

Transportation Electrification Strategic Investment Plan

Angela Song, TE Portfolio Manager | April 7, 2022



Seattle City Light

WE POWER SEATTLE

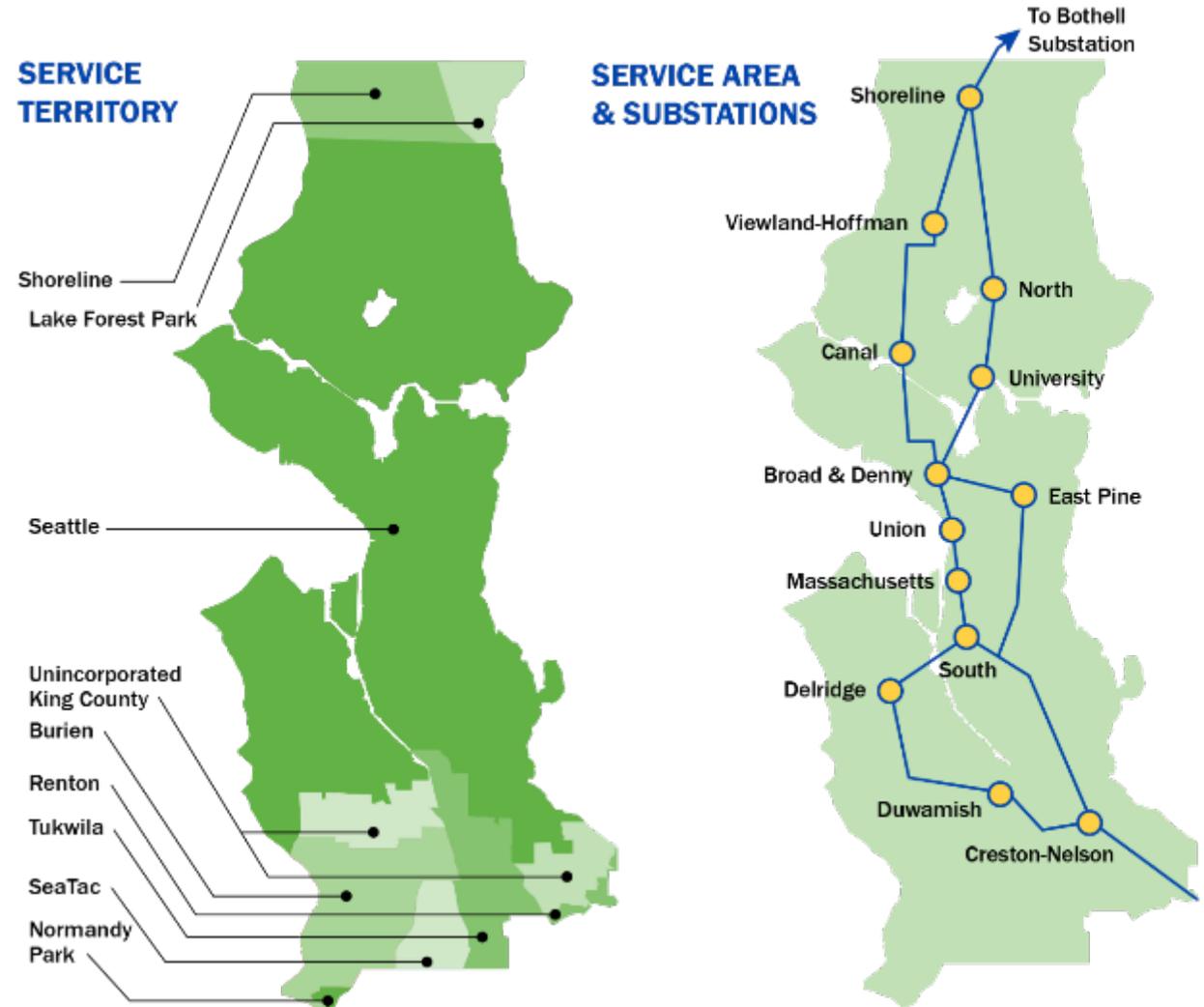
Outline

- + SCL and electrification
- + How are we preparing?
- + What are we doing?
- + What is next?



