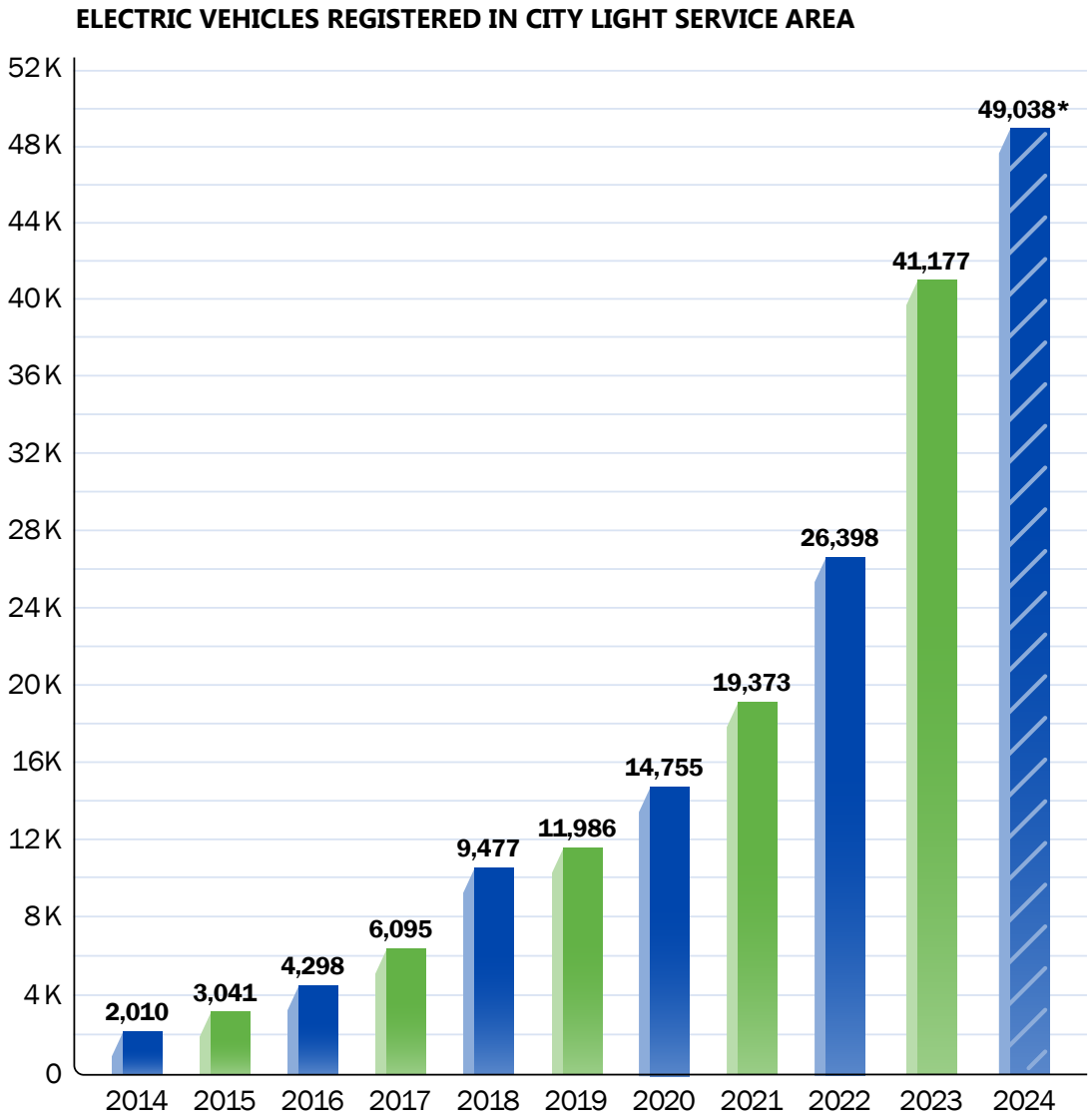
Maritime

In 2020, Seattle City Council approved and adopted the first Transportation Electrification Strategic Investment Plan. Developed with input and feedback from a diverse set of stakeholders, including community leaders, public organizations, and industry leaders, this plan outlined City Light's transportation electrification strategy and investment approach for 2020 – 2024.

The plan highlighted specific focus areas for City Light investments, programs, policies, partnerships, outcomes, and impacts, and provided a roadmap of activities and key milestones. Now, City Light is bringing together community and stakeholder feedback, lessons learned, industry trends, market developments, and continued research to guide the next phase of our transportation electrification work.

Climate, energy, and transportation policy significantly impact transportation decarbonization requirements and City Light strategy. Federal and state regulations designed to reduce greenhouse gas emissions and address climate change are, in turn, rapidly increasing customer demand for EVs and accelerating our investment in charging infrastructure and grid readiness.[5]

[5] *Clean Air Task Force: https://www.catf.us/2024/08/decarbonizing-us-transportation-progress-opportunities*




*Source: Electric Power Research Institute, EVs in the City Light Service Area by Model Year (Cumulative), displaying Department of Licensing registration data through August 2024.*

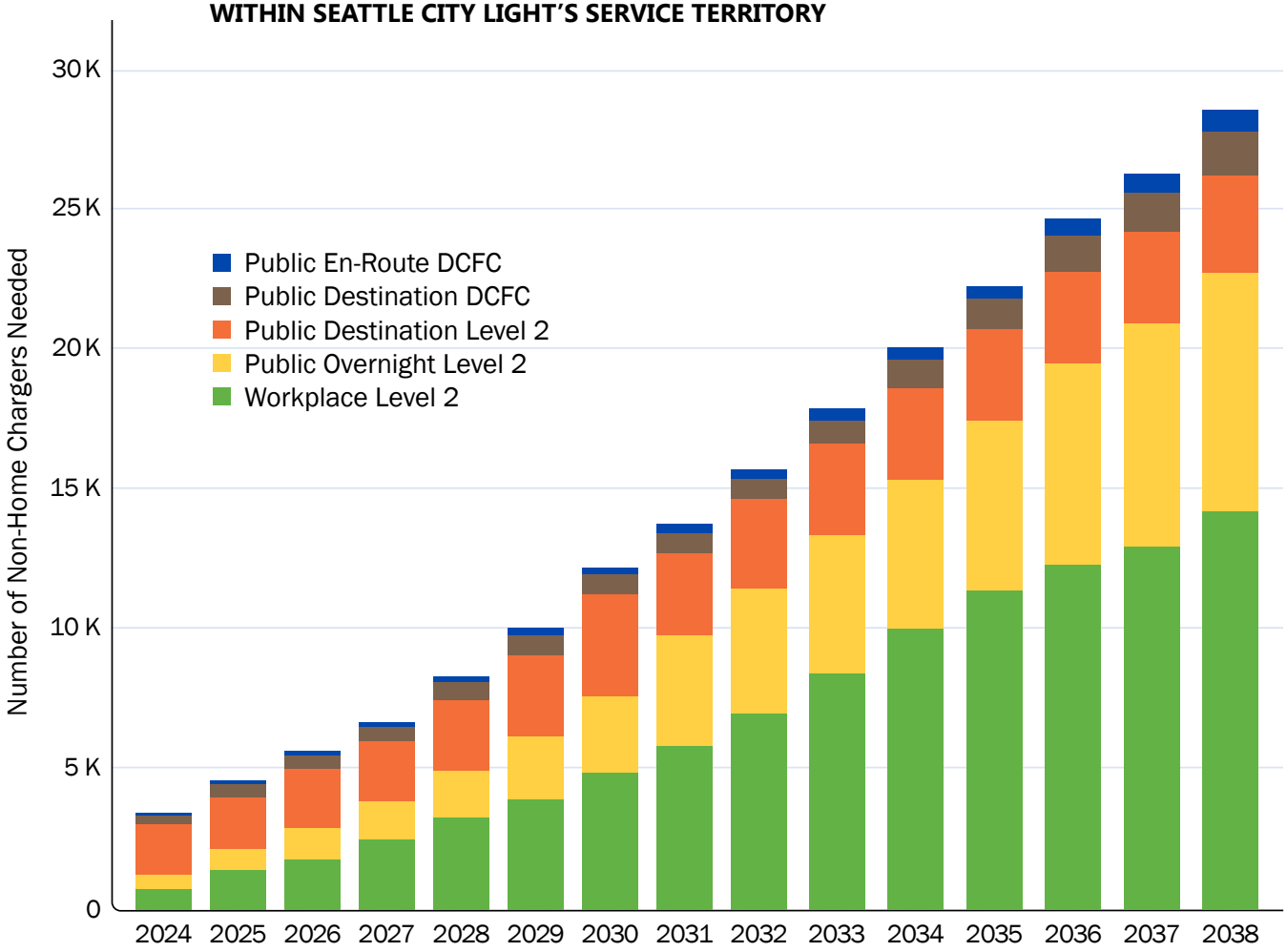
**Data shown for 2024 is incomplete and only includes registrations through August.*

Over the past four years, federal and state agencies have made significant investments in decarbonization efforts, including direct consumer incentives for EV adoption and home charger installation with a focus on low-income households.[6] As customers seek reliable and accessible information about available programs and funding, we anticipate they will increasingly turn to City Light as their trusted energy partner for support navigating incentives. There is a growing need for customer education and engagement efforts to ensure our communities are aware of and able to seize upon opportunities from the transformation.

[6] *Database of State Incentives for Renewables & Efficiency: https://programs.dsireusa.org/system/program/wa*

To prepare for growing customer demand, City Light has been working with stakeholders to bring new research to inform our strategy. The International Council on Clean Transportation conducted a charging gap analysis of our service area to determine the number of chargers needed to support projected EV growth over time.[7] The analysis determined our service area will need over 700 fast chargers and over 11,000 Level 2 chargers at public and workplace locations by 2030. This corresponds to a 230% increase from the 223 fast chargers installed as of 2023 and a 620% increase from the 1,549 Level 2 chargers installed as of 2023. In addition, the analysis found our service area needs 150,000 home chargers by 2030.

**PROJECTED NEED FOR NON-HOME CHARGERS, BY TYPE, WITHIN SEATTLE CITY LIGHT'S SERVICE TERRITORY**




*Source: International Council on Clean Transportation, Charging Gap Analysis of Seattle City Light Service Territory, 2024.*

[7] *International Council on Clean Transportation: https://theicct.org/publication/powering-seattle-fleets-charging-infrastructure-strategy-for-battery-electric-medium-and-heavy-duty-vehicles-may24*

As more people and businesses switch to electric transportation services and systems, City Light faces increased demand for electricity and charging infrastructure. We continue to manage this demand with future-oriented planning on energy sources, required quantities and types, and fluctuating energy demand levels. By predicting how quickly people switch to EVs and how much charging infrastructure our service area needs to support them, we can plan where to build now to enable our customers' future energy choices.

## Strategy References

**Transporation Electrification includes considerations and inputs from these sources:**

- Transportation Electrification Blueprint
- Seattle City Light Strategic Plan
- Grid Modernization Plan and Roadmap
- Seattle City Light Corporate Forecast
- Seattle City Light Integrated Resource Plan
- Climate Change Response Framework
- Executive Order 2022-07: One Seattle Climate Justice Actions to Reduce Emissions from the Transportation Sector
- Seattle Transportation Plan


*City Light staff at the annual Duwamish River Festival.*

*Talking transportation electrification with Cultivate South Park. Courtesy Department of Neighborhoods.*

# Community Input

As a nonprofit, municipal electric utility, City Light is accountable to the needs of our customers, especially overburdened communities and vulnerable populations.[8] By leading with our value of Equitable Community Connections, our focus is on actively involving the communities we serve in order to better meet their energy needs.

Transportation services and systems are directly related to the health, prosperity, and vitality of regions, cities, communities, and neighborhoods.[9] Fossil-fuel powered transportation systems have a disproportionate and negative impact on overburdened communities, including localized air pollution, water and soil pollution, excess noise, traffic injuries and congestion, and impacts on the built environment.[10]

Community members who carry racial, social, and economic burdens have important knowledge and lived experiences that can help City Light identify top priorities for electric transportation investment. To learn from community wisdom, we partnered with the Seattle Department of Neighborhoods and an external team of engagement experts to conduct outreach throughout our service area over the past year.

The community and stakeholder input we received through this process — as well as ongoing community engagement on electric transportation — has directly informed the investment priorities detailed in this strategy. New feedback reflects a growing awareness of the benefits of transportation electrification and an increasing demand to collaborate on future investments.

*City Light staff attending a local event.*

*[8] For the remainder of this document, "overburdened communities" is used to represent "overburdened communities and vulnerable populations"*

*[9] American Public Health Association: https://www.apha.org/news-and-media/news-releases/apha-news-releases/2021/community-drivers-of-health-policy-papers*

*[10] US Environmental Protection Agency: https://www.epa.gov/power-sector/human-health-environmental-impacts-electric-power-sector*

**In TESIP Phase 2 Outreach during August and September 2024, City Light solicited feedback from the following:**

| | |
|---|---|
| **10** Seattle Neighborhoods | **500+** Community Members |
| **90+** Survey Responses | **9+** Place-Based Events at Local Festivals, Houses of Worship, etc. |
| **24** Distinct Language/Cultural Communities Engaged | **9** Engagements with Community-Based Organizations |


*City Light staff talking about electrification at the Othello Park International Festival.*

## KEY COMMUNITY FINDINGS

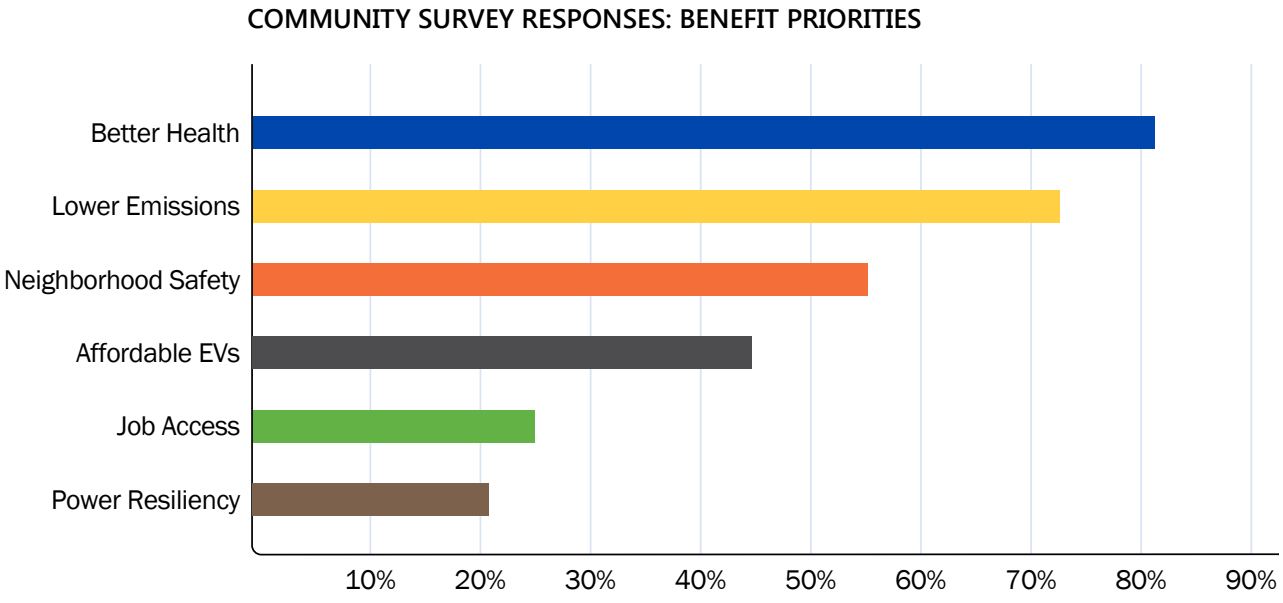
**Equitable investment is an essential driver of community-level adoption.**
Widespread awareness of community health, climate, and economic inequities can motivate adoption of transportation electrification — but only if communities can see meaningful progress is being made that doesn't exclude or harm the most vulnerable.

**Building trust and engagement through education and outreach is a top priority.**
Our communities are asking for more robust, regular, and reliable communication, education, and outreach from City Light. This includes in-language and culturally relevant approaches, more hands-on demonstrations, a focus on reliable and actionable information while addressing misinformation, and in-person engagement tailored to the needs of specific communities.

**Infrastructure and career pathway investments are valued as an opportunity to strengthen community self-determination.**
Reliable EV and electric infrastructure, including plans for maintenance and vandalism deterrence, is a priority for our communities, along with more tailored and targeted economic opportunities. Community-level partnerships are essential to design and deliver programs and projects and to ensure the investment outcomes help create more connected and resilient communities that are resourced for success.

For more detail on specific community feedback and findings, please review the engagement summary report in this document's appendix.

*Talking transportation electrification at Back2School Bash hosted by Rainier Beach Action Coalition.*




*Summary of 76 responses to a transportation electrification community survey. Participants were asked to rank categories of beneficial outcomes from transportation electrification investments from one to six, with one as their top priority and six as their lowest. Results show that the majority of respondents selected "better health" and "lower emissions" as their top priority benefits.*

## ACCOUNTABILITY AND RE-ENGAGEMENT

Community leaders and stakeholders have continually emphasized the importance of community engagement, collaboration, and buy-in to ensure the success and progress of the electrification transition. City Light is committed to remaining accountable to our communities for transportation electrification investments and working diligently to minimize harm and maximize benefits. Our community accountability plans include:

- Returning to stakeholders and community partners over the time horizon of this plan to document progress as well as challenges and opportunities to shape additional investment, policies, and partnerships.
- Engaging communities and stakeholders regularly to respond directly to existing and new priorities and explain how current work and investments are iterating based on community feedback.
- Investing institutionally in more robust communication and education strategies and activities.
- Continuing to build and maintain community-organization and community-leader partnerships for both engagement and program co-creation purposes.
- Co-creating success metrics and other mechanisms to document progress.

*Installation of a City Light EV fast charger.*

# Investment Strategies

## INFRASTRUCTURE

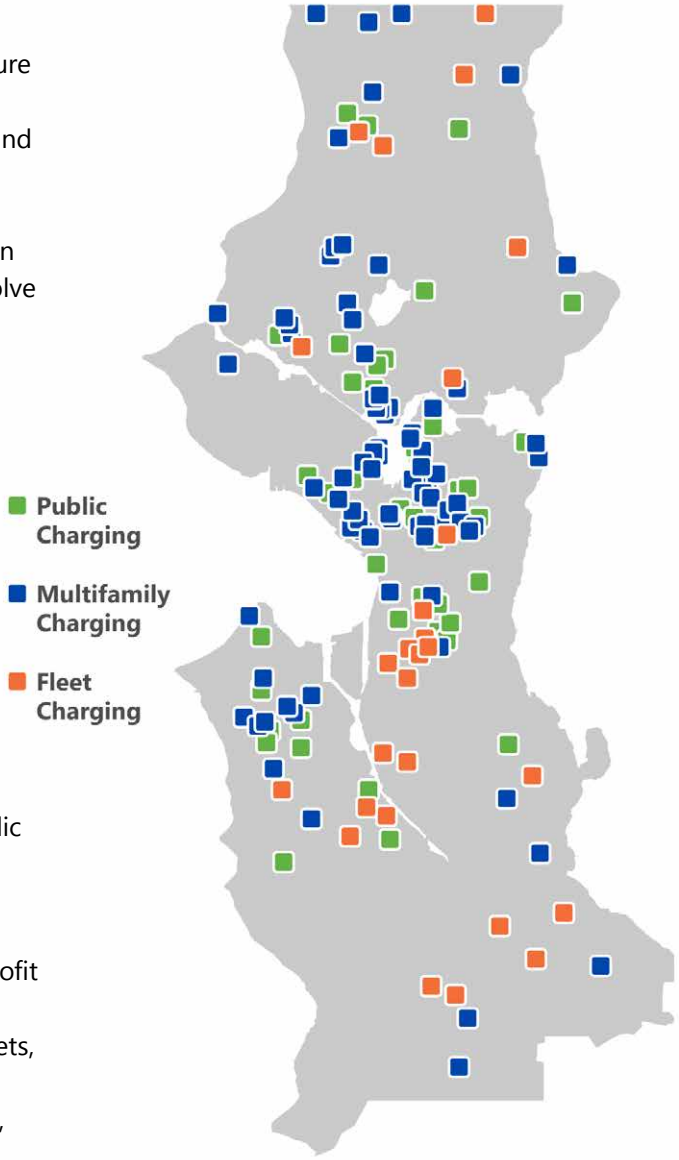
City Light has invested in EV charging infrastructure since 2018, often in partnership with regional agencies, communities and community groups, and private companies. Infrastructure must adapt to community needs, technological advances, and industry trends to support regional transportation electrification. As a result, we will continue to evolve our infrastructure investments to meet market developments and customer needs.

This section provides an overview of the areas we expect to prioritize for investments through 2030 to meet the rapidly growing need for charging as EV adoption continues to increase.

### Public Charging

Public charging allows EV drivers to charge their vehicles away from home or work, meeting needs that vary from long road trips to everyday shopping. Other drivers may rely entirely on public charging if they don't have access to chargers at home or work.[11]

While the private sector primarily operates for-profit fast chargers and Level 2 chargers at centralized, high-traffic locations (with most at grocery markets, superstores, and banks), City Light's role is maintaining and expanding access to convenient, dependable public charging — especially in overburdened communities.[12]




*City Light's investments in public, multifamily, and fleet chargers since 2020, resulting in 164 projects and 448 EV charger installations.*

*[12] The U.S. Census Bureau estimates that as of 2023, 56% of Seattle housing units are renter-occupied and 53% of Seattle housing units are multifamily buildings with 5 or more units. Additionally, a 2024 International Council on Clean Transportation GIS analysis estimates that roughly half of the single-family homes in the City Light service area don't have off-street parking. These types of households often face high barriers to getting at-home charging and instead rely on other charging options, like public and workplace charging. United States Census Bureau: https://data.census.gov/table/ACSDP1Y2023.DP04?q=seattle%20median%20rent.*

*[13] Level 2 chargers provide alternating-current (AC) electricity from the grid to the vehicle's onboard converter, which converts the electricity from AC to direct-current (DC) to charge the battery. Level 2 chargers usually operate on 240-volt, single-phase power and most commonly.*

As of 2024, City Light owns and operates 25 fast chargers and 60 Level 2 chargers for public use throughout our service area. The newly deployed curbside Level 2 chargers, which provide near-home public charging for residents that rely on street parking, have proven especially useful. The locations with the highest utilization are used up to six times per day and dispense enough electricity for over 150,000 miles of travel per year.

## PRIORITIES

### IMPROVING CUSTOMER EXPERIENCE

City Light will replace initial fast charger investments with newer models that offer faster speeds, more reliable service, and updated technology. In addition, to address increasing vandalism to charger cables (a community-identified priority), we have joined in coalition with other local utilities, charging providers, and fleet operators to develop a coordinated response to the problem. Independently, we are developing a public charging security plan to improve site security and address vulnerabilities.

### BUILDING ADDITIONAL CHARGERS

City Light's work to provide near-home public charging, such as curbside Level 2 chargers deployed in partnership with the Seattle Department of Transportation, is one of the most meaningful areas of community benefit. To ensure that residents have access to reliable, dependable charging when they need it, we will focus charging investments on gaps in the charging network. These gaps include providing chargers that:

- Benefit overburdened communities.
- Support electric car share and shared mobility.
- Increase charging opportunities at curbside locations, municipal properties, and public services such as community centers and libraries.

### INCORPORATING NEW TECHNOLOGIES AND CUSTOMER PREFERENCES

EV charging continues to evolve with new and improved technologies that mitigate impacts to the electric grid and offer faster charging speeds, including chargers with integrated battery storage and other technologies. City Light will monitor these developments in consultation with industry experts and adjust our programs and offerings to adapt to transforming market and customer preferences while considering early pilots or demonstrations to gain experience with new approaches.

### OFFERING FINANCIAL INCENTIVES

The need for increased public charging in the City Light service area cannot be met solely by investments from any single organization. To ensure the entire service area has equitable access to convenient and dependable public charging, we will provide financial incentives and technical assistance to charging providers, prioritizing locations that support highly impacted communities.


*City Light being interviewed by The Seattle Times about curbside level 2 chargers.*

## Home Charging

At-home and near-home charging are the most convenient and affordable ways to charge an EV. This convenience makes them vital pathways for electrification for residents whose commutes cannot reasonably be supported by transit or other forms of personal mobility. Single-family homes with off-street parking and spare electrical capacity are ideal for at-home charging, allowing homeowners to install chargers easily and affordably. However, homes lacking these features face high costs and challenges that disproportionately impact lower-income households. In 2024, City Light began offering instant discounts through our single-family charging program to reduce the upfront cost of installing chargers at single-family homes.

Apartments and condominiums make up 55% of the Seattle housing stock.[14] Owners of multifamily homes often struggle to provide charging for renters because the required upgrades can be expensive. While newer multifamily buildings in Seattle must include EV-ready parking, most were constructed before the rise of EVs and lack the necessary infrastructure. To address these barriers, City Light launched a multifamily charging program in 2023 to provide advisory services and rebates to install chargers for residents at these properties.

*[14] Seattle Office of Planning and Community Development: https://www.seattle.gov/opcd/current-projects/housing-choices*

PRIORITIES

**SUPPORTING HIGH-BARRIER HOUSEHOLDS**

City Light can have the greatest impact when focused on helping customers who face economic and social barriers to obtaining at-home charging. We will prioritize offerings that address these barriers, with solutions that may include:

- Targeting outreach, assistance, and educational resources toward affordable housing properties and historically underinvested communities to help customers make informed decisions.
- Offering affordable housing properties and customers on low-to-moderate incomes higher incentives to purchase and install chargers.
- Reducing the cost to the customer for complicated and expensive charger installations and electric capacity upgrades with assistance and incentives.
- Engaging multifamily customers and single-family customers without onsite parking to identify locations for near-home public charging solutions.

**OFFERING SOLUTIONS FOR AT-HOME CHARGING THAT SUPPORT OVERALL GRID RESILIENCY**

City Light will work to include education on customer solutions that mitigate cumulative impacts on the electric grid and incentives that encourage these solutions, such as managed charging and time-of-use rates.

## Commercial Charging

A growing number of companies, nonprofits, and government organizations in the City Light service area are planning to or are already in the process of converting their vehicle fleets to electric alternatives. These commercial vehicles frequently drive longer daily distances than personal vehicles, creating more air, noise, and greenhouse gas pollution in the process. This is especially the case for medium- and heavy-duty trucks like those involved in goods movement.

Replacing commercial vehicles with electric models has a substantial per-vehicle benefit to communities, especially in pollution-burdened neighborhoods near major thoroughfares. However, commercial fleets face unique challenges when transitioning to electric drive due to high upfront costs, limited vehicle availability, and the need for additional electrical capacity for charging infrastructure. A fleet of heavy-duty trucks requires a significant amount of power for charging, estimated at up to 10 megawatts per location for large installations, and providing this power requires diligent planning and close coordination between the utility and the operator.

We introduced our fleet electrification program in 2022, which provides fleet assessments and rebates for commercial vehicle operators interested in vehicle electrification. The program has completed 23 fleet assessments to date, covering over 1,600 vehicles, and has provided rebates to support the installation of 91 chargers.

PRIORITIES

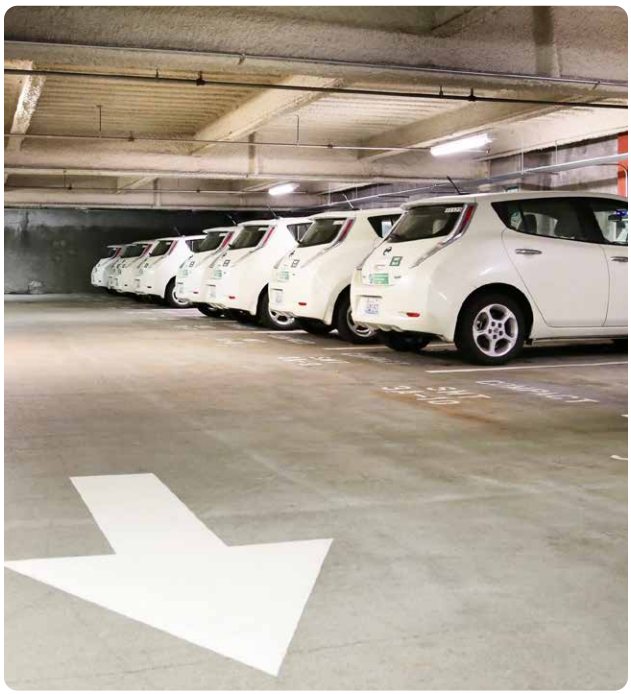
**OFFERING ASSISTANCE TO COMMERCIAL CUSTOMERS**

City Light can facilitate commercial charging projects by ensuring these commercial customers have the knowledge, resources, and technical assistance needed at the start of planning and design stages. We may also prioritize financial assistance for commercial charging projects that provide additional benefits to overburdened communities to ensure limited public resources provide the greatest benefit to the communities experiencing the highest levels of air and noise pollution.

## Workplace Charging

An increasing number of workplaces are providing chargers in employee parking areas to support commutes. These can be beneficial for residential customers that have limitations on charging at home. Although workplace chargers are generally the same types used for public charging, they are not considered public because employers provide them explicitly for use by their employees.

Workplace charging faces challenges similar to multifamily housing charging. It is often expensive and difficult to install the infrastructure needed to support chargers in existing parking facilities that were not designed to accommodate them, and existing electrical systems at the workplaces may not have the capacity to support a large number of chargers.



PRIORITIES

**OFFERING ASSISTANCE TO EMPLOYERS**

City Light will develop a program to support workplaces interested in providing charging for employees, similar to programs available for home and commercial charging. This support will likely include technical assistance to ensure that property managers and owners understand the process, scope, and timeline for installing workplace charging and upgrading their electric service, if needed. This will also include financial incentives for workplace charging projects that otherwise would not be built because of financial barriers, especially for small businesses, women- and minority-owned businesses, and nonprofit organizations.

## Transit

The City Light service area is served by a robust public transit system of vanpool, bus, streetcar, light rail, heavy passenger rail, and ferry service operated by King County Metro, Sound Transit, Washington State Ferries, and Kitsap Transit. Some of these services, including the Link Light Rail, Seattle Streetcar, and some King County Metro bus lines, operate entirely on electricity. Most other transit services are powered by diesel fuel and contribute to air and noise pollution in the communities they serve. These transit agencies have plans underway to electrify their services, which will improve public health and increase quality of life, especially for those who rely most on transit, while simultaneously providing lower operating costs.

Other types of transit — including private employer-sponsored bus service, scheduled and chartered motorcoach service, and school buses — are also pursuing electrification plans that provide corresponding benefits and face similar challenges to public transit electrification.

Electrifying transit requires City Light to provide substantial amounts of electricity in densely packed geographic locations and potentially upgrade the existing electric distribution system to meet demand from new electrification projects. We are also working with the Seattle Department of Transportation and transit providers to meet evolving needs for en-route charging stations.

We supported King County Metro's electrification efforts by providing engineering and technical assistance for Metro's first electric bus charging base that was completed in 2022, as well as by temporarily eliminating electricity demand charges through the utility's Commercial Charging Rate Pilot. These efforts lowered fuel costs and improved the financial viability of the project during the first years of operation. We continue to work in partnership with King County Metro to achieve their goal to fully electrify their transit fleet by 2035.

**BUILDING PARTNERSHIPS FOR TRANSIT PROJECTS**

City Light will continue to provide planning and technical assistance to transit providers for electrification projects and may provide financial incentives to projects that benefit communities that bear a disproportionate burden of air pollution, noise pollution, or traffic from existing transit operations. We will center efforts on community collaboration and feedback to ensure that these projects address community priorities and needs. We will also prioritize partnering with transit providers that are seeking state or federal grants to increase the chances of success and to maximize the impact of investments.


## Non-Road Vehicles

City Light's service area is a major hub for non-road transportation vehicles including cargo ships, cruise ships, fishing vessels, ferries, freight rail and aviation, as well as the support vehicles and infrastructure required for operations, loading and unloading freight. Non-road vehicles are usually fueled with fossil fuels like heavy fuel oil, diesel, or kerosene and lack the same emissions control systems required for on-road vehicles. As a result, non-road vehicles contribute significantly to both greenhouse gas emissions and local air pollution.[15] Electric drive is not yet feasible for many of these non-road vehicles because of their heavy weight and long distances traveled. However, these transportation systems can significantly reduce their emissions when the vehicle is stationary by providing grid power — which allows vehicles to

[15] *International Council on Clean Transportation: https://theicct.org/publication/managing-emissions-from-non-road-vehicles*

shut down onboard engines while still operating all electrical systems — and electrifying support vehicles and infrastructure. Short-range non-road vehicles such as ferries and local rail can also use electric drive systems powered by battery systems or overhead wires.

The Washington State Ferries system is converting to an all hybrid-electric fleet by 2040, with the first of these new hybrid-electric ferries operating from Colman Dock in downtown Seattle.[16] We have worked closely with Washington State Ferries on the project and are providing extensive engineering resources and technical assistance for the ferry charging system and the large electric service it requires. We are also providing engineering and technical resources to plan for and design the distribution system required for the Port of Seattle's new shore power system at Pier 66, which will allow cruise ships to power-down their engines while docked and avoid significant greenhouse gas and air pollution.

PRIORITIES

**PARTNERING TO SUPPORT ELECTRIC SERVICE PLANNING AND DELIVERY**
City Light will continue to work with customers who operate and service the maritime, railroad, and port-related industries to assist with electrification efforts. These projects require close coordination between the utility and the customer because of the large amount of power required.

## TRANSPORTATION ELECTRIFICATION ENABLEMENT

As the transition to electrified transportation accelerates, a key component of our strategy is supporting the shift to clean energy. Growing transportation electrification requires City Light to pursue careful planning to build a strong and resilient grid, implement policies and programs to beneficially manage new load, augment and expand existing financial resources, and collaborate with peers and stakeholders to ensure skilled, local workers are available.

