

# BUILDING ELECTRIFICATION STRATEGY



**Seattle City Light**



# Letter from the GM/CEO

Seattle City Light is in the midst of a major transformation. A transformation to modernize our grid, recalibrate our resource planning and programs, and redefine our services. We are rapidly increasing our capacity to partner with our customers and communities in their transition to an electrified future.

In response to evolving customer demand and state and local policies aimed at addressing climate change, City Light is building on our transportation electrification investments and grid improvements to make building electrification a reality across our service territory. We are focused on ensuring this transition is accessible and affordable for all and centered on communities where overburdened populations are more likely to experience the negative effects of air pollution and related health conditions.

City Light has been a greenhouse gas emissions-neutral utility since 2005. City Light's Building Electrification Strategy recognizes the role our electricity plays in decarbonization and the scale of change needed to enable a once-in-a-century revitalization and modernization of the homes and buildings vital to our communities and our economy. While we anticipate challenges throughout this transition, we also recognize the tremendous opportunity to meet state and local climate policy commitments while supporting our customers along their electrification journeys.

We are committed to maximizing benefits for our customers in this transition. Reducing upfront costs, helping to develop market capacity and a skilled and diverse workforce, and streamlining service upgrades are just a few examples of the critical actions we are launching to make building electrification work for our customers and the communities we serve.

Collectively, we can all play an instrumental role in protecting our environment and elevating our communities. This strategy confirms City Light's commitment to support this transition and lays out foundational actions for how we will deliver on this commitment. Many of the actions are already in the works, and we are excited to roll out innovative pilots, programs, and technical resources in 2024 and beyond!

Sincerely,



Mike Haynes  
Interim General Manager/CEO

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# Introduction

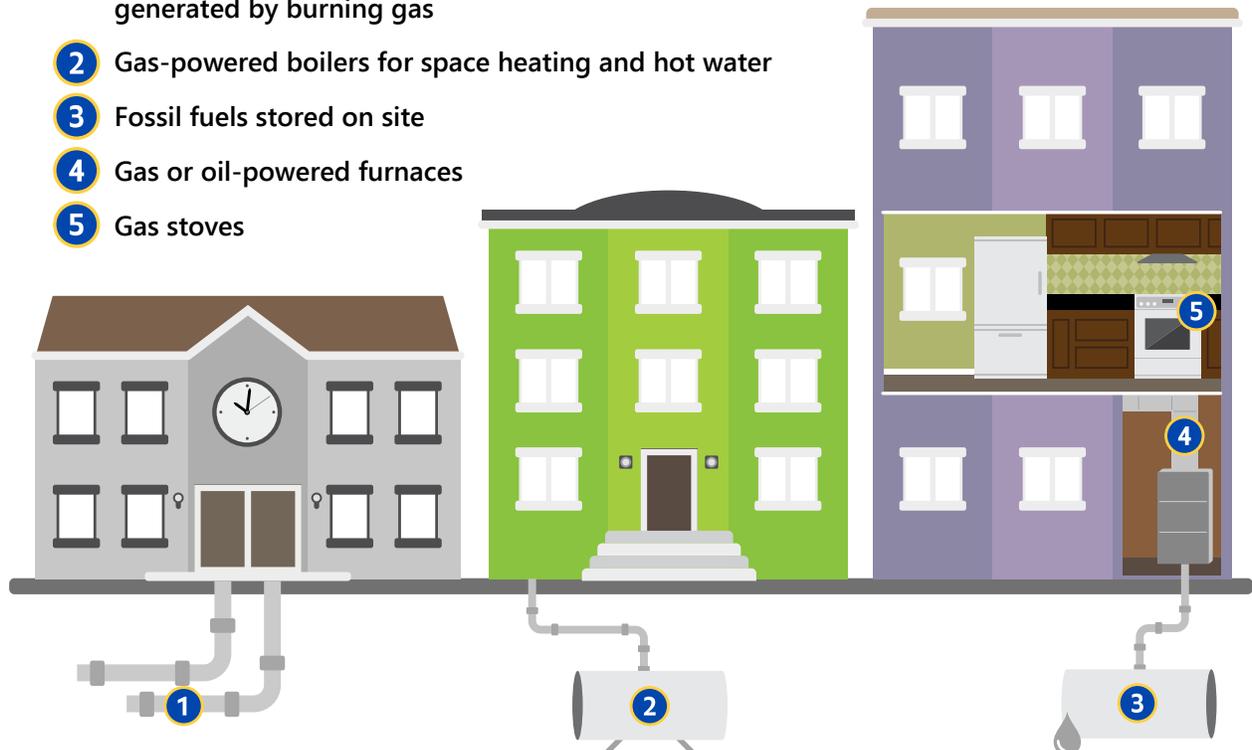
The City of Seattle and Washington state have established ambitious climate pollution reduction commitments. Leveraging Seattle City Light's carbon-neutral electricity is the most feasible and affordable pathway to enable building decarbonization for our customers. To remove climate pollution from buildings and homes, we must transition from carbon-emitting power sources like gas and oil to using renewable electricity from the grid for heating and cooling, water heating, cooking, clothes drying, and industrial applications.



The vast majority of building emissions result from burning fossil fuels in buildings for space and water heating. These emissions are contributing to climate change on a global level, with effects felt locally in the form of hotter summers, milder winters, and increased wildfires. Building emissions are also a major source of hazardous air pollutants affecting indoor and outdoor air quality in neighborhoods across our service territory.

## WHERE DOES CLIMATE POLLUTION IN OUR BUILDINGS COME FROM?

- 1 District steam for space and water heating is generated by burning gas
- 2 Gas-powered boilers for space heating and hot water
- 3 Fossil fuels stored on site
- 4 Gas or oil-powered furnaces
- 5 Gas stoves



City Light has centered this strategy's development work on three core values: equity, environment, and operating the grid as an asset to deliver public good. This values framework guides the utility to maximize the benefits of building electrification while minimizing unintended consequences. Throughout 2022 and 2033, City Light developed this strategy, which was informed by listening sessions and surveys with customers, community members and trade allies; workshops and conversations with staff from across the utility, other City departments and government agencies; technical research on grid capacity, market and workforce trends; and the overall direction of national and local policies and funding.

To guide City Light's efforts in building electrification, we established a goal—the utility's vision for the future state—and we identified strategic objectives, the key priorities that must be realized in order to achieve the strategy goal, which are summarized below.

This Building Electrification Strategy document details how we arrived at these goals and objectives and what actions the utility will take that align with the objectives and help us meet the strategy goal.

## STRATEGIC OBJECTIVES

Goal: Partner with customers and communities to leverage our carbon-neutral electricity to deliver equitable and affordable building decarbonization.



**Increase Access and Awareness**



**Build the Workforce**



**Offset Electrification with Efficiency**



**Reduce Upfront Costs**



**Strengthen Grid Resiliency**



# Leading with Values

The Building Electrification Strategy is guided by the values framework that was originally established in our Strategic Plan<sup>1</sup> and reinforced in our Transportation Electrification Strategic Investment Plan:<sup>2</sup> equity, environment, and the grid. By centering on these values, we have a strategy that seeks to maximize the benefits of building electrification and minimize any unintended consequences.

## Equity

We prioritize engagement with overburdened communities, particularly those that have been historically excluded, to ensure the strategy results in solutions that integrate the intersecting priorities of these communities including public health, housing and energy affordability, and living-wage jobs.

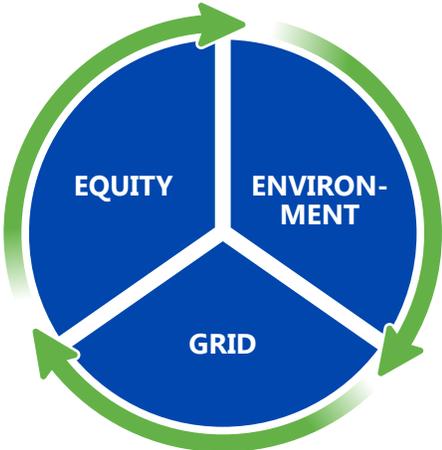
## Environment

City Light is a carbon-neutral utility; when customers replace fossil fuel equipment with electric, it significantly reduces climate pollution. When we experience a smoky heat wave, having access to heat pumps is more than just comfort—it can be a public health necessity and a tool to fight climate change.

## Grid

Intentional and direct utility engagement and programming can influence contractors and customers to ensure building electrification technology is installed and operated in a way that minimizes impacts to the grid, resulting in greater return on this valuable publicly owned asset and thus drive more affordable electricity rates in the long term.

### VALUE FRAMEWORK & BENEFITS



- Energy Affordability • Jobs
- Air Quality & Health
- Resiliency & Reliability • Comfort





# Engagement & Outreach

Throughout 2022 and 2023, City Light engaged communities and other stakeholders through a variety of pathways including hosting listening sessions with frontline community members, participating in customer-organized forums, and meeting one-on-one with diverse audiences including community-based organizations, heat pump installers, and large customers.

City Light acknowledges that our electric service area is on ancestral Coast Salish land, specifically the land of the Duwamish, Suquamish, Stillaguamish, and Muckleshoot People, and our energy generation facilities impact the cultural and natural resources of the Kalispel, Lummi, Nlaka'pamux, Nooksack, Samish, Sauk-Suiattle, Snoqualmie, Stillaguamish, Stó:lō, Suquamish, Swinomish, Ts'elxwéyeqw, Tulalip, and Upper Skagit People. We have heard concerns from the Tribes about the historical and ongoing harm they've faced during energy transitions and seek to center their experiences and voices as we create our energy future together.

Our community and stakeholder engagement is summarized in Appendix. We used this engagement and outreach to develop the strategy iteratively:

## ▶ PHASE 1

City Light finalized a strategy framework, conducted nine workshops with subject matter experts from across the utility, incorporated research and previous community engagement, and held community listening sessions to develop the first draft of the strategy.

## ▶ PHASE 2

In partnership with community partners, City Light used the draft strategy to engage communities across the region on building electrification and ensure that the strategy reflects the community's wants and needs.

## ▶ PHASE 3

City Light incorporated the feedback and updated the finalized strategy based on public engagement.

During phase 2, we worked with community partners to engage customers—particularly those from overburdened communities—on the anticipated benefits of electrification, potential

unintended consequences, and community priorities for programming and investment. In total, City Light attended 12 community events, hosted 7 public workshops and listening sessions, and participated in multiple smaller meetings with community-based organizations. These are the themes we consistently heard from our communities:

### **1. Cost savings**

Although community members consider climate resiliency a high priority, they are equally concerned about the costs of electrification. Community members want more in-depth explanations on the upfront and ongoing costs of electrification, particularly in comparison to their current energy bills.