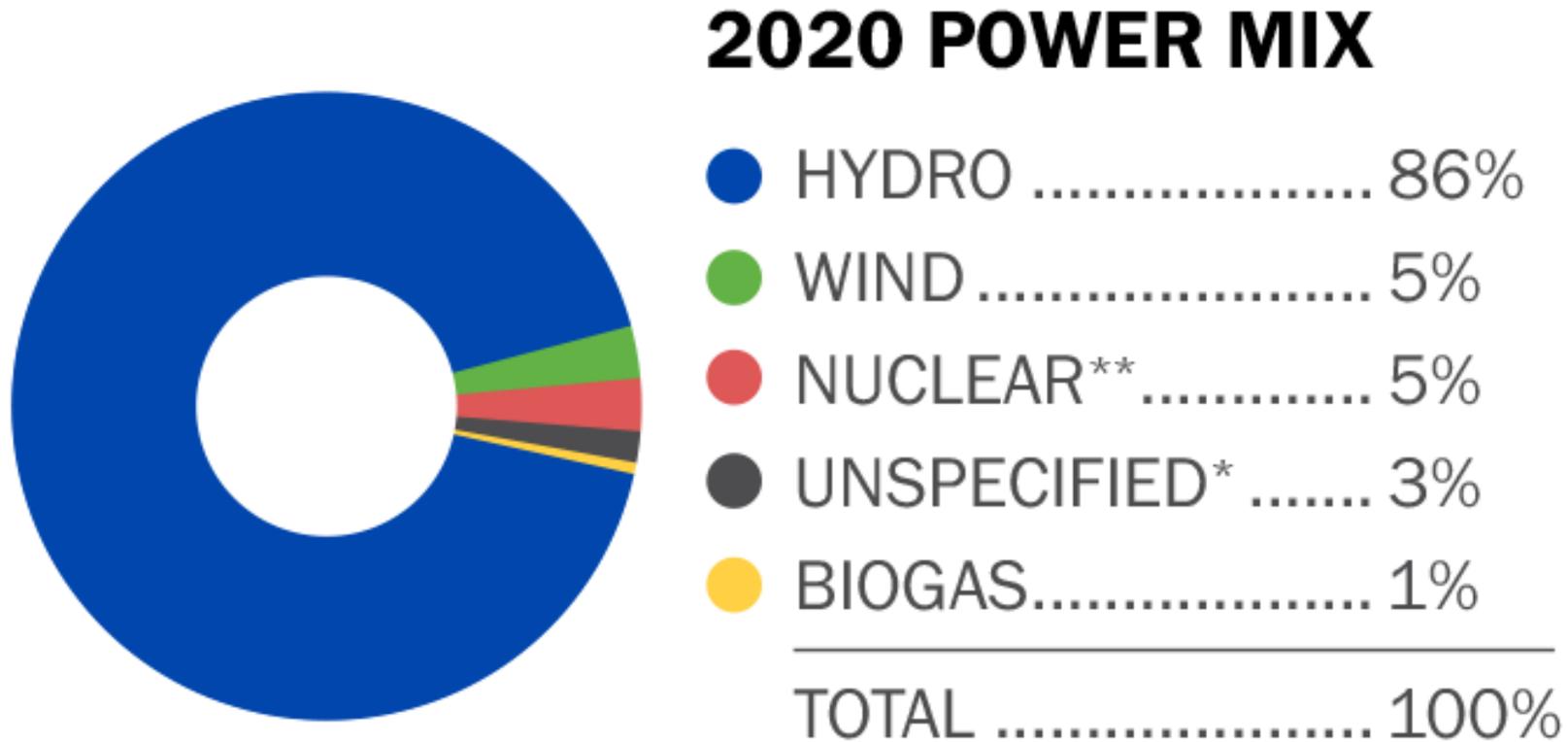
About Seattle City Light

- + Founded in 1910
- + Serve population of 940,000
 - 419,601 residential customers
 - 50,779 non-residential customers



About Seattle City Light

+ Net zero greenhouse gas emissions since 2005



**This fuel represents a portion of the power purchased from BPA.

2022-2026 City Light Business Strategies



Improve the Customer Experience



Create our Energy Future



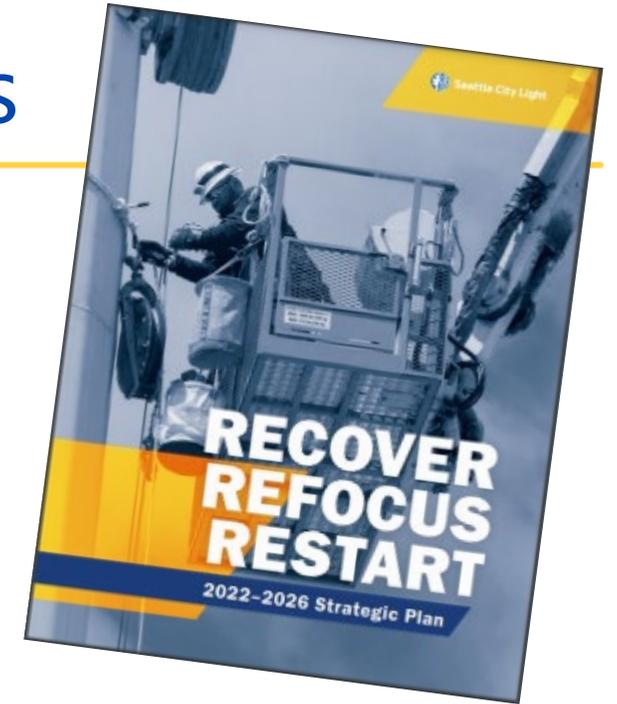
Develop Workforce and Organizational Agility



Ensure Financial Stewardship and Affordability



We Power



Create our Energy Future Objectives:



+ Grid & distribution of energy resources that **increase customer options**

+ Work to **reverse historical inequity** and avoid collateral harm

Do this via:

