SEATTLE CITY COUNCIL

Sustainability, City Light, Arts and Culture Committee

Agenda

Revised - Public Hearing

Friday, August 1, 2025

9:30 AM

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

Alexis Mercedes Rinck, Chair
Debora Juarez, Vice-Chair
Rob Saka, Member
Mark Solomon, Member
Dan Strauss, Member

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

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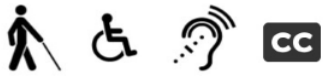

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Meeting Location:
Council Chamber, City Hall , 600 4th Avenue , Seattle, WA 98104

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

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This meeting also constitutes a meeting of the City Council, provided that the meeting shall be conducted as a committee meeting under the Council Rules and Procedures, and Council action shall be limited to committee business. Pursuant to Council Rule VI.C.10, members of the public providing public comment in Chambers will be broadcast via Seattle Channel.

Members of the public may register for remote or in-person Public Comment to address the Council. Speakers must be registered in order to be recognized by the Chair. Details on how to register for Public Comment are listed below:

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

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Please submit written comments no later than four business hours prior to the start of the meeting to ensure that they are distributed to Councilmembers prior to the meeting. Comments may be submitted at Council@seattle.gov or at Seattle City Hall, Attn: Council Public Comment, 600 4th Ave., Floor 2, Seattle, WA 98104. Business hours are considered 8 a.m. - 5 p.m. Comments received after that time will be distributed after the meeting to Councilmembers and included as part of the public record.

Please Note: Times listed are estimated

A. Call To Order

B. Approval of the Agenda

C. Public Comment

D. Items of Business

1 Res 32176 **A RESOLUTION relating to the City Light Department; acknowledging and approving the City Light Department's adoption of a biennial energy conservation target for 2026-2027 and ten-year conservation potential.**

Attachments: Att A - 2026 Demand-Side Management Potential Assessment

Supporting Documents: Summary and Fiscal Note
Presentation

Public Hearing, Briefing, Discussion, and Possible Vote (60 minutes)

Presenters: Dawn Lindell, General Manager and CEO, Craig Smith, Joe Fernandi, and Jennifer Finnigan, Seattle City Light (SCL)

2 **Baker Tilly Audit**

Supporting Documents:

2024 SCL Financial Statements
SCL Audit Results
Presentation

Briefing and Discussion (30 minutes)

Presenters: Natalie Hayashi, Seattle City Light (SCL); Aaron Worthman, Baker Tilly

E. Adjournment

File #: Res 32176, **Version:** 1

CITY OF SEATTLE

RESOLUTION _____

A RESOLUTION relating to the City Light Department; acknowledging and approving the City Light Department's adoption of a biennial energy conservation target for 2026-2027 and ten-year conservation potential.

WHEREAS, Ballot Initiative 937 ("I-937"), also known as the Energy Independence Act, was passed by Washington State voters on November 7, 2006, which requires qualifying electric utilities to obtain new renewable resources and undertake cost-effective energy conservation; and

WHEREAS, I-937 was codified in chapter 19.285 of the Revised Code of Washington (RCW); and

WHEREAS, RCW 19.285.040 calls for each qualifying utility to pursue all available conservation that is cost-effective, reliable, and feasible, including requiring the development of conservation potential and biennial conservation targets; and

WHEREAS, Washington Administrative Code (WAC) 194-37-070 requires that each qualifying utility "must document the methodologies and inputs used in the development of its ten-year potential and biennial target and must document that its ten-year potential and biennial target are consistent with the requirements of RCW 19.285.040(1)"; and

WHEREAS, City Light undertook a Demand Side Management Potential Assessment study to develop its ten-year conservation potential and biennial target, which was consistent with the methodologies set forth in RCW 19.285.040 and WAC 194-37-070; and

WHEREAS, the Demand Side Management Potential Assessment identifies a ten-year conservation potential of 78 average megawatts (aMW) starting in 2026, and a biennial energy conservation target of 16 aMW for City Light in 2026-2027; and

WHEREAS, City Light anticipates meeting or exceeding the energy conservation target for 2026 and 2027, and updating its Demand Side Management Potential Assessment by the year 2028; and

WHEREAS, WAC 194-37-070 requires that each utility must establish its ten-year potential and biennial target by action of the utility's governing board, after public notice and opportunity for comment; NOW, THEREFORE,

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

Section 1. Pursuant to chapter 19.285 of the Revised Code of Washington (RCW) and corresponding Washington Administrative Code (WAC) 194-37-070 regulations, and after public hearing, the City Council acknowledges and approves the City Light Department's ("City Light") adoption of a biennial energy conservation target of 16 aMW for 2026-2027 and a ten-year conservation potential of 78 aMW starting in 2026. City Light's biennial energy conservation target and ten-year conservation potential are based upon a Demand Side Management Potential Assessment conducted using methodologies consistent with those used by the Pacific Northwest Electric Power and Conservation Planning Council in order for City Light to pursue all available conservation that is cost-effective, reliable, and feasible.

Section 2. The City Council further acknowledges that City Light anticipates meeting or exceeding the biennial energy conservation target with its adopted 2026 budget and future 2027 budget.

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

_____

President _____ of the City Council

The Mayor concurred the _____ day of _____, 2025.

_____

Bruce A. Harrell, Mayor

Filed by me this _____ day of _____, 2025.

_____

Scheereen Dedman, City Clerk

(Seal)

Attachments:
Attachment A - 2026 Demand-Side Management Potential Assessment

Seattle City Light

2026 Demand-Side Management Potential Assessment

Project Leads: Margaret Frey, Jennifer Finnigan, and Verene Martin, Seattle City Light
Prepared by: Aquila Velonis, Jesse Emge, PhD, Craig Bird, Andrew Grant, Taylor Bettine, Lily Mosher, and Callahan Seitz,
Cadmus
Sophia Spencer, Nauvoo Solutions
August 2025

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Definition of Terms

aMW	Average megawatt
AC	Air conditioning
BPA	Bonneville Power Administration
CBECS	Commercial Buildings Energy Consumption Survey
CBSA	Commercial Building Stock Assessment
CEIP	Clean Energy Implementation Plan
CETA	Clean Energy Transformation Act
COB	California-Oregon Border
Council	Northwest Power and Conservation Council
CPA	Conservation Potential Assessment
DSM	Demand-Side Management
DSMPA	Demand-Side Management Potential Assessment
ECM	Energy conservation measure
EHD	Environmental Health Disparities
ELCC	Effective Load-Carrying Capacity
EIM	Energy Imbalance Market
EPRI	Electric Power Research Institute
EUL	Effective useful life
EV	Electric vehicle
FPT	Flow Plan Tool
GHG	Greenhouse Gas
GCM	General Circulation Model
HVAC	Heating, Ventilation, and Air Conditioning
I-937	Initiative 937
ICE	Intercontinental Exchange
IRP	Integrated Resource Plan
kWh	Kilowatt-hour
LED	Light-emitting diode
MACA	Multivariate Adaptive Constructed Analogs
Mid-C	Mid-Columbia
MW	Megawatt
MWh	Megawatt-hour
NEEA	Northwest Energy Efficiency Alliance
NREL	National Renewable Energy Laboratory
NWPCC	Northwest Power & Conservation Council
O&M	Operations and maintenance
PV	Photovoltaic
RARE	Resource Adequacy Renewable Energy
RBSA	Residential Building Stock Assessment
RCW	Revised Code of Washington
REC	Renewable Energy Credits
RFP	Request for Proposals
RTF	Regional Technical Forum
RUL	Remaining useful life
S&P	Standard & Poor
SEC	Seattle Energy Code
T&D	Transmission and Distribution
TRC	Total resource cost
UEC	Unit energy consumption
UES	Unit energy savings
WAC	Washington Administrative Code

Acknowledgements

The authors would like to thank the Seattle City Light staff who provided invaluable guidance and support, especially Margaret Frey, Jennifer Finnigan, Verene Martin, Mike Hamilton, Katie Ewing, Rebecca Klein, and Alan Bach. The study required compiling a large amount of data from many sources, including several divisions at City Light.

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1. Executive Summary

1.1. Overview

Seattle City Light (City Light) engaged Cadmus to complete a Demand-Side Management Potential Assessment (DSMPA) to produce rigorous estimates of the magnitude, timing, and costs of conservation (henceforth referred to as "conservation" or "energy efficiency") and demand response resources in its service territory over the next 20 years, beginning in 2026. The DSMPA comprises the conservation potential assessment (CPA) and demand response potential assessment (DRPA). City Light incorporates the CPA and DRPA within the integrated resource planning (IRP) process to identify the cost-effective potential of energy efficiency and demand response, respectively. The DSMPA identifies energy efficiency and demand response potential in City Light's major customer sectors—residential, commercial, and industrial—while accounting for the impacts of climate change and building electrification.[1] The results of this assessment will also help inform the development of City Light's future programs. The study period aligns with the timeline for City Light's 2026 IRP and provides direct inputs into that analysis.

Table 1- shows the 20-year technical, achievable technical, and achievable economic potential for each resource considered in this study. Complete details of the DRPA can be found in Appendix E of this report.

Table 1-1. Summary of Energy Savings and Demand Reduction Potential, Cumulative 2045

	Energy (aMW)			Winter Coincident Peak Capacity (MW)		
Resource	**Technical Potential**	**Achievable Technical Potential**	**Achievable Economic Potential**	**Technical Potential**	**Achievable Technical Potential**	**Achievable Economic Potential**
Energy Efficiency	245	202	103	279	228	108
Demand Response	N/A	N/A	N/A	N/A	193	14

This study accomplishes several objectives:

- Fulfills statutory requirements of Chapter 194-37 of the Washington Administrative Code (WAC), Energy Independence Act (I-937). The WAC requires that City Light identify all achievable, cost-effective conservation potential for the upcoming 10 years.[2] The WAC also specifies that City Light's public biennial conservation target should be no less than the pro rata share of conservation potential over the first 10 years. The study estimates will inform City Light's targets for the 2026-2027 biennium.

[1] For this study, Cadmus estimated demand response potential for managed electric vehicle (EV) charging and conservation potential for efficient, residential EV chargers. We did not estimate conservation potential for efficient EV chargers in the commercial sector.

[2] Washington State Legislature. *Energy Independence Act.* Washington Administrative Code Chapter 194-37.

- Supports City Light's compliance with Washington State's Clean Energy Transformation Act (CETA), passed as Senate Bill 5116 in April 2019, to inform City Light's energy efficiency and demand response short- and long-term targets.[3] In addition, this study will inform City Light's near-term interim targets for its Clean Energy Implementation Plan (CEIP) as required by CETA. CETA sets additional requirements for City Light, such as including the social cost of carbon in avoided energy costs. This study, more broadly, supports City Light's Clean Energy Action Plan, a 10-year action plan described in the 2024 IRP Progress Report to meet CETA requirements.
- Develops up-to-date estimates of energy conservation measure (ECM) datasets for the residential, commercial, and industrial market sectors using measures consistent with the Northwest Power and Conservation Council's (Council) 2021 Power Plan, the Regional Technical Forum (RTF), and other data sources.
- Provides inputs into City Light's IRP and progress update reports, which is completed every two years in accordance with the Revised Code of Washington (RCW) 19.280.[4] City Light's IRP determines the mixture of supply-side and demand-side resources required over the next 20 years to meet customer demand and looks ahead to how City Light plans to meet the 2045 100% non-emitting standard of CETA. The IRP requires a thorough analysis of conservation potential to properly assess the reliability, cost, risk, and environmental impact of different resource portfolios for power generation, as well as to assess other demand-side resources that are not part of the CPA.
- Informs City Light's planning and budget setting for customer programs and City Light's load forecast.

Cadmus relied on City Light–specific data compiled from the 2022 Northwest Energy Efficiency Alliance (NEEA) Residential Building Stock Assessment (RBSA),[5] NEEA's 2019 Commercial Building Stock Assessment (CBSA),[6] and other regional data sources. Our analyses use methodology consistent with the

[3] CETA requires proposing interim targets for meeting the standard under RCW 19.405.040(1) during the years prior to 2030 and between 2030 and 2045. This study estimates potential over 20 years, from 2026 through 2045.

[4] Under RCW 19.280, electric utilities with more than 25,000 customers that are not full requirements customers must provide progress reports on their IRPs every two years. Additionally, these utilities are required to develop and submit an updated IRP at least every four years.

[5] Northwest Energy Efficiency Alliance. *2022 Residential Building Stock Assessment*.

[6] Northwest Energy Efficiency Alliance. *2019 Commercial Building Stock Assessment*.

supply curve workbooks of the Council's 2021 Power Plan, published in March 2022.[7] We also incorporated savings and costs for all ECMs in the Council's 2021 Power Plan workbooks and selected unit energy savings (UES) workbooks from the RTF.[8] Cadmus did not include results from the Council's Ninth Power Plan as the planned completion will be in fall 2026. However, Cadmus did include draft Ninth Power Plan data where applicable, such as updated regional transmission and distribution avoided costs and program administration cost factors. The *Detailed Methodology* section of this report describes the sources and data used in greater detail.

Cadmus also calculated estimates of the demand response potential that align with the Council's demand response methodology and provide City Light with the data it needs to meet Washington State's CETA requirements. The methodology and findings of the Demand Response Potential Assessment are presented in Appendix E.

City Light's IRP analysis used the solar photovoltaic (PV) and battery potential results from the 2024 DSMPA; therefore, Cadmus did not repeat this analysis as part of the 2026 DSMPA. For a summary of the solar PV and battery potential, see the 2024 DSMPA report appendices. Cadmus used the battery potential (adoption) from the 2024 DSMPA as the basis to assess the demand response opportunities of batteries within the 2026 DRPA.

Cadmus completed the analysis under a condensed timeline by focusing on the following updates from the prior 2024 DSMPA:

- Added five new conservation measures: window heat pump, HVAC sizing, multifamily packaged terminal heat pump, heat pump with gas back-up, and electric vehicle (EV) chargers
- Updated to the latest RTF data for 10 high-impact measures
- Updated residential equipment, end-use saturations, and fuel shares with the most recent 2022 RBSA
- Revised the regional avoided transmission and distribution costs and program administration cost factors based on the draft Council Ninth Power Plan data
- Incorporated City Light's recent evaluation data for ductless heat pumps and heat pump water heaters
- Removed selected measures based on discussions with City Light program staff
- Changes to codes and standards and recent programmatic accomplishments

[7] The 2021 Power Plan is a regional plan that provides guidance on resources to ensure a reliable and economical regional power system from 2022 to 2041. The Council develops supply curves covering a variety of supply- and demand-side resources, considers how to best meet the region's power needs across a range of future scenarios (balancing cost and risk), develops a draft plan, and gathers public input before releasing the final version.

[8] RCW 19.285.040 requires CPAs to use methodologies consistent with those used by the Council's most recent regional power plan.

- Adjusted achievable technical potential adoption rates to reflect the two-year timestep since the previous DSMPA.
- Removed acceleration of achievable technical potential adoption for certain commercial building types that were least likely to be adopted rapidly due to the WA State Clean Building Performance Standard (CBPS). City Light has seen limited programmatic adoption from these initiatives so far. In addition, there remains some uncertainty in the commercial market as well as uncertainty in number of customers who may opted for non-compliance (prior study assumed 100% compliance).
- Added four new demand response products: commercial EV supply equipment direct load control, commercial time-of-use, residential opt-out time-of-use, and residential non-incentivized behavioral measures.

In addition, City Light updated the IRP modeling tools and analyses that optimize resource selections. More details can be found in the *Long-Term Resource Planning Model for DSMPA* section of this report.

1.2. Scope of Analysis

For this study, Cadmus analyzed three sectors—residential, commercial, and industrial—and, where applicable, considered multiple market segments, construction vintages (new and existing), and end uses:

- **Residential:** Eight segments, including single-family and multifamily homes (including low-rise, mid-rise, and high-rise) and highly impacted[9] single-family and multifamily homes (including low-rise, mid-rise, and high-rise)
- **Commercial:** 20 major commercial segments (including offices, retail, and other segments)
- **Industrial:** Eight segments, including energy-intensive manufacturing, primarily process-driven customers, and water and wastewater treatment plants[10]

For each sector, Cadmus developed a baseline end-use load forecast that assumed no new future programmatic conservation, accounted for the effects of climate change,[11] and building electrification. The baseline forecast largely captured savings from building energy codes, equipment standards, and other naturally occurring market forces. Cadmus calculated energy efficiency potential estimates by

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9 Highly impacted communities are defined by the Washington State Department of Heath based on a census tract ranking of 9 or 10 on the Environmental Health Disparities (EHD) Map. This ranking considers 19 factors, such as environmental exposures and effects, socioeconomic factors, and sensitive populations. More details on the definition and how Cadmus disaggregated the data are provided in section 1.3.5 of this report.

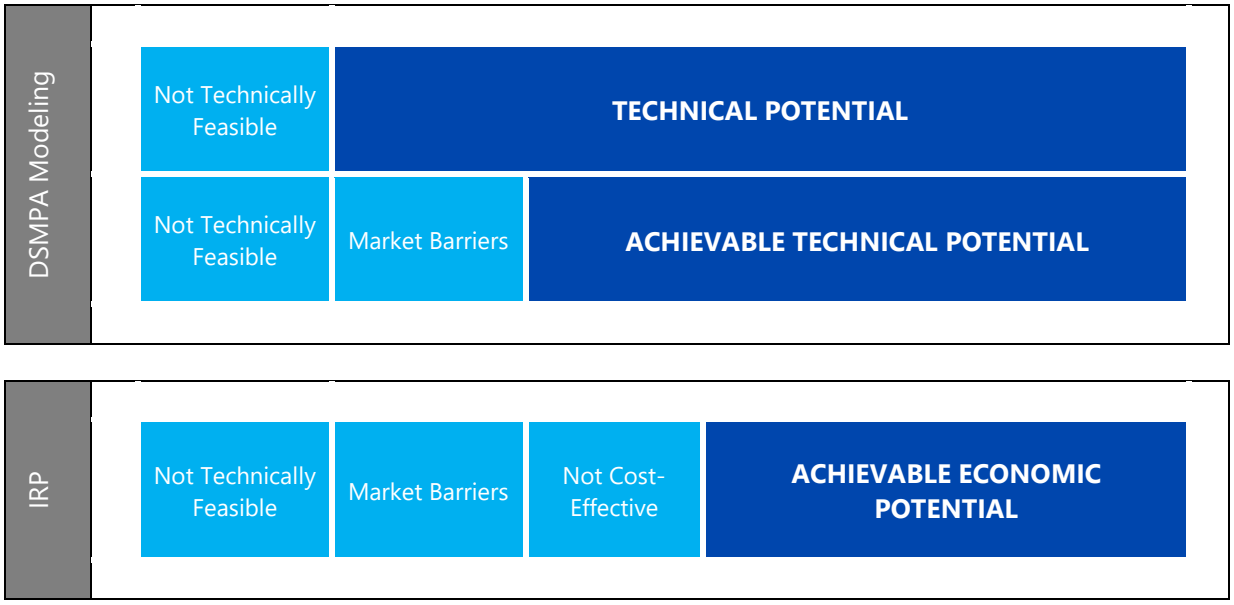
10 In addition to these eight segments, the load forecast included industrial district steam, spot loads, and streetlighting loads provided by City Light. However, Cadmus did not estimate conservation or demand response potential in these segments, so they are excluded from this report.

11 Cadmus did not account for the effects of climate change on the industrial sector.

assessing the impact of each ECM on this baseline forecast. Therefore, conservation potential estimates presented in this report represent savings beyond codes and standards and naturally occurring savings.

Consistent with the WAC requirements, Cadmus considered two types of energy efficiency potential, as shown in Figure 1-1. City Light determined a third potential—achievable economic—through the IRP's optimization modeling.

Figure 1-1. Types of Energy Efficiency Potential



These three types of potential are described as follows:

Technical potential: This is the total amount of energy efficiency that could be collected within City Light's service territory, assuming that all feasible resource opportunities can be captured regardless of cost and market barriers such as customer willingness to adopt. The potential is only limited by physical and operational constraints.

Achievable technical potential: This is the portion of technical potential assumed to be achievable during the study's forecast, regardless of the acquisition mechanism. For example, savings may be acquired through utility programs, improved codes and standards, and market transformation. The achievable technical potential considers market barriers such as customer awareness, willingness to adopt measures, and historical program participation – while not constrained by cost-effectiveness.

Achievable economic potential: This is the portion of achievable technical potential determined to be cost-effective by the IRP's optimization modeling, in which either bundles or individual energy efficiency measures are selected based on cost and savings. The cumulative potential for these selected bundles constitutes achievable economic potential.

Cadmus provided City Light resource planning staff and their IRP modeling consultant, Sylvan Energy Analytics, with forecasts of achievable technical potential, which City Light then entered as variables in the IRP's optimization model to determine achievable economic potential.

To be consistent with WAC requirements of relying on cost-effective energy efficiency, Cadmus bundled the resulting forecasts of achievable technical potential by levelized costs bin for the IRP modeling team. The IRP modeling team then determined the amount of cost-effective energy efficiency that could be considered as a resource within the IRP. See *Long-Term Resource Planning Model for DSMPA s*ection and Appendix D. Measure Details for more information.

1.3. Summary of Results

The study found 124 average megawatts (aMW) of achievable technical conservation potential in the first 10 years (cumulative in 2035) in City Light's service territory.[12] To inform I-937 and CEIP energy efficiency targets, Cadmus calculated two-year and four-year cumulative achievable technical potential. Cumulative achievable technical potential equals 29 aMW in the first two years and 54 aMW in the first four years.

Furthermore, City Light used its IRP optimization model to select measures based on the levelized total resource cost (TRC). Overall, the cumulative 20-year achievable economic potential is 103 aMW, with 78 aMW acquired in the first 10 years. The *pro rata* share (20% of 10-year achievable economic potential), which represents City Light's minimum biennial target, equals 16 aMW. All estimates of potential in this report are presented at the generator, which means they include line losses.[13]

1.3.1. Technical Potential

Table 1- shows the cumulative technical potential for each sector in 2045. Overall, Cadmus identified 245 aMW of technically feasible conservation potential by 2045—the equivalent of 16% of forecasted baseline sales. The study results are presented as a percentage of forecasted baseline sales, which provides a useful benchmark for comparison against City Light's previous studies. The baseline sales reported in the subsequent tables include City Light's EV forecasts for the commercial and residential sectors. They do not include industrial forecasts for spot loads or district steam since these categories require custom engineering work that does not conform to the standard efficiency measures in the industrial sector. Similarly, streetlighting is not included in the baseline sales data, because City Light has installed all efficient measures in this segment and there is no remaining potential. The residential, commercial, and industrial sectors account for 19%, 15%, and 8% of the 20-year technical potential, respectively. Please note that due to rounding, some values presented in the tables and figures may not sum precisely.

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[12] An aMW refers to a unit of measure that represent one million watts (MW) delivered continuously 24 hours a day for each day of the year (for a total of 8,760 hours in non-leap years). A detailed description of MW and aMW can be found on the Council's website: https://www.nwcouncil.org/reports/columbia-river-history/megawatt

[13] City Light estimates transmission and distribution line losses to be 8.31%, so the minimum biennial target at a customer site is 14.3 aMW.

Table 1-2. Cumulative Technical Potential by Sector (2026–2045)

Sector	Baseline Sales–20-Year (aMW)	Technical Potential–20-Year (aMW)	Technical Potential as % of Baseline Sales
Residential	512	97	19%
Commercial	908	138	15%
Industrial	109	9	8%
Total	**1,530**	**245**	**16%**

1.3.2. Achievable Technical Potential

Table 1- shows the cumulative achievable technical potential for each sector in 2045. Overall, Cadmus identified 202 aMW of technically feasible achievable potential by 2045—the equivalent of 13% of forecasted baseline sales. The residential, commercial, and industrial sectors account for 16%, 12%, and 7% of the cumulative achievable technical potential, respectively.

Table 1-3. Cumulative Achievable Technical Potential by Sector (2026–2045)

Sector	Baseline Sales–20-Year (aMW)	Achievable Technical Potential–20-Year (aMW)	Achievable Technical Potential as % of Baseline Sales
Residential	512	81	16%
Commercial	908	113	12%
Industrial	109	8	7%
Total	**1,530**	**202**	**13%**

Table 1- provides two-year, four-year, 10-year, 20-year, and pro rata share of the cumulative achievable technical potential by sector.[14] The commercial sector provides the majority of the cumulative achievable technical potential. This is due to the commercial sector's higher baseline sales compared with those of the residential and industrial sectors.

Table 1-4. Cumulative Achievable Technical Potential by Sector and Time Period

Sector	Achievable Technical Potential (aMW)				
	2-Year (2026-2027)	4-Year (2026–2029)	10-Year (2026–2035)	20-Year (2026–2045)	20% of 10-Year Potential
Residential	7	13	35	81	7
Commercial	20	38	82	113	16
Industrial	1	3	6	8	1
Total	**29**	**54**	**124**	**202**	**25**

Table 1- provides the winter and summer technical, achievable technical, and achievable economic capacity savings from energy efficiency by sector in 2045 in megawatts (MW). Capacity savings represent the average demand reduction for each season based on City Light's peak period definitions. The

[14] Under Chapter 194-37 of the WAC Energy Independence Act, City Light's public biennial conservation target must be no less than 20% of the 10-year potential—representing its "pro rata share."

commercial sector accounts for the majority of the total cumulative winter and summer capacity achievable technical and economic potential. The residential sector accounts for 51% of the winter capacity achievable technical potential but only 25% of the summer capacity achievable technical potential, which reflects the relatively higher saturation of residential electric space heating loads compared with residential cooling loads.

Table 1-5. Cumulative Winter and Summer Capacity (MW) Savings by Sector (2026–2045)

Sector	Technical Potential		Achievable Technical Potential		Achievable Economic Potential	
	Winter MW	Summer MW	Winter MW	Summer MW	Winter MW	Summer MW
Residential	140	86	116	73	17	11
Commercial	130	248	104	208	82	135
Industrial	9	10	8	8	8	8
Total	**279**	**344**	**228**	**289**	**108**	**154**

Table 1- provides the two-year, four-year, and 10-year summer and winter capacity savings by sector. In the first 10 years of the study period, the cumulative winter achievable technical capacity savings are 138 MW, which is 61% of the 20-year cumulative winter achievable technical capacity savings. The 10-year cumulative summer achievable technical capacity savings are 200 MW, which is 69% of the 20-year cumulative summer achievable technical capacity savings.

Table 1-6. Cumulative Winter and Summer Capacity (MW) Savings by Sector and Time Period

Sector	Cumulative Winter Achievable Technical Potential (MW)			Cumulative Summer Achievable Technical Potential (MW)		
	2-Year (2026-2027)	4-Year (2026–2029)	10-Year (2026–2035)	2-Year (2026-2027)	4-Year (2026–2029)	10-Year (2026–2035)
Residential	10	19	51	6	11	31
Commercial	21	38	76	33	63	148
Industrial	1	3	6	2	3	7
Total	**32**	**60**	**134**	**40**	**77**	**186**

1.3.3. Technical and Achievable Technical Potential Comparison to the 2024 DSMPA

The 2026 DSMPA identified 245 aMW of cumulative, final-year technical potential, compared with 263 aMW in the 2024 DSMPA, as shown in Table 1-. The 7% decrease in cumulative, final-year technical potential is due to several key factors:

The study horizon for the 2024 DSMPA was 22 years, whereas the 2026 DSMPA study horizon is 20 years to align on the final study year of 2045. This is the year that CETA requires a complete transition to clean electricity.

While both studies incorporated the impacts of building electrification and climate change in the baseline forecast, the 2026 DSMPA used updated projections from City Light.[15]

- Cadmus updated residential fuel shares and saturations based on the most recent (2022) NEEA RBSA site data. The 2024 DSMPA used the 2017 RBSA.
- Cadmus incorporated updates to codes and standards since the 2024 DSMPA, such as the 2029 residential federal standard for heat pump water heaters and RCW 70A.230.020 prohibiting fluorescent lighting sales.

Based on discussions with City Light program staff, Cadmus removed measures for streetlighting and controls, residential wastewater impacts, spas, fryers, and refrigerator and freezer recycling. These removals had various reasons ranging from measures achieving market saturation, state and city codes limiting program opportunities, and feasibility in measure implementation within City Light'sd service area.

Table 1-7. Final Year Cumulative Technical Potential Comparison by Sector

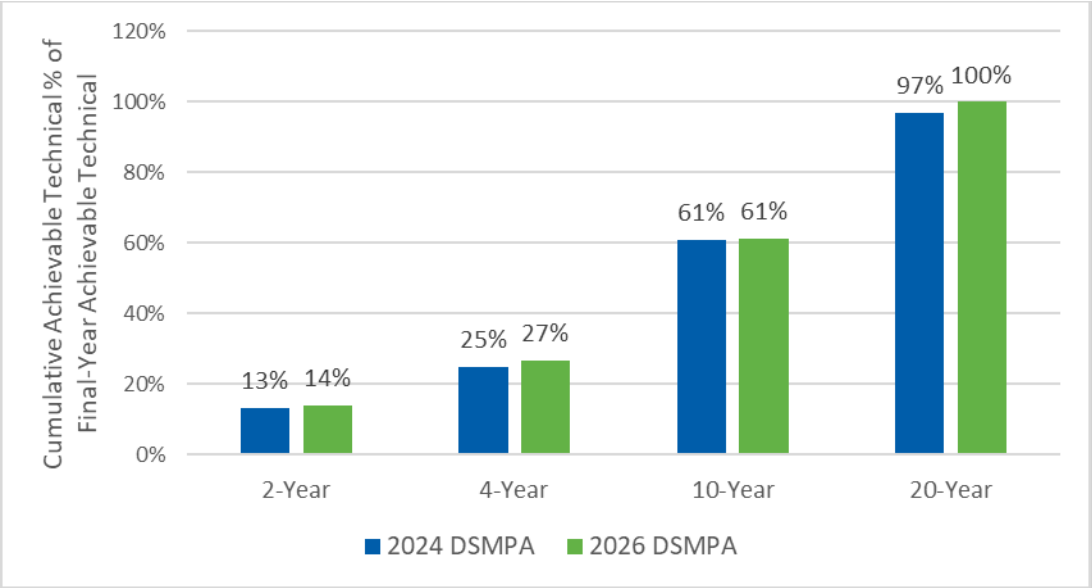
Sector	2026 DSMPA			2024 DSMPA		
	Baseline Sales– 20 Year* (aMW)	Technical Potential– 20 Year (aMW)	Technical Potential as % of Baseline Sales	Baseline Sales– 22 Year* (aMW)	Technical Potential – 22 Year (aMW)	Technical Potential as % of Baseline Sales
Residential	439	97	22%	398	95	24%
Commercial	698	138	20%	718	155	22%
Industrial	109	9	8%	124	13	11%
Total	**1,246**	**245**	**20%**	**1,240**	**263**	**21%**

**Note: The baseline sales do not include EV sales in the residential and commercial sectors for both the 2026 and 2024 DSMPA values*

Figure 1-2 illustrates that the 2026 DSMPA realized a higher proportion of total achievable technical potential in the initial years of the study. This is because the 2026 DSMPA has a 20-year study horizon, whereas the 2024 DSMPA has a 22-year horizon. The two additional years in the 2024 DSMPA's study horizon allow for more achievable technical potential.

[15] Electrification forecast and climate change impacts provided by City Light and based on prior City Light modeling and research.

Figure 1-2. Cumulative Achievable Technical Potential as a Percentage of Total Achievable Technical Potential



To estimate the annual acquisition rate of energy efficiency potential in both the 2024 and 2026 DSMPA, Cadmus used assumptions from the 2021 Power Plan. The 2021 Power Plan identifies ramp rates, also known as adoption curves, for all energy efficiency measures. These ramp rates estimate annual adoption of the measure based on market readiness, adoption barriers, and infrastructure.

The 2021 Power Plan ramp rates cover the 20-year period from 2022 to 2041. Since the study period for both the 2024 and 2026 DSMPA extends to 2045, Cadmus extrapolated these ramp rates to cover the additional years. This is detailed in the *6.2.2 Achievable Technical Potential* section). In addition, Cadmus adjusted the starting point for the ramp rates to 2024 for the 2026 DSMPA and 2022 for the 2024 DSMPA to reflect the adoption of efficiency measures since the publication of the 2021 Power Plan. These adjustments contribute to a higher percentage of overall potential in the initial years of the study period.

Similar to the prior DSMPA, this study shows the savings are front-loaded in the earlier part of the study, with the 10-year estimate representing 61% of the 20-year achievable technical potential. This reflects the assumption (consistent with the Council ramp rates) that the most market-ready retrofit measures and easily adopted energy-efficient equipment will be adopted faster in the first 10 years. In the later years, the remaining potential consists of equipment stock that have long turn-over periods (e.g., long effective-useful lives) as well as the rate of adoption slows for the remaining retrofit measures as the measure approaches full market saturation making it more challenging to implement. Additional detail on ramp rates can be found in the *6.2.2 Achievable Technical Potential* section.

The industrial sector in the 2026 DSMPA included measures and savings methodologies based on the 2021 Power Plan, such as HVAC measures, forklift battery chargers, compressors, fans, pumps, and other motor-driven systems. Similar to the prior DSMPA, Cadmus included non-Council measures, such as industrial generator block heaters, retro-commissioning, and welder system upgrades. Due to following a similar methodology, the potential in the industrial sector did not change significantly compared with the 2024 DSMPA. This is further detailed in the *5.1.3. Changes in Industrial Technical Potential* section.

1.3.4. Incorporating Conservation into City Light's IRP

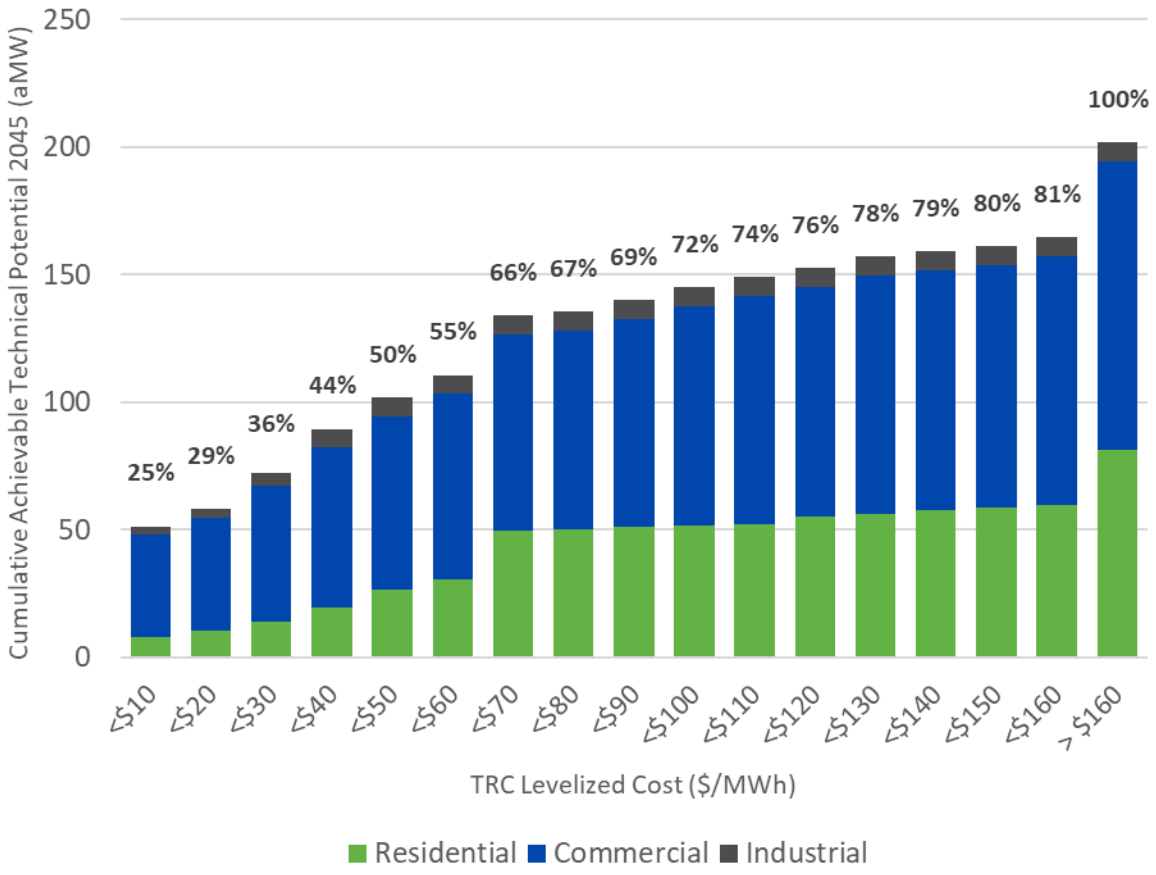
Cadmus summarized the achievable technical potential for energy efficiency, described above, by the levelized cost groups (bins)[16] of conserved energy by customer class for inclusion in City Light's IRP framework.[17] We calculated these costs over a 20-year program life—*Long-Term Resource Planning Model for DSMPA* section provides additional detail on the levelized cost methodology.

Table 1-8 shows the total achievable technical potential available over the 20-year study period, presented in $10 levelized cost increments. For example, 72 aMW, or 36% of the cumulative 2045 achievable technical potential has a levelized cost of less than or equal to $30 per megawatt-hour. Additionally, the figure shows that 19% of the total achievable technical potential has a levelized cost of greater than $160 per megawatt-hour.

[16] Levelized cost groups or "bins" identify a group of measures with similar costs based on a cost per MWh range (e.g., $20 per MWh to $29 per MWh). These bins help planners select groups of energy efficient measures in the IRP.

[17] The customer class the IRP used to group measures included sector, highly impacted community status (for residential customers), and commercial building size status (small or large). It also included a weather sensitivity designation depending on the type of measure being evaluated.

Table 1-8. Electric Supply Curve – Cumulative 20-Year Achievable Technical Potential (Levelized Cost Bins)



1.3.5. Achievable Economic Potential

After incorporating the achievable technical levelized cost of conserved energy bins, the IRP model identified an optimal amount of annual conservation. Bundling resources into distinct cost groups allowed the portfolio optimization model to select the combination of conservation cost bundles by sector that provided City Light with the least-cost portfolio alongside renewable resources while also achieving resource adequacy targets, I-937 requirements, and CETA requirements. Details of resource adequacy can be found in the Resource Adequacy section. By integrating conservation choices alongside renewable supply options into the portfolio optimization model, City Light captured the different value streams from all resources within the same analytical framework.

The resulting IRP analysis selected 103 aMW of achievable economic potential by 2045 with sector-specific selections shown in Table 1-. Cumulative 20-year achievable economic potential accounted for 7% of the total baseline sales in 2045. The commercial sector had the greatest achievable economic potential relative to baseline sales, accounting for 9% of the 2045 commercial baseline sales. This was followed by the industrial sector's cumulative achievable economic potential, which accounted for 7% of the 2045

commercial baseline sales. Finally, the residential sector's cumulative achievable economic potential made up 2% of the 2045 residential baseline sales.

The IRP portfolio optimization model is differentiated the levelized TRC by sector, allowing it to select the specific energy efficiency cost bins that best fits City Light's portfolio and minimize the overall costs. This also recognizes that the conservation supply curves for each sector have different shapes, limits, and elasticities. As shown in Table 1-9, the achievable economic potential represents a levelized TRC of $30 or less per megawatt-hour for residential, $160 or less per megawatt-hour for commercial, and $70 or less per megawatt-hour for industrial.

Table 1-9. Cumulative Achievable Economic Potential by Sector (2026–2045)

Sector	Levelized TRC ($/MWh)	Baseline Sales 20-Year (aMW)	20-Year Achievable Economic Potential (aMW)	Achievable Economic Potential as % of Baseline Sales
Residential	30	512	13	2%
Commercial	160	908	82	9%
Industrial	70	109	8	7%
Total	**N/A**	**1,530**	**103**	**7%**

Table **1-10** provides the two-, four-, 10-, and 20-year cumulative achievable economic potential estimates by sector. The final column shows the pro rata share of the achievable economic potential, which represents the lower limit for the biennial conservation target (as defined by I-937). Overall, 20% of the total 20-year achievable economic potential is achieved in the first two years, and 76% is achieved in the first 10 years.

Table 1-10. Cumulative Achievable Economic Potential by Sector and Time Period

Sector	Achievable Economic Potential – aMW				
	2-Year (2026–2027)	4-Year (2026–2029)	10-Year (2026–2035)	20-Year (2026–2045)	20% of 10-Year Potential
Residential	3	5	9	13	2
Commercial	17	31	62	82	12
Industrial	1	3	6	8	1
Total	**21**	**39**	**78**	**103**	**16**

In Seattle, the 2021 Seattle Energy Code requires new construction buildings to meet stringent energy efficiency standards, particularly for insulation, HVAC systems, lighting, and water heating. These rules are designed to reduce energy use and carbon emissions, often necessitating the use of electric systems over fossil fuels and compliance with advanced performance metrics. Table 1-11 details the achievable economic potential attributed to new construction buildings in the residential and commercial sectors at several timesteps in the study. The potential study did not include any new industrial buildings in City Light's service area that would offer energy efficiency savings opportunities during the study period.

Table 1-11. Cumulative Achievable Economic New Construction Potential by Sector and Time Period

Sector	Achievable Economic Potential – aMW			
	2-Year (2026–2027)	4-Year (2026–2029)	10-Year (2026–2035)	20-Year (2026–2045)
Residential	0.1	0.2	0.6	1.3
Commercial	0.05	0.1	0.3	0.9
Total	**0.2**	**0.3**	**0.9**	**2.2**

Table 1-12 provides achievable economic potential estimates of the two-, four-, and 10-year summer and winter capacity savings by sector.

Table 1-12. Cumulative Winter and Summer Capacity (MW) Savings by Sector and Time Period

Sector	Cumulative Winter Achievable Economic Potential (MW)			Cumulative Summer Achievable Economic Potential (MW)		
	2-Year (2026-2027)	4-Year (2026–2029)	10-Year (2026–2035)	2-Year (2026-2027)	4-Year (2026–2029)	10-Year (2026–2035)
Residential	4	7	14	2	4	8
Commercial	19	34	63	23	44	99
Industrial	1	3	6	2	3	7
Total	**24**	**44**	**83**	**27**	**51**	**114**

Compared to the 2024 DSMPA, the IRP model identified 22% less achievable economic potential. This is largely driven by the IRP selection of residential measures with a total resource cost of less than $30/MWh. In the previous DSMPA, the residential achievable economic potential included all measures with levelized cost values less than $160/MWh. The commercial sector includes slightly more potential due to the inclusion of measures with a higher total resource cost (up to $160/MWh) than the 2024 DSMPA (up to $40/MWh). The industrial achievable economic potential has a slight decrease as a result of the decrease in overall industrial technical potential identified between the two studies. Table 1-13 provides the sector level achievable economic potential identified in each of the two studies.

Table 1-13. Final Year Cumulative Achievable Economic Potential Comparison by Sector

Sector	2026 DSMPA			2024 DSMPA		
	Baseline Sales – 20-Year (aMW)	Achievable Economic Potential – 20-Year (aMW)	Achievable Economic Potential as % of Baseline Sales	Baseline Sales – 22-Year (aMW)	Achievable Economic Potential – 22-Year (aMW)	Achievable Economic Potential as % of Baseline Sales
Residential	439	13	3%	398	50	13
Commercial	698	82	12%	718	72	10
Industrial	109	8	7%	124	10	8
Total	**1,246**	**103**	**8%**	**1,240**	**132**	**11%**

**Note: The baseline sales do not include EV sales in the residential and commercial sectors for both the 2026 and 2024 DSMPA values*

Highly Impacted Communities

Cadmus estimated potential impacts for highly impacted communities within the City Light service area. We used the same approach used in the 2024 DSMPA, which considered equity by including highly impacted communities in the study segmentation. The Washington State Department of Health defines a highly impacted community as "the census tract ranks a 9 or 10 on the Environmental Health Disparities (EHD) Map". They also include the census tracts "covered or partially covered by 'Indian Country' as defined in and designated by statute."[18] The EHD contains 19 criteria, which are grouped under environmental exposures (including fossil fuel pollution and vulnerability to climate change impacts that contribute to health inequities), environmental effects, socioeconomic factors, and sensitive populations. Cadmus selected highly impacted communities as the equity metric because of the data granularity available.

Cadmus disaggregated highly impacted customers within the DSMPA based on income qualification in the City Light Utility Discount Program and Washington EHD index for income-qualified customers.[19,20] Thus, only customers with a household income equal to or less than 70% of the state median income, by household size, and with an EHD rank of 9 and higher were considered highly impacted.

[18] Washington State Department of Health. Accessed June 2023. "Instructions for Utilities to Identify Highly Impacted Communities." https://doh.wa.gov/data-statistical-reports/washington-tracking-network-wtn/climate-projections/clean-energy-transformation-act/ceta-utility-instructions

[19] City of Seattle, Seattle Public Utilities. Accessed June 2023. "Utility Discount Program." https://www.seattle.gov/utilities/your-services/discounts-and-incentives/utility-discount-program

[20] Washington State Department of Health. Accessed June 2023. "Washington Environmental Health Disparities Map." https://doh.wa.gov/data-and-statistical-reports/washington-tracking-network-wtn/washington-environmental-health-disparities-map

Table 1-14 shows the achievable economic potential for the highly impacted communities. The 20-year cumulative, achievable economic potential for these communities represents 31% of the total residential sector's achievable economic potential.

Table 1-14. Highly Impacted Community Achievable Economic Potential by Segment and Time Period

Highly Impacted Segment	Highly Impacted Achievable Economic Potential (aMW)			
	2-Year (2026-2027)	4-Year (2026–2029)	10-Year (2026–2035)	20-Year (2026–2045)
Single-family	0.5	0.8	1.6	2.4
Multifamily Low-rise	0.2	0.3	0.6	0.7
Multifamily Mid-rise	0.1	0.2	0.4	0.5
Multifamily High-rise	0.1	0.1	0.2	0.3
Total	**0.8**	**1.4**	**2.8**	**3.9**

1.4. Organization of This Report

This report presents the study findings in three volumes. Volume I—this document—presents the methodologies and findings of the energy efficiency potential assessment. Volume II contains appendices and provides methodologies and detailed results of demand response potential assessment along with supplemental materials..

Volume I includes the following chapters:

- *Methodology* provides an overview of the methodology Cadmus and City Light used to estimate technical, achievable technical, and achievable economic potential.
- *Baseline Forecast* provides detailed sector-level results for Cadmus' baseline end-use forecasts.
- *Energy Efficiency Potential* provides detailed sector, segment, and end-use specific estimates of conservation potential as well as a discussion of top-saving measures in each sector. It also provides the potential estimates for scenarios.
- *Comparison to* shows how this study's results (the 2026 DSMPA) compared with City Light's prior DSMPA.
- *Detailed Methodology* describes Cadmus' combined top-down/bottom-up modeling approach through several sections.
    - *Developing Baseline Forecasts* provides an overview of Cadmus' approach to producing baseline end-use forecasts for each sector.
    - *Measure Characterization* describes Cadmus' approach to developing a database of ECMs, deriving from the estimates of conservation potential. This section discusses how Cadmus adapted measure data from the 2021 Power Plan, the RTF, the RBSA, the CBSA, and other sources for this study.

- *Estimating Conservation Potential* discusses assumptions and underlying equations used to calculate technical and achievable technical potential.
- *Long-Term Resource Planning Model for DSMPA* describes the DSMPA modeling approach, inputs, and how it informs the forthcoming IRP.

Volume II contains these appendices:

- Appendix A. Washington Initiative 937 (I-937) Compliance Documentation
- Appendix B. Baseline Data
- Appendix C. Detailed Assumptions and Energy Efficiency Potential
- Appendix D. Measure Details[21]
- Appendix E. Demand Response Potential Assessment

[21] Appendix D includes sector, end-use group, and measure-level results by technical, achievable technical, and the IRP model selected potential (achievable economic potential).

2. Methodology

This chapter provides an overview of the methodology Cadmus used in the 2026 DSMPA, followed by an explanation of the considerations for the design of this potential study. The methodology is described in greater detail in the *6. Detailed Methodology* section.

2.1. Overview

Estimating conservation potential draws upon a sequential analysis of various ECMs in terms of technical feasibility (technical potential), expected market acceptance, and the normal barriers that could impede measure implementation (achievable technical potential).

For this assessment, Cadmus followed three primary steps:

1. Developed the baseline forecast, which involved determining the 20-year future energy consumption by sector, market segment, and end use. We calibrated the base year (2025) to City Light's sector-level corporate load forecast produced in 2024. Baseline forecasts in this report included estimated impacts of market-driven efficiency and codes and standards. Forecasts also included the impacts of building electrification and climate change. Cadmus worked with the City Light's load forecast team to determine all of these impacts.
2. Estimated technical potential based on the incremental difference between the baseline load forecast and an alternative forecast reflecting the technical impacts of specific energy efficiency measures.
3. Estimated achievable technical potential by applying ramp rates and achievability percentages to technical potential, which is described in greater detail later in this section.

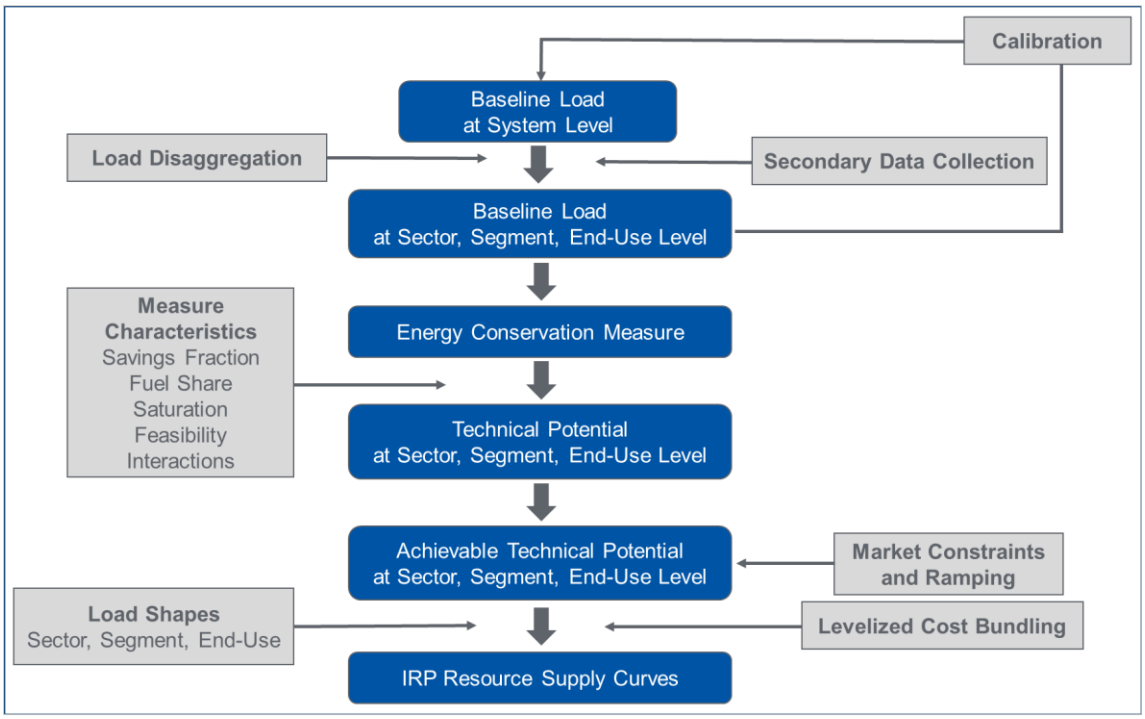
This approach offered two advantages:

Savings estimates were driven by a baseline forecast that is consistent with the assumptions used in City Light's adopted 2024 corporate load forecast. The approach had consistency among all assumptions underlying the baseline and alternative forecasts—technical and achievable technical potential. The alternative forecasts changed relevant inputs at the end-use level to reflect ECM impacts. Because estimated savings represented the difference between baseline and alternative forecasts, they could be directly attributed to specific changes made to analysis inputs.

Cadmus' general methodology can be best described as a combined top-down/bottom-up approach. As shown in Figure 2-1, the top-down component began with the most current load forecast, adjusting for enacted building codes, equipment efficiency standards, climate change, and market trends, including building electrification. We then disaggregated this load forecast into its constituent customer sectors, customer segments, and end-use components.

The bottom-up component estimated electric consumption for each major building end-use and applied the potential technical impacts of various ECMs to each end use. The analysis included assumptions of end-use equipment saturations, fuel shares, ECM technical feasibility, ECM cost, and engineering estimates of ECM unit energy consumption (UEC) and savings. A detailed description of the methodology can be found in the *6. Detailed Methodology* section.

Figure 2-1. Overall Methodology for Assessment of Demand Side Management Potential



In the final step, Cadmus developed energy efficiency supply curves so City Light's IRP portfolio optimization model could identify the amount of cost-effective energy efficiency. The portfolio optimization model required hourly forecasts of electric energy efficiency potential. To produce these hourly forecasts, Cadmus applied hourly end-use load profiles to annual estimates of achievable technical potential for each measure. These profiles are similar to the load shapes the Council used in its 2021 Power Plan supply curves and to those in the RTF's UES measure workbooks. Additionally, Cadmus incorporated a select set of commercial sector end-use load shapes from National Renewable Energy Laboratory's ComStock database.[22]

2.2. Considerations and Limitations

This study provides insights into which measures City Light could offer in future programs and aims to guide program targets. However, various design considerations for this study may lead to differences between future program plans and the study results:

- This potential study uses broad assumptions about the adoption of energy efficiency measures. Program design, however, requires a more detailed examination of historical participation and

[22] Parker, Andrew, Henry Horsey, Matthew Dahlhausen, Marlena Praprost, Christopher CaraDonna, Amy LeBar, and Lauren Klun. March 2023. *ComStock Reference Documentation: Version 1*. Golden, CO: National Renewable Energy Laboratory. NREL/TP-5500-83819. https://www.nrel.gov/docs/fy23osti/83819.pdf

incentive levels on a measure-by-measure basis. The study can inform planning for measures City Light has not historically offered or can focus the program design on areas with remaining amounts of potential identified in this study.