### **2. Awareness of financial incentives and tax credits**

Many community members are unaware of existing incentives or don't know how to take advantage of utility and government incentives, resulting in a feeling of being "left behind." Community members expressed frustration with the paperwork required for incentives and suggested translating more materials, increasing engagement in frontline communities, and providing more hands-on education, (e.g., workshops or community-based "energy coaches") particularly on how to utilize financial incentives and tax credits to increase community access.

### **3. Uncertainty around new technologies**

While community members were excited to learn about the cooling and climate benefits of electric heat pumps, they want more information about electrification technologies to make informed decisions. Customers are interested in how new technologies compare to what they currently have, particularly in terms of equipment location, physical size, durability, and maintenance. They also want information on what to expect when installing new technologies, such as how to find an installer, when to install, and how long the installation will take.

### **4. Need for more flexible solutions**

Most of City Light's residential customers are renters; and renters, especially multifamily renters, often feel left out in this transition because many incentive programs are designed to benefit homeowners. Likewise, community members expressed frustration with utility and government programs' strict income limits—customers who are over the income-eligibility limits by just a few dollars are effectively unable to participate in any incentive or bill assistance programs.



### 5. Resilience of an all-electric grid

Community members are concerned about what happens during a power outage in an electrically-heated home. Many expressed that this fear will likely keep them from switching to all-electric. Similarly, customers have many questions about what role rooftop solar and community solar can play in improving grid resiliency as more customers electrify.

### 6. Tailoring to the younger generation

The transition to switching to electric is a journey that will not occur overnight. It is crucial to signify the importance of electrification not only to household and business decision-makers, but also

the younger generation. Youth engagement was flagged as particularly relevant to support equitable workforce development.

### 7. Commitment and accountability from Seattle City Light

Providing more information about City Light's ongoing initiatives and projects regarding emissions reductions and electrification can increase community confidence in the energy transition. Additionally, following through and following up on community wants and needs establishes the trusting foundation necessary to support equitable and affordable electrification.

## Engaging communities to create City Light's Building Electrification Strategy

City Light is proud to work closely with community partners like the two highlighted below to improve the depth and breadth of our community engagement and create a strategy that reflects the wants and needs of our communities:

- Seattle Department of Neighborhoods [Community Liaisons](#): Community Liaisons are embedded community leaders from a variety of immigrant and refugee communities, communities of color, and communities of seniors, youth, and people with disabilities. City Light partners with the Community Liaisons to engage customers on the strategy at community events and recruit and educate participants in a heat pump pilot in the Skyway neighborhood of unincorporated King County south of Seattle.



*Community Liaisons work alongside City Light staff at the Rainier Beach Boo Bash.*

- [Environmental Coalition of South Seattle \(ECOSS\)](#): Building on our relationship established through our Transportation Electrification work, ECOSS began incorporating building electrification into their engagement in 2023 to respond to community's request to engage on electrification and climate change more holistically. Starting in 2024, ECOSS will support the implementation of the Building Electrification Strategy's community engagement and education.



# Strategy Context

In addition to community and stakeholder engagement, City Light explored a wide range of important and complex topics to provide context for our analysis and to inform the strategy:

- **Bold policies:** Federal, state, and local policies and mandates moving towards low and zero-emissions buildings by 2050.
- **Equity and community resilience:** Our communities care about addressing climate change and maintaining energy affordability.
- **Workforce capacity:** Our region has an urgent need for a more robust and diverse workforce to support equitable and affordable decarbonization.
- **Market and technologies:** Heat pumps are a proven technology that can meet our customers' heating and cooling needs and provide resiliency against extreme heat, but electrification can be challenging for some building types.
- **Funding the transition:** Historic federal funding opportunities provide incentives to support electrification technology adoption.
- **Utility transformation:** Customer energy efficiency remains a least-cost peak mitigation resource and we have opportunities to explore new ways to manage electrified loads flexibly.

People are at the heart of all change processes, and this is especially true with the scale and pace required for the economy-wide decarbonization called for by state and local government commitments. City Light strives for a strategy that can animate collective action and help people successfully implement and benefit from building electrification. Key shifts in carbon policy, critical

building electrification technologies, and incentives and financing available to drive the transition are affecting the building sector ecosystem and our customers. We are leveraging these shifts to shape City Light's building electrification strategy with a focus on collective action and shared benefits as we transition to a clean and healthy building stock.

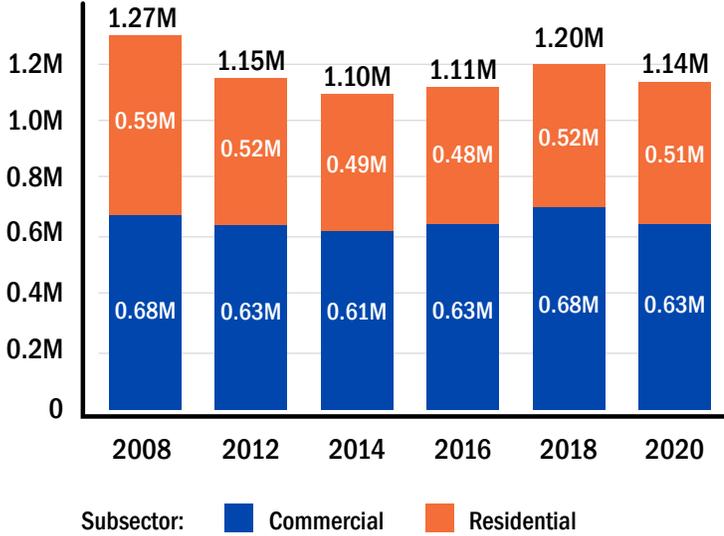
# Bold Policies

Federal, state, and municipal leaders have implemented a series of policy and regulatory changes to drive rapid, economy-wide decarbonization. In line with the Paris Climate Agreement, the United States has committed to achieving net-zero emissions by 2050 and has a target to reduce 50% of U.S. emissions from 2005 levels in 2030.<sup>3</sup> Washington state has set an economy-wide emissions limit of 45% below 1990 levels by 2030 and 95% below 1990 levels by 2050.<sup>4</sup> To achieve these limits, Washington must reduce building emissions in cities and towns across the state by approximately 96% below 2020 levels by 2050.<sup>5</sup>

Washington has passed major policies to meet its emissions limits. The 2019 Clean Energy Transformation Act requires all electric utilities in Washington state to eliminate greenhouse gas emissions by 2045.<sup>6</sup> The 2021 Climate Commitment Act requires the state to establish a comprehensive, market-based program to reduce carbon pollution by setting greenhouse gas reduction targets for Washington’s largest emitting sources and industries. Washington State’s Energy Strategy has identified electrification, combined with efficiency, as the least.<sup>7</sup>

King County has established targets to reduce fossil fuel use in the buildings 20% below 2017 levels by 2030, and 80% by 2050.<sup>8</sup> The County has developed many of its decarbonization targets and commitments in collaboration with partners from the King County-Cities Climate Collaboration. This collaboration consists of 22 King County cities, including the City of Seattle and six of City Light’s franchise cities.<sup>9</sup>

**EMISSIONS IN METRIC TONNES OF CO2e**



Source: Seattle’s 2020 Community GHG Emissions Inventory



## BUILDING POLICIES SUMMARY

BUILDING SEGMENT	CODES* & STANDARDS
New commercial and residential	2021 Washington State Energy Code and Seattle Energy Code: energy efficiency requirements will increasingly drive new buildings to opt for high efficiency electric equipment such as heat pumps rather than inefficient fossil fuel combustion equipment. <sup>25</sup>
Existing commercial & multifamily >20k sf	<ul style="list-style-type: none"> <li>• State Clean Building Performance Standard includes energy use intensity caps that reduce over time<sup>26</sup> (different provisions for multifamily and smaller commercial).<sup>27</sup></li> <li>• Seattle Building Emissions Performance Standard, once adopted, will include GHG per square foot caps that reduce over time<sup>28</sup></li> <li>• 2021 Seattle Energy Code requires heat pumps for equipment replacements in some cases.</li> </ul>
Existing commercial <20k sf	No state or Seattle building performance standards
Existing residential	No state or Seattle building performance standards

In 2017, the City of Seattle committed to meet or exceed the goals of the Paris Climate Agreement,<sup>10</sup> including reaffirming its commitment to becoming carbon-neutral by 2050 and reducing community greenhouse gas emissions 58% below 2008 levels by 2030.<sup>11</sup> The Seattle Climate Action Plan calls for a 39% emissions reduction in buildings below 2008 by 2030 and an 82% reduction by 2050.<sup>12</sup> Seattle also has more aggressive emissions and equity goals in the Seattle Green New Deal, including making Seattle free of climate pollutants by 2030.<sup>13</sup>

Although on a per capita basis Seattle's emissions have continued to decrease since 2008, in aggregate, Seattle's core emissions from buildings haven't meaningfully decreased in a decade despite increasing energy efficiency.<sup>14</sup> The primary source of Seattle's building sector emissions is onsite direct use of fossil fuel for space and water heating in homes and commercial buildings.

A number of state and municipal policies are designed to decrease energy use and emissions in buildings. Washington state and the City of Seattle are using energy codes and building performance standards to reduce energy use and emissions for most new and existing building segments. To fully decarbonize the building sector and maximize health outcomes, nearly every home and building needs to electrify by 2050. City Light recognizes the central role that our electricity plays in supporting customer compliance with these regulations and in meeting state and local decarbonization commitments.



## Equity & Community Resilience

This strategy aims to extend the benefits of electrification to underserved communities—including energy affordability, air quality, jobs, power reliability, and comfort—and center the strategy’s implementation on the wants and needs of overburdened communities.

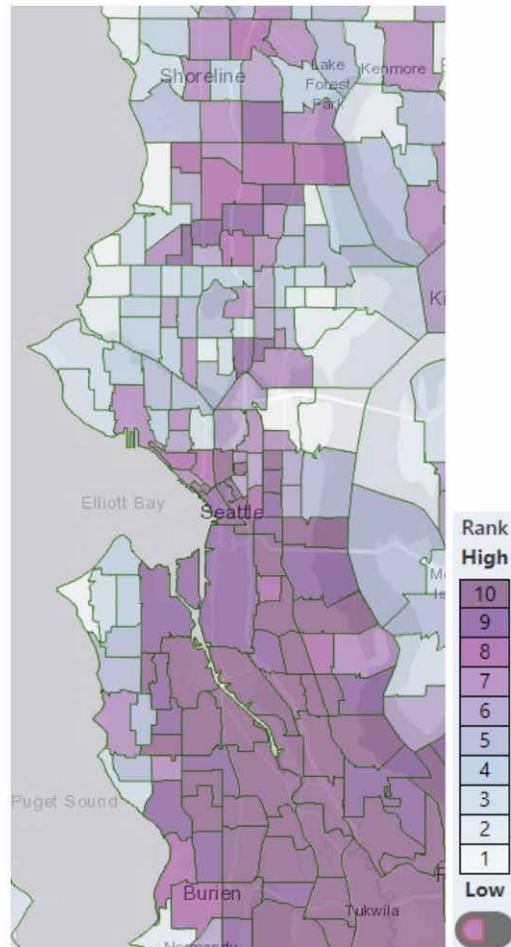
Overburdened and frontline communities include communities that are predominantly home to Black, Indigenous, and People of Color (BIPOC) as well as immigrants, refugees, persons experiencing low incomes, English language learners, youth, and seniors as well as communities that have faced undue historic and current environmental and economic burdens.