+ Grid modernization & integrated distribution system

+ Investment in electrification & Utility Next Portfolio

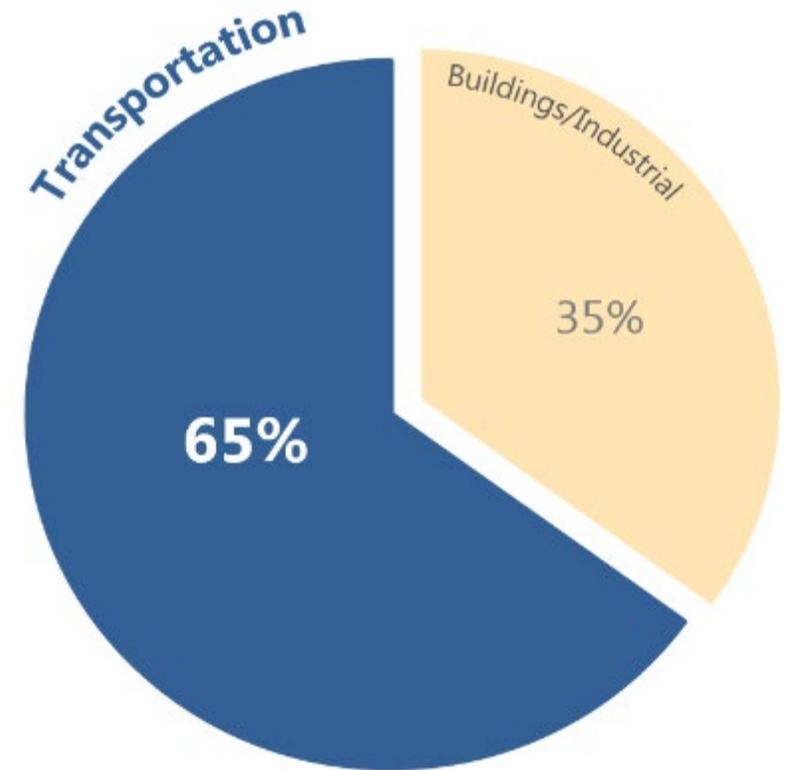
+ Implement building & transportation electrification

+ Regional leadership

- + Smart
- + Resilient
- + Flexible
- + Dynamic
- + Reliable

Electric Vehicles: The Future is Here

- + Transportation sector = 65% of greenhouse gas emissions
- + More electric vehicle options and **growing**
- + Better support and **financial incentives**



Greenhouse Gas Emissions by Sector

How are we
preparing?

EPRI Electrification
Assessment



Seattle City Light



Scope of the Electrification Assessment

- + How will electrification impact City Light's load over time?
- + How can City Light's distribution grid and resources best serve this load?