- This potential study does not consider program implementation barriers. Though it includes a robust, comprehensive set of efficiency measures, it does not examine whether these measures can be delivered through incentive programs or what incentive rate is appropriate. Many programs require strong trade ally networks or must overcome market barriers to succeed.
- This potential study cannot predict market changes over time. Though it accounts for changes in codes and standards as they are enacted today, the study cannot predict future changes in policies, pending or backsliding codes and standards, and which new technologies may become commercially available. City Light programs are not static and have the flexibility to address changes in the marketplace, whereas the potential study estimates use information collected at a single point in time.
- This potential study does not attempt to forecast or otherwise predict future changes in energy efficiency measure costs. The study includes Council and RTF incremental energy efficiency measure costs, including equipment, labor, and operations and maintenance (O&M), but it does not attempt to forecast changes to these costs during the course of the study (except where the Council makes adjustments). For example, changes in incremental costs may impact some emerging technologies, which may then impact both the speed of adoption and the levelized cost of that measure (impacting the IRP levelized cost bundles). Similarly, this study does not take into account pending tariffs.
- This study estimated the potential for highly impacted communities separately. Because of the lack of data on program and administrative costs, Cadmus used the same program and administration costs across the DSMPA. While this study did use higher incentive costs for highly impacted communities as part of the utility cost analysis, this may not reflect the total cost needed to support this customer group. City Light has reason to believe that these costs would be significantly higher for customers in highly impacted communities compared with customers not in highly impacted communities. City Light continues to refine these assumptions and provide the best service to highly impacted communities.
- Like the prior DSMPA, commercial UEC relies on NEEA's CBSA data, which is supplemented by data from the U.S. EIA's Commercial Buildings Energy Consumption Survey (CBECS). However, these data may not reflect the type of commercial facilities in City Light's territory and have an inherent level of uncertainty. On May 28, 2021, the Council's Conservation Resources Advisory Committee reiterated that additional research for the region is needed to develop more reliable energy use intensity data for commercial buildings. In addition, Seattle contains many large multifamily buildings with insufficient primary data (such as baseline stock characteristics). For example, this potential study assessed the impacts of the 2021 Seattle Energy Code and incorporated the code as best as possible. Data were limited on the natural gas fuel shares of equipment in multifamily construction; therefore, it was difficult to correctly estimate the impact of this 2021 code. As a result, this potential study has limited insight into the remaining potential in this segment and highlights the need for further research.

- This study uses City Light's nonresidential database to identify sales and the number of customers for each commercial market segment. This includes historical sales and the number of customers for nonresidential buildings, as well as annual forecasts of commercial square footage for each commercial market segment.
- This study applied accelerated ramp rates to approximate the impact of the Inflation Reduction Act (IRA), state, and local initiatives under the current (early 2025) landscape. However, there is inherent uncertainty in how policy changes may evolve over the 20-year study horizon.
- This study modeled the impacts of climate change by increasing the cooling load and decreasing the heating load over time. The study assumes cooling loads steadily increase year after year and heating loads steadily decrease. In reality, year-to-year weather fluctuations mean that cooling loads will increase and decrease year-to-year, while the overall trend is increasing cooling loads over time. In addition, this study uses a prediction of weather changes and acknowledges a level of uncertainty in such predictions.

Though these considerations and limitations impact the DSMPA, it is worth noting that Chapter 194-37 of the WAC requires City Light to complete and update a CPA every two years. City Light can then address some of these considerations over time and mitigate short- and mid-term uncertainties by continually revising DSMPA assumptions to reflect changes in the market.

3. Baseline Forecast

An assessment of demand-side management potential begins with developing baseline end-use load forecasts, followed by calibrating results to City Light's corporate load forecast in the base year (2025). This chapter briefly describes the methodology used in this analysis, which is then followed by the results presented by sector.

3.1. Scope of Analysis

Cadmus started the analysis by developing separate baseline end-use load forecasts over a 20-year (2026 to 2045) planning horizon for each of the three sectors: residential, commercial, and industrial. We then calibrated these forecasts to City Light's corporate load forecast in the base year (2025). The forecasts do not include future programmatic conservation, but they do account for enacted equipment standards and building energy codes, building electrification, and climate change. The City Light electrification forecast component accounts for market and policy advancement of electrification adoption consistent with goals and policies. The City Light electrification forecast intent is to account for policies promoting electrification directly and indirectly. This includes goals and policies within the Seattle Climate Action Plan and Seattle Office of Sustainability carbon-based benchmarking requirements. The City Light electrification forecast also indirectly accounts for general policies that contribute to electrification, such as the Building Energy Performance Standards (BEPS) or the Commercial Building Performance Standard (CBPS), since these performance standards do promote some level of electrification for existing buildings as a mechanism to reduce consumptions and emissions.

For each sector, Cadmus further distinguished the results by building segments, facility types, and applicable end uses:

- Sixteen residential segments of existing and new construction:
  - Single-family, single-family highly impacted
  - Multifamily low-rise, multifamily low-rise highly impacted, multifamily mid-rise, multifamily mid-rise highly impacted, multifamily high-rise, multifamily high-rise highly impacted[23]

[23] Multifamily low-rise is defined as multifamily buildings with one to three floors, while mid-rise is defined as buildings with four to six floors and high-rise is defined as buildings with more than six floors. The multifamily common area is treated within the commercial sector.

- Forty commercial segments, which include new and existing construction for 20 standard commercial segments
- Eight industrial segments (existing construction only), including water and wastewater treatment segments[24,25]

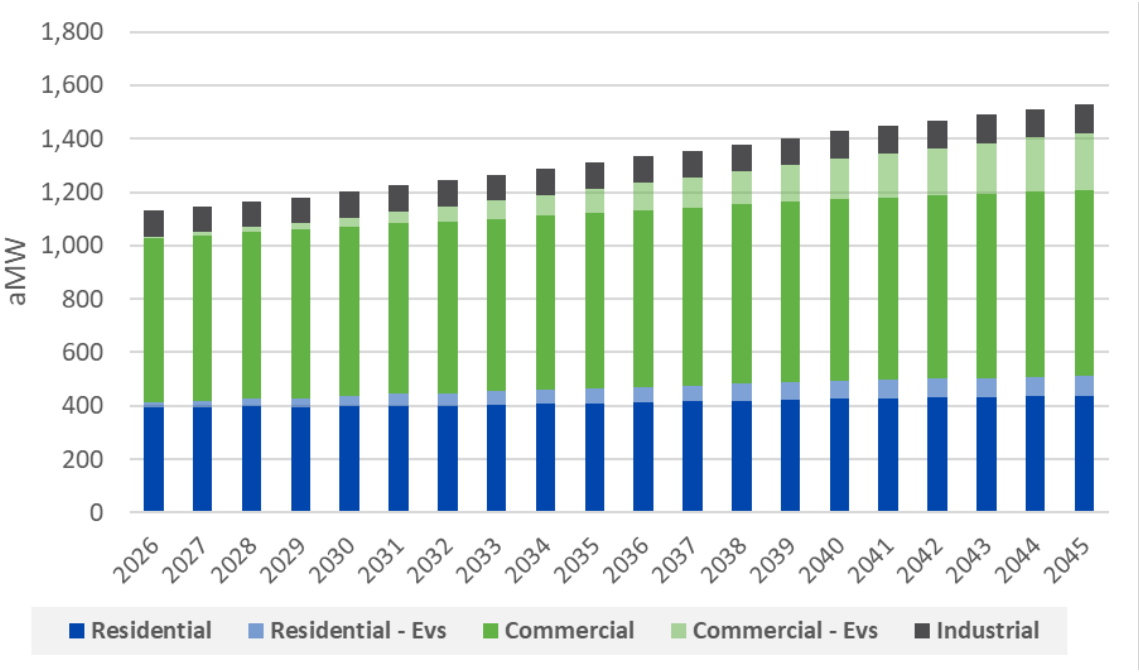
Cadmus and City Light's load forecast team worked together to develop a baseline forecast that aligned with City Light's 2024 adopted corporate load forecast. To achieve this, Cadmus modified the residential baseline forecast to include assumptions about building electrification (based on City Light's prior research and analysis) and climate change (by changing heating and cooling UECs and cooling equipment saturations over time). These changes are detailed in the following section, as well as in the *6. Detailed Methodology* section.

Figure 3-1 shows the distribution of projected sales by sector from 2026 through 2045, with EV forecasts displayed independently of the overall sector totals. In 2045, the commercial sector (excluding EVs) will account for roughly 42% of projected sales, while the residential (excluding EVs) and industrial sectors (excluding EVs) will account for 27% and 7%, respectively. The combined EV forecast makes up 17% of the 2045 baseline sales.

[24] Although City Light's internal classification system considers water and wastewater treatment segments as part of the commercial sector, to align with 2021 Northwest Power Plan, Cadmus included these two segments in the industrial sector. As such, Cadmus removed water and wastewater treatment plants' sales (including the sales of King County Wastewater Treatment Plant and Seattle Public Utilities) from commercial sales and added it to industrial sales.

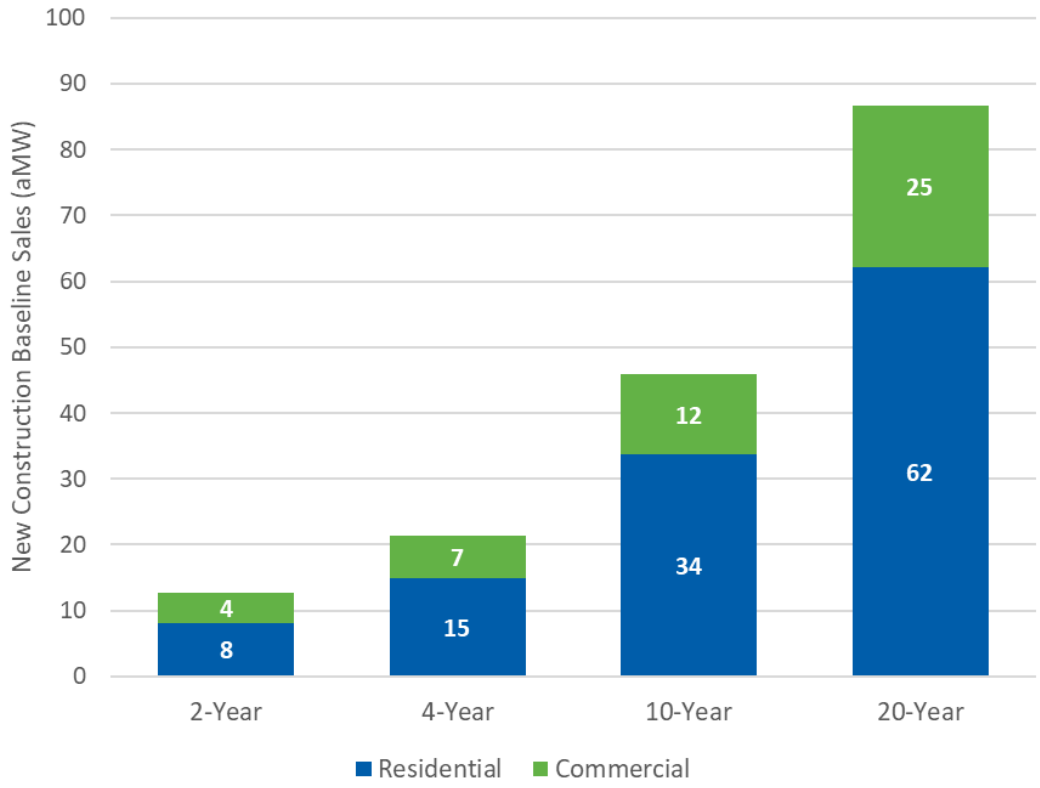
[25] This report does not include industrial district steam, spot loads, and streetlighting in the industrial baseline forecast.

Figure 3-1. Annual Baseline Sales by Sector (2026–2045)



Given the differing building requirements and regulations for new construction buildings, Cadmus seperated the baseline sales for commercial and residential into "construction vintages" to indicate if the sales were associated with new or existing buildings. Figure 3-2 shows the total sales attributed to new construction in both the residential and commercial sectors. The industrial sector does not include any new construction buildings; all sales growth in that sector is assumed to be for existing buildings. By the final year of the study, new construction buildings (those built after 2025) will account for 87 aMW of City Light sales.

Figure 3-2. New Construction Baseline Sales by Time Period and Sector



3.2. Residential

Cadmus considered eight residential segments with 42 end uses. Figure 3-3 lists the residential segments and end uses considered, as well as the broad end-use groups used in this study. Overall, the residential sector accounted for approximately 34% of total baseline sales.

Cadmus used City Light's 2024 residential household forecast in the baseline forecast, disaggregating these households into non-highly impacted and highly impacted segments.

Aligning with the prior 2024 DSMPA, Cadmus first defined equity to represent the vulnerable populations and highly impacted communities within City Light's service area, as described below:

- Vulnerable populations are "population groups that are more likely to be at higher risk for poor health outcomes in response to environmental harms, due to: (i) Adverse socioeconomic factors, such as unemployment, high housing and transportation costs relative to income, limited access to nutritious food and adequate health care, linguistic isolation, and other factors that negatively

affect health outcomes and increase vulnerability to the effects of environmental harms; and (ii) sensitivity factors, such as low birth weight and higher rates of hospitalization."[26]

- Highly impacted communities are defined as "the census tract ranks a 9 or 10 on the EHD Map, as designated by the Washington State Department of Health". They also include the census tracts "covered or partially covered by 'Indian Country' as defined in and designated by statute."[27] The EHD contains 19 criteria, which are grouped under environmental exposures (including fossil fuel pollution and vulnerability to climate change impacts that contribute to health inequities), environmental effects, socioeconomic factors, and sensitive populations.

Between the two equity descriptions, Cadmus selected highly impacted communities because of the data granularity available for the DSMPA. In addition, the highly impacted community framework incorporates climate change impacts, which is consistent with other assumptions in the DSMPA. Cadmus conducted the highly impacted disaggregation based on income qualification in the City Light Utility Discount Program and Washington EHD index for income-qualified customers.[28,29] Thus, we only considered customers with a household income equal to or less than 70% of the state median income, by household size, and with an EHD rank of 9 and higher as highly impacted for the analysis.

Cadmus combined the highly impacted communities distributions by building type with residential household forecasts, estimates of end-use saturations, fuel shares, efficiency shares, and UEC to produce a sales forecast through 2045. This approach is described in the *6.1. Developing Baseline Forecasts* section.

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[26] Washington State Legislature. RCW 70A.02.010. "Revised Code of Washington. Title 70A Environmental Health and Safety" https://app.leg.wa.gov/RCW/default.aspx?cite=70A.02.010

[27] Washington State Department of Health. Accessed June 2023. "Instructions for Utilities to Identify Highly Impacted Communities." https://doh.wa.gov/data-statistical-reports/washington-tracking-network-wtn/climate-projections/clean-energy-transformation-act/ceta-utility-instructions

[28] City of Seattle, Seattle Public Utilities. Accessed June 2023. "Utility Discount Program." https://www.seattle.gov/utilities/your-services/discounts-and-incentives/utility-discount-program

[29] Washington State Department of Health. Accessed June 2023. "Washington Environmental Health Disparities Map." https://doh.wa.gov/data-and-statistical-reports/washington-tracking-network-wtn/washington-environmental-health-disparities-map

Figure 3-3. Residential Segments and End Uses

Segments	End-Use Group	End Uses	
Single-Family Multifamily – High-Rise Multifamily – Mid-Rise Multifamily – Low-Rise Single-Family – Highly impacted Multifamily – High-Rise Highly impacted Multifamily – Mid-Rise Highly impacted Multifamily – Low-Rise Highly impacted	Appliances	Cooking Oven Cooking Range Dryer	Freezer Refrigerator
	Cooling	Cool Central	Cool Room
	Electronics	Computer – Desktop Computer – Laptop Copier DVD Player Home Audio System Microwave	Monitor Multifunction Device Plug Load (Other) Printer Set-Top Box Television
	Exterior Lighting	Lighting Exterior Standard	
	Heating	Air-Source Heat Pump with Back-Up Ductless Heat Pump – Central Heat Ductless Heat Pump – Central Heat with Back-Up Ductless Heat Pump – Room Heat Ductless Heat Pump – Room Heat with Back-Up Packaged Terminal Heat Pump (PTHP)	Circulation – Domestic Hot Water Circulation – Hydronic Heating Heat Central Heat Pump Heat Room Ventilation – Air
	Interior Lighting	Lighting Interior Linear Fluorescent Lighting Interior Specialty	Lighting Interior Standard
	Miscellaneous	Air Purifier Other	Wastewater Pool Pump
	Water Heating	Water Heat GT 55 Gallon	Water Heat LE 55 Gallon
	Electric Vehicles	Electric Vehicles	

Figure 3-4 shows residential sales by segment for each year of the study horizon. City Light projects that more than 85,000 new housing units will be built by 2045. New multifamily units account for about 50% of new residential construction, so both multifamily and single-family segment baseline sales are expected to increase at a similar rate (Table 3-).

Figure 3-4. Annual Residential Baseline Sales by Segment (2026–2045)

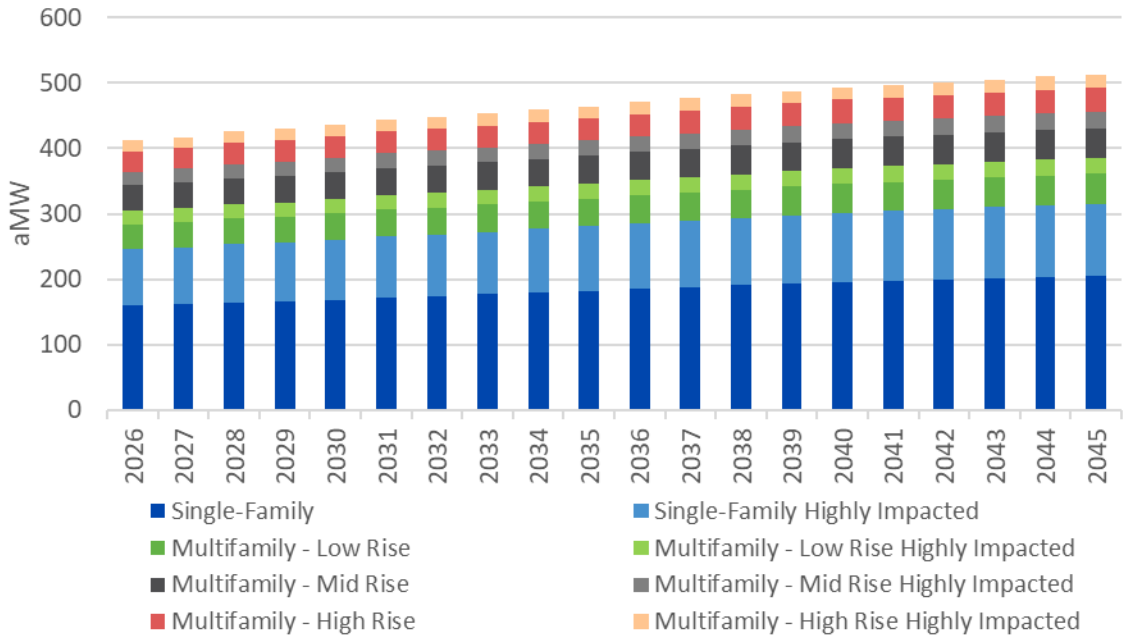


Table 3-1. Residential Baseline Sales and Housing Units by Segment

Sector	Sales (aMW)		Housing Units	
	2026	2045	2026	2045
Single-Family	160	205	161,528	188,285
Single-Family Highly Impacted	86	110	86,975	101,382
Multifamily – Low-Rise	38	45	46,208	54,992
Multifamily – Low-Rise Highly Impacted	21	24	24,881	29,610
Multifamily – Mid-Rise	39	46	49,616	59,047
Multifamily – Mid-Rise Highly Impacted	21	25	26,715	31,794
Multifamily – High-Rise	31	37	40,318	47,982
Multifamily – High-Rise Highly Impacted	17	20	21,709	25,836
Total	**412**	**512**	**457,950**	**538,927**

In the base year (2025), Cadmus calibrated baseline forecasts to City Light's load forecast, ensuring that the study's starting point aligned with the starting point of City Light's forecasts. We then produced a residential forecast.

Figure 3-5 shows the residential baseline forecast by end use. Overall, City Light's residential forecast will increase by approximately 24% over the 20-year horizon. The growth is driven by several factors, including the rising adoption of EVs and heat pumps (due to electrification), increased use of air conditioning (based on climate change assumptions), new housing development, and population growth. Heating and appliances are the two largest consuming end-use groups, together accounting for 50% of residential

consumption. The next three highest forecasted end-use groups are electronics (14%), EVs (14%), and water heating (13%).

Figure 3-5. Annual Residential Baseline Forecast by End-Use Group (2026–2045)

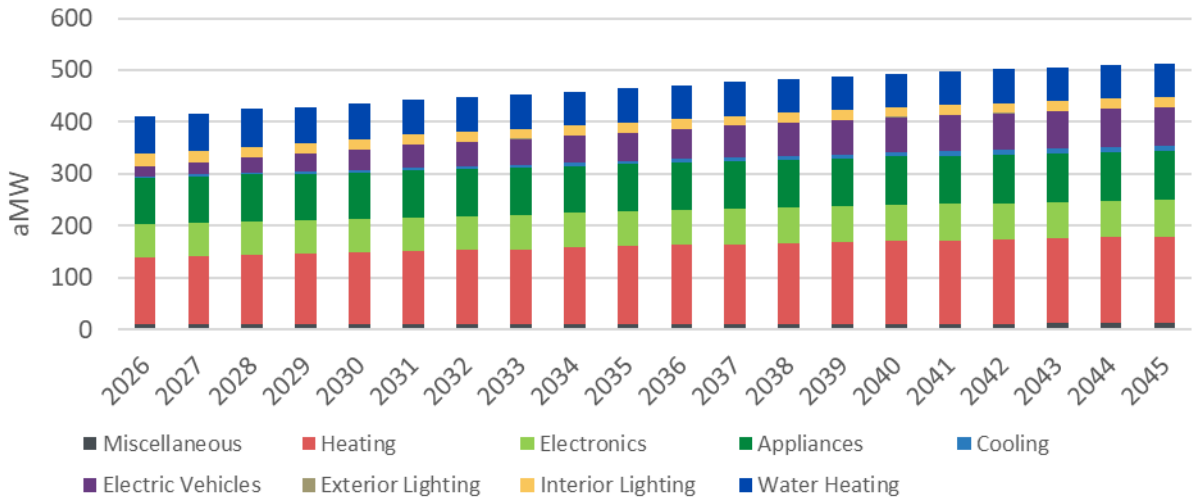


Table 3- shows the assumed average electric consumption per household for each residential segment in 2045. Differences in the average consumption for each segment drive either differences in UEC, saturations, fuel shares,[30] or any combination of differences. Appendix B includes detailed baseline data for the residential sector.

Table 3-2. Per Household Baseline Sales (kWh/Home) by Sector and End-Use Group – 2045

End-Use	Single-Family	Multifamily – Low-Rise	Multifamily – Mid-Rise	Multifamily – High-Rise
Miscellaneous	250	172	126	123
Heating	2,926	2,542	2,412	2,380
Electronics	1,498	776	787	699
Appliances	1,812	1,244	1,191	1,214
Cooling	180	137	132	131
Electric Vehicles	1,196	1,199	1,176	1,176
Exterior Lighting	13	1	1	1
Interior Lighting	493	106	143	94
Water Heating	1,176	1,042	827	884
Total	**9,543**	**7,218**	**6,795**	**6,703**

Note: Highly impacted kilowatt-hour per home values are equivalent to those for non-highly impacted homes.

[30] Fuel shares refer to the percentage of end-use equipment that is electric for end uses where customers have the option of electricity or another fuel. Residential end uses where multiple fuels are an option include central furnace space heating, water heating, cooking, and dryers.

Table 3- shows the electric end-use group distributions of the baseline consumption in 2045 by building type. For each building type, heating makes up 30% or greater of the building type consumption in 2045 and is the end-use group with the largest consumption.

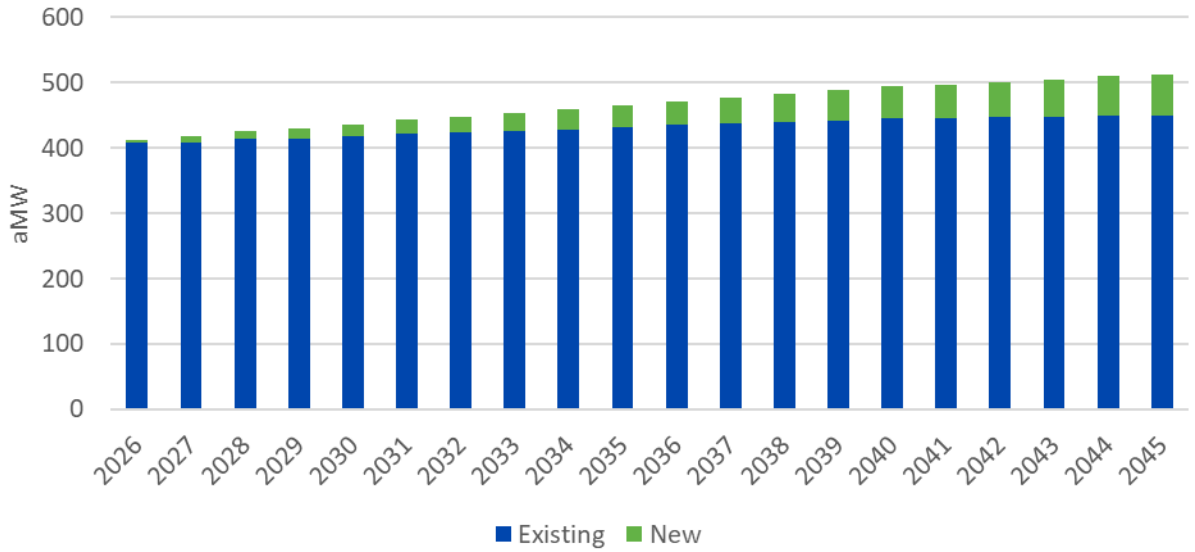
Table 3-3. Residential Consumption End-Use Group Distributions by Segment – 2045

End-Use	Single-Family	Multifamily – Low-Rise	Multifamily – Mid-Rise	Multifamily – High-Rise
Miscellaneous	3%	2%	2%	2%
Heating	31%	35%	35%	36%
Electronics	16%	11%	12%	10%
Appliances	19%	17%	18%	18%
Cooling	2%	2%	2%	2%
Electric Vehicles	13%	17%	17%	18%
Exterior Lighting	0.13%	0.01%	0.01%	0.01%
Interior Lighting	5%	1%	2%	1%
Water Heating	12%	14%	12%	13%
Total	**100%**	**100%**	**100%**	**100%**

Note: Highly impacted end-use percentage distribution values are equivalent to the non-highly impacted.

Figure 3-6 shows forecasted residential sales by construction vintage over the study horizon. Study results indicate that approximately 12% of 2045 sales will derive from new construction homes.

Figure 3-6. Annual Residential Baseline Sales by Construction Vintage (2026–2045)



3.3. Commercial

Cadmus considered 21 commercial building segments and 19 end uses. Table 3- shows the commercial segments and end uses considered in this study, as well as the corresponding segment and end-use groups presented in this report. We chose commercial segments for consistency with the 2021 Power Plan with one exception: the multifamily common area was not a standalone segment in the 2021 Power Plan. Overall, the commercial sector accounts for 908 aMW or 59% of total baseline sales in 2045. While this study captures the commercial sector EVs load, it does not identify any conservation potential for EVs within this sector.

Table 3-4. Commercial Segments and End Uses

Segment Group	Segment
Assembly	Assembly
Data Center	Data Center
Electric Vehicles[b]	Electric Vehicles
Hospital	Hospital
Large Grocery	Supermarket
Large Office	Large Office
	Medium Office
Lodging	Lodging
Multifamily Common Area	Multifamily Common Area
Miscellaneous	Other
Other Health	Residential Care
Restaurant	Restaurant
Retail	Large Retail
	Medium Retail
	Small Retail
	Extra Large Retail
School	School K–12
Small Grocery	Mini Mart
Small Office	Small Office
University	University
Warehouse	Warehouse

End-Use Group	End-Uses
Cooking	Cooking
Cooling	Cooling Chiller
	Cooling Direct Expansion
Data Center	Data Center
	Server
Electric Vehicles[b]	Electric Vehicles
Heat Pump	Heat Pump
Heating	Space Heat
Lighting	Exterior Lighting
	Interior Lighting
Miscellaneous	Computer – Desktop
	Computer – Laptop
	Other [a]
	Plug Load (Other)
	Wastewater
Refrigeration	Refrigeration
Ventilation and Circulation	Ventilation and Circulation
Water Heat	Water Heat GT 55 Gallon
	Water Heat LE 55 Gallon

[a] *Other end uses include all undefined loads, such as elevators, automatic doors, and process loads.*

[b] *In the commercial sector, the EVs segment and end use includes public and workplace charging equipment for personal EVs.*

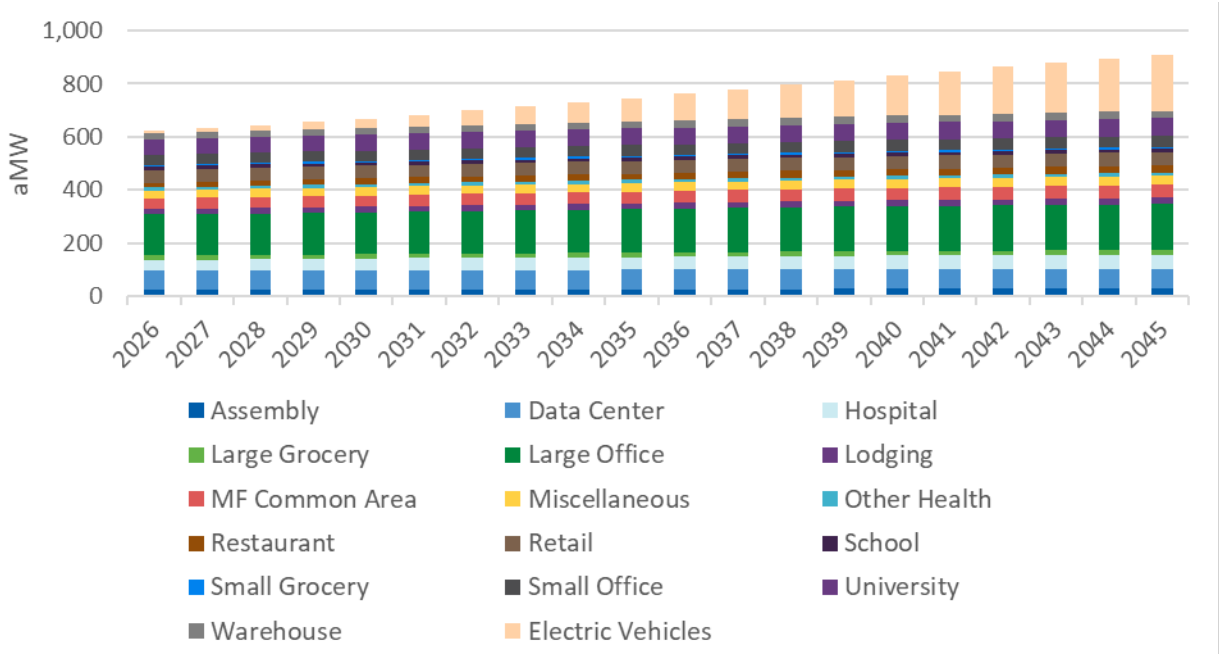
Cadmus used the same segmentation assumptions from the 2024 DSMPA that relied on City Light's nonresidential database to identify sales and the number of customers for each commercial market segment. The database combined City Light's billing data with King County Assessor data, as well as with other secondary data sources, to identify the customer segment and consumption for each nonresidential customer. These data served as the basis for Cadmus' segmentation of the commercial sector.

Cadmus also classified customers as commercial or industrial based on City Light's premise-level nonresidential customer database, mapping commercial customers to the segments listed in Table 3-. (Refer to Table 3-, shown in the *3.4. Industrial* section, for a mapping of iindustrial customers to their respective segments.)

To align with the commercial building square footage in City Light's load forecast, Cadmus adjusted the commercial building counts per segment based on the average square footage per building type from the 2024 DSMPA.

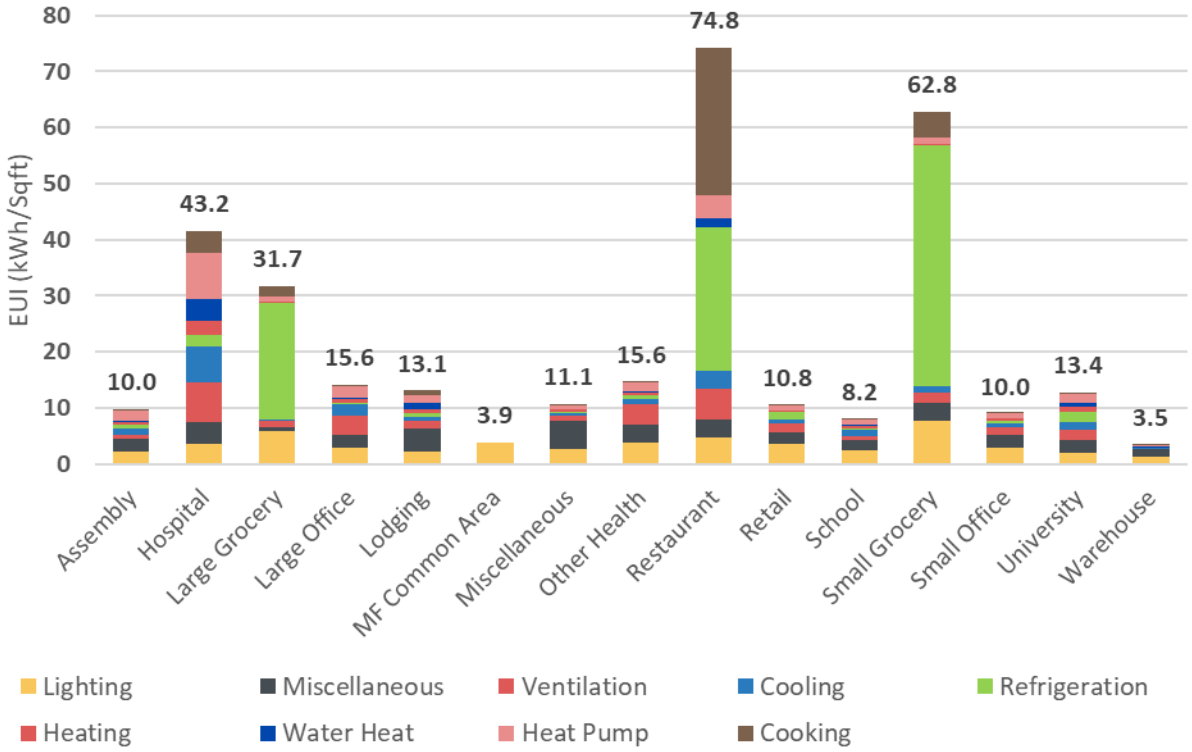
Figure 3-7 shows the distribution of baseline commercial energy consumption by segment for each year of the study. EVs accounted for 23% of commercial baseline sales. Large offices, data centers, and universities accounted for 19%, 8%, and 7% of baseline sales, respectively. Together, these segments represent more than half of all 2045 commercial-sector sales.

Figure 3-7. Annual Commercial Baseline Sales by Segment (2026–2045)



Cadmus developed the whole-building electric energy intensities (total kilowatt-hours per building square feet) based on NEEA's CBSA IV. To develop the end-use intensities, we used the CBSA, the CBECS, and other Cadmus research. Further details are provided in the *6.1 Developing Baseline Forecasts* section. Figure 3-8 shows energy use intensities for each building type and end-use group.

Figure 3-8. Commercial End-Use Group Intensities by Building Type – 2045

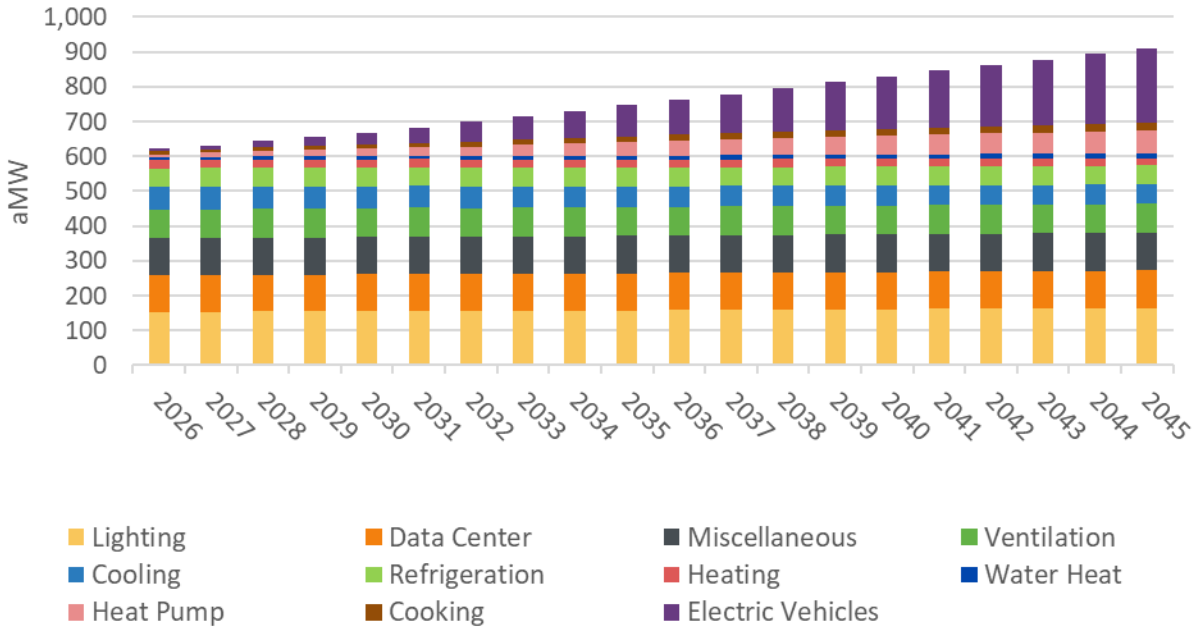


Note: The data center segment energy use intensity of 177.8 kWh per square foot is not included due to scaling. Additionally, all the consumption for the data center segment appears in the data center end-use group.

Figure 3-9 shows the commercial baseline forecast by end-use group. The forecast shows a load growth of commercial sales by roughly 2% on average per year over the study horizon. The highest-consuming end-use group was EVs, accounting for 23% of projected commercial consumption in 2045. The lighting,[31] miscellaneous, and data center end-use groups also account for a large share of consumption at 18%, 12%, and 12% of projected commercial sales in 2045, respectively. Appendix B includes detailed baseline data for the commercial sector.

[31] Due to the timing of the analysis, this study's forecast does not include the impact of Washington State House Bill 1185 (RCW 70A.230.020) limiting the sales of commercial linear fluorescent lamps. However, the energy efficiency potential analysis did account for House Bill 1185.

Figure 3-9. Annual Commercial Forecast by End-Use Group (2026–2045)



Note: The Miscellaneous end-use group includes laptops, desktops, and all other plug load and secondary measure savings from wastewater.

From 2026 to 2045, commercial sector sales are forecasted to increase by 2% year-over-year. This growth is primarily driven by EV adoption, which increases at an average year-over-year rate of 20%—rising from 8 aMW in the early years to 211 aMW of commercial sales in 2045. Additional growth can be attributed to new commercial floor space and electrification in the sector. By 2045, new construction is expected to account for 3% of the forecasted load. Figure 3-10 shows the commercial baseline forecast by construction vintage.

Figure 3-10. Annual Commercial Forecast by Construction Vintage (2026–2045)

3.4. Industrial

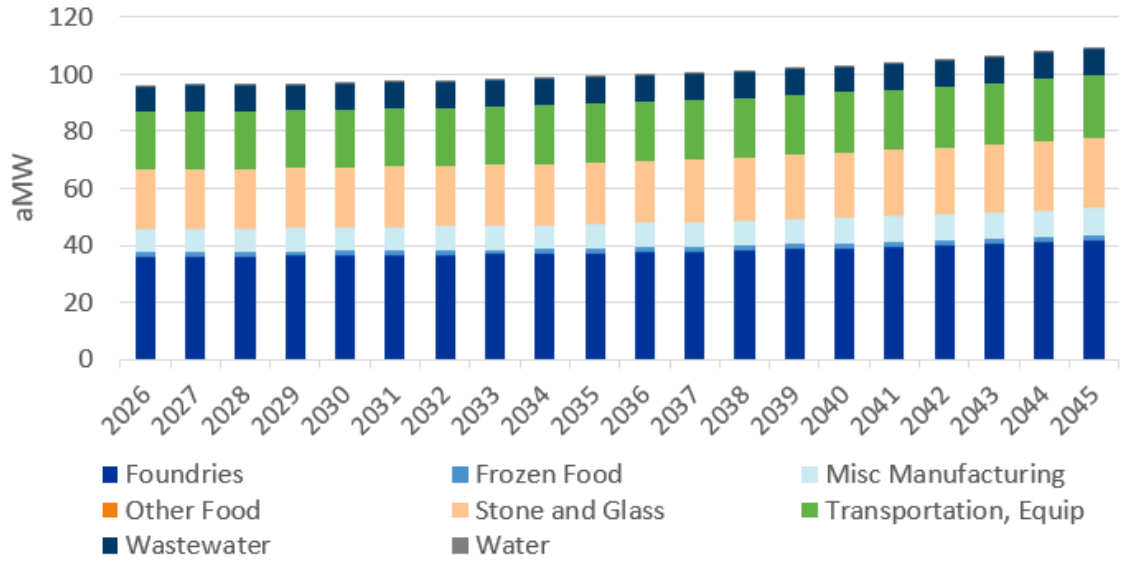
Cadmus disaggregated City Light's forecasted industrial sales into eight facility types (segments) and 11 end uses, as shown in Table 3-. Overall, the industrial sector accounted for 109 aMW, or 7% of City Light's overall forecasted baseline sales in 2045. The sector includes City Light's customers with known industrial processes, as well as those contributing to wastewater and water treatment loads.

Table 3-5. Industrial Segments and End Uses

Segments	End Uses
Foundries Frozen Food Miscellaneous Manufacturing Other Food Stone and Glass Transportation, Equipment Wastewater Water	Process Air Compressor Lighting Fan Pump Motors (Other) Process (Other) Process Heat HVAC Other Process Electro Chemical Process Refrigeration

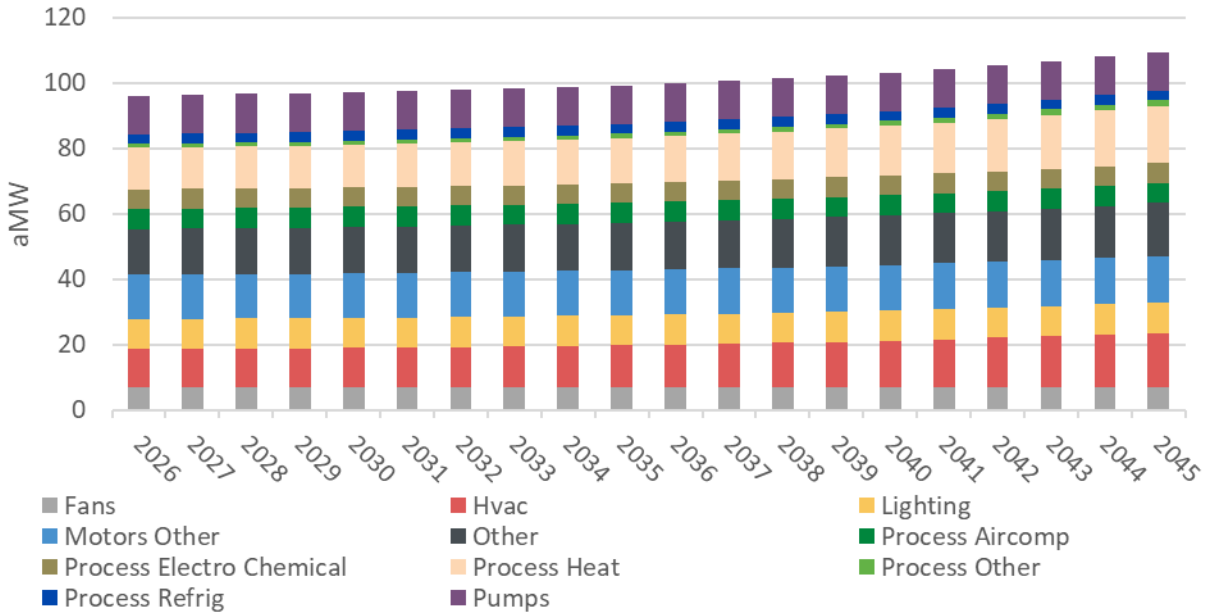
Similar to the commercial sector, Cadmus relied on City Light's nonresidential customer database to determine the distribution of baseline sales by segment. Foundries account for almost 40% of industrial baseline sales, followed by stone and glass (23%) and transportation equipment (20%) (Figure 3-11).

Figure 3-11. Annual Industrial Baseline Sales by Segment (2026–2045)



Cadmus relied on end-use distributions provided in the 2021 Power Plan's industrial tool and the U.S. EIA's Manufacturing Energy Consumption Survey (MECS) to disaggregate segment-specific consumption into end uses. Figure 3-12 shows the industrial baseline sales forecast by end use. The end uses that make up the largest portion of baseline sales in 2045 are process heat (16%) and HVAC (15%),

Figure 3-12. Annual Industrial Baseline Sales by End-Use (2026–2045)



4. Energy Efficiency Potential

City Light requires accurate estimates of technically achievable energy efficiency potential, which are essential for its IRP and program planning efforts. These potentials are then bundled based on the levelized cost of conserved energy so that the IRP model can select the optimal amount of energy efficiency potential.

To support these efforts, Cadmus performed an in-depth assessment of technical potential and achievable technical potential in three sectors: residential, commercial, and industrial. This chapter presents the detailed results of this assessment.

4.1. Overview

This study included a comprehensive set of conservation measures, including those assessed by the Council in the 2021 Power Plan and by the RTF. In consultation with City Light staff, Cadmus also included five new conservation measures: window heat pump, HVAC sizing, multifamily packaged terminal heat pump, heat pump with gas back-up, and EV chargers. Cadmus began its analysis by assessing the technical potential of hundreds of unique conservation measures applicable to each sector, segment, and construction vintage (as discussed in the *Baseline Forecast* section).

Cadmus evaluated 7,189 different combinations—or permutations—of energy conservation measures covering a broad range of technologies and applications. Each permutation represents a unique combination of factors: the specific energy-saving measure, the market sector (such as residential or commercial), customer segment, energy end use (like heating or lighting), building age (new or existing construction), and the type of baseline used for comparison. We only included combinations that offer technical potential for energy savings and excluded those that fell below current efficiency standards.

For example, an ENERGY STAR® air purifier installed in a newly built single-family home is considered a different permutation than the same model installed in an existing single-family home, even if all other factors remain the same. Table 4-Table 4-lists the number of conservation measures and permutations by sector considered in this study.

Table 4-1. Measures and Permutations

Sector	Measures	Permutations
Residential	131	2,152
Commercial	927	4,890
Industrial	29	147
Total	**1,087**	**7,189**

Table 4-Table 4- shows baseline sales and cumulative technical and achievable technical potential by sector. Study results indicate that 245 aMW of technically feasible conservation potential—16% of baseline sales—will be available by 2045 and that 83% of that amount (202 aMW) is considered achievable in 2045. The achievable technical potential corresponds to 13% of baseline sales.

The results in this report account for line losses and represent cumulative energy savings at the generator (unless specified).

Table 4-2. Cumulative Technical and Achievable Technical Potential by Sector (2026-2045)

Sector	Baseline Sales (aMW)	Technical Potential		Achievable Technical Potential	
		aMW	% of Baseline Sales	aMW	% of Baseline Sales
Residential	512	97	19%	81	16%
Commercial	908	138	15%	113	12%
Industrial	109	9	8%	7.6	7%
Total	**1,530**	**245**	**16%**	**202**	**13%**

Note: Industrial sales exclude district steam, spot loads, and streetlighting

The commercial sector represents nearly 60% of baseline energy use and 20-year achievable technical potential, as shown in Figure 4-1. The residential and industrial sectors account for 40% and 4% of the cumulative achievable technical potential in 2045, respectively.

Figure 4-1. 20-Year Achievable Technical Potential by Sector

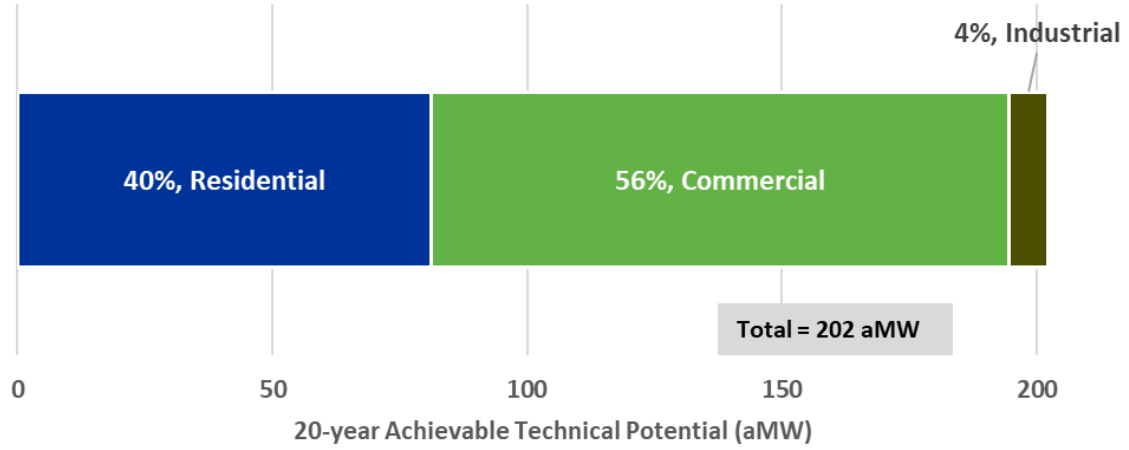


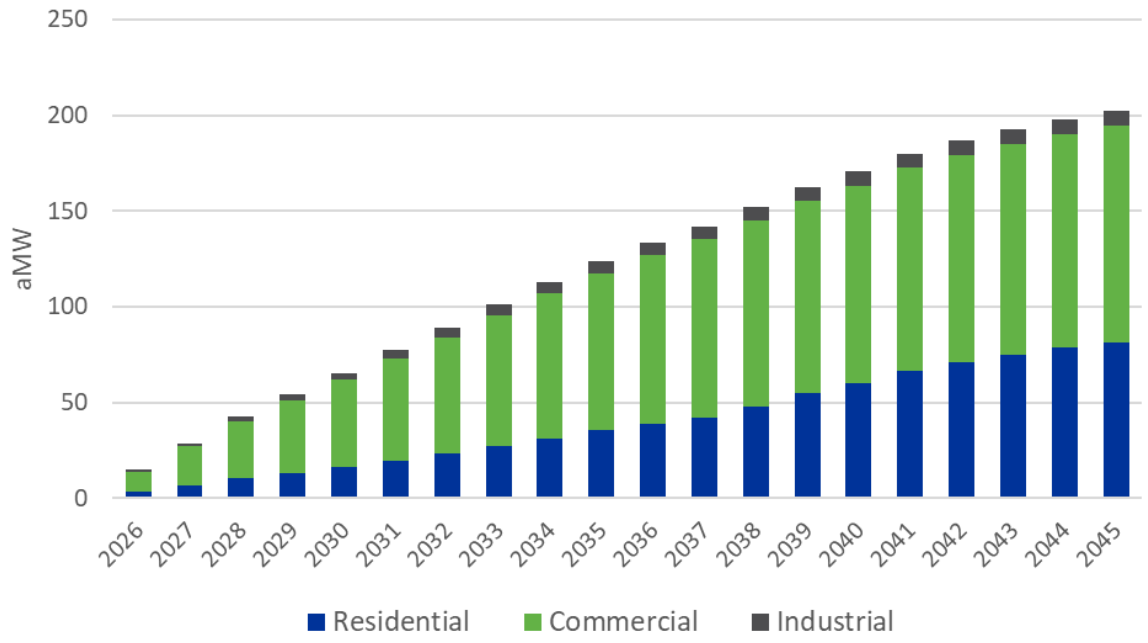
Table 4-Table 4- shows cumulative two-year, four-year, 10-year, and 20-year, as well as 20% of the 10-year achievable technical potential.

Table 4-3. Cumulative Achievable Technical Potential by Sector and Time Period

Sector	Achievable Technical Potential – aMW				
	2-Year (2026-2027)	4-Year (2026-2029)	10-Year (2026-2035)	20-Year (2026-2045)	20% of 10-Year
Residential	7	13	35	81	7
Commercial	20	38	82	113	16
Industrial	1	3	6	8	1
Total	**29**	**54**	**124**	**202**	**25**

Figure 4-2 presents the cumulative achievable technical potential across the study horizon.

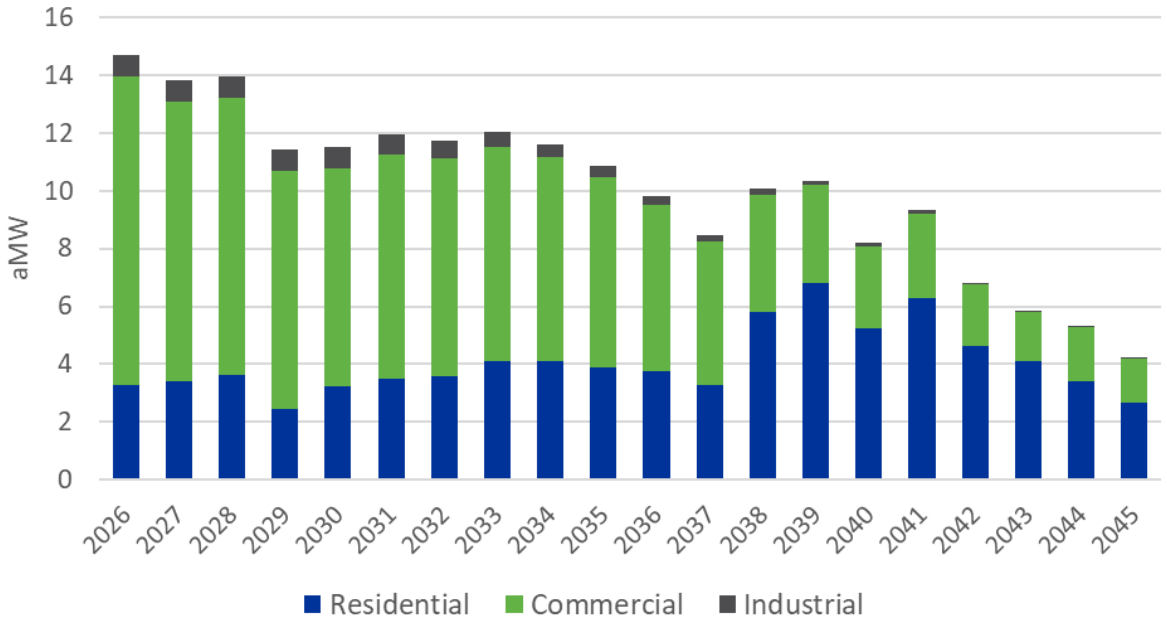
Figure 4-2. Cumulative Achievable Technical Potential by Sector (2026–2045)



Of the cumulative 20-year achievable potential, approximately 27% is acquired in the first four years, and 61% is acquired in the first 10 years. Refer to the *6. Detailed Methodology* section of this report for details the adoption rates.