Whether due to the cooling or climate benefits, City Light customers are buying and installing heat pumps at increasing rates each year. However, without a focus on equity and community resilience, City Light customers who cannot afford beneficial technologies like heat pumps may be left behind in the decarbonization transition. Significant and historical inequities must be addressed as an integral part of decarbonization. BIPOC residents are significantly more likely than white residents to be exposed to air pollution that research has shown to cause the development and aggravation of many health conditions, including asthma, heart disease, and cancer.

City Light’s Building Electrification Strategy is a component of the City’s work to address these inequities, and City Light will focus on the wants and needs of frontline communities in advancing this strategy. City Light is committed to lead with equity grounded in the City’s [Race & Social Justice Initiative](#) and [Green New Deal](#). Building on the relationships and partnerships established through our transportation electrification efforts, City Light is committed to partner directly with communities to create an energy future where everyone can thrive. This approach requires engagement early

and often so that our communities, and overburdened communities in particular, see their values and desired outcomes reflected in our collective work.

To that end, City Light has engaged community members in several listening sessions on building electrification and has been surveying customers more broadly on our clean energy future—as summarized above in [Engagement and Outreach](#). The overall conclusion: Our communities care deeply about the climate, and they prioritize energy affordability and health.



Washington’s Environmental Health Disparities map overlays threats (e.g., fossil fuel pollution) with vulnerabilities (e.g., socioeconomic factors) to determine the risk level of environmental health disparities. Areas shaded darker are communities at higher risk of experiencing health disparities.

## WHAT WE'VE HEARD FROM CUSTOMER & COMMUNITY ENGAGEMENT

94% of all respondents are very or somewhat concerned about climate change.

80% of all respondents believe that City Light's power supply is **less than 85% renewable**.

Source: Clean Energy Future Survey

"Most people do not know your electricity is clean."

Source: 'Create Our Energy Future' message testing

"We need these changes, but I'm worried it will be on us to pay for it—our living expenses are too high already."

"Everybody would switch if you help us out. Everybody wants to go green — nobody wants to do it alone."

Source: Building Electrification community listening sessions

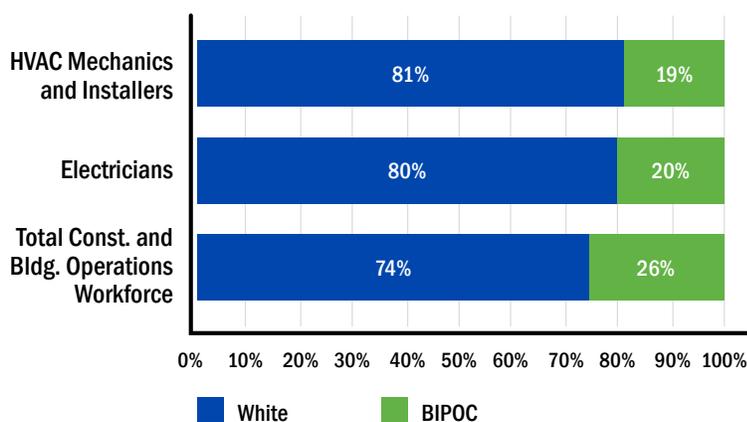
## Workforce Capacity

There is an urgent need for a more robust and diverse workforce. In Seattle (and nationally), there is currently a shortage of people working in the technical trades (HVAC contractors, electricians, weatherization, etc.) and professions (mechanical engineers) needed to install efficient heat pumps, upgrade electrical panels, and insulate homes and buildings. The workforce will need to be trained and rapidly ramped up to align with the scale and pace of the transition envisioned at the policy level. The shortage of qualified installers in particular has resulted in persistent cost inflation of heat pump installations in the Seattle area.

Furthermore, the existing workforce has become less diverse over time. Findings based on two studies funded by City Light, in 2016 and in 2021, show that BIPOC and women are underrepresented in technical trades and professions. Whereas BIPOC represent approximately 37% of the working age population in Seattle, only about 30% of engineering professionals and journey workers are BIPOC. Less than 20% of managers and supervisors are BIPOC, and less than 10% are women.<sup>15</sup>

The workforce studies also show that 48% of those entering the workforce (ages 19-22) are BIPOC. These demographic trends confirm that to support building electrification, City Light must support increasing workforce diversity.

**RACE & ETHNICITY BY OCCUPATION, SEATTLE AREA, 2020**



Source: Seattle Jobs Initiative 2021 Energy Efficient Construction & Building Occupations Workforce Report

# City Light has provided workforce education, technology demonstration, and technical assistance for over 30 years.

Founded in 1989, Seattle City Light's [Lighting Design Lab](#) has provided education, demonstration, and technology evaluation, and technical assistance for lighting professionals and customers throughout the Pacific Northwest. Lighting has historically been the product category with the most energy savings potential and thus a strategic technology in meeting regional energy conservation requirements and lowering customer bills. As the lighting market has transformed over time (the most efficient lighting technology—LED—is now industry standard), the Lab's focus has pivoted to supporting the workforce through the next major market transition: electrification.

The Lab provides City Light with a unique foundation to support education and demonstration of building electrification technologies such as heat pumps and smart electrical panels. The Lab is a platform for City Light to provide customers and trade allies with technical assistance in navigating building regulation compliance (e.g., Seattle Energy Code or Building Emissions Performance Standards) and funding opportunities. The Lab is also partnering with workforce development organizations through initiatives like King County's JumpStart, to tailor our training and education to support



on-ramps to living wage jobs, with a focus on youth, BIPOC, and women.

The Lab's education and training offerings are also key to reducing installation costs and ensuring installation quality and customer satisfaction. Gaining foundational and technical knowledge will increase confidence with technologies—including concepts like product selection, sizing, commissioning, maintenance, and troubleshooting—and minimize installation uncertainties that can drive up project costs. Similarly, properly trained contractors will result in successful projects and satisfied customers.

## Market & Technologies

Building electrification involves the transition from fossil fuels, such as gas and heating oil, to electricity for various end uses. For most residential and commercial building types and applications, electric heat pumps for space heating and water heating are a proven, widely available technology and are three to five times more efficient than alternative technologies.<sup>16</sup> Heat

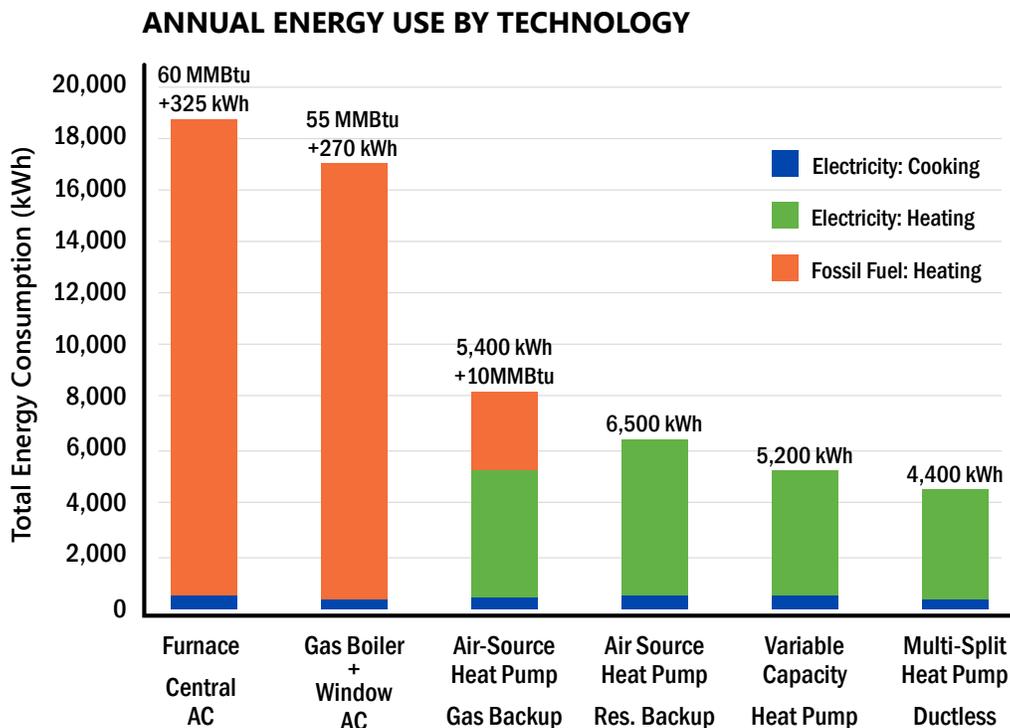
pumps can provide increased comfort and lower energy bills, improving energy affordability. However, for some building types, vintages, and configurations, heat pump technologies can face barriers such as product availability, lack of contractor expertise, need for increased electrical infrastructure, and challenges with wiring and ducting.<sup>17</sup>

The first costs for heat pump installations are typically higher than other options, there is a confusing array of heat pump features and configurations, and the contractor base can be limited or lack expertise and awareness about current technologies and their capabilities. Other factors in addition to equipment installation costs can increase the total costs of building electrification. For example, some homes and buildings may need to upgrade electrical panels and service connections to accommodate increased electric loads. Other related work such as rewiring, ductwork, air sealing, and insulation may be required.

Single-family homes, low-rise multifamily, and small commercial buildings can be retrofit fairly quickly with technologies such as in-unit and central heat pump water heaters, air source heat pumps, ductless mini-splits, and commercial rooftop heat pumps. However, taller commercial

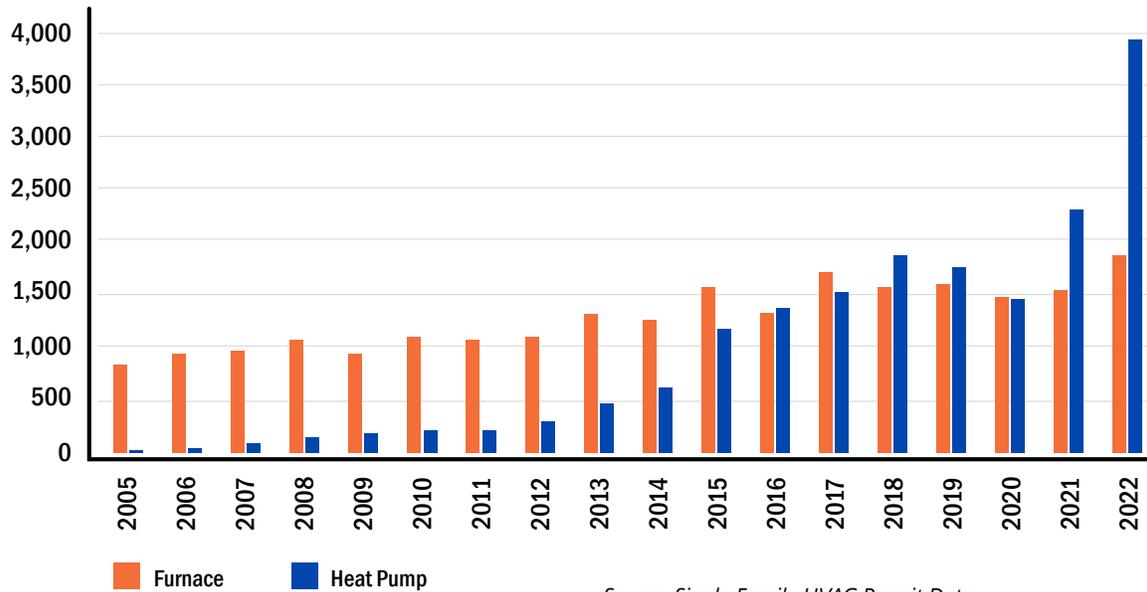
buildings with more complex heating and cooling systems and controls will need longer-term planning to strategically transition building systems over time.