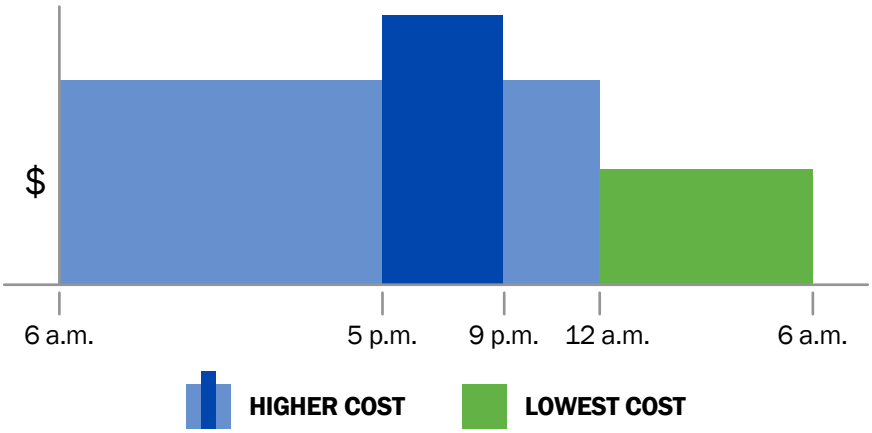
We have a systems-level approach to transportation electrification enablement. The scale of the transition requires thoughtful and collaborative strategies that keep public benefit at the center of our decision-making.


[16] *Washing State Department of Transportation: https://wsdot.wa.gov/construction-planning/major-projects/ferry-system-electrification*

## Load Management

Growing transportation electrification requires increasing amounts of available electricity to serve this new load while also better managing the demand for elsectricity in different locations and at different points in time.[17] City Light must determine how to serve new electrical loads while ensuring a reliable electric grid and maintaining affordable rates. To achieve these goals, we need to manage demand and increase overall system resilience by better predicting and planning for improvements that support transportation electrification and by increasing the integration of distributed energy resources.

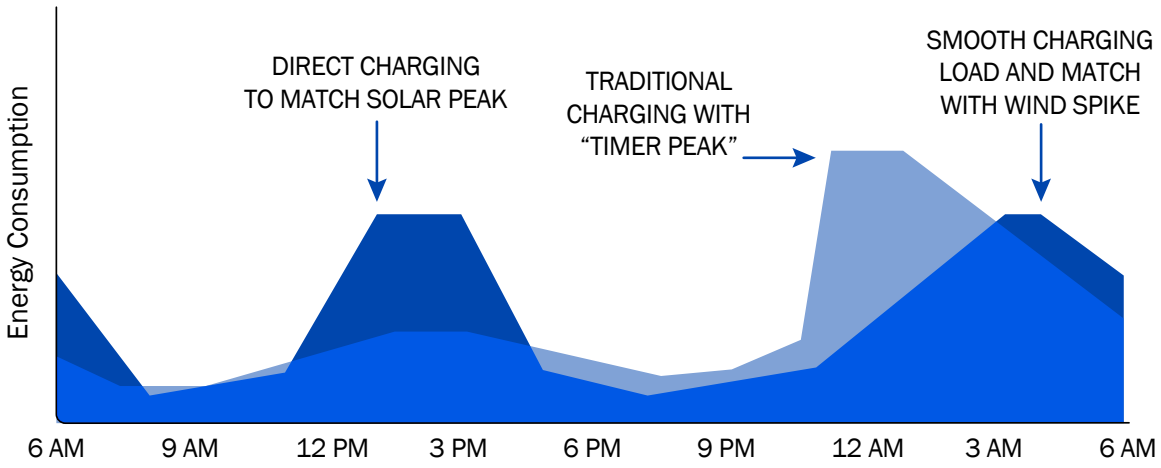
In the near term, two priority areas for City Light's strategy are time-of-use (TOU) rates and managed charging. TOU rates offer customers lower-cost electricity when overall electricity demand is lower, which reduces customer energy bills while shifting charging to times when the grid can better handle it. Managed EV charging can also move electricity demand to optimal times of the day, by slowing or pausing charging during times of high demand or low electricity generation. On a large scale, time-of-use rates and managed charging provide more affordability benefits to customers because they can allow the utility to defer or avoid costly system upgrades and optimize generation resources, thereby keeping rates lower.




*This image shows the structure of City Light's adopted TOU rate; providing lower-cost rates at night can encourage EV charging that optimizes grid resources. Time of use rates approved by Seattle City Council in 2022.*

[17] *Electric Power Research Institute: https://www.epri.com/research/programs/053122/results/3002023248*

MANAGED CHARGING SCENARIO




*Source: BMW of North America, 2016 with edits by Smart Electric Power Alliance, 2017. Note: The light blue area illustrates the impacts of a hypothetical TOU residential charging rate with the lowest rate period beginning at 11 p.m. and with unmanaged EV load. The dark blue area shows how managed charging could distribute charging loads across all hours and align with peaks in renewable energy generation.*

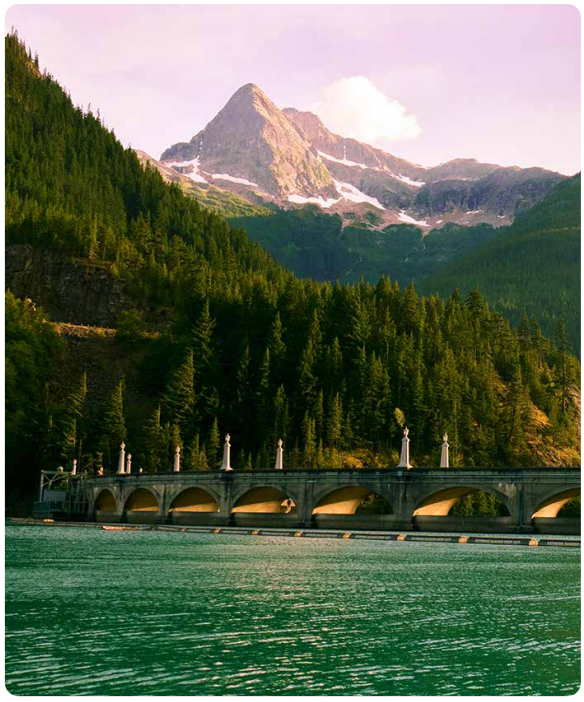
## PRIORITIES

### IMPLEMENTING OUTREACH AND EDUCATION TO INTRODUCE TOU RATES

City Light will conduct marketing, outreach, and education efforts to ensure all customers are aware of the availability of TOU rates (available on an opt-in basis beginning 2025 and transitioning to an opt-out basis beginning in 2026) and have the knowledge to choose the best rate option for their own use of electricity.

### RESEARCHING THE VIABILITY OF ACTIVE MANAGED CHARGING

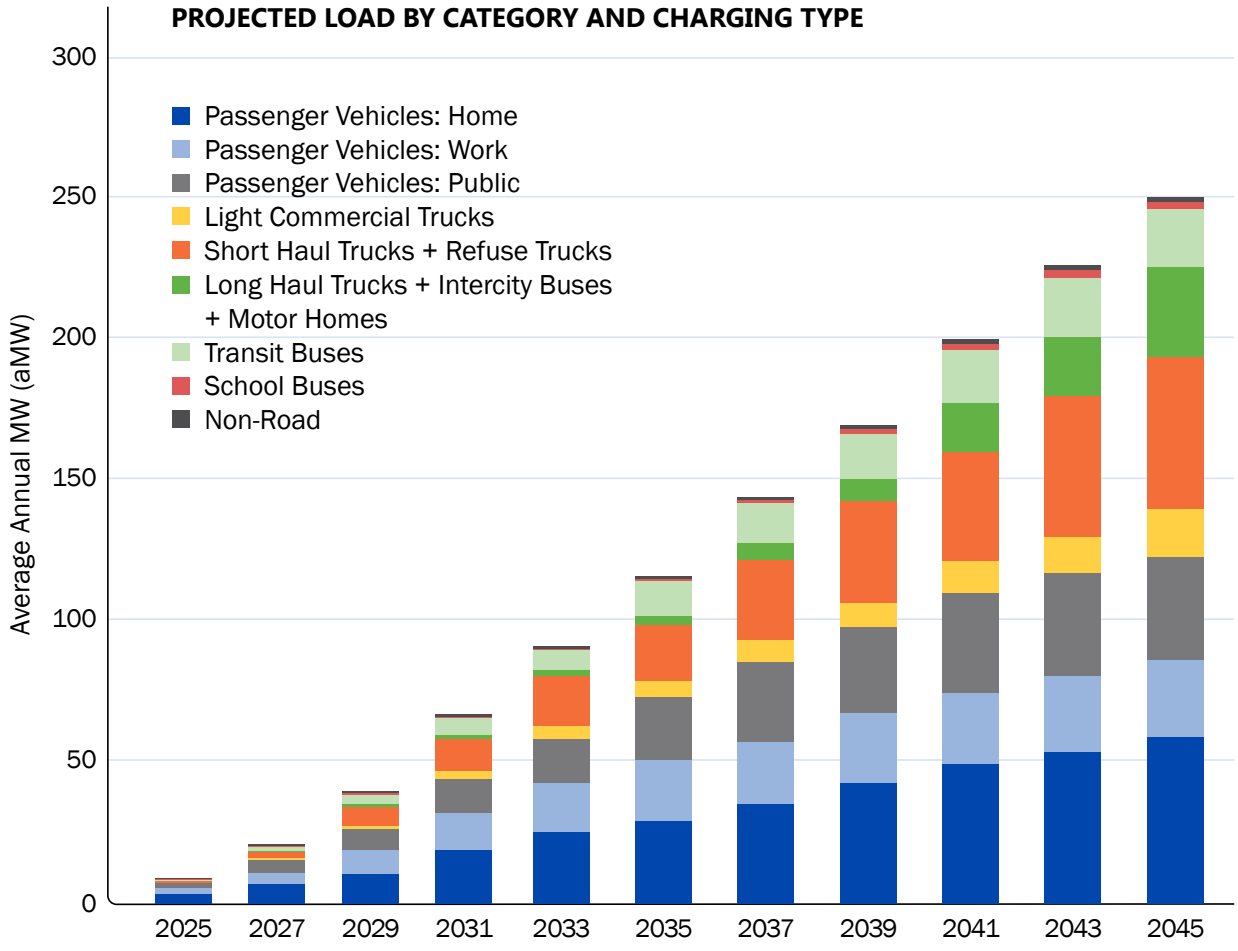
City Light will investigate integrating active managed charging options into public infrastructure. In addition, public outreach, education, engagement, and/or incentives may be part of our work to encourage public adoption of managed charging options as overall EV charging continues to increase.



## Grid Investments

Transportation electrification, as well as building and industrial electrification, will require major investments in all aspects of the electrical grid, ranging from regional transmission systems to residential transformers. Current system forecasts anticipate that by 2045, transportation electrification will contribute to 20% of City Light's total electric load; today transportation electrification contributes less than 1%.[18] Like many utilities across the country facing similar external electrification forces, we are already planning, evaluating, piloting, and implementing various distribution, sub-transmission, and transmission infrastructure investments to accommodate new load and integrate it in ways that maximize benefits to customers and the grid.

To the electric grid, EVs operate like other distributed energy resources such as solar or demand response. As "batteries with wheels," they can provide various grid services like energy and capacity resources, voltage regulation, and balancing intermittent load from renewable energy. Because of these attributes, transportation electrification is one of many variables that comprise City Light's comprehensive and robust approach to investing in and preparing for the grid of the future.




*Source: Seattle City Light, projected load forecasted by transportation category and charging type, 2024.*

[18] *City Light's 2024 system forecast: https://powerlines.seattle.gov/2024/09/04/strategic-plan-update-addresses-challenges-and-opportunities*

### INCREASING CUSTOMER PLANNING EFFECTIVENESS THAT SUPPORTS GRID RESILIENCY

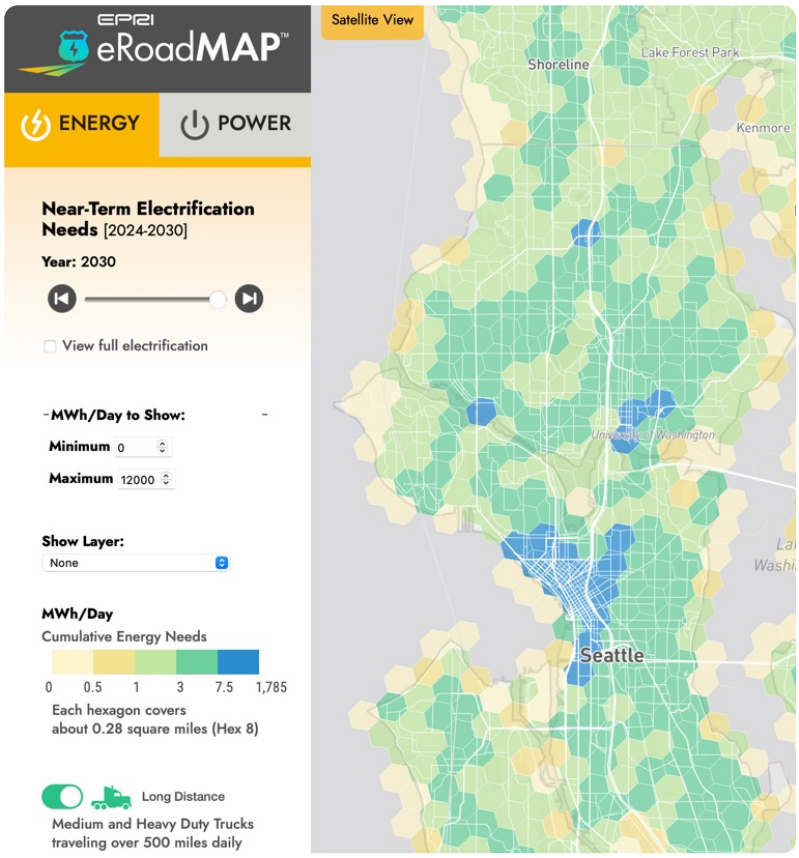
City Light is developing new modeling tools and resources to analyze electric grid capacity and load. These tools will provide a better understanding of what parts of the service area can best support new and upgraded electric services. We may create a modeling tool that will allow customers and developers to quickly determine how easily a prospective location can accommodate the additional electric load from charging.

### IMPLEMENTING A CHARGER AND VEHICLE-DATA INTEGRATION INITIATIVE

With growing EV adoption, measuring the real-time, accurate dispensation of electricity to vehicles from charging stations is ever-more essential. City Light needs integrated measurement data to efficiently manage the grid, predict charging needs, ensure accurate billing, and plan for future infrastructure investments. This work also enhances customer trust and ensures we remain compliant with state, federal, and City environmental directives.

### ENGAGING WITH INDUSTRY LEADERS TO PREPARE THE GRID

City Light will continue to engage with other utilities and research entities to ensure we stay ahead of the EV adoption curve. This includes partnerships such as the Electrification Research Power Institute's EVs2Scale 2030 — a three-year, public and private partnership that addresses the challenges of electrification at scale. This initiative will focus on anticipating load growth and develop processes and interactive tools to help standardize service connections.


*EPPRI's eRoadMAP allows users to explore how quickly electric vehicles are expected in different regions, and identifies the power and energy needs at roughly the individual feeder level where critical utility planning occurs. This image shows the tool's forecasted energy needs for City Light's service area based on anticipated transportation electrification levels in 2030.*

## Funding Resources

To deliver transportation electrification programs, products, and services that meet the requirements, needs, and goals described in this strategy, City Light will need sufficient financial resources to invest in the largest transformation of the transportation sector in recent history. We will prioritize external funding opportunities to deliver transportation electrification programs, policies, and services while keeping cost impacts to customers as minimal as possible.

*City Light community partner, Kambo, providing public comment at a Seattle City Council committee meeting.*

This work includes pursuing federal and state grant funding to enhance and scale utility and partner transportation electrification programs. In addition, Washington's Clean Fuel Standard (CFS) program will provide important resources to support the transition. CFS requires fuels used for transportation to reduce their carbon intensity from 2017 baseline levels by 20% in 2038.[19] Electricity — used as a transportation fuel for the operation of EVs — has one of the lowest assigned carbon intensities within the program.[20] This means that City Light's role is primarily as a credit-generating entity within CFS's regulatory framework. The financial revenue generated from program credits must be spent on efforts that accelerate transportation decarbonization across the state, with an emphasis on overburdened communities.

### PRIORITIES

#### CONTINUING TO SEEK FEDERAL FUNDING

City Light will pursue grants that supplement funding for programs and projects identified in this strategy. These grants will help keep overall program costs and impacts to ratepayers down, expand the scope and impact of the program or project, and/or allow for the prioritization of the other transportation electrification programs.

#### SECURING STATE GRANTS

Similar to federal grants, City Light will pursue state funds to scale planned programs, reduce costs and save customer money, and pursue projects that otherwise lack sufficient resources.

#### COORDINATING AND PREPARING INTERNALLY AND EXTERNALLY FOR CFS CREDIT REVENUE

City Light will lead coordination and implementation of CFS across the City of Seattle. In addition to serving as a supportive partner to other departments participating in CFS, we will focus on internal resourcing and coordination to ensure compliance with the program. In addition, we will ensure that

[19] *RCW 70A.535.025: https://app.leg.wa.gov/RCW/default.aspx?cite=70A.535.025*

[20] *WAC 173-424-900: https://app.leg.wa.gov/WAC/default.aspx?cite=173-424-900.*

revenue from the program supports equitable transportation electrification access priorities for our communities, including revenue-funded projects that are co-developed with community partners.

**INCREASING COMMUNITY AWARENESS OF AVAILABLE FEDERAL AND STATE RESOURCES**
City Light will continue to build and maintain information and awareness efforts that connect customers to relevant grants that support their decarbonization goals and accelerate the broader adoption of EVs. We may also include increasing capacity to respond to customer questions, concerns, and needs for assistance in navigating funding opportunities like tax credits.

## Policy Coordination

Law and policy greatly influence transportation electrification efforts by creating the need for regulatory frameworks that promote clean energy adoption, energy end-use decarbonization, and infrastructure development. Advocating for effective policies and regulations is essential to ensure electrification efforts are equitable in making clean mobility solutions accessible and affordable for all communities.

Rules about infrastructure accessibility and interoperability, climate program operations and results, and funding programs are being developed and will continue for the coming years as markets, technology, and users change. Collaboration among utilities, regulators, and stakeholders is crucial to creating a resilient energy ecosystem, encouraging innovation and investment in cleaner transportation options, and ultimately fostering environmental sustainability and economic benefits.


*Engaging industry experts at Green Transportation Summit and Expo.*

**ENGAGING LEGISLATORS AND REGULATORS TO PROMOTE GOOD GOVERNANCE AND RAISE VISIBILITY OF COMMUNITY NEEDS**

City Light will continue to develop and promote principles for legislation and rulemaking that intersect with electric transportation adoption, maximizing the value and options for our customers and communities we serve.

**PLANNING TO LEVERAGE FUTURE SEATTLE TRANSPORTATION LEVY FUNDS IN PARTNERSHIP WITH SEATTLE DEPARTMENT OF TRANSPORTATION (SDOT) AND OTHERS**

City Light works with SDOT across multiple transportation electrification programs, including public charging, permitting, and supportive policies. We will continue to invest and strengthen our deep partnership with SDOT to enhance local transportation systems, including planning for implementation of joint efforts under levy EV-charging funds, which were approved in the 2024 general election.

**DEVELOPING AND DELIVERING SOLUTIONS WITH FRANCHISE CITIES**

City Light's service area extends beyond the boundaries of the City of Seattle. Our franchise city customers are experiencing significant population, business, and related economic activity that aligns well with policies that promote transportation electrification investments. We will strengthen and expand our advocacy for and partnerships with franchise city leaders and communities to explore transportation electrification solutions.

## Workforce Development

The ongoing, widespread electric transformation of transportation systems has enormous implications for the local economy within City Light's service area. As electrification increases, skilled workers are needed to install, maintain, and upgrade charging infrastructure while growing and maintaining the electric grid. New goods and services, and new careers that support them, are a nascent but growing area of educational and economic opportunity.

We have heard from overburdened communities that increasing community self-determination is a priority outcome for transportation electrification investment. We will create thoughtful, targeted workforce- and business-development opportunities to meet community needs and priorities in this area and increase local workforce capacity to plan, build, and maintain infrastructure that matches the pace of growing transportation electrification adoption.

We offer professional pre-apprenticeship and apprenticeship opportunities to enter skilled trades careers as electricians, line workers, and cable splicers. We are also beginning to support career pathways by providing 17 women- and minority-owned firms with the tools, training, and mentorship to obtain Electric Vehicle Infrastructure Training Program Certification.

## PRIORITIES

### HELPING BUILD CAREER PATHWAYS TO JOBS WITH FAMILY-SUPPORTING WAGES

City Light supports the City's workforce development efforts, namely Priority Hire, and is coordinating with apprenticeship programs to strengthen pathways to energy industry jobs. As part of our commitment to fair labor practices and to ensure competitive compensation for workers involved in public projects, we will adhere to prevailing wage requirements for all contracts. This means that we will ensure workers are paid wages that align with the prevailing rates set by the state.

### INVESTING IN PROGRAMS AND INITIATIVES THAT CREATE LOCAL BUSINESS OPPORTUNITY

City Light will respond to the community 's priority to make it easier for local businesses and community organizations to benefit from the electric transportation transition. This includes opportunities in building new infrastructure and maintaining EVs and related services. This support may include targeting the intersection of business opportunity, local entrepreneurship, and equitable wealth building programs.

## COMMUNITY AND STAKEHOLDERS

As an electric transportation fuel provider and key partner supporting the transformation of transportation systems, City Light can directly promote fair and equitable transportation outcomes for the communities that need them most.

Through ongoing engagement and partnership at the community level, we have learned about community priorities and needs that intersect directly with electric transportation solutions. Expanding our outreach, communication, and partnership efforts is a top priority for community stakeholders. As such, we are making this work a priority element of the Transportation Electrification Strategy Investment Plan. This approach will support the City of Seattle's One Seattle initiative and, in partnership with the Department of Neighborhoods, we aim to bring more voices to the table.

To achieve these goals, we will expand existing outreach and engagement and develop new efforts that enable customers to better shape and access City Light services that reflect their needs and priorities. By investing in communication and community engagement, we can strengthen how customers shape and benefit from our services.

### Community Partnerships

To best serve overburdened communities in our service area and achieve our goals for utility- and climate-related outcomes, City Light must fully understand community members' lived experiences — their needs, desires, and histories — and how utility services can provide relevant, meaningful, and effective public benefit. To do this, City Light must build relationships at the community level.

Relationships can range from informing customers of City Light actions or program opportunities to empowering communities to be stewards and architects of utility funds, operations, and service delivery. Ultimately, we must ensure that communities can meaningfully participate in shaping the solutions that address their needs and priorities — serving as partners and leaders in addressing challenges and thriving on their own terms. For those who have historically been underserved and stand to benefit greatly from investments in energy or transportation services, we need robust and comprehensive partnerships.

### STRENGTHENING COMMUNITY PARTNERSHIPS

City Light will continue to build and expand on our existing relationships with community-based organizations (CBOs) and with individual community leaders. This strategy involves securing dedicated funding for CBO contracts, empowering them to create their own agreements, encouraging subcontracting to broaden impact, integrating CBO collaboration in transportation electrification activities, and sharing successes and lessons learned within City Light and with other City departments.


*City Light staff engaging with community members at Infrastructure Week hosted by Utility[2].*

### REMAINING ACCOUNTABLE TO COMMUNITY

City Light is committed to engaging communities regularly to respond directly to community priorities and demonstrate progress on shared goals through co-developed success metrics.

### EXPANDING COMMUNITY RELATIONSHIPS THROUGH ADMINISTRATIVE SUPPORT

We have heard that communities new to working with City Light (or with government more broadly) need much more support and guidance at the beginning to create a clearer, less complicated, and less laborious path from initial conversation to actual work. The electrification, internal contracting, and accounting teams will continue to work on a set of tools that bridge the gap between City Light staff and new community partners. We will pilot these tools with a few CBOs before making them more broadly available for all interested organizations.

### INTEGRATING EQUITABLE COMMUNITY PARTNERSHIPS

City Light will collaborate across the utility and the City of Seattle to focus on the intersection of climate change, customer needs, equity, and justice. This work may include creating a shared, co-owned understanding of how community partnerships are integrated and operationalized across bodies of work, including processes that enable community consultation on business operations and program development.

### PLANNING COMMUNICATIONS AND OUTREACH IN COORDINATION WITH COMMUNITY PARTNERS

Expanding community outreach and engagement efforts — with an emphasis on specific neighborhoods, demographics, community events, and trusted community partners or organizations — is an important enabler of co-development. City Light may use strategies such as:

- Building new interactive materials, event booth features, and demonstrations that enable communities to better engage with and understand the various transportation electrification technologies, programs, utility offerings, and electric grid operations.
- Creating cohort models to better engage and resource selected community members to cultivate more dynamic and resourced relationships who in turn can be clean energy and transportation ambassadors in their respective communities.
- Researching, ideating, and developing with community co-creation models for City Light to evaluate and incorporate into planned customer program lifecycles.
- Prioritizing funding for CBO partners to increase event staffing as part of partnership work.

## Outreach and Engagement

Increased outreach communication, education, and engagement from City Light is a top priority shared by community stakeholders. Our communities have emphasized that sustained, tailored communications that help build relationships, are culturally appropriate and available in multiple languages, and address specific community questions and needs are priorities for future investment.


*Transportation electrification exhibit at the Seattle International Auto Show hosted by the Washington State Auto Dealers Association.*

As customers continue to become aware of and engaged with our transportation electrification offerings, an increase in external communication efforts is needed — on both transportation electrification and core, foundational aspects of City Light's offerings and services.[21] Often, customers are unaware of City Light's status as a publicly-owned utility, our low-carbon energy generation, and our work to increase climate resiliency, or they perceive underinvestment in minority-owned businesses.

### PRIORITIES

**INCREASING COMMUNICATIONS EFFORTS**

City Light will continue to invest and maintain a comprehensive and robust communications platform, strategy, and implementation to focus on reaching our overburdened communities. These activities may include:

- Dedicating more utility resources to transportation electrification communications plans and actions, including support for external communications partners, community messengers and ambassadors, and the Department of Neighborhoods.
- Creating pathways for community feedback and ideas on City Light communications to be assessed, acted upon, and evaluated in an expedient manner.
- Preparing for a more robust, targeted, and dynamic education and outreach campaign for City Light transportation electrification program activities as they scale in the near-term and tracking and following up on community requests.
- Coordinating with other City and regional communication and outreach efforts.
- Intensively communicate, market, and educate customers and communities on City Light and electric utility foundational topics, such as our resource mix, climate mitigation and adaptation, customer programming, investments in grid infrastructure, and sharing case studies post-investment.

[21] *Alliance for Transportation Electrification: https://www.atlasevhub.com/resource/the-missing-piece-on-meeting-transportation-electrification-goals-utility-education-and-outreach-programs*

[22] *Seattle Department of Neighborhoods: https://www.seattle.gov/neighborhoods/about-us*

### PARTNERING WITH DEPARTMENT OF NEIGHBORHOODS TO SUPPORT ONE SEATTLE

City Light is committed to building and strengthening this foundational relationship. The Department of Neighborhoods strengthens Seattle by actively engaging all communities.[22] This partnership is critical to ensure that we can build authentic relationships with Seattle communities and make connections with communities that historically have little trust in government.

### INVESTING IN MORE IN-PERSON ENGAGEMENTS

In-person events are among the most effective ways to engage with our customers, community members, and businesses. These events play a crucial role in addressing barriers to charger installations, promoting available incentives, dispelling misinformation, and connecting communities to workforce opportunities. Through interactive displays and direct engagement, we demonstrate our commitment to our communities. We will increase staffing and funding to facilitate transportation electrification events and participation in existing community events. These activities may include:

- Deepening event coordination within the utility by leveraging programs, funding, and staff to participate in events to optimize resources and increase the awareness of broader utility topics to event attendees.
- Creating a community and event strategy with clear goals and outcomes. This includes investing in new booth design, construction, interactive elements, educational materials, and logistics to reflect strategic priorities.
- Exploring contracts for third-party event support, particularly staffing and design.
- Expanding market-based and trade group events.


*City Light EV fast chargers at Town and Country Market in Shoreline, WA.*

Seattle City Light

seattle.gov/city-light

# Memorandum

To: Seattle City Light
From: Logan Pierce, Peter Slowik, International Council on Clean Transportation
Date: November 7, 2024
Re: Draft charging gap analysis of Seattle City Light service territory

This work was conducted for, with support from, Seattle City Light. We thank Landon Bosisio, Angela Song, Scott Cooper, Natalie Himmel, David Logsdon, Christopher Robertson, and Jacob Orenberg for their critical reviews and feedback on an earlier version of the work. Their review does not imply an endorsement, and any errors are the authors' own.

## INTRODUCTION

Seattle is one of the leading cities in the United States in its transition to zero-emission vehicles. In 2021, the city published its Clean Transportation Electrification Blueprint that outlined several ambitious and achievable goals to reduce emission across its transportation sector and expand zero-emission mobility.[1] One such goal is for the city to have electrical infrastructure installed and operational to stay ahead of transportation electrification, and to enable the city to meet its target that electric vehicles (EVs) would represent 30% of all vehicle registrations in the city by 2030.[2] In 2023, EVs, which include battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs), accounted for more than one-third of new cars registered in Seattle.[3] To support continued growth in EV sales, the city will need to build out a charging infrastructure network to meet increasing charging demand.

ICCT's 2021 Seattle charging gap analysis report found that achieving the city's 30% EV stock target in 2030 would require a local citywide network of over 3,000 publicly accessible (i.e., public Level 2, DC fast, and workplace chargers) and over 70,000 home chargers would be needed to support the EV transition.[4] This memo updates ICCT's 2021 Seattle charging gap analysis, expanding the geographic scope to include six additional zip codes within the Seattle City Light territory – bringing the total number of zip codes in the analysis to 30 – and applies the newest data on electric and light-duty vehicle (LDV) registrations. We estimate home and non-home charging needs to support projected light-duty EV adoption throughout the 30 zip codes consistent with an EV growth trajectory such that EVs represent 30% of the total LDV stock in 2030. We first summarize updates to our methodology, data sources, and parameters. We follow this with a presentation of estimates for home and non-home charging needs in the 30 zip codes, between 2024 and 2038. Additionally, we assess the gap between charging deployment as of 2023 and what will be needed in later years, as well as the gap in installed

1 Office of Sustainability and Environment, "Seattle's Clean Transportation Electrification Blueprint" (2021), https://www.seattle.gov/documents/Departments/OSE/ClimateChange/TE/Final%20Transportation%20Electrification%20Blueprint.pdf.
2 Listed goals for changes to transportation in Seattle, Office of Sustainability and Environment, accessed June 25, 2024, https://www.seattle.gov/environment/environmental-progress/transportation.
3 Discussions with Seattle City Light staff.
4 Chih-Wei Hsu, Peter Slowik, Nic Lutsey, *City charging infrastructure needs to reach electric vehicle goals: The case of Seattle*, (ICCT, Washington, DC: 2021), https://theicct.org/publication/city-charging-infrastructure-needs-to-reach-electric-vehicle-goals-the-case-of-seattle/.

charging capacity. Results are developed at the zip code level to have a granular understanding of charging needs and EV adoption throughout the city.

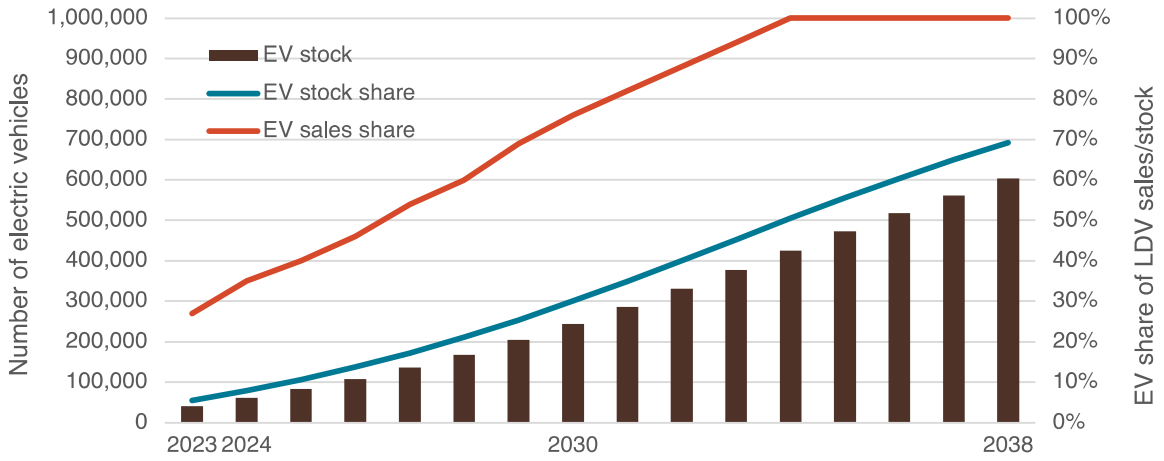
## Data sources and methodology

This analysis follows the methodology from ICCT's 2024 Seattle Clean Fuel Standard credit model for estimating the growth in the stock of light-duty electric vehicles (EVs) and light-duty EV charging needs within City Light's service territory.[5] We use an ICCT stock turnover model to project the number of EVs in City Light's service territory and the associated energy demands across the timeline of this analysis, and we used ICCT's EV CHARGE model to derive the charging infrastructure needs to support this stock of EVs.[6] The modeling assumptions used in this analysis align with the Clean Fuel Standard credit model analysis with selected updates to key parameters, such as trajectory of EV sales and stock growth, the distribution of EVs across housing types within zip codes in City Light's service territory, the evolution of the capacity (i.e. power) of new charging infrastructure deployment, and others. These updated parameters are described in detail in this section. Additionally, we provide a brief discussion of the utilization assumptions in this analysis.

### Updated parameters

The modeled EV adoption trajectory aligns with City Light's need to ensure adequate charging infrastructure to support 30% of the LDVs in its service territory being EVs by 2030. **Figure 1** illustrates this trajectory, showing the growth in the EV sales share of new LDVs between 2023 and 2038 with the red line, the resulting growth in the light-duty EV stock shown by the brown bars, and the growth in the EV stock share of LDVs shown by the blue line.

**Figure 1**
**Assumed EV adoption trajectory in City Light's service territory between 2023 and 2038**




To achieve a 30% EV stock share in 2030, EV adoption would need to grow from 27% of new sales in 2023 to 76% by 2030. This would be an accelerated EV adoption trajectory compared

5 Jane O'Malley, Nikita Pavlenko, *Seattle City Light CFS credit model*, (in press)
6 "EV CHARGE v1.2 Documentation", The International Council on Clean Transportation, access to June 25, 2024, https://theicct.github.io/EVCHARGE-doc/.

to Washington's statewide requirements, which align with the Advanced Clean Cars II regulation passed by the California Air Resources Board in 2022 and would see the statewide EV sales share reach 68% by 2030.[7] Continuing along this trajectory, City Light's service territory would reach a 100% EV sales share in 2034—one year prior to the state's requirements. In 2030, a 30% EV stock share would mean about 244,000 EVs on the roads in the 30 zip codes analyzed, of which we estimate 17% would be PHEVs and the remaining 83% being BEVs. A more detailed breakdown of EV sales and stock by powertrain and citywide EV sales share and stock share are shown in **Table A1** in the Appendix.