Cadmus determined incremental achievable technical potential in each year of the study horizon using natural equipment turnover rates and measure-specific ramp rates. Figure 4-3 illustrates this incremental achievable potential. The increase in savings in 2038 is due to the ramp rates applied and the 12-year measure life for the top saving residential measure, heat pump dryers. In 2038, residential market average dryers installed in 2026 will need to be replaced, given their 12-year measure life. Based on the ramp rate in the replacement year (2038), a proportion of these dryers will be replaced by heat pump dryers. Since heat pump dryers are a high-saving measure, there is a large increase in residential incremental achievable potential in 2038.

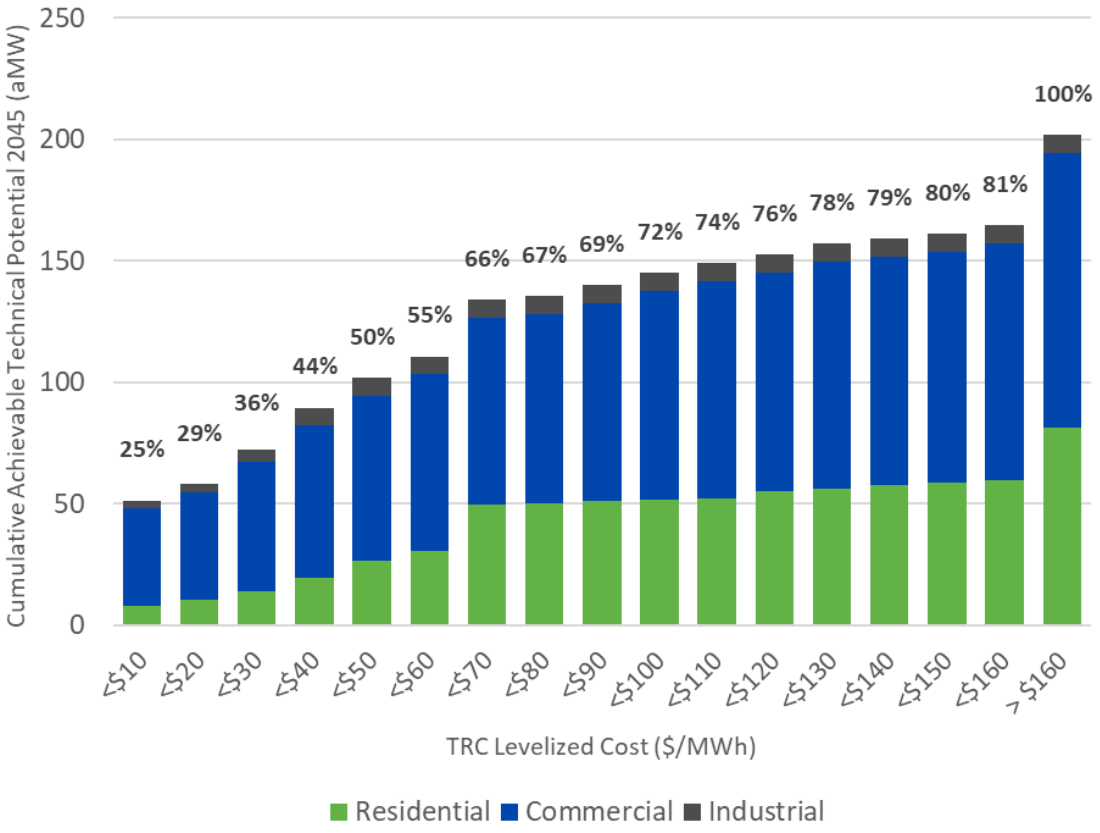
Figure 4-3. Annual Incremental Achievable Technical Potential (2026–2045)



The conservation supply curve in Figure 4-4 shows cumulative achievable potential in $10 per megawatt-hour levelized cost increments, where each bar includes all measures with levelized cost less than the listed amount. The percentage label on the graphic indicates the portion of 20-year achievable technical potential that can be acquired based on a TRC value at or below cost on the x-axis. For example, the analysis revealed that 55% (110 aMW) of the cumulative 2045 achievable technical potential could be acquired at less than or equal to $60 per megawatt-hour.[32] The amount of available achievable technical potential begins to level off at less than or equal to $70 per megawatt-hour, excluding measures that cost more than $160 per megawatt-hour. The 2045 achievable technical potential with a levelized cost of greater than $160 per megawatt-hour makes up 19% of the cumulative achievable technical potential. Many of these costly measures are for emerging technology equipment, heat pumps, and weatherization in the residential and commercial sectors.

[32] The levelized cost bundle of less than or equal to $60 per megawatt-hour represents an example value.

Figure 4-4. All Sectors Supply Curve – Cumulative Achievable Technical Potential in 2045 by Levelized Cost



City Light's IRP model selected achievable economic potential is 103 aMW by 2045. Table 4-Table 4- shows cumulative 20-year achievable economic potential by sector, along with the maximum levelized cost for measure permutations within each sector. For example, all residential achievable economic potential can be obtained at a levelized cost of less than or equal to $30 per megawatt-hour. Refer to the *6. Detailed Methodology* chapter for details on the methodology used to determine achievable economic potential.

Table 4-4. Cumulative Achievable Economic Potential by Sector (2026–2045)

Sector	Levelized TRC ($/MWh)	20-Year Achievable Economic Potential (aMW)
Residential	30	13
Commercial	160	82
Industrial	70	8
Total	**N/A**	**103**

Appendix D shows detailed measure-level results, including levelized costs and technical and achievable technical conservation potential for each measure. The remainder of this chapter provides detailed results of technical, achievable technical, and achievable economic potential by sector.

4.2. Residential

Residential customers in City Light's service territory account for 34% of 2045 total baseline sales and 40% of total achievable technical potential. This sector, which is made up of non-highly impacted and highly impacted single-family and multifamily customers, has a variety of sources for potential savings, including equipment efficiency upgrades (such as water heaters and appliances) and improvements to building shells (such as windows, insulation, and air sealing).

Based on the resources in this assessment, Cadmus estimated residential cumulative achievable technical potential of 81 aMW over 20 years, which corresponds to 16% of the forecasted residential load in 2045. Table 4-Table 4- shows the cumulative 20-year residential conservation potential by segment.

Table 4-5. Cumulative Residential Technical, Achievable Technical, and Achievable Economic Potential by Segment in 2045

Segment	Baseline Sales (aMW)	20-Year Technical Potential		20-Year Achievable Technical Potential		20-Year Achievable Economic Potential	
		aMW	% of Baseline Sales	aMW	% of Technical Potential	aMW	% of Technical Potential
Single-Family	205	41	20%	34	83%	6	14%
Single-Family Highly Impacted	110	22	20%	18	83%	2	11%
Multifamily – Low-Rise	45	9	19%	7	83%	2	18%
Multifamily – Low-Rise Highly Impacted	24	5	19%	4	83%	1	15%
Multifamily – Mid-Rise	46	8	17%	7	84%	1	13%
Multifamily – Mid-Rise Highly Impacted	25	4	17%	4	84%	1	12%
Multifamily – High-Rise	37	6	17%	5	84%	1	10%
Multifamily – High-Rise Highly Impacted	20	3	17%	3	84%	0.3	9%
Total	**512**	**97**	**19%**	**81**	**83%**	**13**	**13%**

As shown in Figure 4-5Table 4-, single-family homes account for 64% (52 aMW) of total achievable technical potential, followed by multifamily low-rise (11 aMW), multifamily mid-rise (10 aMW), and multifamily high-rise (8 aMW). The total achievable technical potential for highly impacted customers is 28 aMW or 35%. This distribution is primarily driven by each home type's proportion of baseline sales, but segment-specific end-use saturations and fuel shares have an effect as well. Appendix B includes detailed

data on saturations and fuel shares for each segment.[33] Appendix C includes a detailed summary of achievable technical potential by segment and end use for each segment.

Figure 4-5. Residential Cumulative Achievable Technical Potential by Segment (2026–2045)

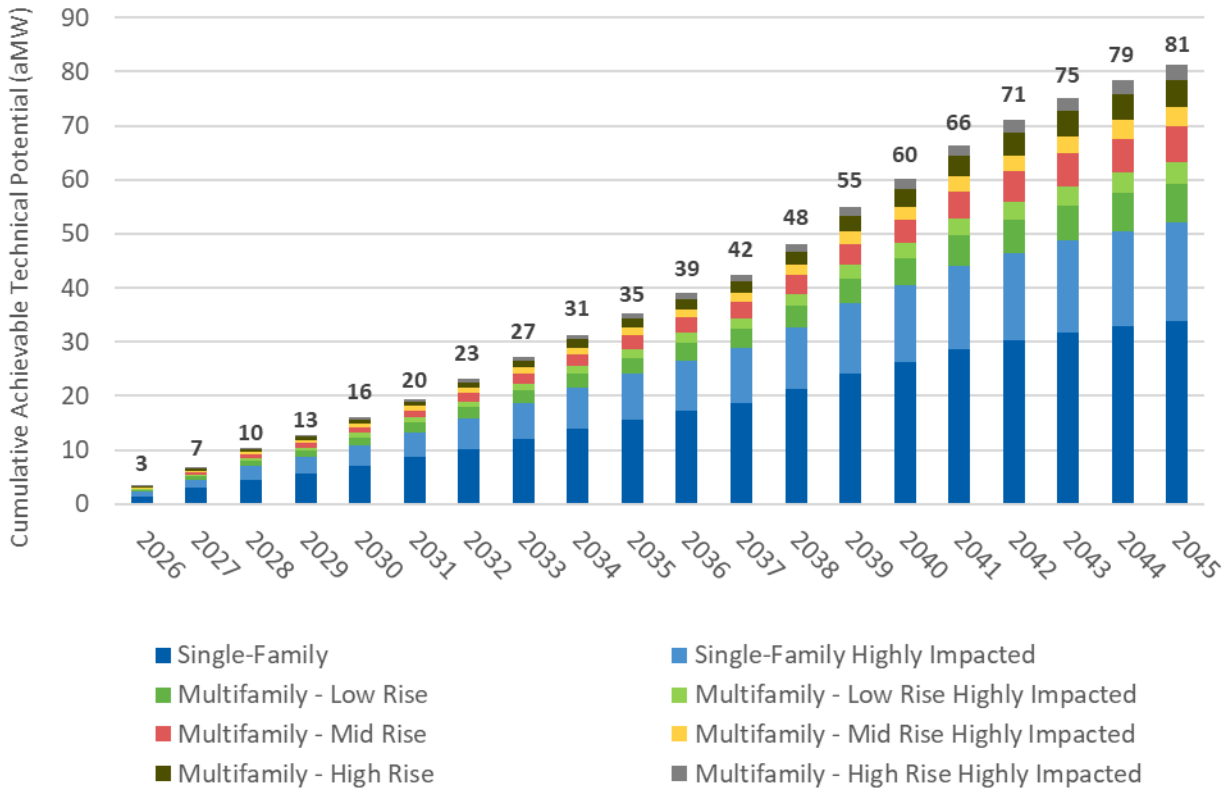


Figure 4-6 presents the cumulative achievable technical potential by construction type for the residential sector. Existing construction represents the majority of achievable technical potential, particularly in the early years of the study, accounting for 94% of the potential in the first four years (2026 through 2029). By the final year of the study period (2045), new construction accounts for 11% of the total cumulative residential achievable technical potential. This is because of the increase in new construction, from roughly 4,931 households in 2026 to over 85,000 households constructed between 2024 and 2045.

[33] The scope of this study does not distinguish differences in end-use saturations and fuel shares between the highly impacted and non-highly impacted segments. Potential for these classifications is defined by customer segmentation. (Refer to Appendix C for potential results by segment, including the highly impacted versus non-highly impacted classification and end use.)

Figure 4-6. Residential Cumulative Achievable Technical Potential by Construction Type (2026–2045)

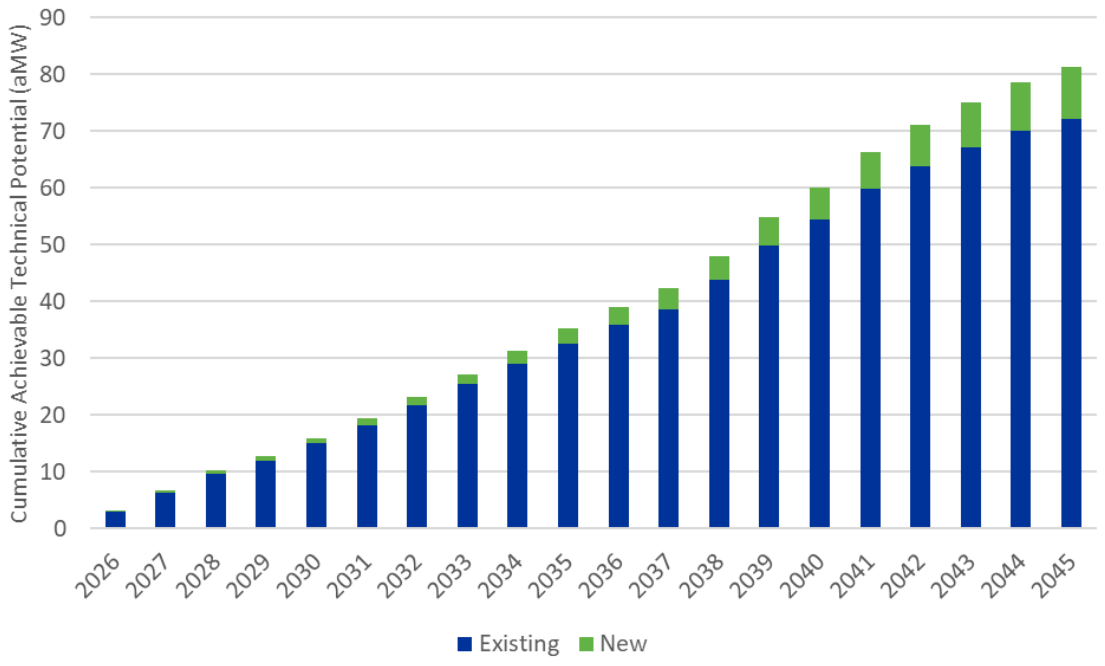


Table 4-6 shows the residential baseline sales and technical and achievable technical potential by end-use group. Heating savings make up the greatest proportion of cumulative achievable technical potential, at 36%. Appliance measures contribute 30% of the total achievable technical potential, followed by water heating measures (21%). Overall, 83% of the technical potential is considered achievable based on adoption patterns from the 2021 Power Plan and adjusted for City Light's historical program success.

Table 4-6. Residential Cumulative Technical, Achievable Technical, and Achievable Economic Potential by End-Use Group in 2045

Segment	Baseline Sales (aMW)	20-Year Technical Potential		20-Year Achievable Technical Potential		20-Year Achievable Economic Potential	
		aMW	% of Baseline Sales	aMW	% of Technical Potential	aMW	% of Technical Potential
Appliances	95	29	30%	24	84%	0.4	24%
Cooling	10	2	21%	2	80%	0.1	7%
Electronics	71	8	11%	7	93%	5	58%
Electric Vehicles	73	0.2	0.3%	0.2	95%	0	0%
Exterior Lighting	0.44	0.02	6%	0.02	84%	0	0%
Heating	166	36	22%	29	81%	4	10%
Interior Lighting	20	1	5%	1	84%	0.1	11%
Miscellaneous	12	1	9%	1	92%	0.3	24%
Water Heating	65	20	31%	17	83%	3	17%
Total	**512**	**97**	**19%**	**81**	**83%**	**13**	**13%**

Incremental and cumulative potential over the 20-year study horizon varies by end-use group due to the application of ramp rates. Cadmus assigned ramp rates to each measure based on factors such as availability, existing program activity, and market trends. We used the same ramp rates for each measure, as assigned by the Council in the 2021 Power Plan, with some adjustments based on City Light's historical program success, as discussed in the *5.2. Achievable Technical Potential and Ramp Rate Comparison* section. Figure 4-7 shows cumulative residential achievable potential by end use.

Figure 4-7. Residential Cumulative Achievable Technical Potential by End Use (2026–2045)

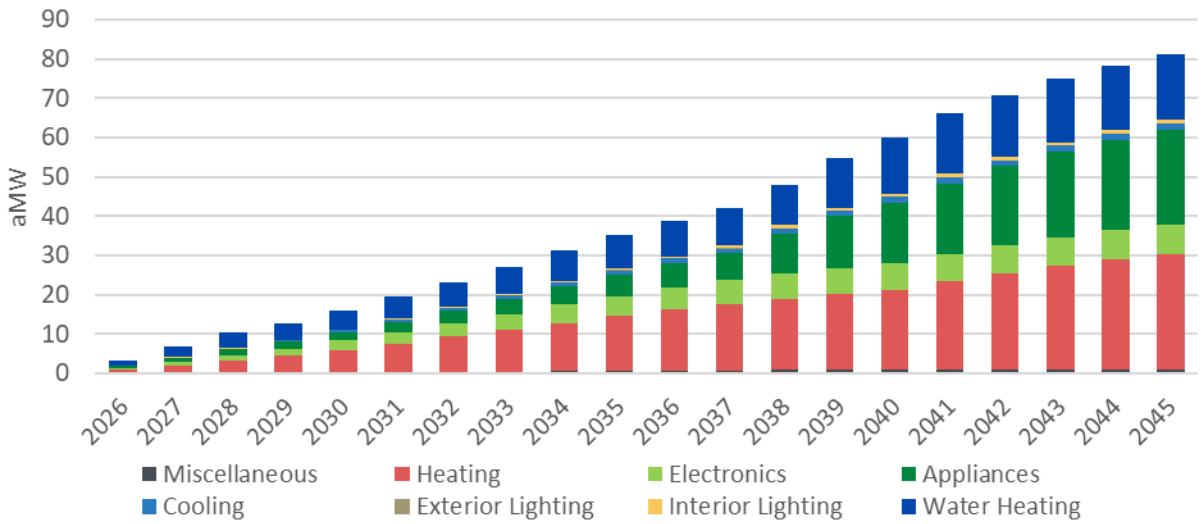


Figure 4-8 shows incremental residential achievable potential. Cadmus used measure ramp rates and effective useful live (EUL)—only for equipment replacement measures—to determine the timing of these savings. The increase in appliance savings in 2038 is due to the high proportion of market average dryers being replaced with more efficient heat pump dryers at the end of their 12-year measure life.

Figure 4-8. Residential Incremental Achievable Technical Potential by End Use (2026–2045)

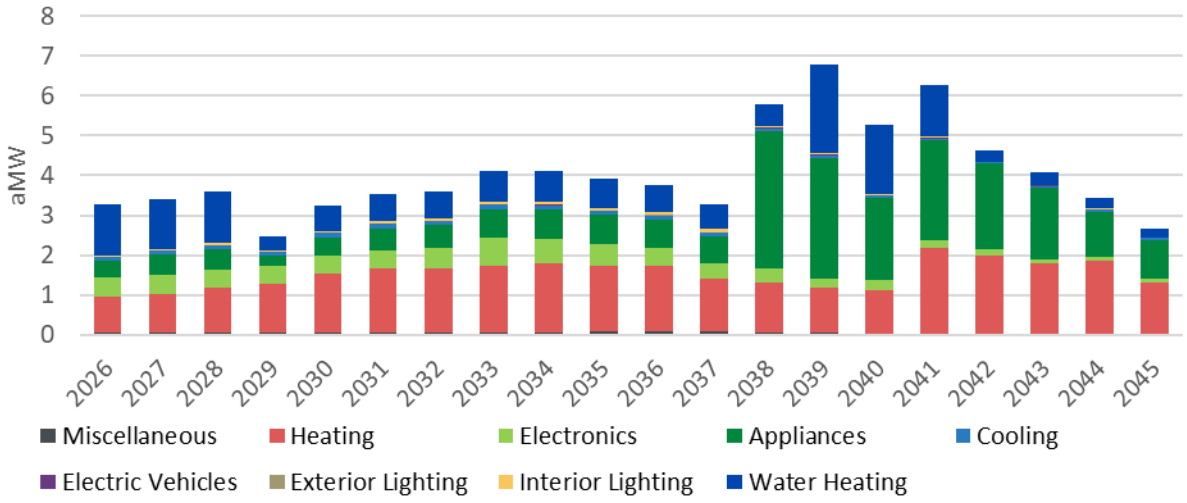


Figure 4-7 lists the 15 highest-saving residential measures sorted by 20-year achievable technical potential. These measures make up 76% of the total residential achievable technical potential. The table also includes the weighted average levelized costs for these measures,[34] which represent the economic equipment and administrative costs while still accounting for energy and non-energy benefits. The measure with the highest cumulative achievable technical potential—heat pump dryers—has a levelized cost of $60 per megawatt-hour. Other measures with potential high savings are window heat pumps, heat pump water heaters, and networked automation controls. Of the highest-savings measures, the least costly are ENERGY STAR TVs and ENERGY STAR printers.

[34] The levelized cost value represents a weighted average across all iterations, including segment and end use. As a result, some permutations of a measure may have a low levelized cost while other permutations have a high levelized cost.

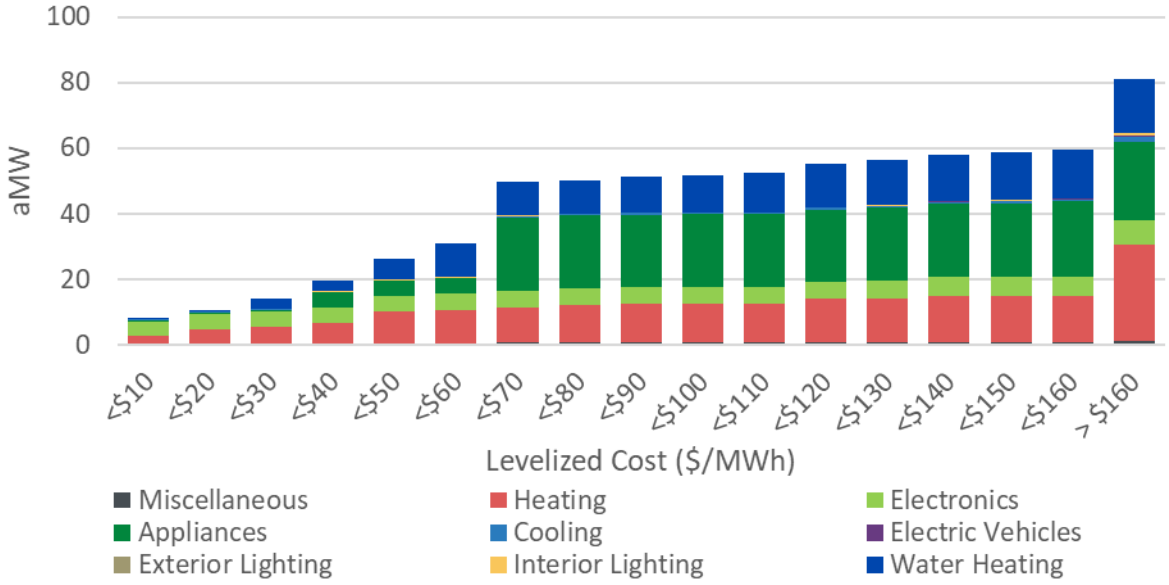
Table 4-7. Top-Saving Residential Measures

Measure Name	Cumulative Achievable Technical Potential (aMW)					Weighted Average Levelized TRC ($/MWh)
	2-Year	4-Year	10-Year	20-Year	% of Total (20-Year)	
Heat Pump Dryer	0.15	0.41	2.25	17.37	21%	$60.51
Window Heat Pump (19 SEER2, 9.3 HSPF)	0.13	0.47	2.94	12.15	15%	$165.40
Heat Pump Water Heater - Tier 4	0.67	1.08	1.94	4.34	5%	$61.35
Networked Automation Controls	0.05	0.21	1.96	3.80	5%	$4,239.03
Heat Pump Water Heater - Tier 3	0.69	1.10	1.54	3.47	4%	$56.78
Refrigerator and Refrigerator-Freezer – Consortium for Energy Efficiency Tier 3	0.59	0.93	1.56	3.19	4%	$34.23
Front Load ENERGY STAR Washer (w/Electric Dryer)	1.03	1.56	2.49	3.06	4%	$20.90
Single-Family Weatherization – Wall Insulation (R-0 to R-11 Heating Zone 1)	0.58	1.15	2.31	2.63	3%	$25.73
ENERGY STAR Office Printer	0.61	1.10	2.04	2.48	3%	$0.00
Convert Electric Forced Air Furnace with Central AC to Heat Pump	0.16	0.37	1.01	1.89	2%	$265.67
ENERGY STAR Ultra-High Definition TV	0.10	0.23	1.16	1.87	2%	$0.00
55-Gallon Heat Pump Water Heater – (2029 Federal Standard)	0.19	0.31	0.31	1.36	2%	$134.55
Residential Retail Valve, Electric Resistance Domestic Hot Water	0.02	0.08	0.70	1.35	2%	$51.37
Clothes Dryer with Heat Recovery	0.02	0.07	0.68	1.27	2%	$35.88
Duct Sealing	0.02	0.07	0.67	1.17	1%	$50.62

[a] *When the net expenses (costs and benefits) are less than zero, the resulting levelized TRC is shown as $0.00 per megawatt-hour and can be considered cost-effective.*

Overall, 16% of residential conservation potential is achievable within the first four years, and 43% is achievable in the first 10 years. Figure 4-9 shows 20-year cumulative residential potential by levelized cost in $10 per megawatt-hour increments.

Figure 4-9. Residential Supply Curve – Cumulative Achievable Technical Potential in 2045 by Levelized Cost



Twenty-seven percent of the residential achievable technical potential is from measures with a levelized cost of over $160 per megawatt-hour. This is partially because the second highest savings measure—window heat pumps—has a levelized cost greater than $160 per megawatt-hour.

City Light's IRP model selected an economic achievable potential of 13 aMW for the residential sector by 2045. Figure 4-10 shows the cumulative 20-year achievable economic potential for the residential sector by end-use group. The two end-use groups with the greatest achievable economic potential are heating and electronics, which collectively represent 67% of the total residential 20-year cumulative achievable economic potential.

Figure 4-10. Residential Cumulative Achievable Economic Potential in 2045 by End-Use Group

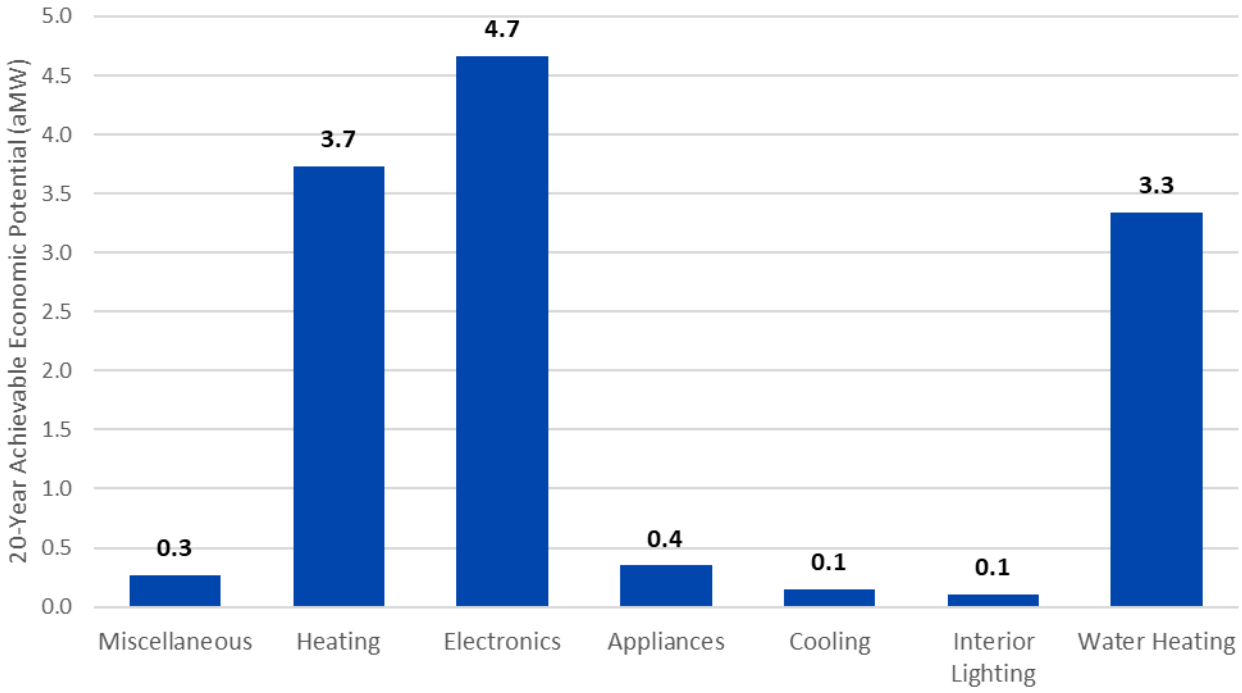


Table 4-8 lists City Light's 15 highest-saving IRP-selected residential measures. These measure permutations all have a levelized cost of less than or equal to $30 per megawatt-hour and make up 95% of the cumulative 20-year achievable economic potential for the residential sector.

Table 4-8. Top-Saving Residential Measures Selected by IRP Model

Measure Name	Cumulative Achievable Economic Potential (aMW) – Less than or Equal to $30/MWh				% of Cumulative 20-Year Achievable Economic Potential
	2-Year	4-Year	10-Year	20-Year	
Front Load ENERGY STAR Washer (w/Electric Dryer)	1.03	1.56	2.49	3.06	24%
ENERGY STAR Office Printer	0.61	1.10	2.04	2.48	20%
ENERGY STAR Ultra-High Definition TV	0.10	0.23	1.16	1.87	15%
Single-Family Weatherization – Wall Insulation (R-0 to R-11 Heating Zone 1)	0.24	0.48	0.96	1.10	9%
Wall Insulation (R-0 to R-11 Heating Zone 1)	0.22	0.45	0.90	1.02	8%
Air Source Heat Pump Upgrade (Advanced) - with Back-up	0.00	0.03	0.27	0.74	6%
Heat Pump Water Heater - Tier 3	0.12	0.20	0.20	0.47	4%
Cooking Range - Federal Standard 2028	0.10	0.10	0.10	0.25	2%
ENERGY STAR Laptops	0.05	0.09	0.14	0.15	1%
ENERGY STAR Home Audio System	0.01	0.02	0.10	0.15	1%
Indirect Evaporative Cooler, 2.5 tons	0.00	0.01	0.06	0.15	1%
Multifamily Door Sweep — Direct Install (Heating Zone 1, CFM50 Air-Leakage Reduction)	0.01	0.03	0.12	0.14	1%
Floor Insulation (R-0 to R-30 Heating Zone 1)	0.03	0.05	0.11	0.12	1%
TLED Linear Fluorescent Lamp Retrofit	0.06	0.11	0.11	0.11	1%
Low-E Storm Window – Double-Pane Metal Frame (Heating Zone 1)	0.01	0.02	0.09	0.10	1%

4.2.1. Highly Impacted Communities

Cadmus estimated the potential for highly impacted communities, as defined earlier in this report. As shown in Figure 4-11, highly impacted community segments constituted 35% (28 aMW) of the total residential achievable technical potential. As noted earlier, this distribution is primarily driven by each home type's proportion of baseline sales, but segment-specific end-use saturations and fuel shares have an effect as well.

City Light's IRP model selected an economic achievable potential of nearly 4 aMW in highly impacted communities by 2045. Figure 4-11 shows the cumulative 20-year achievable economic potential in highly impacted communities by end-use group. The two end-use groups with the greatest achievable economic potential are water heating and electronics, which collectively represent 72% of the total 20-year cumulative achievable economic potential in highly impacted communities.

Figure 4-11. Highly Impacted Communities Cumulative Achievable Economic Potential in 2045 by End-Use Group

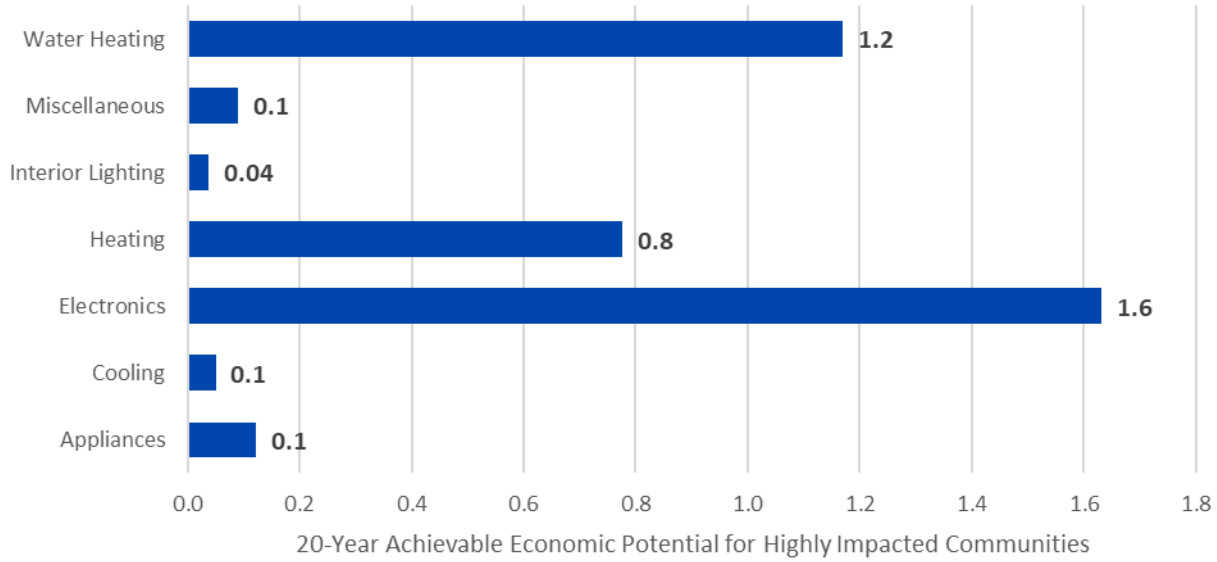


Table 4-9 lists the 15 highest-saving measures City Light's IRP model selected in highly impacted communities. These measure permutations all have a levelized cost of less than or equal to $30 per megawatt-hour and make up 97% of the cumulative 20-year achievable economic potential available for highly impacted communities.

Table 4-9. Top-Saving Residential Measures in Highly Impacted Communities Selected by IRP Model

Measure Name	Cumulative Achievable Economic Potential (aMW) – Less than or Equal to $30/MWh				% of Cumulative 20-year Achievable Economic Potential
	2-Year	4-Year	10-Year	20-Year	
Front Load ENERGY STAR Washer (w/Electric Dryer)	0.36	0.55	0.87	1.07	28%
ENERGY STAR Office Printer	0.21	0.39	0.72	0.87	22%
ENERGY STAR Ultra-High Definition TV	0.03	0.08	0.41	0.65	17%
Single-Family Weatherization – Wall Insulation (R-0 to R-11 Heating Zone 1)	0.08	0.16	0.31	0.36	9%
Air Source Heat Pump Upgrade (Advanced) - with Back-up	0.00	0.01	0.09	0.26	7%
Heat Pump Water Heater - Tier 3	0.04	0.07	0.07	0.17	4%
Cooking Range - Federal Standard 2028	0.03	0.03	0.03	0.09	2%
ENERGY STAR Laptops	0.02	0.03	0.05	0.05	1%
ENERGY STAR Home Audio System	0.00	0.01	0.03	0.05	1%
Indirect Evaporative Cooler, 2.5 tons	0.00	0.00	0.02	0.05	1%
Floor Insulation_(R-0 to R-30_Heating Zone 1)	0.01	0.02	0.04	0.04	1%
TLED Linear Fluorescent Lamp -	0.02	0.04	0.04	0.04	1%
Low-E Storm Window – Double-Pane Metal Frame (Heating Zone 1)	0.00	0.01	0.03	0.03	1%
Double Pane Windows (U22_Heating Zone 1)	0.00	0.01	0.02	0.02	1%
Double Pane Windows (U30_Heating Zone 1)	0.00	0.01	0.02	0.02	0%

4.3. Commercial

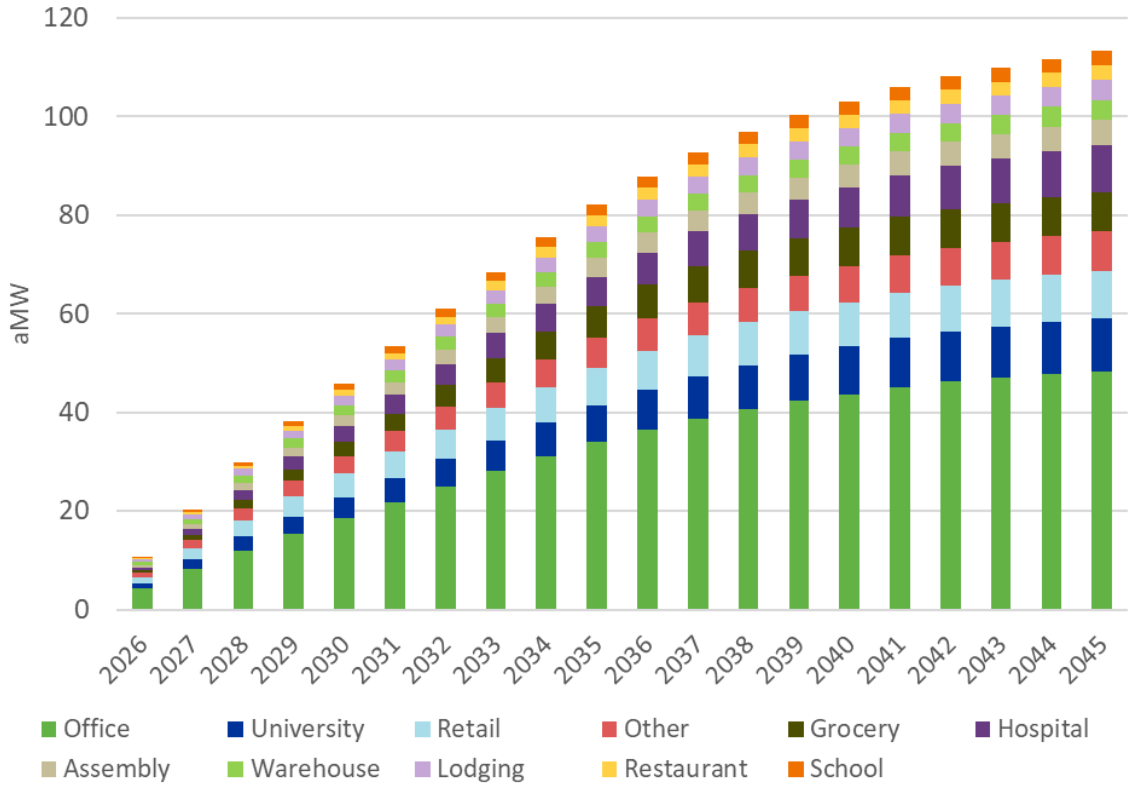
City Light's commercial sector accounts for 59% of its baseline sales in 2045 and 56% of total achievable technical potential. Cadmus estimated the potential for the 20 commercial segments listed above in Table 4-9Table 3- (grouped into 16 segments for this report). Table 4-10 summarizes the 20-year cumulative technical and achievable technical potential by commercial segment. Cadmus did not include an efficiency charger measure for commercial EVs considering the limited applicability for this conservation measure within the commercial sector, but the City Light commercial EV forecast is included in the commercial baseline sales reporting.

Table 4-10. Commercial Cumulative Technical and Achievable Technical Potential by Segment in 2045

Segment	Baseline Sales (aMW)	20-Year Technical Potential		20-Year Achievable Technical Potential	
		aMW	% of Baseline Sales	aMW	% of Technical Potential
Assembly	28	6	23%	5	80%
Data Center	74	0.3	0.5%	0.3	85%
Electric Vehicles	211	0	0%	0	N/A
Hospital	54	12	22%	10	82%
Large Grocery	17	7	43%	6	87%
Large Office	173	43	25%	36	84%
Lodging	23	5	21%	4	82%
MF Common Area	50	0	0%	0	N/A
Miscellaneous	34	7	20%	6	83%
Other Health	13	3	21%	2	80%
Restaurant	26	3	13%	3	84%
Retail	50	12	25%	10	78%
School	14	4	27%	3	82%
Small Grocery	7	2	27%	1	83%
Small Office	41	15	37%	12	80%
University	67	13	20%	11	81%
Warehouse	28	5	20%	4	75%
Total	**908**	**138**	**15%**	**113**	**82%**

Approximately 32% of the 20-year commercial achievable technical potential is from the large office segment, as shown in Figure 4-12. Together, large and small offices (shown as "office" in Figure 4-12) account for 43% of the 20-year commercial achievable technical potential. The large grocery segment has the highest technical potential savings relative to baseline sales due to the high potential associated with refrigeration equipment.

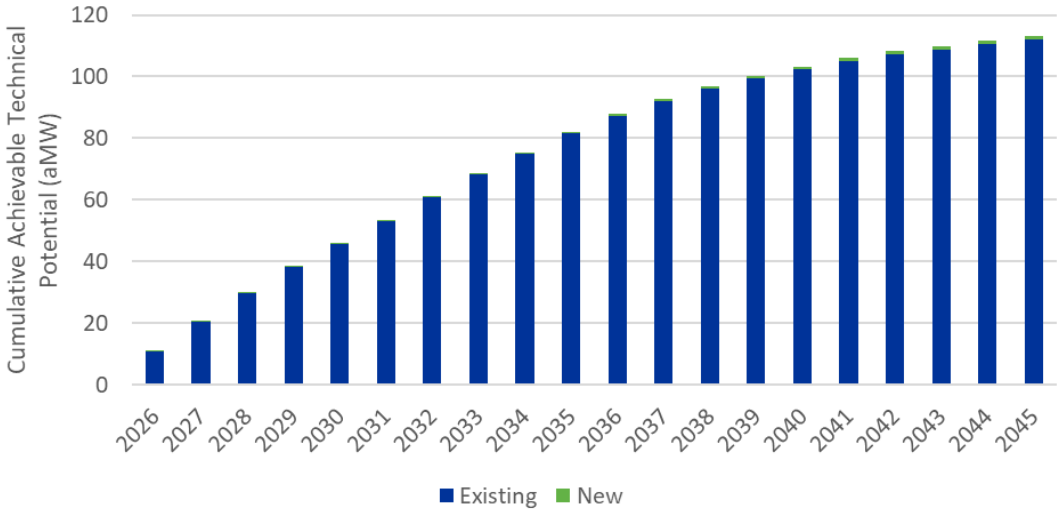
Figure 4-12. Commercial Cumulative Achievable Technical Potential by Segment (2026–2045)



Note: The "Other" segment includes data centers, miscellaneous, and other health.

Figure 4-13 presents the cumulative achievable technical potential by construction vintage for the commercial sector. Existing construction represents the majority of achievable technical potential, particularly in the early years of the study, and accounts for 99.7% of the potential in the first two years (2026 and 2027).

Figure 4-13. Commercial Cumulative Achievable Technical Potential by Construction Type (2026–2045)



Across all end uses, lighting accounts for 20% of total achievable technical potential. Table 4-11 shows the 20-year cumulative commercial potential by end use.

Table 4-11. Commercial Cumulative Technical, Achievable Technical, and Achievable Economic Potential by End-Use Group in 2045

Segment	Baseline Sales (aMW)	20-Year Technical Potential		20-Year Achievable Technical Potential		20-Year Achievable Economic Potential	
		aMW	% of Baseline Sales	aMW	% of Technical Potential	aMW	% of Technical Potential
Cooking	22	1	6%	1.2	85%	1.2	82%
Cooling[a]	56	26	47%	22	83%	12.2	46%
Data Center	107	5	5%	4.6	90%	4.6	90%
Electric Vehicles	211	0	0%	0	N/A	0.0	0%
Heat Pump[b]	67	19	28%	16	87%	9.2	50%
Heating[c]	22	8	35%	6.5	85%	5.4	71%
Lighting	165	33	20%	22	67%	21.8	66%
Miscellaneous	108	4	4%	3.9	88%	2.4	55%
Refrigeration	54	14	25%	13	91%	10.2	74%

Segment	Baseline Sales (aMW)	20-Year Technical Potential		20-Year Achievable Technical Potential		20-Year Achievable Economic Potential	
		aMW	% of Baseline Sales	aMW	% of Technical Potential	aMW	% of Technical Potential
Ventilation	83	24	28%	22	91%	12.9	55%
Water Heating	13	4	32%	3.1	73%	2.6	60%
Total	**908**	**138**	**15%**	**113**	**82%**	**82**	**60%**

[a] *The cooling end-use group refers to cooling direct expansion, chiller equipment, and related retrofit measures.*
[b] *The heat pump end-use group includes air-source heat pumps and related retrofit measures. This differs from heat pump water heaters, which are included in the water heating end-use group.*
[c] *The heating end-use group refers to non-heat pump electric space heating equipment (such as electric resistance heating).*

Compared to the residential sector, a larger proportion of the achievable technical potential is realized in the first 10 years of the study, with 72% of the 20-year cumulative achievable technical potential in the first 10 years (versus 43% for residential sector) and 34% in the first four years (versus 16% for residential sector). Figure 4-14 and Figure 4-15 show cumulative and incremental achievable potential for the commercial sector by end use, respectively. The drop in incremental potential for lighting is due to the incorporation of RCW 70A.230.020 prohibiting fluorescent lighting sales after July of 2029.

Figure 4-14. Commercial Cumulative Achievable Technical Potential by End Use (2026–2045)

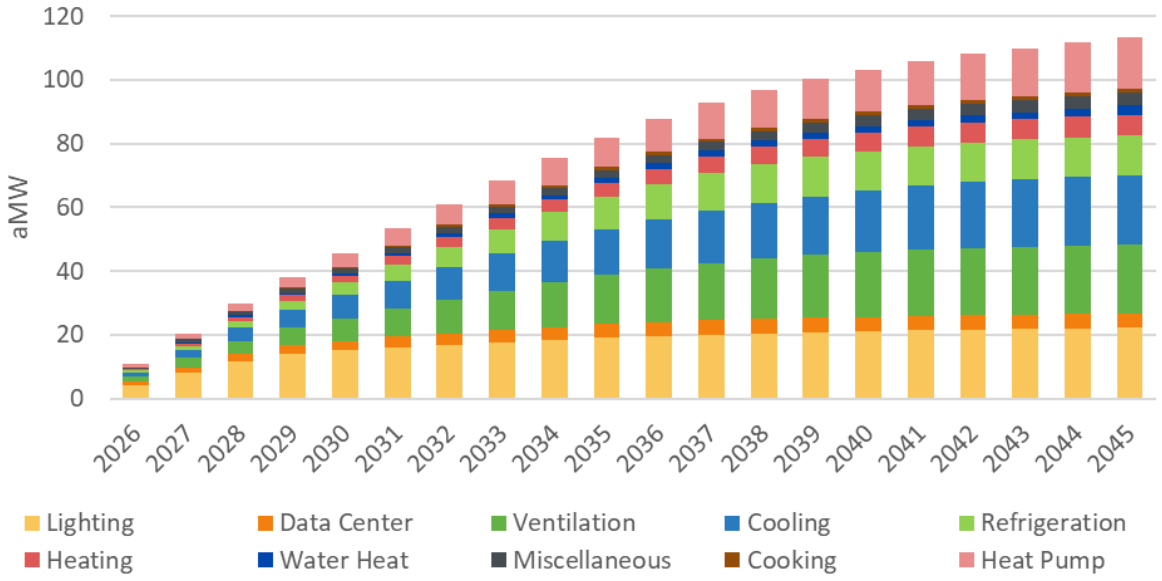


Figure 4-15. Commercial Incremental Achievable Technical Potential by End Use (2026–2045)

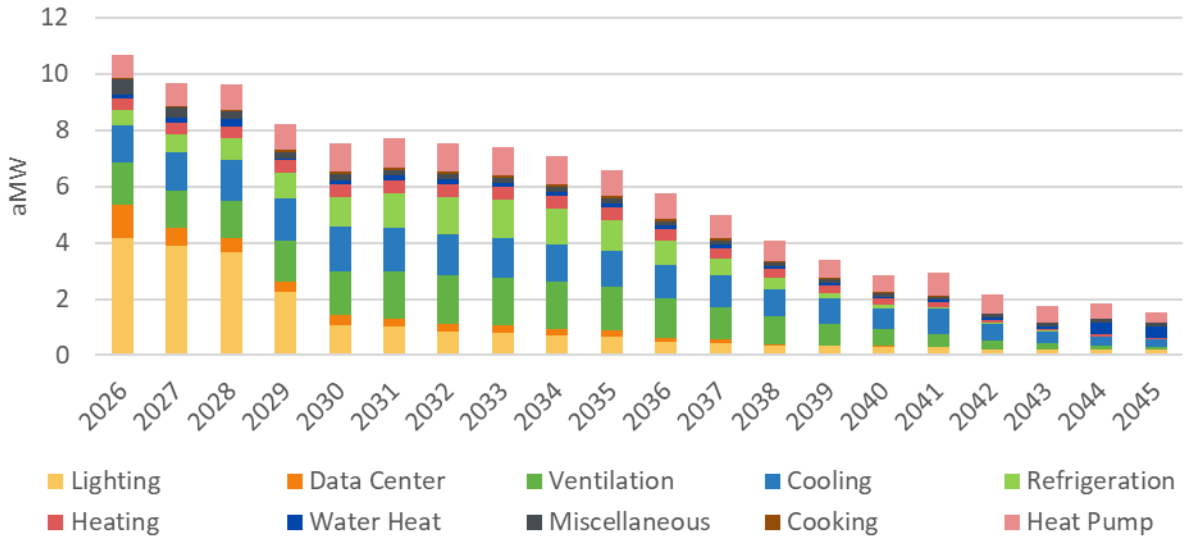


Table 4-12 shows the top 15 commercial measures and their average levelized costs,[35] sorted by 20-year achievable technical potential. Together, these measures represent 41% of the commercial cumulative 2045 achievable technical potential. The highest-saving measure is HVAC retro-commissioning with 7.4 aMW, or 7%, of achievable technical potential. Depending on the application, this measure can also be costly and may not be considered economical, with a weighted average levelized TRC of $159 per megawatt-hour.

[35] The levelized cost value represents a weighted average across all iterations, including segment and end use. As a result, some permutations of a measure may have a low levelized cost while other permutations have a high levelized cost.

Table 4-12. Top-Saving Commercial Measures

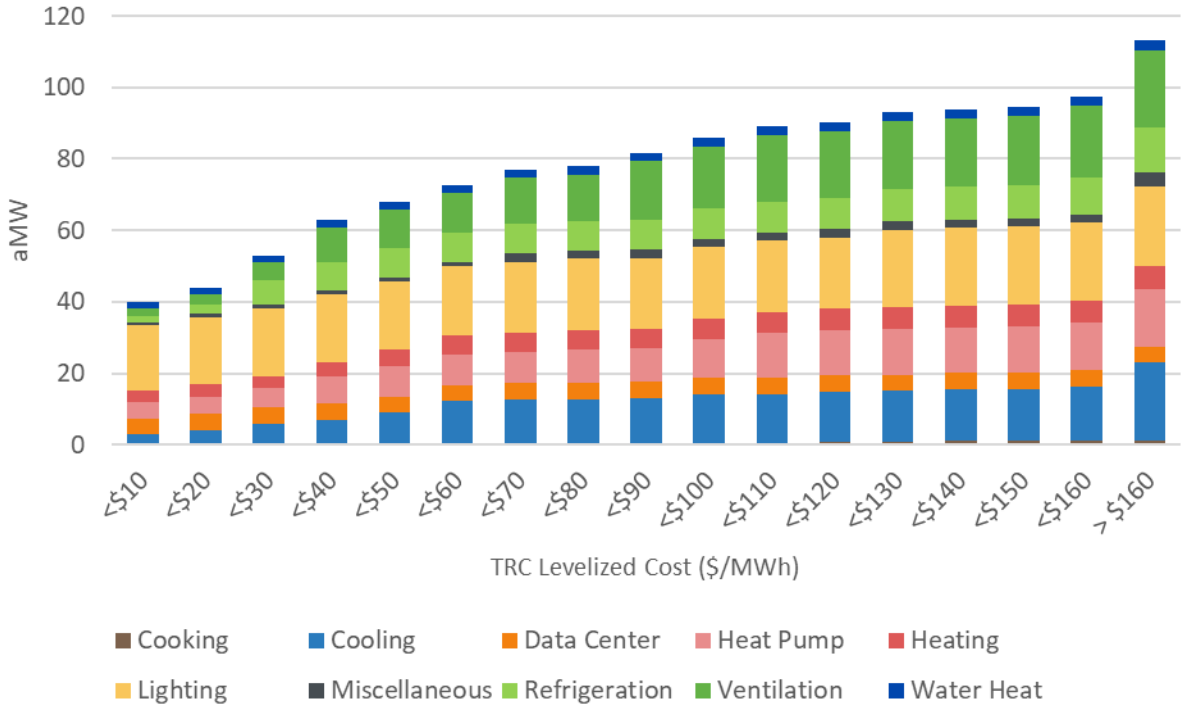
Measure Name	Cumulative Achievable Technical Potential (aMW)					Weighted Average Levelized TRC ($/MWh) [a]
	2-Year	4-Year	10-Year	20-Year	% of Total (20-Year)	
HVAC Retrocommissioning	1.67	3.28	6.51	7.40	7%	$158.59
Building Automation System Upgrades	1.53	3.01	5.97	6.81	6%	$25.58
Strategic Energy Management	0.05	0.19	2.04	5.98	5%	$194.58
Air Source Heat Pump, 240,000 to 759,999 Btu/h, Above Code	0.10	0.29	1.37	3.39	3%	$24.61
New Display Case - Replacement	0.32	0.78	2.79	3.33	3%	$24.52
Air Source Heat Pump, 135,000 to 240,000 Btu/h. Above Code	0.07	0.21	1.03	2.57	2%	$142.49
Thin Triple-Glazed Windows for Large Office with Gas Heating	0.02	0.07	0.77	2.28	2%	$39.69
ENERGY STAR Server	1.40	1.89	2.14	2.16	2%	-$10.99
Server Virtualization	0.20	0.49	1.76	2.11	2%	$4.23
Chiller - Above Code (Air/Water)	0.21	0.51	1.41	1.95	2%	$50.49
Outside Air Economizer	0.44	0.86	1.70	1.93	2%	-$2.03
Circulation Pump with ECM Motor and Advanced Speed Controls	0.45	0.86	1.67	1.89	2%	$83.24
Circulation Pump with ECM Motor and Advanced Run Hour Controls	0.40	0.79	1.57	1.79	2%	$64.72
Double-Sided LED Exit Sign	0.18	0.41	1.30	1.72	2%	$124.93
Large Refrigerator	0.15	0.37	1.32	1.58	1%	$338.10

[a] *The average levelized TRC value represents a weighted average across all iterations, including segment and end use. As a result, some permutations of a measure may have a low levelized cost while other permutations have a high levelized cost.*

Approximately 72% of 20-year commercial achievable technical potential falls within the first 10 years of the study horizon. Much of the commercial retrofit potential for existing buildings occurs within the first 10 years, largely due to the ramp rates associated with these measures. Additionally, the majority of lighting potential must be acquired prior to July of 2029to comply with RCW 70A.230.020 and is therefore captured early in the study period.