For residential and commercial customers, having properly designed and installed heat pump systems is important for the utility's grid and the customer's bottom line. For example, an under-sized heat pump heating system in a single-family home that over-relies on backup resistance heating will result in costly energy bills for the customer and unnecessary winter peaks for the grid. Likewise, an over-sized heat pump water heating system in a large commercial building will also result in high energy bills and unnecessary peaks. Therefore, it is in our customers' interests for City Light to provide programmatic solutions—like technical assistance, contractor training, equipment incentives, and market development—to help optimize electrification and reduce costs.



Source: Seattle City Light Electrification Assessment, Electric Power Research Institute

## RESIDENTIAL HVAC PERMIT DATA, CITY OF SEATTLE



Source: Single Family HVAC Permit Data, Seattle Department of Construction & Inspections

## Funding the Transition

The upfront costs for installing electric equipment and enabling infrastructure like panel upgrades are high, which means significant funding will be required to cover cost gaps. Funding is particularly important to ensure the benefits of electrification are distributed equitably and that communities can increase housing affordability within the context of decarbonization. Fortunately, multiple external funding sources are emerging at the federal and state level to support building electrification.

The most significant of these emerging funding sources is the Inflation Reduction Act (IRA), which, at \$370 billion, represents the largest federal investment in efforts to reduce greenhouse gas emissions and provides incentives directly to

consumers.<sup>18</sup> Funding from Washington state is also available from revenues generated by the Climate Commitment Act (CCA), which is currently estimated to provide about \$500 million per year for projects and programs to advance health and environmental equity statewide, including heat pumps to electrify homes and buildings. The state plans to combine federal funding from the IRA with CCA revenues to provide low- and moderate-income households and small businesses with rebates to purchase and install high-efficiency electric equipment, like heat pumps.<sup>19</sup>

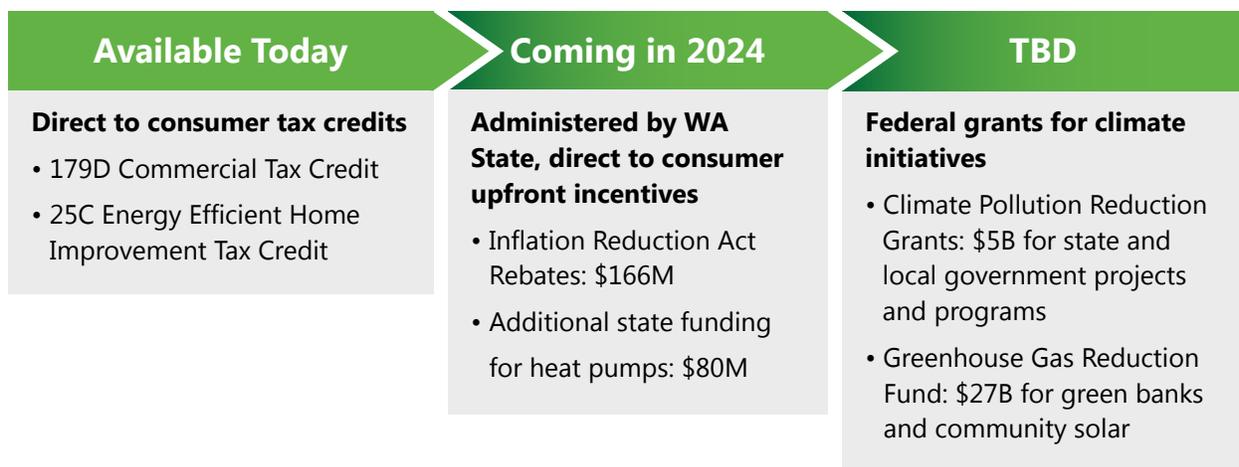
City Light is currently limited in our authority to incentivize customers to electrify; however, we're working closely with Washington State's

City Light invests in regional market transformation initiatives by funding the Northwest Energy Efficiency Alliance (NEEA). NEEA works to reduce costs, improve performance, and increase customer demand for energy efficient solution sets and equipment such as heat pump water heaters, cold climate ductless heat pumps, and high-efficiency commercial heat pumps.

Department of Commerce—who is responsible for administering the IRA funds—and neighboring utilities to maximize the value of external funding for our customers. Likewise, we are analyzing other values associated with electrification—including efficiency and load flexibility—to ensure externally funded electrification aligns with City Light’s priorities.

City Light helps advance the heat pump market and incentives equipment via our participation in the Pacific Northwest midstream heat pump program, which we have administered in

partnership with two other regional utilities since 2020. This program works with local distributors of heat pumps and other efficient technologies to ensure that these units are kept in-stock and competitively priced for commercial and residential customers and provides instant discounts to incentivize customers to install efficient equipment. The program tracks equipment installations across the service territory, indicating that adoption is increasing but potentially not equitably across all geographies in our service area, highlighting the need for this Building Electrification Strategy.<sup>20</sup>



## Utility Transformation

Maintaining a reliable grid is the core function of City Light and is also key to realizing building electrification. To gain important insights into the potential impacts of electrification on the utility and its customers, City Light worked with the industry-leading Electric Power Research Institute (EPRI) to conduct an electrification assessment<sup>21</sup> of scenarios for the electrification of buildings, transportation, and commercial and industrial applications.

Our electrification assessment confirmed that space heating, space cooling, and water heating

are primary drivers of electrification-related increases in electricity demand. This increase in demand could cause significant increases in system peaks during winter and summer months. However, preliminary analysis demonstrates that energy efficiency measures—such as insulation, lighting upgrades, and replacing electric resistance space and water heating with heat pumps—can offset nearly all the peaking impacts of electrifying fossil-fuel equipment in buildings. As noted above, how heat pumps are sized and installed also matters to the grid. Building electrification that increases overall retail load while minimizing

increases to peak demand will have more beneficial impacts to net average rates—supporting long-term rate stability and affordability.

City Light’s distribution grid has significant capacity available much of the year. However, there are areas of the grid and times of the day and year when available capacity is limited. Fortunately, we

have several tools to manage impacts to peaks and ensure the best outcome for the utility and ratepayers. Targeted energy efficiency (e.g., weatherization and replacing inefficient resistance-baseboard space heating with heat pumps), demand response (moving loads off peak), and a smart grid that can interact with grid-enabled space and water heating can also increase grid reliability and resilience.

## How we’re already supporting an electrified future:

We are preparing for and investing in a reliable, resilient system that is ready for our decarbonized future. Initial community engagement has demonstrated high customer and community interest in resiliency to power outages, particularly as building operations become increasingly all-electric. City Light’s Grid Modernization Roadmap<sup>22</sup> was developed to enable a resilient grid that can support increased electrification.<sup>23</sup> This includes rolling out real-time grid technologies like smart line sensors and remote switching that can help crews and technicians identify issues, reroute power so fewer people are affected, and improve response efficiency and safety. Additionally, City Light has developed a Distributed Energy Resources (DER) Strategy that identifies solutions to address both resilience and potential grid benefits to offset the peaks of electrification, particularly of increased cooling load.

Energy efficiency continues to be a valuable least-cost resource for load and peak management. As electrification increases in our



service territory, City Light is updating our Demand Side Management Potential Assessment to account for electrification scenarios. Rates are also a valuable tool to align customer behavior with utility cost of service. City Light will be rolling out opt-in time-of-use (TOU) rates for all customers in the coming years. TOU rates provide customers with lower rates when electricity is cheaper (e.g., in the middle of the day and night) and higher rates when electricity is more expensive (e.g., in the evenings). Many customers will see bill benefits of adopting TOU rates when they electrify space and water heating, leading to more affordable electrification for both the utility and the customer.



## Strategy Goal & Objectives

City Light's Building Electrification Strategy is rooted in our values framework and is heavily informed by community and public input and analyses of the opportunities and challenges we anticipate for our customers and the utility. To guide our building electrification efforts, we established a goal—the utility's vision for the future state—and identified strategic objectives—the key priorities that must be realized to achieve the strategy goal. These strategic objectives are supported by a set of actions, which the utility plans to implement in the near and long-term to work towards the strategy goal.

Collectively, many partners are responsible for ensuring a successful building decarbonization transition. State and local governments (King County, Cities of Seattle, Shoreline, Burien, and others) have established the vision of net-zero emissions buildings by 2050 and enacted the policies to get us there. (See [Bold Policies](#) section,

above.) City Light's role lies within our fundamental function as an electric utility: deliver affordable, reliable, and environmentally responsible power.<sup>24</sup> This Building Electrification Strategy focuses on the utility's role to support our customers through this historic transition.



# Building Electrification Strategy Goal

Our goal is to partner with customers and communities to leverage our carbon-neutral electricity to deliver equitable & affordable building decarbonization. This is a broad and wide-reaching goal that serves as the “North Star” to guide the utility’s work in building electrification. Each component of this strategy goal is relevant to successful implementation, as described in more detail below.

## PARTNERSHIP

**Customers:**

We can’t plan for electrification that we don’t know is coming; the more insight City Light has into our customers’ plans, the better we can serve all our customers.

**Communities:**

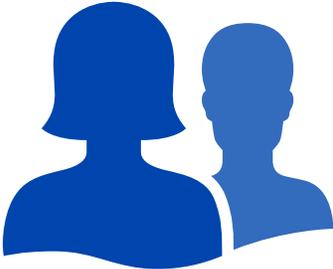
When people don’t understand the benefits of heat pumps or don’t know that their utility is carbon-neutral, they can’t make informed decisions on what space and water heating systems are best for them.

**Trade allies:**

Installers, auditors, HVAC technicians, designers, engineers, and all the other building industry trade allies are the ones who make projects happen and are generally the main point of contact with our customers when it comes to making electrification decisions.