Overview of Key Insights

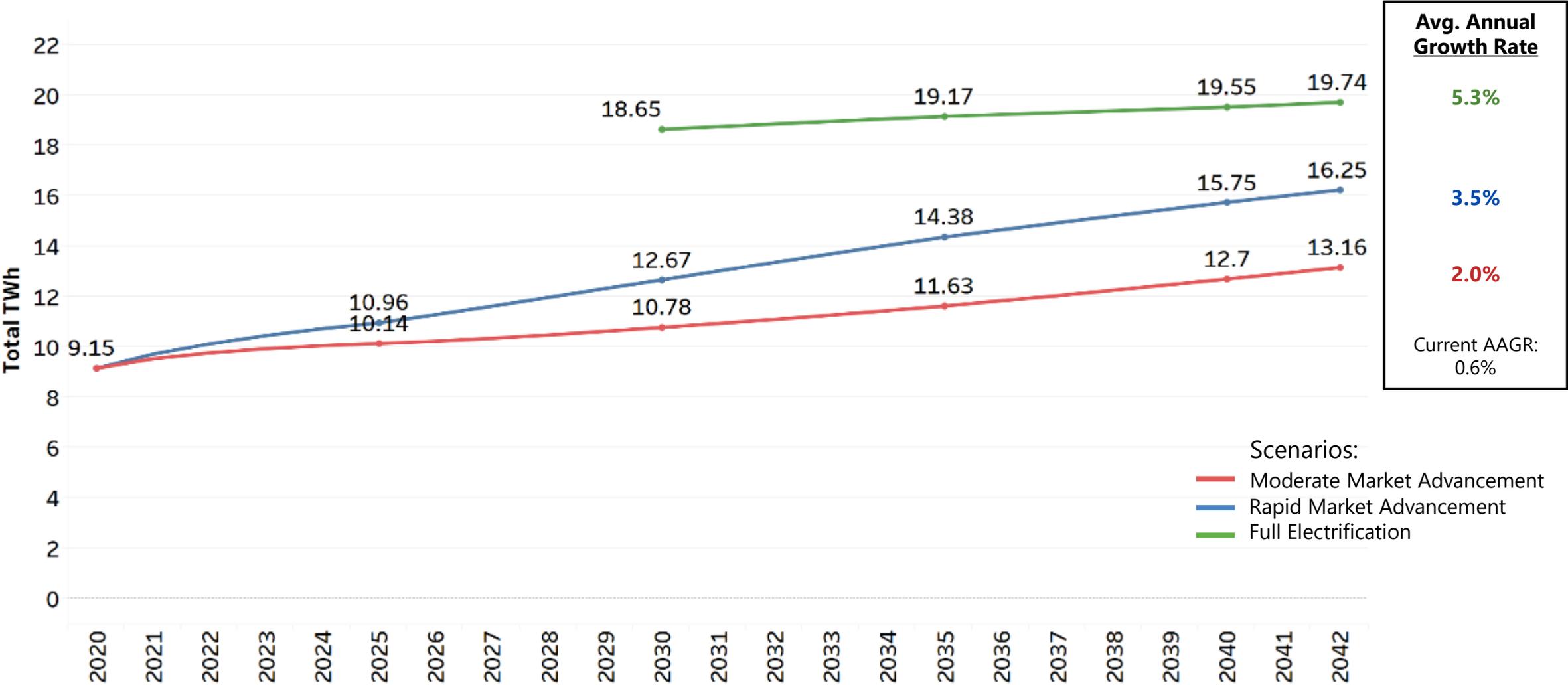


- + Electrification provides a path to meet the City's climate goals
- + Will increase SCL's load
- + We're laying the groundwork plan for a decarbonized future

Scenarios

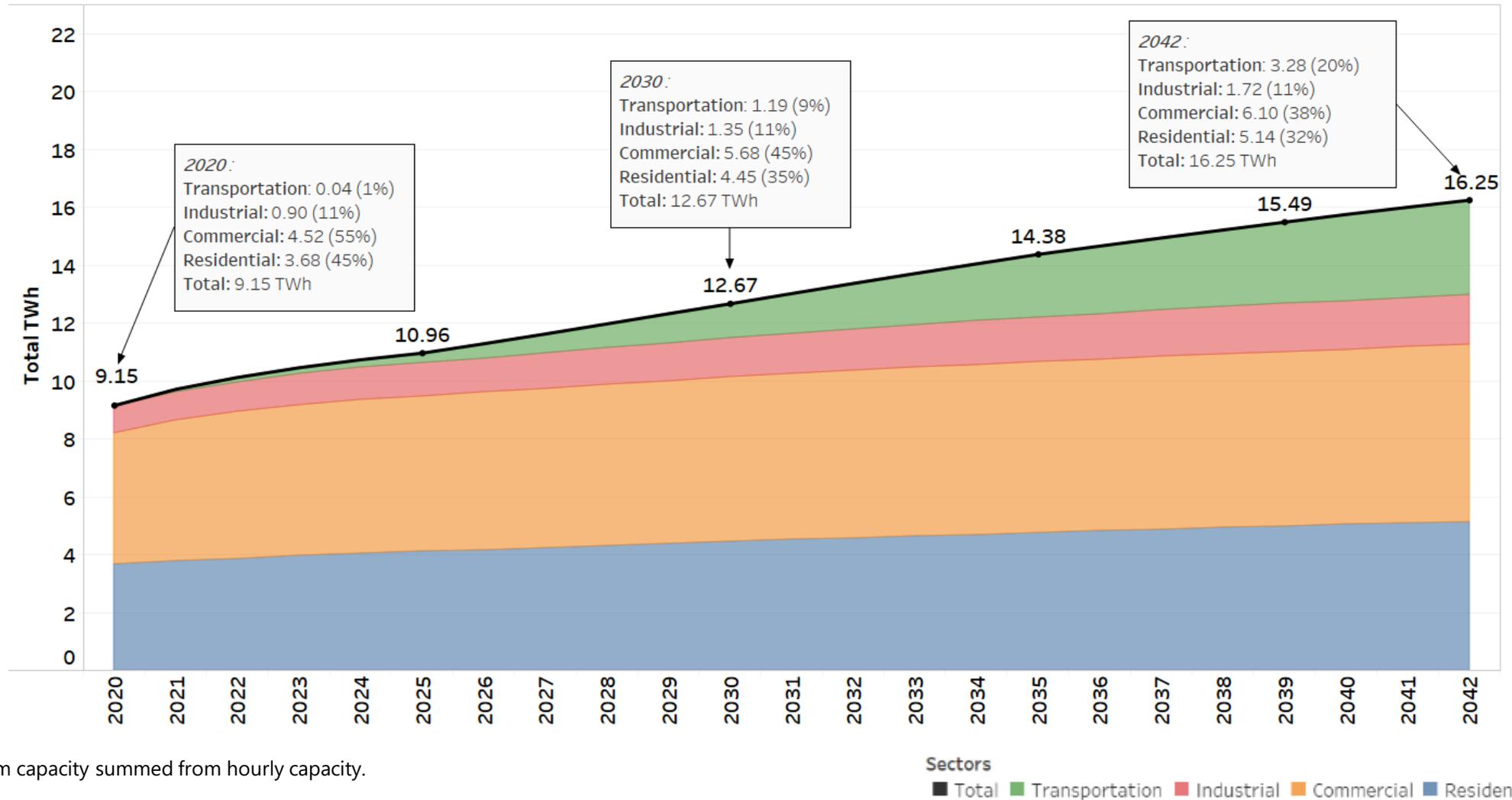
Scenario Name	Basis	Electric Transportation (electrified vehicle stock in 2030)	Buildings and Industry
01 Moderate Market Advancement	<ul style="list-style-type: none"> Baseline trajectory based on external projection/research 	<ul style="list-style-type: none"> Passenger vehicles: 11% Transit & school bus: 6-7% Light commercial, refuse, short-haul trucks: 3-4% Long-haul truck & intercity bus: 0-0.3% 	<ul style="list-style-type: none"> Future years driven by market growth, energy efficiency, and customer choice based on relative economics
02 Rapid Market Advancement	<ul style="list-style-type: none"> Aggressive trajectory consistent with the Climate Action Plan (CAP), Drive Clean Seattle, Seattle’s Clean Transportation Electrification Blueprint and ICCT 	<ul style="list-style-type: none"> Passenger vehicles: 30% Transit & school bus: 82% Light commercial, refuse, short-haul trucks: 27-30% Long-haul truck & intercity bus: 0-1% 	<ul style="list-style-type: none"> Increased electric adoption above and beyond moderate market advancement to align with 2017 CAP emissions targets
03 Full Adoption of Electrification Technologies [single point estimation]	<ul style="list-style-type: none"> City of Seattle’s Green New Deal and reference scenario that underlines the requirements for full electrification 	<ul style="list-style-type: none"> Passenger vehicles and all MDHD vehicle classes: 100% 	<ul style="list-style-type: none"> Full adoption of available electric technologies by 2030