Figure 4-16 illustrates that the commercial levelized cost distributions for the achievable technical potential are similar to those for the residential sector. However, 14% of the achievable technical potential has costs exceeding $160 per megawatt-hour. This is primarily due to the high costs associated with HVAC retro-commissioning and weatherization measures, such as thin triple-pane window replacements, which offer large savings opportunities.

Figure 4-16. Commercial Supply Curve – Cumulative Achievable Technical Potential in 2045 by Levelized Cost



City Light's IRP model selected an achievable economic potential for the commercial sector of 82 aMW by 2045. Figure 4-17 shows the cumulative 20-year achievable economic potential for the commercial sector by end-use group. Achievable economic potential for lighting makes up 26% of the commercial achievable economic potential, followed by ventilation (16%) and cooling (15%).

Figure 4-17. Commercial Cumulative Achievable Economic Potential in 2045 by End-Use Group

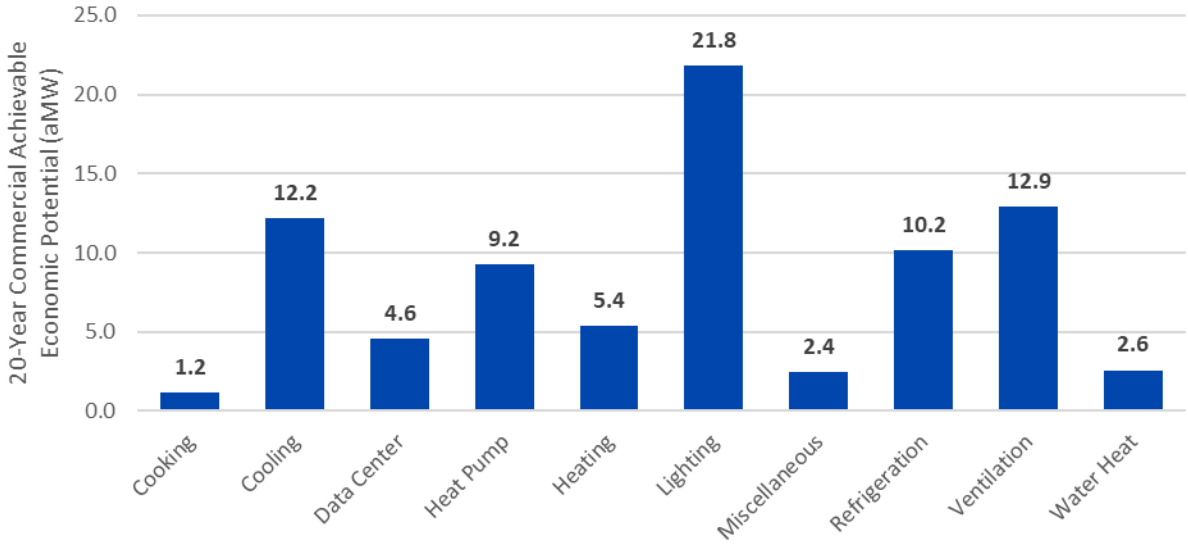


Table 4-13 lists the 15 highest-saving commercial measures City Light's IRP model selected. These commercial achievable economic measure permutations have a levelized cost of less than or equal to $160 per megawatt-hour and make up 44% of the commercial cumulative 20-year achievable economic potential.

Table 4-13. Top-Saving Commercial Measures Selected by IRP Model

Measure Name	Cumulative Achievable Economic Potential (aMW) – Less than or Equal to $160/MWh				% of Cumulative 20-year Achievable Economic Potential
	2-Year	4-Year	10-Year	20-year	
Building Automation System Upgrades	1.42	2.78	5.52	6.30	8%
Air Source Heat Pump, 240,000 to 759,999 Btu/h, Above Code	0.10	0.29	1.37	3.39	4%
New Replacement Display Case	0.32	0.78	2.79	3.33	4%
HVAC Retro-commissioning	0.68	1.37	2.74	3.12	4%
Thin Triple-Glazed Windows for Large Office with Gas Heating	0.02	0.07	0.77	2.28	3%
ENERGY STAR Server	1.40	1.89	2.14	2.16	3%
Server Virtualization	0.20	0.49	1.76	2.11	3%
Strategic Energy Management	0.02	0.06	0.69	2.04	2%
Chiller - Above Code (Air/Water) Heat Pump Water Heater Less than 55 Gallons - Tier 3	0.21	0.51	1.41	1.95	2%
Outside Air Economizer	0.44	0.86	1.70	1.93	2%
Circulation Pump with ECM Motor and Advanced Run Hour Controls	0.40	0.79	1.57	1.79	2%
Double-Sided LED Exit Sign	0.18	0.41	1.30	1.72	2%
Advanced Air-to-water Heat Pump	0.02	0.09	0.86	1.50	2%
Large Office – Linear Fixture Retrofit: Fluorescent Tube to LED Panel	0.53	0.99	1.17	1.37	2%
Web-Enabled Power Monitoring for Small and Medium Businesses	0.02	0.08	0.77	1.36	2%

4.4. Industrial

Cadmus estimated conservation potential for the industrial sector using the Council's 2021 Power Plan analysis tool. The conservation potential addressed eight industrial segments in City Light's service territory based on allocations developed from City Light's nonresidential database. The assessment identified approximately 7.6 aMW of achievable technical potential by 2045. Table 4-14 shows the cumulative industrial potential by segment in 2045.

Table 4-14. Industrial Cumulative Technical and Achievable Technical Potential by Segment in 2045

Segment	Baseline Sales (aMW)	20-Year Technical Potential		20-Year Achievable Technical Potential	
		aMW	% of Baseline Sales	aMW	% of Technical Potential
Foundries	42	3	8%	2.8	85%
Frozen Food	2	0	10%	0.1	83%
Miscellaneous Manufacturing	10	1	9%	0.7	84%
Other Food	0.03	0	11%	<0.01	84%
Stone and Glass	25	0	0%	0	N/A
Transportation Equipment	22	3	11%	2.1	82%
Wastewater	9	2	23%	1.8	85%
Water	0.3	0	8%	0.02	85%
Total	**109**	**9**	**8%**	**8**	**84%**

Figure 4-18 shows the industrial cumulative achievable technical potential by segment and year. Similar to baseline sales, the foundries segment has the largest share (37%) of 20-year industrial achievable technical potential, amounting to 3 aMW. This is followed by transportation equipment and wastewater, which each account for approximately 2 aMW of the total achievable technical potential.

Figure 4-18. Industrial Cumulative Achievable Technical Potential by Segment (2026–2045)

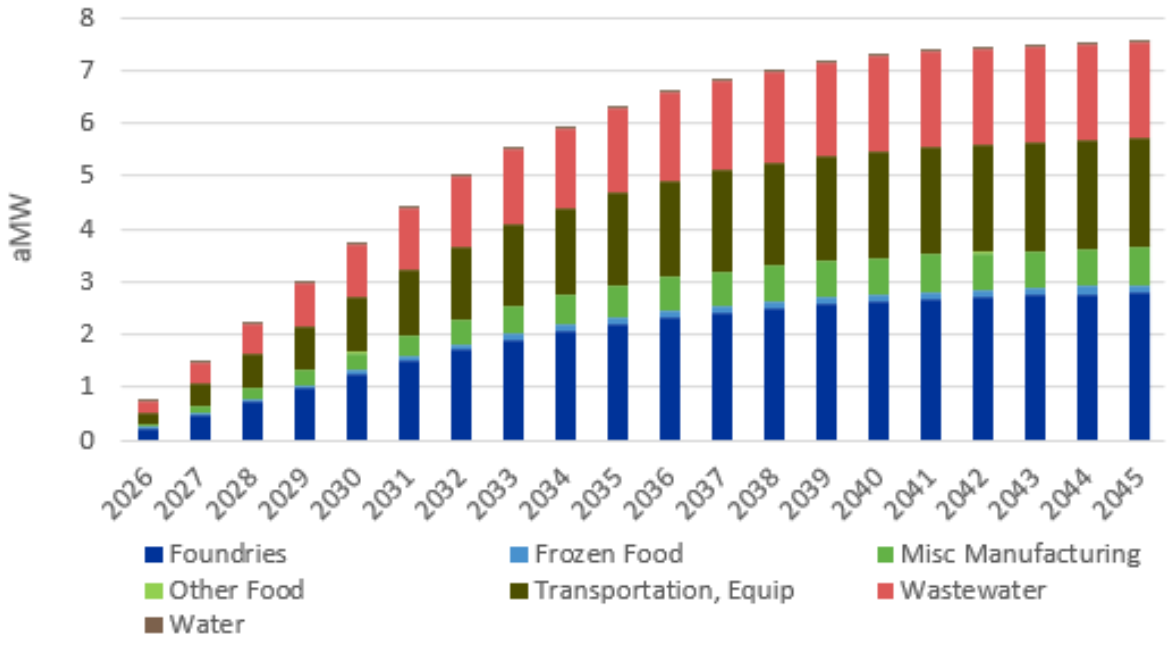


Table 4-15 shows the 20-year potential by industrial end use. The three end uses with the highest industrial achievable technical potential are other, fans, and pumps. The "Other" end-use category includes forklift battery chargers and welder systems, which represent a small portion of the potential, and wastewater and water supply, which represent the majority of potential with the end-use category.

Table 4-15. Industrial Cumulative Technical, Achievable Technical, and Achievable Economic Potential by End Use in 2045

End-Use Category	Baseline Sales (aMW)	20-Year Technical Potential		20-Year Achievable Technical Potential		20-Year Achievable Economic Potential	
		aMW	% of Baseline Sales	aMW	% of Technical Potential	aMW	% of Technical Potential
Fans	7	1.5	21%	1.2	85%	1.2	85%
HVAC	17	0.9	6%	0.8	85%	0.8	85%
Lighting	9	1.3	14%	0.9	73%	0.9	73%
Motors (Other)	14	0.5	4%	0.5	85%	0.5	85%
Other	16	2.2	13%	1.8	85%	1.8	85%
Process Air Compressor	6	0.9	15%	0.8	92%	0.8	92%
Process Electro Chemical	6	0.2	4%	0.2	85%	0.2	85%
Process Heat	17	0.0	0%	0.0	0%	0.0	0%
Process (Other)	2	0.0	0%	0.0	0%	0.0	0%
Process Refrigeration	3	0.1	3%	0.1	85%	0.1	85%
Pumps	12	1.4	12%	1.2	85%	1.2	85%
Total	**109**	**9.0**	**8%**	**7.6**	**84%**	**7.6**	**84%**

Figure 4-19 and Figure 4-20 show cumulative and incremental achievable technical potential by end use over the 20-year study horizon, respectively.

Figure 4-19. Industrial Cumulative Achievable Technical Potential by End Use (2026–2045)

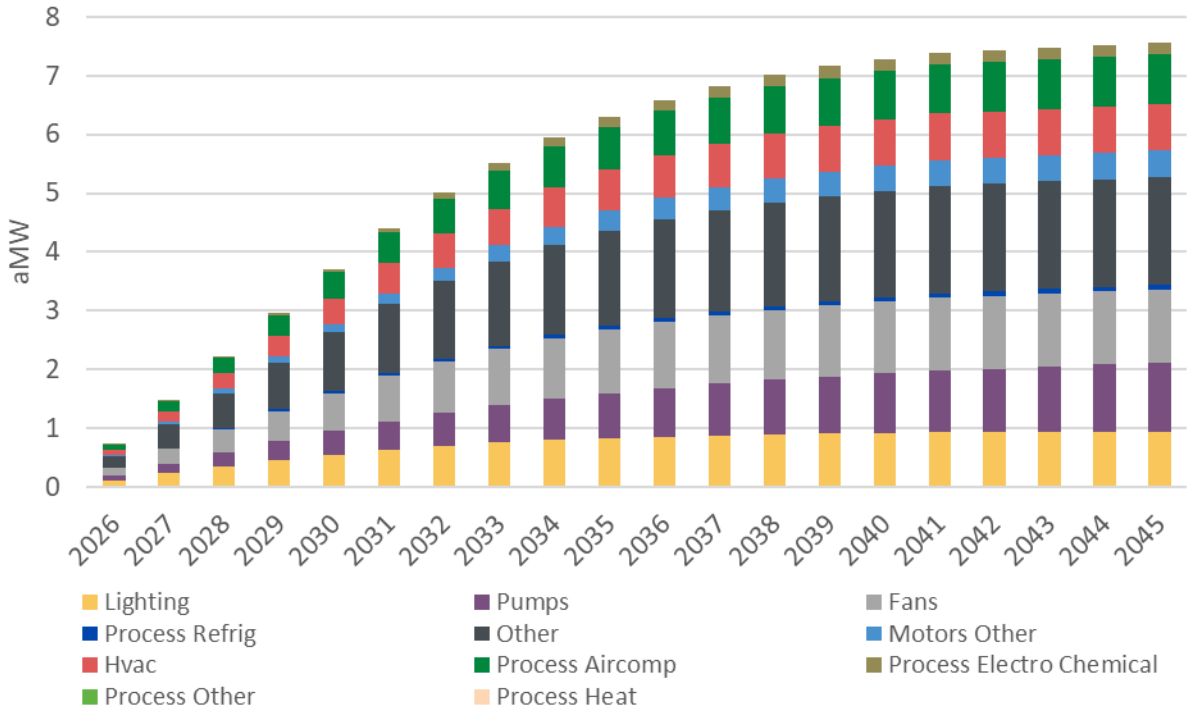


Figure 4-20. Industrial Incremental Achievable Technical Potential by End Use (2026–2045)

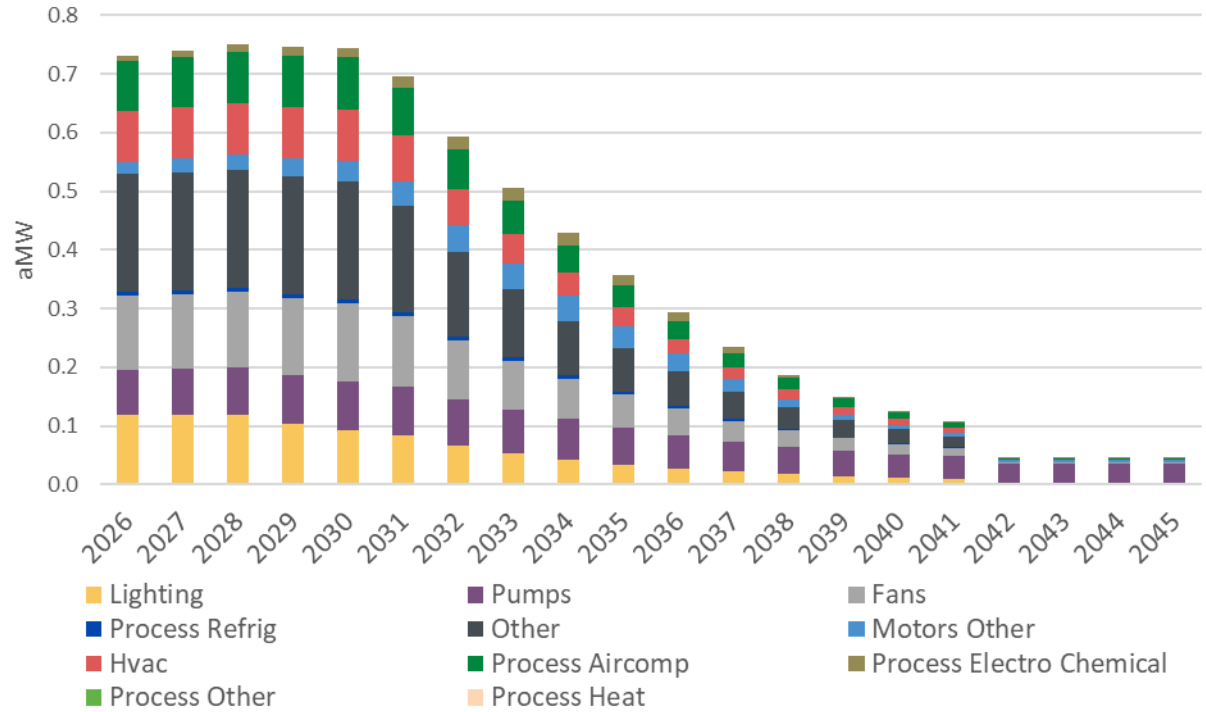


Table 4-16 shows the top-saving industrial measures and their weighted average levelized costs. Collectively, these 15 measures represent 92% of industrial 20-year cumulative achievable technical potential.

Table 4-16. Top-Saving Industrial Measures

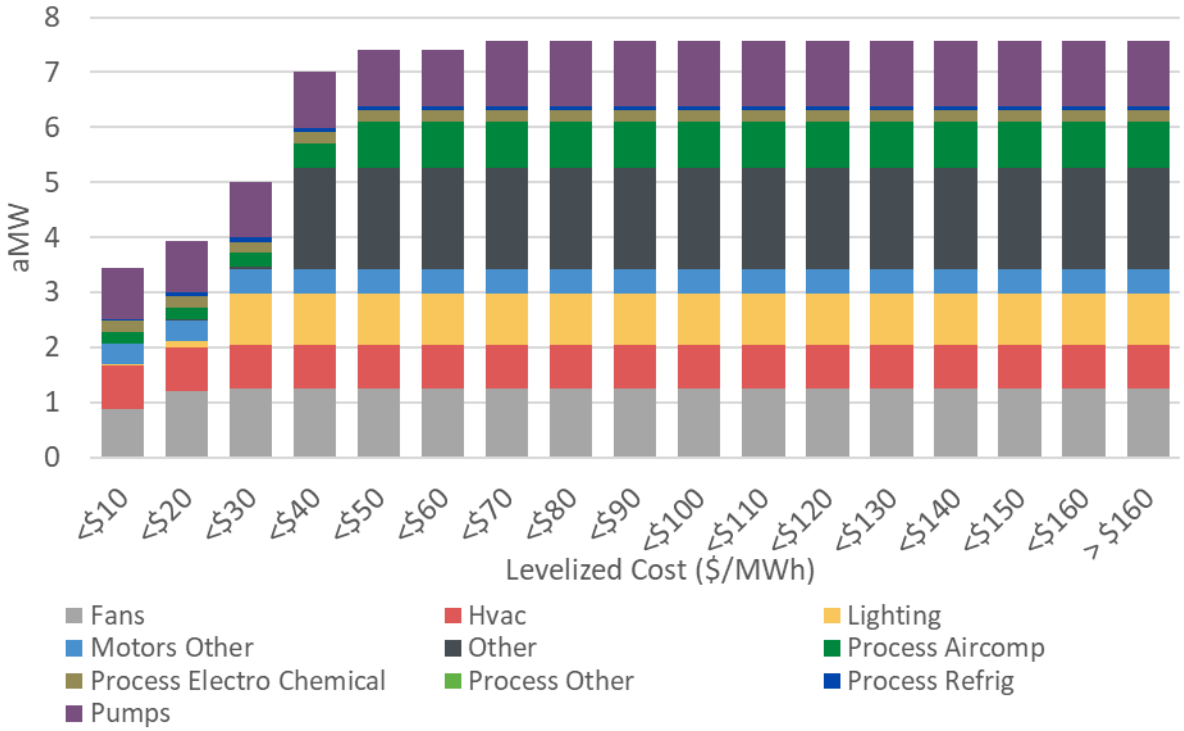
Measure Name	Cumulative Achievable Technical Potential (aMW)					Weighted Average Levelized TRC ($/MWh) [a,c]
	2-Year	4-Year	10-Year	20-Year	% of Total (20-Year)	
Wastewater	0.39	0.79	1.58	1.80	24%	$34.47
Lighting Controls	0.18	0.36	0.72	0.82	11%	$20.72
HVAC	0.17	0.35	0.70	0.79	11%	$0.00
Energy Management[b]	0.05	0.13	0.45	0.54	7%	$6.13
Fan Equipment Upgrade	0.11	0.22	0.45	0.51	7%	$0.00
Pump Optimization	0.05	0.10	0.24	0.49	6%	$0.00
Air Compressor Equipment	0.09	0.17	0.34	0.39	5%	$40.11
Fan Optimization	0.07	0.14	0.29	0.32	4%	$17.58
Energy Management2[b]	0.03	0.05	0.13	0.26	3%	$27.79
Air Compressor Variable Speed	0.04	0.09	0.18	0.20	3%	$34.84
Advanced Motors - Material Handling	0.02	0.05	0.17	0.20	3%	$0.00
Advanced Motors - Material Processing	0.02	0.05	0.17	0.20	3%	$0.00
Pump Variable Speed Trim	0.04	0.07	0.14	0.16	2%	$68.25
Pump Variable Speed	0.03	0.07	0.14	0.15	2%	$0.00
Air Compressor (Large) System Optimization	0.03	0.07	0.13	0.15	2%	$5.08

[a] *The average levelized TRC value represents a weighted average across all iterations, including segment and end use. As a result, some permutations of a measure may have a low levelized cost while other permutations have a high levelized cost.*
[b] *The Council separated the Energy Management measures into two tiers: Level 1 and Level 2. Level 1 represents the standard strategic energy management applied in mostly large industrial facilities. Level 2 represents a share of strategic energy management potential likely found in smaller facilities, which is, therefore, more difficult to achieve. The cost of Level 2 is twice the cost of Level 1 and has half the savings.*
[c] *When net expenses (costs and benefits) are less than zero, the levelized TRC is shown as $0.00 (per megawatt-hour) and can be considered cost-effective.*

Consistent with the Council's approach to the industrial sector, Cadmus modeled all industrial measures as retrofits and did not distinguish between new and existing construction. After applying ramp rates, approximately 83% of 20-year achievable technical potential is realized within the first 10 years.

Industrial measures are generally low cost, so the industrial achievable technical potential by levelized cost distribution does not have the same peak at greater than $160 per megawatt-hour as that for the residential and commercial sectors. In fact, all 7.6 aMW of industrial potential can be achieved at a levelized cost of less than or equal to $70 per megawatt-hour. Figure 4-21 shows cumulative achievable technical potential in 2045 for different levelized cost thresholds.

Figure 4-21. Industrial Supply Curve — Cumulative Achievable Technical Potential in 2045 by Levelized Cost



City Light's portfolio modeling selected all industrial measures for inclusion in the achievable economic potential portfolio. Therefore, the 20-year cumulative achievable economic potential for the industrial sector is 7.6 aMW at a levelized cost of less than or equal to $70 per megawatt-hour. The 15 highest-savings industrial measures the IRP model selected are the same as those reported for achievable technical potential.

5. Comparison to 2024 DSMPA

The 2026 DSMPA focused on final-year cumulative estimates of technical potential and incremental estimates of achievable technical potential. Cadmus defines the final-year cumulative technical potential as the total average megawatt savings that are considered technically feasible to achieve over the study horizon. For the 2024 DSMPA, that horizon was 2024 through 2045 (22 years), while for the 2026 DSMPA, it is 2024 through 2045 (20 years). The final year of each study aligns with the CETA commitment year for achieving greenhouse gas-free emissions. Overall, the 2026 DSMPA identified lower final-year cumulative technical potential and achievable technical potential compared with the 2024 DSMPA. This is partially due to the shorter study horizon but also because of the incorporation of new data sources, codes and standards, as well as the removal of certain measures, which all decreased the cumulative 2045 potential savings. Furthermore, Cadmus adjusted adoption rates to reflect market activity in the past two years that resulted in lower savings in the earlier years of the study. This chapter presents Cadmus' comparison of technical, achievable technical, and achievable economic potential results from these two assessments and details the reasons for the differences in results. In the subsequent tables, the baseline sales for the residential and commercial sectors in the 2026 DSMPA do not include City Light's EV forecasts. This is consistent with the 2024 DSMPA results, which also did not account for EV conservation measures or sales values.

5.1. Technical Potential Comparison

The 2026 DSMPA identified 245 aMW of technical potential in the final year, compared with 263 aMW in the 2024 DSMPA. The 7% decrease in cumulative final-year technical potential is heavily influenced by the shorter study horizon, new codes and standards, removal of measures with more savings than those added, and updated market and customer characterization data based on the 2022 RBSA. Table 5-1 shows a comparison of cumulative technical potential by sector from the 2024 and 2026 DSMPAs.

Table 5-1. Final Year Cumulative Technical Potential Comparison by Sector

Sector	2026 DSMPA			2024 DSMPA			Percentage Change in Technical Potential
	Baseline Sales—20 Year (aMW)	Technical Potential—20 Year (aMW)	Technical Potential as % of Baseline Sales	Baseline Sales—22 Year (aMW)	Technical Potential—22 Year (aMW)	Technical Potential as % of Baseline Sales	
Residential	439	97	22%	398	95	24%	3%
Commercial	698	138	20%	718	155	22%	-11%
Industrial	109	9	8%	124	13	11%	-31%
Total	**1,246**	**245**	**20%**	**1,240**	**263**	**21%**	**-7%**

The following sections detail the differences between the 2026 DSMPA and the 2024 DSMPA by sector.

5.1.1. Changes in Residential Technical Potential

The residential sector technical potential increased from 95 aMW in the final year in the 2024 DSMPA to 97 aMW in the 2026 DSMPA, which is a 3% increase. In the 2026 DSMPA, several factors affected the potential in positive or negative ways and resulted in an overall increase. The factors contributing to increasing potential are an increase in certain appliance saturations based on the incorporation of updated data from the 2022 RBSA, the addition of window heat pumps, and the decrease in the study timeline. In addition, the 2026 DSMPA includes the EV end use and associated potential, unlike the 2024 DSMPA. However, the technical potential due to EVs accounts for only 0.2 aMW in the 2026 DSMPA. Table 5-2 provides a comparison of baseline sales and technical potential and explains the reasons for the differences.

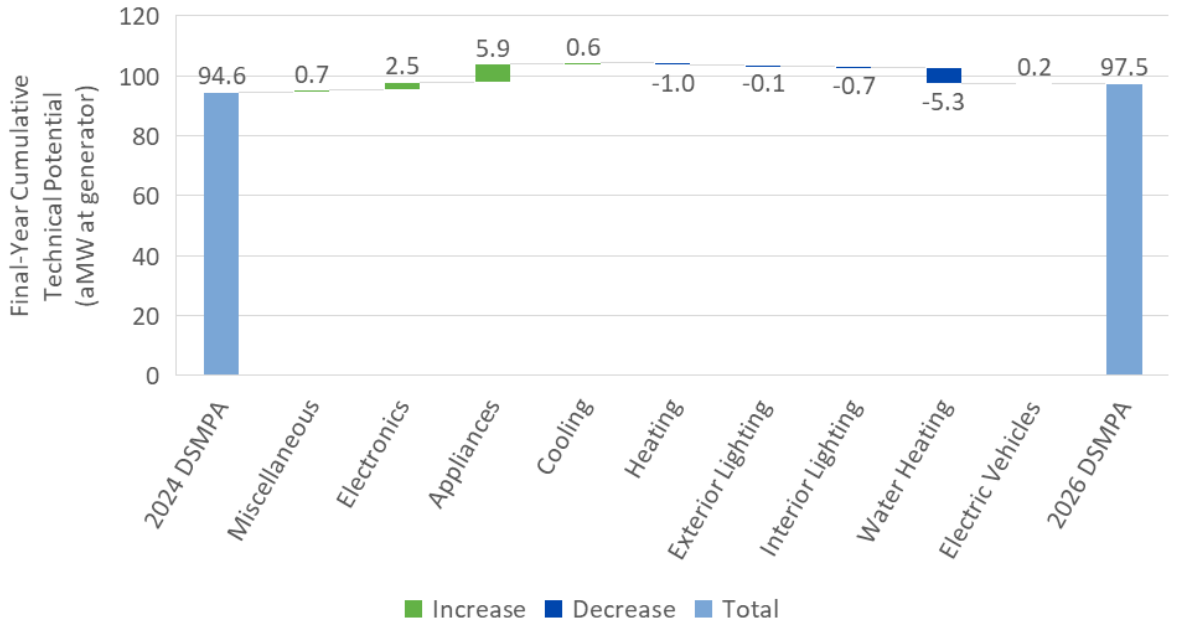
Table 5-2. Residential Cumulative Technical Potential Comparison

Component	2026 DSMPA 20-Year (aMW)	2024 DSMPA 22-Year (aMW)	Percentage Change	Reason for Change
Baseline Sales (aMW)	439	398	10%	Updated sales forecast from City Light with adjustments for building electrification, climate change, and codes and standards. The 2026 DSMPA sales forecast did include electrification in the base forecast and did not include adjustments for COVID-19 (as was done in the 2024 DSMPA).
Technical Potential (aMW)	97	95	3%	Increase in appliance saturations for high savings measures, such as heat pump dryers and TVs, and the addition of window heat pumps
Technical Potential as % of Baseline	22%	24%	N/A	

Note: This comparison does not include EVs

Figure 5-1 shows a comparison of residential technical potential by end-use group. The blue bars indicate all end-use groups that had a decrease in technical potential from the 2024 DSMPA to the 2026 DSMPA. The green bars indicate all end-use groups that had an increase in technical potential. The most significant increase, nearly 6 aMW, comes from the appliances end-use group, which is driven by increased saturations and RTF measure assumptions for appliances such as dryers. Other relatively smaller increases in potential come from electronics due to updated RBSA saturation data. The increase in EV technical potential is due to the addition of EV chargers as a measure. Water heating technical potential decreased by 5.3 aMW from the 2024 DSMPA to the 2026 DSMPA following the incorporation of the 2029 heat pump water heater federal standard.

Figure 5-1. Change in Cumulative Residential Technical Potential by End-Use Group



5.1.2. Changes in Commercial Technical Potential

Several factors resulted in the 2026 DSMPA identifying lower final-year cumulative technical potential than the 2024 DSMPA. These factors include the new commercial load forecast being 3% lower in the 2024 DSMPA and the incorporation of new codes and standards that preclude City Light from capturing potential through efficiency programs for lighting and water heating (Table 5-3).

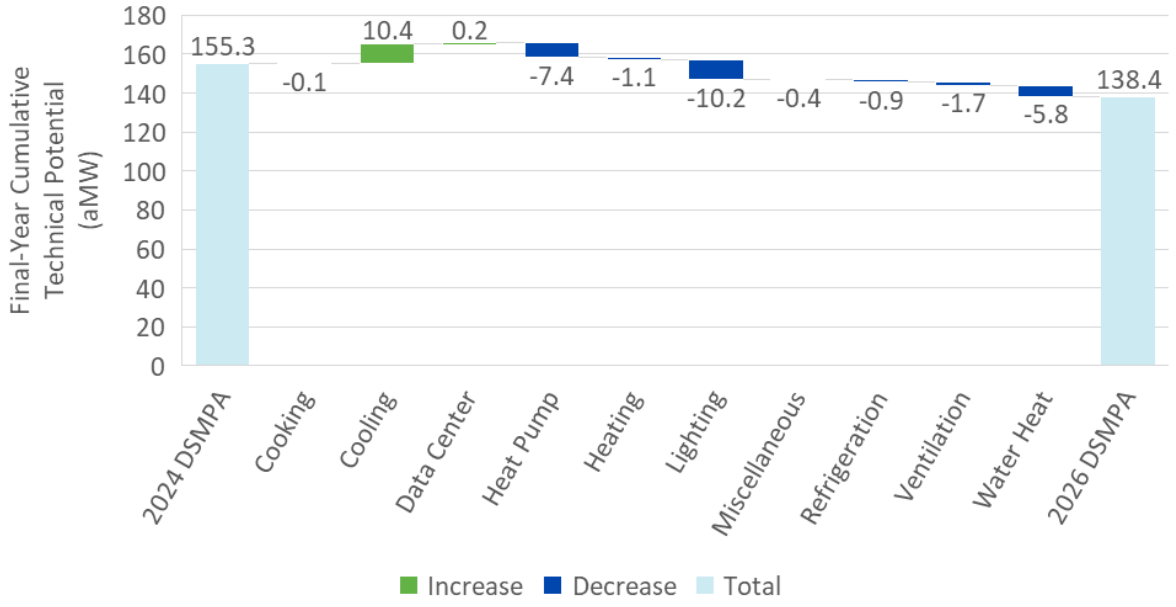
Table 5-3. Commercial Cumulative Technical Potential Comparison

Component	2026 DSMPA 20-Year (aMW)	2024 DSMPA 22-Year (aMW)	Percentage Change	Reason for Change
Baseline Sales (aMW)	698	718	-3%	Updated sales forecast from City Light with adjustments for building electrification, climate change, and codes and standards. The 2026 DSMPA sales forecast did not include adjustments for COVID-19 (as was done in the 2024 DSMPA).
Technical Potential (aMW)	138	155	-11%	Decreased lighting and water heating potential as a result of 2029 Washington codes and federal standards, respectively.
Technical Potential as % of Baseline	20%	22%	N/A	

Figure 5-2 illustrates the change in the commercial technical potential between the 2024 DSMPA and 2026 DSMPA by end-use group. End-use groups with a decrease in technical potential in the 2026 DSMPA include lighting and water heating. The reduction in lighting technical potential reflects the impact of a

halt in LED savings beginning in July 2029, when RCW 70A.230.020 takes effect and prohibits fluorescent lighting sales. Savings for lighting measures after 2029 will primarily come from lighting controls. The decrease in water heating potential is due to the 2029 federal standard for heat pump water heaters. Additionally, updates to the RTF's chiller characterization result in higher cooling savings compared to the 2024 DSMPA.

Figure 5-2. Change in Commercial Cumulative Technical Potential by End-Use Group



5.1.3. Changes in Industrial Technical Potential

For the industrial sector, Cadmus did not incorporate any new measures into the 2026 DSMPA based on the 2021 Power Plan; as a result, there were no major changes in the industrial sector's potential compared with the 2022 CPA. The 2026 DSMPA, like the 2024 DSMPA, accounts for building electrification, which increases the opportunity for additional energy efficiency potential.

5.2. Achievable Technical Potential and Ramp Rate Comparison

The 2026 DSMPA shows a lower cumulative achievable technical potential compared to the 2024 DSMPA. This reduction is due to the final-year cumulative achievable technical potential being a subset of technical potential and influenced by the same factors that lowered technical potential. Specifically, the new commercial load forecast being 3% lower in the 2024 DSMPA, and the incorporation of new codes and standards preclude City Light from capturing potential through efficiency programs for lighting and water heating in the latter years of the study period.

The following figures show incremental achievable technical potential from the 2026 DSMPA (Figure 5-3) and the 2024 DSMPA (Figure 5-4). While the 2045 cumulative potential is 11% lower in the 2026 DSMPA compared to the 2024 DSMPA, the near term potential is more consistent between the two studies. Specifically, the cumulative achievable technical potential in the first two years of the 2026 DSMPA is only

5% lower than that in the first two years of the 2024 DSMPA. This slight increase is a result of the abbreviated study period and the incorporation of adjusted ramp rates from the 2021 Power Plan.

Figure 5-3. Incremental Achievable Technical Potential – 2026 DSMPA

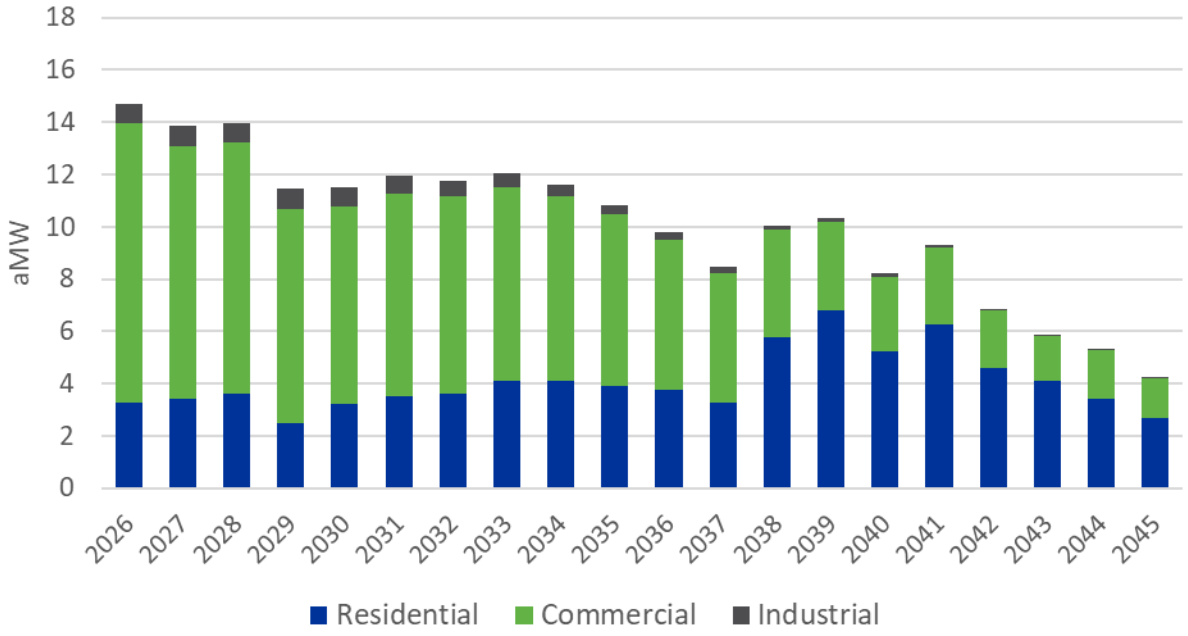
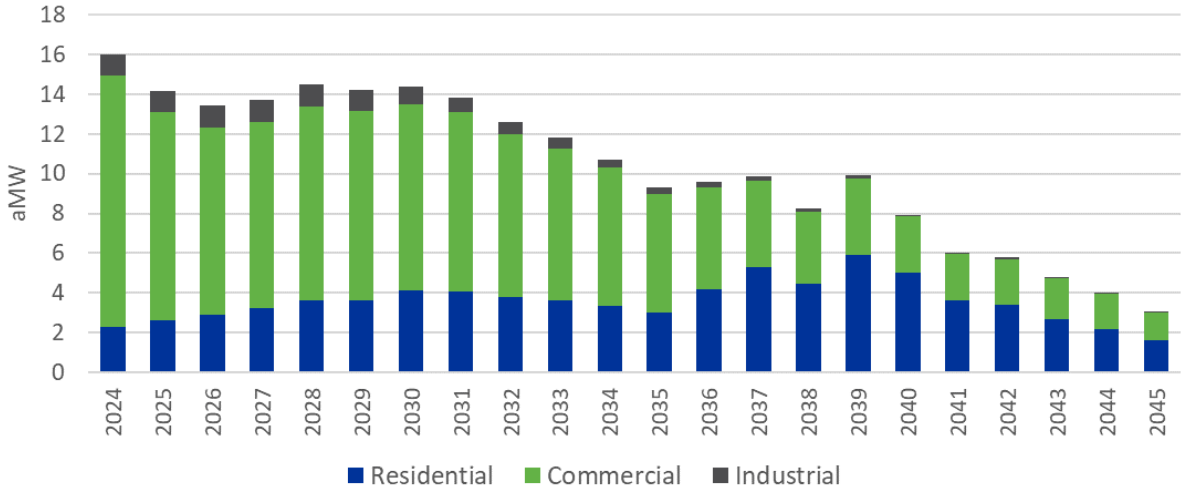


Figure 5-4. Incremental Achievable Technical Potential – 2024 DSMPA



Note that the figures above show the impact of codes and standards that begin taking effect in 2029 and reduce the potential for the remainder of the study period. The two-year achievable potential in the 2024 DSMPA is equal to approximately 13% of the total 22-year achievable technical potential, whereas the

two-year achievable potential in the 2026 DSMPA is equal to approximately 14% of the total 20-year achievable technical potential.

5.3. IRP Achievable Economic Potential Comparison

Both the 2024 DSMPA and 2026 DSMPA used the IRP optimization modeling to determine how much energy efficiency, as a resource, is cost-effective compared with other competing resources over the study horizon. For the 2026 DSMPA, City Light updated the IRP optimization modeling process using a new tool. Details of this modeling framework can be found in Long-Term Resource Planning Model for DSMPA section. Table 5-4 shows a comparison of the achievable (economic) potential between the two studies. While both the 2024 DSMPA and the 2026 DSMPA load forecasts accounted for climate change and increased building electrification loads, the 2026 DSMPA did not include adjustments for COVID-19 that were incorporated in the 2024 DSMPA load forecast. . The two studies also have different demand-side potentials and associated costs.

Table 5-4. Economic Cumulative Potential Comparison

Sector	2026 DSMPA			2024 DSMPA		
	Baseline Sales – 20-Year (aMW)	Achievable Economic Potential – 20-Year (aMW)	Achievable Economic Potential as % of Baseline Sales	Baseline Sales – 22-Year (aMW)	Achievable Economic Potential – 22-Year (aMW)	Achievable Economic Potential as % of Baseline Sales
Residential	439	13	3%	398	50	13
Commercial	698	82	12%	718	72	10
Industrial	109	8	7%	124	10	8
Total	**1,246**	**103**	**8%**	**1,240**	**132**	**11%**

The 2026 DSMPA 20-Year residential sector achievable economic potential increased by nearly 75% compared with the 2024 DSMPA. The 2024 DSMPA selected nearly all measures, mostly due to its effectiveness at reducing winter loads, whereas the 2026 DSMPA only selected measures at or below $30/MWh. This excluded many of the high savings measures that were included in the previous DSMPA.

Conversely, the IRP selected more higher cost measures in the commercial sector than in the 2024 DSMPA which led to a 15% increase in 20-year achievable economic potential. The 2026 DSMPA industrial sector achievable economic potential is very similar to that of the 2024 DSMPA with a slight decrease as a result of lower achievable technical potential.

6. Detailed Methodology

Cadmus' general methodology can be best described as a combined top-down/bottom-up approach. We began the top-down component with City Light's most current load forecast. Cadmus adjusted this forecast for building energy codes, equipment efficiency standards, building electrification, and climate change that was not already accounted for through the forecast. We then disaggregated this load forecast into its constituent customer sectors, customer segments, and end-use components and projected the results out 20 years. We also calibrated the base year (2025) to City Light's sector-load forecasts.

For the bottom-up component, Cadmus considered the potential technical impacts of various ECMs and practices on each end use. We then estimated impacts based on engineering calculations, accounting for fuel shares, current market saturations, technical feasibility, and costs. The technical potential presents an alternative forecast that reflects the technical impacts of specific energy efficiency measures. We then determined the achievable technical potential by applying ramp rates and achievability percentages to technical potential. This chapter describes the CPA methodology in detail.

6.1. Developing Baseline Forecasts

City Light's sector-level sales and customer forecasts provided the basis for assessing energy efficiency potential. Prior to estimating potential, Cadmus disaggregated sector-level load forecasts by customer segment (business, dwelling, or facility types), building vintage (existing structures and new construction), and end uses (all applicable end uses in each customer sector and segment).

To develop the baseline forecasts, Cadmus first identified the appropriate customer segments in each sector. For these designations, we used categories from the study's key data sources—primarily City Light's nonresidential customer database for the commercial and industrial sectors and the U.S. Census Bureau's American Community Survey for the residential sector. We then mapped the appropriate end uses to relevant customer segments.

Next, Cadmus produced the baseline end-use load forecasts by integrating current and forecasted customer counts with key market and equipment usage data.

For the commercial and residential sectors, we calculated the total baseline annual consumption for each end use in each customer segment using the following equation:

$$EUSE_{ij} = \sum_{e} ACCTS_i \times UPA_i \times SAT_{ij} \times FSH_{ij} \times ESH_{ije} \times EUI_{ije}$$

Where:

$EUSE_{ij}$ = total electric energy consumption for end-use j in customer segment i

$ACCTS_i$ = number of accounts/customers in customer segment i

UPA_i = units per account in customer segment i (UPA_i generally equals the average square feet per customer in commercial segments, and equals 1.0 in residential dwellings, assessed at the whole-home level)

SAT_{ij} = share of customers in customer segment i with end-use j

FSH_{ij} = share of end-use j of customer segment i served by electricity

ESH_{ije} = market share of efficiency level in equipment for customer segment i and end use j

EUI_{ije} = end-use intensity: electric energy consumption per unit (per square foot for commercial) for the electric equipment configuration *ije*

For each sector, we determined the total annual electric consumption as the sum of $EUSE_{ij}$ across the end uses and customer segments.

Consistent with other conservation potential studies and commensurate with industrial UEC data (which varied widely in quality), we allocated the industrial sector's loads to end uses in various segments based on data available from the U.S. EIA.[36]

6.1.1. Derivation of End-Use Consumption

End-use electric energy consumption estimates by segment, end use, and efficiency level (EUI_{ije}) provided one of the most important components in developing a baseline forecast. In the residential sector, Cadmus used estimates of UEC, representing annual electric energy consumption associated with an end use and represented by a specific type of equipment, such as a central AC or heat pump. We derived the basis for the UEC values from savings in the latest RTF workbooks, the Council's 2021 Power Plan workbooks, and savings analyses to calculate accurate consumption wherever possible for all efficiency levels of end-use technology. When Council workbooks did not exist for certain end uses, we used results from NEEA's 2022 RBSA or City Light's oversample, or we conducted other research (for example, U.S. Department of Energy, ENERGY STAR).

For the commercial sector, Cadmus treated consumption estimates as end-use intensities that represented annual electric energy consumption per square foot served. To develop the end-use intensities, Cadmus developed electric energy intensities (total kilowatt-hours per building square foot) based on NEEA's 2019 CBSA IV. We then benchmarked these electric energy intensities against various other data sources, including the CBSA III, historical forecasted and potential study data from City Light, and historical end-use intensities developed by the Council and NEEA.

To distribute the electric energy intensities to end-use intensities, Cadmus used assumptions specific to each building segment and end use and applied the following methods:

- **Lighting.** To determine lighting end-use, Cadmus analyzed the CBSA IV's lighting power density (lighting wattage per square foot). We then multiplied this by the Council's interior lighting hours of use by building type. After calculating lighting end-use intensity, we subtracted this portion of

[36] U.S. Department of Energy, Energy Information Administration. 2010. *Manufacturing Energy Consumption Survey*.

the load from the total CBSA electric energy intensities (for example, to estimate non-lighting intensities).

Non-lighting. To distribute the remaining non-lighting CBSA electric energy intensities into end uses, Cadmus used 2012 CBECS microdata to calculate percentages of end-use intensities across various end-use groups by building types as defined by the Council. We then used the CBSA fuel shares and end-use saturations to adjust the distributions of CBECS end-use intensities to better represent City Light's commercial service territory. These finalized CBECS end-use intensities—adjusted with CBSA values where possible—were the basis for most of the end-use intensities in the commercial sector.

- **Computers and servers.** Cadmus developed energy intensities by building type for computers (desktops and laptops) and servers end uses. Using the CBECS data, Cadmus determined the number of units per square foot and then multiplied this by the consumption per unit.
- **University.** The CBSA IV data lacked information on university building type, and the schools building type represented only K–12, as designated by the Council. To develop a more accurate electric energy intensity specific to universities, Cadmus calculated a ratio between the CBECS's university and school K–12 building types. We then used the CBSA school K–12 lighting power density and applied the Council's university lighting hours of use. Finally, Cadmus verified the reasonableness of the result by benchmarking the university lighting end-use intensity developed for City Light against the ratio of CBECS university and school K–12 lighting loads.
- **Retail.** Low CBSA respondent counts and matching varying definitions of building type in Council and CBECS data caused concern, especially for the large and extra-large retail building types. To address this, Cadmus combined the large and extra-large retail building types for the CBSA electric energy intensities and lighting power density. Similarly, Cadmus combined small and medium retail building types because the counts and definitions were insufficient.

For the industrial sector, end-use electric energy consumption represented the total annual industry consumption by end use, as allocated by the secondary data described above.

6.1.2. City Light Forecast Adjustments

Cadmus worked with the City Light load forecast team to adjust the baseline forecast to account for climate change, equipment standards, building energy codes, and building electrification.

To account for the impacts of climate change, Cadmus used Multivariate Adaptive Constructed Analogs (MACA) scalar-adjusted heating degree days and cooling degree days data provided by City Light. Cadmus applied annual heating and cooling degree days adjustment ratios (called climate change adjustment factors) to cooling, heating, and heat pump UECs for the residential and commercial sectors. Table 6-1 presents the climate change adjustment factors for the heating, cooling, and heat pump end uses for each year.

Table 6-1. Climate Change Adjustment Factors for Residential and Commercial Heating, Cooling, and Heat Pump End Uses for Each Year

Year	Residential and Commercial Heating End-Use Multiplier	Residential and Commercial Cooling End-Use Multiplier	Residential Heat Pump End-Use Multiplier	Average Commercial Heat Pump End-Use Multiplier [a]
2025	0.99	1.02	0.99	1.00
2026	0.98	1.03	0.99	1.00
2027	0.98	1.05	0.98	1.01
2028	0.98	1.06	0.98	1.02
2029	0.97	1.09	0.97	1.02
2030	0.96	1.11	0.97	1.03
2031	0.96	1.12	0.97	1.03
2032	0.96	1.15	0.97	1.05
2033	0.95	1.17	0.96	1.05
2034	0.95	1.20	0.95	1.06
2035	0.94	1.22	0.95	1.06
2036	0.94	1.24	0.95	1.07
2037	0.93	1.27	0.94	1.08
2038	0.92	1.29	0.94	1.09
2039	0.92	1.31	0.93	1.10
2040	0.92	1.34	0.94	1.11
2041	0.91	1.36	0.93	1.11
2042	0.90	1.39	0.92	1.12
2043	0.90	1.41	0.92	1.13
2044	0.90	1.44	0.92	1.14
2045	0.89	1.46	0.91	1.14

[a] *Since the heat pump heating/cooling ratio of heat pumps varies by type of commercial building, commercial heat pump consumptions vary by building type. The numbers presented in this table are average multipliers.*

For each end use, Cadmus multiplied the base year (2025) UEC by the multipliers shown in the table above to calculate the climate change-adjusted UEC. For example, for cooling, the climate adjustment factor was 1.46 in 2045, and therefore, we multiplied the base year (2025) cooling consumption by 146% in 2045.

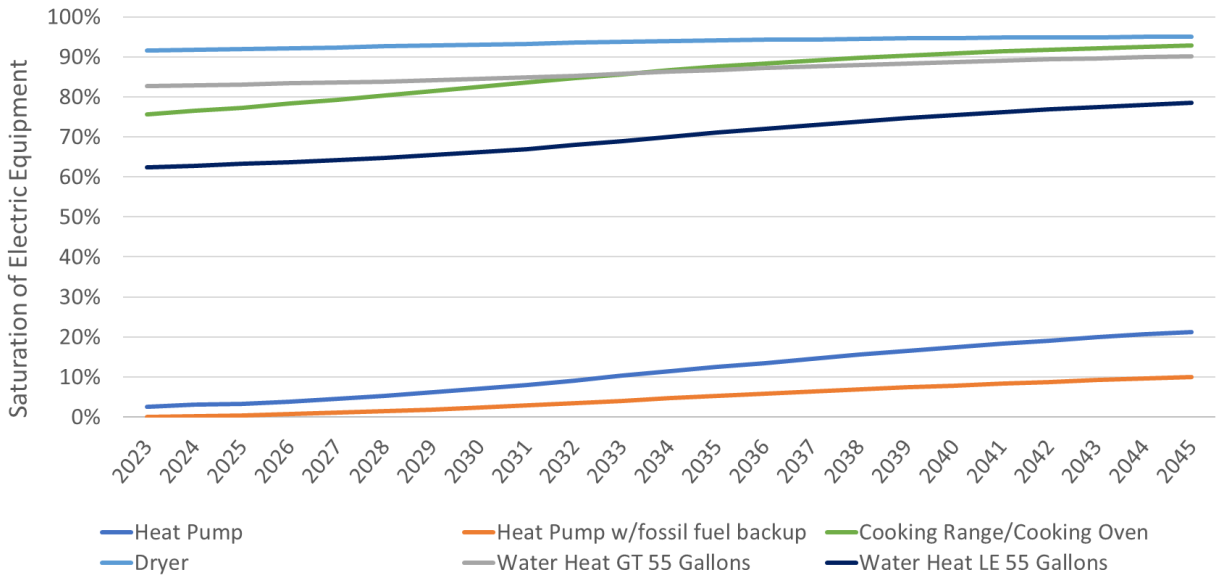
For the commercial sector, heat pump consumptions vary by building type because the heat pump heating/cooling ratio of heat pumps varies by the type of commercial building. On average, we multiplied the base year commercial heat pump consumptions by 114% in 2045. For the residential sector, based on observed increases in the adoption of heat pumps and AC spurred by the 2021 heat dome, Cadmus assumed that future cooling saturation (heat pump plus AC) would reach 70% by 2045. Cadmus implemented this assumption by linearly interpolating between base year (2025) saturation and final year (2045) saturation.