The experience of owning and charging an EV is affected by access to home charging, which is in turn affected by the type of home one lives in and the likelihood of having access to off-street parking where either an outlet to charge from already exists or it is relatively easier to install an outlet or home charger. Each of City Light's zip codes have unique housing distributions and thus will have varying levels of access to home charging and subsequent reliance on public charging infrastructure. To properly capture this dynamic, we apply data from the U.S. Census Bureau on the zip code-level housing distributions for the zip codes in City Light's service territory that we analyzed.[8] **Table A2** in the appendix details the housing distributions by zip code. During the early stages of EV adoption most adopters are those who are more likely to have access to convenient charging at home, particularly those living in single-family detached homes. As such, we model each zip code with a higher share of single-family detached homes, initially, and adjust the distribution as the EV stock share increases (decreasing the share of single-family detached homes and increasing the share of all other homes) until it matches the distribution shown in **Table A2** by the time a 50% EV stock share is reached.

As EV and battery technology improve, EVs will be able to charge faster but will need faster charging infrastructure that can deliver energy as fast as the EV can accept it. As such, we anticipate that over time an increasing share of higher rated power DC fast chargers will be installed to better match the specifications of newer EVs on the road and improve throughput of publicly accessible DC fast charging infrastructure. For the different types of non-home charging infrastructure considered in our analysis, which are the same charger types analyzed in the our 2024 national charging gap analysis,[9] we model the shares of newly installed chargers by rated power over time as shown in **Table 1**.

## Table 1
**Assumed share of newly installed non-home chargers by type and rated power in 2024 and 2038**

7 "Washington clean cars" Washington Department of Ecology, accessed June 25, 2024, https://ecology.wa.gov/air-climate/air-quality/vehicle-emissions/clean-cars & "Advanced Clean Cars II", California Air Resources Board, accessed June 25, 2024, https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii.

8 U.S. Census Bureau "Selected Housing Characteristics." American Community Survey, ACS 5-Year Estimates Data Profiles, Table DP04, 2022, https://data.census.gov/table/ACSDP5Y2022.DP04?q=DP04&g=860XX00US98057,98101,98102,98103,98104,98105,98106,98107,98108,98109,98115,98116,98118,98119,98121,98122,98125,98126,98133,98134,98136,98144,98146,98148,98155,98166,98168,98178,98188,98199. Accessed on April 17, 2024.

9 Logan Pierce, Peter Slowik, *Assessment of U.S. electric vehicle charging needs and announced deployments through 2032*, (ICCT, Washington, DC, 2024), https://theicct.org/wp-content/uploads/2024/03/ID-89-–-Chargers-2032_final-v2.pdf.

| Charger type (Level) | Share of newly installed chargers in 2024 (nominal power) | Share of newly installed chargers in 2038 (nominal power) |
|---|---|---|
| Workplace (Level 2) | 70% (9.6 kW), 30% (7.2kW) | 70% (9.6 kW), 30% (7.2kW) |
| Public overnight (Level 2) | 100% (9.6 kW) | 100% (9.6 kW) |
| Public destination (Level 2) | 100% (9.6 kW) | 100% (9.6 kW) |
| Public destination (DCFC) | 25% (50 kW), 32.5% (150 kW), 40% (250 kW), 2.5% (350 kW) | 10% (50 kW), 40% (150 kW), 42.5% (250 kW), 7.5% (350 kW) |
| Public en-route (DCFC) | 80% (150 kW), 20% (250 kW) | 55% (150 kW), 37% (250 kW), 8% (350 kW) |

For Level 2 chargers we assume the shares remain consistent over time. Non-home Level 2 chargers in theory would be installed in spaces where EVs would park for an extended period where prioritizing throughput on charger is less urgent. In addition, Level 2 chargers would likely be installed at locations where there's less available power capacity which would make it difficult to install higher power Level 2 chargers. 9.6 kW chargers were selected as the most common power rating for Level 2 chargers because that aligns with the guidelines for chargers deployed in City Light's curbside EV charging program.[10] For DC fast chargers in 2024 we model shares of newly installed chargers that result in a weighted average rated power of 170 kW, which is roughly equal to the weighted average rated power of DC fast charging infrastructure deployed in Seattle as of January 2024.[11] From there we model decreasing shares of lower rated 50 kW chargers in favor of higher rated 150, 250, and 350 kW chargers. By 2038, the weighted average rated power of public destination DC fast chargers is 198 kW and 203 kW for public en-route DC fast chargers.

Likewise, with home charging we anticipate that many EV drivers will initially charge using a standard household outlet (Level 1) in their garage or along their driveway, but that over time, as battery and charging technology improve, they will upgrade to a Level 2 home charger; also as consumer understanding around EVs develops, new EV drivers will bypass Level 1 outlets to install a Level 2 upon purchasing an EV. As such, we model a decreasing share of Level 1 home charging access in favor of more Level 2 home charging access as shown in **Table 2.**

**Table** 2
**Assumed share of home Level 1 and Level 2 charging**

| Year | Share of homes with Level 1 charging | Share of homes with Level 2 charging |
|---|---|---|
| 2023 | 34% | 66% |

10 "Curbside Level 2 Electric Vehicle Charging", Seattle city light, accessed June 25, 2024, https://www.seattle.gov/city-light/in-the-community/current-projects/curbside-level-2-ev-charging.
11 Eco-Movement (counts of installed electric vehicle charging infrastructure in Seattle, accessed April 2024)

| | | |
|---|---|---|
| 2024 | 32% | 68% |
| 2025 | 30% | 70% |
| 2026 | 28% | 72% |
| 2027 | 26% | 74% |
| 2028 | 24% | 76% |
| 2029 | 22% | 78% |
| 2030 | 20% | 80% |
| 2031 | 18% | 82% |
| 2032 | 16% | 84% |
| 2033 | 14% | 86% |
| 2034 | 12% | 88% |
| 2035 | 10% | 90% |
| 2036 | 8% | 92% |
| 2037 | 6% | 94% |
| 2038 | 4% | 96% |

We estimate about one-third of home chargers in 2023 are Level 1 home chargers with the remaining being Level 2 chargers. By 2030, we project just one-fifth of home chargers are Level 1 and that by 2038 less than 5% are.

Early EV adopters in 2024 typically have relatively higher home charging access. As the EV market expands to drivers without home access to charging, there will be more demand for public charging and less overall access to home charging. Meanwhile, another segment of the population who have the ability to charge at home will increasingly choose to do so as they look to have more convenient and lower cost charging to public chargers. We weighed the power of the first trend higher, anticipating an initial and gradual decline in rates of home charging access at both single-family and multifamily homes before 2030, as shown in **Table 3**.

**Table 3**
**Assumed home charging access by housing type**

| Year | EV stock share | House | Apartment |
|---|---|---|---|
| 2024 | 7.4% | 89% | 54% |
| 2030 | 30% | 77% | 43% |
| 2038 | 68.3% | 69% | 59% |

A proxy for home charging access is having a driveway where there's a greater likelihood of being near an outlet or the electrical service where a home charger install would be relatively easy. We examined GIS data from City Light on the number of single-family homes in its service territory with driveways and found that roughly only half have driveways. We assume home charging access will trend towards access to off-street parking via driveways over time, as such we model continued decline in home charging access for single-family homes from 2030 to 2038. If relatively more or less people park off-street in residential neighborhoods, relatively less or more curbside charging infrastructure would be needed, respectively. As for multifamily homes, we model a rebound and increase in access to home charging from 2030 to 2038, assuming that investment and supporting policies to make home charging access more equitable between single- and multifamily homes will take place. Under the National Electric

Vehicle Infrastructure Formula program and the Charging and Fueling Infrastructure program, Seattle can apply for billions of dollars in federal grants to make investments in community charging projects, like retrofitting multifamily homes to install charging infrastructure.[12] Authorities having jurisdiction in Washington can also adopt building codes and streamline permitting processes, among a slew of other policies, to support the expansion of charging at multifamily homes in Seattle.[13]

In addition to estimating the number of chargers needed in each zip code to support the modeled EV adoption trajectory, we want to assess where the gaps in charging deployment in City Light's service territory are. To do so we examined a dataset from Eco-movement of the stock of chargers deployed in each of the zip codes included in this analysis. **Table 4** and **Table 5** summarize the public charger stock in City Light's service territory by rated power level through 2023. These data are input as the charger stock as of 2023 in the model. Because there's uncertainty as to the types of locations and/or use cases for the chargers in Eco-movement we designate all chargers as public destination chargers for the purposes of our analysis.

**Table 4**
**Level 2 charger stock in City Light's service territory through 2023 (Eco-movement)**

| | 3.7 kW | 7.4 kW | 11 kW | 22 kW | 43 kW |
|---|---|---|---|---|---|
| Counts | 21 | 1418 | 106 | 3 | 1 |
| Share | 1.4% | 91.5% | 6.8% | 0.2% | 0.1% |

For Level 2 chargers, we only use the data in **Table 5** to establish the public Level 2 charger stock in City Light's service territory through 2023. Future year power distribution is informed by City Light's curbside charger program guidelines for Level 2 chargers to be offer at least 9.6kW. If the average Level 2 charging power were relatively higher or lower than this value, relatively fewer or more chargers would be needed, respectively.

**Table 5**
**DCFC charger stock in City Light's territory through 2023 (Eco-movement)**

| | 25 kW | 50 kW | 150 kW | 250 kW | 350 kW |
|---|---|---|---|---|---|
| Counts | 4 | 62 | 72 | 64 | 21 |
| Share | 1.8% | 27.8% | 32.3% | 28.7% | 9.4% |

For DC fast chargers, we calculate the weighted average power deployed in City Light's service territory to be around 170 kW. We use that value as the baseline for the weighted average of the assumed power distribution of newly installed DC fast chargers. The assumed charger power distribution in future years shifts towards higher power chargers, resulting in an increase in the weighted average power of DC fast chargers, as summarized in **Table 1**.

## Charger utilization

12 "Technical Assistance and Resources for States", Joint Office of Energy and Transportation, accessed June 25, 2024, https://driveelectric.gov/states.

13 Logan Pierce, Anh Bui, *Electric vehicle charging at multifamily homes in the United states: barriers, solutions, and selected equity considerations*, (ICCT: Washington, DC, 2024), https://theicct.org/publication/promoting-equity-ev-transition-barriers-and-solutions-to-charging-at-multi-family-homes-us-apr24/.

Fundamental to estimating charging infrastructure needs is the amount of daily utilization (i.e. the hours per day a charger is actively supplying energy) each charger gets. Different analyses can assume more or less utilization that would lead to comparatively fewer or greater charging needs, respectively. In this analysis we apply utilization assumptions consistent with those in the Seattle CFS analysis, as shown in **Table 6**.

**Table 6**
**Assumed charger utilization by charger type (consistent with assumptions in the Seattle CFS analysis)**

| Year | EV stock share | Workplace Level 2 | Public overnight Level 2 | Public destination Level 2 | Public destination DCFC | Public en-route DCFC |
|---|---|---|---|---|---|---|
| 2024 | 7.4% | 4.1 hours | 5.3 hours | 5.7 hours | 3.1 hours | 3.1 hours |
| 2030 | 30% | 4.6 hours | 5.8 hours | 7 hours | 4 hours | 4 hours |
| 2038 | 68.3% | 4.8 hours | 6 hours | 7.4 hours | 4.3 hours | 4.3 hours |

Consistent with the findings in Bauer et al. 2021, utilization increases logarithmically with increasing EV stock share.[14] Over the course of the analysis we assume utilization grows from as little as 3.1 hours per day (13%) to up to 7.4 hours per day (31%) depending on the type of charger. These assumptions, while more bullish than the utilization assumed in our national charging gap analysis, reflect relatively higher EV adoption in Seattle when compared with most of the country.[15] That said, these assumptions are by no means outside the bounds of real-world observed charger utilization. In Q1 2024, EVgo reported nationwide utilization of its DC fast network at about 19% (4.6 hours), whereas our assumptions for DC fast charger utilization in Seattle increase to 18% by 2038.[16] Likewise, curbside Level 2 chargers in New York City have been reported to have utilization as high as 72% in 2024, or 17.3 hours per day.[17] We estimate higher utilization for Level 2 chargers than for DC fast chargers in Seattle, but utilization remains below 30% (7.2 hours/day) until after 2030.

## Results

This section summarizes the analytical findings of this work. First, we present the City Light service territory home and non-home charging needs by type. We then compare the resulting charging needs in 2030 with existing public charging deployment as of 2023 to understand City Light's progress towards meeting the estimated charging deployment needs. Lastly, we share maps of City Light's service territory and the non-home charging and power needs by zip code, to better visualize which regions charging and power needs are greatest.

14 Gordon Bauer, Chih-Wei Hsu, Mike Nicholas, Nic Lutsey, *charging up America's: assessing the growing need for US charging infrastructure through 2030*, (ICCT: Washington, DC, 2021), https://theicct.org/publication/charging-up-america-assessing-the-growing-need-for-u-s-charging-infrastructure-through-2030/.

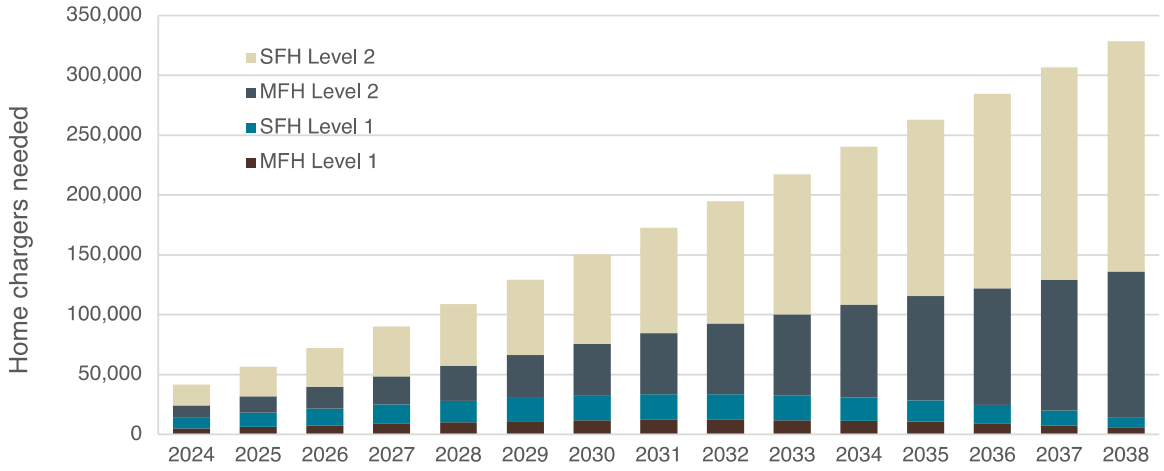
15 Logan Pierce, Peter Slowik, *Assessment of U.S. electric vehicle charging needs and announced deployments through 2032*, (ICCT, Washington, DC, 2024), https://theicct.org/wp-content/uploads/2024/03/ID-89—-Chargers-2032_final-v2.pdf.

16 "*Evgo Doubles Down on Commitment to Begin NACS Deployments in 2024*," EVgo, accessed June 25, 2024, https://www.evgo.com/press-release/evgo-doubles-down-on-commitment-to-begin-nacs-deployments-in-2024/.

17 "NYC's curbside EV chargers are popular—and often blocked," *autoblog*, March 30, 2024, https://www.autoblog.com/2024/03/30/nycs-curbside-ev-chargers-are-popular-and-often-blocked/.

**Figure 2** shows the estimated number of home chargers needed in City Light's service territory from 2024 to 2038, broken down by the type of home, single-family or multifamily home, and by the level of the home charger, Level 1 or Level 2. An estimated 42,000 home chargers will be needed by the end of 2024 which grows to about 150,000 in 2030 and almost 330,000 by 2038. About 36% of the chargers we estimate will be needed at multifamily homes in 2024, which slightly increases to 37% in 2030 and 39% in 2038; the remaining home chargers will be installed at single-family homes. Where home chargers are ultimately deployed will depend on the housing type distribution and the housing stock throughout the City Light's service territory. **Table A3** in the appendix provides a detailed breakdown of the home charging needs by zip code in 2030.

**Figure 2**
**Projected need for home chargers within Seattle City Light's service territory, 2024 through 2038**

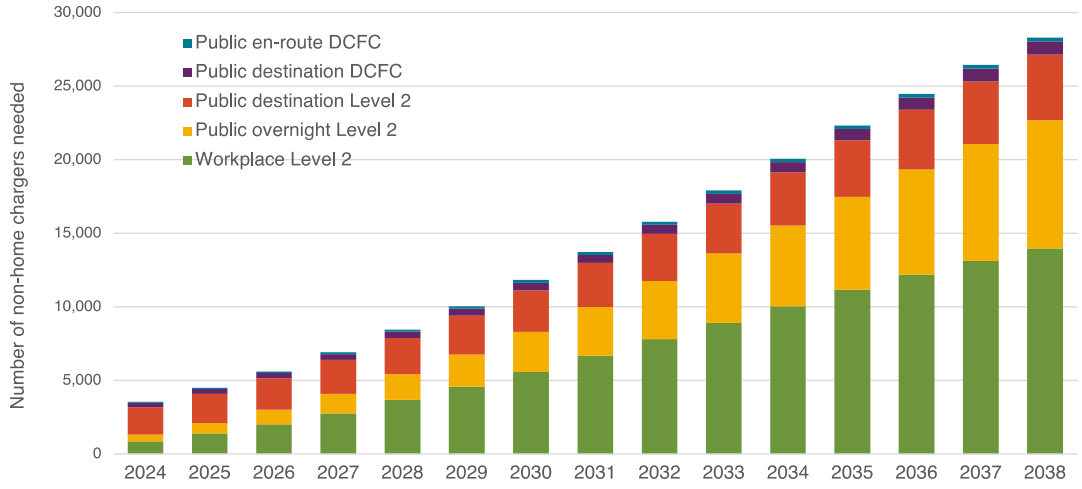



As mentioned in the section discussing updated parameters, we anticipate Level 1 home charging will become less prevalent over time as EV drivers opt to upgrade their existing Level 1 outlet to a Level 2 charger, and as new EV drivers bypass Level 1 charging to install a Level 2 charger upon purchasing an EV. While the share of Level 1 home chargers decreases over time, in accordance with **Table 3**, the absolute number of Level 1 chargers is expected to increase as the growth of City Light's EV market outpaces the shift away from Level 1 chargers towards Level 2 chargers. This trend tops out in 2032 and the number of Level 1 chargers decreases thereafter as the pace of growth of Seattle's EV market settles.

Home charging needs in Seattle are far greater than the needs for non-home chargers, however as Seattle's EV market moves away from early adopters, who are more likely to have home charging access, demand for non-home charging infrastructure at workplaces and other public locations will increase. **Figure 3** shows the estimated non-home chargers needed in City Light's service territory from 2024 to 2038. We estimate approximately 3,600 non-home chargers will be needed by the end of 2024, almost double of what has been installed as of the end of 2023.[18] Non-home charging needs increase to about 12,000 by 2030 and about 28,000 in 2038.

18 Eco-Movement (counts of installed electric vehicle charging infrastructure in Seattle, accessed April 2024)

**Figure 3**
**Projected need for non-home chargers, by type, within Seattle City Light's service territory, 2024 through 2038**




We estimate most of the non-home chargers needed will be Level 2 chargers at workplaces, on curbsides in residential neighborhoods, and in other public locations. Workplace chargers are expected to account for most of the non-home Level 2 chargers needed because of the convenience they offer commuting EV drivers, particularly those without home charging. About 5,600 workplace Level 2 chargers will be needed by the end of 2030, representing about 47% of all non-home chargers and 50% of non-home Level 2 chargers in that year; these needs increase to about 14,000 chargers in 2038 representing 49% of all non-home chargers and 51% of non-home Level 2 chargers. Public overnight Level 2 chargers comprise the second largest need for chargers with about 2,700 chargers needed in 2030, or 23% of all non-home chargers and 24% of non-home Level 2 chargers; by 2038 about 8,700 public overnight Level 2 chargers will be needed representing 31% of non-home chargers and 32% of non-home Level 2 chargers. Like workplace chargers, public overnight chargers can supplement a lack of home charging access, serving as a proxy for a home charger when deployed in residential neighborhoods.

Public destination Level 2 chargers, installed at a variety of sites, make up the remaining non-home Level 2 chargers needed. Because we assume all the existing non-home Level 2 chargers, as of 2023, are public destination, these initially account for 63% non-home Level 2 chargers, but then grow slowly with less than a 10% year-over-year increase in the number of chargers each year analyzed, whereas public overnight and workplace chargers initially see triple digit and then double digit percentage year-over-year increases in chargers through at least 2036. About 2,800 public destination Level 2 chargers are needed in 2030, representing 24% of non-home chargers and 25% of non-home Level 2 chargers, and by 2038 about 4,500 public destination Level 2 chargers will be needed, representing 16% of all non-home chargers and non-home Level 2 chargers alike.

As of 2023, 13% of non-home chargers in City Light's service territory are DC fast chargers, which reflects the charging behavioral preference for EV drivers to use slower charging that is often cheaper and more convenient. We expect this preference will persist as EV adoption increases, and by 2030 we estimate 6% of non-home chargers needed in City Light's service territory will be DC fast chargers, decreasing further to 4% by 2038. Most of these chargers will

be public destination DC fast chargers rather than public en-route chargers, indicating most DC fast chargers will be used to support daily charging needs, supplementing those lacking, or with limited, home charging access. In 2030, about 500 public destination and 200 public en-route DC fast chargers will be needed, and by 2038 about 900 and 250, respectively.

As with home chargers, where these non-home chargers are deployed throughout Seattle will depend on the characteristics of each region such as the amount of EVs, commute patterns, and access to home charging (or the lack thereof). **Table A4** in the appendix details the non-home charging needs in each zip code, by type, in 2030.

To better understand City Light's progress towards meeting its communities' charging infrastructure needs we compare charging deployment as of 2023 with targets in later years. **Table 8** summarizes the total number of Level 2 and DC fast chargers deployed as of 2023, consistent with the findings from Eco-movement presented in **Table 5** and **Table 6**, as well the estimated number of Level 2 and DC fast chargers needed in 2030 and the relative gap between those numbers.

**Table 7**
**City Light's non-home charging gap between 2023 and 2030**

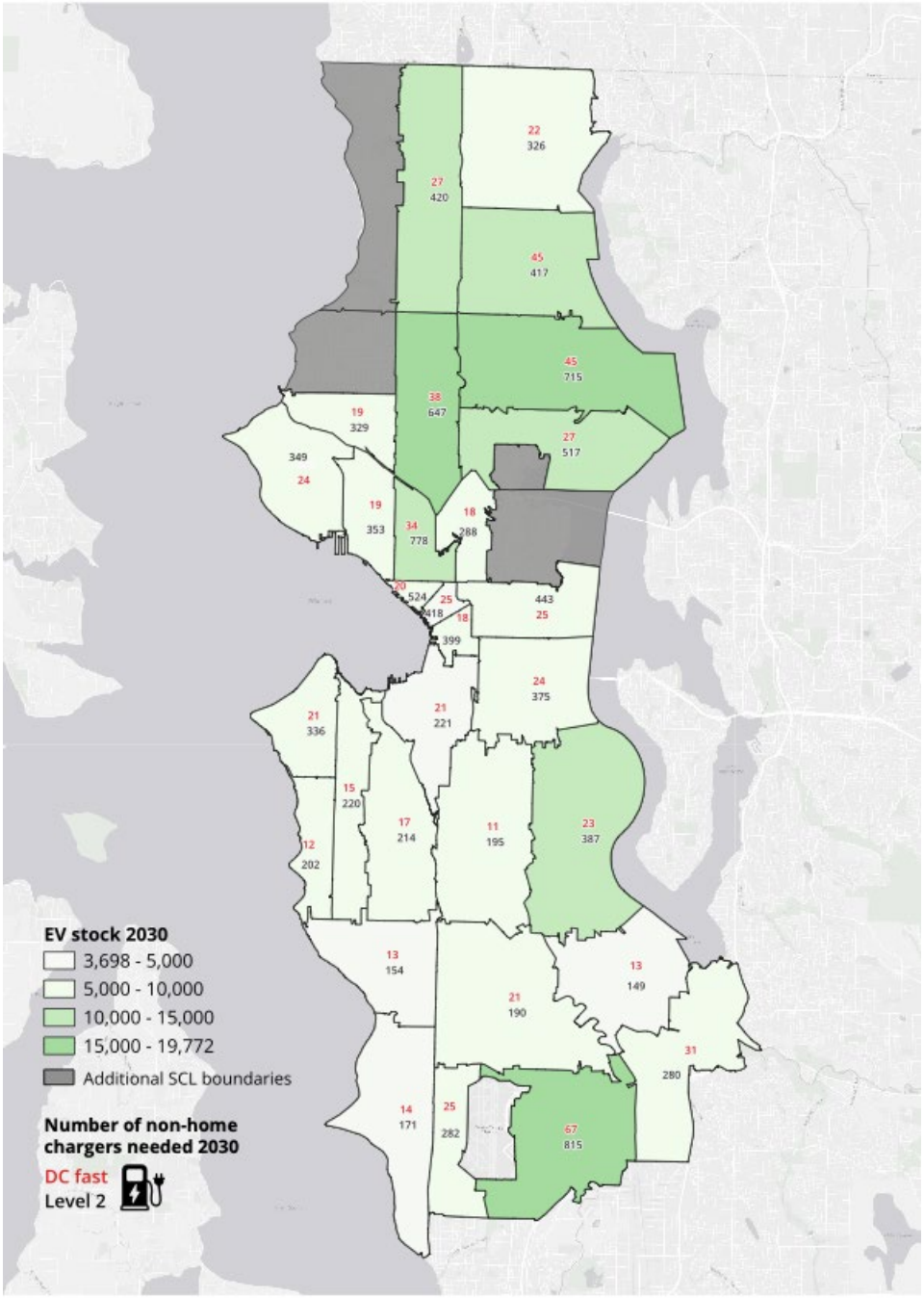
| Non-home Level 2 | | | Non-home DCFC | | | Total non-home | | |
|---|---|---|---|---|---|---|---|---|
| Number of chargers | | | Number of chargers | | | Number of chargers | | |
| 2023 | 2030 | Gap | 2023 | 2030 | Gap | 2023 | 2030 | Gap |
| 1549 | 11,114 | 7.2x | 223 | 734 | 3.3x | 1,772 | 11,848 | 6.7x |

As shown, the number of Level 2 chargers in City Light's service territory would need to increase more than sevenfold and the number of DC fast chargers would need to more than triple by 2030 to satisfy estimated non-home charging needs. Overall, non-home charging needs would need to increase nearly sevenfold. **Table A5** in the appendix details the Level 2 and DC fast non-home charging gaps in each zip code. In practice, and as will be discussed later in the section, the precise number of chargers needed can be adjusted if there is sufficient capacity to support energy demands of EVs in City Light's service territory Fewer higher power chargers can be deployed in lieu of many slow chargers if so desired, and EV drivers can be reasonably expected to adjust their charging behavior accordingly.

**Figure 4** depicts a map of City Light's service territory. The map shows the Level 2 (in black) and the DC fast (in red) non-home charging needs, in 2030, in each of the zip codes analyzed. Each zip code is shaded green in accordance with the size of the EV stock estimated in each region in 2030; the darker the region, the greater the stock of EVs. A few of the regions that are shown in gray have been omitted from the analysis. 98112 (includes parts of Washington Park, Madison Park Denny Blaine, Montlake, and Stevens), 98117 (includes parts of Olympic Manor, North Beach, Sunset Hill, Phinney Ridge, Loyal Heights, Whittier Heights, Crown Hill, and Greenwood) and 98177 (includes parts of Blue Ridge, Broadview, and Shoreline) were omitted for lack of vehicle registration and sales data, 98154, 98164, and 98174 were omitted because they are too small to analyze—each contain a single city block in Downtown Seattle, and 98195 was omitted because it is wholly comprised of the University of Washington. Seattle-Tacoma International Airport is left blank because it is not part of City Light's service territory, instead receiving power from the Port of Seattle.[19]

19 "Airport Tenant Utilities", Port of Seattle, accessed August 1, 2024, https://www.portseattle.org/page/airport-tenant-utilities.

**Figure 4**
**Map of Seattle City Light service territory with non-home charging needs and EV stock estimates, by zip code, in 2030**



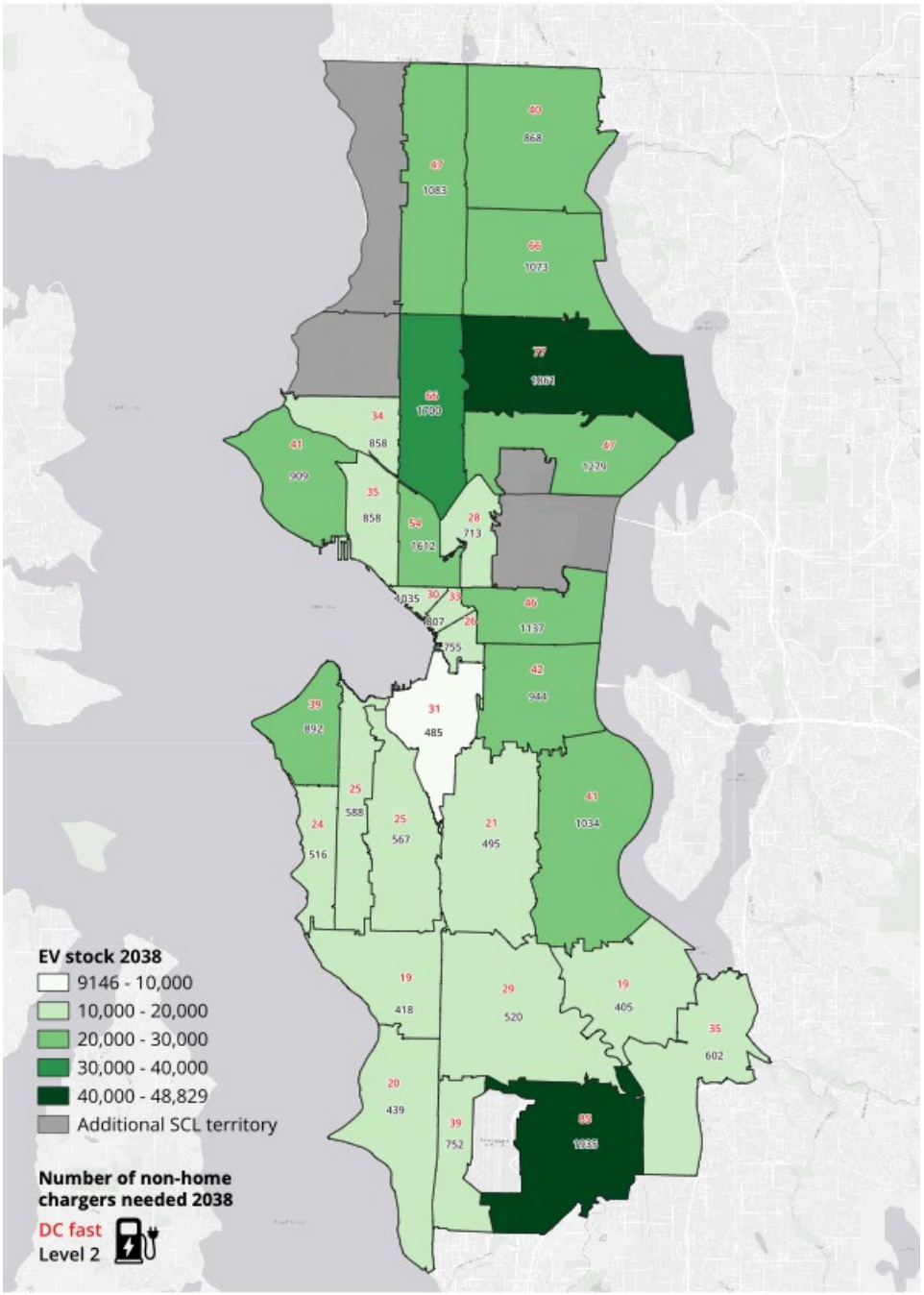

In 2030, Seattle is modeled to reach a 30% citywide EV stock share comprised of about 244,000 EVs. The stock of EVs in each zip code ranges from about 3,700 to about 20,000. The top 10 zip codes by EV stock, most of which are in the northern part of Seattle and City Light's service territory, except for 98188 near Seattle-Tacoma International airport, together account for about half of the EVs in 2030 with the remaining 20 zip codes representing the other half.

The top 10 zip codes by total non-home chargers needs mostly overlap with the top 10 zip codes by EV stock, showing the correlation that where there are more EVs there will also need to be more non-home chargers. 98101 and 98121 are outliers in this regard, having the tenth

and the fifth-most non-home chargers needs, respectively, while being ranked 26th and 17th, respectively, in EV stock. These regions are unique in that they are centrally located in downtown Seattle and thus are projected to have large numbers of workplace chargers to support EV drivers that commute into these regions. **Table A6** in the appendix presents the results above alongside rankings for each zip code by projected EV stock and estimated charging needs.

**Figure 5** shows the same map of City Light's service territory overlayed with the non-home charging needs and estimated EV stock, by zip code, in 2038. As shown, there is a significant uptick in EV adoption among all regions as the map is notably darker than **Figure 4**.