**Implementation partners:**

Other organizations like King County and Puget Sound Energy are also launching building electrification programming, and rather than reinventing the wheel, we’re partnering with them to maximize our shared efforts.



## EQUITABLE

Providing access to the benefits of electrification to those who can’t access them today, with a focus on race and social justice. Facilitating community participation in the clean energy transition.



## AFFORDABLE

**Upfront costs:**

Addressing the cost gap between electrification technologies and like-for-like fossil fuel replacements.

**Ongoing costs:**

Ensuring customer bills and utility rates remain affordable and pursuing opportunities to reduce energy bills through efficient and flexible electrification when possible.



# Strategic Objectives

The strategy identifies five key strategic objectives that must be realized to achieve the strategy goal. How City Light will collaborate to deliver on these objectives is summarized in the next section and described in more detail in the [Next Steps and Conclusion](#) section.



**Increase Access and Awareness**



**Build the Workforce**



**Offset Electrification with Efficiency**



**Reduce Upfront Costs**



**Strengthen Grid Resiliency**



## Increase Access and Awareness

City Light seeks to increase awareness of and access to the benefits of building electrification for our communities, customers, and staff. To do this, we need broad community education on the benefits, improved internal processes that are hindering equitable electrification, and right-sized staffing to support increased workloads associated with electrification.

### Strategy in action highlight:

We have moved from majority paper-based community outreach to incorporating interactive demonstrations of renewable energy and electrification technologies that support community conversations on building electrification. In August 2023, for example, City Light included building electrification education at a community event every single weekend.



### Build the Workforce

To both meet the growing demands for qualified heat pump installers as well as create a more equitable workforce with more women and BIPOC professionals, we need a citywide workforce development strategy, a building industry professional engagement program to align trade allies with programmatic goals, and an industry education and resource hub to support best practices in technology installation and operation.

### Strategy in action highlight:

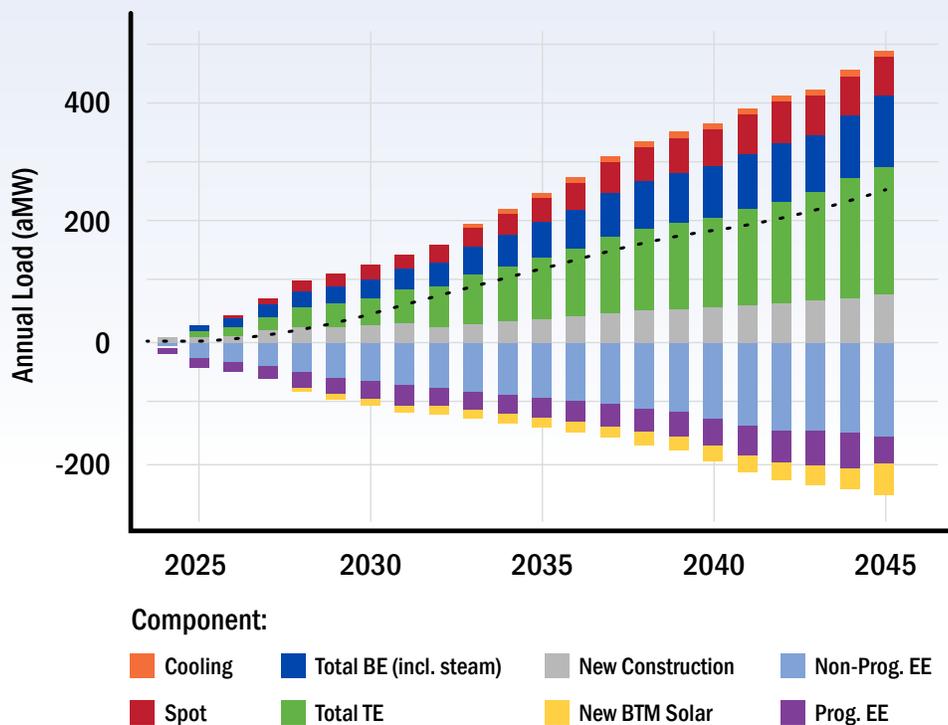
City Light is building relationships with trade allies that can support equitable workforce education. We invited an electric heat pump manufacturer to bring a real, physical heat pump to King County's "Green Jobs, Green futures" career fair in September 2023 to demonstrate that heat pump jobs are also clean energy jobs.

### Offset Electrification with Efficiency

Energy efficiency is a least-cost resource to affordably support increased building electrification and helps lower customer bills by reducing overall energy consumption. City Light is incorporating electrification scenarios into setting efficiency incentives and will help customers identify the rate option that will have the best bill benefits as they electrify, including the Utility Discount Program and time-of-use rates.

### Strategy in action highlight:

Updated building electrification assumptions (dark blue) are incorporated into the 2023 Corporate Load Forecast and other utility planning processes, including those that feed into energy efficiency incentive setting.



Source: Mike Hamilton (2023 corporate load forecast memo)

## Reduce Upfront Costs

To address the cost barriers of building electrification and assisting customers in navigating new funding sources, City Light will align our programs to integrate external funding and financing, launch a new technical assistance program to support best practices in building electrification (and building performance regulation compliance) and explore new utility electrification incentives.



### Strategy in action highlight:

City Light partnered with Puget Sound Energy to launch the Joint Utility Heat Pump Pilot in Skyway in September 2023. We've developed multilingual outreach materials and have partnered with Seattle's Dept. of Neighborhoods' Community Liaisons to support customer recruitment. (Some of whom are pictured above at the pilot's first home electrification assessment.) The Community Liaisons are able to communicate with customers in their preferred languages, which helps establish trust with our customers and communities.

## Strengthen Grid Resiliency

To minimize the impacts of building electrification on the grid (along with other concurrent pressures including transportation electrification, business development, and housing density), we need to spread out new load across as many hours of the day and year as possible, to support load growth with distributed energy resources, and to enable these flexible load tools with enhanced utility technology capabilities.

### Strategy in action highlight:

City Light launched our TempWise demand response pilot in summer 2023 and ran seven successful demand response events where customers opted in to have City Light remotely control their smart thermostats to reduce an average of 330 kilowatts per event, with the highest reduction of 533 kilowatts during a late summer event.

**Seattle City Light**

## Enroll and Earn up to \$90 Your First Year

**What is the TempWise Pilot?**  
TempWise allows you to use your Sensi, Honeywell, Google Nest, or Mya smart thermostat to lower your energy use and earn participation incentives. Enrolling takes just a few minutes, and participating is easy. Consider enrolling today, as spots are limited. You'll earn a one-time payment of \$50 for enrolling and up to \$40 a year (or \$20 each season) for continued participation.\*

**How Does It Work?**  
During times when energy use is high in our community, we'll call an "event" to automatically adjust your thermostat by a few degrees for up to three hours. You are always in control of your smart thermostat and can opt out of an event at any time.  
This small temperature adjustment will add up to big energy reductions when lots of people participate. By signing up for this pilot, you can help Seattle City Light reduce stress on the electricity grid to help the environment and community!

**How Do I Know if I Am Eligible?**  
**To be eligible\* to enroll, you must:**

- Be a Seattle City Light residential customer
- Own an eligible Sensi, Honeywell, Nest, or Mya smart thermostat controlling an electric-powered furnace, baseboards, heat pump, or central A/C system
- Have WiFi (mobile hot spots not included)

**Scan the QR code to learn more:**

**Ready to enroll?**  
Visit [seattle.gov/city-light/tempwise](https://seattle.gov/city-light/tempwise) to get started.

**Not eligible to enroll?** Visit [seattle.gov/city-light/residential-services/home-energy-solutions](https://seattle.gov/city-light/residential-services/home-energy-solutions) or call us at (206) 684-3800 to get connected to other available programs.

**Have a question?**  
Contact us at [SCL\\_TempWise@Seattle.gov](mailto:SCL_TempWise@Seattle.gov) to learn more about the pilot.

\*Terms and conditions apply. Payment is subject to direction of the utility. Additional eligibility criteria may apply. Please review the pilot Terms and Conditions document for all details.

Google and Nest are trademarks of Google LLC.

seattle.gov/city-light/tempwise      SCL\_TempWise@seattle.gov



# Strategy Actions

City Light has identified the following actions as having the most impact at realizing the strategic objectives and meeting the strategy’s goal. Each of these actions are cross-cutting and support multiple strategic objectives. As noted in the [Next Steps and Conclusion](#), these actions will result in programs, projects, and initiatives to serve all building and customer segments (residential, commercial, and industrial).

 **INCREASE ACCESS & AWARENESS**

COMMUNITY ENGAGEMENT & EDUCATION	PROBLEM STATEMENT
<p>Identify and develop outreach and education resources that will increase awareness of and access to the benefits of building electrification.</p>	<p>To know what resources communities and customers need to successfully participate in the building decarbonization transition, City Light needs to conduct community engagement and establish long-term relationships.</p>
WHAT WE’RE DOING	POTENTIAL FUTURE OUTPUTS
<p>City Light’s utility-wide community engagement framework supports coordination between initiatives. From this engagement, we can launch new communication, outreach, and education resources for various audiences on topics such as the benefits of electrification, how to electrify, how City Light can help, cost estimating tools, available incentives and rebates (IRA tax credits), and case studies.</p>	<ul style="list-style-type: none"> <li>• Coordinating with other utility outreach</li> <li>• Launching outreach &amp; education campaigns</li> <li>• Identifying and developing tools &amp; resources for audiences</li> </ul>

SERVICE CONNECTION & IMPROVEMENT	PROBLEM STATEMENT
<p>Support ongoing utility efforts to increase service connection, upgrade transparency and simplification and identify solutions that support equitable access to electrification.</p>	<p>Our existing service upgrade process can be time-consuming, confusing, and inconsistent, which is a barrier to building electrification and negatively impacts customer and staff satisfaction.</p>
WHAT WE'RE DOING	POTENTIAL FUTURE OUTPUTS
<p>In response to this and other customer feedback, City Light has launched a Service to Bill program to continuously improve the end-to-end process from the initial customer service application to billing. The success of Service to Bill is critical to removing operational barriers to electrification. Building electrification staff will support Service to Bill to ensure that solutions align with strategy objectives.</p>	<ul style="list-style-type: none"> <li>• Improving service connection/upgrade process</li> <li>• Adopting service standard updates to accommodate broad electrification</li> </ul>