Cadmus further tailored the load forecast embedded with climate change adjustments for the impacts of city and state codes and federal standards that were on the books as of November 2024. We describe the treatment of codes and standards in the 2026 DSMPA in the *Incorporating Federal Standards and State and Local Codes and Policies* section.

Furthermore, Cadmus made adjustments for building electrification based on a 2022 Electric Power Research Institute (EPRI) study.[37] For this 2026 DSMPA, Cadmus applied the EPRI study's moderate market advancement scenario data to account for the impacts of electrification. This scenario is the closest to a "business-as-usual" scenario, where electric transportation adoption continues to grow based on past trajectories. Additionally, the electrification of buildings and industry is driven by customer choice as well as relative economics. The building stock and end-use saturation assumptions of the moderate market advancement scenario are generally consistent with City Light's 2024 load forecast and the 2024 CPA.

Based on moderate market advancement scenario data, Cadmus increased the fuel shares and equipment saturations for the residential sector. This involved converting cooking, dryer, and water heater fuel to electric, which led to an increase in heat pump equipment saturations as non-electric space heating equipment was converted to heat pumps. Figure 6-1 illustrates the change in saturation of electric equipment for cooking, water heating, and HVAC heat pumps with and without fossil fuel backup over the study horizon for single-family houses (existing construction).

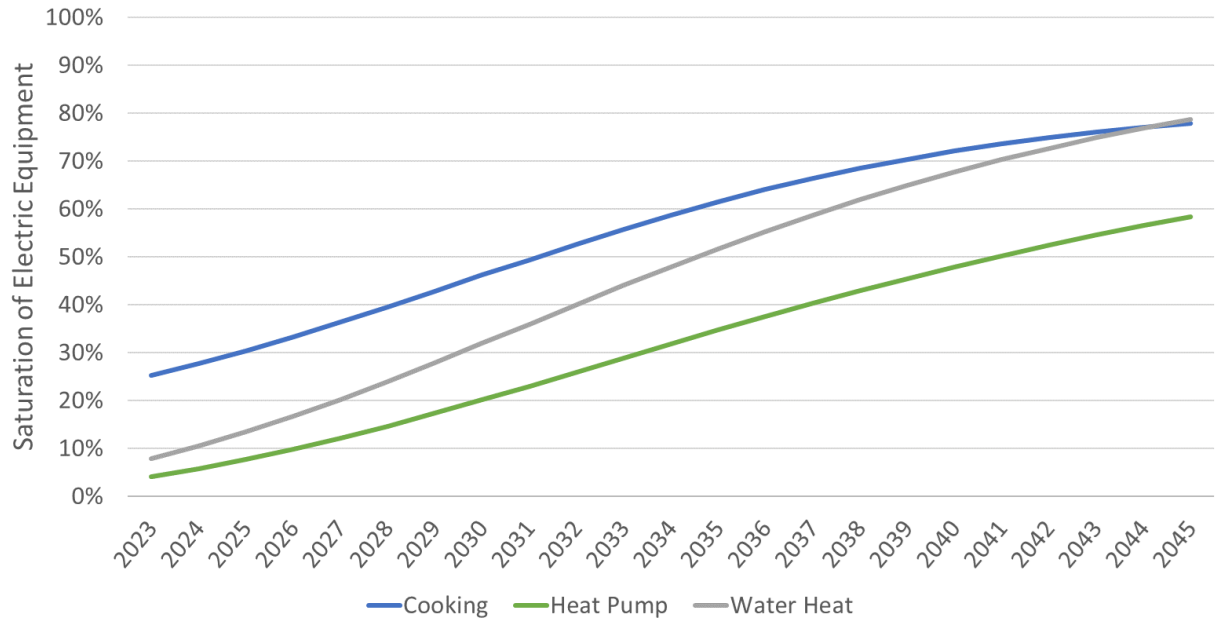
Figure 6-1. Cooking, Water Heating, Heat Pump, and Heat Pump with Fossil Fuel Backup Saturations in Single-Family Houses (Existing Construction)



[37] Electric Power Research Institute. January 2022. *Seattle City Light Electrification Assessment, Final Report*.

Similarly, for the commercial sector, the saturation of cooking, water heater, and HVAC heat pump electric equipment increased. As an example, Figure 6-2 illustrates the change in cooking, water heating, and heat pump saturation of electric equipment over the study horizon for restaurants (existing construction).

Figure 6-2. Cooking, Water Heating, and Heat Pump Saturations in Restaurants (Existing Construction)



In this study, all these adjustments occur naturally and do not represent energy efficiency potential.

6.1.3. Measure Characterization

Because technical potential relies on an alternative forecast that includes installations of all technically feasible measures, Cadmus chose the most robust set of appropriate ECMs. We developed a comprehensive database of technical and market data for these ECMs, applicable to all end uses across various market segments.

The database included the following measures:

- All measures in the Council's 2021 Power Plan conservation supply curve workbooks.
- Active UES measures from the RTF, updated to the latest RTF data for 10 high-impact measures.
- Technologies of interest to City Light and included in the 2026 DMSPA, including window heat pump, HVAC sizing, multifamily packaged terminal heat pump, heat pump with gas back-up, and EV chargers.
- Commercial technologies of interest to City Light and included in the 2022 CPA, such as airflow management (data center), building automation system upgrades, computer room AC, cooling towers, economizer (outside air), economizer (water side), freezer (lab grade), heat pump (water

source), heat recovery improvements, HVAC retro-commissioning, LED sign lighting, server (virtualization), and water heater controls.

- Emerging technology measures that are near commercialization or that may become cost-effective within the next five years and can help bridge the gap in declining potential from current technologies:

  Residential sector

  - Induction cooktop, 2-element
  - Induction cooktop, 4-element
  - Vinyl siding, insulated
  - Structural insulated panels panel framing
  - Networked automation controls
  - Smart electrical panel
  - Smart outlets
  - Indirect evaporative cooler, 2.5 tons
  - Indirect evaporative cooler, 1.0 tons
  - Clothes dryer with heat recovery
  - Advanced air-to-water heat pump

  Commercial sector

  - Induction cooktop
  - Commercial/industrial carbon dioxide heat pumps
  - Central heat pump water heater with load controls
  - Aerofoil outfitted shelving
  - Advanced air-to-water heat pump
  - Web-enabled power monitoring for small- and medium-sized businesses
  - Food truck, efficient electric cooking
  - Low global warming potential freezers and refrigerator cases

Cadmus only included the Council and RTF measures applicable to sectors and market segments in City Light's service territory. For example, we did not characterize measures for the agriculture sector or the residential manufactured home segment, as these sectors are a small fraction of City Light's customer mix. We added measures if the RTF workbooks were not included in the Council's 2021 Power Plan or if the RTF workbooks have been updated since the Council's 2021 Power Plan workbooks.

Cadmus classified the electric energy efficiency measures applicable to City Light's service territories into two categories:

- **High-efficiency equipment (lost opportunity) measures** directly affecting end-use equipment (such as high-efficiency domestic water heaters), which follow normal replacement patterns based on expected lifetimes.
- **Non-equipment (retrofit) measures** affecting UEC without replacing end-use equipment (such as insulation). Such measures do not include timing constraints from equipment turnover—except for new construction—and should be considered discretionary, given that savings can be acquired at any point over the planning horizon.

Each measure type had several relevant inputs:

- **Equipment and non-equipment measures**
  - Energy savings: average annual savings attributable to installing the measure, in absolute and/or percentage terms

  - Equipment cost: full or incremental, depending on the nature of the measure and the application
  - Labor cost: the expense of installing the measure, accounting for differences in labor rates by region and other variables
  - Technical feasibility: the percentage of buildings where customers can install this measure, accounting for physical constraints
  - Measure life: the expected life of the measure equipment
- **Non-equipment measures only**
  - Percentage incomplete: the percentage of buildings where customers have not installed the measure but where its installation is technically feasible; this equals 1.0 minus the measure's current saturation
  - Measure competition: for mutually exclusive measures, accounting for the percentage of each measure likely installed to avoid double-counting savings
  - Measure interaction: accounting for end-use interactions (for example, a decrease in lighting power density causing heating loads to increase)

Among various sources, Cadmus primarily derived these inputs from four resources:

- NEEA CBSA IV, including Puget Sound Energy's oversample, where applicable[38]
- NEEA RBSA III with City Light's oversample
- The Council's 2021 Power Plan conservation supply curve workbooks
- The RTF UES measure workbooks

Cadmus reviewed a variety of sources for many equipment and non-equipment inputs. To determine which source to use for this study, Cadmus developed a hierarchy for costs and savings (also shown in Table 6-2):

1. RTF UES measure workbooks, where a more recent version is available than what the Council's 2021 Power Plan used
2. The Council's 2021 Power Plan conservation supply curve workbooks
3. Secondary sources, such as American Council for an Energy-Efficient Economy work papers, Simple Energy and Enthalpy Model building simulations, or various technical reference manuals

Cadmus also developed a hierarchy to determine the source for various applicability factors, such as the technical feasibility and the percentage incomplete. This hierarchy differed slightly for residential and commercial measure lists.

[38] City Light did not have an oversample conducted as part of CBSA IV. To better represent the Seattle area (compared with regional values), Cadmus incorporated Puget Sound Energy's CBSA oversample data.

RBSA Methodology

For residential estimates, Cadmus relied on City Light sites in NEEA's RBSA III (2022). If City Light's subset did not have at least five observations to use for analysis, then we based the analysis on the RBSA Urban Washington building subset. For instances where the data from the 2022 RBSA was not sufficient, Cadmus used historical RBSA II values for City Light's oversample. If we could not calculate applicability factors from NEEA's RBSA, we used applicability factors from the Council's 2021 Power Plan conservation supply curve workbooks. The resulting estimates reflect averages for the Northwest region and were not necessarily specific to City Light's service territory.

CBSA Methodology

For the commercial sector, Cadmus first used the subset of City Light's customers, including Puget Sound Energy's oversample, in NEEA's CBSA IV (2019).

The original CBSA IV weights were constructed to represent the Council's regional building counts. To represent City Light's building counts, Cadmus re-analyzed the CBSA weights based on City Light's totals of building square footage for specific building types. We only included the CBSA data and Puget Sound Energy's oversample in the Council's defined climate heating zone 1. While reviewing whether to only include urban sites in these analyses, Cadmus found that for the heating zone 1 subset, 92% of the buildings were urban, and 95% of the building square footage was urban. Due to the limited rural impact for all sites in the heating zone 1 subset, Cadmus did not make any further adjustments in the overall analysis.

After finalizing City Light's CBSA weights to match City Light's total building square footage by building type, we used these weights for all CBSA analyses in this study. Where respondent counts were sufficient for specific CBSA analyses, we used building type names as defined by the Council to produce more granular results.

If NEEA's CBSA did not have sufficient data to estimate a particular value (for example, applicability factors) for a given measure, Cadmus relied on factors from the Council's 2021 Power Plan conservation supply curve workbooks.

Measure Data Sources

Table 6-2 lists the primary sources referenced in the study by data input.

Table 6-2. Key Measure Data Sources

Data	Residential Source	Commercial Source	Industrial Source
Energy Savings	City Light's recent evaluation data for ductless heat pumps and heat pump water heaters; 2021 Power Plan supply curve workbooks; RTF; Cadmus research	2021 Power Plan supply curve workbooks; RTF; Cadmus research	2021 Power Plan supply curve workbooks; Cadmus research
Equipment and Labor Costs	2021 Power Plan supply curve workbooks; RTF; Cadmus research	2021 Power Plan supply curve workbooks; RTF; Cadmus research	2021 Power Plan supply curve workbooks; Cadmus research
Measure Life	2021 Power Plan supply curve workbooks; RTF; Cadmus research	2021 Power Plan supply curve workbooks; RTF; Cadmus research	2021 Power Plan supply curve workbooks; Cadmus research
Technical Feasibility	NEEA RBSA; Cadmus research	NEEA CBSA; Cadmus research	Cadmus research; Council industrial data
Percentage Incomplete	NEEA RBSA; City Lights program accomplishments; Cadmus research	NEEA CBSA; City Lights program accomplishments; Cadmus research	Cadmus research; Council industrial data
Measure Interaction	2021 Power Plan supply curve workbooks; RTF; Cadmus research	2021 Power Plan supply curve workbooks; RTF; Cadmus research	Cadmus research

6.1.4. Incorporating Federal Standards and State and Local Codes and Policies

Cadmus' assessment accounted for changes in codes, standards, and policies over the planning horizon. These changes not only affected customers' energy-consumption patterns and behaviors, but they also revealed which energy efficiency measures would continue to produce savings over minimum requirements. We captured current efficiency requirements, including those enacted but not yet in effect as of November 2024.

Cadmus reviewed all local and state codes, federal standards, and local and state policy initiatives that could impact this potential study and that were on the books as of November 2024. For the residential and commercial sectors, the potential study considered the local energy codes (2021 Seattle Energy Code with amendments, 2021 Washington State Energy Code, and 2021 RCW) as well as current and pending federal standards. We also assessed if, how, and when Washington State and Seattle City legislation impacted the potential study. This legislation included Seattle's Energy Benchmarking Program (SMC 22.920), Washington's Clean Buildings bill (E3S House Bill 1257), House Bill 1589 and Initiative 2066, and the CETA (194-40-330).

Cadmus reviewed many codes, standards, and policy initiatives:

- **Federal standards.** All technology standards for heating and cooling equipment, lighting, water heating, motors, and other appliances not covered in or superseded by state and local codes.[39]
- **2021 Seattle Energy Code.** The code requires all new commercial buildings and large multifamily buildings above three stories to use the most efficient technologies for space and water heating, which are *de facto* electric heat pumps in most cases. These latest updates to the energy code also apply to HVAC and water heating equipment replacements in existing buildings; however, there are several exemptions such that the impact of this provision on load forecasts is projected to be negligible (regarding existing buildings). All other code provisions took effect on March 15, 2024.[40]
- **2021 Washington State Energy Code.** The code provides requirements for residential and commercial new construction buildings, except in cases where the 2021 Seattle Energy Code supersedes the Washington code. The effective date was March 15, 2024.[41]
- **Seattle's Energy Benchmarking Program (SMC 22.920).** This program requires owners of commercial and multifamily buildings (20,000 square feet or larger) to track and report energy performance annually to the City of Seattle. Though in effect since 2016, full enforcement of the program began on January 1, 2021.[42]
- **2021 RCW 19.260.040.** These codes set minimum efficiency standards for specific types of products, including computers, monitors, showerheads, faucets, residential ventilation fans, general service lamps, air compressors, uninterruptible power supplies, water coolers, portable ACs, high color rendering index fluorescent lamps, commercial dishwashers, steam cookers, hot food holding cabinets, and fryers. The effective dates varied by product, with the 2021 RCW signed on July 28, 2019.[43]

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[39] Office of Energy Efficiency & Renewable Energy. Accessed November 2024. "Standards and Test Procedures." https://www.energy.gov/eere/buildings/standards-and-test-procedures

[40] City of Seattle, Department of Construction & Inspections. February 1, 2021. "Energy Code - Overview" https://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/energy-code

[41] Washington State Building Code Council. Accessed November 2024. https://sbcc.wa.gov/state-codes-regulations-guidelines/state-building-code/energy-code

[42] City of Seattle, Office of Sustainability and Environment. Accessed June 2021. "Energy Benchmarking." https://www.seattle.gov/environment/climate-change/buildings-and-energy/energy-benchmarking#:~:text=Seattle's%20Energy%20Benchmarking%20Program%20(SMC,to%20the%20City%20of%20Seattle.&text=Compare%20your%20building's%20energy%20performance,started%20saving%20energy%20and%20money.

[43] Washington State Legislature. Revised Code of Washington. December 7, 2020. "RCW 19.260.050 Limit on Sale or Installation of Products Required to Meet or Exceed Standards in RCW 19.260.040." https://app.leg.wa.gov/rcw/default.aspx?cite=19.260.050

- **Clean Buildings Bill (E3S House Bill 1257).** The law requires the Washington State Department of Commerce to develop and implement an energy performance standard for the state's existing buildings, especially large commercial buildings (based on building square feet), and provide incentives to encourage efficiency improvements. The effective date was July 28, 2019, with the building compliance schedule set to begin on June 1, 2026. Early adopter incentive applications began in July 2021.[44]
- **CETA (194-40-330).** This act applies to all electric utilities serving retail customers in Washington and sets specific milestones to reach the required 100% clean electricity supply. The first milestone was in 2022, when each utility was required to have prepared and published a CEIP with its own four-year targets for energy efficiency, demand response, and renewable energy.[45]
- **Shoreline's Ordinance No. 948.**[46] This ordinance promotes energy efficiency and the decarbonization of commercial and large multifamily buildings like the Seattle Building Energy Code.
- **House Bill 1589 and Initiative 2066.** House Bill 1589 requires Puget Sound Energy to accelerate the transition away for natural gas impacting City Light's overlapping service territory. In November of 2024, voters of Initiative 2066 overturned parts of the bill. Then in March of 2025, in Washington's Superior Court found the Initiative 2066 unconstitutional. This initiative continues to be challenged in the courts. While this DSPMA did not directly model the impact of this house bill, in part due the uncertainty during the development of this study, City Light does capture electrification within the load forecast.

Applying Federal Standards

Cadmus explicitly accounted for federal codes and standards within the DSMPA modeling. For the residential sector, these included appliance, HVAC, and water heating standards. For the commercial sector, these included appliance, HVAC, lighting, motor, and water heating standards. Figure 6-3 provides a comprehensive list of equipment standards considered in the study. Bars indicate the year in which a new equipment standard was or will be enacted. It is important to note that Cadmus did not attempt to predict how energy standards might change in the future. At the time we finalized the measure list for this study, there were no federal appliance standards pending after 2023. Cadmus completed this study's assessment of federal standard in November of 2024. In February 2025, the current administration have

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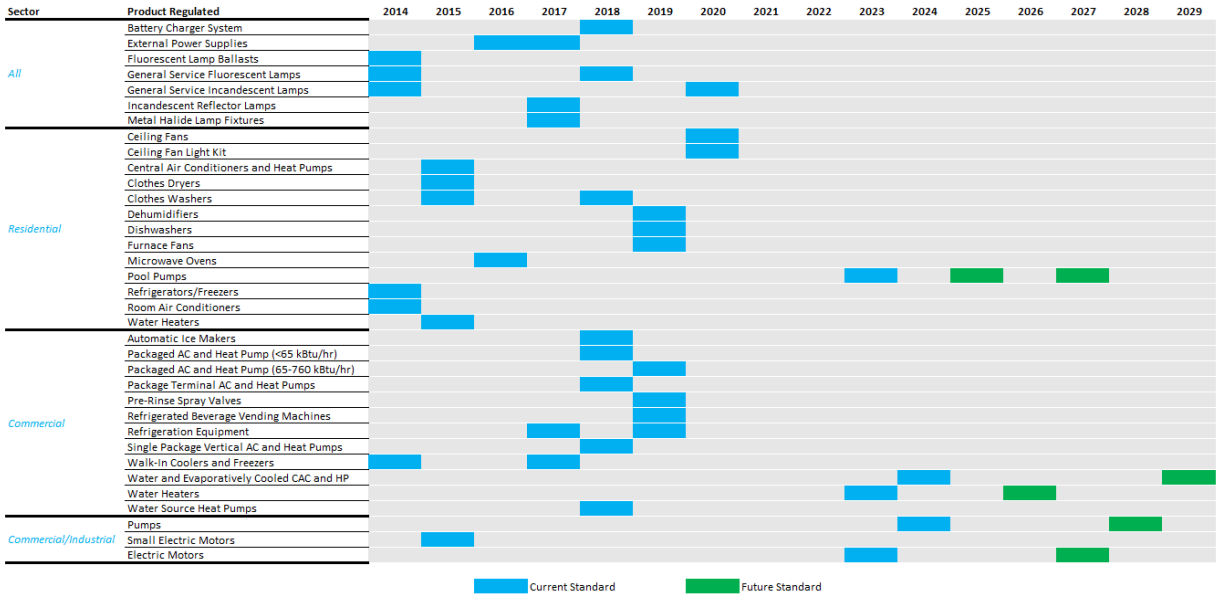
[44] Washington State Department of Commerce. Accessed June 2023. "Clean Buildings." https://www.commerce.wa.gov/growing-the-economy/energy/buildings/

[45] Washington State Department of Commerce. Accessed June 2023. "Clean Energy Transformation Act (CETA)." https://www.commerce.wa.gov/growing-the-economy/energy/ceta/

[46] Ordinance No. 948 "Ordinance of the City of Shoreline, Washington Amending Chapter 15.05, Construction and Building Codes, of the Shoreline Municipal Code, to Provide Amendments to the Washington State Energy Code – Commercial, as Adopted by the State of Washington" took effect on July 1, 2022.

put a hold or potentially rolling back energy efficiency standards. This study kept the known standards in place and did not assume any roll backs in efficiency standards.

Figure 6-3. Equipment Standards Considered (as of Nov. 2024)



Treatment of State and Local Codes and Initiatives

Cadmus identified each type of code (local and state) and initiative (local and state) that would impact measures in the DSMPA. Cadmus sorted each impact into three main categories:

Measure applicability or savings adjustment. Cadmus adjusted measure characterization inputs to account for local and state energy codes (2021 Washington State Energy Code and 2021 RCW 19.27A.160). Where appropriate, we revised measure applicability, savings, and costs to reflect the impact of the code. For example, we removed measures entirely or over time (applicability set to zero) if code baselines were more efficient than the baseline data found in the RTF or Council workbooks (such as for showerheads, fryers, steam cookers, and new construction homes). Notably, the Washington State Energy Code (RCW 19.27A.160) states "…residential and nonresidential construction permitted under the 2031 state energy code must achieve a 70% reduction in annual net energy consumption, using the adopted 2006 Washington state energy code as a baseline." For this purpose, Cadmus adjusted the new construction load forecast periodically so that by 2031, the new construction load would meet the requirement. RCW 19.27A.160 also mandates that the Council report its progress every three years, so we incremented the code adjustment every three years until 2031 to account for future state codes that meet the requirement of RCW 19.27A.160. Cadmus did not predict exactly how each end use would be impacted; rather, we opted for a general reduction to building energy use for new construction across all end uses. Much of the net energy reduction is expected to be achieved through electrification of thermal end uses, an expectation which this study does not fully reflect. That said, we partially capture this expectation by modeling increasing heat pump saturation (and decreasing fossil fuel saturations) in

accordance with the moderate electrification scenario from the 2022 EPRI study. We also accounted for these adjustments in the baseline forecast, as mentioned in the *City Light Forecast Adjustments* section.

Equipment saturation adjustment. Cadmus adjusted equipment saturations by year to account for the 2021 Seattle Energy Code (this code largely matches the 2021 Washington State Energy Code). At the time of this study, Cadmus used the draft 2021 Seattle Energy Code version (viewed September/October of 2024). In addition, Cadmus adjusted the space heating equipment saturations for new construction commercial and large multifamily buildings to align with this code (such as for ductless heat pumps and air-source heat pumps). We also accounted for these adjustments in the baseline forecast, as mentioned in the *City Light Forecast Adjustments* section.

Adoption ramp rate adjustment. Cadmus reviewed and adjusted the prescribed ramp rates in the Council's 2021 Power Plan, where necessary to better reflect the expected adoption timelines of impacted measure groups. Changing the ramp rates (in most cases) will not impact the cumulative potential; rather, it changes the timing of when the potential occurs. For measures currently included in City Light's residential programs, Cadmus increased the Council's assigned ramp rates by one tier—for example, adjusting a slow ramp to a medium ramp—to reflect more aggressive uptake..

In the commercial sector, Cadmus worked with City Light to determine the appropriate Council ramp rates so that City Light's program measures better align with historical program acquisition as well as with local and state policies promoting energy efficiency. The intent behind shifting the ramp rates is to account for initiatives and policies that promote energy efficiency through customer incentives, penalties, or feedback on energy use, such as Seattle's Energy Benchmarking Program, Building Energy Performance Standards (BEPS) and the WA State Clean Building Performance Standard (CBPS).[47] City Light can claim energy impacts through these initiatives and policies; therefore, removing measures or adjusting baselines may not be appropriate within the context of the DSMPA. These initiatives and policies encourage existing customers to conserve energy, thereby accelerating the rate of the adoption of energy efficiency through energy reduction requirements. The 2026 DMSPA updating these ramp rate acceleration adjustments (from the prior DSMPA) to account for limited historical programmatic adoption from these initiatives, the uncertainty in the commercial market, and the uncertainty in non-compliance (prior study assumed 100% compliance). Cadmus took a more targeted approach. Rather than adjusting ramp rates across the entire sector, Cadmus worked with City Light to differentiate by building type. As a result, we increased ramp rates for data center and lodging measures using the same tiered approach as in the residential sector. Ramp rates for other commercial building types remained aligned with the original 2021 Power Plan assignments. Changing the ramp rates (in most cases) will not impact the cumulative potential; rather, it changes the timing of when the potential occurs.

In some cases no adjustment was needed (already accounted for in the existing data). For example, the Council's 2021 Power Plan workbooks and Cadmus' equipment characterization may have already accounted for the federal standards and, in some cases, the 2021 RCW. Therefore, Cadmus did not make additional adjustments those measures.

[47] This includes CETA in setting statewide goals that require City Light to establish performance targets.

Additional Codes and Standards Considerations

Cadmus identified three considerations around codes and standards that impact the characterization of this potential study.

First, starting with residential lighting, Cadmus reviewed the codes and standards as well as assessed the current saturation of LED lighting in the residential sector. The Council's 2021 Power Plan and RTF residential lighting workbooks account for the Washington State Code requirement (House Bill 1444) of the Energy Independence and Security Act backstop provision. Originally adopted from the federal standard, the Act's backstop provision requires higher-efficiency technologies (45 lumens per watt or better). The savings in the most recent RTF lighting workbook use an LED baseline (for Washington only).

After reviewing the Council and RTF workbooks, Cadmus concluded that the 2026 DSMPA should use an LED baseline. Currently, there are no lighting technologies on the market that meet the 45 lumens per watt requirement other than CFLs or LEDs. Furthermore, major manufacturers have phased out the production of CFLs. The market is rapidly adopting LEDs (according to the RBSA saturations and Council and RTF projections), which are becoming the *de facto* baseline. Considering that LEDs are the only viable technology that meets the Washington code, Cadmus used LEDs as the baseline for all non-highly impacted applications but for highly impacted homes assumed a small amount of available potential remaining. This adjustment to the lighting loads is effectively accounted for in City Light's baseline forecast and the 2026 DSMPA.

Secondly, the 2021 Washington State Energy Code includes new construction prescriptive and performance path requirement options for both residential and commercial. The DSMPA characterizes efficiency improvements on a measure basis that aligns with the prescriptive path. The performance path includes the HVAC total system performance ratio requirement, defined as the ratio of the sum of a building's annual heating and cooling load compared with the sum of the annual carbon emissions from the energy consumption of the building's HVAC systems. The variability in the HVAC total system performance ratio from building to building cannot be easily captured in the DSMPA; so, for this study, Cadmus followed the prescriptive requirements in the 2021 Washington State Energy Code.

As part of the 2026 DSMPA, Cadmus developed a codes and standards forecast for City Light to understand the impact of naturally occurring savings derived from codes and standards over the study timeframe. To quantify expected savings from naturally occurring potential, Cadmus produced two baseline forecasts—one with naturally occurring potential embedded into the forecast, and one without. Our approach essentially turned off how we model turnover and changes in codes and standards to determine an alternative forecast without naturally occurring savings. The net difference between these two forecasts results in the naturally occurring potential.

Our analysis accounts for naturally occurring conservation in two ways:

- Cadmus assumes gradual increases in efficiency due to retiring older equipment in existing buildings and homes and replacing them with units meeting or exceeding minimum standards at the time of replacement (e.g., stock turnover). For example, the existing single-family residential building construction stock includes several central air conditioning units that do not meet

current minimum federal efficiency standards. The baseline forecast assumes gradual replacement with units that meet those standards.

- Cadmus accounts for pending improvements to equipment efficiency standards that will take effect during the planning horizon. As well as accounting for future changes in state and local codes for new construction buildings.[48]
  - **Federal standards.** All technology standards for heating and cooling equipment, lighting, water heating, motors, and other appliances not covered in or superseded by state and local codes. These federal standards include 2028 cooking range, 2026 Room AC, 2028 dryer, 2029 freezer and refrigerator, and 2029 heat pump water heater standards.
  - **2021 Seattle Energy Code (SEC).** The code regulates the energy-use features of new commercial and large multifamily buildings above three stories, including building envelope, heating and cooling, water heating, lighting, metering, plug load controls, transformers and motors.
  - **2021 Washington State Energy Code (WSEC).** The code provides requirements for residential and commercial new construction buildings, except in cases where the 2021 Seattle Energy Code supersedes the Washington code.[49] Tightening new construction codes over time through 2031 (RCW 19.27A.160) impacts the load forecast as a reduction in new construction load forecast.
  - **Shoreline's Ordinance 948.** This ordinance promotes energy efficiency and the decarbonization of commercial and large multifamily buildings like the Seattle Building Energy Code.

To produce a codes and standards forecast, Cadmus developed an alignment between the load forecast and WSEC (RCW 19.27A.160) which requires "… residential and nonresidential construction permitted under the 2031 state energy code achieve a 70% reduction in annual net energy consumption, using the adopted 2006 Washington state energy code as a baseline." Cadmus adjusted the new construction load forecast annually so that by 2031 the new construction load meets the requirement. According to RCW 19.27A.160, "The Council shall report its progress … every three years…".[50] Since the length of code cycle is three years, Cadmus changed the magnitude of impact for every three years until 2031 accounting for future state codes that meet the requirement of RCW 19.27A.160.

Additionally, Cadmus provided alignment between the load forecast and 2021 SEC over WSEC, Cadmus used the information from "Seattle Energy Code Savings and Attribution Analysis" report prepared for City

[48] City/State Initiatives such as the Seattle's Energy Benchmarking program, the Clean Buildings bill, and CETA are not considered energy codes as utilities can still claim savings but will inherently speed up the rate of the adoption of energy efficiency through energy reduction requirements.

[49] Washington State Building Code Council, https://sbcc.wa.gov/

[50] The Council referred to in RCW 19.27A.160 is the Washington State Building Code Council.

Light by Ecotopia and A2 Efficiency and adjusted the equipment saturations in new construction multifamily-mid rise and multifamily-high rise buildings.

6.1.5. Adapting Measures from the RTF and 2021 Power Plan

To ensure consistency with methodologies employed by the Council and to fulfill requirements of WAC 194-37-070, Cadmus relied on ECM workbooks developed by the RTF and the Council to estimate measure savings, costs, and interactions. In adapting these ECMs for this study, we adhered to two principles:

Deemed ECM savings in RTF or Council workbooks must be preserved: City Light relies on deemed savings estimates provided by the Bonneville Power Administration (BPA) that largely remain consistent with savings in RTF workbooks in demonstrating compliance with I-937 targets. Therefore, Cadmus sought to preserve these deemed savings in the potential study to avoid possible inconsistencies among estimates of potential, targets, and reported savings.

Use inputs specific to City Light's service territory: Some Council and RTF workbooks relied on regional estimates of saturations, equipment characteristics, and building characteristics derived from the RBSA and CBSA. Cadmus updated regional inputs with estimates calculated from City Light's oversample of CBSA and RBSA or from estimates affecting the broader Puget Sound area. This approach preserved consistency with Council methodologies while incorporating Seattle-specific data.

Cadmus' approach to adapting the Council's and RTF's workbooks varied by sector, as described in the following sections.

Residential and Commercial

Cadmus reviewed each residential Council workbook and extracted savings, costs, and measure lives for inclusion in this study. We largely used applicability factors (such as the current saturation of an ECM) from City Light's oversample of RBSA, adjusting them for City Light's program accomplishments. If we could not develop a City Light–specific applicability factor from the RBSA, we used the Council's regional value.

In addition to extracting key measure characteristics, Cadmus identified each measure as an equipment replacement measure or a retrofit measure. There are two key distinctions between these two types of measures:

Equipment replacement (i.e., lost opportunity): We calculated savings for equipment replacement measures as the difference between measure consumption and baseline consumption. For instance, for the heat pump water heater measure, Cadmus estimated the baseline consumption of an average market water heater and used the Council's deemed savings to calculate the consumption for a heat pump water heater. This approach preserved the deemed savings in the Council's workbooks.

Retrofit (i.e., discretionary): We calculated savings for retrofit measures in percentage terms relative to the baseline UEC but reflected the Council's and RTF's deemed values. For instance, if the Council's deemed savings were 1,000 kWh per home for a given retrofit measure and Cadmus estimated the baseline consumption for the applicable end use as 10,000 kWh, relative savings for the measure were

10%. We did not apply relative savings from the Council's workbooks to baseline UEC because doing so would lead to per-unit estimates that differed from Council and RTF values.

Cadmus also accounted for interactive effects presented in Council and RTF workbooks. For instance, the Council estimated water heating, heating, and cooling savings for residential heat pump water heaters, with the heating and cooling savings as the interactive savings. Because the installation of a heat pump water heater represents a single installation, Cadmus employed a stock accounting model, which combined interactive and primary end-use effects into one savings estimate. Though we recognize that this approach could lead to overstating or understating savings in an end use, in aggregate—across end-uses—savings matched the Council's deemed values.

Cadmus generally followed the same approach with the commercial sector; however, because of the mixture of lighting measures considered in the Council's 2021 Power Plan, we chose to model all commercial lighting measures as retrofits and none as equipment replacements. Savings and costs for these measures reflected this decision.

Industrial

Cadmus adapted measures from the Council's Industrial_Tool_2021P_v08 and IND_AllMeasures_2021P_V8 workbooks for inclusion in this study for four key industrial measure inputs:

- Measure savings (expressed as end-use percentage savings)
- Measure costs (expressed in dollars per kilowatt-hour saved)
- Measure lifetimes (expressed in years)
- Measure applicability (percentage)

Cadmus mapped each Council industry type to industries found in City Light's service territory: these included foundries, miscellaneous manufacturing, stone and glass, transportation equipment manufacturing, other food, frozen food, water, and wastewater. We identified applicable end uses using the Council's assumed distribution of UEC in each industry. Table 6-3 shows the distribution of end-use consumption and the list of industries considered in this study.

Table 6-3. Distribution of End Use Consumption by Segment

Segment	Process Air Comp	Lighting	Fans	Pumps	Motors Other	Process Other	Process Heat	HVAC	Other	Process Electro-Chemical	Process Refrigeration
Foundries	7%	9%	10%	18%	15%	0%	21%	9%	5%	6%	0%
Frozen Food	4%	8%	4%	4%	12%	0%	4%	7%	1%	3%	53%
Misc. Manufacturing	7%	11%	7%	10%	16%	0%	11%	17%	9%	6%	6%
Other Food	12%	4%	2%	8%	11%	0%	0%	9%	8%	2%	44%
Transportation Equipment	6%	20%	6%	8%	11%	0%	0%	28%	7%	14%	0%
Wastewater	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%
Water	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%
Stone and Glass	8%	5%	7%	13%	21%	6%	20%	6%	3%	2%	8%

To incorporate broader secondary data, Cadmus aggregated some Council end uses into broader end uses. Table 6-4 shows the mapping of Council end uses to Cadmus end uses.

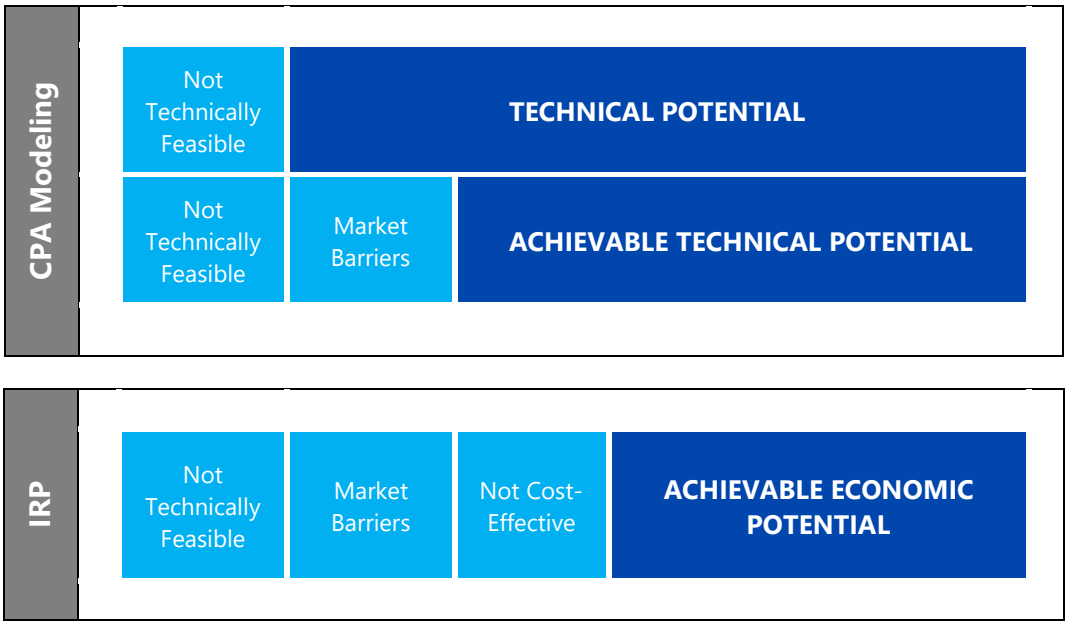
Table 6-4. Council and Cadmus End Uses

Council End Use	Cadmus End Use
Pumps	Pumps
Fans and Blowers	Fans
Compressed Air	Process Air Compressor
Material Handling	Process Electrochemical
Material Processing	Motors Other
Low Temp Refer	Process Refrigeration
Med Temp Refer	Process Refrigeration
Pollution Control	Other
Other Motors	Motors Other
Drying and Curing	Process Heat
Heat Treating	Process Heat
Heating	Process Heat
Melting and Casting	Process Heat
HVAC	HVAC
Lighting	Lighting
Other	Other

6.2. Estimating Conservation Potential

As discussed, Cadmus estimated two types of conservation potential, and City Light determined a third potential—achievable economic—through the IRP's optimization modeling, as shown in Figure 6-4.

Figure 6-4. Types of Conservation Potential



Technical potential is the total amount of energy efficiency that could be achieved within City Light's service territory, assuming that all feasible resource opportunities can be captured regardless of cost and market barriers such as customer willingness to adopt. The potential is only limited by physical and operational constraints.

Achievable technical potential is the portion of technical potential assumed to be achievable during the study's forecast, regardless of the acquisition mechanism. For example, savings may be acquired through utility programs, improved codes and standards, and market transformation. The achievable technical potential considers market barriers such as customer awareness, willingness to adopt measures, and historical program participation. However, it is not constrained by cost-effectiveness considerations.

Achievable economic potential is the portion of achievable technical potential determined to be cost-effective by the IRP's optimization modeling, in which either bundles or individual energy efficiency measures are selected based on cost, savings, and timing. The cumulative potential for these selected bundles constitutes achievable economic potential.

The following sections describe Cadmus' approach to estimating technical and achievable technical potential as well as to developing the conservation IRP inputs. The last section of this chapter explains the approach City Light used to estimate achievable economic potential.

6.2.1. Technical Potential

Technical potential includes all technically feasible ECMs, regardless of costs or market barriers and is divided into two classes: discretionary (retrofit) and lost opportunity (new construction and replacement of equipment on burnout).

Another important aspect in assessing technical potential is, wherever possible, to assume installations of the highest-efficiency equipment that is commercially available. For example, this study examined central air conditioners of varying efficiencies in residential applications, including SEER 20 and SEER 18 air conditioners. In assessing technical potential, Cadmus assumed that, as equipment fails or new homes are built, customers will install SEER 20 air conditioners wherever technically feasible, regardless of cost. Where applicable, we assumed SEER 18 would be installed in homes where the SEER 20 equipment was not feasible. Cadmus treated competing non-equipment measures in the same way, assuming installation of the highest-saving measures where technically feasible.

In estimating technical potential, it is inappropriate to merely sum up savings from individual measure installations. Significant interactive effects can result from the installation of complementary measures. For example, upgrading a heat pump in a home where insulation measures have already been installed can produce less savings than upgrades in an uninsulated home. Cadmus' analysis of technical potential accounts for two types of interactions:

Interactions between equipment and non-equipment measures: As equipment burns out, technical potential assumes it will be replaced with higher-efficiency equipment, reducing average consumption across all customers. Reduced consumption causes non-equipment measures to save less than they would if the equipment had remained at a constant average efficiency. Similarly, savings realized by replacing equipment decrease upon installation of non-equipment measures.

Interactions between non-equipment measures: Two non-equipment measures applying to the same end use may not affect each other's savings. For example, installing a low-flow showerhead does not affect savings realized from installing a faucet aerator. Insulating hot water pipes, however, causes the water heater to operate more efficiently, thus reducing savings from the water heater. Cadmus accounted for such interactions by stacking interactive measures, iteratively reducing baseline consumption as measures were installed, thus lowering savings from subsequent measures.

Although, theoretically, all retrofit opportunities in existing construction—often called discretionary resources—could be acquired in the study's first year, this would skew the potential for equipment measures and provide an inaccurate picture of measure-level potential. Therefore, Cadmus assumed that these opportunities would be realized in equal annual amounts over the 20-year planning horizon. By applying this assumption, natural equipment turnover rates, and other adjustments described above, we could estimate the annual incremental and cumulative potential by sector, segment, construction vintage, end use, and measure.

To estimate technical potential, Cadmus drew upon best-practice research methods and standard utility industry analytic techniques. Such techniques remained consistent with the conceptual approaches and methodologies used by other planning entities (such as by the Council in developing regional energy efficiency potential) and remained consistent with methods used in City Light's previous potential assessments.

6.2.2. Achievable Technical Potential

The achievable technical potential summarized in this report is a subset of the technical potential that accounts for market barriers such as customer awareness, market or infrastructure readiness, and product availability. However, the achievable technical potential does not account for certain real-world constraints that can affect program implementation. These can include factors such as contractor and work force limitations, behavioral inertia, or the influence of media or policy signals. Because the impacts of these barriers can be challenging to predict and quantify, they are not explicitly considered in the analysis.

To refine the technical potential into achievable technical potential, Cadmus followed the Council's approach and employed two factors:

Maximum achievability factors that represent the maximum proportion of technical potential that can be acquired over the study horizon.

Ramp rates that are annual percentage values representing the proportion of cumulative 20-year technical potential that can be acquired in a given year (discretionary measures) or the proportion of technical annual potential that can be acquired in a given year (lost opportunity measures).

Achievable technical potential combines technical potential and both the maximum achievability factor and the ramp rate percentage. Cadmus assigned maximum achievability factors to measures based on the Council's 2021 Power Plan supply curves. We based the measure-specific ramp rates on the ramp rates developed for the Council's 2021 Power Plan supply curves, accelerating them based on City Light's program accomplishments.

Cadmus applied measure ramp rates to lost opportunity and discretionary resources, although the interpretation and application of these rates differed for each class, as described below. We based measure ramp rates on the Council's 2021 Power Plan. As described above in *Treatment of State and Local Codes and Initiatives* section, Cadmus accounted for initiatives and legislation that promote energy efficiency through customer incentives or penalties (Seattle's Energy Benchmarking Program and Clean Buildings Bill, as well as the federal Inflation Reduction Act) by accelerating ramp rates for measures that are offered by City Light programs for residential buildings and certain commercial buildings. These initiatives and legislation (including CETA) are viewed as mechanisms to speed up the adoption of energy efficiency.

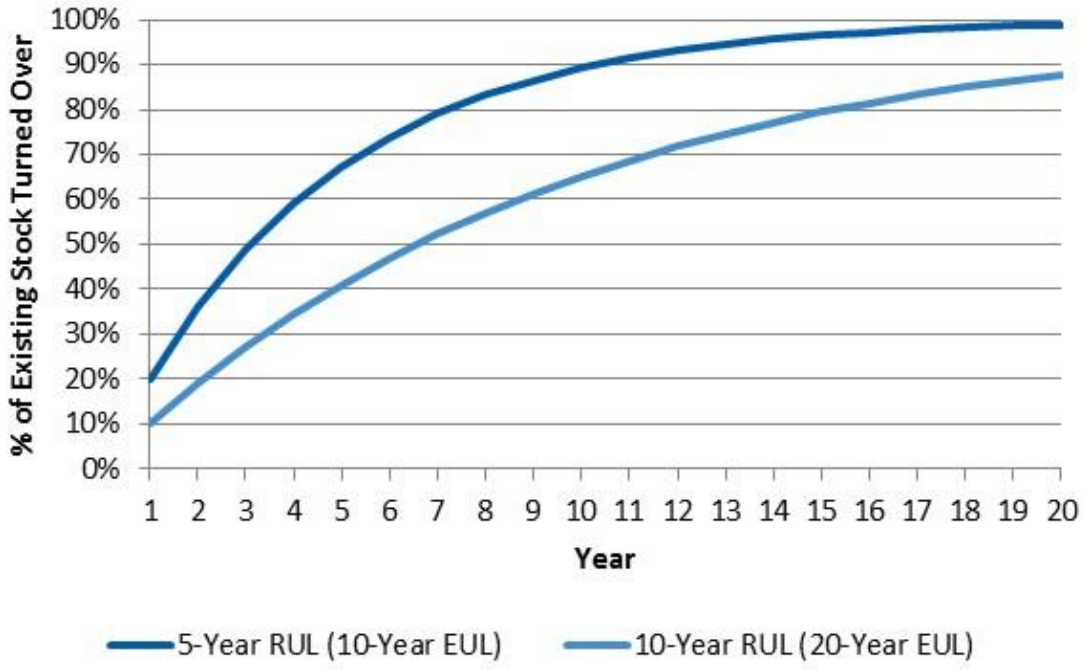
For measures not specified in the 2021 Power Plan, Cadmus assigned an appropriate ramp rate for that technology (for example, using the same ramp rate as similar measures in the 2021 Power Plan).

Lost Opportunity Resources

To quantify achievable technical potential for lost opportunity resources each year, Cadmus determined the potential technically available through new construction and natural equipment turnover. We used new construction rates from City Light's customer forecast and developed equipment turnover rates by dividing units into each year by the measure life. For example, if 100 units initially had a 10-year life, one-tenth of units (10) would be replaced. The following year, 90 units would remain, and one-tenth of these (9) would be replaced, and so on over the study timeline.

As the mix of existing equipment stock ages, the remaining useful life (RUL) would equal—on average—one-half of the EUL. The fraction of equipment turning over each year would be a function of this RUL; thus, technical potential for lost opportunity measures would have an annual shape before applying ramp rates, as shown in Figure 6-5. This same concept applied to new construction, where opportunities became available only during home or building construction. In addition to showing an annual shape, demonstrates that the amount of equipment turnover during the study period was a function of the RUL: the shorter the RUL, the higher the percentage of assumed equipment turnover.

Figure 6-5. Existing Equipment Turnover for Two Remaining Useful Life Scenarios



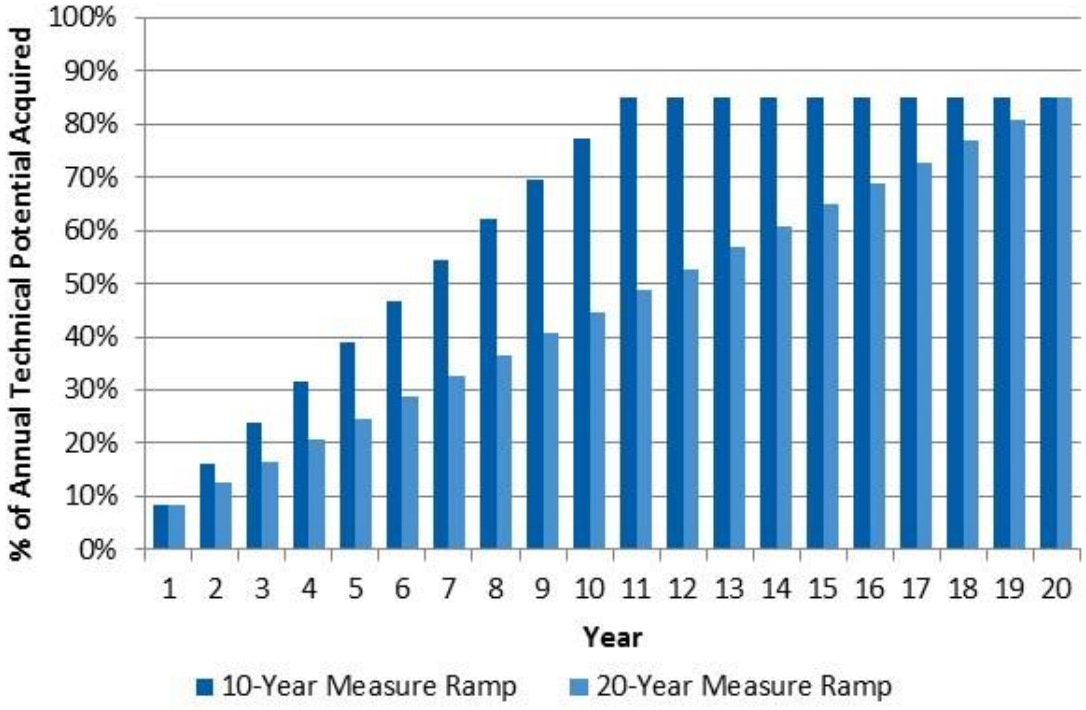
In addition to natural timing constraints of equipment turnover and new construction rates, Cadmus applied measure ramp rates to reflect other resource acquisition limitations (such as market availability over the study's horizon). For lost opportunity measures, we used the same ramp rates as those developed by the Council for its 2021 Power Plan supply curves. However, since the 2021 Power Plan ramp rates cover the 2022 to 2041 timeline, we first took these ramp rates beginning in 2024 and applied them for the first 18 years of the study (from 2026 to 2043), extrapolating them to extend from 2043 to the final year of the study (2045) following the last three years' trend. Figure 6-6 presents two examples of how Cadmus converted 2021 Power Plan ramp rates (example: Lost Opportunity 12 Medium and Lost Opportunity 5 Medium) for this study. The value (12 and 5 medium) represent the max pace of acquisition in conjunction with annual unit count. As such, 12 medium starts higher on the curve and has a faster pace than 5 medium.

Figure 6-6. 2021 Power Plan Ramp Rate Conversion for 2026 DSMPA

Year	LO12Med (Lost Opportunity 12 Medium)		LO5Med (Lost Opportunity 5 Medium)		
	2021 Power Plan	2026 DSMPA	2021 Power Plan	2026 DSMPA	
2022	10.9%	N/A	4.3%	N/A	
2023	21.9%	N/A	9.6%	N/A	
2024	32.8%	N/A	16.0%	N/A	
2025	43.7%	N/A	23.5%	N/A	
2026	54.7%	32.8%	32.1%	16.0%	Study Period
2027	64.5%	43.7%	42.1%	23.5%	
2028	72.4%	54.7%	53.1%	32.1%	
2029	78.7%	64.5%	64.3%	42.1%	
2030	83.7%	72.4%	74.8%	53.1%	
2031	87.8%	78.7%	83.9%	64.3%	
2032	91.0%	83.7%	90.9%	74.8%	
2033	93.6%	87.8%	95.8%	83.9%	
2034	95.6%	91.0%	98.7%	90.9%	
2035	97.3%	93.6%	100.0%	95.8%	
2036	98.6%	95.6%	100.0%	98.7%	
2037	99.7%	97.3%	100.0%	100.0%	
2038	99.7%	98.6%	100.0%	100.0%	
2039	99.7%	99.7%	100.0%	100.0%	
2040	99.7%	99.7%	100.0%	100.0%	
2041	99.7%	99.7%	100.0%	100.0%	
2042	N/A	99.7%	N/A	100.0%	
2043	N/A	99.7%	N/A	100.0%	
2044	N/A	99.7%	N/A	100.0%	
2045	N/A	99.7%	N/A	100.0%	

Figure 6-7 shows a measure with a maximum achievability of 85% that ramps up over 10 years (for example, XXYY measure). This measure would reach full market maturity—85% of annual technical potential—by the end of that period, while another measure (for example, AABB measure)might take 20 years to reach full maturity. Measures that Cadmus ramped over 20 years in this study included some newer technologies, such as heat pump dryers, dedicated outside air systems, and emerging technology measures as listed in the *6.1.3. Measure Characterization* section. On the other hand, measures that Cadmus ramped over a shorter time period included more mature and accepted technologies, such as ENERGY STAR computers and laptops, and ENERGY STAR office equipment.

Figure 6-7. Examples of Lost Opportunity Ramp Rates



To calculate annual achievable technical potential for each lost opportunity measure, Cadmus multiplied technical resource availability and measure ramping effects together, consistent with the Council's methodology. In the early years of the study horizon, a gap occurs between assumed acquisition and the maximum achievability. These lost resources can be considered unavailable until the measure's EUL elapses. Therefore, depending on EUL and measure ramp rate assumptions, some potential may be pushed beyond the 20th year, and the total lost opportunity achievable economic potential may be less than the maximum achievable percentage of the technical potential.

Figure 6-8 shows a case for a measure with a five-year RUL and 10-year EUL. The spike in achievable technical potential starting in Year 11—after the measure's EUL—results from the acquisition of opportunities missed at the beginning of the study period.