**Figure 5**
**Map of Seattle City Light service territory with non-home charging needs and EV stock estimates, by zip code, in 2038**



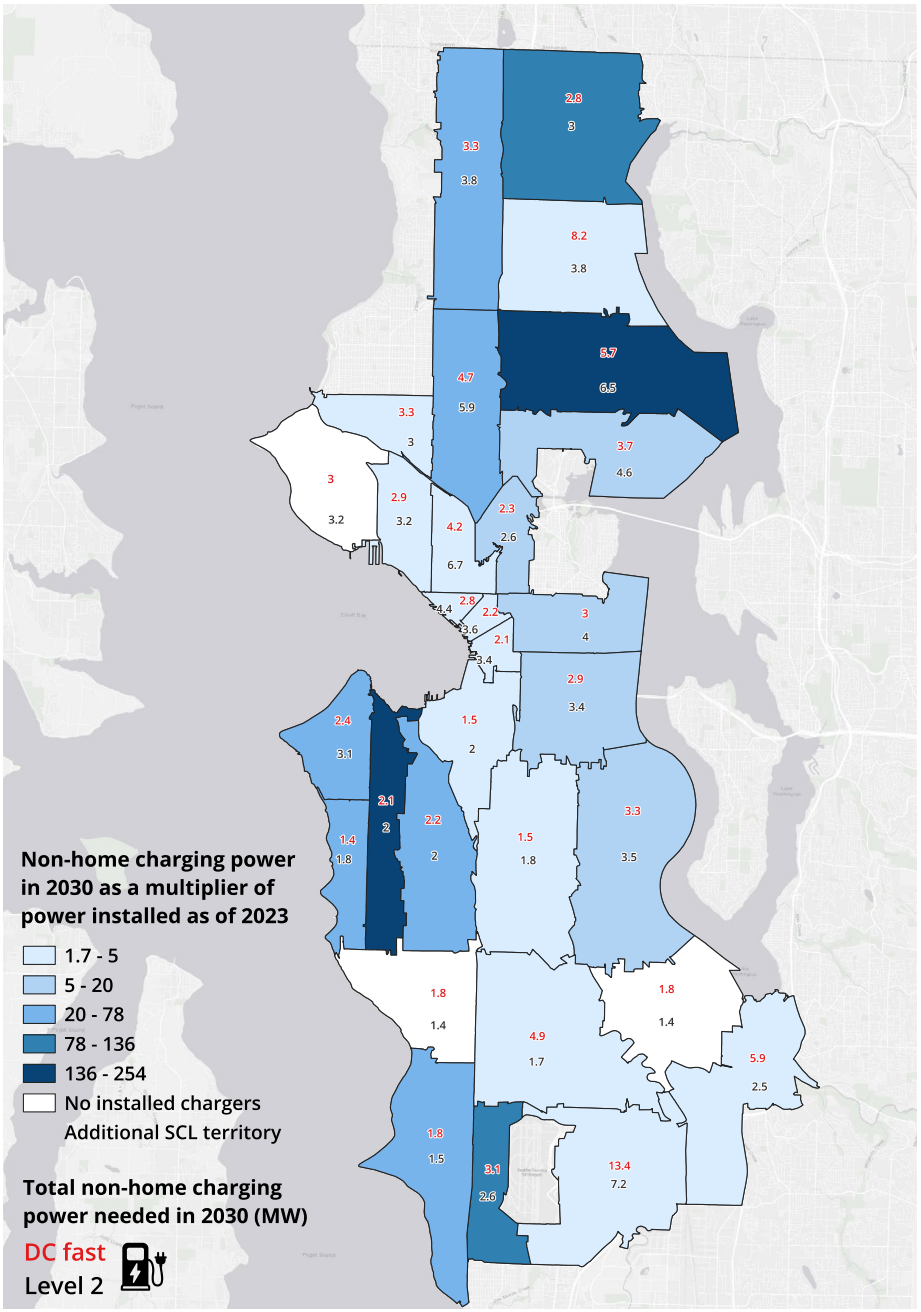

In 2038, the EV stock and stock share in City Light's service territory are about 600,000 vehicles and about 68%, respectively. Zip code EV stocks range about 9,000 to about 49,000. The trends in EV adoption persist from 2030 as the regions with the greatest adoption in 2030 are the same in 2038, and these are the regions with the greatest non-home charging needs.

The findings of relative number of Level 2 and DC fast charging needs are based on the best available data of how EV drivers charge, but changes in charging behavior could lead EV

drivers to meet their charging needs using different chargers than what's been modeled here. Given this possibility, it's important to understand the amount of power (i.e. capacity) that is needed for non-home charging. The capacity needed, along with our assumptions for utilization, reflect the amount of energy that will satisfy the charging needs of vehicles that reside in, and travel to, each region in City Light's service territory.

**Figure 6** shows the non-home charging capacity needed in each of the zip codes analyzed. DC fast non-home charging capacity needs are labeled in red and Level 2 non-home charging capacity needs are labeled in black, both in MW of power needed. Regions are shaded blue in accordance with the scale of growth in capacity between what is installed as of 2023 and what is needed in 2030. Darker regions have a larger gap between the amount of capacity needed and what is already installed. The white regions indicate zip codes where no non-home charging has been installed as of 2023. As before, the gray regions show other zip codes in City Light's service territory that have been omitted from this analysis.

**Figure 6**
**Map of Seattle City Light service territory with estimated non-home charging capacity needs**




The regions that require the most non-home charging capacity generally do not need to grow their capacity too much relative to what is installed as of 2023. As previously discussed, these regions tend to also have the greatest amount of EV adoption indicating that chargers are being deployed where EVs are owned and driven. The one outlier in this regard is 98115, which has only 48 kW of non-home power installed as of 2023 and will need to grow to over 12 MW by 2030—a 2,540% increase, which is the largest gap. The zip codes where no non-home chargers have been installed yet have relatively less non-home charging capacity needs than

the other zip codes. 98146 and 98178 in the southern part of City Light's territory have the second lowest and the lowest capacity needs, respectively, and 98199 is ranked 15th out of 30. **Table A7** in the appendix presents the data in **Figure 6** alongside the rankings for each zip code by both capacity needed and the size of the capacity gap.

## Key Findings

This memo assesses the charging infrastructure deployment gap and projected charging infrastructure needs of 30 zip codes within City Light's service territory through 2038. We draw the following reflections from the analysis:

- **Continued EV market growth requires continued charging deployment.** By 2030 Seattle endeavors to have 30% of its light-duty vehicle registrations be EVs. This could lead to about 244,000 EVs across City Light's service territory. We estimate that an EV stock of this size will require more than 150,000 home chargers to be installed at single- and multifamily homes, as well as 12,000 non-home chargers at workplaces (~5,600 Level 2 chargers), residential curbsides (~2,700 Level 2 chargers), alongside highways (~200 DC fast chargers), and at other public locations (~2,800 Level 2 chargers and ~500 DC fast chargers). The number of Level 2 and DC fast non-home chargers deployed would need to increase by more than sevenfold and triple, respectively, from what's installed as of 2023; overall, the total number of non-home chargers deployed in City Light service territory would need to increase by nearly sevenfold.

- **Charging needs in Seattle will continue to grow in tandem with growth in its EV market.** By 2038, the stock of EVs across City Light's service territory could grow to over 600,000 vehicles or about 68% of registered light-duty vehicles. This stock could require about 330,000 home chargers and 28,000 non-home chargers.

- **Charging needs vary across Seattle by zip code in accordance with trends in EV adoption.** We find that future non-home charging needs in City Light's service territory are concentrated in areas where EV adoption is projected to be the highest. Primarily throughout the northern region of City Light's service territory and near Seattle-Tacoma International Airport. Likewise, estimated non-home charging capacity is greatest in zip codes with high EV adoption. That said, zip codes with lower EV adoption have been somewhat overlooked in terms of charging deployment, having relatively larger gaps in capacity that will need to be filled to support projected EV adoption.

Charging infrastructure planning and deployment is complex and involves coordination between government and municipal agencies, private sector charging companies, and utilities. Recent ICCT research has documented announced charging investments and utility actions to help accelerate charging deployments nationwide.[20] Further research can investigate how Seattle might leverage additional outside resources from public, private and utility sector investments to fill gaps in charging deployment, as well as how the city can prioritize its own funding to deploy chargers in underserved communities and communities to advance EV and charging access and equity.

20 Logan Pierce, Peter Slowik, *Assessment of U.S. electric vehicle charging needs and announced deployments through 2032*, (ICCT, Washington, DC, 2024), https://theicct.org/wp-content/uploads/2024/03/ID-89—-Chargers-2032_final-v2.pdf.

# Appendix

**Table A1** summarizes the EV adoption projection from 2024 through 2038 applied in this analysis. EV sales, stock, sales share, and stock share, by powertrain (i.e. BEV or PHEV), are shown for each year.

**Table A1**
**EV sales and stock projections, 2024 through 2038, modeled in this analysis**

| Year | BEV sales | PHEV sales | Total EV sales | EV share of new vehicle sales | BEV stock | PHEV stock | Total EV stock | EV share of vehicle stock |
|---|---|---|---|---|---|---|---|---|
| 2023 | 10,143 | 1,962 | 12,105 | 27% | 33,027 | 8,407 | 41,434 | 5% |
| 2024 | 16,406 | 3,174 | 19,580 | 35% | 49,150 | 11,477 | 60,626 | 8% |
| 2025 | 19,000 | 3,676 | 22,676 | 40% | 67,736 | 15,010 | 82,746 | 11% |
| 2026 | 21,192 | 4,100 | 25,292 | 46% | 88,339 | 18,915 | 107,254 | 14% |
| 2027 | 25,013 | 4,839 | 29,853 | 54% | 112,533 | 23,491 | 136,024 | 17% |
| 2028 | 27,897 | 5,397 | 33,295 | 60% | 139,314 | 28,545 | 167,859 | 21% |
| 2029 | 32,116 | 6,213 | 38,330 | 69% | 169,933 | 34,332 | 204,265 | 25% |
| 2030 | 35,336 | 6,836 | 42,172 | 76% | 203,311 | 40,627 | 243,938 | 30% |
| 2031 | 38,110 | 7,373 | 45,483 | 82% | 238,861 | 47,312 | 286,172 | 35% |
| 2032 | 40,930 | 7,919 | 48,849 | 88% | 276,480 | 54,387 | 330,867 | 40% |
| 2033 | 43,253 | 8,368 | 51,621 | 94% | 315,548 | 61,760 | 377,308 | 45% |
| 2034 | 45,762 | 8,854 | 54,616 | 100% | 356,096 | 69,437 | 425,533 | 51% |
| 2035 | 45,661 | 8,834 | 54,495 | 100% | 395,261 | 76,877 | 472,137 | 56% |
| 2036 | 46,103 | 8,920 | 55,023 | 100% | 433,295 | 84,134 | 517,429 | 60% |
| 2037 | 46,638 | 9,023 | 55,661 | 100% | 469,922 | 91,143 | 561,065 | 65% |
| 2038 | 47,366 | 9,164 | 56,530 | 100% | 504,994 | 97,870 | 602,864 | 69% |

**Table A2** details the housing distributions, by dwelling type, for the 30 zip codes analyzed in City Light's service territory. Initially, we adjust the distribution in each region to have a greater share of single-family detached homes because early adopters are more likely to live in single-family homes. As the EV stock share increases, we decrease the share of single-family homes and increase the share of all other housing types until the distribution matches the shares shown below, once a 50% EV stock share is reached.

**Table A2**
**Housing distribution by zip code and dwelling type for zip codes considered in analysis**

| | Housing shares[21] | | | | |
|---|---|---|---|---|---|
| Zip code | Single-family detached | Single-family attached | Multifamily home | Other home | Neighborhoods within[22] |
| 98057 | 25% | 3% | 72% | 1% | West Hill, Renton, Valley |
| 98101 | 1% | 0% | 99% | 0% | Downtown Seattle, Pike Place Market, Denny Triangle, First Hill |
| 98102 | 13% | 5% | 81% | 1% | Portage Bay, Montlake, Eastlake, Capitol Hill |
| 98103 | 39% | 10% | 51% | 0% | Greenwood, Phinney Ridge, Fremont, Wallingford, Green Lake, North College Park |
| 98104 | 1% | 0% | 99% | 0% | Downtown Seattle, Pioneer Square, First Hill, Chinatown-Internation District |
| 98105 | 33% | 3% | 64% | 0% | Laurelhurst, Windemere, Ravenna, Wallingford, Bryant, University District |
| 98106 | 52% | 11% | 36% | 1% | Riverview, North Delridge, Highland Park, High Point, South Delridge, Highline |
| 98107 | 26% | 11% | 62% | 1% | West Woodland, Fremont, Ballard |
| 98108 | 63% | 11% | 25% | 1% | Beacon Hill, Georgetown, South Beacon Hill, New Holly, South Park, Southern Heights |
| 98109 | 10% | 2% | 87% | 0% | East Queen Anne, North Queen Anne, Lower Queen Anne, Westlake, South Lake Union |
| 98115 | 62% | 4% | 34% | 0% | View Ridge, Ravenna, Wedgwood, Roosevelt, Lake City, Maple Leaf, Sand Point |
| 98116 | 43% | 8% | 50% | 0% | Alki, North Admiral, Genese |
| 98118 | 64% | 7% | 29% | 0% | Seward Park, Columbia City, Rainier Beach, Brighton, Dunlap, South Beacon Hill |
| 98119 | 24% | 4% | 71% | 0% | North Queen Anne, Lower Queen Anne, West Queen Anne, Interbay |
| 98121 | 2% | 0% | 98% | 0% | Pike Place Market, Denny Triangle, Belltown |
| 98122 | 21% | 5% | 74% | 0% | Madrona, Leschi, Mann, Minor, Capitol Hill |
| 98125 | 48% | 3% | 49% | 0% | Lake City, Maple Leaf, Pinehurst |
| 98126 | 57% | 9% | 34% | 0% | Fauntleroy, North Admiral, Gatewood, Fairmount Park, North Delridge, Roxhill, High Point |
| 98133 | 43% | 6% | 50% | 1% | Shoreline, Haller Lake, Bitter Lake |
| 98134 | 0% | 0% | 100% | 0% | SoDo |
| 98136 | 69% | 5% | 26% | 0% | Fauntleroy, Seaview, Gatewood, Fairmount Park |
| 98144 | 43% | 12% | 45% | 0% | Leschi, Mt Baker, North Beacon Hill, Atlantic |
| 98146 | 70% | 3% | 27% | 1% | Salmon Creek, Arbor Heights, Highline, Northeast Burien |
| 98148 | 42% | 3% | 56% | 0% | Five Corners, North Hill, Sunnydale, Manhattan |
| 98155 | 70% | 4% | 25% | 0% | Sheridan Beach, Horizon View, Brookside, Shoreline, Turtle Rock |
| 98166 | 67% | 1% | 31% | 0% | Three Tree Point, Maplewild, Normandy Park, Seahurst, Gregory Heights, Five Corners, Lake Burien, Linde Hill Park, Downtown Burien |
| 98168 | 61% | 2% | 35% | 2% | Highline, Northeast Burien, Foster Heights, Riverton, Allentown, Southern Heights, Tukwila, Cascade View, Cedarhurst, Latona-SeaTac |
| 98178 | 74% | 2% | 23% | 1% | Rainier Beach, West Hill |
| 98188 | 36% | 3% | 57% | 4% | Tukwila, Thorndyke, McMicken Heights, Angle Lake shore Acres Tukwila South, Riverton Heights, McVan-McMicken Heights, Rancho Vista, Outlying SeaTac |
| 98199 | 60% | 7% | 33% | 0% | Briarcliff, Southeast Magnolia, Lawton Park, Interbay |

**Table A3** details the estimated home charging needs in each zip code, in 2030, by type. Variations in the numbers of home chargers needed reflect differences in EV adoption and the number of residential units and the housing distribution in each zip code.

21 Numbers in table are rounded.
22 Neighborhood information received from https://www.homes.com.

**Table A3**
**Estimated home charging needs in 2030, by level and housing type, for zip codes in City Light's service territory**

| Zip code | SFH Level 1 | SFH Level 2 | MFH Level 1 | MFH Level 2 | Home total |
|---|---|---|---|---|---|
| 98057 | 305 | 897 | 376 | 1,109 | 2,687 |
| 98101 | 44 | 165 | 451 | 1,706 | 2,366 |
| 98102 | 227 | 830 | 458 | 1,673 | 3,188 |
| 98103 | 1,368 | 5,041 | 734 | 2,708 | 9,851 |
| 98104 | 39 | 136 | 474 | 1,690 | 2,339 |
| 98105 | 707 | 2,625 | 633 | 2,348 | 6,313 |
| 98106 | 633 | 2,365 | 183 | 680 | 3,861 |
| 98107 | 545 | 2,046 | 457 | 1,719 | 4,767 |
| 98108 | 660 | 2,475 | 108 | 401 | 3,644 |
| 98109 | 307 | 1,164 | 920 | 3,497 | 5,888 |
| 98115 | 2,163 | 8,051 | 560 | 2,083 | 12,857 |
| 98116 | 739 | 2,734 | 375 | 1,387 | 5,235 |
| 98118 | 1,336 | 4,972 | 270 | 1,004 | 7,582 |
| 98119 | 372 | 1,377 | 461 | 1,702 | 3,912 |
| 98121 | 67 | 252 | 599 | 2,275 | 3,193 |
| 98122 | 486 | 1,807 | 675 | 2,511 | 5,479 |
| 98125 | 910 | 3,362 | 452 | 1,671 | 6,395 |
| 98126 | 688 | 2,549 | 178 | 659 | 4,074 |
| 98133 | 896 | 3,343 | 466 | 1,740 | 6,445 |
| 98134 | 0 | 0 | 343 | 1,357 | 1,700 |
| 98136 | 686 | 2,500 | 118 | 430 | 3,734 |
| 98144 | 852 | 3,153 | 361 | 1,336 | 5,702 |
| 98146 | 593 | 2,194 | 106 | 391 | 3,284 |
| 98148 | 631 | 2,468 | 398 | 1,557 | 5,054 |
| 98155 | 1,193 | 4,441 | 199 | 740 | 6,573 |
| 98166 | 530 | 1,965 | 124 | 457 | 3,076 |
| 98168 | 609 | 2,321 | 163 | 621 | 3,714 |
| 98178 | 603 | 2,256 | 88 | 329 | 3,276 |
| 98188 | 1,211 | 3,624 | 864 | 2,587 | 8,286 |
| 98199 | 1,044 | 3,916 | 257 | 961 | 6,178 |
| **Total** | **20,444** | **75,029** | **11,851** | **43,329** | **150,653** |

**Table A4** details the estimated non-home charging needs in each zip code, in 2030, by type. Variations in the number of chargers reflect differences in EV adoption, access to home charging, or the lack thereof, and the housing stock distribution.

**Table A4**
**Estimated non-home charging needs in 2030, by type, for zip codes in City Light's service territory**

| Zip code | Public overnight Level 2 | Public destination Level 2 | Workplace Level 2 | Public destination DCFC | Public en-route DCFC | Public Level 2 total | DCFC total | Level 2 total | Non-home total |
|---|---|---|---|---|---|---|---|---|---|
| 98057 | 71 | 95 | 114 | 26 | 5 | 166 | 31 | 280 | 311 |
| 98101 | 77 | 214 | 127 | 21 | 4 | 291 | 25 | 418 | 443 |
| 98102 | 81 | 66 | 141 | 12 | 6 | 147 | 18 | 288 | 306 |
| 98103 | 169 | 109 | 369 | 26 | 12 | 278 | 38 | 647 | 685 |
| 98104 | 81 | 180 | 138 | 13 | 5 | 261 | 18 | 399 | 417 |
| 98105 | 132 | 119 | 266 | 18 | 9 | 251 | 27 | 517 | 544 |
| 98106 | 52 | 37 | 125 | 11 | 6 | 89 | 17 | 214 | 231 |
| 98107 | 92 | 55 | 182 | 13 | 6 | 147 | 19 | 329 | 348 |
| 98108 | 41 | 46 | 108 | 7 | 4 | 87 | 11 | 195 | 206 |
| 98109 | 163 | 343 | 272 | 24 | 10 | 506 | 34 | 778 | 812 |
| 98115 | 188 | 96 | 431 | 30 | 15 | 284 | 45 | 715 | 760 |
| 98116 | 89 | 52 | 195 | 15 | 6 | 141 | 21 | 336 | 357 |
| 98118 | 91 | 62 | 234 | 14 | 9 | 153 | 23 | 387 | 410 |
| 98119 | 88 | 95 | 170 | 14 | 5 | 183 | 19 | 353 | 372 |
| 98121 | 103 | 258 | 163 | 15 | 5 | 361 | 20 | 524 | 544 |
| 98122 | 125 | 86 | 232 | 18 | 7 | 211 | 25 | 443 | 468 |
| 98125 | 106 | 78 | 233 | 38 | 7 | 184 | 45 | 417 | 462 |
| 98126 | 54 | 33 | 133 | 9 | 6 | 87 | 15 | 220 | 235 |
| 98133 | 105 | 87 | 228 | 18 | 9 | 192 | 27 | 420 | 447 |
| 98134 | 66 | 49 | 106 | 18 | 3 | 115 | 21 | 221 | 242 |
| 98136 | 48 | 36 | 118 | 8 | 4 | 84 | 12 | 202 | 214 |
| 98144 | 92 | 77 | 206 | 16 | 8 | 169 | 24 | 375 | 399 |
| 98146 | 36 | 22 | 96 | 8 | 5 | 58 | 13 | 154 | 167 |
| 98148 | 84 | 44 | 154 | 17 | 8 | 128 | 25 | 282 | 307 |
| 98155 | 77 | 50 | 199 | 14 | 8 | 127 | 22 | 326 | 348 |
| 98166 | 39 | 34 | 98 | 9 | 5 | 73 | 14 | 171 | 185 |
| 98168 | 47 | 33 | 110 | 15 | 6 | 80 | 21 | 190 | 211 |
| 98178 | 34 | 22 | 93 | 8 | 5 | 56 | 13 | 149 | 162 |
| 98188 | 186 | 289 | 340 | 58 | 9 | 475 | 67 | 815 | 882 |
| 98199 | 93 | 45 | 211 | 16 | 8 | 138 | 24 | 349 | 373 |
| **Total** | **2,710** | **2,812** | **5,592** | **529** | **205** | **5,522** | **734** | **11,114** | **11,848** |

**Table A5** details the number of deployed non-home chargers in each zip code, as of 2023 and the number of non-home chargers needed in 2030 to measure the gap in relative charging deployment.

**Table A5**
**Gaps in non-home charging deployment, by zip code, between existing chargers as of 2023 and needed chargers in 2030**

| Zip code | Level 2 | DCFC |
|---|---|---|

| | 2023 | 2030 | Gap | 2023 | 2030 | Gap |
|---|---|---|---|---|---|---|
| 98057 | 58 | 280 | 4.8 | 22 | 31 | 1.4 |
| 98101 | 184 | 418 | 2.3 | 21 | 25 | 1.2 |
| 98102 | 32 | 288 | 9.0 | 0 | 18 | — |
| 98103 | 31 | 647 | 20.9 | 2 | 38 | 19.0 |
| 98104 | 151 | 399 | 2.6 | 5 | 18 | 3.6 |
| 98105 | 63 | 517 | 8.2 | 5 | 27 | 5.4 |
| 98106 | 9 | 214 | 23.8 | 1 | 17 | 17.0 |
| 98107 | 13 | 329 | 25.3 | 13 | 19 | 1.5 |
| 98108 | 22 | 195 | 8.9 | 5 | 11 | 2.2 |
| 98109 | 278 | 778 | 2.8 | 4 | 34 | 8.5 |
| 98115 | 6 | 715 | 119.2 | 0 | 45 | — |
| 98116 | 10 | 336 | 33.6 | 1 | 21 | 21.0 |
| 98118 | 12 | 387 | 32.3 | 6 | 23 | 3.8 |
| 98119 | 57 | 353 | 6.2 | 8 | 19 | 2.4 |
| 98121 | 219 | 524 | 2.4 | 15 | 20 | 1.3 |
| 98122 | 33 | 443 | 13.4 | 10 | 25 | 2.5 |
| 98125 | 28 | 417 | 14.9 | 28 | 45 | 1.6 |
| 98126 | 4 | 220 | 55.0 | 0 | 15 | — |
| 98133 | 36 | 420 | 11.7 | 1 | 27 | 27.0 |
| 98134 | 26 | 221 | 8.5 | 14 | 21 | 1.5 |
| 98136 | 10 | 202 | 20.2 | 0 | 12 | — |
| 98144 | 33 | 375 | 11.4 | 2 | 24 | 12.0 |
| 98146 | 0 | 154 | — | 0 | 13 | — |
| 98148 | 3 | 282 | 94.0 | 1 | 25 | 25.0 |
| 98155 | 8 | 326 | 40.8 | 0 | 22 | — |
| 98166 | 12 | 171 | 14.3 | 1 | 14 | 14.0 |
| 98168 | 6 | 190 | 31.7 | 15 | 21 | 1.4 |
| 98178 | 0 | 149 | — | 0 | 13 | — |
| 98188 | 205 | 815 | 4.0 | 43 | 67 | 1.6 |
| 98199 | 0 | 349 | — | 0 | 24 | — |
| **Total** | **1549** | **11,114** | **7.2** | **223** | **734** | **3.3** |

**Table A6** details the Level 2, DC fast, and total non-home charging needs and EV projections in 2030, in each zip codes analyzed and consistent with the results in **Figure 4**. It also provides rankings by EV stock and by the total number of non-home chargers needed showing there's generally overlap between the areas with greatest EV adoption and where most non-home chargers are needed.

**Table A6**
**Estimated non-home charging needs, by type, and EV projections by zip code**

| Zip code | Level 2 | DC fast | Total non-home chargers needed | Ranking by number of non-home chargers needed | EV stock | Ranking by size of EV stock |
|---|---|---|---|---|---|---|
| 98057 | 280 | 31 | 311 | 19 | 5,108 | 24 |
| 98101 | 418 | 25 | 443 | 10 | 4,675 | 26 |
| 98102 | 288 | 18 | 306 | 21 | 5,728 | 19 |
| 98103 | 647 | 38 | 685 | 4 | 15,823 | 3 |
| 98104 | 399 | 18 | 417 | 11 | 5,331 | 22 |
| 98105 | 517 | 27 | 544 | 5 | 10,793 | 5 |
| 98106 | 214 | 17 | 231 | 24 | 5,637 | 20 |
| 98107 | 329 | 19 | 348 | 17 | 7,730 | 14 |
| 98108 | 195 | 11 | 206 | 27 | 5,094 | 25 |
| 98109 | 778 | 34 | 812 | 2 | 10,697 | 6 |
| 98115 | 715 | 45 | 760 | 3 | 19,772 | 1 |
| 98116 | 336 | 21 | 357 | 16 | 8,332 | 13 |
| 98118 | 387 | 23 | 410 | 12 | 10,924 | 4 |
| 98119 | 353 | 19 | 372 | 15 | 6,780 | 16 |
| 98121 | 524 | 20 | 544 | 5 | 6,193 | 17 |
| 98122 | 443 | 25 | 468 | 7 | 9,466 | 9 |
| 98125 | 417 | 45 | 462 | 8 | 10,152 | 7 |
| 98126 | 220 | 15 | 235 | 23 | 6,007 | 18 |
| 98133 | 420 | 27 | 447 | 9 | 10,044 | 8 |
| 98134 | 221 | 21 | 242 | 22 | 3,698 | 30 |
| 98136 | 202 | 12 | 214 | 25 | 5,544 | 21 |
| 98144 | 375 | 24 | 399 | 13 | 8,981 | 12 |
| 98146 | 154 | 13 | 167 | 29 | 4,570 | 27 |
| 98148 | 282 | 25 | 307 | 20 | 7,405 | 15 |
| 98155 | 326 | 22 | 348 | 17 | 9,450 | 10 |
| 98166 | 171 | 14 | 185 | 28 | 4,473 | 28 |
| 98168 | 190 | 21 | 211 | 26 | 5,159 | 23 |
| 98178 | 149 | 13 | 162 | 30 | 4,446 | 29 |
| 98188 | 815 | 67 | 882 | 1 | 16,506 | 2 |
| 98199 | 349 | 24 | 373 | 14 | 9,419 | 11 |

**Table A7** details the public Level 2, workplace Level 2, DC fast, and total non-home charging capacity needed in 2030 in the zip codes analyzed, consistent with the results in **Figure 6**. The gap is a measure of the total non-home charging capacity needed in 2030 divided by the non-home charging capacity than has been installed as of 2023. Capacity installed as of 2023 can be calculated by dividing the total capacity needed by the gap. Rankings of zip codes by both the size of the gap and the total non-home capacity needed are provided for reference. Total non-home capacity needed may not sum precisely because of rounding.

**Table A7**

**Estimated non-home charging capacity needed, by charger type, and charging capacity gap for zip codes in City Light's service territory in 2030**

| Zip code | Public Level 2 capacity needed (MW) | Workplace Level 2 capacity needed (MW) | DCFC capacity needed (MW) | Total non-home capacity needed (MW) | Gap | Ranking by size of gap | Ranking by total non-home capacity needed |
|---|---|---|---|---|---|---|---|
| 98057 | 1.5 | 1.0 | 5.9 | 8.4 | 1.7 | 27 | 6 |
| 98101 | 2.4 | 1.1 | 2.2 | 5.7 | 1.9 | 23 | 18 |
| 98102 | 1.4 | 1.2 | 2.3 | 4.9 | 19.5 | 11 | 22 |
| 98103 | 2.7 | 3.3 | 4.7 | 10.6 | 27.9 | 8 | 5 |
| 98104 | 2.2 | 1.2 | 2.1 | 5.5 | 3.8 | 19 | 20 |
| 98105 | 2.3 | 2.4 | 3.7 | 8.3 | 6.7 | 14 | 7 |
| 98106 | 0.8 | 1.1 | 2.2 | 4.1 | 31.3 | 7 | 23 |
| 98107 | 1.4 | 1.6 | 3.3 | 6.3 | 2.5 | 21 | 14 |
| 98108 | 0.8 | 1.0 | 1.5 | 3.2 | 3.8 | 18 | 28 |
| 98109 | 4.3 | 2.4 | 4.2 | 10.9 | 4.4 | 16 | 4 |
| 98115 | 2.7 | 3.8 | 5.7 | 12.2 | 254.0 | 1 | 2 |
| 98116 | 1.3 | 1.7 | 2.4 | 5.4 | 39.2 | 6 | 21 |
| 98118 | 1.4 | 2.1 | 3.3 | 6.8 | 6.8 | 13 | 11 |
| 98119 | 1.7 | 1.5 | 2.9 | 6.0 | 3.1 | 20 | 16 |
| 98121 | 3.0 | 1.4 | 2.8 | 7.2 | 2.0 | 22 | 8 |
| 98122 | 1.9 | 2.1 | 3.0 | 6.9 | 5.2 | 15 | 10 |
| 98125 | 1.7 | 2.1 | 8.2 | 11.9 | 1.9 | 24 | 3 |
| 98126 | 0.8 | 1.2 | 2.1 | 4.1 | 137.0 | 2 | 24 |
| 98133 | 1.8 | 2.0 | 3.3 | 7.1 | 23.0 | 10 | 9 |
| 98134 | 1.1 | 0.9 | 1.5 | 3.5 | 3.9 | 17 | 25 |
| 98136 | 0.8 | 1.0 | 1.4 | 3.2 | 43.6 | 5 | 27 |
| 98144 | 1.6 | 1.8 | 2.9 | 6.3 | 17.5 | 12 | 13 |
| 98146 | 0.6 | 0.8 | 1.8 | 3.2 | — | — | 29 |
| 98148 | 1.2 | 1.4 | 3.1 | 5.6 | 78.1 | 4 | 19 |
| 98155 | 1.2 | 1.8 | 2.8 | 5.8 | 78.3 | 3 | 17 |
| 98166 | 0.7 | 0.9 | 1.8 | 3.3 | 24.7 | 9 | 26 |
| 98168 | 0.8 | 1.0 | 4.9 | 6.6 | 1.7 | 26 | 12 |
| 98178 | 0.5 | 0.8 | 1.8 | 3.1 | — | — | 30 |
| 98188 | 4.1 | 3.0 | 13.4 | 20.5 | 1.7 | 25 | 1 |
| 98199 | 1.3 | 1.9 | 3.0 | 6.2 | — | — | 15 |
| **Total** | **50.0** | **49.5** | **103.4** | **202.9** | **2.8** | — | — |

# SUMMARY and FISCAL NOTE

| Department: | Dept. Contact: | CBO Contact: |
|---|---|---|
| Seattle City Light | Angela Song | Greg Shiring |

## 1. BILL SUMMARY

**Legislation Title:** A RESOLUTION relating to the City Light Department; adopting an updated 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. Under RCW 35.92.450, City Light is authorized to invest in transportation electrification and related grid improvements pursuant to its transportation electrification plan approved by its governing body. This resolution adopts a five-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? ☐ ☒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 have financial impacts to the City?** ☐ **Yes** ☒ **No**

## 3.d. Other Impacts

**Does the legislation have other financial impacts to The City of Seattle, including direct or indirect, one-time or ongoing costs, that are not included in Sections 3.a through 3.c? If so, please describe these financial impacts.**
No.

**If the legislation has costs, but they can be absorbed within existing operations, please describe how those costs can be absorbed. The description should clearly describe if the absorbed costs are achievable because the department had excess resources within their existing budget or if by absorbing these costs the department is deprioritizing other work that would have used these resources.**
NA

**Please describe any financial costs or other impacts of *not* implementing the legislation.**
If this legislation is not adopted, City Light will not have the authority to continue investing in transportation electrification. The private market would be solely responsible for meeting all charging and infrastructure upgrades.

## 4. OTHER IMPLICATIONS

**a. Please describe how this legislation may affect any departments besides the originating department.**
N/A

**b. Does this legislation affect a piece of property? If yes, please attach a map and explain any impacts on the property. Please attach any Environmental Impact Statements, Determinations of Non-Significance, or other reports generated for this property.**
No.

**c. Please describe any perceived implication for the principles of the Race and Social Justice Initiative.**

**i. How does this legislation impact vulnerable or historically disadvantaged communities? How did you arrive at this conclusion? In your response please consider impacts within City government (employees, internal programs) as well as in the broader community.**
Programs and services in the Transportation Electrification Strategic Investment Plan will be developed in consultation with community partners and vulnerable and historically disadvantaged communities.

City Light has undertaken broad customer and stakeholder engagement across communities and sectors consistent with community and state standards, including the City's Race and Social Justice Initiative, Washington's HEAL Act, and in collaboration with the Department of Neighborhoods.

**ii. Please attach any Racial Equity Toolkits or other racial equity analyses in the development and/or assessment of the legislation.**
Attached, additional information is available upon request.

**iii. What is the Language Access Plan for any communications to the public?**
The Transportation Electrification Strategic Investment Plan will file annual Language Access Plans with the City. The plans will consist of funding spent on contracts with community organizations, the Department of Neighborhood Community Liaisons, in-language services, and other tactics.

**d. Climate Change Implications**

**i. Emissions: How is this legislation likely to increase or decrease carbon emissions in a material way? Please attach any studies or other materials that were used to inform this response.**

The Transportation Electrification Strategic Investment Plan will decrease carbon emissions. Transportation electrification replaces fossil fuels with City Light's carbon-neutral power, resulting in a cleaner transportation system.