ASSESS LONG-TERM STAFFING NEEDS	PROBLEM STATEMENT
<p>Determine appropriate staffing to support electrification loads so that staff are empowered to provide best-in-class customer service and technical assistance throughout the electrification journey.</p>	<p>Due to a variety of factors, City Light is currently experiencing a ~15% vacancy rate. This shortage is exacerbated in certain areas that will likely experience increased workloads due to electrification, including engineering and customer service.</p>
WHAT WE'RE DOING	POTENTIAL FUTURE OUTPUTS
<p>City Light has engaged a consultant to identify strategies to address long-term staffing needs across the organization. The transportation and building electrification teams are supporting this work by assessing anticipated workload impacts and work across divisions to justify staffing increases and/or reallocations necessary to meet customers' needs.</p>	<ul style="list-style-type: none"> <li>• Right-size staffing and increase training for staff</li> <li>• Change management plan, including training for staff on electrification service upgrade processes and available electrification project assistance</li> </ul>



## BUILD THE WORKFORCE

INDUSTRY EDUCATION & RESOURCE HUB	PROBLEM STATEMENT
<p>Pivot and repurpose City Light’s Lighting Design Lab to provide hands-on education, technology demonstrations, case studies, and unbiased project advising for electrification technologies.</p>	<p>Particularly with building electrification, where best practices in equipment sizing and installation will translate into lower peak impacts and improved customer satisfaction, it’s important for City Light to have hands-on training and educational resources.</p>
WHAT WE’RE DOING	POTENTIAL FUTURE OUTPUTS
<p>For decades, City Light’s Lighting Design Lab has been an industry-leading resource for efficient lighting and advanced lighting controls. Both market transformation in the lighting market and an evolution of utility energy efficiency programs towards deeper energy retrofits beyond lighting have led City Light to repurpose (and rebrand) the Lighting Design Lab to be an education and resource hub to ensure the building industry can implement electrification technologies that bring benefits to our customers.</p>	<ul style="list-style-type: none"> <li>• Technology demonstrations, case studies, project advisory services</li> <li>• Hands-on training on best practices, including right-sizing heat pump systems</li> </ul>

INDUSTRY ENGAGEMENT PROGRAM	PROBLEM STATEMENT
<p>Launch a building industry engagement program that informs and supports City Light’s customer-facing programs and services.</p>	<p>City Light has multiple customer-facing programs that rely on trade allies (building industry professionals including equipment distributors and installers) to meet program goals and currently lacks a forum to communicate with this group of stakeholders.</p>
WHAT WE’RE DOING	POTENTIAL FUTURE OUTPUTS
<p>Staff have already studied the opportunity and recommended that City Light launch a trade ally engagement program to support the multiple programs and initiatives that rely on trade allies to deliver high-quality and energy-efficient installations for our customers.</p>	<ul style="list-style-type: none"> <li>• Utility-hosted trade ally roundtables</li> <li>• List of participating contractors on the City Light website</li> </ul>

WORKFORCE ENGAGEMENT STRATEGY	PROBLEM STATEMENT
<p>Develop a Citywide workforce development strategy to guide City Light’s education planning and delivery that enables equitable and affordable electrification.</p>	<p>There is currently a workforce shortage impacting heat pump installations in our service territory, which inflates installation costs as demand often exceeds the supply of heat pump installers. Furthermore, the current workforce is predominantly white and male.</p>
WHAT WE’RE DOING	POTENTIAL FUTURE OUTPUTS
<p>City Light needs a workforce development strategy to both meet the growing demands for qualified heat pump installers as well as create a more equitable workforce with more women and BIPOC professionals. City Light has already begun partnering with Seattle’s Office of Economic Development and King County’s Green Workforce Development Program on regional workforce development and education opportunities.</p>	<ul style="list-style-type: none"> <li>• Convening stakeholders</li> <li>• Advocating for BIPOC, women</li> <li>• Establishing plans and programs to guide the utility’s efforts in workforce development</li> </ul>

 **OFFSET ELECTRIFICATION WITH EFFICIENCY**

ENHANCED CONSERVATION INCENTIVES	PROBLEM STATEMENT
<p>Help customers take advantage of the bill benefits of energy efficiency, and size incentives for energy efficiency to properly reflect the value of conservation given increases in load and peak demand caused by building electrification.</p>	<p>Energy efficiency continues to be a valuable least-cost resource for load and peak management. Without properly accounting for electrification in conservation potential assessments, we risk undervaluing efficiency, particularly heating and water heating efficiency.</p>
WHAT WE’RE DOING	POTENTIAL FUTURE OUTPUTS
<p>As electrification increases in our service territory, City Light is updating its Demand Side Management Potential Assessment (which includes the Conservation Potential Assessment) to account for EPRI electrification scenarios. Staff will take the results of this updated analysis to right-size incentives to account for the increased value of conservation for both resource acquisition and peak mitigation.</p>	<ul style="list-style-type: none"> <li>• Electrification scenarios included in Demand Side Management Potential Assessment</li> <li>• Updated incentive-setting; increased incentives for measures like weatherization or HVAC efficiency</li> </ul>

RIGHT RATE OPTIONS	PROBLEM STATEMENT
<p>Connect rate options and customer behavior programs to the building electrification journey to help customers manage their electricity bills.</p>	<p>Current default block rates are intended to motivate energy efficiency but have the unintended consequence of disincentivizing customer decarbonization. TOU rates align cost of service and can motivate beneficial customer behavior particularly for newly electrified loads.</p>
WHAT WE'RE DOING	POTENTIAL FUTURE OUTPUTS
<p>Rates are a valuable tool to align customer behavior with utility cost of service. City Light will be rolling out opt-in TOU rates for all customers in the coming years. Certain customers will see bill benefits by adopting TOU rates when they electrify space and water heating, leading to more affordable electrification for both the utility and the customer. As utility load shapes and peaks evolve over time, new rate options will provide additional benefits.</p>	<ul style="list-style-type: none"> <li>• Tools/resources for customers to understand what rates are best when they electrify</li> <li>• New rate structures and options</li> </ul>

## REDUCE UPFRONT COSTS

INTEGRATED EXTERNAL FUNDING & FINANCING	PROBLEM STATEMENT
<p>Align City Light programming with new and existing external funding and financing opportunities to ensure a simple, easy-to-understand customer journey.</p>	<p>In our service territory, upfront cost is a significant barrier to affordable and equitable building decarbonization for most customers. Single-family central heat pump system installations can range from \$20k-\$50k and multifamily mini-split installations hover around \$15k/unit.</p>
WHAT WE'RE DOING	POTENTIAL FUTURE OUTPUTS
<p>The IRA represents the largest investment in renewable energy and electrification in the history of the U.S. For these investments to have the greatest impact, access to funds must be made easy to understand and directed to reducing upfront cost. Regardless of which incentive delivery model the state designs, City Light will develop complementary programs and services.</p>	<ul style="list-style-type: none"> <li>• A clear financing pathway for most building sector segments</li> <li>• Hiring an IRA specialist</li> <li>• Utility upfront cost reduction solutions integrate state and federal funding rebates and incentives</li> </ul>

TECHNICAL ASSISTANCE PROGRAM	PROBLEM STATEMENT
<p>Launch a service for building electrification projects that provides technical assistance to optimize service size, streamline service upgrades and layer internal and external incentive programs to bring down both soft (time, admin) and hard (capital) costs.</p>	<p>Electrification projects can be difficult and costly. Particularly with the expectation of a Seattle Building Emissions Performance Standard (BEPS), it's critical that City Light be proactive in identifying efficiency and peak mitigation solutions to reduce service connection costs and streamline service upgrades.</p>
WHAT WE'RE DOING	POTENTIAL FUTURE OUTPUTS
<p>To ensure timely project completion and reduce cost, the utility can offer a technical assistance service that helps customers manage both sides of the meter of an electrification project. This may include assistance in determining equipment, energy needs, and understanding financing options - all while streamlining internal process that may cause project delays and or cost overruns.</p>	<ul style="list-style-type: none"> <li>• Creating new role at the utility to provide specialized electrification project navigation</li> <li>• Coordinating/ bundling incentives and financing</li> <li>• Developing a set of decarbonization pathways to align with BEPS compliance</li> </ul>

UTILITY ELECTRIFICATION INCENTIVES	PROBLEM STATEMENT
<p>Develop incentives to build on the momentum of city, federal, and state funding and policy, assuming authority and sufficient value for our utility, customers, and communities.</p>	<p>External funding will significantly impact the market for building electrification equipment, but it won't bring down the full cost of electrification for all customers, and it won't provide any funding for several building segments.</p>
WHAT WE'RE DOING	POTENTIAL FUTURE OUTPUTS
<p>To maximize the impact of external funding, City Light may develop complementary building electrification incentives. We are currently analyzing the impacts of building electrification, the potential value streams, and how to maximize value while minimizing unwanted consequences. Incentives will be an important tool to influence customer and trade ally choices and behavior when it comes to equipment efficiency and load shapes.</p>	<ul style="list-style-type: none"> <li>• Joint utility targeted electrification pilot to test assumptions of the value of electrification and gather data to inform future incentive setting</li> </ul>



## STRENGTHEN GRID RESILIENCY

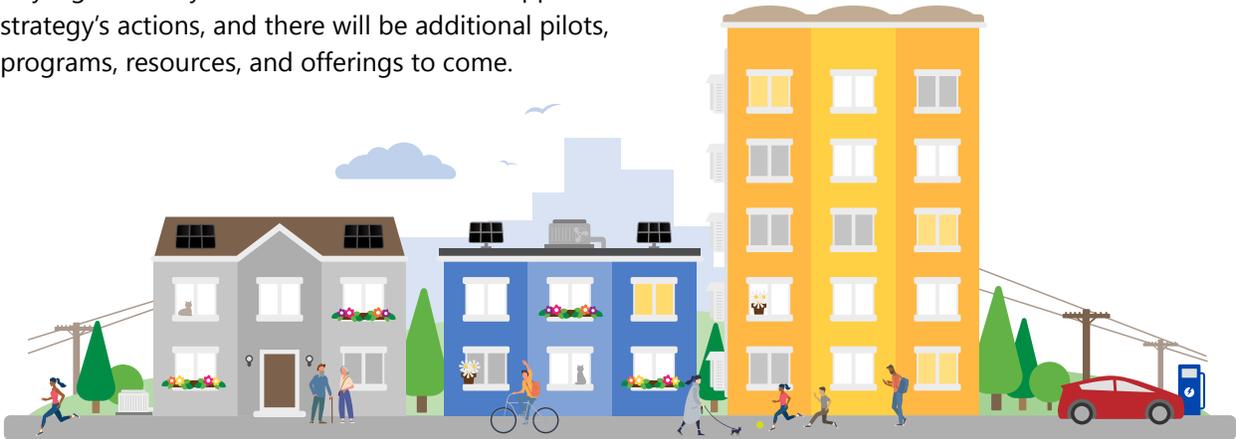
DISTRIBUTED ENERGY RESOURCE STRATEGY	PROBLEM STATEMENT
<p>Leverage the DER Strategy to identify products and programs that can increase customer resiliency and provide grid services as customers transition to all-electric buildings.</p>	<p>Initial community engagement has demonstrated high customer and community interest in resiliency to power outages, particularly as building operations become increasingly all-electric.</p>
WHAT WE'RE DOING	POTENTIAL FUTURE OUTPUTS
<p>City Light's Grid Modernization Roadmap was developed to enable a resilient grid that can support increased electrification. Additionally, City Light is developing a DER Strategy that will identify solutions to address both resilience and potential grid benefits to offset the peaks of electrification, particularly of increased cooling load associated with adoption of heat pumps.</p>	<ul style="list-style-type: none"> <li>• Improved interconnection standards and guidance</li> <li>• Programs that encourage customer-sited distributed energy resources such as rooftop solar and battery storage</li> </ul>