Figure 6-8. Example of Combined Effects of Resource Availability and Measure Ramping Based on 10-Year EUL

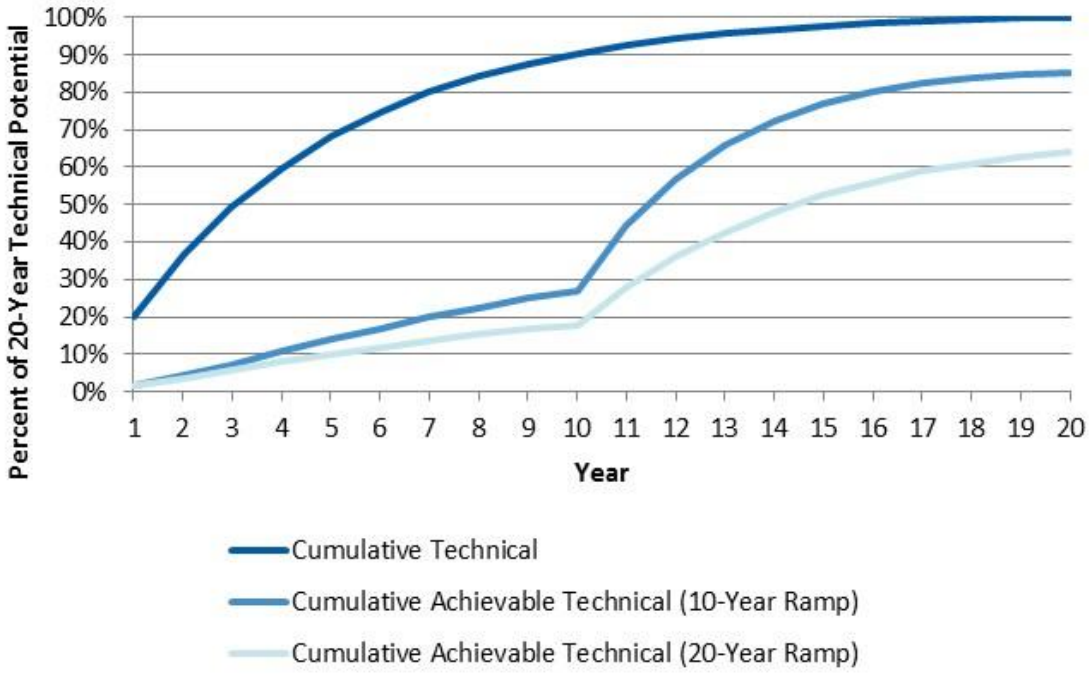


Table 6-5 illustrates this method, based on the same five-year RUL and 10-year EUL measures, with a 10-year ramp rate (the light blue line in Figure 6-8), assuming that 1,000 inefficient units would be in place by Year 1. In the first 10 years, lost opportunities would accumulate as the measure ramp-up rate caps the availability of high-efficiency equipment. Starting in the eleventh year, the opportunities lost during the previous 10 years become available again. Figure 6-8 also shows that this EUL and measure ramp rate combination results in 85% of technical potential being achieved by the end of the study period.

As described, amounts of achievable potential are a function of the EUL and measure ramp rate. The same 10-year EUL measure, on a slower 20-year ramp rate, would achieve less of its 20-year technical potential. Across all lost opportunity measures in this study, approximately 83% of technical potential appears achievable over the 20-year study period.

Table 6-5. Example of Lost Opportunity Treatment: 10-Year EUL Measure on a 10-Year Ramp

Study Year	Incremental Stock Equipment Turnover (Units)	Cumulative Stock Equipment Turnover (Units)	Measure Ramp Rate	Installed High-Efficiency Units	Missed Opportunities for Acquisition in Later Years (Units)	Missed Opportunities Acquired (Units)	Cumulative Units Installed	Cumulative Percentage of Technical Achieved
1	200	200	9%	17	180	0	17	9%
2	160	360	16%	26	130	0	43	12%
3	128	488	24%	30	92	0	73	15%
4	102	590	31%	32	65	0	106	18%
5	82	672	39%	32	44	0	138	20%
6	66	738	47%	31	29	0	168	23%
7	52	790	54%	29	19	0	197	25%
8	42	832	62%	26	11	0	223	27%
9	34	866	70%	23	6	0	246	28%
10	27	893	77%	21	2	0	267	30%
11	21	914	85%	18	0	153	438	48%
12	17	931	85%	15	0	110	563	60%
13	14	945	85%	12	0	78	653	69%
14	11	956	85%	9	0	55	717	75%
15	9	965	85%	7	0	38	762	79%
16	7	972	85%	6	0	25	793	82%
17	6	977	85%	5	0	16	814	83%
18	5	982	85%	4	0	10	828	84%
19	4	986	85%	3	0	5	836	85%
20	3	988	85%	2	0	2	840	85%

Discretionary Resources

Discretionary resources differ from lost opportunity resources due to their acquisition availability at any point within the study horizon. From a theoretical perspective, this suggests that all achievable technical potential for discretionary resources could be acquired in the study's first year. From a practical perspective, however, this outcome is realistically impossible due to infrastructure and budgetary constraints and customer considerations.

Furthermore, due to interactive effects between discretionary and lost opportunity resources, immediate acquisition distorts the potential for lost opportunity resources. For example, if one assumes that all homes are weatherized in the program's first year, potentially available high-efficiency HVAC equipment would decrease significantly (for example, a high-efficiency heat pump would save less energy in a fully weatherized home).

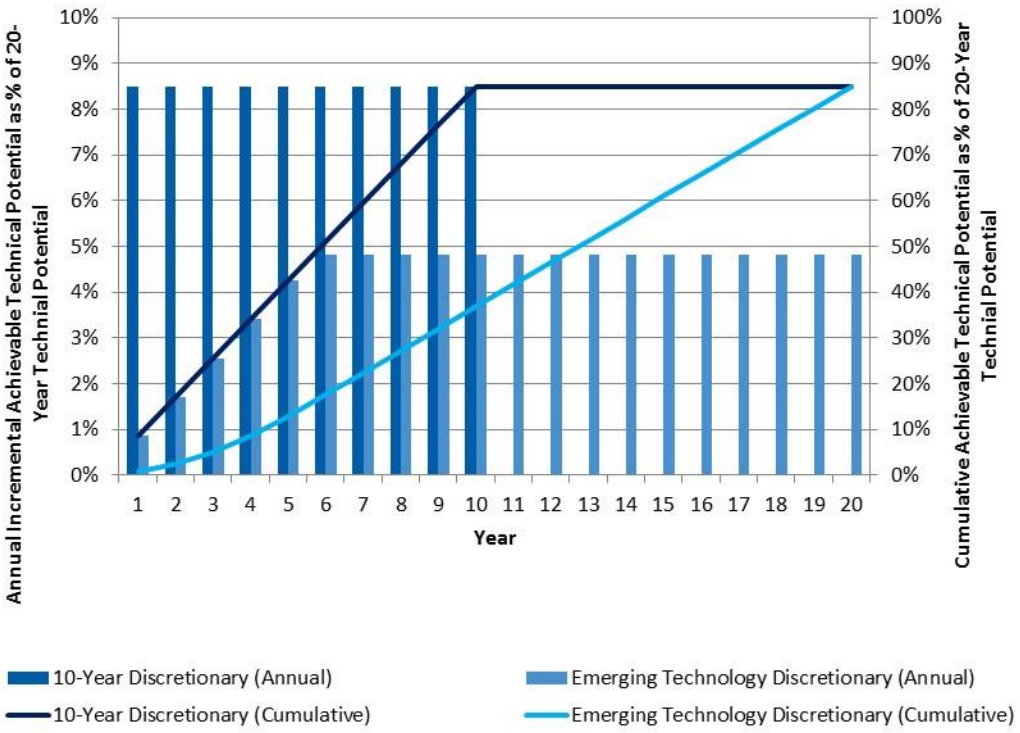
Consequently, Cadmus addressed discretionary resources via two steps:

1. Developed a 20-year estimate of discretionary resource technical potential, assuming that technically feasible measure installations would occur equally (at 5% of the total available) for each year of the study, avoiding the distortion of interactions between discretionary and lost opportunity resources previously described.
2. Overlayed a measure ramp rate to specify the timing of achievable discretionary resource potential, thus transforming a 20-year cumulative technical value into annual, incremental achievable technical values.

The discretionary measure ramp rates specify only the timing of resource acquisition and do not affect the portion of the 20-year technical potential achievable over the study period.

Figure 6-9 shows incremental (bars) and cumulative (lines) acquisitions for two different discretionary ramp rates. A measure with an 85% maximum achievability on the 10-year discretionary ramp rate reaches full maturity in 10 years, with market penetration increasing in equal increments each year. A measure with an 85% maximum achievability on the emerging technology discretionary ramp rate would take longer to reach full maturity, though also gaining 85% of the total technical potential. Ultimately, it would arrive at the same cumulative savings as the measure on the 10-year ramp rate.

Figure 6-9. Examples of Discretionary Measure Ramp Rates



7. Long-Term Resource Planning Model for DSMPA

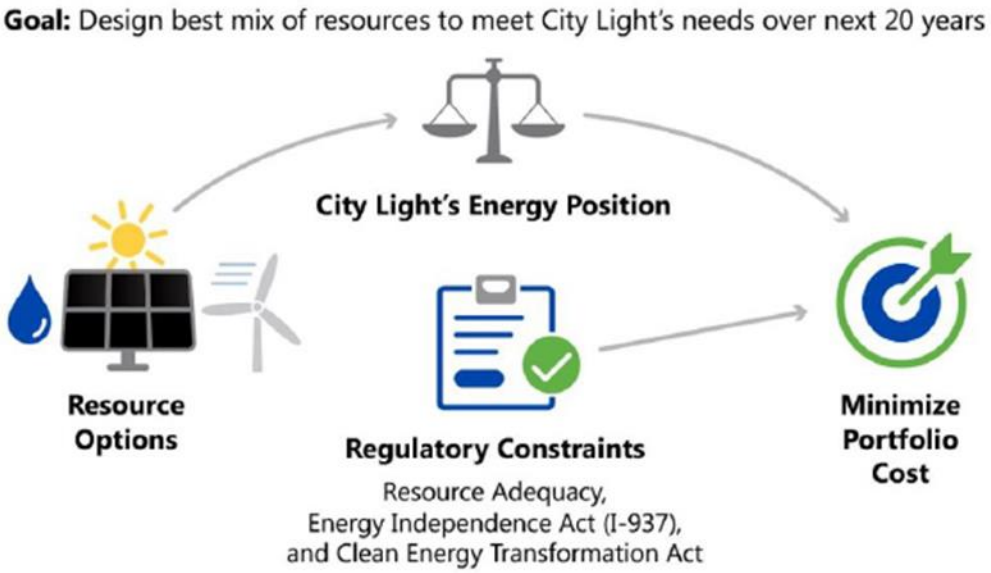
City Light uses long-term resource planning studies, such as the DSMPA, to identify the least-cost candidate resource portfolio, given a portfolio of existing resources, available resource options, available wholesale market depth, reliability requirements, and any operational and applicable policy constraints. Per WAC 194-37-070, City Light must perform a long-term resource planning study that includes candidate demand-side management (DSM, previously known as conservation) resources, with up-to-date estimates of those resources' energy or capacity potentials and demand-side resource valuations based on avoided costs of equivalent wholesale energy market purchases.

Similar to City Light's 2022 CPA and 2024 DSMPA study methodologies, City Light used a mathematical optimization modeling framework for the 2026 DSMPA to identify the most cost-effective (economic) demand-side resources. These demand-side resources comprise energy efficiency measures and demand response programs) to supplement City Light's existing power supply portfolio. The 2026 DSMPA study used City Light's system load forecast and model constraints representing policy requirements through the 20-year study period, 2026 through 2045. These demand-side resources also competed for selection by the model with supply-side candidate resources, providing further insight into the optimal demand- and supply-side resource mix that would enable City Light to keep rates as low as possible for its customer-owners.

7.1. DSMPA Model Framework

City Light collaborated with Sylvan Energy Analytics (Sylvan) to model City Light's existing resource portfolio, operational constraints, candidate demand- and supply-side resources, wholesale energy market prices, and applicable environmental policy requirements in Grid Path, an open-source long-term resource planning model framework. Sylvan then used the City Light instance of Grid Path to select the most economic demand-side resource additions to City Light's portfolio to meet expected future loads reliably through the 20-year study period. Figure 7-1 shows a high-level overview of City Light's resource planning model framework.

Figure 7-1. High-Level Overview of Resource Planning Model Framework



7.1.1. New Model Framework: Grid Path

City Light worked closely with Sylvan to model City Light's resource portfolio, modernizing City Light's previous model framework to better support the utility's decision-making processes in the rapidly evolving energy landscape. City Light, in collaboration with Sylvan, used Grid Path for the 2026 DSMPA study to determine the economic potential of demand-side resources provided by Cadmus. For the 2026 IRP modeling work scheduled to take place in late 2025 and early 2026, Sylvan and City Light will again use GridPath, with a focus on candidate supply-side resource additions to City Light's portfolio. By using GridPath for both the 2026 DSMPA and 2026 IRP modeling, as well as to support other simultaneous long-term resource portfolio decision-making internally at the utility, City Light will maintain consistency among long-term resource planning activities.

GridPath presents some notable advantages for modeling City Light's resource portfolio and candidate demand- and supply-side resource selections compared to the model framework used in prior DSMPAs and IRPs at City Light. First, GridPath dynamically dispatches generation from flexible resources both within City Light's existing resource portfolio and from flexible candidate resources. For example, the model can adjust the rate of discharge at the Skagit and Boundary hydroelectric projects as needed (within modeled operating constraints), thereby shifting the use of water for additional electricity generation between hours within a day or between days within a one- or two-week period. GridPath similarly takes advantage of the flexibility of other dispatchable candidate resources like demand response programs or utility-scale short-term battery energy storage systems. This ensures guidance from the model provides maximum reliability of candidate portfolios and reduces the risk of capacity overbuilds by the model. By contrast, the previous model framework could only dynamically dispatch Skagit and Boundary generation on an hourly basis within five-day intervals.

Secondly, Grid Path's capacity expansion model utilizes hourly capacity profiles of available resources, contracts, and market purchases to build optimal candidate portfolios. The previous 2024 model framework could not incorporate capacity profiles at an hourly resolution and instead relied on single-value effective load-carrying capacities (ELCCs) for each candidate resource considered in the model. The previous methodology utilizing ELCCs was computationally expensive and prone to underestimating resource requirements needed to meet resource adequacy thresholds based on the capacity expansion model's optimal candidate portfolios.

Thirdly, GridPath's zonal transmission module uses physics-based constraints at key flowgates in the region, which more realistically constrains available market depth and cost-effective wholesale energy marketing activity. The previous 2024 model framework was not able to effectively model transmission-based constraints and could only account for transmission costs through sensitivity analyses; for the 2024 DSMPA, the model framework was run 20 times, resulting in 20 distinct "optimal" portfolios for each transmission-cost threshold. By incorporating both candidate resources and the commensurate transmission required to meet reliability thresholds through the study period, GridPath eliminated the need for modeling multiple distinct transmission-cost sensitivities.

Finally, in modeling the reliability and portfolio values of demand-side resources to City Light, the new model framework using GridPath allows wholesale energy market arbitrage. This reflects more realistic operations and recognizes any additional value from demand-side resources to City Light ratepayers. There were some limitations on modeled arbitrage opportunities into and out of California, including participation in the Energy Imbalance Market (EIM). To account for these limitations, GridPath applies estimates that will conservatively overestimate the costs of the optimized candidate portfolios. The next section discusses in more depth the development of market price scenarios at Mid-Columbia (Mid-C) and California-Oregon Border (COB) market settlement points used in the GridPath DSMPA study.

7.1.2. Wholesale Market Price Forecasts

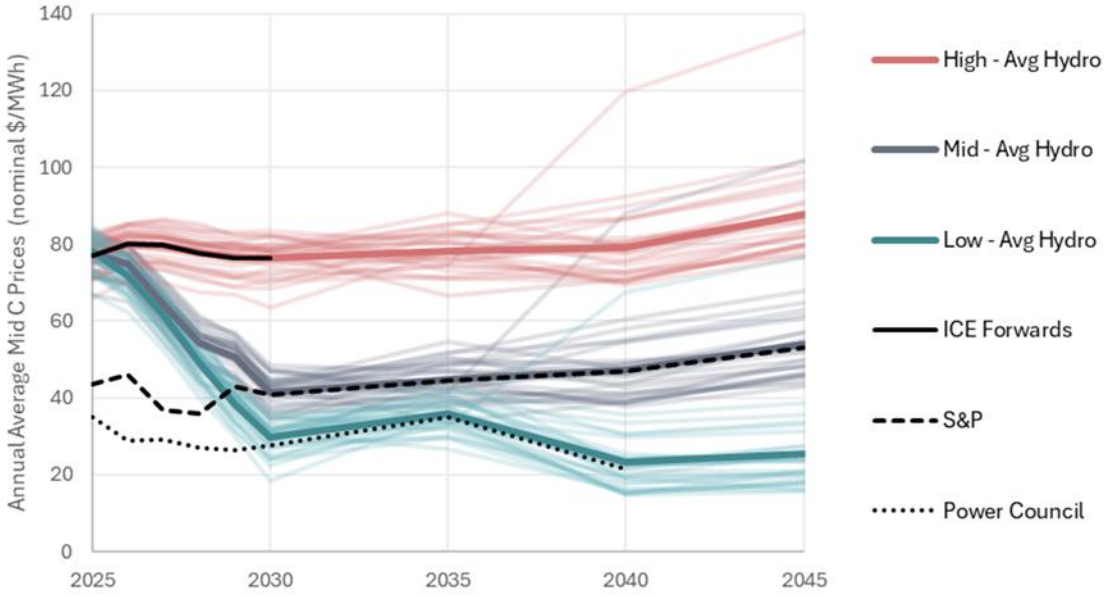
Sylvan developed three scenarios (low, mid, and high) for hourly wholesale price forecasts at the Mid-C market settlement point. All three price scenarios used a different entity's hourly market price forecast as a starting point (discussed below), but City Light made adjustments to develop 30 distinct hydro traces in each of the low-, mid-, and high-price scenarios. The Council's 2021 Power Plan developed these market price adjustments by hydro year. Sylvan applied price adders for each trace based on the monthly average price deviation in the Council's modeling for that hydro future.

- The mid-market price ensemble forecast reflects near-term market scarcity and long-term expectations that align with Standard & Poor's (S&P's) market price forecasts prior to adjustment by hydro year future.
- The low scenario reflects near-term market scarcity and long-term expectations that align with the Council's price forecast ensemble rather than S&P.

The high scenario reflects persistent scarcity into the future by using the 2030 Mid-C Intercontinental Exchange (ICE) forward prices as the basis of the forecast through the end of the study period rather than S&P.

Since S&P price forecasts employ a floor of $0, it was necessary for City Light to apply this same price floor to each hourly price scenario trace after making all other adjustments. Figure 7-2 shows the monthly average aggregations of the resulting price forecasts.

Figure 7-2. Mid-C Prices across Hydro Futures



Equivalent hourly price forecasts for the same horizons were not available for the COB market settlement point or the EIM. However, Sylvan was able to develop reasonable hourly COB prices by extrapolating from the Mid-C price traces described above based on historical relationships. Because the S&P hourly price forecasts for Mid-C employed a price floor of $0/MWh, Sylvan had to apply the same price floor to COB prices. Thus, the actual typical midday negative pricing at COB due to surplus solar generation in California was not captured in the price forecast traces for COB. The underrepresentation of opportunity for negative pricing arbitrage at COB by City Light results in more conservative (lower) market revenues than recognized by the model compared to if the COB price forecasts include actual negative midday pricing.

Sylvan also allowed the model to purchase month-long capacity products from the wholesale market on days when wholesale energy was assumed unavailable on the spot market (more discussion on this topic in the City Light's Modeled Existing Portfolio section below). Monthly capacity products represent capacity purchased on a forward basis. Sylvan set the prices of these capacity products in the model to equal the BPA demand rate. This assumes BPA sets forward capacity pricing on a competitive basis with the market. Based on internal analysis at City Light, BPA's demand rate may currently be low-biased on an expected basis through the study period, making capacity products look slightly more attractive to the model. However, other capacity pricing through the study period was not readily available.

7.2. City Light's Modeled Existing Portfolio

City Light's instance of GridPath models the existing power supply portfolio, including system load forecast, owned large hydroelectric generation assets and transmission, and long-term resource (energy, capacity, and transmission) contracts.

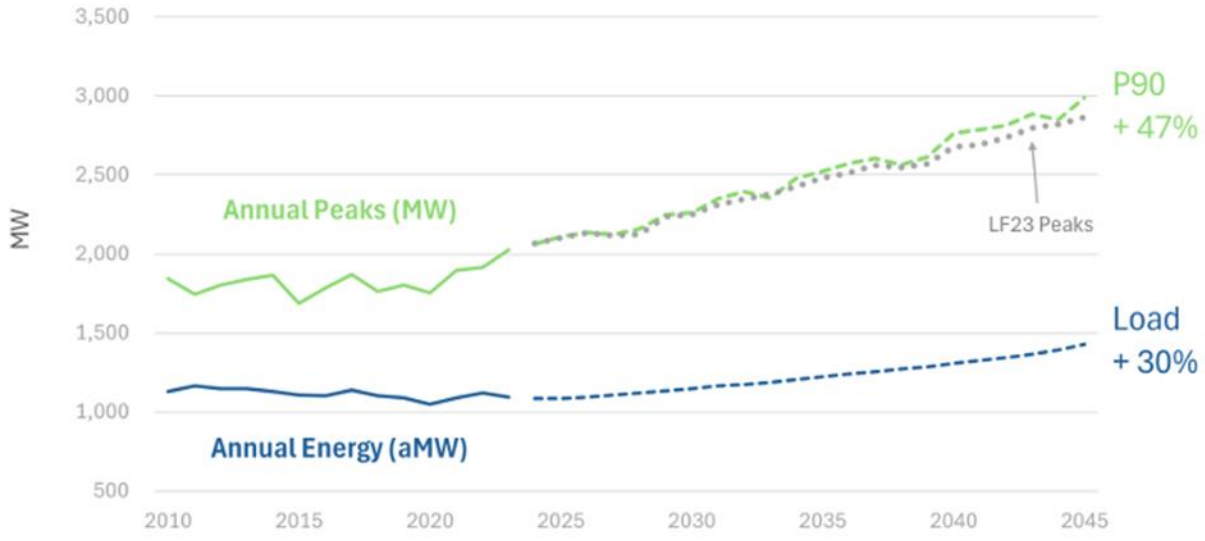
7.2.1. Load Forecast

An end-use model developed City Light's system load forecast, which extends from the present through 2045. Each target year of the forecast comprises an ensemble of 30 weather-normalized historical years.

To account for the impact of climate change on Seattle's load over the study period, City Light created linear regression models for each calendar month, fit using multiple general circulation models (GCMs) that cover Seattle's balancing area. City Light then used those models to apply scale factors to temperatures in each forecast month and combined these base temperatures with the end-use load forecasts to arrive at a final load forecast for the balancing area.

City Light's system load forecast shows increasing loads over the 20-year DSMPA study period, primarily driven by building and transportation electrification. City Light expects annual peak loads to grow at a faster rate over the study period than annual average loads, as shown in Figure 7-3. The growth rate of annual peak loads represents a slight increase over the previous year's load forecast peak load (LF23 Peaks in the figure below) growth rate. This is consistent with the findings of many other load-serving entities across the Pacific Northwest and presents a particular challenge for these entities, including City Light, to procure a higher ratio of firm capacity to energy than expected based on previous load forecast iterations.

Figure 7-3. 2024 Peak Forecast



7.2.2. Large Hydro Projects

The Council's model data supporting the Ninth Power Plan includes weather-driven models of regional conditions for 30 water years under three different spatially downscaled GCMs.[51, 52] The Council used their 30 years of modeled weather to drive regional hydro conditions, subsequent operations of regional hydroelectric projects, and corresponding wholesale energy market prices at Mid-C. Sylvan and City Light obtained hourly Council model data for City Light's Skagit and Boundary projects, as well as Mid-C price data, at an hourly granularity, for use in City Light's DSMPA modeling.

To alleviate some computational expense, City Light used the modeled natural inflows into City Light's Skagit project to calculate daily average discharge flows at Ross, Diablo, and Gorge, using an internally developed operations planning tool called the Flow Plan Tool (FPT). The FPT incorporates the many operational constraints at the Skagit project set out in the project's Federal Energy Regulatory Commission (FERC) license #533, Fisheries Settlement Agreement for the protection of fish habitats, mitigation of flood risk, and facilitation of summer recreation at Ross Reservoir. However, the FERC license for the Skagit expired in April 2025; City Light expects the new license to go into effect by the late 2020s and will prescribe updated operations requirements. One such update will allow Ross Reservoir to have a summer operating range from 1594.5 ft to 1602.5 ft, which is significantly more flexible than the previous summer operating range from 1600.0 to 1602.5 ft permitted. This update increases City Light's ability to meet resource adequacy needs in summer months and was incorporated into both the FPT and GridPath.

After the FPT model meets seasonal operational requirements, the output of the FPT provides weekly (or biweekly) water budgets for GridPath to optimize Skagit project operations at an hourly granularity for load service and to participate in wholesale energy and capacity markets. To avoid over-fitting Skagit generation to short-term fluctuations in modeled market prices, Sylvan applied additional ramping constraints to the hydro generators, which ensured modeled operations were realistic; this can also be viewed as simulating imperfect foresight of wholesale market prices within GridPath.

7.2.3. BPA Products

Under City Light's current BPA contract, effective through the end of September 2028 (the end of water year 2028), City Light purchases BPA's Diurnal Block product. As a part of the DSMPA study, Sylvan modeled City Light as taking the Diurnal Block product through the end of September 2028. Beginning in October 2028 (the start of water year 2029), City Light will start a new contract with BPA and will purchase the Monthly Block/Slice product.

The Provider of Choice contracts extend only through water year 2044, but Sylvan continued use of the Monthly Block/Slice product through the last DSMPA study year (water year 2045). This models the assumption that City Light would engage with BPA in an equivalent product choice under the subsequent

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[51] A water year is the consecutive 12-month period from October through the following September. The water year number is equal to the calendar year in the latter nine months of the water year. For example, water year 2026 spans October 2025 through September 2026.

[52] CanESM2, CCSM4, and CNRM-CM5, all using emissions scenario RCP 8.5.

contract. This assumption was the most reasonable option for modeling the last year of the DSMPA study period, given the lack of information about the nature of a BPA product contract for preference customers after water year 2044.

7.3. Environmental Policy Compliance in GridPath

City Light's long-term resource plans are subject to several legislative requirements, as described below.

7.3.1. Washington Energy Independence Act (I-937)

In 2006, Washington voters approved Initiative 937 (I-937), which requires that major utilities invest in all cost-effective energy efficiency measures and sets targets for adding Northwest renewable energy as a percentage of load. I-937 requires City Light to identify all achievable, cost-effective conservation potential for the upcoming 10 years and to specify City Light's public biennial conservation target should be no less than the pro rata share of conservation potential over the first 10 years. Previously, City Light followed the I-937 no load growth compliance pathway, but due to City Light's current and forecasted future load growth, City Light must now comply with the applicable regulations for load growth utilities.

7.3.2. Washington Clean Energy Transformation Act (CETA)

Approved by the Washington State legislature in 2019, CETA provides electric utilities in Washington with a clear mandate to phase out greenhouse gas emissions. CETA requires that utilities eliminate the use of coal-fired resources after December 31, 2025. Additionally, all electricity sold to customers must be greenhouse gas- (GHG-) neutral by January 1, 2030. To qualify as GHG-neutral, a utility must supply at least 80% of its load with a combination of renewable and non-emitting resources. Utilities may use alternative compliance options for no more than 20% of the load. CETA requires utilities to serve load with 100% GHG-free (renewable or non-emitting resources) by January 1, 2045.

GridPath was set up to assume that City Light retains the environmental attributes, renewable energy credits (RECs), or carbon-free credits associated with all eligible generation in its portfolio (see below for REC price forecast). City Light did not include a mechanism in the GridPath model to distinguish specified from unspecified wholesale energy market purchases;[53] this allows the model to realistically simulate dispatch decisions in response to market prices but leaves the problem of calculating GHG emissions associated with City Light's marketing activities. For the purposes of modeling compliance with emissions-related legislation, Gridpath assumed all market purchases simulated in GridPath were unspecified. GridPath ensures portfolios adhere to emissions requirements set out by CETA, and emissions limitations do not exceed City Light's allowances set out by the Department of Ecology.

CETA also requires utilities to ensure that the clean energy transition benefits highly impacted communities (HIC). City Light ensured that its DSMPA benefits HIC in two ways. First, the GridPath model

[53] An unspecified energy market purchase is a market purchase without specific detail of which generator produced the electricity. This is important for emissions accounting because an unspecified market purchase cannot be assumed to have been produced from a non-emitting resource.

includes programs that specifically benefit HIC as candidate resources. Second, after the model selected its portfolios, City Light evaluated the programs that were just above the cutoff of the highest cost program (on a $/MWh basis). If any of these programs above the cutoff were focused on highly impacted communities, City Light considered swapping the program with a similar program selected by the model that does not specifically benefit highly impacted communities.

REC Price Forecast

When the most cost-effective option become available, the GridPath model allows City Light to purchase RECs at the prices shown in Table 7-1.

Table 7-1. REC Price Forecast

Year	E3 REC Price Forecast (2023$)
2024	$14.64
2025	$16.83
2026	$18.09
2027	$19.32
2028	$20.26
2029	$19.94
2030	$19.39
2031	$18.79
2032	$18.14
2033	$17.55
2034	$16.95
2035	$16.44
2036	$16.09
2037	$15.95
2038	$15.97
2039	$16.31
2040	$16.99
2041	$17.83
2042	$18.66
2043	$19.29
2044	$19.79
2045	$20.31

7.3.3. Washington Climate Commitment Act (CCA)

Approved in 2021, the CCA creates a cap on carbon emissions in Washington's most polluting industries. City Light and other utilities must purchase carbon allowances to cover the potential emissions from its electricity imports from other states. Per regulations specified by the CCA, for each year throughout the duration of the 2026 DSMPA study period, the Washington State Department of Ecology will grant City Light no-cost carbon allowances to limit the cost impacts of the CCA on City Light's customers.[5] In 2026, City Light's no-cost carbon allowance allocation is 251,767 metric tons of CO_2 equivalent.[6]

7.4. GridPath Set Up for DSMPA

7.4.1. Supply-Side Candidate Resources

A key change in the 2026 DSMPA model framework compared to previous cycles is that supply-side resources are allowed to compete with demand-side resources in the capacity expansion model. This enables candidate portfolios to be more highly optimized compared to previous model results produced by City Light, which retained the supply-side candidate resources selected by the prior IRP and only chose the optimal demand-side resources to fill the remaining resource gap.

To avoid introducing highly uncertain price, performance, and commercial availability assumptions around emerging utility-scale resource technologies, Sylvan and City Light only allowed established and presently commercially available resource technologies to be selected within GridPath's capacity expansion functionality. These established technologies are onshore wind farms, solar PV plants, and short-duration battery storage systems. Table 7-2 provides more details on the model's supply-side candidate resources.

Table 7-2. Modeled Supply-Side Candidate Resources

Technology	Location(s)	Data Sources and Notes
Onshore Wind	Gorge (WA/OR border) Idaho Montana	NREL-based wind shapes RARE renewable dataset RFP responses NREL ATB
Solar PV	Central WA Gorge (WA/OR border) Idaho	NREL-based solar shapes RFP responses NREL ATB
Battery storage	On-system On BPA's system Co-located with renewables	RFP responses NREL ATB 85% round-trip efficiency Duration selected by model (4-hr min)

7.4.2. Capacity Expansion Model

Sylvan identified the combination of one water year trace from the Council model data and one load forecast trace from City Light's system load forecast that resulted in approximately median conditions over the 20-year 2026 DSMPA study period. Sylvan used this synthetic median year as the basis for solving for the optimal mix of demand- and supply-side candidate resources.

Sylvan modeled study years 2026 to 2030, 2035, 2040, and 2045 explicitly in GridPath, using price, hydro, load, and weather simulations based on the identified median year conditions. Results for years not explicitly modeled were linearly interpolated between explicitly modeled years. Since forecast uncertainty increases significantly with an increasing forecast horizon, City Light expects this extrapolation to have minimal impact on key near-term results.

Cadmus provided hourly shapes for representative weeks by calendar month for non-dispatchable demand-side resources. Cadmus also provided season-specific potentials for dispatchable demand-response resources for each year in the study period. Additional details about the modeled demand-side resources are discussed below. To model a typical year in GridPath creates a size and computational issue, therefore to reduce the size problem the modeling used 12 typical weeks per year. To further reduce computational complexity, Sylvan selected one representative weekday and one representative weekend day from each of the unique 12 weeks to be modeled explicitly in GridPath.

7.4.3. Resource Adequacy

Sylvan assumed energy would be available to purchase through wholesale energy markets during all modeled hours except on explicitly defined resource adequacy-constrained days. Sylvan referred to the 2024 Western Assessment of Resource Adequacy report produced by the Western Electricity Coordination Council to determine the number of resource adequacy-constrained days to add to each year explicitly modeled in GridPath. The number of resource adequacy-constrained days incorporated into the GridPath model originated from the Western Assessment of Resource Adequacy's 55% demand at risk scenario as the most conservative scenario available in the reported results. Representative weekdays, representative weekend days, and resource adequacy-constrained days were assigned weights in GridPath proportional to their presence in each modeled year. To meet load in all hours of all modeled study years, Sylvan allowed GridPath to select demand-side candidate resources provided by Cadmus (described in more detail in the next section), commercially established supply-side candidate resources (solar PV, wind, and short-term batteries), wholesale energy marketing on non-resource adequacy-constrained days, and monthly capacity products priced at the BPA demand rate.

7.5. Development of DSM GridPath Model Inputs

Cadmus worked with City Light to determine the format for inputs into the DSM GridPath model. This potential study provided the demand-side candidate resources for the DSMPA model framework described above. Cadmus compiled DSM potential into the levelized costs bundles to be used within the GridPath model to determine the preferred resource at a given cost.

7.5.1. Levelized Cost of Energy

Cadmus calculated the levelized cost of energy as the net present value of a given resource or portfolio over the entire study period, divided by (or "levelized" by) the total amount of energy provided by that resource over the study period. In the following calculation, Cadmus discounted the energy provided by the resource at the same rate as was used to discount costs in the calculation of net present value.

Cadmus derived the levelized cost of energy for each measure using the following formula.

$$\mathrm{LCOE} = \frac{\sum_{t=0}^{n} \frac{\mathrm{Expenses_t}}{(1+\mathrm{i})^t}}{\sum_{t=0}^{n} \frac{\mathrm{E_t}}{(1+\mathrm{i})^t}}$$

Where:

LCOE	=	levelized cost of conserved energy for a measure
$\mathrm{E_t}$	=	energy conserved in year t
n	=	lifetime of the analysis (20 years)
$\mathrm{Expenses_t}$	=	all net expenses in the year t for a measure using the costs and benefits
i	=	discount rate

Cadmus grouped the energy efficiency measures by levelized cost over the 20-year study period, allowing GridPath to select the optimal energy efficiency potential bundles, given various assumptions regarding future resource requirements and costs. The 20-year total resource levelized cost calculation incorporates numerous factors, which are consistent with the expense components shown in **Error! Reference source not found.**.

Table 7-3. Levelized Cost Components

Type	Component
Costs	Incremental Measure Equipment and Labor Cost
	Incremental O&M Cost
	Administrative Adder
Benefits	Present Value of Non-Energy Benefits
	Present Value of Transmission and Distribution Deferrals
	Secondary Energy Benefits
	10% Conservation Credit

7.5.2. Candidate DSM Resource Present Value Components

Cadmus used the economic inputs shown in Table 7-4 to model DSM product performances, parameters, and costs through the 20-year DSMPA study period, with all costs reported in 2026 U.S. dollars.

Table 7-4. Economic Inputs

7.5.3. Economic Inputs Included

Discount Rate	3.00%
Inflation Rate	2.53%
Line Loss Rate	8.31%
T&D Deferral Costs ($/kW-yr) ($2026)	$41.08

T&D = Transmission and Distribution

The costs and benefits (equivalent to negative costs) of demand-side resources calculated by Cadmus incorporated several components, described in more detail below.

7.5.4. Costs

Incremental technology costs: The present value of a demand-side resource cost as compared the baseline technologies (such as a energy efficient heat pump versus cheaper, but less energy-efficient heat pump).

Administrative adder: Program administrative costs based on the draft Ninth Power Plan representing the cost to conversed energy ($0.18 per kWh for residential, $0.12 per kWh for commercial, and $0.07 per kWh for industrial.

Incremental O&M costs: The present value of each demand-side resource includes typical costs for any required operations and maintenance, such as reduced operational costs from reduction in water usage.

7.5.5. Benefits

Non-energy benefits: Treated as a reduction in demand-side resource costs commensurate with the dollar value of non-energy-related savings. For example, the installation of a low-flow showerhead would reduce a demand-side resource's cost by the value of the conserved water. The Council's RTF workbooks provided measure-level non-energy benefit assumptions that Cadmus applied in this DSMPA study.

T&D deferrals: Treated as a reduction in the cost of demand-side resources by $41.08/kW-yr, based on the value of the deferred need for additional transmission and distribution procurement that would have been required for supply-side resource additions. City Light calculated the value of the T&D deferral rate, incorporating the following:

- Annual social cost of GHG from the Washington State Utilities and Transportation Commission (adjusted to 2026 U.S. dollars)
- Monthly REC prices forecasted by E3, purchased by City Light
- Monthly energy prices forecasted S&P, purchased by City Light
- Monthly expected costs of purchasing transmission on BPA's transmission system

10% conservation credit: Energy efficiency measures received a credit in the form of a flat reduction of 10% of the present costs. This credit is intended to account for other unquantified external benefits from conservation when compared with alternate resources and is consistent with the Northwest Power Act and the Council's Power Plans.

Secondary energy benefits: Treated as a benefit as a reduction in levelized costs for demand-side resources that save energy on secondary fuels. For example, consider the cost for R-11 wall insulation for a home with an electric central cooling system and a natural gas furnace. For the central cooling end-use, Cadmus considered the energy savings that R-11 insulation produces for natural gas furnace systems, conditioned on the presence of electric central cooling, as a secondary benefit that reduces the levelized cost of the measure. This adjustment impacts only the measure's levelized costs; the magnitude of energy savings for the R-11 measure on the electric supply curve is not impacted by considering secondary energy benefits.

7.5.6. Other Adjustments to Present Value

End-effects: If the useful life of a DSM resource did not extend through the end of the study, Cadmus incorporated an end effect to the total cost by treating the resource's levelized cost over its useful life as an annual reinstallation cost for the remainder of the study period. If a resource's useful life extended beyond the study period, Cadmus levelized resource costs over the resource's useful life and treated as annual costs within the study period. This approach is consistent with the Council's approach and consistent with the approach employed in City Light's previous IRP and DSMPA studies.

7.6. Modeling DSM Candidate Resources in GridPath

Cadmus provided two types of candidate demand-side resources for input into GridPath: dispatchable and non-dispatchable. In previous DSMPA modeling work, City Light modeled all candidate demand-side resources statically, meaning they could not be dispatched dynamically by the model to most effectively meet the load. For the present DSMPA study, GridPath was able to treat dispatchable demand response programs dynamically.

7.6.1. Non-Dispatchable Candidate Resource Inputs

GridPath modeled non-dispatchable demand-side resources with a fixed hourly shape across a typical calendar year. The potential of these programs increases through the study period based on product- and study year-specific multipliers determined through Cadmus's DSM study for City Light's balancing area. Non-dispatchable demand-side resources include some demand response programs, all energy efficiency measures, and all customer solar programs.

GridPath included the customer solar programs selected in the 2024 DSMPA in the modeling of City Light's existing portfolio. Historically, City Light has not updated the set of candidate programs for every iteration of the DSMPA (or CPA). For the 2026 DSMPA, City Light chose to maintain existing customer solar programs, pausing the update of the customer solar programs in the DSMPA portfolio modeling to make updates to the demand-side distributed energy resource products that will set City Light's near-term targets. City Light will update customer solar programs in the 2028 DSMPA modeling. Even though

the selected programs did not change with this 2026 study, Gridpath allowed the generation output of the previously selected customer solar programs to vary with modeled weather conditions.

To improve computational tractability when modeling thousands of candidate energy efficiency measures, Cadmus grouped non-dispatchable measures into incremental cost bundles, aggregating resource costs and energy contributions based on ranges of the levelized cost of energy (LCOE) of the given resource. The cost thresholds of the LCOE bundles are shown in Table 7-5. Within the cost bundles, Cadmus split out subgroups for customer class (residential, commercial, or industrial), weather sensitivity (yes or no), and measures focused on highly impacted communities (yes or no).

Table 7-5. Levelized Cost Bundle Ranges

Bundle	$/MWh
1	($9,999,999) to $10
2	$10 to $20
3	$20 to $30
4	$30 to $40
5	$40 to $50
6	$50 to $60
7	$60 to $70
8	$70 to $80
9	$80 to $90
10	$90 to $100
11	$100 to $110
12	$110 to $120
13	$120 to $130
14	$130 to $140
15	$140 to $150
16	$150 to $160
17	$160 to $9,999,999

Table 7-6 shows an example of the subbundle attributes within each LCOE bundle.

Table 7-6. Example Subgroups within Each Levelized Cost Bundle Range:

Example: Bundle #1 Sub-bundles	Customer Class	Weather Sensitivity	Highly Impacted Community
1.a.	Residential	Yes	Yes
1.b.	Residential	Yes	No
1.c.	Residential	No	Yes
1.d.	Residential	No	No
1.e	Commercial	Yes	Yes
1.f.	Commercial	Yes	No
1.g.	Commercial	No	Yes
1.h.	Commercial	No	No
1.i.	Industrial	Yes	Yes
1.j.	Industrial	Yes	No
1.k.	Industrial	No	Yes
1.l.	Industrial	No	No

In the previous DSMPA and CPA studies, City Light had further aggregated Cadmus' LCOE bundles into cumulative groups, such that each bundle included all resources below a specified incremental LCOE threshold, under the assumption that City Light would pursue lower-cost demand-side resources before any higher LCOE resources. City Light also performed further bundling had also been performed by grouping cumulative cost bundles when incremental energy provided by the next highest cost bundle was deemed negligible. However, aggregating energy efficiency measures into cumulative LCOE-bundles introduced artificial constraints to the capacity expansion model. For the current DSMPA work, City Light recognizes that it could be more optimal to choose energy efficiency measures with a higher LCOE, compared to lower LCOE products, if those higher LCOE measures more effectively meet City Light's net load at critical times, thereby offsetting the need to acquire more expensive alternate resources or market products. As such, Sylvan did not perform additional cumulative bundling for the 2026 DSMPA and, instead, allowed GridPath to select any of the incremental LCOE sub-bundles to meet resource needs with the combination of measures that resulted in the minimum total portfolio cost.

7.6.2. Dispatchable Candidate Resource Inputs

Cadmus provided parameters for dispatchable candidate demand response resources. These parameters primarily describe achievable potentials and upper limits to the number of calls and durations of calls allowed in each of the summer and winter seasons in the study period. Gridpath modeled dispatchable demand response resources as individual decision variables, meaning the model could choose to select any individual resource and dispatch it as needed within the specified resource parameters. This allowed dispatchable demand response resources to be considered on equal footing with candidate supply-side resources.

Dispatchable demand response programs can be further subcategorized by their impact on load; per NREL nomenclature, these subcategories are shift, shed, and shimmy. Programs could fall into one or more of these sub-categories.

Shift. Demand response resources that shift load are resources that allow a reduction in load when an event is called, but the magnitude of the energy reduction is added back onto the load after the event ends. An example of this is commercial EV supply equipment; when an event is called, normal energy use by this equipment is reduced for up to four hours by preventing charging of the EVs during the event. However, EVs still need to be charged before their next use and are assumed to charge instead during the four hours following the event.

Cadmus' study showed these programs to be effective when called four to 12 times per season for up to four hours at a time.

Shed. Demand response resources allow City Light to reduce energy consumption without the need to deliver that energy at a later time. Many demand response programs identified by the Cadmus study fell into this category; a typical example of this is curtailment of load, where customers reduce their usage of electronics and energy-intensive electrical equipment during an event.

Similar to shift programs, Cadmus' study allowed events for shed programs to be called four to 12 times per season for up to four hours each.

Shimmy. Load shimmy programs allow dispatchers to follow the load on a minute-by-minute basis, providing frequency regulation to the grid. Dispatchable demand response resources that are able to shimmy load and that were identified in the DSMPA study were primarily residential and commercial batteries and water heater-related resources. Within GridPath, Sylvan modeled these resources effectively like batteries, down to a minimum temporal granularity of one hour.

The DSMPA study showed shimmy demand response programs to be effective when called for up to four hours on modeled resource adequacy-constrained days. When two or more resource adequacy-constrained days occur in a row, such as during a multi-day heat wave or cold snap, these programs can be called for multiple consecutive days. However, these programs are not intended to be called on days when City Light's service area experiences more typical conditions.

7.6.3. Results

Scenarios with Monthly Capacity Products

Sylvan completed GridPath model runs, as described in the previous section, for the three different price forecast sensitivities: low, mid, and high, where monthly capacity products were available to purchase to meet City Light's resource needs (referred to as the scenarios with capacity products). The candidate portfolios for the low- and mid-price scenarios resulted in reasonable economic achievable potentials (magnitude of demand-side product capacities) across customer classes, but the high-price scenario produced inconsistent and unrealistic results, so Sylvan ran another scenario with an additional constraint to produce more informative results from the high-price scenario, as discussed in more detail below.

Demand Response Low- and Mid-Price Scenarios with Capacity Products

The model found the same demand response economic achievable potential result for the low- and mid-price scenarios. It determined that only a relatively small portion of the demand response achievable potential was cost-effective compared to the other candidate resource types selected in the optimal

portfolio. The demand response economic achievable potential was primarily concentrated in the commercial customer class, and the model selected only winter demand response rather than summer demand response programs. This seasonal result matches City Light's past experience, as well as modeled future expectations, that the net load in the winter is, and will continue to be, greater than the net load in the summer.

Figure 7-1. Comparison of 2026 Demand Response Scenarios to 2024 Preferred Portfolio

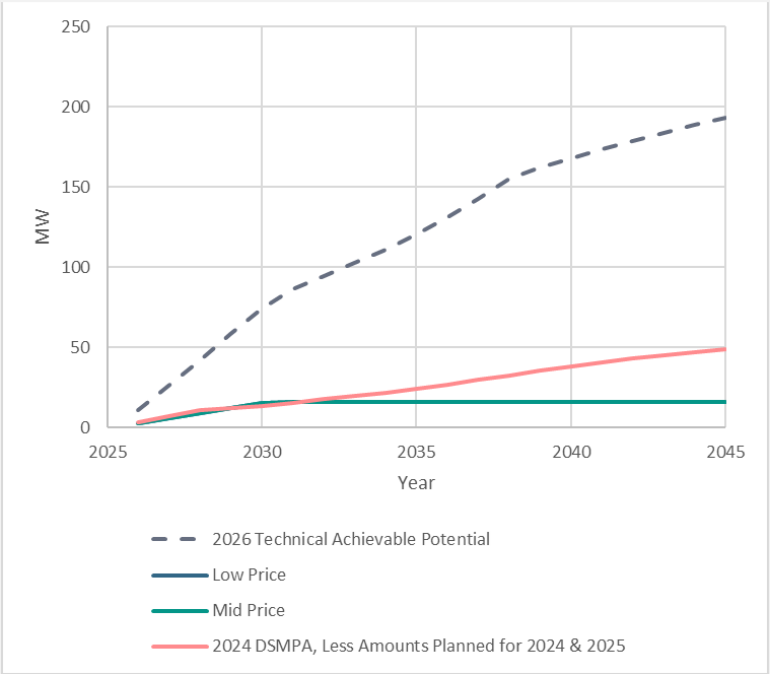
2026 Scenario	Customer Class	2-Year MW (2026-2027)	4-Year MW (2026-2029)	10-Year MW (2026-2035)	20% of 10-year
2026 DSMPA: Low Price	Commercial	**6**	**12**	**15**	**3**
2026 DSMPA: Mid Price	Commercial	**6**	**12**	**15**	**3**
2026 DSMPA: High Price (sensitivity)	Commercial	**7**	**14**	**18**	**4**
2024 Results	**Customer Class**	**2-Year MW (2024-2025)**	**4-Year MW (2024-2027)**	**10-Year MW (2024-2033)**	**20% of 10-Year**
2024 DSMPA: Preferred Portfolio	Commercial	6	13	23	4
	Residential	0	0	4	1
	Total	**6**	**13**	**26**	**5**

Compared to the demand response selected in the preferred portfolio from the 2024 DSMPA, the 2026 DSMPA model selected similar commercial winter economic achievable potential early in the study period, particularly in the first two and four years. The primary change was that the 2026 DSMPA did not select any additional residential demand response programs or additional commercial programs that contributed to economic potential, primarily in the latter years of the study period. This change was likely driven by the additional flexibility of GridPath's capacity expansion model, which allowed it to account directly for weather-sensitive contributions to resource adequacy needs and allowed a more cost-effective mix of energy efficiency measures rather than demand response programs to be selected to meet demonstrated resource adequacy needs.

In the 2024 DSMPA, the demand response programs provided capacity in both summer and winter, whereas the 2026 DSMPA shows only winter demand response programs are economic. This was likely a result of the increased flexibility of City Light's Skagit hydro project expected in the new FERC license. The increased summer elevation operating range at Ross Reservoir allows the Skagit project to provide significantly more resource adequacy contribution in the summer months.

Figure 7-2 depicts the differences between the winter demand response economic achievable potential identified by the 2024 DSMPA and the low- and mid-price runs' winter demand response economic achievable potential for the 2026 DSMPA. Note that the demand response economic achievable potentials were the same for both the low- and mid-price scenarios. For reference, the total demand response technical achievable potential identified by Cadmus' study is included in the same plot.

Figure 7-2. Comparison of 2026 and 2024 DSMPA Winter Demand Response



7.6.4. Energy Efficiency Low- and Mid-Price Runs with Capacity Products

The optimal portfolios resulting from the low- and mid-price runs contained energy efficiency economic achievable potentials significantly higher than their respective demand response economic achievable potentials in all years of the study. The 2026 DSMPA energy efficiency economic potential in the first several years of the study period in the low-price run was lower than that in the 2024 DSMPA preferred portfolio, while that in the mid-price run was higher than that in the 2024 DSMPA preferred portfolio. The 2026 DSMPA energy efficiency economic potential landed well below the 2024 DSMPA results by year 10 and through the remainder of the 20-year study period, as GridPath relied more heavily on supply-side candidate resource builds and capacity products to meet resource needs a decade or more in the future in both the low- and the mid-price runs. The similarity of the energy efficiency economic potentials identified in the near term for the 2026 DSMPA low- and mid-price runs and the 2024 DSMPA preferred portfolio results in energy efficiency potential through the study period represented measures benefiting highly impacted communities.

Figure 7-3. Comparison of 2026 Energy Efficiency Scenarios to 2024 Preferred Portfolio

2026 Scenario	Sector	2-Year aMW (2026-2027)	4-Year aMW (2026-2029)	10-Year aMW (2026-2035)	20-Year aMW (2026-2045)
2026 DSMPA: Low Price	Commercial	14	26	49	62
	Industrial	1	3	6	8
	Residential (HIC)	1 (0)	3 (1)	6 (2)	8 (3)
	Total	**17**	**32**	**61**	**78**
2026 DSMPA: Mid Price	Commercial	17	31	62	82
	Industrial	1	3	6	8
	Residential (HIC)	3 (1)	5 (1)	9 (3)	13 (4)
	Total	**21**	**39**	**78**	**103**
2026 DSMPA: High Price (sensitivity)	Commercial	18	34	71	96
	Industrial	1	3	6	8
	Residential (HIC)	4 (1)	7 (2)	15 (4)	23 (5)
	Total	**24**	**44**	**92**	**126**
2024 Results	**Sector**	**2-Year aMW (2024-2025)**	**4-Year aMW (2024-2027)**	**10-Year aMW (2024-2033)**	**22-Year aMW (2024-2045)**
2024 DSMPA	Commercial	12	23	49	72
	Industrial	2	4	8	10
	Residential (HIC)	4 (1)	8 (2)	22 (6)	50 (13)
	Total	**18**	**35**	**79**	**132**

Even though the 2026 DSMPA study selected a greater proportion of energy efficiency economic potential from the commercial customer class than the other customer classes, City Light selected, so it is likely that the additional flexibility to select distinct incremental price sub-bundles allowed GridPath to select more energy efficiency that better fit the shape of the resource need across hours of the day, months of the year, and years of the study period, rather than simply selecting the lowest cost bundles first. This was the same reasoning as with demand response economic achievable potential increases.

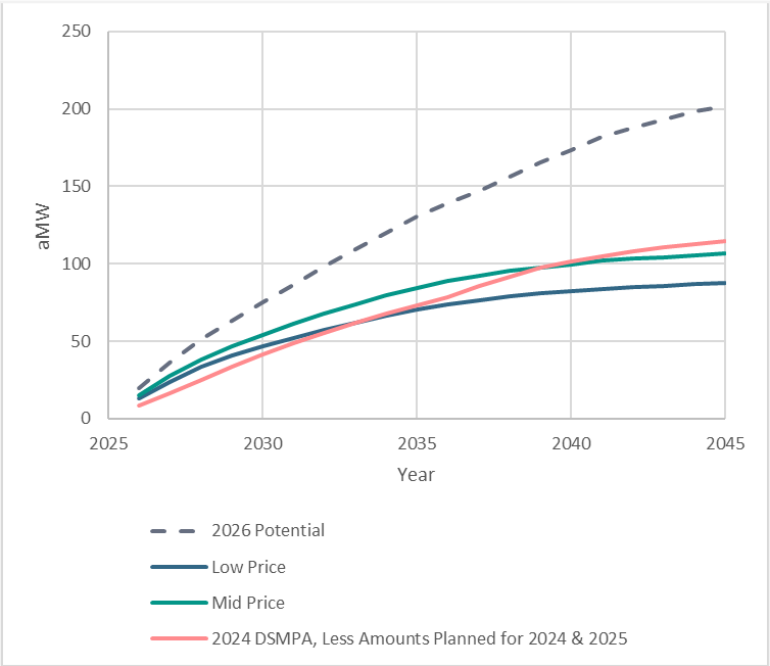
Impacts of recent legislation will lead directly or indirectly to increased commercial energy efficiency in the latter years of the study period, but City Light will not be able to recognize them as part of our achievements through energy efficiency measures. For example:

- City of Seattle Building Performance Standards and other initiatives make additional achievable potential available in the near term but eliminates that potential in the latter years of the study period.
- House Bill 1185 requires phasing out of sales of lighting containing mercury by 2029, which would instead be replaced by more efficient LEDs. City Light would continue to be able to recognize lighting efficiencies prior to 2029 as part of its programs but would no longer be able to recognize those efficiencies after the legislation goes into effect.

Figure 7-4 illustrates the differences between the energy efficiency economic achievable potentials identified in 2024 DSMPA and the low- and mid-price runs' energy efficiency economic achievable

potentials for 2026. The figure also shows how these compare to the total energy efficiency technical achievable potential identified by Cadmus' updated DSMPA study.