Scenario Comparison: Total Load



Note: Total system capacity summed from hourly capacity

Total Load, Scenario 2: Rapid Market Advancement



Note: Total system capacity summed from hourly capacity.

Source: EPRI, Seattle City Light Electrification Assessment, Figure 1-3.

Conclusions & Insights—Electric Transportation

- + Energy impacts from transportation:
 - Passenger vehicles
 - Transit buses might be an early player
 - Important to understand emerging fleet loads
 - Much of EV charging is flexible load; results highly dependent on customer behavior
 - Potential area for programs to mitigate peaks



What are we doing?

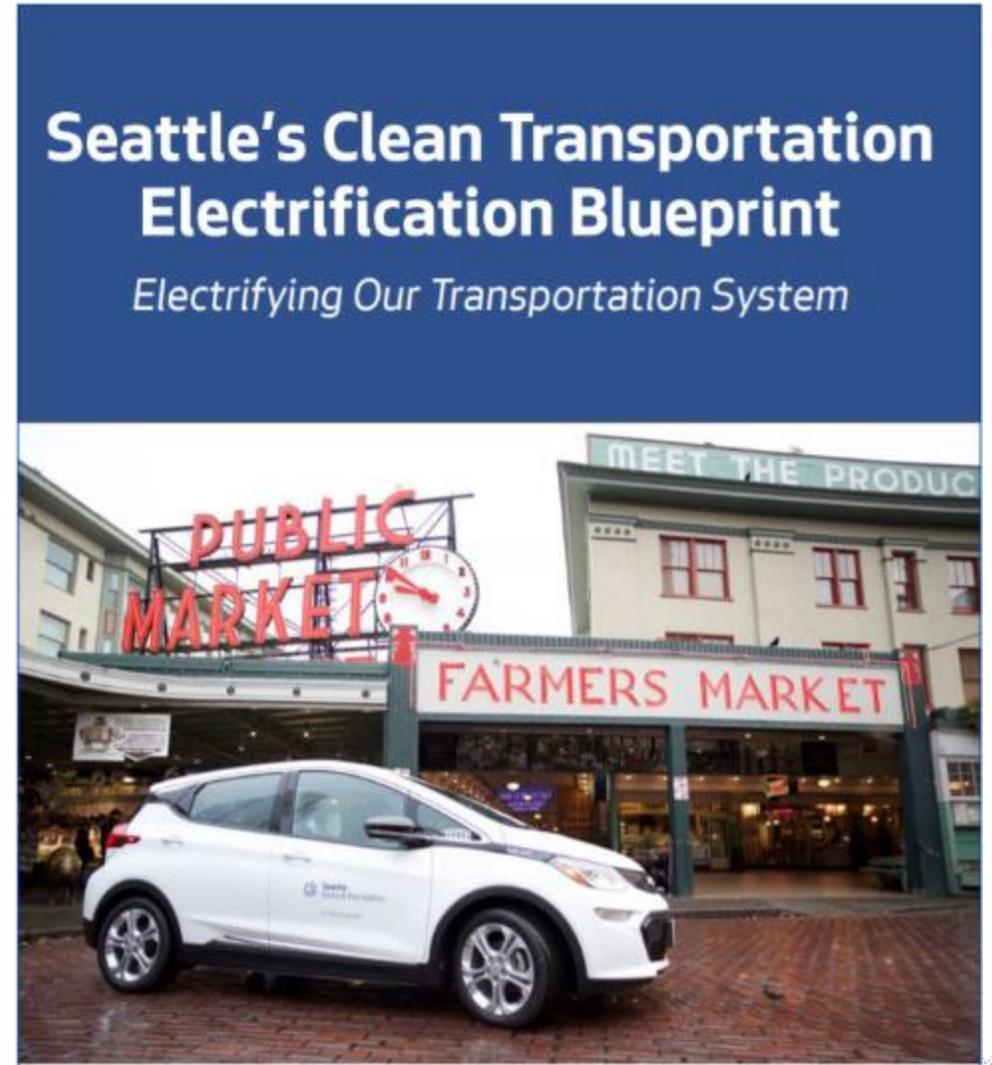
Transportation
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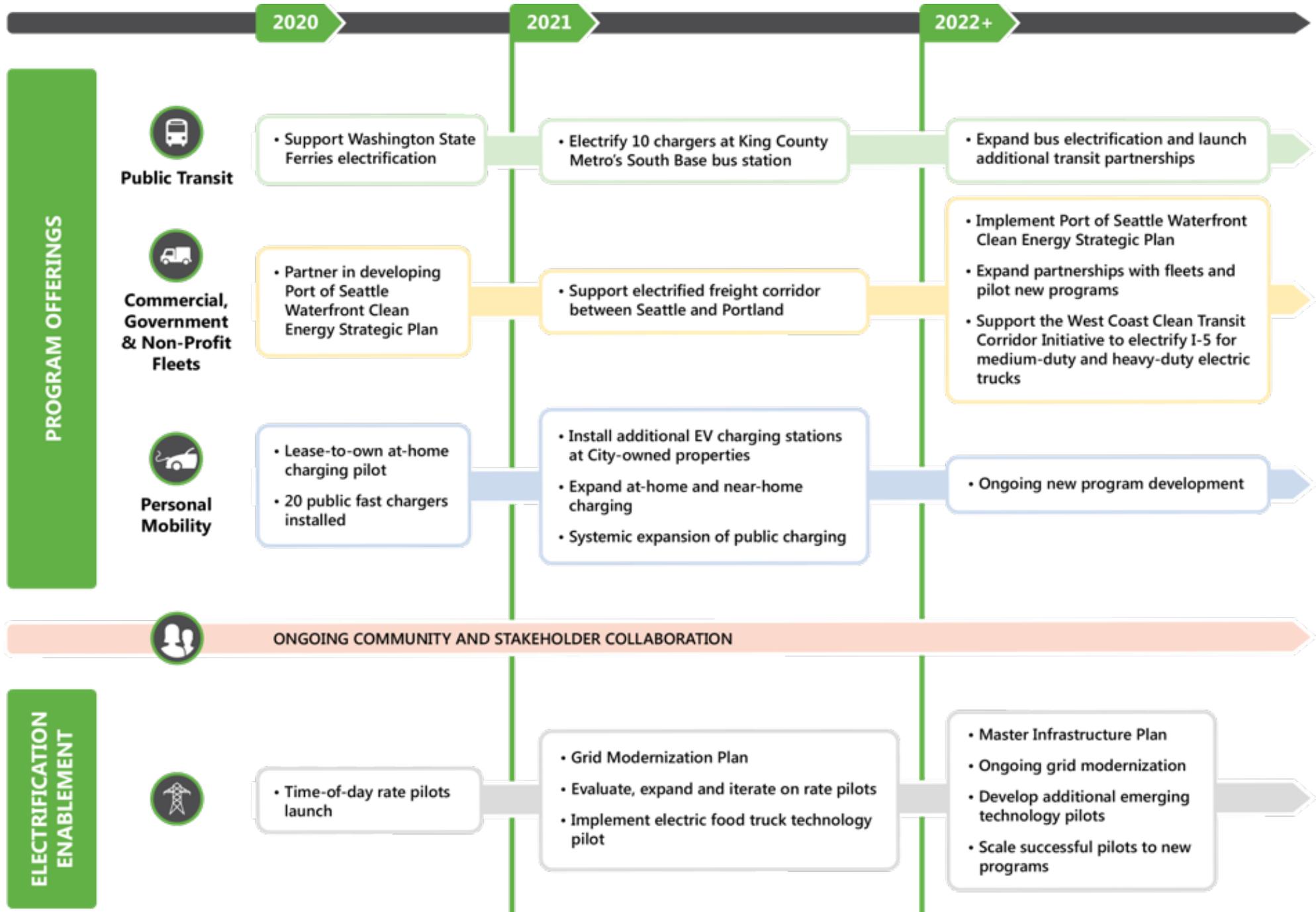


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Transportation Electrification Roadmaps





Maritime Transportation Electrification Program

- + Seattle Waterfront Clean Energy Strategy
- + WSF Colman Dock Terminal Electrification
- + Port of Seattle Pier 66 Shore Power