**ii. Resiliency: Will the action(s) proposed by this legislation increase or decrease Seattle's resiliency (or ability to adapt) to climate change in a material way? If so, explain. If it is likely to decrease resiliency in a material way, describe what will or could be done to mitigate the effects.**

Transitioning transportation systems to electricity in and of itself creates a more resilient transportation system in the long-run as reliance on volatile, international and politically susceptible fossil fuel supply chains is reduced. Additionally, electricity can be produced locally through onsite distributed energy resources like solar or through larger scale utility-scale renewable energy resources like wind, solar, and hydro that are located in Washington or regionally. Furthermore, existing and future efforts regarding resiliency hubs that increase community resiliency in key areas such as energy, cooling/heating, water, food, and shelter can also serve as "fueling" hubs for electric vehicles.

**e. 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)? What mechanisms will be used to measure progress towards meeting those goals?**

N/A

## 5. CHECKLIST

☐ **Is a public hearing required?**

☐ **Is publication of notice with *The Daily Journal of Commerce* and/or *The Seattle Times* required?**

☐ **If this legislation changes spending and/or revenues for a fund, have you reviewed the relevant fund policies and determined that this legislation complies?**

☐ **Does this legislation create a non-utility CIP project that involves a shared financial commitment with a non-City partner agency or organization?**

## 6. ATTACHMENTS

**Summary Attachments:**

Summary Attachment A – Fleet Design Condensed Racial Equity Toolkit

Summary Attachment B – Multi-Family EV Charging Design Concept Condensed Racial Equity Toolkit
Summary Attachment C – Public Charging EV Racial Equity Toolkit

# Fleet Design - Condensed Racial Equity Tool Kit

July 31, 2022

## 1. Identify a racial equity outcome as our north star goal.

*What is the issue and what are we really trying to accomplish?*

The Transportation Electrification Strategic Investment Plan (TESIP) outlines six broad racial equity outcomes to guide future TE programs:

- **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 communication 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 by providing youth, apprenticeship and job pathways with good labor standards and livable wages.
- **Electricity Affordability.** Widespread transportation electrification increases revenue to put downward pressure on electricity prices.

Fleet electrification is one of the programs covered by TESIP and therefore has been designed to align with the racial equity outcomes above. Our fleet electrification investments are guided by the community's wants and needs by maximizing GHG reductions and improving air quality in Environmental Justice Communities, as identified during the TESIP stakeholder engagement efforts.

During Phase 1 of our community engagement for the TESIP, community members identified the negative health impacts from carbon emissions as one of their primary concerns. To address the issue of heavy greenhouse gas emissions in environmental justice communities, we are designing our fleet program to accelerate the transition of commercial vehicles to electric vehicles. Because commercial vehicles are the primary source of air pollution in the Environmental Justice Communities, City Light has prioritized the Fleet Electrification program.

The program's overall goals are:

1. To offer a portfolio of different EV charging solutions that meet our fleet customers where they are. Our fleet electrification investments **reflect the community's wants and needs** by maximizing GHG reductions and **improving air quality in Environmental Justice Communities**. Our customers partner with us on their electrification journey because our teams are empowered with the right tools and resources.

Given the large emissions displacement potential of fleet electrification, which would substantially decrease the negative health impacts on communities who live along freight corridors, this program has been identified by communities and City Light leadership as a priority.

Annual emissions per vehicle segment are shown in the table below. Heavier duty Class 6-8 vehicles are a small portion (<25%) of the total vehicles, but make up a larger portion of energy, carbon and particulate emissions.

| Class | Vehicles | Energy (MMBtu) | Carbon (tons) | NOX (tons) |
|---|---|---|---|---|
| Passenger | 27,412 | 9% | 8% | 4% |
| Light Truck/Van (Class 2-3) | 24,062 | 12% | 10% | 7% |
| Small Delivery Truck/Van (Class 4) | 35,555 | 17% | 14% | 12% |
| Large Delivery Truck (Class 6) | 25,603 | 33% | 25% | 31% |
| Tractor (Class 8) | 2,847 | 29% | 43% | 46% |
| | 115,479 | 15,075,052 | 1,225,466 | 2,942 |

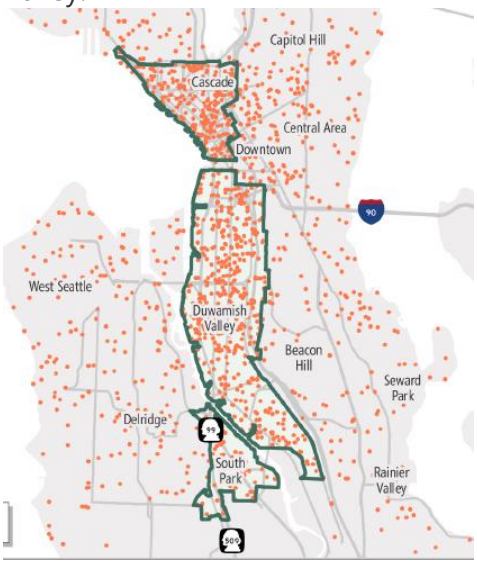
## 2. Gather relevant data for the problem we are attempting to solve

*a) Analyze the raw data. For example: (Native Americans, Black folks, undocumented/mixed status immigrants, prisoners, insecurely housed, Queer and trans folks of color, single low-income people w/o community supports and folks in recovery).*

- Road transportation represents two-thirds of Seattle's climate pollution. Medium- and heavy-duty trucks, in particular, are responsible for sixteen percent of greenhouse gas emissions in Seattle.[1] In addition to reducing the miles we need to drive to meet our daily needs we must electrify our cars, buses, and trucks to meet our carbon neutrality goals.[2]
- Fleet operations are highly concentrated in Environmental Justice communities, which bear a disproportionate impact of emissions. Commercial medium- and heavy-duty fleet vehicles are responsible for most of the air pollution. Diesel emissions, in particular, disproportionately harm Environmental Justice communities.[3]

[1] Seattle Climate Action Plan, p.5. http://greenspace.seattle.gov/wp-content/uploads/2018/04/SeaClimateAction_April2018.pdf
[2] https://www.seattle.gov/environment/climate-change
[3] https://insideclimatenews.org/news/27102021/diesel-pollution-environmental-justice/

- A Fehr & Peers study found that medium-duty trucks are concentrated in the Duwamish Valley.[4]




- Most medium- and heavy-duty trucks use diesel fuel. 72 percent of the trucks with a gross vehicle weight rating 10,001 and above sold in the United States in 2013 were diesel-powered.[5]
- Low-income neighborhoods and communities of color experience an average of 28 percent more nitrogen dioxide (NO2) pollution than higher-income and majority-white neighborhoods. Diesel trucks are the dominant source of NO2 emissions and contribute up to half of the overall NO2 pollution despite being just 5 percent or less of the total traffic.[6]
- Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material.[7]
    - The solid material in diesel exhaust is known as diesel particulate matter (DPM). DPM is typically composed of carbon particles ("soot", also called black carbon, or BC) and numerous organic compounds, including over 40 known cancer-causing organic substances.
    - Diesel exhaust also contains gaseous pollutants, including volatile organic compounds and oxides of nitrogen (NOx). NOx emissions from diesel engines can undergo chemical reactions in the atmosphere leading to formation of PM2.5. (More than 90% of DPM is less than 1 μm in diameter and thus is a subset

[4] Seattle Zero Emissions Freight Study by Fehr & Peers (June 2021)

[5] U.S. Dept. of Transportation. https://www.bts.dot.gov/sites/bts.dot.gov/files/legacy/DieselFactSheet.pdf
[6] https://insideclimatenews.org/news/27102021/diesel-pollution-environmental-justice/
[7] California Air Resources Board. https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health

of PM2.) Therefore, DPM also contributes to the same non-cancer health effects as PM2.5 exposure.

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.[8,9]

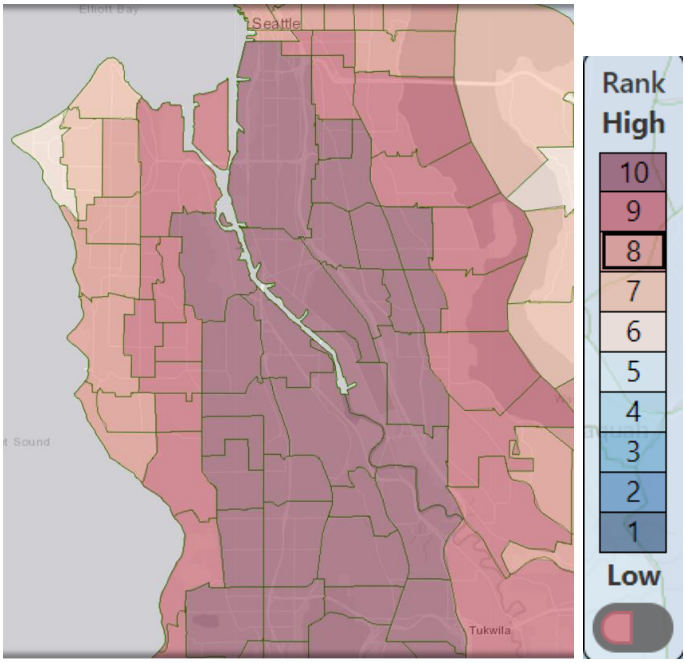
- Emissions from transportation is a major source of PM2.5 air pollutants in urban areas. (PM2.5 is fine particulate matter that is 2.5 microns or less in diameter.) PM2.5 is particularly dangerous because the fine particles can be inhaled and get deep into your lungs. Numerous scientific studies have linked particle pollution exposure to a variety of health problems, including[10]:
    - premature death in people with heart or lung disease
    - nonfatal heart attacks
    - irregular heartbeat
    - aggravated asthma
    - decreased lung function
    - increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing.
- The DOH Environmental Health Disparities map shows high concentrations of PM2.5 air pollutant particles in the Duwamish Valley.[11]

[8] 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

[9] 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

[10] United States Environmental Protection Agency. https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm

[11] Washington State Department of Health. https://fortress.wa.gov/doh/wtn/WTNIBL/




*b) Identify those most impacted by the decision we are about to make.*

City Light identified key audiences during Phase 1 of the stakeholder outreach and engagement strategy (TESIP Community and Stakeholder Outreach and Engagement Summary, p.31). Of this group, the subset most impacted by the decisions we make in our fleet program design are customers who live along freight corridors, especially in the Duwamish Valley and near the Port of Seattle. These communities have been identified as environmental justice communities in part because of their proximity to pollution centers. Communities who live near heavy fleet traffic areas are most likely to reap the benefits of the greenhouse gas reductions we aim to achieve in our fleet programs. As part of the Scope of Work the program implementor will help City Light identify and prioritize target areas and customers for the Fleet Electrification program using the equitable outcomes addressed in Section 1 above.

On the other hand, impacted customers who could potentially face undue hardships, depending on the decisions we make, include those that own and operate fleets, such as large and small businesses, non-profits, and government agencies. While fleet operators are likely to realize positive health impacts as well from the programs we put in place to reduce the emissions of fleets, we need to be aware of how the programs will affect business owners and operators, especially those who belong to environmental justice communities themselves. We do not want to impose financial or resource hardships on businesses disproportionate to what they can reasonably afford. We must work with these groups to devise solutions that both improve air quality and enable businesses to continue operating.

*c) Talk to the folks we believe will be most directly affected. Center these relationships.*

City Light's equity-centered approach to stakeholder outreach and engagement is detailed in the TESIP Community and Stakeholder Outreach and Engagement Summary (p. 27-49). By

centering people and communities experiencing environmental inequities, community outreach and engagement will result in solutions that meet the needs of all our customers.

In Phase 1, City Light's strategy was focused on in-person, in-depth small group or one-on-one conversations with key audiences. City Light 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.

Community leaders and environmental advocacy groups identified fleet electrification as a priority and requested that communities most impacted by poor air quality be targeted first for investment. Multiple community leaders also identified nonprofit/small business fleet electrification as an opportunity to increase equitable access to transportation electrification.

During the development of the fleet program, the design team reached out to five fleets and other experts to learn about barriers to electrification. The team will continue to engage with fleets and stakeholders as the program develops to ensure that our program aren't putting undue burden on our customers.

## 3. How will our most impacted benefit from our stated course of action?

*And, how will our most impacted be burdened by our stated course of action?*

The preliminary design concept has incorporated TESIP Phase 1 community feedback and aligned with the TESIP racial equity outcomes to include design elements that will prioritize fleet electrification funding to have positive impacts on environmental justice communities. This includes:

- Layering rebate incentives for customer-owned charging to potentially include "bonuses" based on criteria that would benefit environmental justice communities
    - For example, higher incentive level based on geography (targeting and prioritizing fleets that travel through the Duwamish Valley)
- Offering make-ready (i.e., enhanced incentives) for projects that will have the greatest impacts on environmental justice community, including:
    - Large (based on kW) projects replacing high-emitting diesel fleets
    - Projects for community-based organization fleets with high barriers to electrification
- Providing advisory services to assist fleets that do not have in-house resources or expertise

Since equity is a key component of the program's goal, the preliminary design concept has established a key performance indicator around emissions reductions. This can be further refined to target emissions reductions in environmental justice communities as the design evolves.

| Goal | How | Metric |
|---|---|---|
| Equity: reduce emissions in Environmental Justice Communities | • Targeted recruitment based on emissions impact<br>• Bonus incentives based on emissions reductions in environmental justice communities<br>• Proactive partnership outreach | % GHG reduced, % PM 2.5 reduced |

## 4. What are potential unintended consequences?

*Are there risks we can foresee? If so, how can we minimize the risk of harm to our most impacted communities?*

| Risk | Likelihood | Level of Impact | Mitigation strategy |
|---|---|---|---|
| **Stranded assets:** Technology is rapidly changing, which may lead to EV investments becoming obsolete. | Medium | Medium | Program design: build operations and maintenance of City Light owned relevant EV assets into the consultant contract |
| **Stranded assets:** If SCL builds fleet charging for communities that don't have resources to purchase EVs, the assets will be underutilized. | Low | Medium | Program design: Pair infrastructure with electric vehicles for specific projects with high community benefit impacts (donation program or funding, e.g., DERA, DOE, etc.) |
| **Bad community reception:** If the majority of fleet investments benefit large, corporate customers (e.g., Amazon), community will not see their needs/wants reflected. | Low | High | Program design: target incentives to customers that most need our help and will have greatest community impact.<br>Marketing, outreach, and education: Promote the community benefits for fleet electrification projects beyond the individual customer. |
| **Displacement:** If air quality is extremely improved, it may accelerate gentrification in environmental justice communities. | Low | Low | Long-term relationships: Stay engaged with community members to monitor likelihood of this occurring. |

## 5. Are we developing sustainable relationships in this moment?

*Are we developing mechanisms to evaluate the impact of this decision in the everyday lives of community members?*

As part of the commitments made during TESIP Phase 1 community outreach, City Light issued an RFQ to contract with community-based organizations to develop and execute Phase 2 TE outreach. To date, City Light has contracted with two community partners. The contract has the

potential to support all TE programs (including Fleets) by incorporating community feedback into program design and ongoing program improvement.

The Phase 1 outreach has already influenced program design (prioritizing fleet electrification over other electrification investments with lower potential pollution reduction impacts) and it is our hope that Phase 2 outreach can continue to inform ongoing program development.

## 6. Continue to center relationships.

*Receive feedback from community whether said decision has had individual and collective impact.*
Two of the problem statements identified by the preliminary design concepts are:

- How do we make investments that will deliver value to the utility, customer, and **community** in the long-term?
- How can we continue to incorporate **community** feedback?

The preliminary design concept recognizes the need to create a feedback mechanism to continue to center relationships and to allow for continuous program improvement based on those relationships. Examples of how this could be conducted include formal surveying, informal meetings, and ongoing engagement via the community outreach and education contracts with ECOSS and Africatown.

# MUD EV Charging Design Concept Condensed Racial Equity Toolkit

February 28, 2022

## 1. Identify a racial equity outcome as our north star goal.

*What is the issue and what are we really trying to accomplish?*

The Transportation Electrification Strategic Investment Plan (TESIP) outlines six racial equity outcomes to guide future TE programs:

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

The program is "really trying to accomplish" offering a solution that meets the wants and needs of customers living in multi-unit dwellings ("MUDs") in Environmental Justice Communities ("EJCs") as part of a larger (TE) program portfolio. We want customers living in MUDs to feel like when they want to drive an EV, they see a pathway to be able to do so and charge it at similar levels of cost and convenience as a customer living in a single unit dwelling. City Light wants this program to benefit EJCs even if many customers in those communities cannot afford or want to own, lease, or drive an EV today for their personal use. We do not want to add to gentrification pressures in EJCs through this program and instead will use it as opportunity to achieve equity outcomes defined in TESIP.

Regarding these outcomes, the envisioned MUD EV charging program will likely have the largest impacts on community collaboration and equitable access and secondarily on economic opportunities and youth pathways. If a MUD EV charging program scales it could also have large impacts on the other TESIP equity outcomes.

## 2. Gather relevant data for the problem we are attempting to solve

*a) Analyze the raw data. For example: (Native Americans, Black folks, undocumented/mixed status immigrants, prisoners, insecurely housed, Queer and trans folks of color, single low-income people w/o community supports and folks in recovery).*

The table below further describes issues that are foundational to the TESIP outcomes:

| **TESIP Equity outcome** | **The issue** |
|---|---|
| Community collaboration | City programs have not always incorporated the voices of EJCs in program design or evaluation, even for programs meant to serve those communities. |
| Healthy planet, healthy lives | EJCs have suffered disproportionate health impacts from the pollution generated by personally owned internal combustion engine (ICE) vehicles and live in areas that are relatively susceptible to climate change impacts caused in part by these ICE vehicles. |
| Equitable access | Implicit and explicit biases of people in power have not always provided EJCs equitable access to City-sponsored programs and services that could have improved their lives; there is a legacy of racism and discrimination in public transportation investments. |
| Community assets | Past investments in transportation infrastructure have disproportionately displaced Black Indigenous or People of Color (BIPOC) residents or changed the environment of neighborhoods where BIPOC people live to the point where the areas have become EJCs. These communities did not experience the transportation investments in their neighborhood as assets and they were not adequately compensated for the impacts the investments had on them. |
| Economic opportunities and youth pathways | BIPOC customers are not equitably represented in the electrical trades that will benefit from investments made with public dollars. |
| Electricity affordability | Some EJCs face a disproportionately high energy burden. |

The personal mobility opportunity study, the MUD market characterization, and the MUD EV charging program design concept artifact gathered and analyzed primary and secondary resources from an equity perspective to populate the table above. Additional research used for this RSJ toolkit include:

- Greenlink Equity Map (h2ttps://www.equitymap.org)
- Seattle Jobs Initiative, Seattle's Energy Efficient Building Operations and Construction Industries Workforce Development Report (2021)

- Seattle City Light, Contact information and audit data for more than 2,500 MUDs representing more than 90,000 units that participated in the Powerful Neighborhoods energy efficiency program for multifamily properties.

This combined research also brought up important equity-related gaps that will influence the MUD EV charging program design and goals, some of which is contained in the previously mentioned documents supporting this program:

- Environmental justice community (EJC) stakeholders view onsite MUD EV charging as a relatively low priority. The TESIP research showed providing EV charging access to MUD residents as 4th out of 5 priority items for transportation investments. Even within the TESIP feedback it was unclear if stakeholders prioritized at-home or near home charging as an investment, an important distinction to make for program design. Puget Sound Sage's *Powering the Transition* study showed a low priority for personal mobility electrification investments.
- There are inadequate EV incentives and few low-cost used EVs with desired attributes available to make EVs an affordable purchase compared to a similar ICE vehicle. City Light has not pursued providing incentives to reduce the up-front cost of EVs like other Washington municipal and investor-owned utilities.
- City Light has not yet defined how to measure if its programs are achieving TESIP equity outcomes.
- City Light has been advised against establishing a trade ally network. A trade ally network could provide a relatively simple way for City Light to support WMBE contractors outside of lengthy and cumbersome procurement pathways.
- City Light lacks data that would help inform the market potential of an equity-focused MUD EV charging program:
    a. Lack of data on MUD structures. City Light lacks data about MUD structures, such as the availability of unused onsite parking, behind the meter electrical capacity, and in front of the meter electrical capacity. This information will impact the program cost, customer receptiveness, and market potential of a MUD EV charging offering.
    b. Lack of data on onsite EV charging at MUDs. City Light lacks data on where EV chargers at MUDs are installed to model equity-focused success stories. EPRI's Electrification Assessment uses high level assumptions about EV charging installations (e.g., 1% of all MUDs have access to an onsite charger). Plugshare.com only lists publicly available EV chargers. SDCI permit data has not been mined to focus on equity use cases at MUDs.
    c. Lack of equity-focused customer data. City Light lacks socioeconomic, demographic, and use case data on customers living MUDs. Census data underlying the ACS historically has underreported on people that identify as BIPOC. City Light does not gather additional demographic data on customers as a standard practice that could be classified as personally identifiable information (PII) on customers in accordance with privacy guidelines.

i. Lack of equity-focused customer research. City Light has not sponsored equity-focused customer research for its EV programs prior to TESIP, and TESIP research only engaged representatives from community-based organizations and not customers independent from those organizations.
ii. Lack of driver data. We lack specific information on who owns, leases, and drives EVs. We know that less than 1% of ride hail drivers own EVs and ride hail drivers servicing the airport own a Prius or similar hybrid that gets much better gas mileage and pollutes less than a conventional ICE vehicle. How much do residents typically pay for an ICE vehicle and what factors make vehicle ownership out of reach or not a priority?
iii. Lack of driving data. City Light lacks data on the driving patterns of MUD residents to inform how much pollution benefit will accrue to an EJC if an onsite charger is installed at a MUD in an EJC vs. a MUD elsewhere.
iv. Lack of franchise City data. Available data from the City of Seattle is not always inclusive of franchise cities served by City Light that have EJCs.
v. Lack of established and ongoing relationships with CBOs. City Light lacks ongoing relationships with community-based organizations who can help provide access to customers in EJCs.

## 3. How will our most impacted benefit from our stated course of action?

*And, how will our most impacted be burdened by our stated course of action?*

The envisioned MUD EV charging program has the following elements:

- Tiered incentives to encourage property owners to agree to place EV-ready infrastructure and/or EV chargers at MUDs. EV-ready infrastructure can include infrastructure in front of and behind the meter.
- "Experts" such as electricians, sales consultants, and general contractors that can help all market actors involved in deciding about installing an onsite MUD charger how to select the best EV charging solutions, procure the equipment, install the equipment, and maintain the equipment.
- Various forms of outreach to educate customers, contractors and other decisionmakers about the program. This outreach can be combined with other TE-related outreach efforts (e.g., websites or awareness campaigns).

Potential program benefits for our most impacted customers:

| **TESIP Equity outcome** | **Potential equity-focused benefits** |
|---|---|
| Community collaboration | • Opportunities for EJCs to co-design the program or be involved in its evaluation. City Light's planned outreach activities with ECOSS and Africatown, and planned customer research with The Vida Agency, will provide opportunities for program co-design and ensure the program reflects the communities' wants and needs.<br>• Ensure customer research occurs throughout City Light's territory, including in franchise cities. |

| | |
|---|---|
| | • Design programs with intentional flexibility to incorporate feedback from EJC customer research that may not be available until after the program has been slated to launch. |
| Healthy planet, healthy lives | • The program could spur EVs adoption inside or outside EJCs which will reduce the pollution impacts where that vehicle drives regardless of where the vehicle is charged. |
| Equitable access | • Improve the electrical infrastructure at MUDs so buildings are capable of supporting EV charging when there is customer demand;<br>• Provide heightened incentives to encourage the placement of EV charging or EV charging infrastructure at MUDs that meet certain equity criteria;<br>• Seek out car-share entities that could couple access to EVs with program-supported EV charging so that residents that would not otherwise be able to afford an EV can have access to one;<br>• Not require parking stalls that have an EV charger be EV-dedicated to prevent the program from displacing parking for more affordable ICE vehicles yet still providing access to charging if a customer does own an EV.<br>• Create more opportunities for all MUD residents to drive an EV and boost the EV market and make used, relatively affordable EVs more prevalent;<br>• Provide program outreach material that is widely accessible by partnering with community-based organizations;<br>• Improve safety and reliability of power delivered to MUD residents in older structures if the building owner adopts EV-ready infrastructure through the program.<br>• Provide other clean transportation benefits to customers if EV charging / driving an EV does not serve their needs. |
| Community assets | • Provide heightened incentives for placing an EV charger in gentrifying areas that is available to the public only if there is proof that building tenants want one installed there. |
| Economic opportunities and youth pathways | • Provide targeted outreach and/or recruitment activities to contractors in EJCs that could serve as program experts;<br>• Provide procurement stipulations that contractors involved with the program must meet certain workforce development criteria;<br>• Look for community organizations to act as a "prime" on any procurement activity resulting from this program instead of as a subcontractor to a nonlocal, White-owned firm. |
| Electricity affordability | • If the program results in more people use EVs, the costs of electricity in general could decline and reduce everyone's energy burden. |

There could be a rate impacts on customers if the TE portfolio programs meet the .25% rate increase threshold set in TESIP. It could be viewed as a low impact compared to the long-term potential benefit, but for energy-burdened customers it matters. It is unclear how City Light will absorb or factor all the infrastructure improvements envisioned by the program into the rate impact calculation.

## 4. What are potential unintended consequences?

*Are there risks we can foresee? If so, how can we minimize the risk of harm to our most impacted communities?*

| Risk | Risk Mitigation Strategy |
|---|---|
| The program prioritizes personally-owned vehicles at the expense of other mobility options valued by the City and increases congestion. | • Provide customers a full range of clean transportation options available to them to meet their mobility needs.<br>• Couple the program with an EV car share entity. |
| The program incentivizes installations only in in richer, Whiter communities that have a current demand for MUD EV charging assistance, yet we set goals around achieving high uptake in EJCs (overpromise/underdeliver). | • Offer targeted outreach, higher incentives, and program partnerships to ensure the program can be equitably accessible.<br>• Ensure EJC feedback is reflected in the program design and have program goals attuned accordingly. |
| The program could remove parking for affordable ICE vehicles from MUDs and result in an asset not valued by current building residents. | • Do not require building owners to dedicate EV charging parking to EVs.<br>• Provide additional incentives to cover EV chargers with extra-long charging cords to ensure an EV parked in a nearby EV-charging stall taken up by an ICE vehicle can still access the charger.<br>• Provide heightened incentives for chargers that are in shared/common area parking. |
| Installation of EV chargers at MUDs in EJCs results in less pollution benefits in EJCs than if the chargers were installed elsewhere. | • Gather data on driving habits of drivers in MUDs to understand customers who drive the most in EJCs. |
| Onsite EV chargers become a maintenance problem for EJC property owners or not work reliably for tenants and deliver more problems than benefits. | • Offer O&M services with rapid/priority response service level agreements as part of the program design for sites that want it. |
| The installation of EV chargers results in rent increases which could lead to gentrification and displacement. | • Provide property owners with heightened incentives only if they can show current residents want the installation.<br>• Offer infrastructure-only options that do not result in the installation of L2 chargers wanted by todays EV drivers. |
| Program incentivized equipment becomes quickly outdated and does not serve the needs of residents once they own an EV. | • Offer a range of solutions to customers, including EV-ready, L1 plugs, and L2 chargers and plugs so decisionmakers can make the best choice for their property and residents. |

## 5. Are we developing sustainable relationships in this moment?

*Are we developing mechanisms to evaluate the impact of this decision in the everyday lives of community members?*

The MUD EV charging program design is not yet finalized. However, the program plans to incorporate feedback loops from community-based organizations and customers in EJCs to inform the design and understand the impact of the program. To this end, City Light is beginning TESIP Phase 2 outreach with ECOSS and Africatown and customer research with The Vida Agency. City Light also recently hired a Communications team member that is forming a strategy for City Light to engage with the Department of Neighborhoods and community-based organizations. The program manager will continue to connect with different market actors, such as the Housing Development Consortium and the regional Housing Authorities to inform the program design.

## 6. Continue to center relationships.

*Receive feedback from community whether said decision has had individual and collective impact.*

City Light can leverage the relationships listed above to receive feedback from the community on the program and include community feedback loops and program flexibility to respond to the feedback as part of the program design criteria. Since there are so many complex equity components to the MUD EV charging offering, we plan to engage a consultant with experience in equity focused program design, implementation, and evaluation to help us move forward while keeping centered on equity.

# Racial Equity Toolkit

## to Assess Policies, Initiatives, Programs, and Budget Issues

RACE & SOCIAL JUSTICE INITIATIVE

**The vision of the Seattle Race and Social Justice Initiative is to eliminate racial inequity in the community.** To do this requires ending individual racism, institutional racism and structural racism. The Racial Equity Toolkit lays out a process and a set of questions to guide the development, implementation and evaluation of policies, initiatives, programs, and budget issues to address the impacts on racial equity.

## When Do I Use This Toolkit?

**Early.** Apply the toolkit early for alignment with departmental racial equity goals and desired outcomes.

## How Do I Use This Toolkit?

**With Inclusion.** The analysis should be completed by people with different racial perspectives.

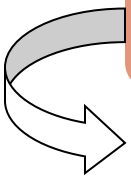
**Step by step.** The Racial Equity Analysis is made up of six steps from beginning to completion:

**Step 1. Set Outcomes.**
Leadership communicates key community outcomes for racial equity to guide analysis.

**Step 2. Involve Stakeholders + Analyze Data.**
Gather information from community and staff on how the issue benefits or burdens the community in terms of racial equity.

**Step 3. Determine Benefit and/or Burden.**
Analyze issue for impacts and alignment with racial equity outcomes.

**Step 4. Advance Opportunity or Minimize Harm.**
Develop strategies to create greater racial equity or minimize unintended consequences.



**Step 5. Evaluate. Raise Racial Awareness. Be Accountable.**
Track impacts on communities of color overtime. Continue to communicate with and involve stakeholders. Document unresolved issues.

**Step 6. Report Back.**
Share information learned from analysis and unresolved issue with Department Leadership and Change Team.

# Racial Equity Toolkit Assessment Worksheet

**Title of policy, initiative, program, budget issue:** Public EV Charging Stations

**Description:** SCL

**Department:** Customer Energy Solutions_____ **Contact:** __Landon Bosisio_____

☐**Policy** ☐**Initiative** ☒**Program** ☐**Budget Issue**

## Step 1. Set Outcomes.

### 1a. What does your department define as the most important racially equitable community outcomes related to the issue?

*(Response should be completed by department leadership in consultation with RSJI Executive Sponsor, Change Team Leads and Change Team. Resources on p.4)*

In 2020, Seattle City Light finalized the Transportation Electrification Strategic Investment Plan (TESIP) to guide City Light in centering equity as a critical component of the utility's transportation electrification programs. TESIP outlines City Light's commitment to addressing environmental inequities and engaging communities to minimize harm and maximize the benefits of transportation electrification.

The equity outcomes outlined in TESIP's are intended to guide all of City Light's strategic investments in transportation electrification (TE)**:**

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.

City Light's Clean Energy Equity Plan further details the utility's Just Transition Principles, which are intended to support the objective that all utility customers equitably benefit from the transition to clean energy.

1. City Light is committed to racial diversity, social justice, and the equitable provision of services to all.
2. City Light recognizes past and current energy injustices and understands that taking a restorative approach should guide us to advance energy justice by conferring benefits first to communities most burdened by these injustices.
3. City Light's approach is rooted in community-centered collaboration and engagement to design equitable, inclusive solutions.
4. City Light is dedicated to reducing pollutants that impact public health where communities live, work, learn, play, and worship.
5. City Light will make decisions that are transparent to all communities and customers.

The Public Charging Business Case, largely informed by TESIP and City Light's Clean Energy Equity Plan defines its program goals and outcomes as:

1. Provide broad access to EV charging through deployments of up to 2,000 public EV charging ports by 2030; public EV charging keeps pace with demand.
2. Increase equitable and affordable access to public EV charging in all communities, including those not prioritized by public investment to combat discrimination and foster sustainable economic growth.
3. Improve EV drivers' and EVSP's customer experience and improve the reliability of chargers in all City Light territories.
4. Inform, engage, and build partnerships with City and key community stakeholders within City Light's territory, on the Program's goals and activities to combat discrimination and foster sustainable economic growth.

## 1b. Which racial equity opportunity area(s) will the issue primarily impact?

| ☑/☒ | Opportunity Area | ☑/☒ | Opportunity Area |
|---|---|---|---|

| | | | |
|---|---|---|---|
| | Education | | Criminal Justice |
| ☑ | Community Development | ☑ | Jobs |
| ☑ | Health | | Housing |
| ☑ | Environment | ☑ | Service Equity |

## 1c. Are there impacts on:

| ☑/☒ | Areas of Impact | ☑/☒ | Areas of Impact |
|---|---|---|---|
| ☑ | Contracting equity | ☑ | Immigrant and Refugee Access to Services |
| ☑ | Workforce equity | ☑ | Inclusive Outreach and Public Engagement |

Please describe:

The public charging program – in line with the program's second overarching goal – will work to ensure affordable and accessible public charging in historically marginalized and overburdened communities. These communities are largely located in, or live near, transportation corridors and experience higher rates of poor air quality and health outcomes. This would include transportation network company (TNC) drivers who work in these transportation corridors and are disproportionately immigrants. Public charging can increase the viability of owning a zero-emission vehicle and lead to reduced emissions over time.

Working with community, City Light plans to support a community co-creation program for public charging, and maintain and likely expand City Light's charging station network with the goal of ensuring affordable access to public charging, equitable and thoughtful siting of chargers, and expansion of workforce opportunities and contracting behind the installation and ongoing maintenance of chargers through the EVICP program.

City Light intends to incentivize more public charging built by the private sector and provide an additional incentive for public chargers installed within overburdened communities. This portion of the program will also involve outreach to potential 'site hosts' for public charging, such as local businesses, to support them through the process of installing a charger.

Public chargers support zero emission vehicles, indirectly reducing climate and air pollution. This is especially impactful in communities who disproportionately bear the burden of poor air quality.

City Light will also leverage the Washington state clean fuel program to collect credits and reinvest earnings into overburdened communities (as designated by the state). Lastly, the program team will require data reporting of incentivized stations to ensure reliability and to encourage data-informed decision making for future infrastructure development.