Figure 7-4. Comparison of 2026 and 2024 DSMPA Energy Efficiency



7.6.5. High-Price Scenario Sensitivity Run with Capacity Products

Unlike the low- and mid-price runs with capacity products, the candidate portfolio resulting from the high-price scenario with capacity products selected an unrealistically high quantity of supply-side resources and extremely low demand-side resources because excess energy from supply-side resources could be sold back to the market at a premium due to sustained scarcity pricing through the study period. The model's price-taker wholesale market price forecasts are treated as static inputs to the optimization problem and thus cannot reflect realistic market dynamics. High quantities of resource capacity built in response to sustained high regional wholesale market prices would subsequently act to suppress market prices as energy supply increases relative to demand. This would, in turn, likely make the large amounts of supply-side resource additions to City Light's portfolio uneconomic. Since this scenario produced unrealistic results, City Light did not consider the candidate portfolio resulting from the high-price scenario to be a viable solution.

To remedy this situation, Sylvan ran an additional high-price scenario where the total capacity of supply-side resources selected by the model was artificially limited to 130% of the supply-side capacity selected in the mid-price scenario. Even though it introduces an artificial constraint, this scenario represents a more realistic future scenario where new construction of wind, solar, and short-term batteries is limited, justifying continued scarcity pricing in the wholesale market through the end of the study period.

Sensitivity Run Demand Response Results

In this high-price capped supply-side sensitivity run, only slightly less demand-side management capacity was selected than in the mid- or low-price runs. In particular, the demand response products selected were also a commercial winter demand response program, and it contributed proportionally more capacity in the first two and four years of the study period than in the last 10 years when compared to the 2024 DSMPA preferred portfolio's demand response economic potential. This further supports the conclusions from the low- and mid-price runs that demand response programs contributing greater achievable potential in the winter and in the early years of the study period provide greater value than those that contribute more in the latter years.

Sensitivity Run Energy Efficiency Results

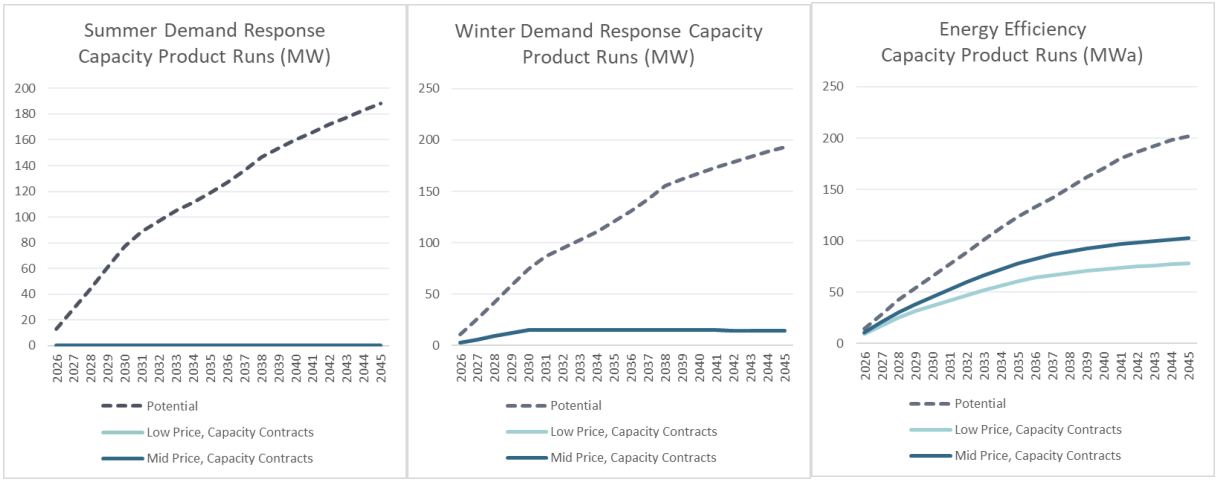
The high-price sensitivity run's optimal portfolio included greater energy efficiency economic potential than the low-and mid-price runs, with greater weighting on the latter years. This suggests that some energy efficiency measures not selected in the low- and mid-price scenarios are the next most cost-effective in the case that the acquisition of supply-side resources is infeasible at the optimal rate identified by the IRP. Indeed, materials shortages, increases in supply costs, and delays in deployment are already obstacles impacting the industry and are all feasible contingencies that are prudent considerations for long-term resource planning.

Similar to the low- and mid-price runs, the high-price sensitivity run selected a high proportion of commercial customer class energy efficiency measures. In addition, the high-price scenario is consistent with the 20% to 25% of economic programs focused on highly impacted communities, as shown in the low- and mid-price run results.

Sensitivity Run Conclusions

The demand response and energy efficiency economic potentials identified in the high-price sensitivity run further support the conclusion that the commercial customer class may provide the greatest benefit over the cost of implementation for both demand response and energy efficiency resources and that energy efficiency appears to be more cost-effective on the whole, as opposed to demand response, regardless of the possible range of wholesale market prices.

Figure 7-5. Scenarios without Monthly Capacity Products (Physical Capacity Runs)



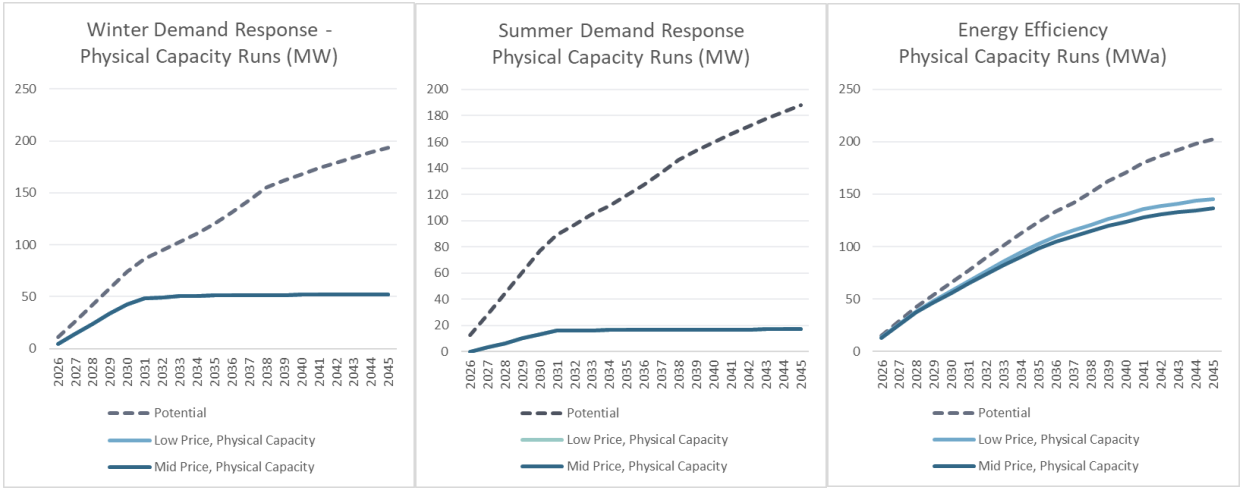
Because the demand response economic achievable potentials in the model runs described above were notably less than what was identified in the 2024 DSMPA, Sylvan executed model runs to test whether this was a result of the inclusion of wholesale market capacity products to meet resource adequacy needs in the 2026 DSMPA model. Sylvan ran two additional scenarios: one using the low wholesale energy price forecast and the other using the mid wholesale energy price forecast, but this time without capacity products available as candidate resources. While the resultant optimal portfolios produced by these two runs showed unrealistically large buildouts of the wind, solar, and short-term battery supply-side candidate resources to meet City Light's anticipated future resource adequacy needs, they provided insight into the economic achievable potential of demand-side resources.

Demand Response and Energy Efficiency Results of Physical Capacity Runs

The amount of energy efficiency economic potential overall increased from about 50% of the total achievable potential in the low- and mid- price runs with capacity products to about 75% of the total in the low- and mid- price physical capacity runs. The demand response economic achievable potential selected in these two new scenarios nearly tripled in all study years when capacity products were removed as candidate resources but still only reached about 25% of the total achievable potential by the end of the study period. This confirms that, overall, more of the achievable potential from energy efficiency measures is economic compared to demand response programs. The inclusion of forward monthly capacity products as candidate resources remains a more economic resource for meeting City Light's resource adequacy needs in the latter part of the study period.

These two portfolios are discussed here to gain insight into the value of demand-side management resources, especially in comparison to supply-side resource options. However, due to the unlikelihood that forward monthly capacity products, which are commonly available products across current power markets, would be unavailable going forward, the resultant portfolios are not considered for the purpose of setting City Light's demand-side management targets. Further, the infeasibility of the large supply-side buildouts in these portfolios makes them unrealistic and not cost-effective for future resource planning purposes.

Figure 7-6. Scenarios with Monthly Capacity Products (Physical Capacity Runs)



7.7. Conclusions and Recommendation

The collaboration with Sylvan in the implementation of GridPath for City Light's DSMPA has facilitated significant improvements to City Light's DSMPA modeling process. While many inputs to the DSMPA model still carry significant uncertainty, this updated model and analyses have attempted to quantify and account for much of that uncertainty in determining the optimal future demand-side resource mix. City Light are encouraged to see that, even with such significant updates to the model framework, the economic achievable potential of energy efficiency and demand response in the first several years are a comparable order of magnitude to those resulting from the previous model framework used for the 2024 DSMPA and prior long-term resource planning studies.

Five total scenarios represented reasonable future scenarios for consideration. However, City Light recognizes that three of those portfolios (high price with capacity products and limited supply-side resource buildout, low price with capacity product purchases limited to zero, and mid-price with capacity product purchases limited to zero) introduced artificial limitations to explore "what if" scenarios and assess the stability of the solution space. While they provide useful results for comparison among scenarios, they are less defensible for use in setting demand-side management targets due to artificial limitations.

Among the two scenarios that did not introduce artificial constraints (the low- and mid-wholesale market price scenarios with capacity products), the mid-price scenario represents a future where prices begin at current-day Mid-C ICE Forward prices, representing current regional market scarcity, but by 2030 they align with expected energy price futures from S&P. These prices persist some amount of market scarcity pricing above those assumed by the Council's price forecasts, which accounts more for imperfect resource buildout in the region, which could be argued to be the most realistic price scenario. Additionally, the mid-price scenario's economic achievable potential selected by the model aligns well with the results from the previous model framework used in the 2024 IRP Progress Report and the 2024 DSMPA and does not differ hugely from the low-price scenario's direction.

However, as the mid-wholesale market price portfolio still represents an incremental increase in recognized demand-side efficiencies, as shown in Figure 7-7, City Light would require immediate additional resources, especially in terms of personnel and information technology, to capture these demand-side economic potentials; acquisition of requisite additional resources does not represent an insurmountable obstacle for the utility.

Thus, the optimal portfolio resulting from the mid-wholesale market price (with capacity products) scenario is City Light's choice for setting realistic, economic achievable potential targets for the next two and four years. This portfolio best positions City Light to make investments in customer-side energy solutions while allowing room to adjust course as needed with future model enhancements and updated forecasts.

Figure 7-7. 2026 Portfolio Based on Mid-Price Scenario Compared to 2024 Preferred Portfolio

2026 DSMPA Results	2-Year (2026-2027)	4-Year (2026-2029)	10-Year (2026-2035)	20% of 10-Year
Commercial	17	31	62	12
Industrial	1	3	6	1
Residential	3	5	9	2
2026 Total (aMW)	**21**	**39**	**78**	**16**
Demand Response (MW)	*6*	*12*	*16*	

2024 DSMPA Results	2-Year (2024-2025)	4-Year (2024-2027)	10-Year (2024-2033)	20% of 10-Year
Commercial	12	23	49	10
Industrial	2	4	8	2
Residential	4	8	22	4
2024 Total (aMW)	**18**	**35**	**79**	**16**
Demand Response (MW)	*6*	*13*	*31*	

8. Glossary of Terms

These definitions draw heavily from the NAPEE Guide for Conducting Energy Efficiency Potential Studies and the State and Local Energy Efficiency Action Network.[54]

Achievable potential: The amount of energy use that efficiency can realistically be expected to displace.

Conservation potential assessment: A quantitative analysis of the amount of energy savings that exists, proves cost-effective, or could potentially be realized through implementation of energy-efficient programs and policies.

Cost-effectiveness: A measure of relevant economic effects resulting from implementing an energy efficiency measure. If the benefits of this selection outweigh its costs, the measure is considered cost-effective.

Economic potential: Refers to the subset of technical potential that is economically cost-effective compared with conventional supply-side energy resources.

End use: A category of equipment or service that consumes energy (such as lighting, refrigeration, heating, or process heat).

End-use consumption: Used for the residential sector, this represents per-UEC consumption for a given end use, expressed in annual kilowatt-hours per unit (also called unit energy consumption).

End-use intensities: Used in the commercial and institution sectors, this represents the energy consumption per square foot for a given end use, expressed in annual kilowatt-hours per square foot per unit.

Energy efficiency: The use of less energy to provide the same or an improved service level to an energy consumer in an economically efficient way.

Effective useful life: An estimate of the duration of savings from a measure. EUL is estimated through various means, including the median number of years that energy efficiency measures installed under a program remain in place and operable. EUL also is sometimes defined as the date at which 50% of installed units remain in place and operational.

Levelized cost: The result of a computational approach used to compare the cost of different projects or technologies. The stream of each project's net costs is discounted to a single year using a discount rate (creating a net present value) and divided by the project's expected lifetime output (MWhs).

Lost opportunity: Refers to an efficiency measure or efficiency program seeking to encourage the selection of higher-efficiency equipment or building practices than that typically chosen at the time of a purchase or design decision.

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[54] Schiller Consulting, Inc. 2012. *Energy Efficiency Program Impact Evaluation Guide. NAPEE Guide for Conducting Energy Efficiency Potential Studies and the State and Local Energy Efficiency Action Network.* Prepared by SEEAction. www.seeaction.energy.gov

Measure: Installation of equipment, subsystems, or systems, or modifications of equipment, subsystems, systems, or operations on the customer side of the meter designed to improve energy efficiency.

Portfolio: Either (a) a collection of similar programs addressing the same market, technology, or mechanisms or (b) the set of all programs conducted by one organization.

Program: A group of projects with similar characteristics and installed in similar applications.

Retrofit: An efficiency measure or efficiency program intended to encourage the replacement of functional equipment before the end of its operating life with higher-efficiency units (also called early retirement) or the installation of additional controls, equipment, or materials in existing facilities for reducing energy consumption (such as increased insulation, lighting occupancy controls, or economizer ventilation systems).

Resource adequacy*:* Having sufficient resources, generation, energy efficiency, storage, and demand-side resources to serve loads across a wide range of conditions.

Technical potential: The theoretical maximum amount of energy use that could be displaced by efficiency, disregarding all non-engineering constraints (such as cost-effectiveness or the willingness of end users to adopt the efficiency measures).

Total resource cost test: A cost-effectiveness test that assesses the impacts of a portfolio of energy efficiency initiatives on the economy at large. The test compares the present value of efficiency costs for all members of society (including costs to participants and program administrators) compared with the present value of benefits, including avoided energy supply and demand costs.

SUMMARY and FISCAL NOTE

Department:	Dept. Contact:	CBO Contact:
City Light	Jennifer Finnigan	Christie Parker

1. BILL SUMMARY

Legislation Title: A RESOLUTION relating to the City Light Department; acknowledging and approving the City Light Department's adoption of a biennial energy conservation target for 2026–2027 and ten-year conservation potential.

Summary and Background of the Legislation:
City Light must establish and make publicly available a biennial acquisition target for cost-effective conservation and a ten-year conservation potential. This Resolution establishes a 16 average megawatt (aMW) conservation target for 2026-2027 and a ten-year conservation potential of 78 aMW.

Initiative 937 was passed by Washington state voters in November 2006 to establish renewable and energy efficiency targets for electric utilities serving more than 25,000 retail customers. In complying with RCW 19.285.040, each qualifying utility shall pursue all available conservation that is cost-effective, reliable, and feasible. RCW 19.285.040.

WAC 194-37-070 Section (5) provides further guidance that the development of the biennial target and the ten-year potential should follow the methodologies used by the Northwest Power and Conservation Council (NWPPC) and this section offers a series of methodical details to ensure consistency with this regional effort. Section (4) also calls for electric utilities to "establish its ten-year potential and biennial target by action of the utility's governing board, after public notice and opportunity for public comment." The adoption of this resolution by the City Council in an open public meeting will maintain our compliance with state law.

Every two years City Light initiates a Demand Side Management Potential Assessment (DSMPA) (formerly known as the Conservation Potential Assessment (CPA)) to identify the biennial acquisition target and the ten-year potential for the service territory. City Light hired a consulting firm (Cadmus) to support the DSMPA consistent with the methodologies outlined in RCW 19.285.040 and WAC 194-37-070 and to be consistent with the Northwest Power and Conservation Council's methodology used for their 2021 Power Plan. This DSMPA has identified a target of 16 aMW within the City Light service territory for 2026-2027 and a total conservation potential of 78 aMW for the ten-year period starting in 2026. City Light anticipates meeting or exceeding the 16 aMW biennial target for 2026-2027 and believes the spending plan and rate path adopted via Resolution 32319 for the 2025-2030 Strategic Plan Update will be sufficient to meet the biennial acquisition targets.

As a point of reference, this is the ninth Resolution to establish the biennial target and ten-year potential for the utility. The most recent legislation, Resolution #32134 established the 2024-

2025 conservation target of 18 aMW and ten-year potential of 79 aMW. The 2026-2027 target of 16 aMW is a decrease from the 2024-2025 target. Other than the energy savings target and ten-year potential, this Resolution is similar to Resolution #32134 in its language and intent.

2. CAPITAL IMPROVEMENT PROGRAM

Does this legislation create, fund, or amend a CIP Project? ☐ **Yes** ☒ **No**

3. SUMMARY OF FINANCIAL IMPLICATIONS

Does this legislation have financial impacts to the City? ☐ **Yes** ☒ **No**

3.d. Other Impacts

Does the legislation have other financial impacts to The City of Seattle, including direct or indirect, one-time or ongoing costs, that are not included in Sections 3.a through 3.c? If so, please describe these financial impacts.

There is no direct financial impact of implementing this legislation; the adoption of this Resolution is an administrative requirement of state law. However, failing to meet the biennial conservation target may result in an administrative penalty outlined in RCW 19.285.060: "(1) Except as provided in subsection (2) of this section, a qualifying utility that fails to comply with the energy conservation or renewable energy targets established in RCW 19.285.040 shall pay an administrative penalty to the state of Washington in the amount of fifty dollars for each megawatt-hour of shortfall. Beginning in 2007, this penalty shall be adjusted annually according to the rate of change of the inflation indicator, gross domestic product-implicit price deflator, as published by the bureau of economic analysis of the United States department of commerce or its successor."

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

City Light makes substantial energy efficiency investments every year and expects to do so in the future. The Department builds its capital budget expecting conservation measures will, in general, be relatively close to historical levels and have a similar cost of acquisition. City Light has sufficient CIP & O&M budget in 2026. If the cost of acquisition increases, City Light may require higher O&M and/or CIP budget in 2027 to meet the two-year target. If so, City Light will incorporate incremental conservation budget needs in the 2027-2032 Strategic Plan's rate path.

Please describe any financial costs or other impacts of *not* implementing the legislation.

There is no direct financial cost of not implementing this legislation. However, City Light is required by state law to set the conservation targets as outlined in RCW 19.285.040. Failing to meet the biennial conservation target may result in an administrative penalty.

4. OTHER IMPLICATIONS

a. Please describe how this legislation may affect any departments besides the originating department.

Within the budget for conservation, Seattle City Light directs funding to the following departments:

- $3M annually to the Office of Housing in support of the HomeWise Weatherization Program,
- $1.2M annually to the Office of Sustainability and Environment for policy development, and grant coordination.
- $547K annually to the Seattle Department of Construction and Inspections for energy code development, compliance, and outreach.

b. Does this legislation affect a piece of property? If yes, please attach a map and explain any impacts on the property. Please attach any Environmental Impact Statements, Determinations of Non-Significance, or other reports generated for this property.

No

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

i. How does this legislation impact vulnerable or historically disadvantaged communities? How did you arrive at this conclusion? In your response please consider impacts within City government (employees, internal programs) as well as in the broader community.

The adoption of this Resolution is an administrative requirement of state law to set a conservation target using methodology set by the Northwest Power and Conservation Council.

ii. Please attach any Racial Equity Toolkits or other racial equity analyses in the development and/or assessment of the legislation.

The adoption of this Resolution is an administrative requirement of state law to set a conservation target using methodology set by the Northwest Power and Conservation Council.

iii. What is the Language Access Plan for any communications to the public?

The adoption of this Resolution is an administrative requirement of state law to set a conservation target using methodology set by the Northwest Power and Conservation Council.

d. Climate Change Implications

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

This resolution supports a decrease in carbon emissions by establishing two- and ten-year energy conservation targets. Conservation helps to reduce City Light's carbon emissions by saving energy and helping to reduce overall load, ultimately helping City Light's hydroelectric resources meet most of our demand.

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

This resolution supports Seattle's resiliency to climate change by establishing two- and ten-year energy conservation targets. Energy efficiency helps to reduce carbon emissions, as stated above.

e. If this legislation includes a new initiative or a major programmatic expansion: What are the specific long-term and measurable goal(s) of the program? How will this legislation help achieve the program's desired goal(s)? What mechanisms will be used to measure progress towards meeting those goals?

This is not a new initiative or major programmatic expansion; this effort is consistent with City Light's longstanding commitment to conservation.

5. CHECKLIST

☒ **Is a public hearing required?**
Yes. Consistent with WAC 194-37-070 section (4), the utility must establish its ten-year potential and biennial target by action of the utility's governing board, after public notice and opportunity for comment.

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

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

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

6. ATTACHMENTS

Summary Attachments: None.

SCL 2026-2027 Conservation Target RES

Sustainability, City Light, Arts & Culture Committee

Jennifer Finnigan | August 1, 2025

Seattle City Light

WE POWER SEATTLE

What is Energy Conservation?

Energy conservation is a reduction of the total amount of energy consumed over a year

Also known as energy efficiency

2

Conservation Examples

Residential

- ENERGY STAR washers and dryers
- Wall insulation
- Heat pumps
- Heat pump water heaters

Commercial

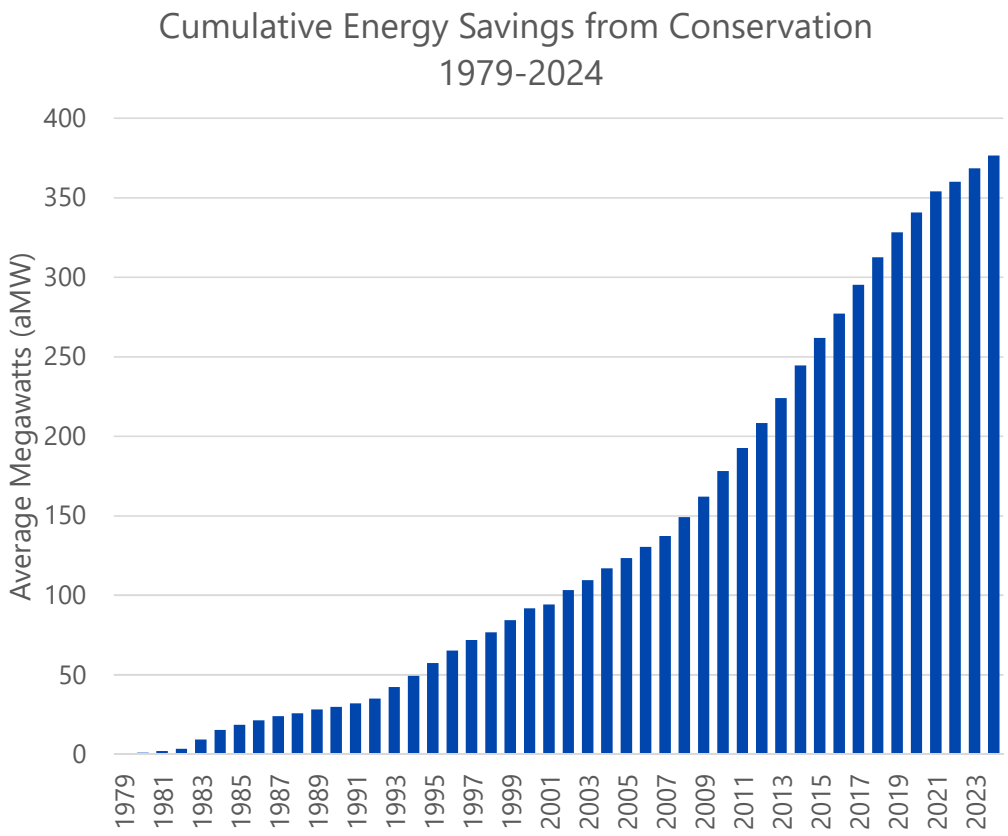
- Triple glazed windows
- Building automation systems
- HVAC retro-commissioning

3

Conservation at City Light

- A top resource choice
  - Lower cost
  - Lower risk
  - Low environmental impact
  - Avoids transmission constraints

Our Conservation Legacy



5

Energy Conservation Targets – State Law

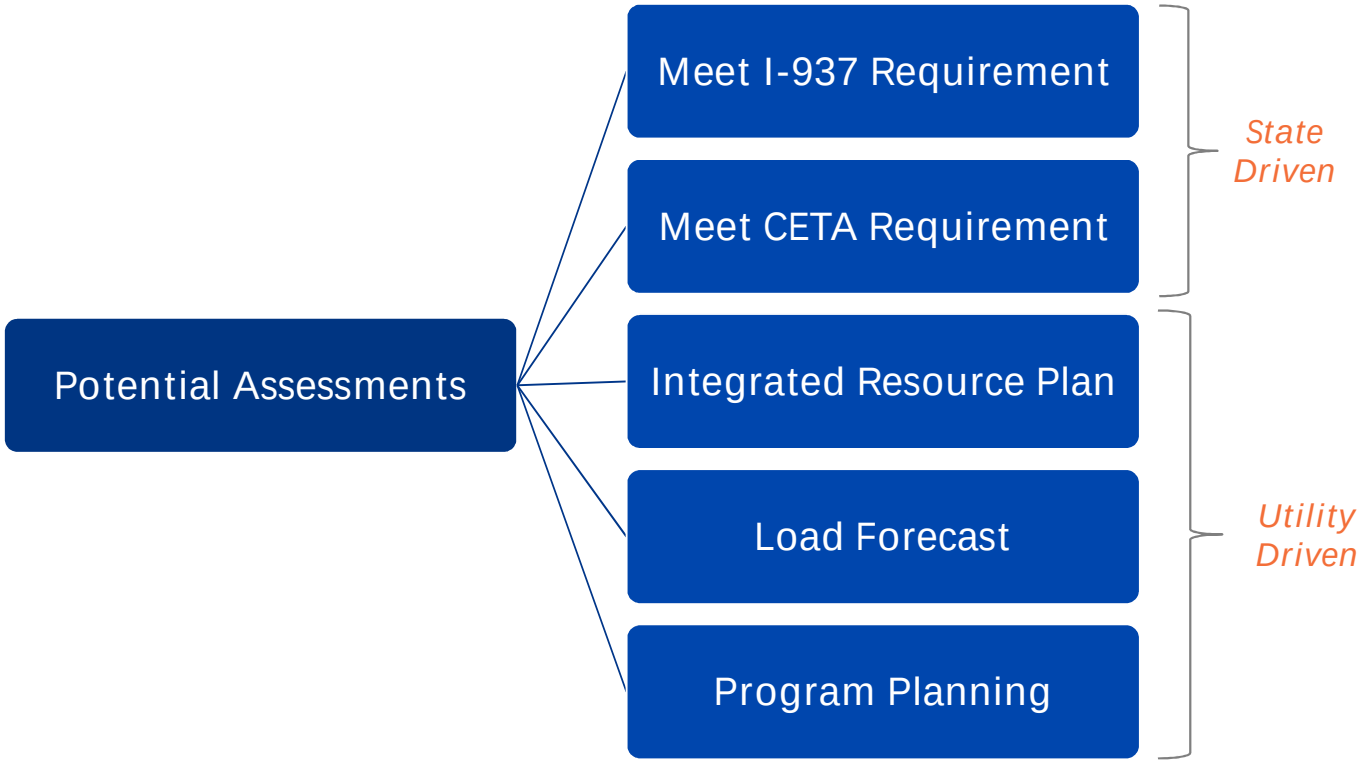
- Required by Washington Energy Independence Act (I-937) and the Clean Energy Transformation Act (CETA)
- Utilities must
  - Pursue "all available conservation that is cost-effective, reliable, and feasible"
  - Set 2-year conservation target, 10-year conservation target, every two years
  - Collect enough conservation to meet the 2-year target

How We Calculate Energy Conservation Targets

Potential Assessment Study

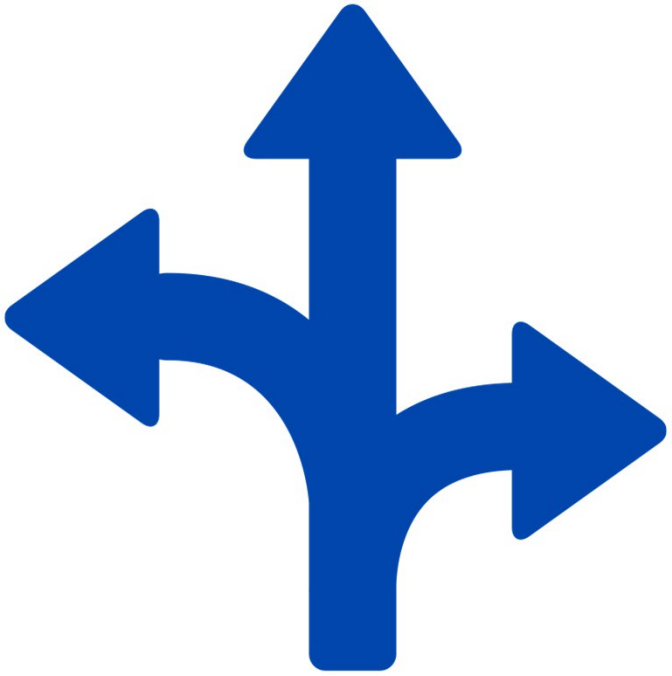
- Identifies the amount, timing, and cost of conservation
- Specific to our service territory
- Weighs against supply-side resources
- Identifies amount of conservation that is ‘least-cost’
- Methodology is set by state law

Why We Do Potential Assessments



CETA = Clean Energy Transformation Act

Conservation Targets Change Over Time

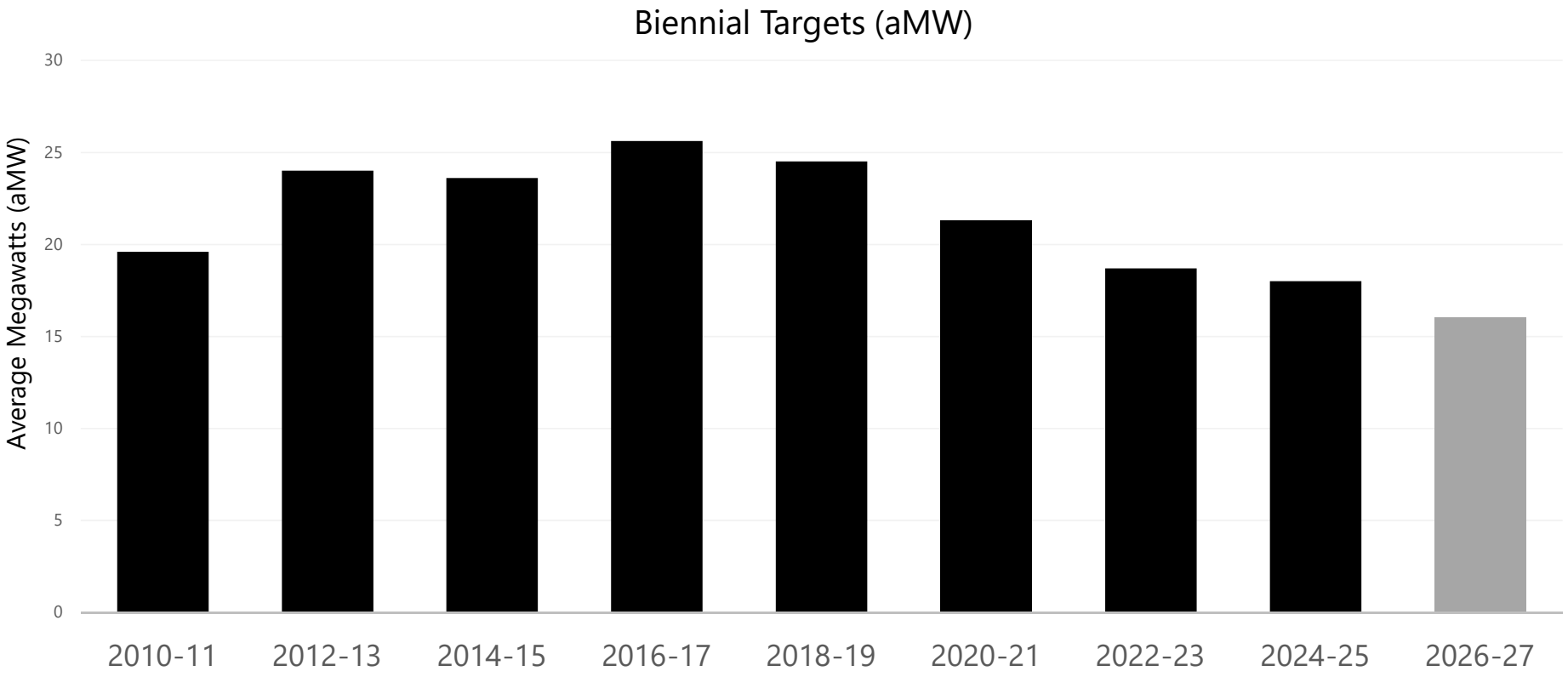


I-937: Utilities must pursue "all available conservation that is cost-effective, reliable, and feasible"

Drivers of change

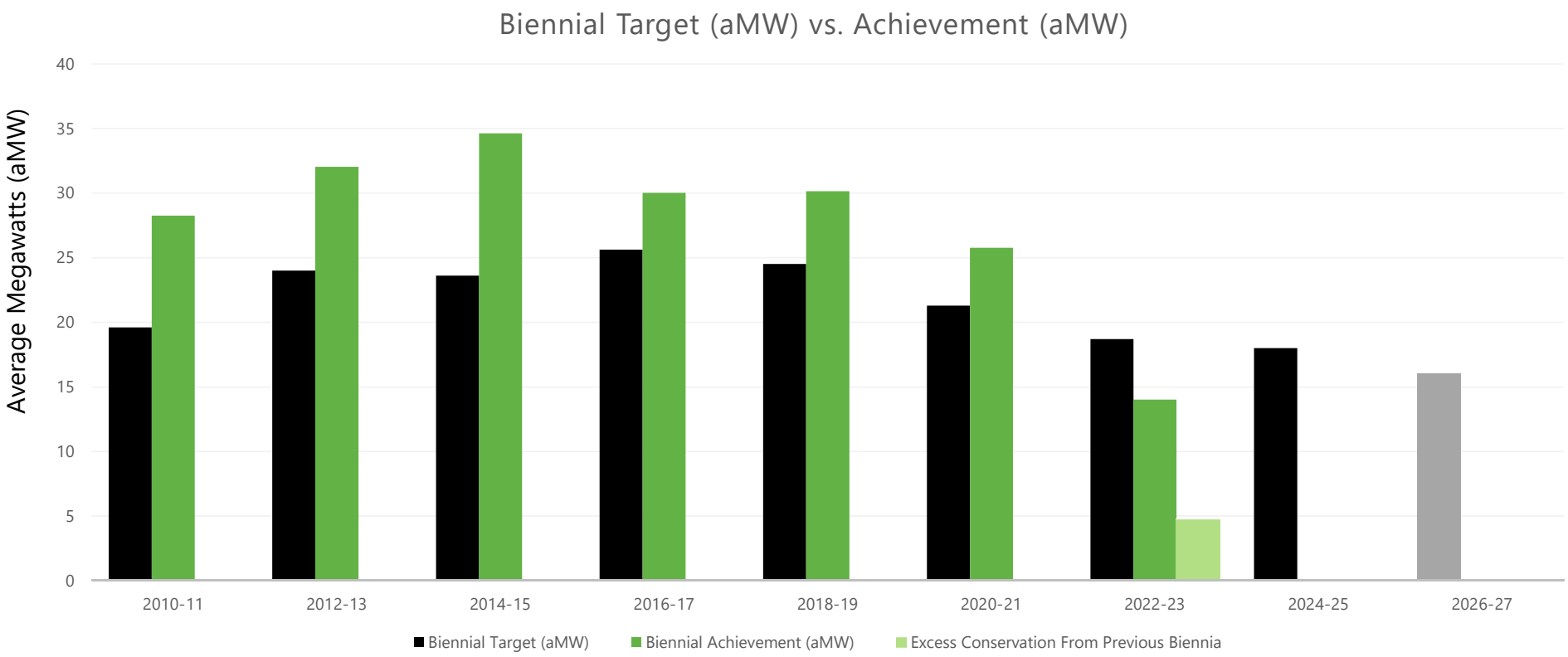
- Market transformation
- Local market conditions
- Government policies

Conservation Targets Over Time



10

Conservation Targets and Achievement Over Time



Request: Approve Conservation Targets

We request adoption of:

- 2026-2035 (ten-year) conservation target: 78 aMW
- 2026-2027 (two-year) conservation target: 16 aMW
  - (Equivalent energy to ~9,500 homes annually)

Sector	10-Year aMW (2026-2035)	2-Year aMW (2026-2027)
Commercial	62	12
Industrial	6	1
Residential	9	2
Total	78	16

THANK YOU

Seattle City Light

Legislation Text

File #: Inf 2720, **Version:** 1

Baker Tilly Audit

The City of Seattle—
City Light Department

Enterprise Fund of The City of Seattle

Financial Statements as of and for the
Years Ended December 31, 2024 and 2023,
Required Supplementary Information,
Other Information, and
Independent Auditors' Report

ENTERPRISE FUND OF THE CITY OF SEATTLE
TABLE OF CONTENTS

Independent Auditors' Report

To the Sustainability, City Light, Arts & Culture Committee of
City of Seattle, City Light Department

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of the City of Seattle, City Light Department (Department), an enterprise fund of the City of Seattle, Washington, as of and for the years ended December 31, 2024 and 2023, and the related notes to the financial statements, as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the financial position of the Department, as of December 31, 2024 and 2023, and the changes in financial position and cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States (*Government Auditing Standards).* Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Department and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Emphasis of Matter

As discussed in Note 1, the financial statements of the Department are intended to present the financial position, the changes in the financial position, and cash flows of only the Department. They do not purport to, and do not, present fairly the financial position of the City of Seattle, Washington, as of December 31, 2024, and 2023, and the changes in financial position, or cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America; and for the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Department's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the required supplementary information, as listed in the table of contents be presented to supplement the financial statements. Such information is the responsibility of management and, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Management is responsible for the other information as identified in the table of contents. The other information does not include the financial statements and our auditors' report thereon. Our opinion on the financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated April 30, 2025 on our consideration of the Department's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Department's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Department's internal control over financial reporting and compliance.

Madison, Wisconsin
April 30, 2025

The following discussion and analysis of the financial performance of The City of Seattle—City Light Department (the Department) provides a summary of the financial activities for the years ended December 31, 2024 and 2023. This discussion and analysis should be read in combination with the Department's financial statements, which immediately follow this section.

ORGANIZATION

The Department is the public electric utility of The City of Seattle (the City). As an enterprise fund of the City, the Department owns and operates generating, transmission and distribution facilities and delivers electricity to approximately 513,500 customers in Seattle and certain surrounding communities, and other City agencies.

OVERVIEW OF THE FINANCIAL STATEMENTS

The Department's accounting records are maintained in accordance with generally accepted accounting principles for proprietary funds as prescribed by the Governmental Accounting Standards Board (GASB). The Department's accounting records also follow the Uniform System of Accounts for Public Licensees prescribed by the Federal Energy Regulatory Commission (FERC).

This discussion and analysis serve as an introduction to the Department's financial statements, which are composed of the financial statements and the notes to the financial statements and include the following:

Statements of Net Position, Statements of Revenues, Expenses, and Changes in Net Position, and Statements of Cash Flows—The financial statements provide an indication of the Department's financial health. The Statements of Net Position include all the Department's assets, deferred outflows of resources, liabilities, deferred inflows of resources, and net position using the accrual basis of accounting, and indicate which assets may be utilized for general purposes and which are restricted due to bond covenants and other commitments. The statements of revenues, expenses, and changes in net position report all the revenues and expenses during the time periods indicated. The statements of cash flows report the cash provided and used by operating activities, as well as other cash sources, such as investment income and cash payments for bond principal and capital additions and betterments.

Notes to the Financial Statements—The notes to the financial statements provide additional information needed for a full understanding of the data provided in the financial statements.

CONDENSED STATESMENTS OF NET POSITION

($ in millions)	December 31 2024	2023	2022
Assets:			
Utility plant—net	$ 4,970.9	$ 4,762.1	$ 4,550.9
Restricted assets	224.1	225.9	210.3
Current assets	622.9	615.4	716.6
Other assets	496.7	490.0	465.1
Total assets	6,314.6	6,093.4	5,942.9
Total deferred outflows of resources	90.3	113.2	72.8
Total assets and deferred outflows of resources	$ 6,404.9	$ 6,206.6	$ 6,015.7
Liabilities:			
Long-term debt	$ 2,833.9	$ 2,783.5	$ 2,795.3
Noncurrent liabilities	425.2	441.3	284.4
Current liabilities	341.2	360.2	341.4
Other liabilities	41.7	36.3	36.3
Total liabilities	3,642.0	3,621.3	3,457.4
Total deferred inflows of resources	162.7	169.8	268.0
Net position:			
Net investment in capital assets	2,338.5	2,185.5	1,953.7
Restricted:			
Rate stabilization account	25.0	25.0	25.0
Total restricted	25.0	25.0	25.0
Unrestricted—net	236.7	205.0	311.6
Total net position	2,600.2	2,415.5	2,290.3
Total liabilities, deferred inflows, and net position	$ 6,404.9	$ 6,206.6	$ 6,015.7

ASSETS

Utility Plant—Net

2024 Compared to 2023 Utility plant assets net of accumulated depreciation and amortization increased $208.8 million to $4,970.9 million in 2024. The following table sets forth the increases in utility plant (before depreciation and amortization) year over year:

Utility Plant Assets:	2024	increase	2023
Hydroelectric Production Plant	1,066.9	31.7	1,035.2
Transmission Plant	381.1	9.6	371.5
Distribution Plant	3,875.7	183.3	3,692.4
General Plant	481.1	40.6	440.5
Intangibles Plant	854.0	15.9	838.1
Total	6,658.8	281.1	6,377.7

The $281.1 million increase in utility plant assets to $6,658.8 million was partially offset by a $159.7 million increase in accumulated depreciation and amortization to $2,611.2 million. The components of the increase in utility plant assets include the following:

- The $31.7 million increase in Hydro Assets is primarily due to a $25.1 million increase for miscellaneous Hydro Equipment, a $5.7 million increase in Hydro Structures, a $0.7 million increase for Hydro Turbines, a $0.1 million increase for Hydro Dams, and a $0.1 million increase for Roads and Bridges.
- The $9.6 million increase in Transmission is primarily due to a $6.4 million increase for Transmission Station Equipment, a $3.0 million increase for Transmission Structures, and a $0.2 million increase for Transmission Underground Lines and other.
- The $183.3 million increase in Distribution Plant is due to a $54.0 million net increase for Underground, an increase of $39.0 million related to Services, Station Equipment, Street Lights, a $29.2 million increase for Network, a $28.1 million increase for Overhead, a $25.0 million increase for Poles, and a $8.0 million increase for Meters.
- The $40.6 million increase in General Plant is primarily due to a $28.9 million increase for Equipment and Tools, a $13.5 million increase for General Structure improvements, partially offset by $1.8 million in vehicle and truck retirements.
- The $15.9 million increase in Intangible Assets is primarily due to a net $15.9 million increase in Software related to Customer Service Portal and Advanced Meter Infrastructure Upgrades.

Other components of utility plant include:

- Construction work-in-progress (CWIP) of $741.3 million, an increase of $84.3 million over the prior year, driven by an addition of $395.8 million offset by capitalization of $311.5 million.
  The $741.3 million CWIP is for ongoing construction in the following areas:
  - $64.6 million for Substations and structures,
  - $305.4 million for improvements to Distribution System
  - $102.1 million for Hydro
  - $104.5 million for General Tools and Equipment
  - $123.9 million for Software & Licenses
  - $40.8 million for Transmission

- Nonoperating property has a balance of $21 million, which is an increase of $2.2 million.
- Assets held for future use is $3.1 million, same as the prior year with a slight decrease of $29.4 thousand.
- Land and land rights is $157.7 million, which is an increase of $1.0 million.

See Note 3 Utility Plant of the accompanying financial statements.

2023 Compared to 2022 Utility plant assets net of accumulated depreciation and amortization increased $211.2 million to $4,762.1 million in 2023. The following table sets forth the increases in utility plant (before depreciation and amortization) year over year:

Utility Plant Assets:	2023	increase	2022
Hydroelectric Production Plant	$ 1,035.2	$ 34.0	$ 1,001.2
Transmission Plant	371.5	9.6	361.9
Distribution Plant	3,692.4	158.2	3,534.2
General Plant	440.5	2.2	438.3
Intangibles Plant	838.1	5.0	833.1
	$ 6,377.7	$ 209.0	$ 6,168.7

The $209.0 million increase in utility plant assets to $6,377.7 million was partially offset by a $124.4 million increase in accumulated depreciation and amortization to $2,451.5 million. The components of the increase in utility plant assets include the following:

- The $34.0 million increase in Hydro Assets is primarily due to a $29.2 million increase for Hydro Turbines, $2.4 for Hydro Dams, $1.1 million for Roads and Bridges, $0.8 million in Hydro Structures, and a $0.5 million increase for miscellaneous Hydro Equipment.
- The $9.6 million increase in Transmission is primarily due to an $8.4 million increase for Transmission Station Equipment, $0.7 million for Transmission Structures, and $0.5 million for Transmission Underground Lines and other.
- The $158.2 million increase in Distribution Plant is due to a $38.8 million increase for Poles, a $35.3 million net increase for Underground, $27.7 million increase for Network, a $24.9 million increase for Overhead, an increase of $17.1 million related to Services, Station Equipment, Street Lights, and $14.4 for Meters.
- The $2.2 million increase in General Plant is primarily due to a $5.2 million increase for General Structure improvements, and a $1.7 million increase for Equipment and Tools, offset by $4.7 million in vehicle and truck retirements.
- The $5.0 million increase in Intangible Assets is primarily due to a net $27.8 million increase in Software related to Customer Service Portal and Advanced Meter Infrastructure Upgrades, offset by a net $22.8 million decrease in relicensing costs primarily due to the reversal of premature capitalizations for Skagit Relicensing.

Other components of utility plant include:

- Construction work-in-progress (CWIP) of $657.0 million, an increase of $125.1 million over the prior year, driven by an addition of $425.3 million offset by capitalization of $300.2 million.
  The $657.0 million of CWIP is for ongoing construction in the following areas:
  - $68.2 million for Substations and structures
  - $254.4 million for improvements to Distribution System
  - $79.3 million for Hydro
  - $106.7 million for General Tools and Equipment
  - $95.9 million for Software & Licenses
  - $33.4 million for Transmission
  - $19.1 million for miscellaneous capital
- Nonoperating property has a balance of $19.0 million, which increased $0.7 million.
- Assets held for future use is $3.1 million, same as the prior year with a slight decrease of $29.4 thousand.
- Land and land rights is $156.8 million, which increased $0.9 million.

Restricted Assets

2024 Compared to 2023 Restricted assets decreased by $1.8 million to $224.1 million.

Construction funds balance decreased by $13.5 million in 2024 compared to 2023 as the funds had been fully depleted by the end of 2024.

The Rate Stabilization Account (RSA) increased by a net $2.4 million to $68.2 million. Details are below:

($ in millions)	**2024**	**2023**
Rate Stabilization Account		
Beginning balance	$ 65.8	$ 75.0
Council authorized transfer to RSA	-	100.0
Surcharge revenue	39.4	-
Operating revenue	(37.0)	(109.2)
Ending balance	$ 68.2	$ 65.8

In 2024, actual net wholesale revenue was $33.7 million less than budgeted primarily due to hydro generation substantially below the historical average. The $37.0 million net transfer reflects a true-up from the previous year made from the RSA to the operating cash account during the year. Transfers from the RSA were partially offset by $39.4 million resulting from the 4.0% surcharge that went into effect on January 1, 2024. See Note 4 Rate Stabilization Account of the accompanying financial statements.

Other restricted assets increased by $9.3 million to $155.9 million. The bond reserve account increased by $3.9 million due to 2024 interest income. The debt service account decreased by $0.7 million mainly due to the lower bond interest and principal payment pending for payment at the end of 2024. Special deposits and other restricted assets increased by $6.1 million due to an increase in customer prepayments by $13.0 million and Climate Commitment Act related payments by $2.2 million, partially offset by lower Make Ready Work and other deposits of $9.1 million.

2023 Compared to 2022 Restricted assets increased by $15.6 million to $225.9 million.

Construction funds increased by $13.5 million in 2023. In 2022 the funds had been fully depleted by the end of the year.

The Rate Stabilization Account (RSA) decreased by a net $9.2 million to $65.8 million. Details are below:

($ in millions)	**2023**	**2022**
Rate Stabilization Account		
Beginning Balance	$ 75.0	$ 99.4
Council Authorized transfer to RSA	100.0	-
Operating Revenue	(109.2)	(24.4)
Ending Balance	$ 65.8	$ 75.0

In 2023, actual net wholesale revenue was $105.0 million less than the $40.0 million adopted planning value. The $109.2 million transfer reflects a true-up from previous year, as well as an estimate for the December transfer (which was trued up in January 2024). This transfer was partially offset by $100.0 million transferred to the RSA from operating cash ($30.0 million in May, $30.0 million in August and $40.0 million in December) in accordance with Seattle City Ordinance No. 126819, which authorizes discretionary transfers to prevent the RSA from being depleted. The Ordinance also postponed a June 1, 2023 surcharge that was triggered based on the end March RSA balance, per the RSA rules. However, this was not sufficient to avoid an RSA surcharge further, which was triggered at the end of September and a 4.0% surcharge was implemented Jan 1, 2024. See Note 4 Rate Stabilization Account of the accompanying financial statements.

Other restricted assets increased by $11.3 million to $146.6 million. The bond reserve account increased by $3.2 million due to 2023 interest income. The debt service account decreased by $1.1 million mainly due to the lower bond interest and principal payment pending for payment at the end of 2023. Special deposits and other restricted assets increased by $9.2 million due to higher Make Ready Work deposits of $9.7 million and an increase in fair value of $1.0 million, partially offset by a $1.5 million decrease in customer prepayments.

Current Assets

2024 Compared to 2023 Current assets increased by $7.5 million to $622.9 million.

Operating cash increased by $6.2 million to $269.4 million.

Accounts receivable increased by $0.8 million to $194.6 million in 2024 compared to 2023 due to the following components:

- $3.2 million decrease in retail electric receivables net of allowance. The $7.0 million year-over-year increase in the allowance was mainly due to additional Service Agreement types included in the calculation for the allowance for doubtful accounts partially offset by the $3.8 million increase in retail electric receivables primarily due to a 2024 rate increase.
- $2.5 million decrease in short-term payment arrangements due to tightened restrictions surrounding qualifying events.
- $7.2 million increase in non-electric service receivables net of allowance mostly due to the Time and Materials and Make Ready Work projects.
- $2.0 million decrease in short-term wholesale energy and transmission receivable, attributable to a decrease in 2024 net sale transactions compared to 2023.
- $1.3 million increase in grants accounts receivable.

Unbilled revenues decreased by $4.2 million due to lower unbilled retail consumption compared to December 2023 partially offset by the average rate increase in 2024.

Materials, supplies, and inventory increased by $4.6 million to $60.1 million in 2024 compared to 2023 due to the following components:

- The utility electric materials commodity contributed $2.2 million to the increase. Inventory volume and mix added $1.7 million, and cost contributed $0.5 million. The year over year volume growth mitigated increased lead times.
- There was an addition of 376 utility poles in inventory, resulting in a $1.1 million increase. 84% of the increase can be attributed to two pole types (40-foot, class 3 and 75-foot class 1).
- An increased demand for Switches has added $0.7 million with volume impacting $0.4 million and price $0.3 million.
- The spares commodity increased $0.2 million primarily driven by volume.
- The remaining $0.4 million increase is attributed to a mix of volume and price across other inventory commodities.

Other current assets increased by $0.1 million to $5.8 million in 2024.

2023 Compared to 2022 Current assets decreased by $101.2 million to $615.4 million.

Operating cash decreased by $85.4 million to $263.2 million. The lower cash balance is a result of decreased net wholesale energy transactions, higher debt service costs, and higher capital contributions offset by higher inflows from retail revenue, and transfers from the Rate Stabilization Account (RSA).

Accounts receivable decreased by $9.2 million to $195.3 million in 2023 compared to 2022 due to the following components:

- $0.8 million increase in retail electric receivables net of allowance. The lower allowance in 2023 is a result of continued collection efforts and the Utility Residential Customer Arrearages grant.
- $0.5 million increase in payment arrangements, as more customers signed up to pay outstanding bills.
- $3.4 million decrease in non-electric service receivables net of allowance mostly due to the higher allowance in 2023, as more invoices remained unpaid at the end of 2023 than 2022.
- $0.5 million increase in late fee charges for non-electric service receivable.
- $4.8 million increase in short-term wholesale energy and transmission receivable, attributable to an increase in December 2023 net sale transactions compared to December 2022. December 2022 had a comparably low amount of net sale transactions as a result of cold weather driving higher load, higher prices, and lower generation from Boundary and Skagit.
- $12.4 million decrease in accounts receivable from other governments. The decrease is due to the lower credits from the Bonneville Power Administration (BPA) Power Reserves Distribution Clause for $13.8 million and Federal Energy Regulatory Commission (FERC) land use fee credit for $4.0 million partially offset by $2.4 million increase due from Seattle IT related to CCM expense allocations, a $1.9 million increase from government invoices, and a $1.1 million increase in federal interest subsidies for the Department's bonds.