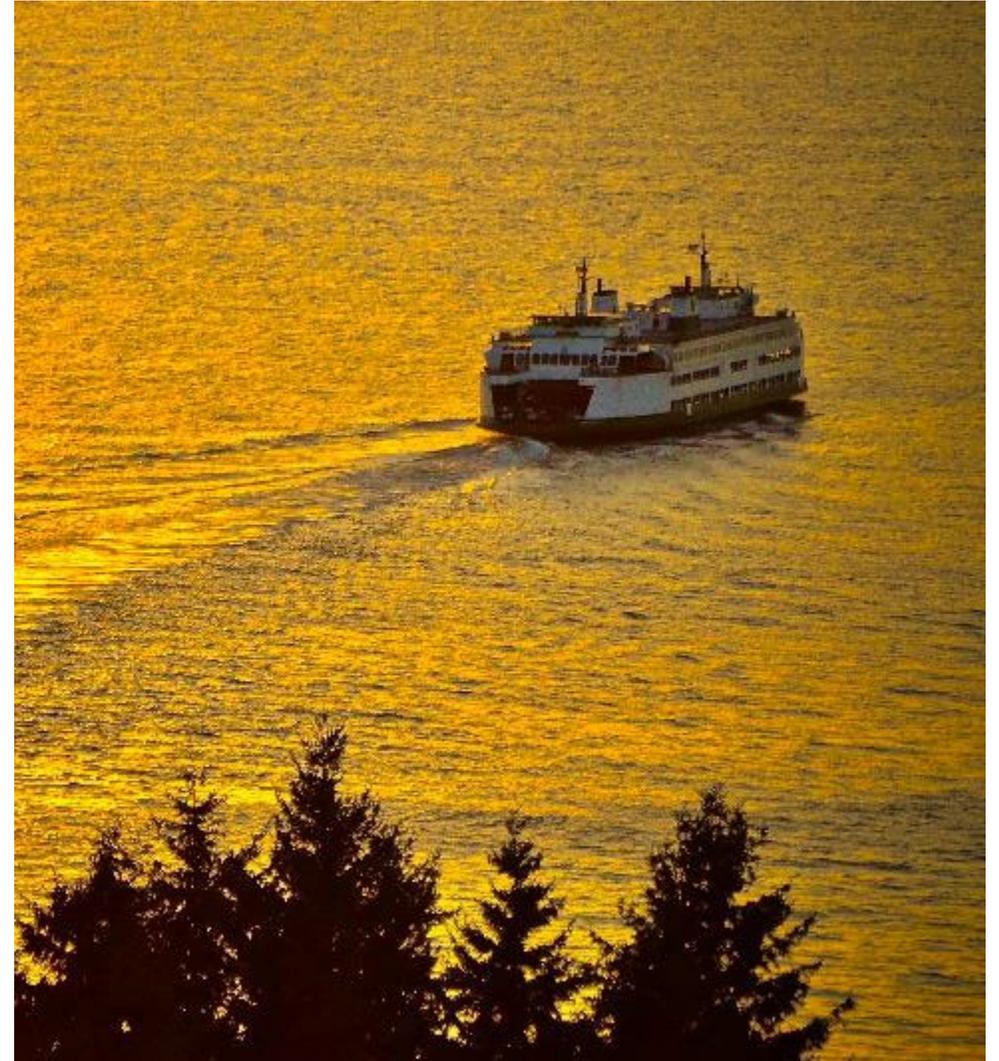
Seattle Waterfront Clean Energy Strategy Sites



- Port of Seattle Properties
- Northwest Seaport Alliance Managed Properties

Colman Dock Terminal Electrification

- + Washington State Ferries already converting ferries to plug-in battery-electric
- + Providing power to charge at terminals
- + WSF & SCL working together for the most reliable, flexible, resilient solution



Pier 66 Project



Seattle City Light Fleet Electrification Program

Fleet Advisory Services

- Free comprehensive, objective guidance from experts in EVs
- Customized fleet assessment reports with tailored EV recommendations, potential financial savings and emission reductions
- Incentive and grant program information and support



Available Now

Charging Solution Incentives

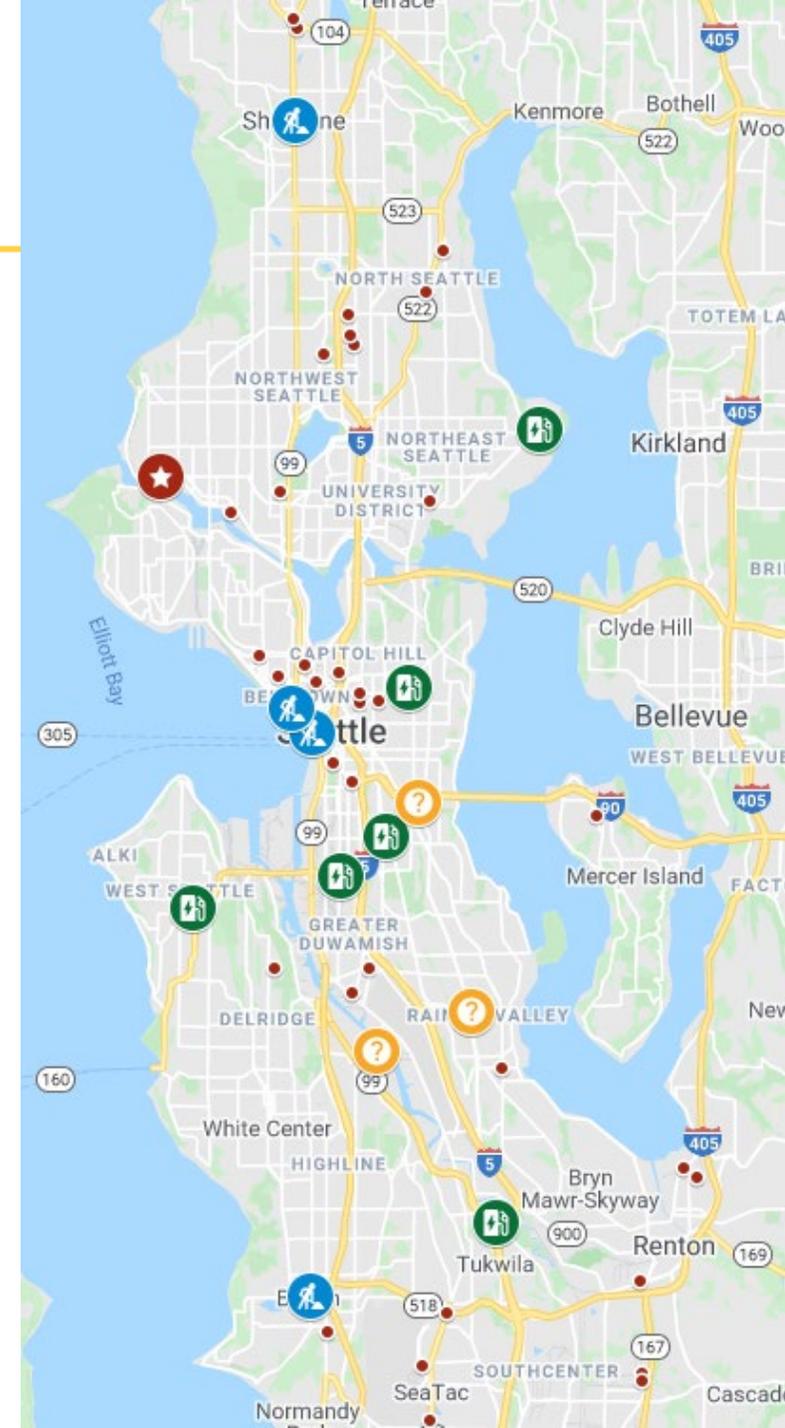
- Infrastructure funding and charger rebates to help offset capital costs
 - Customer-owned charger incentives
 - City-Light owned make-ready incentives
- Support through design, permitting, and construction processes