# Step 2. Involve stakeholders. Analyze data.

## 2a. Are there impacts on geographic areas? ☒ Yes ☐ No

Check all neighborhoods that apply *(see map on p.5)*:

1. ☒ Seattle neighborhoods
2. ☒ Ballard

3. ☒ North
4. ☒NE
5. ☒ Central
6. ☒ Lake Union
7. ☒ Southwest
8. ☒ Southeast
9. ☒ Delridge
10. ☒ Greater Duwamish
11. ☒ East District
12. ☒ King County (outside Seattle)
13. ☐ Outside King County

Please describe:

- Shoreline
- Seattle
- Skyway
- Burien
- Renton
- Tukwila
- SeaTac

## 2b. What are the racial demographics of those living in the area or impacted by the issue?

*(See Stakeholder and Data Resources p. 5 and 6)*

## Overall City Light Customer Demographics

City Light serves a diverse demographic profile, encompassing various age groups, income levels, and residential areas. In a recent City Light presentation using CSAT longitudinal study data, it was estimated that City Light services more than 914,637 people, 50.48% of all customers identify as male while 49.52% identify as female with an overall median household income of $68,613.

The same study also revealed 80% of households speak English, 4% speak Spanish, 4% speak Chinese, 3% Vietnamese, 0.5% speak Korean, 0.5% speak Tagalog, 1% speak Amharic. More than 25% of customers held a bachelor's degree or higher with more than 53% of individuals attending some college or higher learning institution in 2023. 49% of customers live in single family residences, 35% in apartments, 10% in condos, 3% in townhouses, 1% in duplexes, and 3% in other types of residences with 55% of these residents owning the property and 44% renting.[1][2]

[1] City Light customer experience team. (2022, August). "2023 City Light Customer Demographics".

[2] 2023 CSAT Longitudinal Study. DHM Research. The survey assesses customer satisfaction, measures program awareness, and gauges perceptions of various energy sources.

In Figure 1 we detail the franchise cities that City Light serves, and in Table 1 and Table 2 we look more closely at 2022 estimates for select franchise cities' demographics and households to understand the racial diversity that our region represents. City Light does not serve the entirety of all cities and numbers represented in this toolkit should be seen as estimates and not exact to City Light territory.

*Figure 1 Seattle City Light Customer Service Area Map*[3]

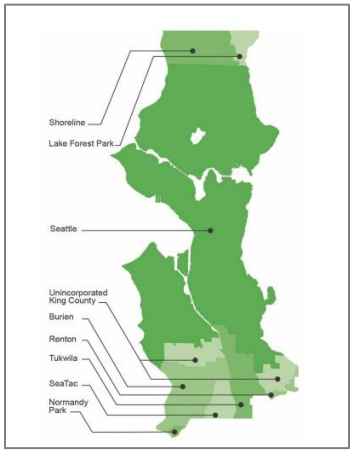



*Table 1. Demographics of select City Light franchise cities, King County and Washington State*[4]

| Location | Total population | White alone | Black or African American alone | American Indian and Alaska Native alone | Asian alone | Native Hawaiian and Other Pacific Islander alone | Some Other Race alone | Two or More Races | Hispanic or Latino (of any race) |
|---|---|---|---|---|---|---|---|---|---|
| **Seattle** | 749,267 | 59.40% | 5.80% | 0.30% | 18.10% | 0.20% | 0.80% | 7.00% | 8.40% |
| **Burien** | 51,505 | 49.00% | 7.90% | 0.20% | 14.00% | 0.30% | 0.30% | 6.30% | 21.90% |
| **Shoreline** | 58,213 | 63.40% | 6.40% | 0.40% | 15.60% | 0.50% | 0.50% | 6.00% | 7.20% |
| **Renton** | 104,060 | 37.00% | 11.70% | 0.50% | 31.50% | 0.50% | 1.40% | 7.90% | 9.50% |
| **Bryn Mawr-Skyway CDP** | 18,032 | 29.60% | 29.80% | 0.30% | 25.70% | 0.10% | 1.00% | 7.10% | 6.30% |
| **King County** | 2,266,789 | 53.40% | 6.50% | 0.40% | 20.70% | 0.80% | 0.70% | 7.00% | 10.50% |
| **Washington State** | 7,785,786 | 63.50% | 3.80% | 0.90% | 9.70% | 0.70% | 0.70% | 6.70% | 14.00% |

*State of Washington, City of Seattle, Renton and King County data was gathered from U.S. Census Bureau. "ACS Demographic and Housing Estimates", American Community Survey, ACS 1-Year Estimates Data Profiles for 2022 estimates. City of Burien, Shoreline, and Byn Mawr-Skyway CDP data was gathered from U.S. Census Bureau, "ACS Demographic and Housing Estimates", American Community Survey, ACS 5-Year Estimates Data Profiles, showing 2022 estimates. Demographic data shown is from Hispanic or Latino and Race estimates.*

When looking broadly at City Light territory cities, more than 46% of individuals identify as a minority compared to 35% in Washington state. Renton and Skyway are two of the most diverse cities in City Light territory, with less than 40%

[3] Seatle City Light Transportation Electrification Strategic Investment Plan. TESIP.pdf (seattle.gov)

[4] 2022 American Community Survey. American Community Survey (ACS) (census.gov)

identifying as white alone. In the earlier 2017 RSJI toolkit, respondents to a survey associated EV ownership with being white. This would mean a large proportion of EV owners reside in Seattle, or more broadly King County. Data on EV title registration shows that EV ownership in Washington is highest in King County but the data is not broken out by race.

*Table 2. Household ownership and rentals by select City Light franchise cities, King County and Washington state*[5]

| Location | Total households | Owner-occupied housing units | Renter-occupied housing units |
|---|---|---|---|
| **Seattle** | 367,119 | 43.80% | 56.20% |
| **Burien** | 19,903 | 56.70% | 43.30% |
| **Shoreline** | 22,706 | 66.50% | 33.50% |
| **Renton** | 42,485 | 57.60% | 42.40% |
| **King County** | 945,040 | 55.60% | 44.40% |
| **Washington State** | 3,079,953 | 64.20% | 35.80% |

*City of Seattle, Burien, Shoreline, Renton, and King County data was gathered from the U.S. Census Bureau. "Households and Families", American Community Survey, ACS 5-Year Estimates Subject Tables.*

When looking across Washington state, approximately two-thirds (64 percent) of residents are owner-occupied housing units, but Seattle-alone shows less than half of its residents own their home. Seattle and Burien appear to have the highest rate of renter occupied housing. Unfortunately we were unable to pull household data for Bryn-Mawr Skyway to determine their rate of owner-occupied versus renter-occupied. Studies conclude that EV drivers rely on at-home charging[6] as their primary re-fueling resource, a necessity often made possible because they own their own homes, instead of renting.

## 2c. How have you involved community members and stakeholders?

*(See p.5 for questions to ask community/staff at this point in the process to ensure their concerns and expertise are part of analysis.)*

The program team approached collecting feedback from four broad segments: EV drivers that have used City Light-owned chargers and provided feedback on PlugShare or Google, informal stakeholder interviews with franchise cities or electric vehicle service providers (EVSPs), and previous community feedback gathered for TESIP, and by Vida Agency[7], TRC[8] and Kambo Energy[9].

A fourth segment is our current planning, which will involve working with program partners like ECOSS, Department of Neighborhoods, and Kambo Energy to build out continual and routine community feedback at community events or through individualized workshops. Included in this fourth segment is City Light's interactive tool which customers can suggest EV charging stations, and our team can use to gauge community interest in potential charging sites[10]. It's

[5] See 4

[6] Nicholas, Michael, et al. (2019, January). "Quantifying the electric vehicle charging infrastructure gap across U.S. Markets". https://theicct.org/sites/default/files/publications/US_charging_Gap_20190124.pdf

[7] Vida. Seattle City Light External - Vida Agency_Findings Presentation_Final_PME_10_3122.pdf (sharepoint.com)

[8] TRC. Seattle City Light External - SCL Public Charging Evaluation_Presentation_03.22.23_Final_clean.pdf (sharepoint.com)

[9] Kambo Energy. 2023 June. Seattle City Light External - Community Engagement with Seattle EJ Communities - Kambo.pdf - All Documents (sharepoint.com)

[10] Suggest a Potential Public Electric Vehicle Charging Station in the Seattle City Light Service Area (arcgis.com)

important to note City Light has gathered limited community input at the current phase of the program so as not exhaust community resources.

A critical component of our public charging program will include a community co-creation workstream. It's our intention to work with Kambo and potentially others to identify communities interested in charging station co-creation with City Light. We then intend to design and host community workshops around EVs, chargers, and integrate with portfolio wide electrification programs such as residential and fleet charging to encourage continual feedback from the communities we serve.

Our team understands there are data gaps around EV ownership by racial groups, and charging deserts in pockets of both well-served and underserved neighborhoods. Managing this data gap of demographic data and EV ownership such as lack of information on EV ownership racial demographics, and the knowledge gaps within communities on EVs and charging will be important to do through community engagement workshops. Rather than a traditional 'public relations' campaign, an iterative approach to community engagement will be necessary for the public charging program. This iterative process will allow our team and community to remain in sync as we all manage the rapid evolution of the EV market, changing transportation and energy needs of City Light's communities and the need for continuous community input and education as technological changes emerge.

## 2d. What does data and your conversations with stakeholders tell you about existing racial inequities that influence people's lives and should be taken into consideration?

*(See Data Resources on p.6. King County Opportunity Maps are good resource for information based on geography, race, and income.)*

**Summary:**

- Reliability of charging stations is a key community concern.
- Current charging infrastructure is a barrier to EV ownership, but if more charging stations were available, it could influence customers to drive EVs more frequently and purchase EVs in the future.
- Charging stations can potentially signal neighborhood gentrification, displacement, traffic, and new parking limitations.
- Continuous community feedback and forming lasting key stakeholder relationships will be integral to the success of public charging, particularly for City Light-owned chargers.
- Communities do not distinguish charging programs, so public charging, multifamily, and fleets programs should take a holistic outreach approach.
- Engagement with community leaders on any proposed location of charging stations (or siting) is critical.
- Neighborhoods that are racially diverse and non-white, and historically marginalized by redlining show a lack of charging infrastructure.
- A lack of public charging infrastructure may also indicate the presence of high-income earners and the prevalence of at-home charging.

### Input from stakeholders

The previous RSJI toolkit from 2017 cited a City Light customer survey, in which respondents associated EV ownership or EV drivers with being white, and male[11], with the 2018 Electric Vehicle Charging in the Right-of-Way (EVCROW) toolkit similarly cited California's 2017 EV Consumer Survey, where 64% of the respondents identified as White/Caucasian[12]. Unfortunately, EV ownership data by race in Washington state is not available. Although we do not have this data, we can speak to some of the leading concerns for EV adoption and using public charging, which are reliability of public chargers, the cost of EVs, and range anxiety.

Based off existing customer (who are EV drivers) input on PlugShare[13] and previous community engagement efforts, reliability is a critical concern amongst customers. Users frequently report instances of broken equipment, such as malfunctioning chargers or broken ports, issues with payment, and non-EVs occupying parking spots meant for EVs to use while charging. The feedback of broken hardware, on top of failed or inadequate charging sessions all point towards "reliability" meaning hardware, software, payment systems, and station design all needing to be in sync for a positive charging experience. Similar stories in media, like "What's behind the epidemic of unreliable EV chargers"[14] further the narrative of stations being unreliable.

Consistent with PlugShare comments, and echoing media headlines, was **community input to City Light and from Vida Agency, TRC, and Kambo Energy about the reliability of stations and network failures**. The unreliability of stations is also seen as a contributing factor to range anxiety for drivers. Other important input included:

1. Public chargers fill an important gap for EV drivers and future EV drivers. There's a need for increased availability and convenient locations of chargers, but parking in Seattle is limited and station placement could take up a parking spot or interrupt bike lanes.
2. Charging stations can signal multiple impacts, including potential neighborhood gentrification and displacement,[15] traffic, and new parking limitations.
3. For charging stations incentivized by 3rd parties, engagement with community leaders on any proposed location (or siting) of the station is critical.
4. The cost of an EV is prohibitive for many, particularly those that live in overburdened communities where high-mileage drivers live, or for multi-unit dwelling residents.
5. Generally, communities understand the value of EVs and their impact on climate change, but there are concerns about how and whether EV manufacturing may contradict Seattle's climate change goals.

[11] 2017 SCL Public Charging Stations RSJI Toolkit

[12] Center for Sustainable Energy. (2017, June). Summary Documentation of the Electric Vehicle Consumer Survey, 2013–2015 Edition. https://cleanvehiclerebate.org/sites/default/files/attachments/CVRPConsumerSurvey2013-15Reference.pdf

[13] PlugShare. https://plugshare.com/. PlugShare is a community-based tool that guides users to available charging locations around the world

[14] John, Jeff. 2023, December 12. "What's behind the epidemic of unreliable EV chargers?" https://www.canarymedia.com/articles/ev-charging/whats-behind-the-epidemic-of-unreliable-ev-chargers.

[15] Underlined by DOE case study: U.S. Department of Energy. (2021). "Electrifying Seattle with Equity." https://afdc.energy.gov/case/3102

6. Community members want information and education on EVs and chargers. A one-stop website with information for the EV-curious, EV-purchaser, and the EV-owner would be appreciated by all studied segments.
7. Current charging infrastructure is a barrier to EV ownership, but if more charging stations were available, it could influence customers to drive EVs more frequently and purchase EVs in the future.
8. Communities do not distinguish charging programs, so public charging, multifamily, and fleets should take a holistic outreach approach. Outreach should also include transit updates as community members fold chargers into larger transit and mobility needs.

As an overarching takeaway from the community feedback is: (1) concerns over charger reliability, (2) EV and non-EV drivers alike want more charging stations but EV drivers were more worried than non-EV drivers that chargers could signal gentrification in neighborhoods[16], (3) community consistently asks for more education and outreach regarding public charging, and (4) City Light should look to the Department of Neighborhoods (DON) for more meaningful outreach. The program intends to work with DON to produce materials that are accessible, culturally relevant, and translated into multiple languages. **Key components of program implementation will include various opportunities for communities to provide continuous feedback, goals to establish long-lasting community relationships, and accountability metrics to ensure program is meeting goals**.

During conversations with charging providers, they recognized concerns that their business model does not always pursue installations in disadvantaged communities, and that it's a concern for program managers. But as they relayed to us, they would install where there are incentives, and particularly so if there were adders (higher rebates for installs in disadvantaged communities). One consideration that charging providers raised for stations installed in disadvantaged communities, is how utility incentives—while not intended to indicate utility ownership-- may be perceived as such. Specifically, stations could be perceived as a public investment and City Light might be held responsible for stations that are broken or inoperable. Stations owned and operated by City Light undergo more rigorous site selection and community engagement than 3rd party owned stations. Community does not distinguish between the two and might be critical of sites and level of engagement with 3rd parties such as charging providers. **The long-term ownership and operation plan of charging infrastructure is thus a known concern that community members have raised, and one that charging providers recognized as a familiar concern**.

In 2020, the Seattle Department of Transportation in partnership with other City and external partners developed a EVSE Roadmap for Shared Mobility Hubs[17] which provided metrics for equity and program strategies for EVSE deployment within the region. These resources are helpful in informing program design, and it is important to leverage these resources as to not exhaust community feedback and outreach.

### Data insights

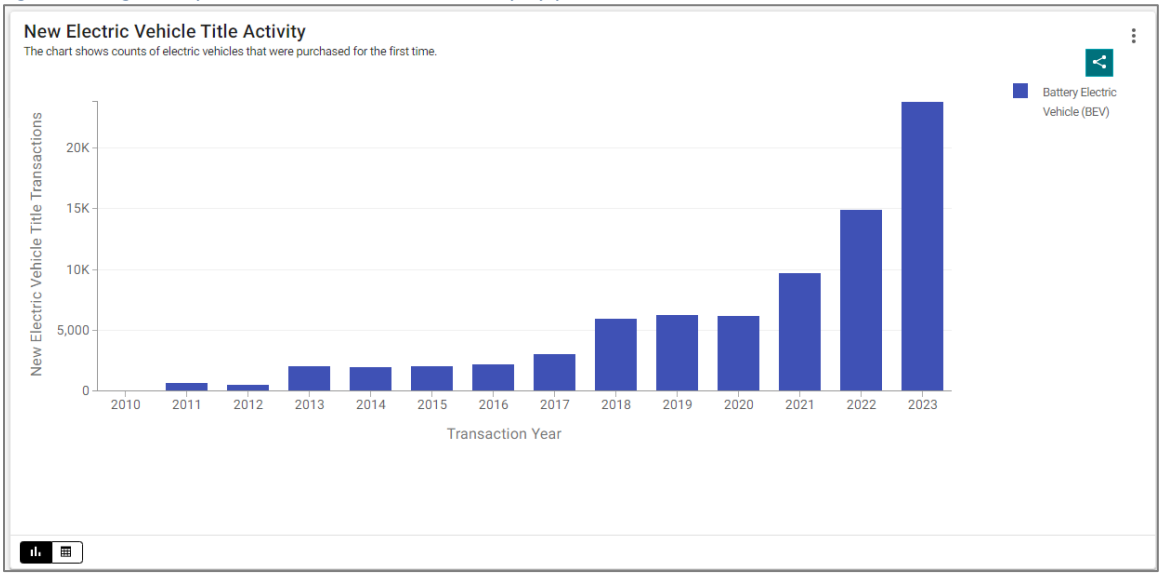
Data on EV ownership by race in Washington and around the existing racial inequities of public charging is sparse. While Figure 2 shows the level of EV ownership in King County has risen exponentially since our 2017 RSJI toolkit, we cannot see the new EV title registrations by race or address.

[16] Seattle City Light - Vida Agency_Findings Presentation_Final_PME_10_3122.pdf - All Documents (sharepoint.com)

[17] Seattle Department of Transportation. (2020). "EVSE Roadmap for Shared Mobility Hubs". SDOT_EVSE_Roadmap_for_Shared_Mobility_Hubs.pdf (seattle.gov)

Looking at demographic data, **South King County is among the most racially diverse areas within City Light's service territory**.

*Figure 2. King County new electric vehicle title activity by year*




https://data.wa.gov/d/2h2e-g4je *This bar chart recaps the titling of new Electric Vehicles, filtered Battery Electric Vehicles (BEVs). It shows counts of transactions recording initial ownership of them.*

*Table 3. Number of new electric vehicle titles by select City Light franchise cities, King County, and Washington state in 2022 & 2023*

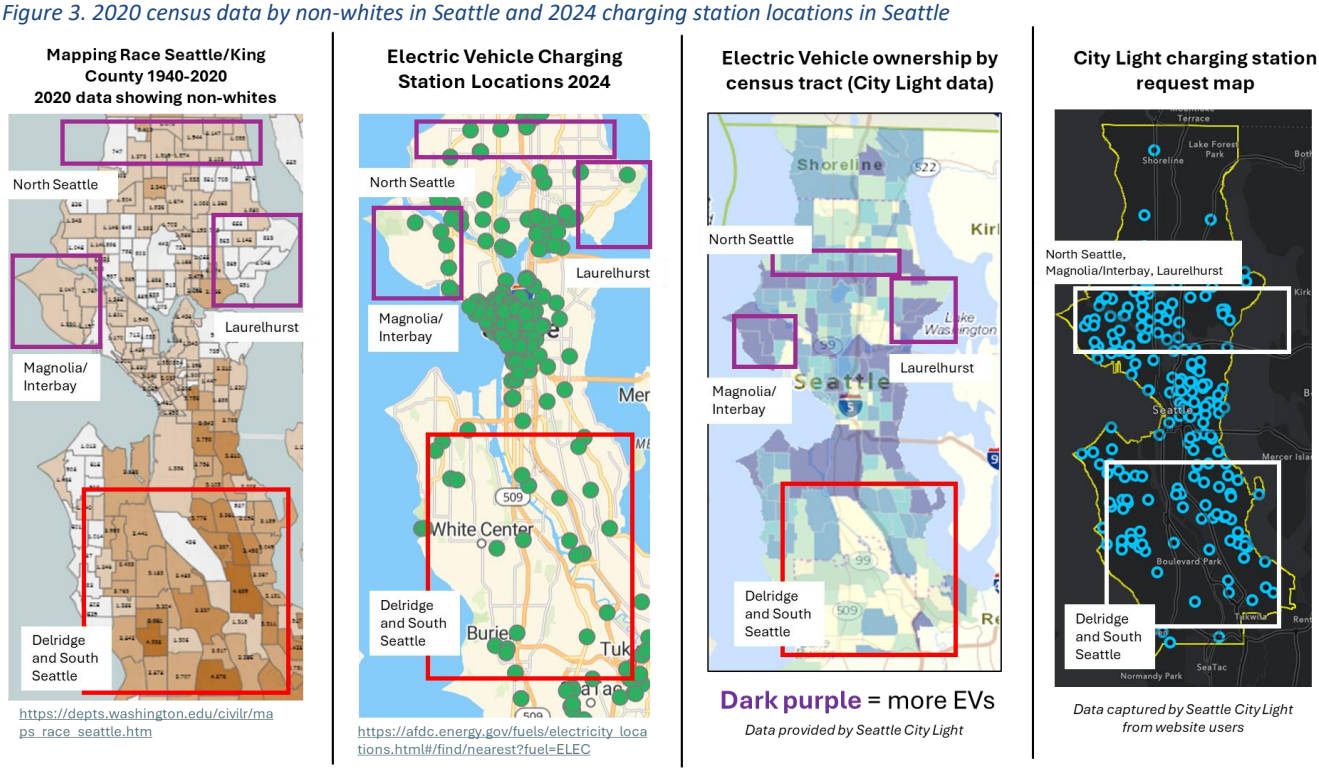
| Location | Count of BEVs in 2022 | Count of BEVs in 2023 | Vehicle Type |
|---|---|---|---|
| **Seattle** | 4,386 | 6,220 | Battery Electric Vehicle |
| **Shoreline** | 251 | 407 | Battery Electric Vehicle |
| **Burien** | 116 | 195 | Battery Electric Vehicle |
| **Renton** | 711 | 1,268 | Battery Electric Vehicle |
| **King County** | 14,884 | 21,979 | Battery Electric Vehicle |
| **Washington State** | 26,195 | 40,139 | Battery Electric Vehicle |

https://data.wa.gov/d/2h2e-g4je *This table summarizes the number of new Electric Vehicles, filtered Battery Electric Vehicles (BEVs), with a 2022 transaction date year. It shows counts of transactions recording initial ownership of them.*

In Figure 3, we show a side-by-side comparison of demographics in City Light's service territory against charging station deployment from the Alternative Fuel Data Center (AFDC), EV ownership by census, and a charging station request map. This snapshot shows the complicated relationship between public charging and existing racial inequities in Seattle, and

likely the broader City Light service territory. Areas like North Seattle, Magnolia/Interbay and Laurelhurst are shown to be more white, in the purple boxes, and lack public charging stations as shown on the AFDC map, but have a high concentration of EV-owners. This lines up with our 2017 RSJI toolkit where survey respondents associated EV ownership with being white, and ICCT's 2019 report[18] that many EV owners rely on at-home charging. Areas in south Seattle are shown to be more non-white, lack public charging stations, and lack EV-ownership. EV ownership and station availability aside, it's important to point out that the City Light charging station request map shows requests for stations in north and south Seattle.

*Figure 3. 2020 census data by non-whites in Seattle and 2024 charging station locations in Seattle*




The presence of transportation network company (TNC) and taxi drivers is another key consideration for evaluating existing racial inequalities and access to adequate infrastructure. TNCs are now an integral part of transportation services[19] and in Seattle, TNCs and taxis support traffic moving to and from SeaTac Airport and around the Puget Sound region. With their increased mileage, TNC drivers produce three times the emissions as a personal light-duty vehicle[20]

[18] https://theicct.org/sites/default/files/publications/US_charging_Gap_20190124.pdf

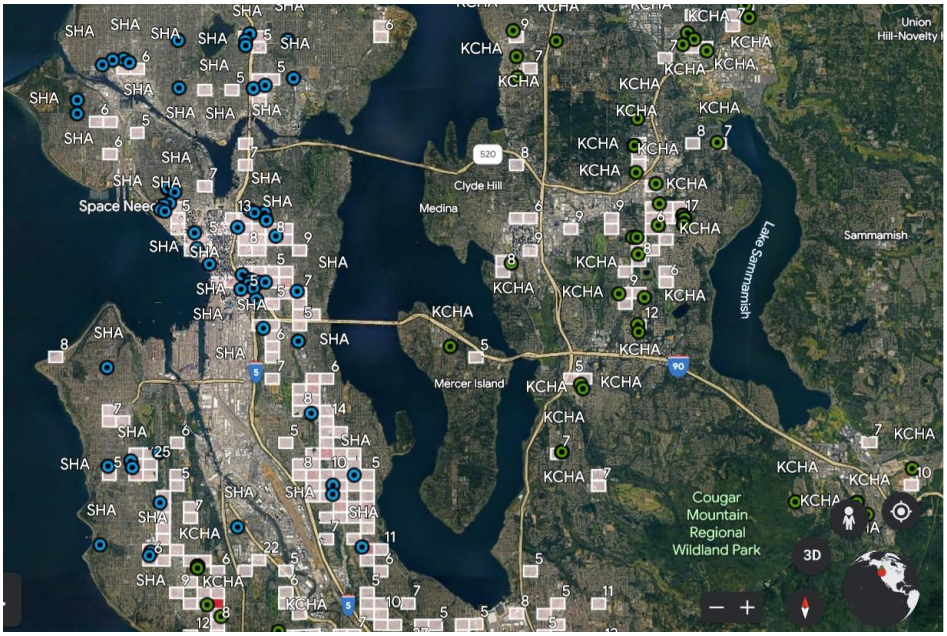
[19] Baker, Dwayne. "Transportation Network Companies (TNCs) and public transit: Examining relationships between TNCs, transit ridership, and neighborhood qualities in San Francisco". https://www.sciencedirect.com/science/article/abs/pii/S2213624X20300924.

[20] Mohanty, Sudeshna. (2023, June). "Understanding the Clean Miles Standard Regulation for Ridehailing Companies". https://rmi.org/understanding-the-clean-miles-standard-regulation-for-ride-hailing-companies.

and are a key sector to electrify. Companies like Uber and Lyft announced zero-emissions commitments in 2020.[21, 22] Despite corporate commitments to encourage electric vehicle adoption, 96% of TNC-affiliated vehicles that operate in the City are not electric.[23] We anticipate more TNC and taxi drivers driving EVs, however, and increasing demand for charging options in proximity to popular pick-up or drop-off destinations, in addition to locations near where drivers live. Many drivers reside in south King County or south Seattle, as shown in Figure 4, often within or close to King County or Seattle Housing Authority properties.

A study commissioned by the City showed that 72% of drivers identified as foreign born and 73% identified as Black, Hispanic, Asian or other. Drivers were nearly three times more likely to be immigrants than workers across King County and most of them speak a language other than English at home.[24] Uber and Lyft are accused of discriminating against drivers with who are not white and speak with accents,[25] so it is important that City Light recognizes the cultural identities of TNC drivers and seek to engage with drivers' communities in a way that is not burdensome.

*Figure 4. Location of TNC driver registrations in King County with regional housing authorities shown*




[21] Uber, "Millions of trips a day, zero emissions and a shift to sustainable packaging". https://www.uber.com/us/en/about/sustainability/.

[22] Lyft, "Leading the Transition to Zero Emissions: Our Commitment to 100% Electric Vehicles by 2030". https://www.lyft.com/blog/posts/leading-the-transition-to-zero-emissions.

[23] Seattle Department of Fleets and Administrative Services. (April 2023). "Vehicle Safety Inspections by Engine Type for IDT."

[24] Parrott, James A., and Michael Reich. (2020, July). "A Minimum Compensation Standard for Seattle TNC Drivers." https://www.seattle.gov/documents/Departments/LaborStandards/Parrott-Reich-Seattle-Report_July-2020%280%29.pdf

[25] Allyn, Bobby. "Uber Fires Drivers Based on "Racially Biased" Star Rating System, Lawsuit Claims". https://www.npr.org/2020/10/26/927851281/uber-fires-drivers-based-on-racially-biased-star-rating-system-lawsuit-claims\

Knowing that EV sales and public charging station availability[26] are intrinsically linked, having charging stations readily available for the future of EVs and TNC drivers is critical. Corporate commitments are not enough, having public charging stations readily available would be a deciding factor in electrifying TNC drivers.

Beyond corporate commitments and encouragement to adopt EVs, we also know that electrifying our vehicles is critical to reducing greenhouse gas emissions[27] and a healthier future. A 2023 study of California's registered EVs showed reduced pollution and improved respiratory health in zip codes where EVs were registered.[28]

In City Light territory, historically redlined neighborhoods face higher rates of pollution. A 2023 study[29] overlayed the 2010 census data with the Home Owners' Loan Corporation (HOLC) redlining regions to monitor air pollution by demographics and HOLC's historic grading system. The concentration of ultrafine particulate matter (UFPs) jumped 29% in areas ranked Undesirable (a grade of D) from those deemed Desirable (a grade of A). The study asserted what has been said repeatedly about environmental racism. Decades of infrastructure buildout, like highways[30], and continuous exclusions[31] have exacerbated environmental hazards like increased pollution in our service territory, and we cannot forget that the Environmental Protection Agency declared superfund site[32] in the lower Duwamish. Being able to provide public charging, and encourage EV adoption, particularly in marginalized communities serves as a strategy in reducing greenhouse gas emissions and improving the air quality and health outcomes of our customers.

Ultimately, existing data and previous community engagement and input reminds us that racially diverse and marginalized neighborhoods are often underserved because of a complex history of government regulation and institutional practices, resulting in quantifiable and negative outcomes.

## 2e. What are the root causes or factors creating these racial inequities?

*Examples: Bias in process; Lack of access or barriers; Lack of racially inclusive engagement*

The root causes and/or factors creating these racial inequities are redlining, high capitol cost associated with EVs, a lack of access to charging stations, and perceived safety or security at public charging stations.

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[26] Nilsen, Ella. (2021, June). "The fastest way to get more people to buy electric vehicles". https://www.vox.com/22463219/electric-vehicles-charging-station-infrastructure.

[27] Abrams, Zara. (2023, February). "Study links adoption of electric vehicles with less air pollution and improved health". https://keck.usc.edu/news/study-links-adoption-of-electric-vehicles-with-less-air-pollution-and-improved-health/.

[28] See 26.

[29] Bramble, Kaya, et al. (July 2023). "Exposure Disparities by Income, Race and Ethnicity, and Historic Redlining Grade in the Greater Seattle Area for Ultrafine Particles and Other Air Pollutants" https://ehp.niehs.nih.gov/doi/full/10.1289/EHP11662.

[30] Berger, Knute. (2021, April). "The legacy of racism built into Northwest highways and roads". https://crosscut.com/opinion/2021/04/legacy-racism-built-northwest-highways-and-roads.

[31] Segregated Seattle. (Date unknown). https://depts.washington.edu/civilr/segregated.htm#:~:text=From%20the%201910s%20through%20the,covering%20more%20than%2034%2C000%20properties.

[32] Duwamish River Superfund Site. https://kingcounty.gov/en/legacy/depts/health/environmental-health/healthy-communities/duwamish-fishing/superfund.

Throughout the 21st century there were a suite of government and non-governmental policies intended to segregate, disenfranchise, and decrease access to resources and opportunities for people of color. Policies like redlining, racial covenants, 1944 GI Bill, exclusionary zoning practices, the Urban Renewal Program, and discriminatory private lending practices. These policies reinforced and normalized racism, which created communities that lacked resources and opportunities, were publicly defunded and unplanned for, and were polluted by surrounding unwanted land-uses.

For example, in the Central Area during the 1960s, the City of Seattle forcibly removed Black and Filipino residents from their land under the Urban Renewal Act. Land previously owned by New Hope Missionary Baptist Church was seized through this program and is now valued at over $2 million[33]. Additionally, large transportation investments such as Interstate 5 cutting directly though historically diverse neighborhoods such as Central District and Chinatown International greatly impacted the cultural identities within these areas. Residents in the Chinatown International District have voiced they feel like a "dumping ground for Seattle's development".[34]

In

Figure 5 we show a Seattle Times created map of redlined neighborhoods against a current AFDC map of where chargers are installed to show the lack of infrastructure investments in historically redlined neighborhoods. Similar to Figure 3, understanding station deployment by racial inequities is complicated. Neighborhoods like Delridge, Georgetown and Beacon Hill, which were deemed "Hazardous" by the Home Owners' Loan Corp, are among the most sparse for charging stations. Rainer Beach, an area shown as "Definitely declining" also shows fewer chargers. Neighborhoods around Central District and Capitol Hill, which were historically redlined, appear to be faring better with public charging stations. Interestingly, "Best" neighborhoods, like Magnolia (along the water), Laurelhurst, and "Still Desirable" in west Seattle and north Seattle, are also lacking in public chargers. It is important to reiterate that over 80% of residents charge at home and the aforementioned neighborhoods have a large amount of single-family homes within the district[35]. A 2019 article in BlastPoint also observed charging deserts and the link of station placement to historic redlining practices in Pittsburgh, they also touched on the complex market assumptions that EVPS may be using to place chargers in more populous and dense areas[36]. **It's important to reiterate that a lack of charging infrastructure (or a 'charging desert') can mean a neighborhood is a historically marginalized one or a historically wealthy one.**

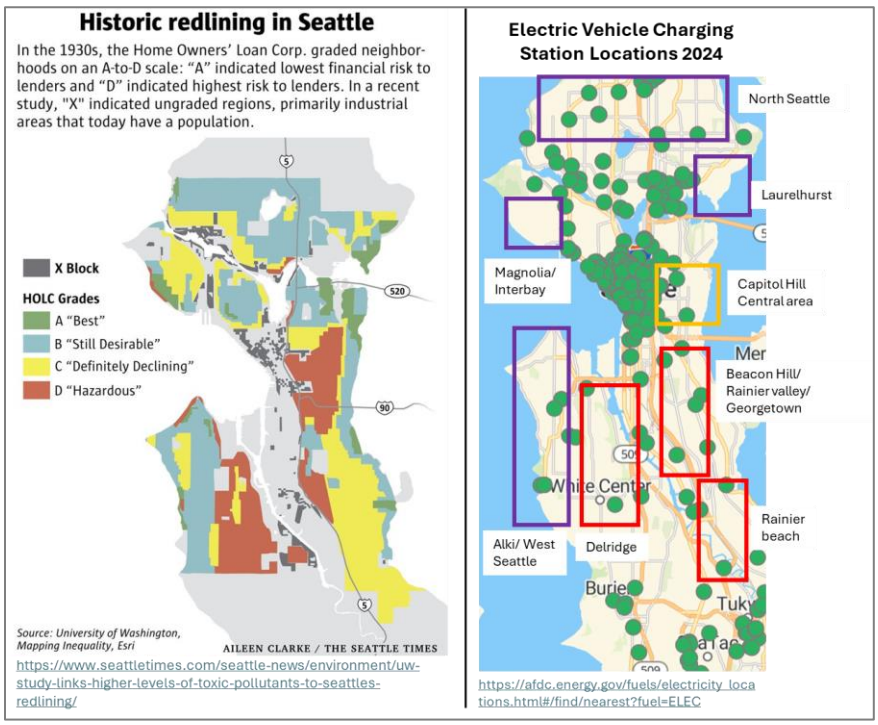
*Figure 5. Historic Redlining and 2024 Charging Station locations*

[33] Jeffrey Robert. 2021. "Right Past Wrong of Racist 'Urban Renewal' and pay reparations to Seattle's Black community". Right past wrongs of racist 'urban renewal' and pay reparations to Seattle's Black community | The Seattle Times.