FLEXIBLE LOAD MANAGEMENT STRATEGY	PROBLEM STATEMENT
<p>Develop a flexible load management strategy with specific goals around reducing load to address peak impacts of building electrification.</p>	<p>As peaks increase and evolve with increased electrification, climate change, and changes in customer behavior, City Light needs a flexible load management strategy to quantify how much peak load needs to be reduced or shifted and identify solutions for managing peak.</p>
WHAT WE'RE DOING	POTENTIAL FUTURE OUTPUTS
<p>Also from the Grid Mod Roadmap, City Light is launching a demand response (DR) pilot to measure the uptake and value streams of smart thermostats for managing both winter and summer peaks. The pilot can be leveraged to develop a strategy to help inform future programming and investments that will support the building electrification strategy's goals, objectives, and actions.</p>	<ul style="list-style-type: none"> <li>• Integrate findings from demand response pilot into strategy</li> <li>• Programs and products that can flexibly manage customers' increasingly electrified loads such as a smart thermostat pilot</li> </ul>

UTILITY TECHNOLOGY CAPABILITIES	PROBLEM STATEMENT
Accelerate utility IT projects that increase utility technology capabilities for managing flexible loads to enhance grid reliability and resiliency.	City Light has completed a number of foundational IT projects that allow us to leverage our AMI meters; however, there are still fundamental gaps to fully operationalize the value of the technology we have invested in.
WHAT WE'RE DOING	POTENTIAL FUTURE OUTPUTS
Particularly around distributed energy resources and third-party software solution for load management, we need to significantly accelerate the timeline to complete the necessary internal IT projects that would facilitate these solutions.	<ul style="list-style-type: none"> <li>IT integration projects that enable workflow automation intake, automated technical evaluation, and Distribution Energy Resources Management Software (DERMS) platform solutions</li> </ul>

These are long-term, ongoing actions with milestones throughout the coming years. While some actions will provide immediate benefits to customers (e.g., integrated external funding and financing), others are critical to enabling and sustaining those customer benefits over time (e.g., utility technology capabilities). The tables on the following pages include more details on each action, including a description, a problem statement, information on what the utility is doing now, and potential outputs that could result from each action.

City Light already has work in motion that supports the strategy's actions, and there will be additional pilots, programs, resources, and offerings to come.





# Next Steps & Conclusion

The Building Electrification Strategy is currently moving into the implementation phase, where City Light will continue to collaborate with our partners to implement the actions laid out herein. Implementation will look different for each action and will include a portfolio of customer-facing programs, alignment of existing programs with strategic objectives, and a suite of tools, education, and resources for customers and their contractors.



While developing this strategy, we spoke with hundreds of customers and community members about building electrification and what City Light can do to deliver affordable and equitable building decarbonization. Throughout 2024, we will continue to work with our community and implementation partners to update existing offerings and co-create new offerings.

The next several years will see a lot of change in the building sector that will significantly influence the direction of building electrification with the deployment of unprecedented levels of funding, approaching compliance deadlines, and technological advancements. We anticipate it will be necessary to assess and update this strategy on a four-year cadence, starting in 2028. These documents will be available to the public on our website and distributed through our

communications channels, including community engagement.

We must create a pathway for building electrification that results in an equitable and affordable transition for Seattle’s homes and buildings in support of decarbonization. Electrification will make buildings and homes healthier and safer while bringing cleaner air and good jobs to the communities we serve. As part of this process, we must ensure that public sector investments prioritize those most in need of resources.

City Light looks forward to continuing to partner with our customers and communities as they transition to healthy, high-performing, climate-friendly buildings.

# Acknowledgements

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# Appendix: Community & Stakeholder Engagement

## Introduction

This appendix shows the organizations and audiences engaged in the development of the Building Electrification Strategy.

### Community Engagement

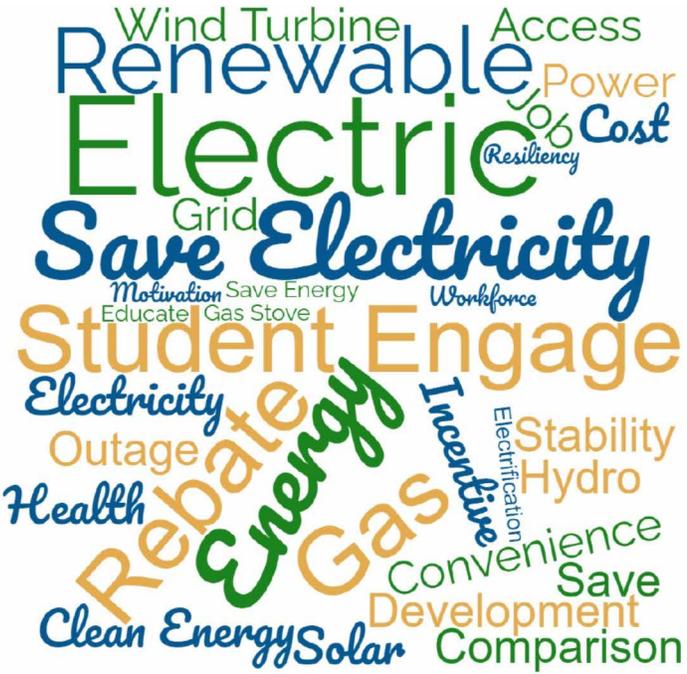
Community engagement encompasses a variety of different engagement types, including meetings with individual community organizations, utility-hosted listening sessions with community members, and community events where the utility provided building electrification education and awareness building.

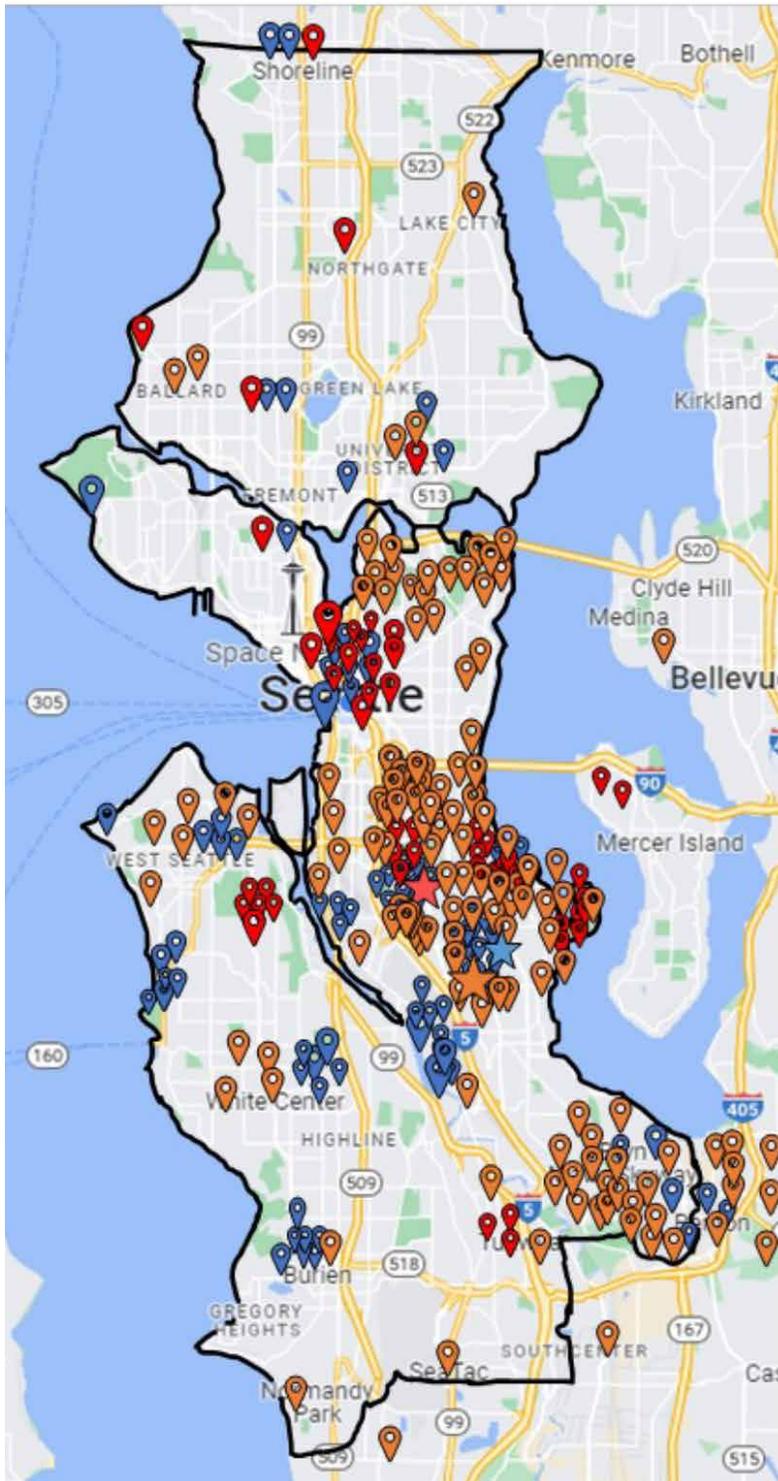
ORGANIZATION(S) OR AUDIENCE	ENGAGEMENT TYPE	DATES
Frontline community members (International District, Rainier Beach, and Duwamish Valley)	City Light-hosted focus groups	June–Aug 2022
Environmental Coalition of South Seattle (ECOSS) Meetings	City Light-hosted listening sessions	8/20/22, 10/20/22, 10/27/22
Environmental Coalition of South Seattle (ECOSS)	Meetings	Multiple
Community Liaisons (Dept. of Neighborhoods)	Meetings	Multiple
Beacon Hill Clean Energy and Community Resilience Solutions Collaborative (El Centro de la Raza, Bethany United Church of Christ, Beacon Hill Council)	Meetings	Multiple
Renton Innovation Zone Partnership	Meetings	1/9/2023
Community Liaisons (Dept. of Neighborhoods)	City Light-hosted listening session	3/21/23
Emerald Cities	Meeting	4/29/2022

ORGANIZATION(S) OR AUDIENCE	ENGAGEMENT TYPE	DATES
Barbershop Event (Fathers and Sons Together)	Community event	4/29/23
West Hill Community Association	Meeting	5/10/23
Share the Spark (ECOSS)	Community workshop	5/24/23
Central District Community Preservation Development Authority	Meeting	6/2/23
Skyway Juneteenth (Skyway Coalition)	Community event	6/18/23
Seattle Juneteenth (City of Seattle)	Community event	6/18/23
Duwamish River Festival (Duwamish River Community Coalition)	Community event	8/5/23
Othello International Festival (Othello Park Alliance)	Community event	8/13/2023
Big Day of Play (Seattle Dept. of Parks & Recreation)	Community event	8/19/23
Rainier Beach Back to School Bash (Rainier Beach Coalition)	Community event	8/13/2023
Kids & Paper (Seattle Dept. of Parks & Recreation)	Education event (ages 9-12)	9/6/2023
Skyway residents (Skyway Library, King County Libraries)	City Light "Office Hours"	9/13/23, 10/7/23
Skyway Resource Center	Community event	9/15/23
Green Jobs Green Futures (King County's Green Jobs program)	Green jobs event	9/29/23
Energize! Heat Pump Workshop – Skyway (King County Dept. of Local Services)	Community workshop	10/24/23

ORGANIZATION(S) OR AUDIENCE	ENGAGEMENT TYPE	DATES
Skyway Downtown Halloween Block Party (Skyway Coalition)	Community event	10/28/23
Boo Bash @ the Beach (Champs Resource Service Center, Rainier Beach)	Community event	10/29/23

City Light staff took notes at the community meetings, workshops, and listening sessions. The image here is a “word cloud” of the most frequently mentioned words and two-word phrases, where larger words indicate higher frequency.





