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

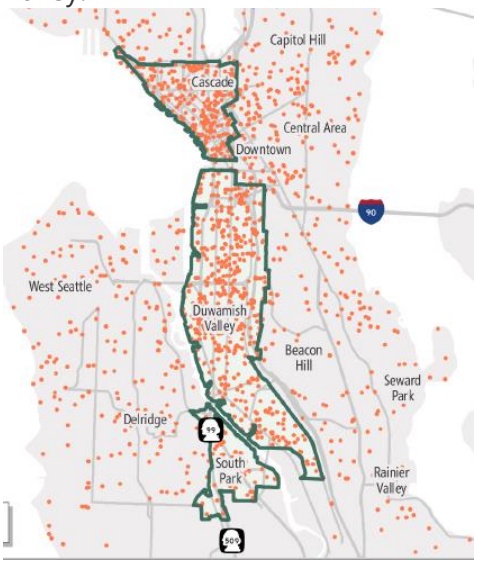
2. Gather relevant data for the problem we are attempting to solve

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]

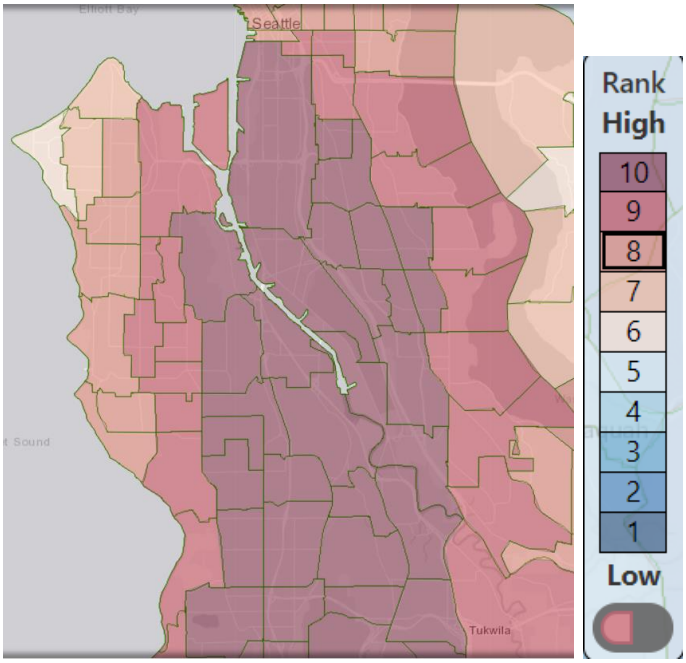
- Emissions from transportation is a major source of PM2.5 air pollutants in urban areas. (PM2.5 is fine particulate matter that is 2.5 microns or less in diameter.) PM2.5 is particularly dangerous because the fine particles can be inhaled and get deep into your lungs. Numerous scientific studies have 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 • Bonus incentives based on emissions reductions in environmental justice communities • 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. 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.