[34] Berger Knute. 2021. "The legacy of racism built into Northwest highways and roads". https://crosscut.com/opinion/2021/04/legacy-racism-built-northwest-highways-and-roads.

[35] Seattle City Light - Vida Agency_Findings Presentation_Final_PME_10_3122.pdf - All Documents (sharepoint.com).

[36] Ellsworth, Janeen. 2019, July 16. "EV Charging Deserts: Where They Are & Why They Might Exist". https://blastpoint.com/blog/ev-charging-deserts-where-they-are-why-they-might-exist/.




Beyond access to public chargers, we know marginalized communities face challenges in accessing services, including reliable transportation options, which reinforces systemic disparities in community development.[37] Research continues to showcase the current impacts of income-level and poor air quality in historically redlined neighborhoods.[38,39] Neighborhoods that have been systemically underserved or marginalized are identified as "overburdened communities" in this program and are shown by several mapping tools, such as the Racial and Social Equity Composite Index Current[40] for Seattle neighborhoods and the Washington State Environmental Health Disparities Map.[41]

Financial barriers, like the cost of-, or ability to finance the purchase of- an EV limit the adoption of EVs, and is felt more so in overburdened communities. The higher capital costs associated with EV ownership coupled with limited access to relevant incentives poses a substantial barrier for large scale adoption. Even once an EV is purchased, the cost of installing electric vehicle supply equipment (EVSE) can be prohibitive for many households—either for owners or renters. For those living in multi-unit dwellings (MUD), EVSE chargers may not be available, making public charging the

[37] Lane, Haley, et al. "Historical Redlining Is Associated with Present-Day Air Pollution *Environ. Sci. Technol. Lett.* 2022, 9, 4, 345–350.
[38] Breda, Isabella. 2023, July 6. "UW study shows Seattle's historically redlined communities have worse air quality." https://www.seattletimes.com/seattle-news/environment/uw-study-links-higher-levels-of-toxic-pollutants-to-seattles-redlining/.
[39] Kaya Bramble, et al. 2023. July. "Exposure Disparities by Income, Race and Ethnicity, and Historic Redlining Grade in the Greater Seattle Area for Ultrafine Particles and Other Air Pollutants." Environmental Health Perspectives. doi:10.1289/EHP11662. https://ehp.niehs.nih.gov/doi/abs/10.1289/EHP11662.
[40] Racial and Social Equity Composite Index Current. https://www.arcgis.com/apps/mapviewer/index.html?panel=gallery&layers=3a6bcc7fa4c14c4daabdb1cd8f329758.
[41] Washington Tracking Network. "Washington Environmental Health Disparities Map." https://doh.wa.gov/data-and-statistical-reports/washington-tracking-network-wtn/washington-environmental-health-disparities-map

only option. For MUD residents, this gap in infrastructure can be especially challenging. Unlike single-family homes with private driveways, MUDs may lack dedicated parking spaces or the ability to install personal charging stations. As a result, the intersection of economic inequality and the financial constraints associated with EV adoption contributes to disparities in EV ownership within City Light territory.

The prevalence of theft and vandalism at public charging stations poses a deterrent to the widespread deployment and accessibility of public charging and may signal an unsafe site. In the pilot phase of City Light's Public Charging program, the South Park charging stations, which are in an overburdened community, were never able to become operational due to continual cable cutting and cord theft. Customers in the area are now left with a gap in public charging services available in their area. Unfortunately, the prevalence of vandalism contributes to EVSP reluctance to install chargers in areas where the risk of theft and vandalism is high, thus creating a cycle of insufficient infrastructure development, limiting access to EV charging for customers in these regions. In addition, safety is of particular concern for drivers using public charging as they are potentially vulnerable to crime if they choose to remain in their vehicle while it is plugged in.

## Step 3. Determine Benefit and/or Burden.

Given what you have learned from data and from stakeholder involvement…

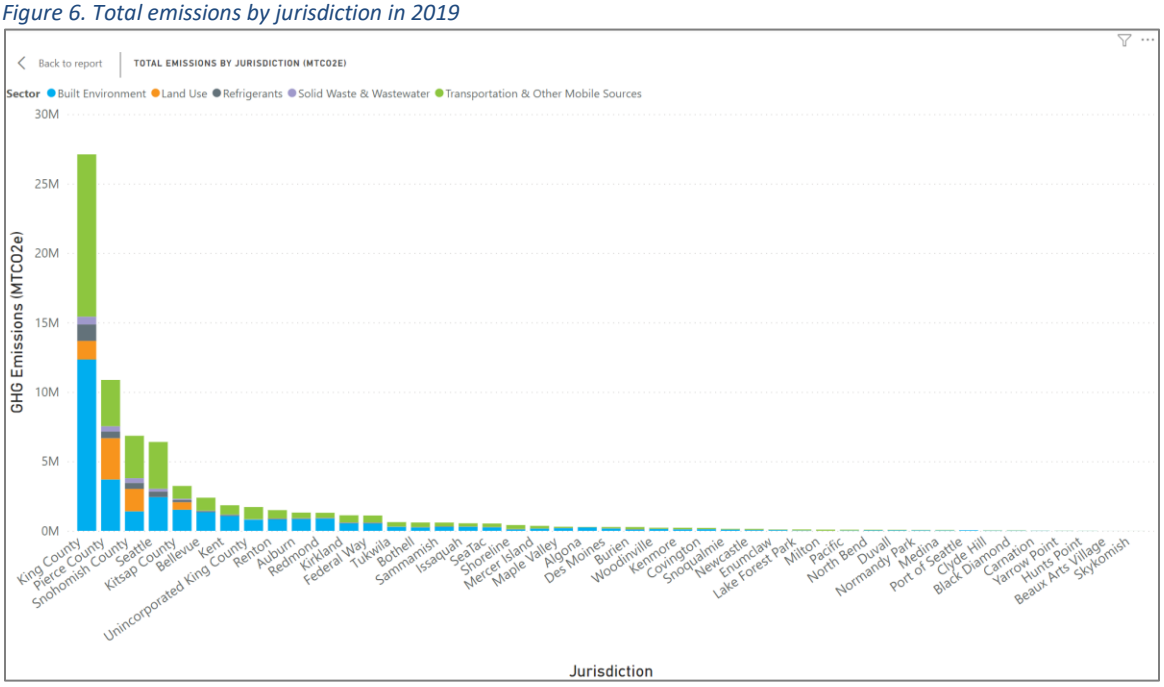
### 3. How will the policy, initiative, program, or budget issue increase or decrease racial equity? What are potential unintended consequences? What benefits may result? Are the impacts aligned with your department's community outcomes that were defined in Step I.?

Summary

- King County has the most EVs in Washington State. More public EV charging is necessary to meet and accelerate the EV adoption rate.
- Public EV charging, particularly in overburdened or marginalized communities, is an important component to adding more EVs to our roads, reducing GHG emissions, and reducing racial inequities.
- City Light-owned station utilization data provides a clear example of how public charging stations placed in overburdened or historically marginalized communities can see high use, potentially benefiting the surrounding neighborhood.

The public charging program's goals include providing broad access to EV charging to accelerate EV adoption. The program also wants to ensure equitable and affordable access to the chargers incentivized and installed. **We know more people are buying and driving EVs in King County, and we believe providing more public charging stations will further the EV adoption rate in our service territory and King County. Encouraging EV adoption is one way to reduce greenhouse gas emissions (GHG), specifically tailpipe emissions from passenger vehicles.** While Washington state's vehicle registration data shows King County has the fastest rate of EV adoption, 2019 data shows King County as the largest contributor GHG emissions in the State, see Figure 6. Given this data, we understand that greenhouse gas is a contributor to climate change, which exacerbates poor air quality in our region, and this can disproportionately impact overburdened communities.

*Figure 6. Total emissions by jurisdiction in 2019*




*King County greenhouse gas emissions. https://kingcounty.gov/en/legacy/services/environment/climate/actions-strategies/strategic-climate-action-plan/emissions-inventories.*

King County's Puget Sound Regional Emissions analysis reported "on-road transportation activities accounted for 24% and 28% of King County's total communitywide GHG emissions in 2019 and 2020, respectively".[42] On road includes passenger vehicles, freight trucks and transit vehicles. In Seattle, over 60% of GHG emissions come from transportation.[43] **Accelerating the EV adoption rate in King County through public charging, particularly charging in overburdened or marginalized communities, is an important component to adding more EVs to our roads, reducing GHG emissions, and reducing racial inequities**.

Adding to this focus on reducing racial inequities, our program seeks to encourage charging station installations in charging deserts, with installations in overburdened communities receiving additional incentives. Placing charging stations in overburdened communities will be co-identified with these very same communities to ensure overall success.

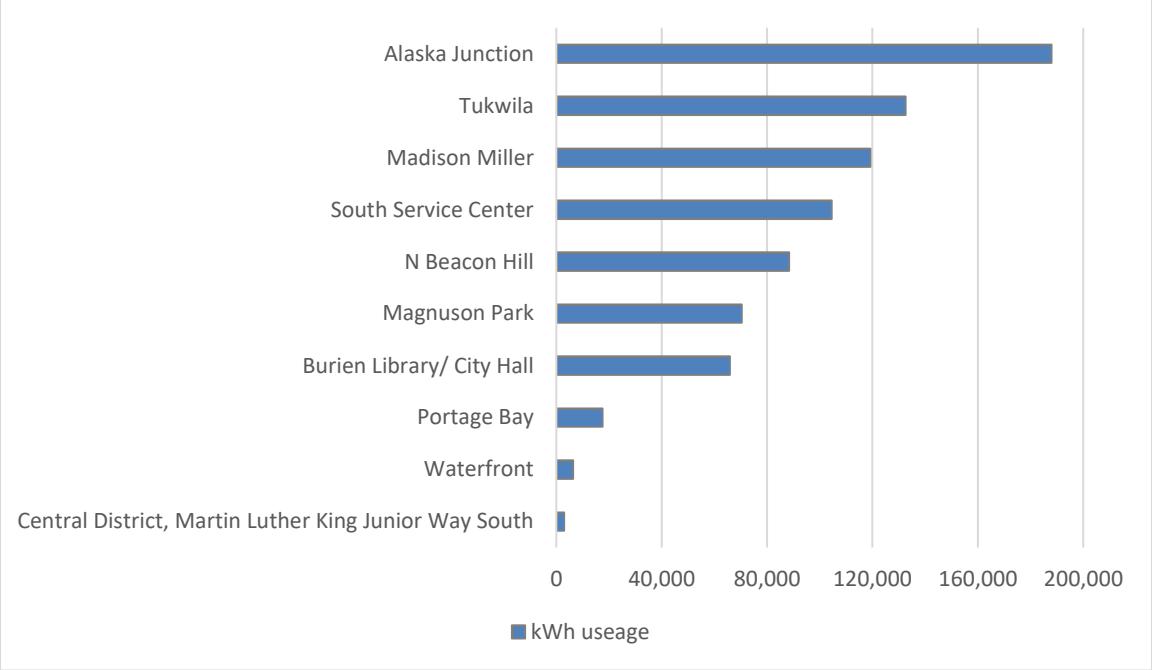
The previous 2017 City Light public charging RSJI toolkit wrote "there could be unintended consequences in terms of larger benefits for current EV owners, which tend to be whiter. More specifically, stations in North Seattle could see higher use, and therefore benefit more from the City's development." Since then, while operating City Light's public EV chargers, the program has found the opposite to be true of current station utilization data. In Figure 7, City Light station utilization data from 2021 through January 2024 only shows one North Seattle station in the top 10 sites by energy use.

[42] Cascadia Consulting Group. (2022, August) "Communitywide Geographic Greenhouse Gas Emissions: Puget Sound Regional Emissions Analysis." https://your.kingcounty.gov/dnrp/climate/documents/2022/king-county-geographic-ghg-emissions-inventory-and-wedge-report-09-2022.pdf.

[43] Seattle Office of Sustainability and Environment. "Total Annual Emissions By Sector." https://app.powerbigov.us/view?r=eyJrIjoiNjBlNzE2OTItMDc1OC00OWQ2LTgwYTQtMDZiMzUyNjNhYmJlIiwidCI6Ijc4ZTYxZTQ1LTZiZWItNDAwOS04Zjk5LTM1OWQ4YjU0ZjQxYiJ9.

In fact the second most utilized charging site is Tukwila, in south King County. **City Light-owned station utilization data provides a clear example of how public charging stations placed in overburdened or historically marginalized communities can experience high utilization, potentially benefiting the surrounding neighborhood.**

*Figure 7. Top 10 City Light-owned charging sites by total kWh dispensed from 1/1/2021 - 1/5/2024*




As utilization at City Light's charging stations increase, new opportunities become available for City Light to accumulate clean fuel credits through Washington state's clean fuel program, which would in turn will be reinvested in overburdened communities and additional transportation electrification efforts (as directed by the state). **In our 2023 business case, the public charging program estimated nearly 7,000 credits could be earned from now through 2030 through public charging** (see *Table 4* to learn more).

*Table 4. Clean Fuel Program Credits (estimate)*

| Program Year | Sum of Total kWh delivered by DCFC and L2 | Potential Credits Generated[44] | Potential Credits Generated from City Light-owned chargers[45] |
|---|---|---|---|
| **1** | 14,350,000 | 16,984 | 680 |
| **2** | 16,168,800 | 19,044 | 761 |
| **3** | 18,235,939 | 21,251 | 850 |
| **4** | 20,587,333 | 23,741 | 950 |
| **5** | 23,264,304 | 26,547 | 1,062 |
| **6** | 26,314,414 | 29,550 | 1,182 |

[44] Calculated using Washington State Department of Ecology's CFP credit estimator provided to and edited by City Light.

[45] We assume City Light-owned chargers occupy 4% of the public charging station market of 8,000 ports.

| | | | |
|---|---|---|---|
| **7** | 29,792,427 | 32,913 | 1,317 |
| **Total** | **148,713,216** | **170,029** | **6,801** |

Despite our best efforts to maximize benefits and reduce racial inequities and disparities, our program will face unintended consequences, some potential unintended consequences are:

1. If the program were to be scaled back or cut and City Light-owned public stations were the only ones being maintained, replaced, and installed, we would face outdated and delayed technology being deployed. City Light is not capable of imploring the latest most capable technology in the market due to costs. For example, City Light's charging DCFC infrastructure was largely manufactured in 2020 and have a 50 kW capacity; as of 2023 150-350 kW are available on the market. It's unlikely that City Light could acquire and install updated technology on par with technological advancements and we would remain years behind the best technology available to our customers. If City Light remained as is, we might also find third-party installations happening in more populated areas instead of overburdened or even wealthy communities. As shown in earlier figures, the highest density of chargers is around the downtown corridor. Public charging likely would not expand at the level necessary to meet expected demand and/or be sparse enough geographically to make it difficult to impossible to affordably operate an EV in certain neighborhoods.

2. If the program were to find itself with high program participation from a lot of different EVSPs, we face the potential of stations being left behind when (or if) EVSPs go out of business. The transportation electrification market has yet to reach full maturity and can be turbulent. We have seen companies such as of Car2Go pull out of the North American market[46], Proterra (an electric bus company) file for bankruptcy[47], and Greenlots bought by Shell[48]. From personal experience, Efacec pulled out of the North American market and our team has dealt with the challenges of acquiring parts or assistance for two City Light-owned Efacec charging stations.

3. If the program were to attract a high-level of attention, engagement and interest from customers within overburdened communities, program participants may choose to install L2s over DCFCs because L2s are more affordable. Our program team is concerned that customers willing to install stations in overburdened communities will install L2s over DCFCs because they are responsible for all the upfront costs of a charger installation. L2s are substantially more affordable than DCFC and often require less effort to install and maintain. If customers decide to install L2s over DCFCs in overburdened or historically marginalized communities (to save on costs), they risk the long-term consequences of outdated technology and significantly longer charging times

[46] Nickelsburg, Monica. (2019, December 18). "Car2gone: Share Now to exit North America, leaving Seattle with no free-floating car-sharing service." https://www.geekwire.com/2019/car2gone-share-now-shuts-north-america-leaving-seattle-no-free-floating-car-sharing-services/.

[47] Reuters. (2023, August 7). "EV Firm Proterra Files for Chapter 11 Bankruptcy Protection". https://money.usnews.com/investing/news/articles/2023-08-07/ev-firm-proterra-files-for-chapter-11-bankruptcy/.

[48] Moloughney, Tom. (2021, November 3). "Greenlots Renamed: Will Soon Become Shell Recharge Solutions". https://insideevs.com/news/545338/greenlots-renamed-shell-recharge-solutions/.

for EVs. This would only exacerbate existing racial inequities around access to transportation in historically marginalized and overburdened communities.

4. If the program finds itself installing charging stations more heavily in overburdened communities, communities and/or neighborhoods may become gentrified, largely because EV ownership is tied to high-income, predominantly white, homeowners. This potential gentrification of a neighborhood could lead to distrust of City Light's programming and more consequential, displace residents from their neighborhood.

## Step 4. Advance Opportunity or Minimize Harm.

### 4. How will you address the impacts (including unintended consequences) on racial equity?

What strategies address immediate impacts? What strategies address root causes of inequity listed in Q.6? How will you partner with stakeholders for long-term positive change? If impacts are not aligned with desired community outcomes, how will you re-align your work?

**Educational resources and EV charging public awareness campaign**: Though details for our program resources are still in development, our program team will work to create multi-lingual resources, that cover topics beyond EVSE's and into EV ownership and key considerations for charging. These include challenging the perception that EV's cost too much[49], or that charging stations signal gentrification because City Light-owned charging stations show that south King County stations are among the most utilized stations (see Figure 7) and their placement has not led to gentrification.

**Program participant toolkit**: Though details for our program resources are still in development, our program team will work to create multi-lingual resources on topics such as selecting a charging station site, selecting the appropriate hardware, what a site host agreement is, and how to select an EVSP, and charging station data 101.

**Workforce development:** To encourage the long-term sustainability of our transportation electrification portfolio, and for our region, we will promote and encourage the growth of our Minority and Women's Business Enterprises (WMBE) and Electric Vehicle Installation Certification Program (EVICP). We want to be able to identify interested WMBE contractors, cover training costs, and encourage connections between them and local contractors or EVSE technicians, or site hosts**.**

**Clear EVSP program requirements:** To ensure the longevity and sustainability of infrastructure installed under our program, we will work to ensure program participant agreements clearly detail requirements for a networked EVSP, with warranty, data sharing, and City Light's clean fuel credit reporting responsibilities clearly outlined.

**Community co-created program**: While details have not been determined at the time of this toolkit, a substantial component of our program will be community-driven and led, with Kambo Energy managing our community

[49] Borras, Jo. "New York Times Gets Electric Car Costs Very Wrong." https://cleantechnica.com/2022/08/18/new-york-times-gets-ev-pricing-very-wrong/

partnerships and relationships. It's our hope that a strong community input model will help build buy-in and trust for City Light's program and future infrastructure investments. This community involvement may also serve to support greater security/investment in neighborhoods that have experienced cable theft, and to help mitigate the concerns of displacement or gentrification.

**Continued installation of City Light-owned stations:** Our program team will continue to build out and maintain EV charging stations across City Light territory with an explicit commitment to placing chargers in overburdened communities and areas overlooked by the private sector. It's our belief that by maintaining ownership, we are better equipped to manage costs and the affordability of chargers. We also believe owning chargers helps our staff remain informed about the EVSE industry.

**Data-informed program design and deployment**: Our program team is committed to using our station utilization data, and finding ways to leverage relationships to examine station deployments across our region to design and adjust our public charging program. We will also look our own incentives to track installations in overburdened communities. For example, we have reached out to King County unincorporated program managers to understand their participatory budgeting process for infrastructure investments, and Washington state's department of commerce to understand their mapping tools[50]. City Light is also working to launch a public-facing EV hosting capacity map for customers to better understand their projects.

Program Strategies? _____

Policy Strategies? _____

Partnership Strategies? _____

## Step 5. Evaluate. Raise Racial Awareness. Be Accountable.

### 5a. How will you evaluate and be accountable?

How will you evaluate and report impacts on racial equity over time? What is your goal and timeline for eliminating racial inequity? How will you retain stakeholder participation and ensure internal and public accountability? How will you raise awareness about racial inequity related to this issue?

The public charging program will be evaluated by a third-party evaluator, and we suggest the evaluation occur on an annual basis or previous to major program changes or milestones, with a mixed-methods approach. Our team will be able to support the evaluator's collection of quantitative data, as program applications, clean fuel credits, and station reporting will be managed by us.

[50] Washington State Department of Commerce. "Publicly Available Application Grant Tool". https://ev-station-grants-wacommerce.hub.arcgis.com/pages/tool.

We recommend our existing data collection efforts be leveraged by the outside evaluator, and hope to see case studies and customer satisfaction surveys produced for post-installation feedback. Our recommendations are listed below Table 5.

*Table 5. Evaluation recommendation from program design*

| Goal/Outcome | Suggested measures for evaluation |
|---|---|
| **Provide broad access to EV charging through deployments of up to 2,000 public EV charging ports by 2030; public EV charging keeps pace with demand.** | • Change in the number of public stations on AFDC between time periods; consider types of public stations and total stations by select franchise cities' total population<br>• Growth in program applications between time periods and applications by location<br>• Number of stations fully funded under City Light and stations funded partially by City Light and other grants (and whether location of stations impacts funding sources)<br>• Number of registered EVs and Stations – a ratio score – in City Light territory and by select franchise cities; also consider the number of registered EVs by total population of a city<br>• Total clean fuel credits generated and re-invested over time by City Light |
| **Increase equitable and affordable access to public EV charging in all communities, including those not prioritized by private investment.** | • Ability to meet annual growth target for L2 and DCFCs in City Light territory<br>• Comparison of City Light-owned charger pricing against surrounding stations' pricing<br>• Number of stations within City Light territory that report their fee structure and whether the stations are free; suggest reviewing completed projects as program matures<br>• Number of WMBE contractors introduced to EVICP training |
| **Improve EV drivers' and EVSP's customer experience, and improve the reliability of chargers in City Light territory** | • Total number of sessions, energy delivered, and revenue generated by stations participating in our program<br>• Total number of failed sessions and reported issues by stations enrolled in our program<br>• Qualitative analysis of customer input/feedback from emails, PlugShare, and Google. |

| | |
|---|---|
| **Inform, engage, and co-develop with City and underserved community stakeholders within City Light's territory, on the Program's goals and activities.** | • Number of stations installed as a result of community engagement<br>• Number of sites recommended and number of stations found in locations where community recommended sites<br>• Number of site assessments completed in overburdened communities and whether final decisions was to move forward with a charger or to not |

### 5b. What is unresolved?

What resources/partnerships do you still need to make changes?

There is a great deal of community engagement and charging provider outreach the program is currently lacking. Through Kambo partnership, program team fully intends partner with key stakeholders, potential site hosts, and charging providers to guarantee harmonious and seamless charger installation and integration with existing neighborhood services, character, and dynamics. We recognize the need to engage key community organizations such as nonprofits and libraries.

We acknowledge more partnership is needed with internal departments such as Department of Neighborhoods, Community Development, SDCI, and Seattle Department of Transportation.

## Step 6. Report Back.

Share analysis and report responses from Q.5a. and Q.5b. with Department Leadership and Change Team Leads and members involved in Step 1.

## Creating Effective Community Outcomes

**Outcome = the result that you seek to achieve through your actions.**

***Racially equitable* community outcomes = the specific result you are seeking to achieve that advances racial equity in the community.**

When creating outcomes think about:

- What are the greatest opportunities for creating change in the next year?
- What strengths does the department have that it can build on?
- What challenges, if met, will help move the department closer to racial equity goals?

Keep in mind that the City is committed to creating racial equity in seven key opportunity areas: **Education, Community Development, Health, Criminal Justice, Jobs, Housing, and the Environment.**

**Examples of community outcomes that increase racial equity:**

| OUTCOME | OPPORTUNITY AREA |
|---|---|
| Increase transit and pedestrian mobility options in communities of color. | Community Development |
| Decrease racial disparity in the unemployment rate. | Jobs |
| Ensure greater access to technology by communities of color. | Community Development, Education, Jobs |
| Improve access to community center programs for immigrants, refugees and communities of color. | Health, Community Development |
| Communities of color are represented in the City's outreach activities. | Education, Community Development, Health, Jobs, Housing, Criminal Justice, Environment |
| The racial diversity of the Seattle community is reflected in the City's workforce across positions. | Jobs |
| Access to City contracts for Minority Business Enterprises is increased. | Jobs |
| Decrease racial disparity in high school graduation rates | Education |

**Additional Resources:**

- **RSJI Departmental Work Plan:** http://inweb/rsji/departments.htm

- **Department Performance Expectations:** http://web1.seattle.gov/DPETS/DPETSWEbHome.aspx
- **Mayoral Initiatives:** http://www.seattle.gov/mayor/issues/

## Identifying Stakeholders + Listening to Communities of Color

### Identify Stakeholders

Find out who are the **stakeholders** most affected by, concerned with, or have experience relating to the policy, program or initiative? Identify racial demographics of neighborhood or those impacted by issue. *(See District Profiles in the Inclusive Outreach and Public Engagement Guide or refer to U.S. Census information on p.7)*

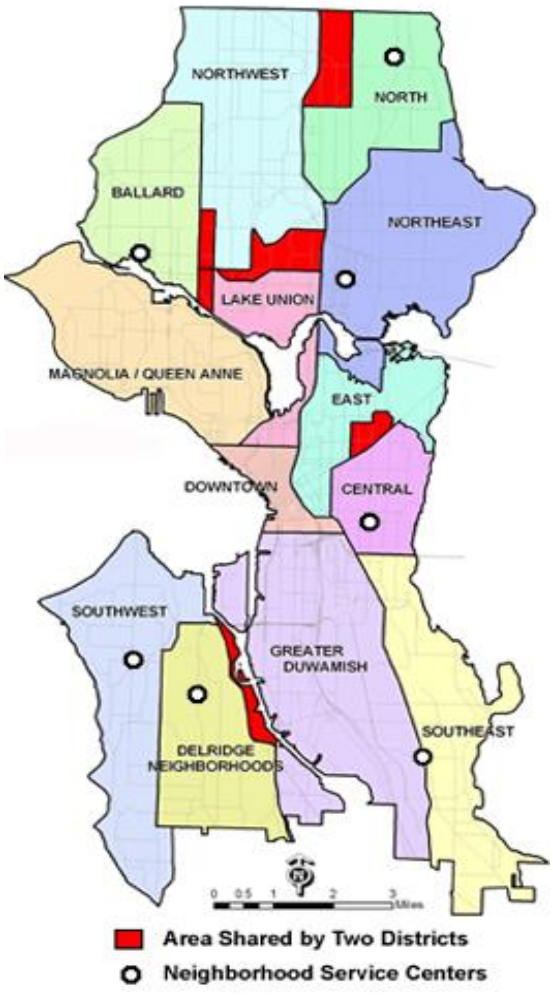
**Once you have indentified your stakeholders ….**

**Involve them in the issue.**
Describe how historically underrepresented community stakeholders can take a leadership role in this policy, program, initiative or budget issue.

**Listen to the community. Ask:**
1. What do we need to know about this issue? How will the policy, program, initiative or budget issue burden or benefit the community? *(concerns, facts, potential impacts)*

2. What factors produce or perpetuate racial inequity related to this issue?

3. What are ways to minimize any negative impacts (harm to communities of color, increased racial disparities, etc) that may result? What opportunities exist for increasing racial equity?




**Tip: Gather Community Input Through…**

- Community meetings
- Focus groups
- Consulting with City commissions and advisory boards
- Consulting with Change Team

**Examples of what this step looks like in practice:**

- A reduction of hours at a community center includes conversations with those who use the community center as well as staff who work there.
- Before implementing a new penalty fee, people from the demographic most represented in those fined are surveyed to learn the best ways to minimize negative impacts.

For resources on how to engage stakeholders in your work see the **Inclusive Outreach and Public Engagement Guide:** http://inweb1/neighborhoods/outreachguide/

## Data Resources

**City of Seattle Seattle's Population and Demographics at a Glance**:
http://www.seattle.gov/dpd/Research/Population_Demographics/Overview/default.asp
Website updated by the City Demographer. **Includes: Housing** Quarterly Permit Report • **Employment data** • 2010 Census data • **2006-2010 American Community Survey** • 2010 Census: Demographic highlights from the 2010 Census; Basic Population and Housing Characteristics Change from 1990, 2000, and 2010 – PDF report of counts of population by race, ethnicity and over/under 18 years of age as well as a total, occupied and vacant housing unit count; Three-page subject report – PDF report of detailed population, household and housing data • American Community Survey: **2010 5-year estimates and 2009 5-year estimates** • Census 2000 • Permit Information: Comprehensive Plan Housing Target Growth Report for Urban Centers and Villages; Citywide Residential Permit Report • Employment Information: Comprehensive Plan Employment Target Growth Report for Urban Centers and Villages; Citywide Employment 1995-2010 • The Greater Seattle Datasheet: a report by the Office of Intergovernmental Relations on many aspects of Seattle and its region.

**SDOT Census 2010 Demographic Maps** (by census blocks): Race, Age (under 18 and over 65) and Median Income http://inweb/sdot/rsji_maps.htm

**Seattle's Population & Demographics Related Links & Resources** (From DPD website: http://www.seattle.gov/dpd/Research/Population_Demographics/Related_Links/default.asp)

**Federal**

- American FactFinder: The U.S. Census Bureau's main site for online access to population, housing, economic, and geographic data.
- Census 2000 Gateway: The U.S. Census Bureau's gateway to Census 2000 information.

**State**

- Washington Office of Financial Management: OFM is the official state agency that provides estimates, forecasts, and reports on the state's population, demographic characteristics, economy, and state revenues.

**Regional**

- Puget Sound Regional Council: PSRC is the regional growth management and transportation planning agency for the central Puget Sound region in Washington State.

**County**

- King County Census Viewer: A web-based application for viewing maps and tables of more than 100 community census data indicators for 77 defined places in King County.
- King County Department of Development and Environmental Services: the growth management planning agency for King County.
- Seattle & King County Public Health - Assessment, Policy Development, and Evaluation Unit: Provides health information and technical assistance, based on health assessment data

- King County Opportunity Maps: A Study of the Region's Geography of Opportunity. Opportunity maps illustrate where opportunity rich communities exist, assess who has access to those neighborhoods, and help to understand what needs to be remedied in opportunity poor neighborhoods. Puget Sound Regional Council.

**City**

- The Greater Seattle Datasheet: A Seattle fact sheet courtesy of the City of Seattle's Office of Intergovernmental Relations.

**Other**

- Seattle Times Census 2000: articles, charts related to Census 2000 and the Seattle/Puget Sound region.

## Glossary

**Accountable**- Responsive to the needs and concerns of those most impacted by the issues you are working on, particularly to communities of color and those historically underrepresented in the civic process.

**Community outcomes-** The specific result you are seeking to achieve that advances racial equity.

**Contracting Equity**- Efforts to achieve equitable racial outcomes in the way the City spends resources, including goods and services, consultants and contracting.

**Immigrant and Refugee Access to Services-** Government services and resources are easily available and understandable to all Seattle residents, including non-native English speakers. Full and active participation of immigrant and refugee communities exists in Seattle's civic, economic and cultural life.

**Inclusive Outreach and Public Engagement**- Processes inclusive of people of diverse races, cultures, gender identities, sexual orientations and socio-economic status. Access to information, resources and civic processes so community members can effectively engage in the design and delivery of public services.

**Individual racism**- Pre-judgment, bias, stereotypes about an individual or group based on race. The impacts of racism on individuals including white people internalizing privilege and people of color internalizing oppression.

**Institutional racism**- Organizational programs, policies or procedures that work to the benefit of white people and to the detriment of people of color, usually unintentionally or inadvertently.

**Opportunity areas**- One of seven issue areas the City of Seattle is working on in partnership with the community to eliminate racial disparities and create racial equity. They include: Education, Health, Community Development, Criminal Justice, Jobs, Housing and the Environment.

**Racial equity**- When social, economic and political opportunities are not predicted based upon a person's race.

**Racial inequity**-When a person's race can predict their social, economic and political opportunities and outcomes.

**Stakeholders**- Those impacted by proposed policy, program or budget issue who have potential concerns or issue expertise. Examples might include: specific racial/ethnic groups, other institutions like Seattle Housing Authority, schools, community-based organizations, Change Teams, City employees, unions, etc.

**Structural racism** - The interplay of policies, practices and programs of multiple institutions which leads to adverse outcomes and conditions for communities of color compared to white communities that occurs within the context of racialized historical and cultural conditions.