At several community events over summer 2023, City Light invited attendees to put a pin on a map to indicate where they live. The map on this page shows where the community events were located and where attendees put pins, with the black outline representing City Light's service area.

## Industry Engagement

To inform the strategy, City Light engaged with a diverse group of stakeholders in the building electrification industry. This type of engagement spans from regular meetings with regional utilities to participating in workgroups and presenting at industry events. Industry engagement is a valuable tool to stay up-to-date on electrification technologies, provide us with broad perspectives on building electrification, and build on other efforts to ensure we're not reinventing the wheel when it comes to strategy development.

REGIONAL UTILITY	UTILITY OR ENERGY PROGRAM ADMIN.
Tacoma Power Snohomish County PUD Puget Sound Energy	Southern California Edison Sacramento Municipal Utility District (SMUD) New York State Energy Research and Development Authority (NYSERDA)
INDUSTRY ASSOCIATION	ADVOCACY ORGANIZATION
Smart Electric Power Alliance (SEPA) Beneficial Electrification League Building Electrification Institute Building Decarbonization Coalition Consortium for Energy Efficiency (CEE) Advanced Water Heating Initiative (AWHI) New Buildings Institute Northwest Energy Efficiency Alliance (NEEA)	Northwest Energy Coalition (NVEC) Seattle 2030 District Building Operators & Managers Association Climate Solutions Association to Save Energy All Electrify

Throughout the strategy development, City Light also participated in several workgroups, advisory groups, and presentations hosted by industry associations.

WORKGROUP	HOSTING ORGANIZATION
Electrify Cohort	Rocky Mountain Institute (RMI)
Air-source Heat Pump Working Group	Consortium for Energy Efficiency (CEE)
Building Electrification Workgroup	American Council for and Energy Efficient Economy (ACEEE)
CITY LIGHT PRESENTATION	HOSTING ORGANIZATION
Inflation Reduction Act	Northwest Eco-Building Guild
City Light's Building Electrification Strategy	Association of Energy Service Professionals
Load Flexibility and Building Electrification	Building Performance Association

CITY LIGHT PRESENTATION	HOSTING ORGANIZATION
Panel judge for student case study competition on building electrification	UW Climate Solutions Summit
City Light's Building Electrification Strategy	E Source Annual Conference

BUILDING EMISSIONS PERFORMANCE STANDARD (BEPS) ENGAGEMENT	HOSTING ORGANIZATION
Building Emissions Performance Standard Advisory Task Force	Housing Development Consortium (HDC)
Building Emissions Performance Standard Technical Advisory Group	Office of Sustainability and Environment (OSE)
Building Emissions Performance Standard Open House	Office of Sustainability and Environment (OSE)

### Customer Engagement

In addition to community engagement where City Light uses a variety of different ways to reach our smaller customers, we conduct customer surveys on a regular basis, which provide us with valuable insights to inform the strategy. These include:

- JD Power Customer Satisfaction
- Residential Customer Satisfaction Survey
- Clean Energy Future Survey

City Light also meets with larger customers to understand their electrification project needs and barriers, which informs the development of the Building Electrification Strategy.

ORGANIZATION(S) OR AUDIENCE	ENGAGEMENT TYPE	DATES
Seattle City Light – Key Customer Roundtable	Presentation and discussion	2/8/22
Affordable housing developer	Building tour and discussion	4/27/2022
Large hospital	Meeting	8/3/2022
Industrial customer	Meeting	10/17/2022, 1/26/23
Commercial property developer	Meeting	10/27/2022

ORGANIZATION(S) OR AUDIENCE	ENGAGEMENT TYPE	DATES
Government agency customer	Meeting	10/28/2022, 6/14/23
Condominium apartments	Building tour and discussion	3/22/2023
Customers impacted by Building Emissions Performance Standard	Meeting	4/28/2023
Industrial customer	Meeting	8/7/23
Seattle City Light – Franchise City Forum	Presentation and discussion	10/30/23

### Trade Ally Engagement

Trade allies are the installers, contractors, trades, builders, manufacturers, and equipment distributors who make building electrification projects happen for our customers. Because many energy efficiency projects involve the same technologies as building electrification projects, we have long-standing engagement channels with trade allies that will be impacted by building electrification. We regularly engage with these trade allies through two primary channels: Customer Energy Solutions energy efficiency programs and Lighting Design Lab education. We had targeted engagement with heat pump manufacturers, HVAC and water heating equipment distributors, heat pump installers, and general contractors throughout 2022 and 2023 to inform the Building Electrification Strategy.

### Government Engagement

City Light meets regularly with government stakeholders on a variety of topics. Below includes offices, agencies, and departments that we have engaged with specifically on building electrification.

#### OFFICE, AGENCY OR DEPARTMENT

Washington State Department of Commerce  
 Seattle Office of Sustainability & Environment  
 Puget Sound Clean Air Agency  
 U.S. Environmental Protection Agency  
 King County's Executive Office  
 King County's Department of Environmental Services  
 Seattle Office of Housing  
 King County's Department of Local Services  
 Washington State Lawmakers  
 City of Shoreline  
 King County Library System  
 U.S. Department of Energy

## NOTES

<sup>1</sup>*Strategic Plan and Review Panel — City Light | seattle.gov*

<sup>2</sup><https://powerlines.seattle.gov/2020/10/05/mayor-durkan-celebrates-passage-of-transportation-electrification-plan-to-guide-seattle-city-lights-investments-in-an-electrified-transportation-system>

<sup>3</sup><https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies>

<sup>4</sup><https://apps.leg.wa.gov/rcw/default.aspx?cite=70A.45.020>

<sup>5</sup>[https://uploads-ssl.webflow.com/5d8aa5c4ff027473b00c1516/61d7a479ba34328152be6239\\_CETI-2050%20Institute%20Operation%202030%20White%20Paper\\_2022-01-05.pdf](https://uploads-ssl.webflow.com/5d8aa5c4ff027473b00c1516/61d7a479ba34328152be6239_CETI-2050%20Institute%20Operation%202030%20White%20Paper_2022-01-05.pdf)

<sup>5</sup><https://www.commerce.wa.gov/growing-the-economy/energy/ceta>

<sup>6</sup><https://www.commerce.wa.gov/growing-the-economy/energy/2021-state-energy-strategy>

<sup>7</sup><https://kingcounty.gov/en/legacy/services/environment/climate/actions-strategies/strategic-climate-action-plan.aspx>

<sup>8</sup><https://kingcounty.gov/en/legacy/services/environment/climate/actions-strategies/partnerships-collaborations/k4c.aspx>

<sup>9</sup>[http://greenspace.seattle.gov/wp-content/uploads/2018/04/SeaClimateAction\\_April2018.pdf](http://greenspace.seattle.gov/wp-content/uploads/2018/04/SeaClimateAction_April2018.pdf)

<sup>10</sup><http://clerk.seattle.gov/search/resolutions/31312>

<sup>11</sup>[https://www.seattle.gov/documents/Departments/Environment/ClimateChange/2013\\_CAP\\_20130612.pdf](https://www.seattle.gov/documents/Departments/Environment/ClimateChange/2013_CAP_20130612.pdf)

<sup>12</sup><https://www.seattle.gov/environment/climate-change/green-new-deal>

<sup>13</sup><https://www.seattle.gov/environment/climate-change/climate-planning/performance-monitoring>

<sup>14</sup>*ibid.*

<sup>15</sup><https://www.seattlejobsinitiative.com/wp-content/uploads/Seattles-Energy-Efficient-Construction-and-Building-Occupations-Workforce.pdf>

<sup>16</sup><https://newbuildings.org/resource/the-building-electrification-technology-roadmap>

<sup>17</sup>*ibid.*

<sup>18</sup><https://powerlines.seattle.gov/2023/01/20/how-the-inflation-reduction-act-will-help-you>

<sup>19</sup>[https://ofm.wa.gov/sites/default/files/public/budget/statebudget/2023-25biennial/2023-25-CCA\\_investments\\_to\\_OBC.pdf](https://ofm.wa.gov/sites/default/files/public/budget/statebudget/2023-25biennial/2023-25-CCA_investments_to_OBC.pdf)

<sup>20</sup><https://pnwutilityrebates.com>

<sup>21</sup><https://powerlines.seattle.gov/2022/01/20/planning-for-an-electrified-future>

<sup>22</sup><https://www.seattle.gov/city-light/energy/grid-modernization>

<sup>23</sup><https://powerlines.seattle.gov/2022/11/17/how-is-seattle-city-light-preparing-for-future-electrification>

<sup>24</sup><https://www.seattle.gov/city-light/about-us/strategic-plan-and-review-panel>

<sup>25</sup>[https://www.sbcc.wa.gov/sites/default/files/2022-07/WSR\\_22\\_14\\_091\\_full2021WSEC\\_C.pdf](https://www.sbcc.wa.gov/sites/default/files/2022-07/WSR_22_14_091_full2021WSEC_C.pdf)

<sup>26</sup><https://www.commerce.wa.gov/growing-the-economy/energy/buildings/clean-buildings-standards>

<sup>27</sup><https://lawfilesex.leg.wa.gov/biennium/2021-22/Pdf/Bills/Senate%20Passed%20Legislature/5722-S.PL.pdf?q=20220329121607>

<sup>28</sup><https://www.seattle.gov/environment/climate-change/buildings-and-energy/building-emissions-performance-standard/beps-policy-development>



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[seattle.gov/city-light](https://seattle.gov/city-light)