Launching June 2022

EV Fast Chargers

+ Actual & Planned in the City Light Service Area



What's Next?

2022+



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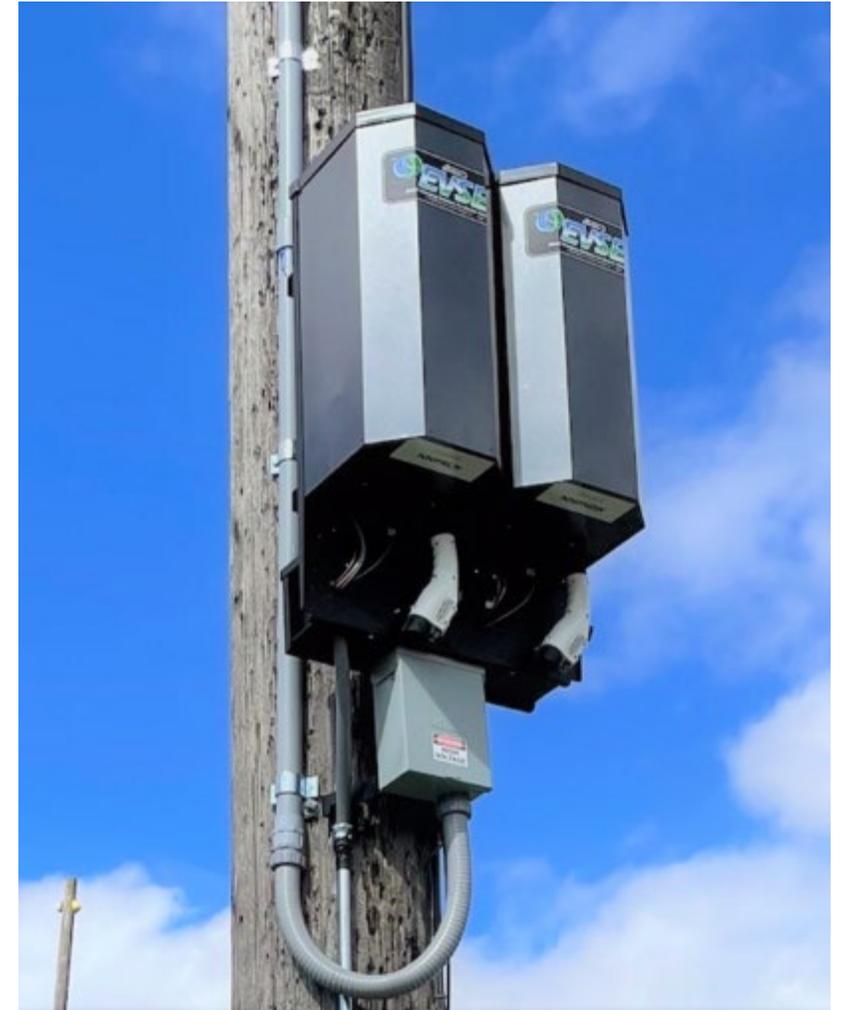
King County Metro Bus Electrification



- + South Test Bus Base
- + 52,000 sq. ft
- + Simultaneously charge 9 buses
- + Testing several technologies

Personal Mobility Electrification

- + Expand at-home and near-home charging for multi-unit dwelling residents
- + 52% of SCL customers are renters
- + Majority live in multi-unit dwellings
- + Launching late 2022



What's Next?

- + Community outreach and engagement
- + EPRI MD/HD Fleet Assessment
- + Hosting Capacity Maps
- + Roll out more programs
- + Leverage funding opportunities



Contact Information



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THANK YOU



Seattle City Light