**Workforce Equity**- Ensure the City's workforce diversity reflects the diversity of Seattle

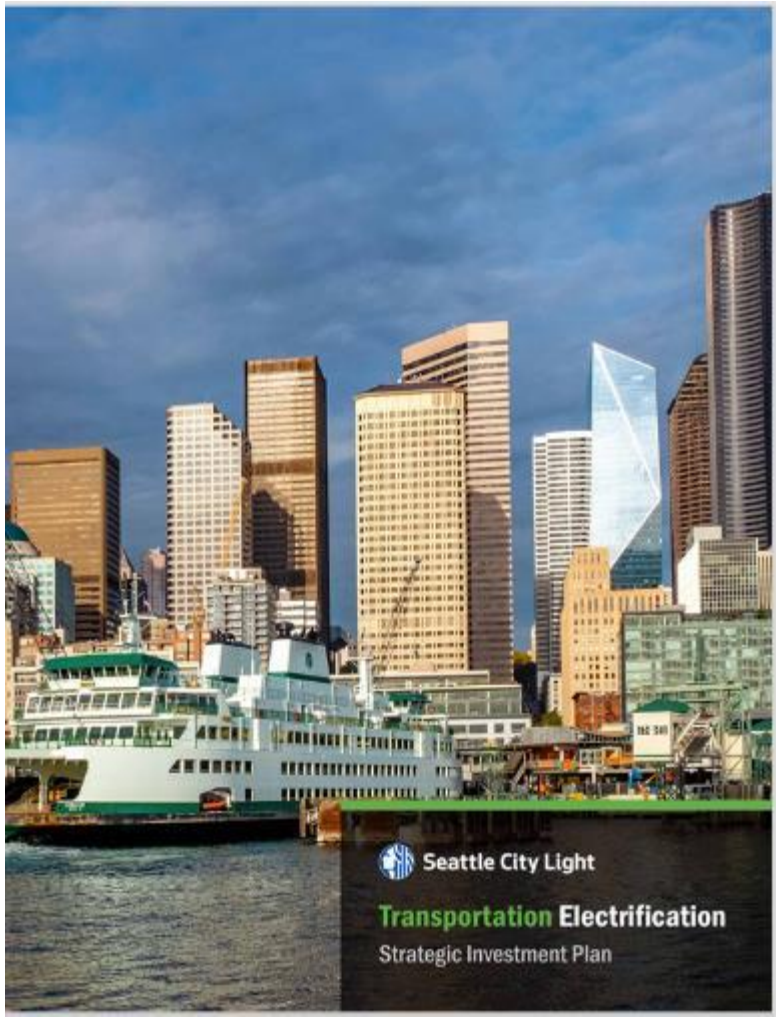

Seattle City Light

# Transportation Electrification Briefing & Council Action

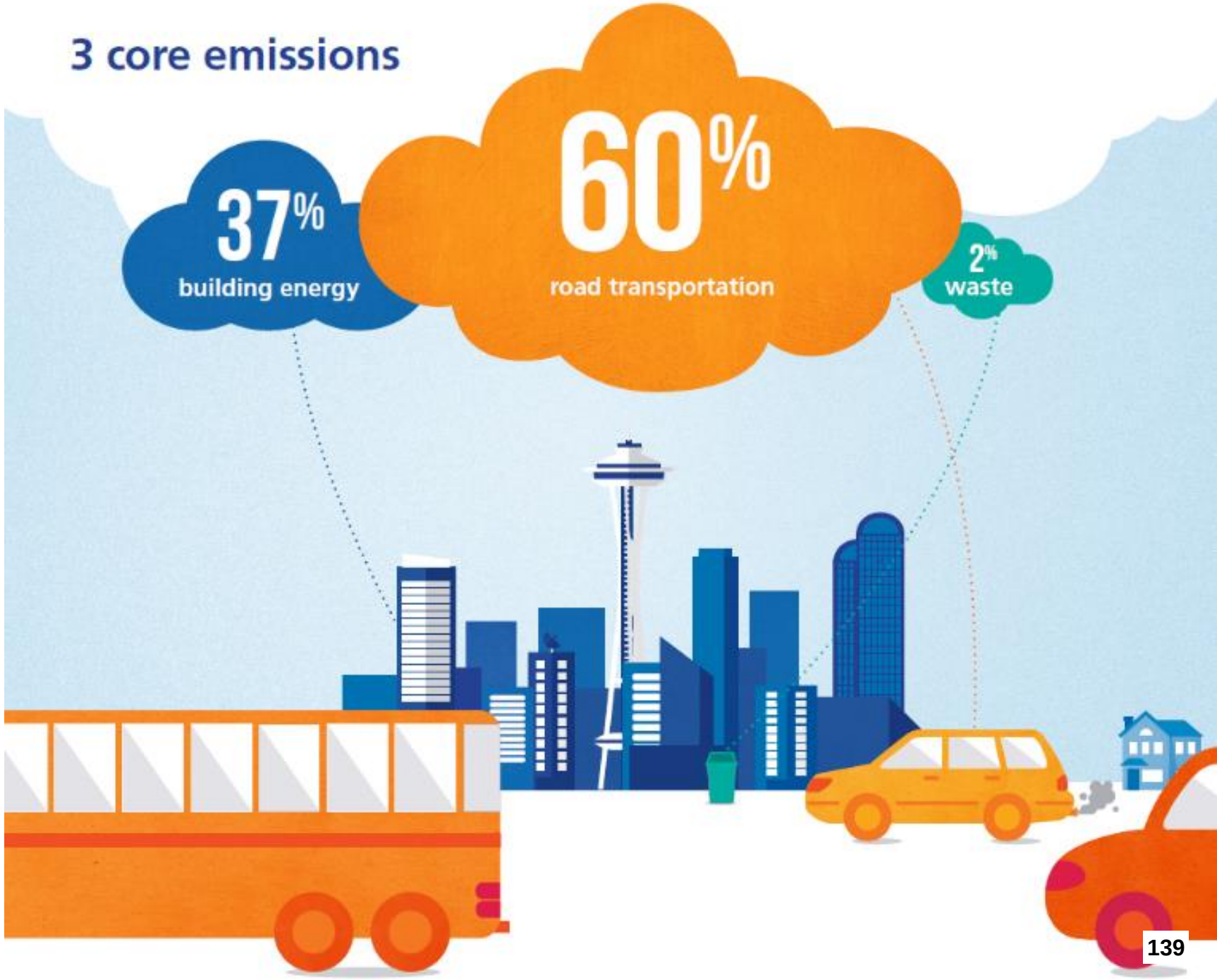
January 17, 2024

# Agenda

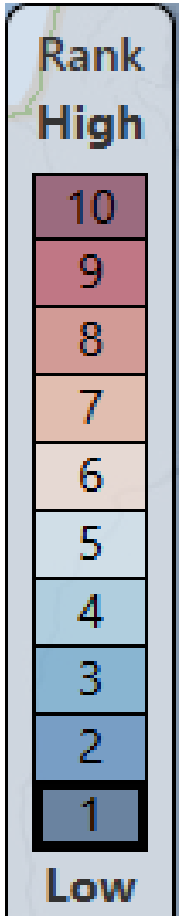
- Background and Progress To-Date
- Updated 2025-2030 TESIP Strategies
- Electrification Enabling Actions
- Community Outreach & Engagement
- Council Action

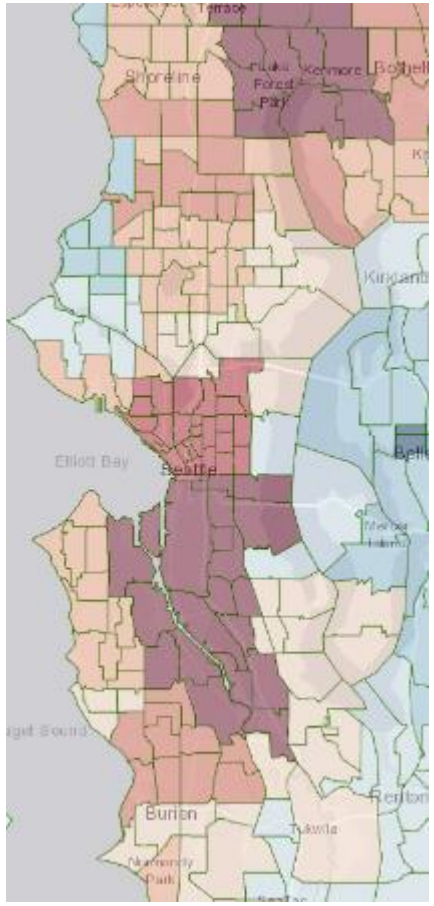


**Decarbonization**
through
electrification

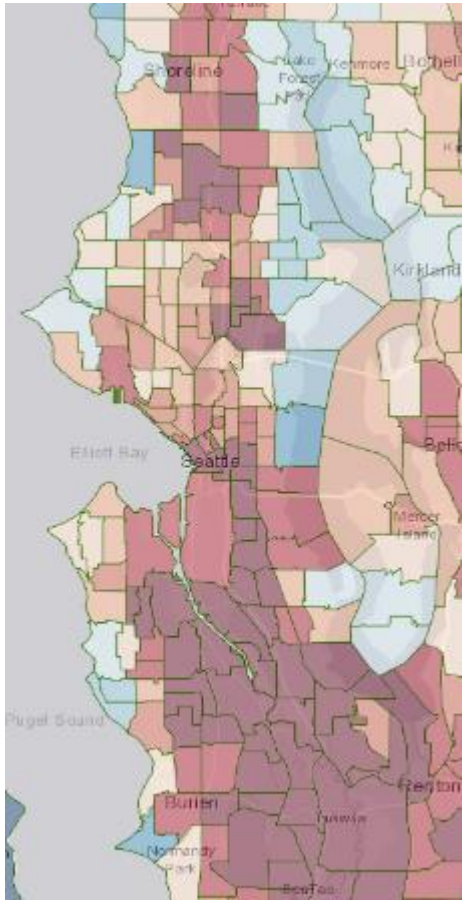


# Transportation Electrification and Environmental Justice

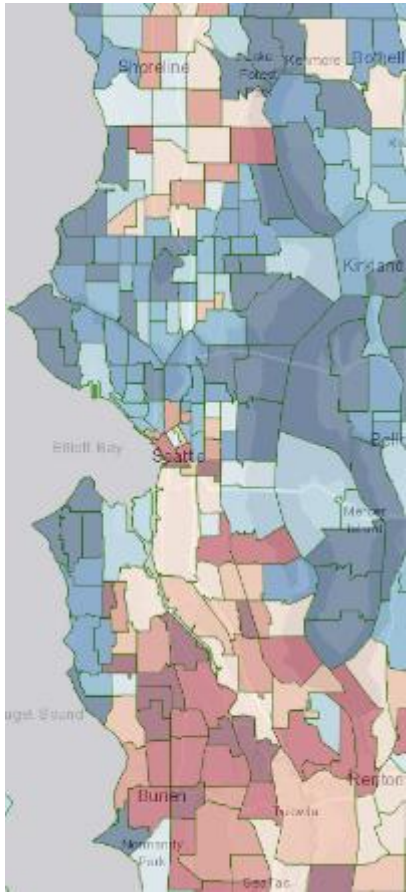


**Air pollution**

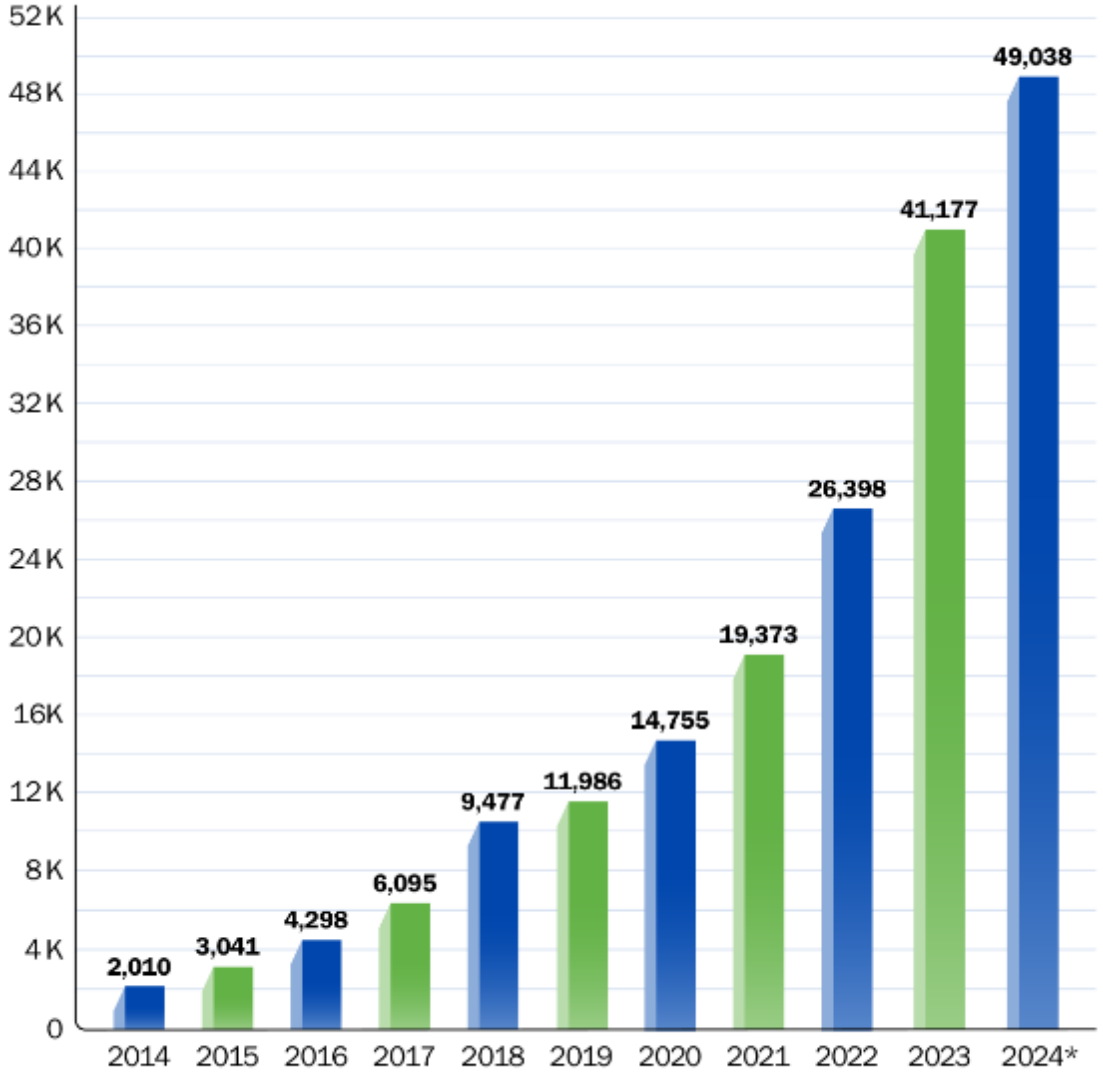


**Diesel pollution**



**Health disparities**

# Electric vehicle adoption is growing fast in Seattle Area




Source: Electric Power Research Institute.

*Data through Aug 2024

# Progress on 2020-2024 Plan

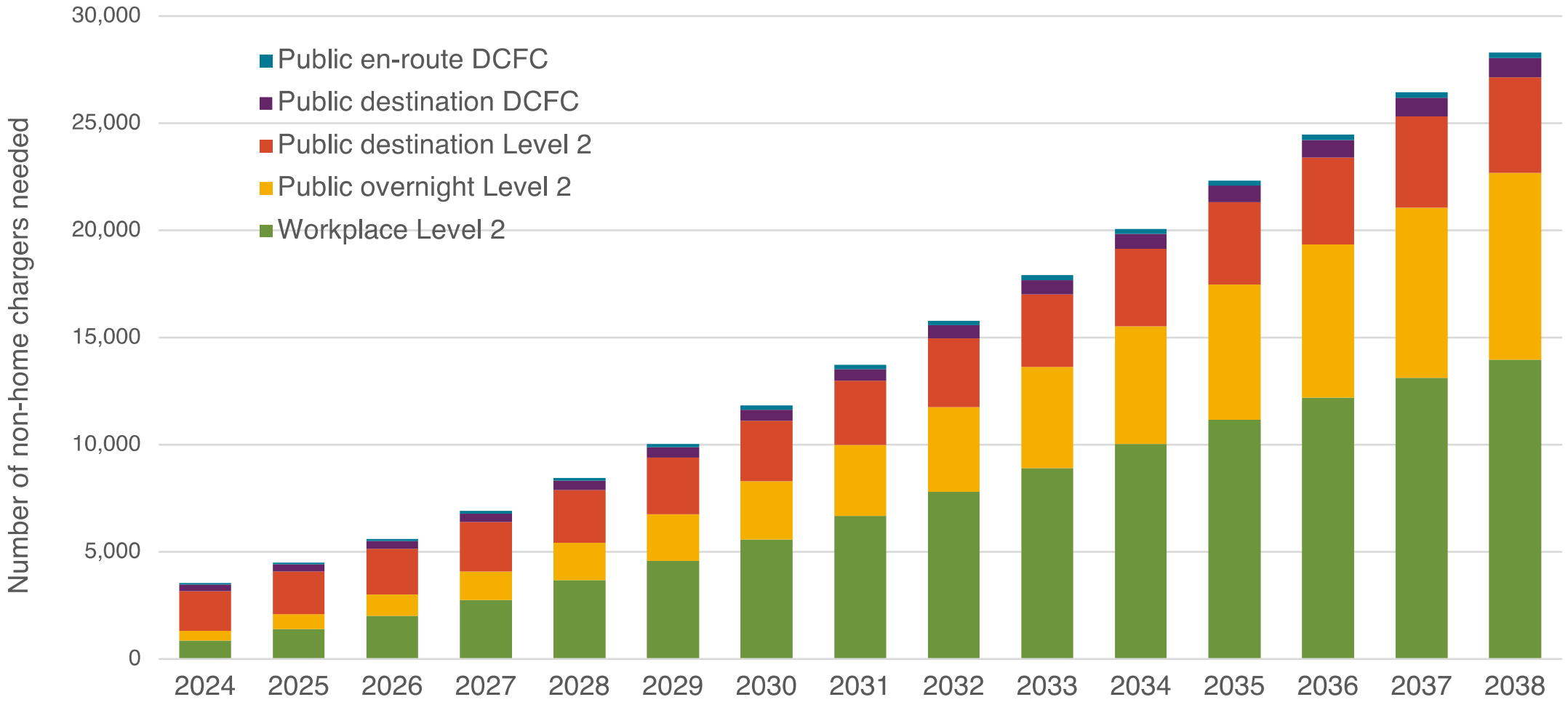
- Public EV Charging Program
  - 25 public EV fast chargers installed
  - 60 public Level 2 EV chargers installed
- Multifamily Charging Program
  - 190 assessments; 309 chargers
- Fleet Charging Program
  - 25 assessments; 91 chargers
- Single-family Charger Rebate
  - 420 chargers

# Transportation Electrification Investments

## 2025 - 2030

Seattle City Light

# Research-Based Planning for Growth




Source: International Council on Clean Transportation, 2024

# Community Input on Strategy Development

*In TESIP Phase 2 Outreach during August & September 2024, City Light solicited feedback from:*

# Community Priorities for Investment

➞ **Provide Equitable Access**

➞ **Increase Communication and In-Person Engagement**

➞ **Improve Health**

➞ **Strengthen Community Self-Determination**

# 2025-2030 Investment Priority Areas

- Transit
- Public Charging
- Home Charging
- Commercial Charging
- Workplace Charging
- Non-Road Vehicles

**Infrastructure**

- Load Management
- Grid Investments
- Funding Resources
- Policy Coordination
- Workforce Development

**Electrification Enablement**

- Community Partnerships
- Outreach & Engagement

**Community and Stakeholders**

# Transit Strategy

+ Assist transit providers with implementing electrification plans
+ Priorities
  - Provide technical and engineering assistance
  - Partner on state and federal funding opportunities
  - Ensure projects address community priorities

# Public Charging Strategy

+ Expand access to convenient, dependable public charging
+ Focus on equitable investments, especially in overburdened communities
+ Priorities
  - Improve customer experience
  - Build additional chargers
  - New technologies and customer preferences
  - Offer financial incentives

# Home Charging Strategy

+ Help customers access the most convenient, lowest-cost solutions
  - Instant discounts available for single-family households
  - Advisory services and rebates available for multifamily housing
+ Priorities
  - Support higher-barrier households
  - Offer solutions to support grid resiliency

# Commercial Charging Strategy

- Assist commercial customers in planning for and implementing charging projects
- Significant per-vehicle benefits for heavier and high-mileage vehicles
- Priorities
  - Provide technical assistance
  - Provide incentives, especially in overburdened communities

# Workplace Charging Strategy

- Help employers implement workplace charging projects
- Priorities
  - Offer technical assistance
  - Provide financial incentives, especially for small businesses, non-profits, and women- and minority-owned enterprises

# Non-Road Vehicles Strategy

- Assist key customers with maritime, aviation, and rail operation electrification
- Priorities
  - Closely coordinate with project engineering and design for service planning and delivery

# Transportation Electrification Enablement Strategy

- Load management & grid investments
- Pursue external funding to support affordability
- Serve as trusted partners to policymakers to support community
- Contribute to building local economic and educational opportunities

# Community Partnership Strategy

- Meeting communities where they are at and working towards co-developed solutions that meet both utility and customer needs
- Priorities:
  - Strengthen community partnerships
  - Remain accountable to the community
  - Expand and tailor communications and outreach

# Outreach and Engagement Strategy

- Build deeper relationships with community and customers that enables their participation in electrification
- Priorities:
  - Communicate and educate key utility/energy topics
  - Create pathways for feedback and integration
  - Expanded, robust, targeted, and dynamic education and outreach campaign

# Council Resolution 32160 – What it Does

- Adopts the proposed 2025-2030 Transportation Electrification Strategic Investment Plan (TESIP)
- Requests that City Light consult with other departments, stakeholders, community partners and customers on initiatives, programs and incentives during TESIP implementation.
- Requests City Light to submit an annual report on TESIP progress and City Light will update the plan every 5 years.

# THANK YOU

Seattle City Light

Legislation Text

**File #:** Inf 2615, **Version:** 1

Bomb Cyclone Storm Response and Recovery

# Bomb Cyclone Storm Response & Recovery Briefing

## Sustainability, City Light, Arts & Culture Committee

January 17, 2025

Seattle City Light

WE POWER SEATTLE

# Agenda

- Opening Comments from the COO
- Bomb Cyclone Storm Overview – Impact & Response
- Incident Command Structure (ICS) Initiated
  - Preparedness
    - Pre-Disaster
  - Response
    - All Hands-on Deck
  - Recovery
    - Long Term Planning
  - Mitigation
    - Post-Disaster

# Bomb Cyclone Storm Overview

## All Hands-On Deck

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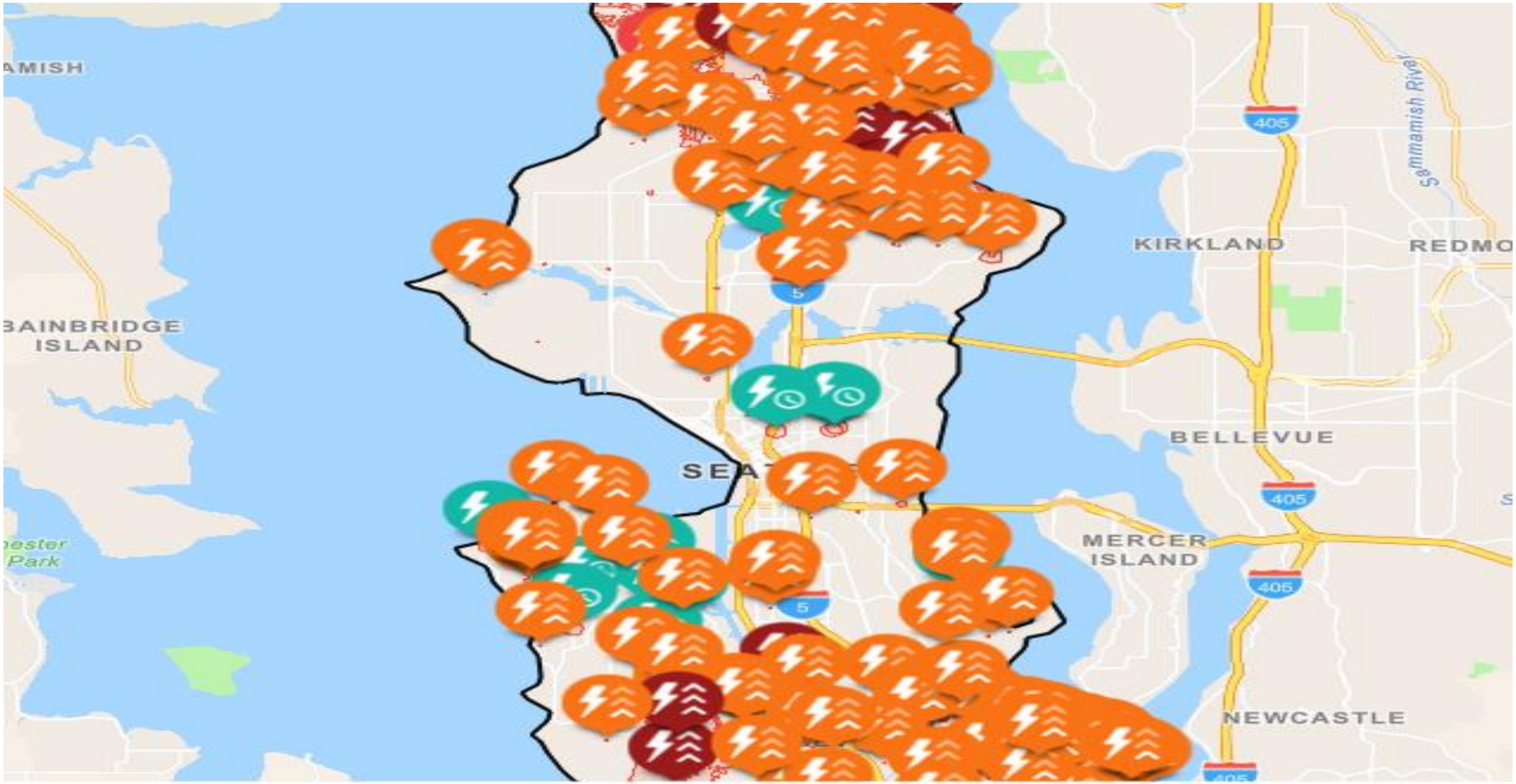
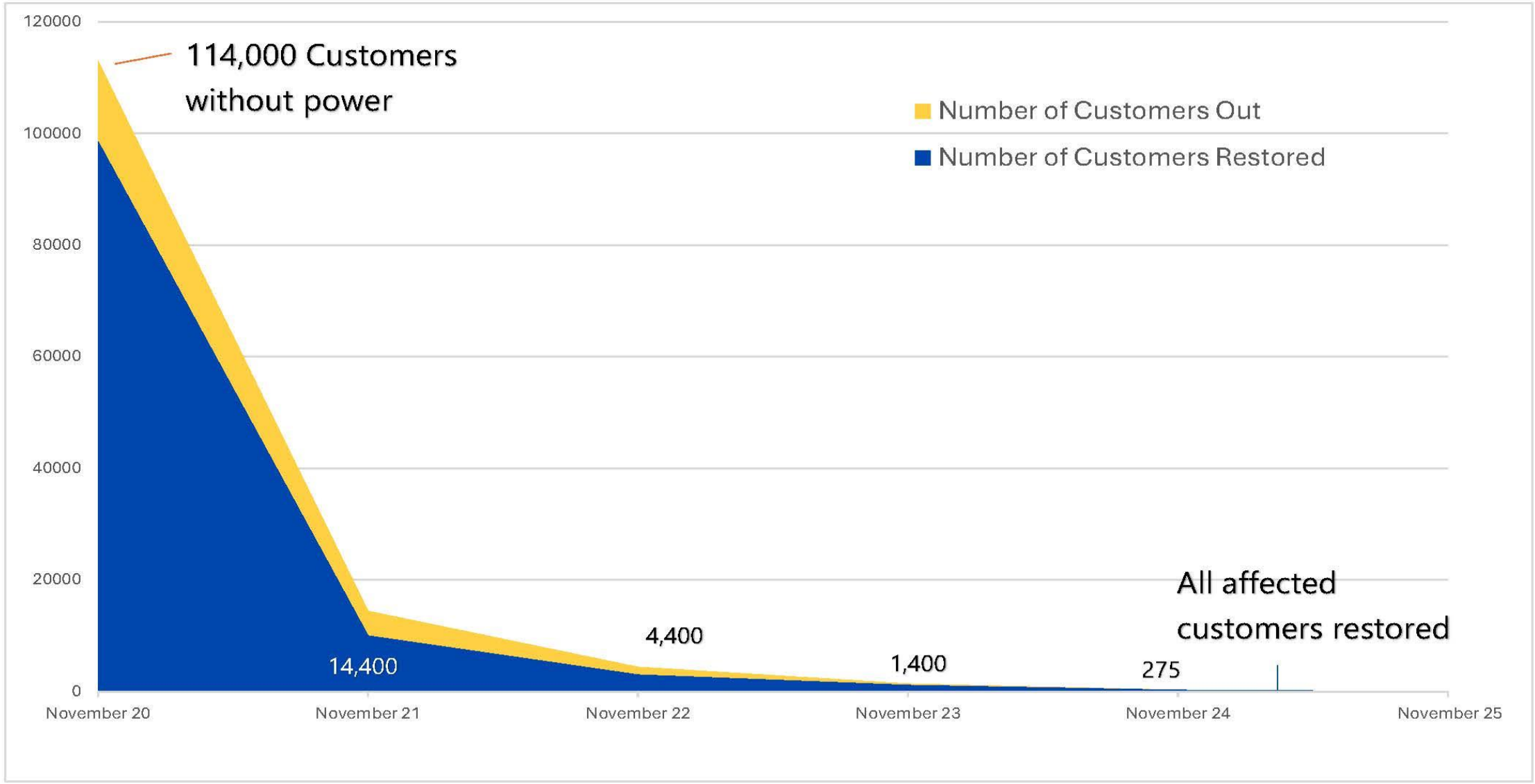
# Bomb Cyclone Response & Restoration Overview

- Storm hit November 20, 2024
- 114,000 Outages
  - 20% of our customer base
- OneSeattle Coordination Efforts
  - Office of Energy Management (OEM)
  - Seattle Dept. of Transportation (SDOT)
  - Seattle Public Utilities (SPU)
  - Human Service Department (HSD)
- Incident Management Team Activation
  - SCL Staff
- Restoration Prioritization

# Storm Impact & Restoration Snapshot – 11/20/24 @9:30AM



# Bomb Cyclone Impact & Restoration Overview



# Incident Command Structure (ICS) Initiated

1. Preparedness
2. Response
3. Recovery
4. Mitigation

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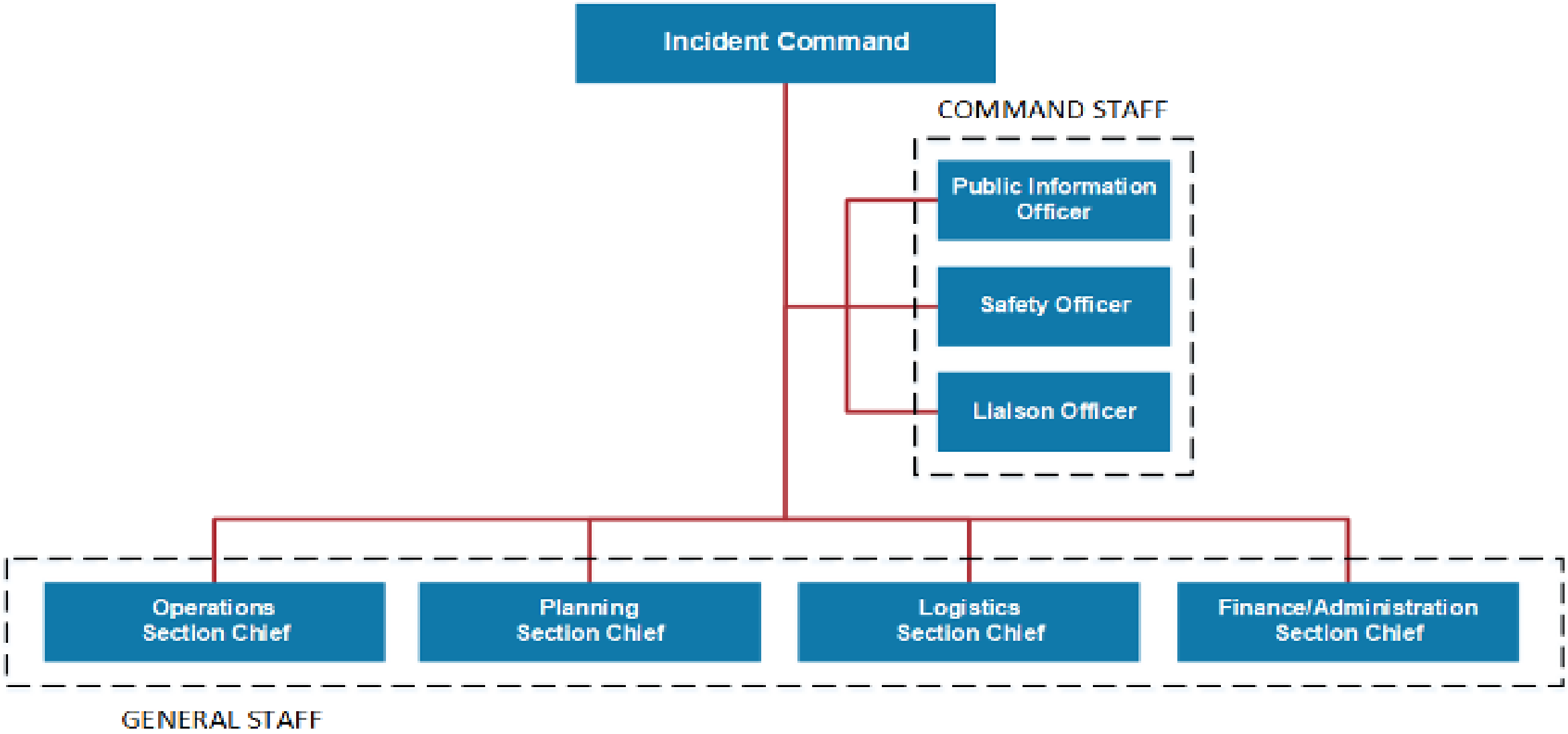
# Incident Command Structure (ICS) Chart



# Preparedness Phase

- Incident Management Team Position Alignment
- Weather Forecast Monitoring
- Incident Command System Training
- Restoration Prioritization
- Customer Communication

# Response Phase

- Daily Incident Management Team Calls
- Mutual Aid Assistance - Avista & Tacoma Power
- Western Energy Institute Partnership
- Coordination Efforts- OEM, SDOT, SPU, HSD
- Sheltering - Garfield Community Center

# Recovery Phase

- Final Restoration Phase
- Mutal Aid Demobilization
- Debris Removal
- FEMA- Public Assistance Program

# Mitigation Phase

- After Action Review
- Emergency Management Expansion

# Federal Storm Damage Assistance

- Customers (residential & business) may qualify for US Small Business Administration low-interest loans.
- Loans cover losses not fully covered by insurance or other sources.
- Applicants can apply online or receive in person assistance with the application.
- Additional disaster assistance information and online application at SBA.gov/disaster.
- SBA's Customer Service Center at 800-659-2955 or email disastercustomerservice@sba.gov for more information on SBA disaster assistance.

# THANK YOU

Seattle City Light