Unbilled revenues decreased by $14.8 million due to lower unbilled retail consumption compared to December 2022 partially offset by the 4.5% average rate increase in 2023.

Materials, supplies, and inventory increased by $8.2 million to $55.5 million in 2023 compared to 2022 due to the following components:

- The wire and cable commodity contributed $3.3 million to this increase, primarily driven by mix and price increases in primary underground cable of $1.7 million and $1.6 million due to additional volume in other categories.

- The meter commodity added an additional $1.9 million due to new items and long lead times in support of the utility's needs.
- The utility electric materials commodity contributed to a $1.5 million increase due to inventory volume growth to mitigate increasing lead times.
- There was an addition of 153 utility poles in inventory, resulting in a $0.6 million increase. 40% of the increase was in the composite pole category which has a significantly higher price than Douglas fir poles. The Douglas fir pole increased in volume and price due to a full transition to a new more costly treatment process.

The balance of the year over year inventory variance is due to an increase of $0.4 million in PVC conduit and composite crossarms impacted by rising resin other petroleum products and $0.5 million due to increased volumes as well as pricing in lighting, hardware, and miscellaneous supplies.

Other Assets

2024 Compared to 2023 Total Other assets of $496.7 million increased by $6.7 million from 2023.

The $6.7 million year over year increase included the following:

- Regulatory assets for environmental cleanup increased by $19.8 million. These are the estimated costs to remediate several Superfund sites along the Duwamish River for which the Department has been designated as a responsible party.
- Conservation costs increased by $0.8 million due to additions to various programs. See Note 7 Other Assets of the accompanying financial statements.
- The $4.8 million decrease in long-term receivable is the result of the GASB Statement No. 87, entry.
- The $3.3 million decrease in FERC land use fee refund credit.
- The $2.9 million decrease in the long term payment arrangements balance due to ongoing payment and tightened restrictions surrounding qualifying events.
- The $2.0 million decrease for ongoing payment from local jurisdictions for underground infrastructure improvements loans.
- Other, $0.9 million decrease.

2023 Compared to 2022 Total Other assets of $490.0 million increased by $24.9 million from 2022.

The $24.9 million year over year increase included the following:

- Regulatory assets for environmental cleanup increased by $23.3 million. These are the estimated costs to remediate several Superfund sites along the Duwamish River for which the Department has been designated a responsible party.
- Conservation costs increased by $1.6 million due to additions to various programs. See Note 7 Other Assets of the accompanying financial statements.

Deferred Outflows of Resources

2024 Compared to 2023 Deferred outflows of resources decreased by $22.9 million to $90.3 million.

In 2024, pension-related deferred outflows decreased by a net $25.1 million due to a $26.6 million decrease in the difference between projected and actual earnings and a $7.0 million decrease related to changes in actuarial assumptions, partially offset by a $7.2 million increase in contributions and a $1.3 million increase in the difference between expected and actual experience. The most recent actuarial experience study was used to update assumptions, including for salary increase, mortality, and retirement rates. See Note 13 Seattle City Employees' Retirement System of the accompanying financial statements.

Deferred outflow of resources pertaining to GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits other than Pensions (OPEB)*, increased by $4.1 million.

Charges on advance refunding account balance decreased by a net $1.9 million due to 2024 amortization.
2023 Compared to 2022 Deferred outflows of resources increased by $40.4 million to $113.2 million.

In 2023, pension-related deferred outflows increased by a net $44.0 million due to a $52.8 million increase in the difference between projected and actual earnings and a $0.6 million increase in contributions, partially offset by a $9.2 million related to changes in actuarial assumptions and a $0.2 million decrease in the difference between expected and actual experience. The most recent actuarial experience study was used to update assumptions, including for salary increase, mortality, and retirement rates. See Note 13 Seattle City Employees' Retirement System of the accompanying financial statements.

Deferred outflow of resources pertaining to GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits other than Pensions (OPEB)*, decreased by $0.4 million.

Charges on advance refunding account balance decreased by a net $3.2 million. 2023 activity consisted of amortization, 2012 and 2013 bonds refunding and 2014 and 2017 bonds defeasance.

LIABILITIES

Long-Term Debt

2024 Compared to 2023 Long-term debt increased a net $50.4 million to $2,833.9 million during 2024.

The Department issued fixed rate bonds in the amount of $199.7 million. The fixed bond proceeds were used for ongoing capital improvement programs and for a $20.8 million refunding of the 2014 bonds on a current basis.

Debt to capitalization ratio was 50.8% at the end of 2024, a decrease from 52.2% in 2023.

Net revenues available to pay debt service in 2024 were equal to 1.84 times principal and interest on all bonds. See Note 9 Long-Term Debt of the accompanying financial statements.

2023 Compared to 2022 Long-term debt decreased a net $11.8 million to $2,783.5 million during 2023.

The Department issued fixed rate bonds in the amount of $273.6 million. The fixed bond proceeds were used for ongoing capital improvement programs and for a $12.4 million refunding of the 2012 bonds and $48.3 million of the 2013 bonds on a current basis. The Department also issued $85.8 million of variable rate bonds. The

variable bond proceeds were used to refund $85.4 million of the 2018 variable rate bonds on a current basis. In addition, $27.6 million of 2014 bonds, $29.3 million of 2015 bonds, and $36.7 million of 2017 bonds were defeased in 2023.

Debt to capitalization ratio was 52.2% at the end of 2023, a decrease from 53.6% in 2022.

Net revenues available to pay debt service in 2023 were equal to 1.74 times principal and interest on all bonds.

Noncurrent Liabilities

2024 Compared to 2023 Total noncurrent liabilities decreased by $16.1 million to $425.2 million.

Net Pension liability decreased by $38.4 million based on the most recent actuarial report. This was caused primarily by an increase in plan fiduciary net position due to a better investment performance in 2023 compared to 2022. See Note 13 Seattle City Employees' Retirement System of the accompanying financial statements. Environmental liability increased by $13.1 million. The increase is largely due to increased projected cost for East Waterway, Harbor Island Superfund Site due to the recent update of estimated projected remediation costs at the request of Environmental Protection Agency. City Light and other entities are sharing the cost of investigating contamination in EW. City Light's involvement stems from its sale of transformers to a company on Harbor Island. See Note 15 Environmental Liabilities of the accompanying financial statements.

The remaining increase of $9.2 million is due to a $4.9 million increase in Other Post-Employment Benefits (OPEB) liability and a $4.3 million increase in non-current accrued vacation time primarily due to 2024 and 2023 retroactive annual wage increases. See Note 14 Other Postemployment Benefits (OPEB) of the accompanying financial statements.

2023 Compared to 2022 Total noncurrent liabilities increased by $156.9 million to $441.3 million.

Net Pension liability increased by $130.9 million based on the most recent actuarial report. This was caused primarily by a decrease in plan fiduciary net position due to poor investment performance in 2022.

Environmental liability increased by $27.3 million. The increase is largely due to increased projected cost for East Waterway (EW), Harbor Island Superfund Site as a result of the recent update of estimated projected remediation costs at the request of Environmental Protection Agency. City Light and other entities are sharing the cost of investigating contamination in EW. City Light's involvement stems from its sale of transformers to a company on Harbor Island.

The remaining decrease of $1.3 million is due to a decrease in Other Post-Employment Benefits (OPEB) liability plus a small decrease in non-current accrued vacation time.

Current Liabilities

2024 Compared to 2023 Current liabilities decreased by $19.0 million to $341.2 million due to the following:

- $4.3 million decrease in short-term wholesale power payable primarily due to a decrease in purchase volume, and a decrease in the average purchase price per MWh in 2024 compared to 2023.
- $20.6 million decrease in accounts payable liability.
- $5.1 million increase in customer prepayments primarily for Make Ready Work projects

- $4.1 million increase in claims payable.
- $6.6 million in lower debt due within one year.
- $1.6 million for lower interest payable within one year due to decreased bonds outstanding at the end of 2024.
- $1.2 million for higher taxes payable at the end of 2024 due to higher revenue in 2024.
- $3.7 million increase in payroll and related taxes payable at the end of 2024 due to wage increases.

2023 Compared to 2022 Current liabilities increased by $18.8 million to $360.2 million due to the following:

- $19.5 million decrease in short-term wholesale power payable primarily due to a decrease in purchase volume, and a decrease in the average purchase price per MWh in December 2023 compared to December 2022, $27.8 million. There was also a $0.3 million decrease in miscellaneous power net purchase transactions. This amount is partially offset by an $8.3 million increase from BPA Block Load Shaping, a reallocation of month-to-month volumes with differing rates over the contract year.
- $21.6 million increase in accounts payable liability.
- $9.6 million increase in customer prepayments.
- $4.8 million decrease in claims payable.
- $3.9 million in higher debt due within one year.
- $1.7 million for higher interest payable due to increased bonds outstanding at the end of 2023.
- $6.3 million for higher taxes payable at the end of 2023. The 2022 tax payable was recorded in an interdepartmental liability account, that was paid by the end of the year.

Other Liabilities

2024 Compared to 2023 Other liabilities increased by net $5.4 million to $41.7 million due to a $13.0 million increase in customer prepayments offset by a $7.6 million increase in deferred revenue for contributions in aid of construction.

2023 Compared to 2022 No year over year change in other liabilities.

Deferred Inflows of Resources

2024 Compared to 2023 Deferred inflows of resources decreased by $7.1 million for a total of $162.7 million.

GASB Statement No. 87 transaction resulted in a $5.7 million decrease in deferred inflow. Under the Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources.

The rate stabilization unearned revenue account increased by $2.4 million.

Deferred inflows related to pension liability decreased by $1.1 million. The decrease is due to the difference between projected and actual experience of $1.6 million partially offset by a $0.5 million increase related to changes between employer contributions and proportionate share of contributions.

Deferred inflows of resources pertaining to OPEB decreased by $0.8 million for actuarial changes of assumptions, based on the most recent actuarial experience study.

Other deferred inflows decreased $2.1 million which is comprised of a decrease in FERC land use fee refund credit and other miscellaneous power transactions of $3.3 million, and an increase related to the Department's Energy Conservation Agreement with Bonneville of $1.2 million.

The gain on refunding was $0.3 million higher in 2024 than in 2023.

2023 Compared to 2022 Deferred inflows of resources decreased by $98.2 million for a total of $169.8 million.

GASB Statement No. 87 transaction resulted in a $5.2 million decrease in deferred inflow. Under the Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources.

The rate stabilization unearned revenue account decreased by $9.2 million. $9.2 million was transferred to operating revenues for actual net wholesale revenues which were less than budgeted.

Deferred inflows related to pension liability decreased by $82.2 million. The decrease is due to the difference between projected and actual investment earnings of $86.5 million and a $0.3 million decrease in deferred inflows related to differences between expected and actual experience. This decrease was partially offset by a $4.6 million increase related to changes between employer contributions and proportionate share of contributions.

There was a decrease of $4.0 million primarily due to a FERC Land Use fee refund applied during 2023 from 1996 - 2019 per court order that was partially offset by a $1.8 million increase related to the Department's Energy Conservation Agreement with Bonneville.

The gain on refunding was $0.6 million higher in 2023 than in 2022.

RESULTS OF OPERATIONS

Condensed Statements of Revenues, Expenses, and Changes in Net Position

($ in millions)	Year Ended December 31 2024	2023	2022
Operating revenues	$1,254.2	$1,190.9	$1,238.7
Nonoperating revenues	33.0	35.9	(7.2)
Total revenues	1,287.2	1,226.8	1,231.5
Operating expenses	1,094.6	1,053.3	924.0
Nonoperating expenses	95.8	91.6	88.8
Total expenses	1,190.4	1,144.9	1,012.8
Income before capital contributions and grants	96.8	81.9	218.7
Capital contributions	70.6	43.0	48.4
Capital grants	17.3	0.3	0.2
Total capital contributions and grants	87.9	43.3	48.6
Change in net position	$ 184.7	$ 125.2	$ 267.3

SUMMARY

2024 Compared to 2023 The change in net position for 2024 was $184.7 million, an increase of $59.5 million or 47.5% from the 2023 change in net position of $125.2 million.

The major contributors for the higher net position:

- higher retail electric sales, $91.5 million
- higher short-term wholesale power revenue, $19.4 million
- higher other operating revenue, $0.7 million
- higher capital contributions and grants, $44.6 million
- higher non-capital grants, $0.9 million
- higher interest revenue, $2.1 million
- higher other non-operating revenue, $2.3 million

These were partially offset by the following components:

- lower other power-related revenue, $36.7 million
- higher transfers to RSA, $11.6 million
- higher operating expenses, $41.3 million
- lower fair value adjustment, $8.2 million
- higher interest expense, $4.2 million

2023 Compared to 2022 The change in net position for 2023 was $125.2 million, a decrease of $142.1 million or 53.2% from the 2022 change in net position of $267.3 million.

The major contributors for the lower net position:

- higher retail electric sales, $12.2 million
- higher other operating revenue, $2.1 million
- higher fair value adjustment and interest revenue, $43.1 million
- greater capital grants, $0.1 million

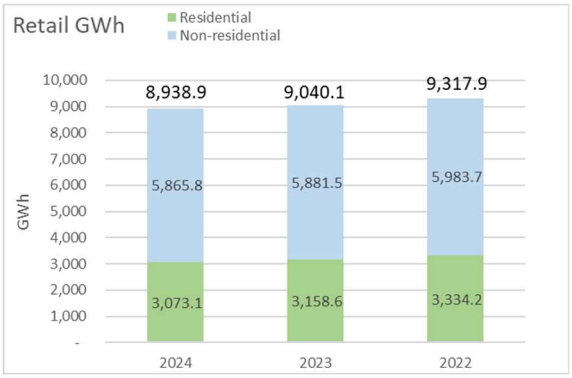
These were partially offset by the following components:

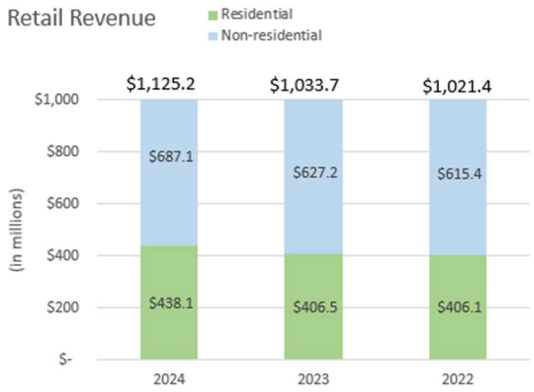
- lower short-term wholesale power and other power-related revenue, $46.9 million
- lower transfers from RSA, $15.2 million
- higher operating expenses, $129.3 million
- higher interest expense, $2.8 million
- lower capital contributions and grants, $5.4 million

REVENUES

2024 Compared to 2023 Total operating revenue was $1,254.2 million, an increase of $63.3 million or 5.3% from 2023. Retail power revenues at $1,125.2 million increased $91.5 million, Short-term wholesale power revenues at $75.6 million increased $19.4 million, Other power-related revenues at $34.4 million decreased $36.7 million, Transfers to RSA increased by $11.6 million, and Other operating revenues at $21.4 million increased by $0.7 million.

Higher Retail power revenues for $91.5 million were the net result of higher residential revenues, $31.6 million, and higher nonresidential revenues, $59.9 million. There was a retail rate increase on January 1, 2024 of approximately 4.5% on average.





Transfers from/(to) the RSA are determined by the departure of actual net wholesale power revenues from budget. In 2024, actual net wholesale revenue was $33.7 million less than forecasted. The $37.0 million transfer reflects a true-up from previous year, as well as an estimate for the December transfer (which was trued up in January 2025). Transfers from the RSA were partially offset by a $39.4 million surcharge revenue resulting from the 4.0% surcharge. See Note 4 Rate Stabilization Account of the accompanying financial statements.

($ in millions)	**2024**	**2023**
Rate Stabilization Account		
Beginning balance	$ 65.8	$ 75.0
Council authorized transfer to RSA	-	100.0
Surcharge revenue	39.4	-
Operating revenue	(37.0)	(109.2)
Ending balance	$ 68.2	$ 65.8

Short-term wholesale power revenues represent revenue received from the sale of power generated in excess of retail sales and other obligations and were $75.6 million, an increase of $19.4 million compared to $56.2 million in 2023. Short-term wholesale power revenues fluctuate with changes in water conditions, retail sales, and commodity prices.

City Light is active in the wholesale power market both buying and selling energy. For a more comprehensive overview of wholesale energy transactions City Light management often reviews net wholesale revenue, where wholesale purchases are deducted from wholesale sales and adjusted for book-outs. Net wholesale revenues were $11.8 million in 2024, $80.1 million higher than in 2023, but lower than forecasted due to historically low hydro generation and high average wholesale market prices.

Net Wholesale Revenue, $ Million

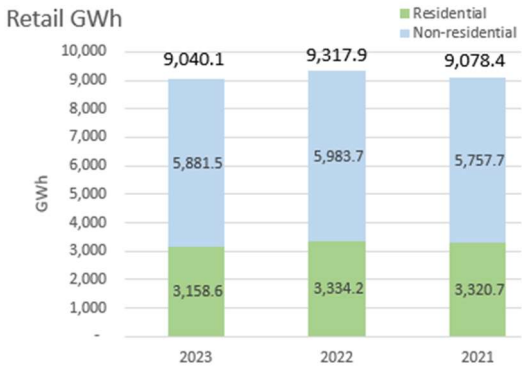
	2024	**2023**	**2022**
Wholesale Power Revenue	$ 75.6	$ 56.2	$ 97.7
Wholesale Power Purchases	(63.8)	(124.5)	(86.2)
Booked out Long-Term Purchases	-	-	1.6
Net Wholesale Revenue	**$ 11.8**	**$ (68.3)**	**$ 13.1**

Other power-related revenues, net, decreased by $36.7 million. This is attributable to a $28.5 million decrease from the Lucky Peak exchange contract, a $5.8 million decrease in the valuation of energy exchange contracts, and a $5.1 million decrease in BPA loss returns, partially offset by a $2.7 million increase in other miscellaneous revenues. Lucky Peak generation was used to meet City Light's load requirements in 2024. BPA loss returns are treated as a cash expense with no offsetting fair value revenue starting in 2024.

Other operating revenue increased by $0.7 million mainly due to an increase of $2.7 million in late fees partially offset by $2.0 million decrease in service connections billing.

2023 Compared to 2022 Total operating revenues were $1,190.9 million, decrease of $47.8 million or 3.9% from 2022. Retail power revenues at $1,033.7 million increased $12.2 million, Short-term wholesale power revenues at $56.2 million decreased $41.5 million, Other power-related revenues at $71.1 million decreased $5.4 million, Transfers from/(to) RSA at $9.2 million decreased by $15.2 million, and Other operating revenues at $20.7 million increased by $2.1 million.

Higher Retail power revenues for $12.2 million were the net result of higher billed residential revenues, $23.4 million, and higher nonresidential revenues, $15.1 million, offset by lower net change of unbilled revenue, $26.2 million. There was a retail rate increase on January 1, 2023 of approximately 4.5% on average. Higher electric sales were due to colder than normal temperatures during the February to April and November periods, faster post-pandemic recovery in the commercial sector and higher saturation of cooling equipment for residential customers.



Transfers from/(to) the RSA are determined by the departure of actual net wholesale power revenues from budget. In 2023, actual net wholesale revenue was $105.0 million less than forecasted. The $109.2 million transfer reflects a true-up from previous year, as well as estimate for the December transfer (which was trued up in January 2024). This transfer was partially offset by $100.0 million transferred to the RSA from operating cash ($30 million in May, $30 million in August and $40 million in December) in accordance with Seattle City Ordinance No. 126819, which authorizes discretionary transfers to prevent the RSA from being depleted. The Ordinance also postponed a June 1, 2023 surcharge that was triggered based on the end March RSA balance, per the RSA rules. However, this was not sufficient to avoid an RSA surcharge further, which was triggered at the end of September and a 4.0% surcharge was implemented Jan 1, 2024. See Note 4 Rate Stabilization Account of the accompanying financial statements.

($ in millions)	2023	2022
Rate Stabilization Account		
Beginning Balance	$ 75.0	$ 99.4
Council Authorized transfer to RSA	100.0	-
Operating Revenue	(109.2)	(24.4)
Ending Balance	$ 65.8	$ 75.0

Short-term wholesale power revenues represent revenue received from the sale of power generated in excess of retail sales and other obligations and were $56.2 million, a decrease of $41.5 million compared to $97.7 million recorded in 2022. Short-term wholesale power revenues fluctuate with changes in water conditions, retail sales, and commodity prices.

City Light is active in the wholesale power market both buying and selling energy. For a more comprehensive overview of wholesale energy transactions City Light management often reviews net wholesale revenue, where wholesale purchases are deducted from wholesale sales and adjusted for book-outs. Net wholesale revenues were negative $68.3 million in 2023, $81.4 million lower than in 2022. This shortfall reflects very low hydro generation owing to dry conditions exacerbated by higher-than-expected retail sales increasing the need to purchase power on the wholesale market at very high market prices.

Net Wholesale Revenue, $ Million

	2023	2022	2021
Wholesale Power Revenue	$ 56.2	$ 97.7	$ 66.3
Wholesale Power Purchases	(124.5)	(86.2)	(38.5)
Booked out Long-Term Purchases	-	1.6	9.8
Net Wholesale Revenue	**$ (68.3)**	**$ 13.1**	**$ 37.6**

Other power-related revenues, net, decreased by $5.4 million. The valuation of energy exchange contracts decreased by $11.5 million. This decrease was partially offset by $4.0 million from the Lucky Peak exchange contract having a more favorable premium. Other miscellaneous increased by $1.9 million.

Other operating revenue decreased by $2.1 million mainly due to an increase of $1.3 million in Operation and Maintenance revenues and a $0.8 million increase in cable and telecom pole rentals.

EXPENSES

2024 Compared to 2023 Operating expenses totaled $1,094.6 million, an increase of $41.3 million or 3.9% from $1,053.3 million in 2023.

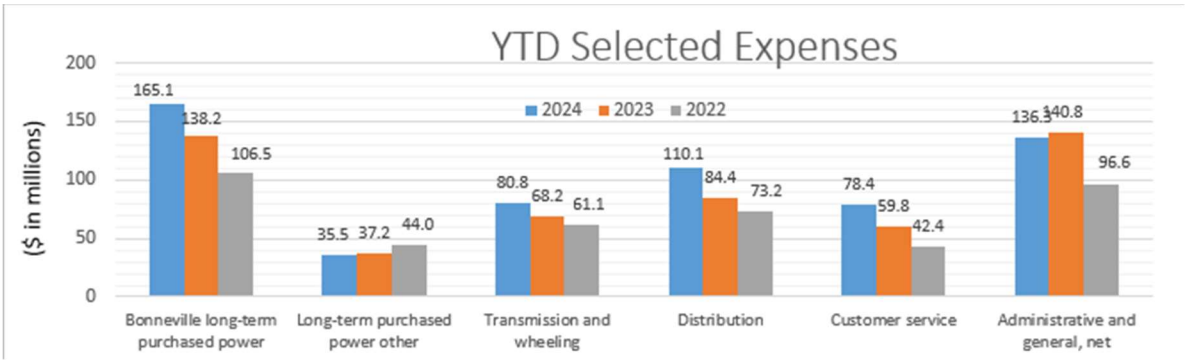
2024 power-related operating expenses at $440.4 million were lower by $29.6 million or 6.3% compared to $470.0 million in 2023 due to the following:

- Long-term purchased power expenses of $200.6 million increased by $25.2 million. Please refer to Note 20 of the accompanying financial statements.
- Short-term wholesale power purchases of $63.8 million decreased by $60.7 million.
- Other power expenses of $95.2 million decreased by $6.7 million.

- Transmission expenses of $80.8 million increased by $12.6 million mostly due to the higher O&M costs for City Light's transmission and higher BPA wheeling costs.

Non-power operating expenses increased by $41.2 million to $352.6 million or 13.2% from $311.4 million in 2023 due to the following:

- Distribution expenses of $110.1 million increased by $25.7 million due to due a higher overtime.
- Customer service of $78.4 million increased by $18.6 million due to the higher bad debt expense of $8.8 million and various other costs of $9.8 million due to wage settlements, including retro payments, as well as higher overtime, which includes the response to the windstorm in November.
- Conservation expenses of $27.8 million increased by $1.4 million due to higher participation in various conservation programs.
- Administrative and general expense of $136.3 million decreased by $4.5 million compared to 2023 primarily due to decreased pension and benefits expense, $28.3 million, and an increase in General expense, $24.8 million due to wage settlements, including retro payments, as well as higher overtime, which includes the response to the windstorm in November.



Taxes in 2024 increased by $16.3 million primarily due to a higher operating revenue in 2024.

Depreciation and amortization of $172.9 million increased by $13.4 million primarily due to replacements and additions to software of $6.8 million, additions to Distribution of $5.1 million, and increases to other of $1.5 million.

2023 Compared to 2022 Operating expenses totaled $1,053.3 million, an increase of $129.3 million or 14.0% from $924.0 million in 2022.

2023 power-related operating expenses at $470.0 million were higher by $60.3 million or 14.7% compared to $409.7 million in 2022 due to the following:

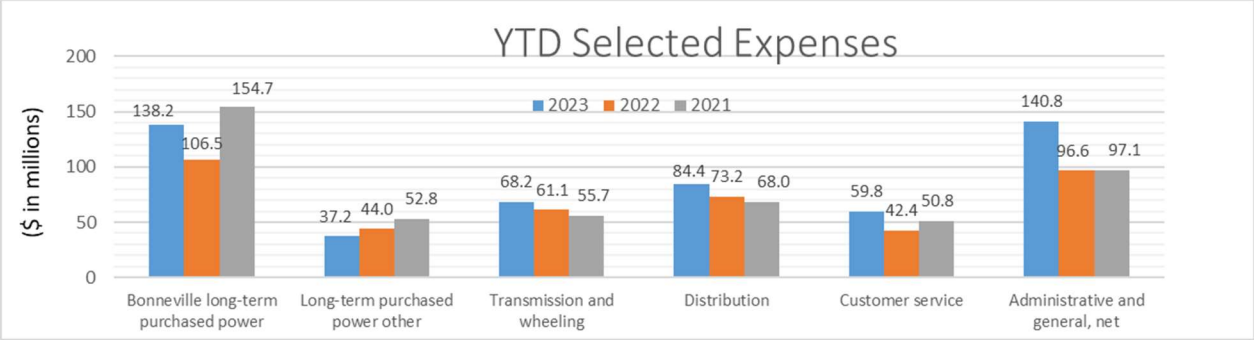
- Long-term purchased power expenses of $175.4 million increased by $24.9 million largely due to a reduced BPA Power Reserves Distribution Clause credit in 2023 by $15.7 million, and a $16.0 million increase due to BPA Block power costs. A $6.8 million decrease in other long-term purchased power partially offset the increases. Please refer to Note 20 of the accompanying financial statements.
- Short-term wholesale power purchases of $124.5 million increased by $38.3 million due to low hydro generation owing to dry conditions exacerbated by higher-than-expected retail sales increasing the need

to purchase power on the wholesale market at very high market prices.

- Other power expenses of $101.9 million decreased by $10.0 million due to the lower generation costs and the lower market prices related to non-monetary transactions, partially offset by an increase in miscellaneous other power costs.
- Transmission expenses of $68.2 million increased by $7.1 million mostly due to the higher O&M costs for City Light's transmission and higher BPA wheeling costs.

Non-power operating expenses increased by $72.9 million to $311.4 million or 30.6% from $238.5 million in 2022 due to the following:

- Distribution expenses of $84.4 million increased by $11.2 million due to less labor being charged to capital work, higher vacancy-driven overtime and increased cost of supplies.
- Customer service of $59.8 million increased by $17.4 million due to the higher bad debt expense of $11.8 million and various other costs of $5.6 million due to continued strong post-pandemic pick up on normal operations.
- Administrative and general of $140.8 million increased by $44.2 million compared to 2022 primarily due to increased pension expense, $27.4 million, and an increase in General expense, $7.8 million.



Taxes in 2023 decreased by $6.6 million primarily due to a tax refund received from the City of Seattle.

Depreciation and amortization at $159.5 million increased by $2.7 million primarily due to replacements and additions of conductors, conduits, poles and software

NONOPERATING REVENUES AND (EXPENSES), CAPITAL CONTRIBUTIONS AND GRANTS

2024 Compared to 2023 Nonoperating revenues, net decreased by $2.9 million due to the lower fair value adjustment of $8.2 million, partially offset by the higher grant revenue, net by $0.9 million and higher interest income by $2.1 million and other non-operating revenue by $2.3 million.

Interest expenses decreased by $4.2 million year over year.

Capital contributions and grants increased by $44.6 million mainly due to the higher volume of processed billing of Time and Materials and Make Ready Work projects, $27.6 million, and higher grants, $17.0 million.

2023 Compared to 2022 Nonoperating revenue increased by $43.1 million in 2023 due to the increased fair value adjustment of $37.3 million, higher interest income of $6.9 million partially offset by lower non-capital grants, net, $0.9 million and other $0.2 million.

Nonoperating expenses increased by $2.8 million year over year due to higher interest because of the increased bonds balance at the end of 2023, $5.6 million, offset by the higher refunding gain amortization, $2.8 million.

Capital contributions and grants decreased by $5.3 million mainly due to the reduced activity in Time and Materials and Joint Use jobs.

RISK MANAGEMENT

The Department evaluates and monitors all strategic risks at the enterprise level, including emergency response, cybersecurity, physical plant security and seismic risks.

The Department's Risk Oversight Council (ROC) is a cross-functional executive committee that has the authority and responsibility for overseeing and implementing the Department's risk management efforts related to wholesale marketing activities. ROC meets at least twice per month to review recent events in the wholesale power markets and the Department's market positions, exposures, policy compliance, and wholesale trading strategies and plans.

Wholesale energy marketing activities are managed by Power Operations and Marketing. Risk Oversight Division manages the market and credit risk related to all wholesale marketing activities and carries out the middle office functions of the Department. This includes risk control, deal review & valuations, independent reporting of market positions and portfolio performance, counterparty credit risk, risk modeling, model validations, settlements, and ensuring adherence to wholesale trading policy and procedures. These divisions report to separate officers to ensure checks and balances.

Hydro Risk

Due to the Department's reliance on hydroelectric generation, weather can significantly affect its operations. Hydroelectric generation depends on the amount of snowpack in the mountains upstream of the Department's hydroelectric facilities, springtime snowmelt timing, run-off, and rainfall. Hydroelectric operations are also influenced by flood control and environmental considerations including protection of fish. In low water years when generation is reduced, the Department will utilize purchased power to meet retail demand. Normally, the Department's retail demand peaks in winter; however, extreme weather conditions affecting either heating or cooling needs could increase costs. In addition, economic trends (increase or decrease in business activity, housing sales and development of properties) can affect demand and costs.

Energy Market Risk

For the Department, energy market risk is the risk of adverse fluctuations in the price of wholesale electricity, which is compounded by volumetric changes affecting the availability of, or demand for, electricity. Factors that contribute to energy market risk include regional planned and unplanned generation plant outages, transmission constraints or disruptions, the number of active creditworthy market participants willing to transact, and environmental regulations that influence the availability of generation resources.

The Department's exposure to hydro volumetric and energy market risk is managed by the ROC and approved hedging strategies are executed by Power Operations and Marketing. The Department engages in market transactions to meet its load obligations and to realize earnings from surplus energy resources. With a portion of the Department's revenue expectations associated with wholesale energy market transactions, emphasis is placed on the management of risks associated with this activity. Policies, procedures, and processes designed to manage, control and monitor these risks are in place. A formal front, middle, and back-office structure is in place to ensure proper segregation of duties.

The Department measures the risk in its energy portfolio using a model that utilizes historical simulation methodology and incorporates not only price risk, but also the volumetric risk associated with its hydro-dominated power portfolio. Scenario analysis is used for stress testing.

Credit Risk

Credit risk is the risk of loss that would be incurred as a result of nonperformance by a counterparty of their contractual obligations. If a counterparty failed to perform on its contractual obligation to deliver electricity, then the Department may find it necessary to procure electricity at current market prices, which may be higher than the contract price. If a counterparty failed to pay its obligation in a timely manner, this would have an impact on the Department's revenue and cash flow. As with market risk, the Department has policies governing the management of credit risk.

Wholesale counterparties are assigned credit limits based on publicly available and proprietary financial information. Along with ratings provided by national ratings agencies, an internal credit scoring model is used to classify counterparties into one of several categories with permissible ranges of credit limits. Specific counterparty credit limits are set within this prescribed range based on qualitative and quantitative factors. Credit limits are also used to manage counterparty concentration risk. The Department actively strives to reduce concentration of credit risk related to geographic location of counterparties as it only transacts in the western energy markets. This geographic concentration of counterparties may impact the Department's overall credit exposure because counterparties may be affected by similar conditions.

Credit limits, exposures and credit quality are actively monitored. Despite such efforts, there is potential for default; however, the Department has not faced a counterparty default in nearly 15 years. The Department transacts with counterparties on an uncollateralized and collateralized basis. Posted collateral may be in the form of cash, letters of credit, or parental guarantees.

REQUESTS FOR INFORMATION

For more information about Seattle City Light, contact Communications at 206-684-3000 or at P.O. Box34023, Seattle, WA 98124-4023

THE CITY OF SEATTLE—CITY LIGHT DEPARTMENT

STATEMENTS OF NET POSITION - ASSETS AND DEFERRED OUTFLOWS OF RESOURCES
AS OF DECEMBER 31, 2024 AND 2023

($ in millions)	2024	2023
ASSETS		
UTILITY PLANT—At original cost:		
Plant -in-service—excluding land	$ 6,658.8	$ 6,377.7
Less accumulated depreciation and amortization	(2,611.2)	(2,451.5)
Total plant-in-service—net	4,047.6	3,926.2
Construction work-in-progress	741.3	657.0
Nonoperating property—net of accumulated depreciation	21.2	19.0
Assets held for future use	3.1	3.1
Land and land rights	157.7	156.8
Total utility plant—net	4,970.9	4,762.1
RESTRICTED ASSETS:		
Rate stabilization account	68.2	65.8
Municipal light and power bond reserve account	110.2	106.3
Construction account	-	13.5
Special deposits and other restricted assets	45.7	40.3
Total restricted assets	224.1	225.9
CURRENT ASSETS:		
Cash and equity in pooled investments	269.4	263.2
Accounts receivable, net of allowance of $59.6 and $46.2	194.6	193.8
Interfund receivables	1.5	1.5
Unbilled revenues	91.5	95.7
Materials and supplies at average cost	60.1	55.5
Prepayments and other current assets	5.8	5.7
Total current assets	622.9	615.4
OTHER ASSETS:		
Conservation costs—net	256.4	255.6
Environmental costs—net	136.2	116.4
Other charges and assets—net	104.1	118.0
Total other assets	496.7	490.0
TOTAL ASSETS	6,314.6	6,093.4
DEFERRED OUTFLOWS OF RESOURCES		
Deferred outflows related to Pension and OPEB	82.6	103.6
Charges on advance refunding	7.7	9.6
TOTAL DEFERRED OUTFLOWS OF RESOURCES	90.3	113.2
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	$ 6,404.9	$ 6,206.6

See notes to financial statements.

STATEMENTS OF NET POSITION - LIABILITIES, DEFERRED INFLOWS OF RESOURCES, & NET POSITION
AS OF DECEMBER 31, 2024 AND 2023

($ in millions)	2024	2023
LIABILITIES		
LONG-TERM DEBT:		
Revenue bonds	$ 2,682.9	$ 2,635.7
Plus bond premium—net	276.0	279.4
Less revenue bonds—current portion	(125.0)	(131.6)
Total long-term debt	2,833.9	2,783.5
NONCURRENT LIABILITIES:		
Net pension liability	264.2	302.6
Accumulated provision for injuries and damages	124.3	111.2
Compensated absences	24.3	20.3
Other noncurrent liabilities	12.4	7.2
Total noncurrent liabilities	425.2	441.3
CURRENT LIABILITIES:		
Accounts payable and other current liabilities	160.2	174.7
Accrued payroll and related taxes	12.0	8.4
Compensated absences	1.3	1.1
Accrued interest	42.7	44.4
Long-term debt—current portion	125.0	131.6
Total current liabilities	341.2	360.2
OTHER LIABILITIES	41.7	36.3
TOTAL LIABILITIES	3,642.0	3,621.3
DEFERRED INFLOWS OF RESOURCES		
Rate stabilization unearned revenue	43.2	40.8
Deferred inflows related to pension and OPEB	15.3	17.2
Other deferred inflows of resources	104.2	111.8
TOTAL DEFERRED INFLOWS OF RESOURCES	162.7	169.8
NET POSITION		
Net investment in capital assets	2,338.5	2,185.5
Restricted:		
Rate stabilization account	25.0	25.0
Total restricted	25.0	25.0
Unrestricted—net	236.7	205.0
Total net position	2,600.2	2,415.5
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND NET POSITION	$ 6,404.9	$ 6,206.6

See notes to financial statements.

THE CITY OF SEATTLE—CITY LIGHT DEPARTMENT

STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION
FOR THE YEARS ENDED DECEMBER 31, 2024 AND 2023

($ in millions)	2024	2023
OPERATING REVENUES:		
Retail power revenues	$ 1,125.2	$ 1,033.7
Short-term wholesale power revenues	75.6	56.2
Other power-related revenues	34.4	71.1
Transfers from/(to) rate stabilization account	(2.4)	9.2
Other operating revenues	21.4	20.7
Total operating revenues	1,254.2	1,190.9
OPERATING EXPENSES:		
Long-term purchased power—Bonneville and other	200.6	175.4
Short-term wholesale power purchases	63.8	124.5
Other power expenses	95.2	101.9
Transmission	80.8	68.2
Distribution	110.1	84.4
Customer service	78.4	59.8
Conservation	27.8	26.4
Administrative and general	136.3	140.8
Taxes	128.7	112.4
Depreciation and amortization	172.9	159.5
Total operating expenses	1,094.6	1,053.3
OPERATING INCOME	159.6	137.6
NONOPERATING REVENUES AND (EXPENSES):		
Other revenues and (expenses)—net	33.0	35.9
Interest expense		
Interest expense—net	(119.0)	(119.1)
Amortization of bond costs—net	23.2	27.5
Total interest expense	(95.8)	(91.6)
Total nonoperating income (expenses)	(62.8)	(55.7)
INCOME BEFORE CAPITAL CONTRIBUTIONS AND GRANTS	96.8	81.9
CAPITAL CONTRIBUTIONS AND GRANTS:		
Capital contributions	70.6	43.0
Capital grants	17.3	0.3
Total capital contributions and grants	87.9	43.3
CHANGE IN NET POSITION	184.7	125.2
NET POSITION:		
Beginning of year	2,415.5	2,290.3
End of year	$ 2,600.2	$ 2,415.5

See notes to financial statements.

THE CITY OF SEATTLE—CITY LIGHT DEPARTMENT

STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2024 AND 2023

($ in millions)	2024	2023
OPERATING ACTIVITIES:		
Cash received from customers and counterparties	$ 1,214.6	$ 1,114.5
Cash paid to suppliers and counterparties	(511.5)	(476.9)
Cash paid to employees	(161.3)	(155.8)
Taxes paid	(126.6)	(106.1)
Net cash provided by operating activities	415.2	375.7
NONCAPITAL FINANCING ACTIVITIES:		
Interfund operating cash paid	(60.2)	(55.4)
Principal paid on long-term debt	(16.1)	(12.2)
Interest paid on long-term debt	(14.6)	(10.9)
Noncapital grants received	21.8	1.6
Bonneville receipts for conservation	3.5	4.7
Payment to vendors on behalf of customers for conservation	(26.4)	(21.6)
Net cash used in noncapital financing activities	(92.0)	(93.8)
CAPITAL AND RELATED FINANCING ACTIVITIES:		
Proceeds from long-term debt	181.1	216.6
Proceeds from long-term debt premiums	21.5	34.2
Payment to trustee for defeased bonds	-	(90.4)
Bond issue costs paid	(0.3)	(0.7)
Principal paid on long-term debt	(115.6)	(115.5)
Interest paid on long-term debt	(105.0)	(102.7)
Acquisition and construction of capital assets	(365.2)	(344.9)
Interfund payments for acquisition and construction of capital assets	(31.3)	(27.1)
Capital contributions	54.2	45.5
Interfund receipts for capital contributions	(1.4)	-
Capital grants received/(paid)	16.0	0.3
Interest received for suburban infrastructure improvements	2.3	2.3
Proceeds on sale of property	0.4	-
Decrease in other assets	2.0	1.9
Net cash used in capital and related financing activities	(341.3)	(380.5)
INVESTING ACTIVITIES:		
Interest received (paid) on cash and equity in pooled investments	22.5	28.8
Net cash provided by (used in) investing activities	22.5	28.8
NET INCREASE (DECREASE) IN CASH AND EQUITY IN POOLED INVESTMENTS	4.4	(69.8)
CASH AND EQUITY IN POOLED INVESTMENTS:		
Beginning of year	489.1	558.9
End of year	$ 493.5	$ 489.1

See notes to financial statements.

THE CITY OF SEATTLE—CITY LIGHT DEPARTMENT

STATEMENTS OF CASH FLOWS - RECONCILIATION
FOR THE YEARS ENDED DECEMBER 31, 2024 AND 2023

($ in millions)	2024	2023
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES:		
Operating income	$ 159.6	$ 137.6
Adjustments to reconcile operating income to net cash provided by operating activities:		
Non-cash items included in operating income:		
Depreciation	172.9	159.5
Amortization of other assets	35.8	24.8
Bad debt expense	27.3	17.8
Power revenues	(28.2)	(70.9)
Power expenses	40.9	83.6
Provision for injuries and damages	0.9	2.2
Other non-cash items	(35.7)	(8.8)
Change in:		
Accounts receivable	41.0	40.9
Unbilled revenues	4.2	14.8
Materials and supplies	(8.0)	(12.9)
Prepayments, interest receivable, and other receivables	(0.1)	-
Other assets	(40.6)	(54.2)
Provision for injuries and damages and claims payable	32.0	48.4
Accounts payable and other payables	13.8	4.9
Deferred inflows	(3.0)	(2.8)
Rate stabilization unearned revenue	2.4	(9.2)
Total adjustments	255.6	238.1
Net cash provided by operating activities	$ 415.2	$ 375.7
SUPPLEMENTAL DISCLOSURES OF NONCASH ACTIVITIES:		
In-kind capital contributions	$ -	$ 0.2
Amortization of debt related costs—net	23.2	27.5
Power exchange revenues	10.7	40.1
Power exchange expenses	(10.7)	(40.1)
Power revenue netted against power expenses	6.6	18.7
Power expense netted against power revenues	(10.9)	(12.1)
Bond proceeds deposited into an escrow account for purposes of refunding	21.2	146.5

See notes to financial statements.

1. OPERATIONS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The City Light Department (the Department) is the public electric utility of The City of Seattle (the City). The Department is an enterprise fund of the City. The Department owns and operates certain generating, transmission, and distribution facilities and supplies electricity to approximately 513,500 residential, commercial, and public customers in the City of Seattle. The Department also supplies electrical energy to other City agencies at rates prescribed by City ordinances, and to certain neighboring communities under franchise agreements. The establishment of the Department's rates is within the exclusive jurisdiction of the Seattle City Council. A requirement of Washington State law provides that rates must be fair, nondiscriminatory, and fixed to produce revenue adequate to pay for operation and maintenance expenses and to meet all debt service requirements payable from such revenue. The Department pays occupation taxes to the City based on total revenues.

The Department's revenues for services provided to other City departments were $21.5 million and $18.6 million in 2024 and 2023, respectively, and $1.2 million and $1.2 million for non-energy services, respectively.

The Department's receivables from other City departments were $1.5 million on December 31, for 2024 and 2023. The Department's payables to other City departments were $0.0 million on December 31, for 2024 and 2023. The balances receivable and payable are the result of transactions incurred in the normal course of operations.

The Department receives certain services from other City departments and paid $140.6 million in 2024 and $134.8 million in 2023, for such services. Amounts paid include central cost allocations from the City for services received including treasury services, risk financing, purchasing, data processing systems, vehicle maintenance, personnel, payroll, legal, administrative, information technology and building rentals, including for the Department's administrative offices.

Basis of Presentation and Accounting Standards—The financial statements are prepared using the economic resources measurement focus and the accrual basis of accounting in conformity with accounting principles generally accepted in the United States of America as applied to governmental units. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. The Governmental Accounting Standards Board (GASB) is the accepted standard-setting body for establishing governmental accounting and financial reporting principles. The Department has applied and is current through 2024 with all applicable GASB pronouncements.

GASB Statement No. 100 - GASB Statement No. 100, *Accounting Changes and Error Corrections,* establishes accounting and financial reporting requirements for (a) accounting changes and (b) the correction of an error in previously issued financial statements. There was no material impact on the financial statements when the Department implemented Statement No. 100 effective January 1, 2024.

GASB Statement No. 101 - GASB Statement No. 101, *Compensated Absences,* clarifies the recognition of certain types of employee accrued leave and also establishes guidance for measuring a liability for leave that has not been used. There was no impact on the financial statements when the Department implemented Statement No. 101 effective January 1, 2024.

GASB Statement No. 102 - GASB Statement No. 102, *Certain Risk Disclosures,* establishes financial reporting requirements for risks related to vulnerabilities due to certain concentrations or constraints. A concentration is a lack of diversity related to an aspect of a significant inflow of resources or outflow of resources. A constraint is a limitation that is imposed by an external party or by formal action of a government's highest level of decision-

making authority. A government may be vulnerable to risks from certain concentrations or constraints that limit its ability to acquire resources or control spending. This statement will be effective for the Department in 2025. The Department is currently evaluating the impact of implementation on the financial statements.

GASB Statement No. 103 - GASB Statement No. 103, *Financial Reporting Model Improvements,* improves key components of the financial reporting model to enhance its effectiveness in providing information that is essential for decision making and assessing a government's accountability. Governments engaged only in business type activities should present revenues by major source distinguishing between operating, noncapital subsidy, and other nonoperating revenues and expenses. This statement will be effective for the Department in 2026. The Department is currently evaluating the impact of implementation on the financial statements.

GASB Statement No. 104 - GASB Statement No. 104, *Disclosure of Certain Capital Assets,* requires certain information regarding capital assets to be presented by major class. This Statement also requires additional disclosures for capital assets held for sale. This statement will be effective for the Department in 2026. The Department is currently evaluating the impact of implementation on the financial statements.

Fair Value Measurements—Descriptions of the Department's accounting policies on fair value measurements for items reported on the statements of net position at December 31, 2024 and 2023, are as noted in Note 2 Fair Values, Note 5 Cash and Equity in Pooled Investments and Investments, Note 6 Accounts Receivable and Note 20 Long-Term Purchased Power, Exchanges, and Transmission.

Fair Value of Financial Instruments—The Department's financial instruments reported on the statements of net position at December 31, 2024 and 2023, as Restricted assets and Cash and equity in pooled investments are measured at fair value. These instruments consist primarily of the Department's share of the City-wide pool of investments (see Note 5 Cash and Equity in Pooled Investments and Investments). Gains and losses on these financial instruments are reflected in Investment income in the statements of revenues, expenses, and changes in net position. The fair value of long-term debt at December 31, 2024 and 2023 is discussed in Note 9 Long-Term Debt.

Net Position— The Department classifies its net position into three components as follows:

- *Net investment in capital assets*—This component consists of capital assets, net of accumulated depreciation and amortization, reduced by the net outstanding debt balances related to capital assets net of unamortized debt expenses.

- *Restricted*—This component consists of net position with constraints placed on use. Constraints include those imposed by creditors (such as through debt covenants and excluding amounts considered in net capital, above), grants, or laws and regulations of other governments, or by enabling legislation, The City of Seattle Charter, or by ordinances legislated by the Seattle City Council.
- *Unrestricted*—This component consists of assets, deferred outflows of resources, liabilities, and deferred inflows of resources that do not meet the definition of Net investment in capital assets or Restricted.

Restricted and Unrestricted Net Position—The Department's policy is to use restricted net position for specified purposes and to use unrestricted net position for operating expenses. The Department does not currently incur expenses for which both restricted and unrestricted net position is available.

Assets Held for Future Use—These assets include property acquired but never used by the Department in electrical service and therefore, held for future service under a definitive plan. Also included is property

previously used in service but retired and held pending its reuse in the future under a definitive plan. As of December 31, 2024 and 2023, assets held for future use included the following electrical plant assets: land for future substations, communication system and risk mitigation structures was $3.1 million.

Materials and Supplies—Materials and supplies are generally used for construction, operation and maintenance work, not for resale. They are valued utilizing the average cost method and charged to construction or expense when used.

Revenue Recognition—Service rates are authorized by City ordinances. Billings are made to customers on a monthly or bimonthly basis. Revenues for energy delivered to customers between the last billing date and the end of the year are estimated and reflected in the accompanying financial statements as unbilled revenue within Retail power revenues.

The Department's customer base accounted for electric energy sales at December 31, 2024 and 2023, as follows:

	2024	2023
Residential	38.9 %	39.3 %
Nonresidential	61.1 %	60.7 %
Total	100.0 %	100.0

Revenues earned in the process of delivering energy to customers, wholesale energy transactions, and related activities are considered operating revenues in the determination of change in net position. Investment income, nonexchange transactions, and other revenues are considered Nonoperating revenues.

Other nonoperating revenues and (expenses), net for the years 2024 and 2023 consisted of the following:

($ in millions)	2024	2023
Nonoperating Revenues and (Expenses)		
Other revenues and (expenses) - net		
Investment income	$ 24.7	$ 31.2
WA families clean energy grant	19.1	-
Clean energy grant funds disbursed	(18.8)	-
Utility residential customer arrearages grant	-	1.6
Arrearages grant funds disbursed	-	(1.6)
Other income (expense) - net	8.0	4.7
Total Other revenues and (expenses) - net	$ 33.0	$ 35.9

Expense Recognition—Expenses incurred in the process of delivering energy to customers, wholesale energy transactions, and related activities are considered operating expenses in the determination of net income. Debt interest expense, debt related amortization, and certain other expenses are considered Nonoperating expenses.

Administrative and General Overhead Costs Applied—Certain administrative and general overhead costs are allocated to construction work-in-progress, major data processing systems development, programmatic conservation, relicensing mitigation projects, and billable operations and maintenance activities based on rates established by cost studies. Pension and benefit costs are allocated to capital and operations and maintenance

activities based on a percentage of labor dollars.

The administrative and general overhead costs applied totaled $57.0 million and $58.0 million in 2024 and 2023, respectively. Benefit costs applied were $47.0 million and $45.0 million in 2024 and 2023, respectively. Administrative and general expenses, net of total applied overhead, were $136.3 million and $140.8 million in 2024 and 2023, respectively.

Nonexchange Transactions—Capital contributions and grants in the amount of $87.9 million for 2024 and $43.3 million for 2023 and noncapital grants in the amount of $21.8 million for 2024 and $1.6 million for 2023 are reported in the Statements of Revenues, Expenses, and Changes in Net Position as nonoperating revenues from nonexchange transactions. Capital contributions and grant revenues are recognized based on the accrual basis of accounting. In-kind capital contributions are recognized at estimated acquisition value in the period when all eligibility requirements have been met as described in GASB Statement No. 33, *Accounting and Financial Reporting for Nonexchange Transactions*. Federal and state grant revenues are recognized as earned and are subject to contract and other compliance audits.

Compensated Absences—Regular employees of the Department earn vacation time in accordance with length of service. A maximum of 480 hours may be accumulated for the most tenured employees and, upon termination, employees are entitled to compensation for unused vacation. Upon retirement, employees receive compensation equivalent to 25% of their accumulated sick leave. Employees represented by unions who voted in favor of a Healthcare Reimbursement Arrangement (HRA) receive 35% of their sick leave balance tax-free through an HRA account for healthcare expenses post-retirement. Because of the special tax arrangement, the sick leave balance may only go into the HRA account; it may not be taken as a cashout. The HRA program is administered by an independent third-party administrator, Meritain Health. HRA investments are managed by HRA Voluntary Employee Beneficiary Association (VEBA) Trust. The Department accrues all costs associated with compensated absences, including payroll taxes.

Use of Estimates—The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect amounts reported in the financial statements. The Department used significant estimates in determining reported allowance for doubtful accounts, unbilled revenues, power exchanges, accumulated provision for injuries and damages and workers' compensation, environmental liabilities, accrued sick leave, net pension liability, other postemployment benefits, and other contingencies. Actual results may differ from those estimates.

Significant Risk and Uncertainty—The Department is subject to certain business risks that could have a material impact on future operations and financial performance. These risks include financial market liquidity and economic uncertainty; prices on the wholesale markets for short-term power transactions; interest rates and other inputs and techniques for fair valuation; water conditions, weather, climate change, and natural disaster-related disruptions; terrorism; collective bargaining labor disputes; fish and other Endangered Species Act (ESA) issues; Environmental Protection Agency (EPA) regulations; compliance with clean and renewable energy legislation; local and federal government regulations or orders concerning the operations, maintenance, and/or licensing of hydroelectric facilities; other governmental regulations; restructuring of the electrical utility industry; and the costs of constructing transmission facilities that may be incurred as part of a northwest regional transmission system, and related effects of this system on transmission rights, transmission sales, surplus energy, and governance.

Deferred Outflows of Resources—A deferred outflow of resources represents a consumption of net position that

applies to a future period and will not be recognized as an outflow of resources (expense) until that future time. See Note 8 for additional information.

Deferred Inflows of Resources—A deferred inflow of resources represents an acquisition of net position that applies to a future period and therefore will not be recognized as an inflow of resources (revenue) until that future time. See Note 17 for additional information.

2. FAIR VALUE MEASUREMENT

The Department records certain assets, liabilities, and deferred inflows of resources in accordance with GASB Statement No. 72, *Fair Value Measurement and Application*, which defines fair value, establishes a framework for measuring fair value, and requires disclosures about fair value measurement.

Fair value is defined in Statement No. 72 as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price). Fair value is a market-based measurement for a particular asset or liability based on assumptions that market participants would use in pricing the asset or liability. Such assumptions include observable and unobservable inputs of market data, as well as assumptions about risk and the risk inherent in the inputs to the valuation technique.

Valuation techniques to determine fair value should be consistent with one or more of three approaches: the market approach, cost approach, and income approach. The Department uses the market approach for the valuation of pooled investments, a combination of the market and income approaches for the valuation of the undelivered forward portion of energy exchanges and other nonmonetary transactions.

As a basis for considering market participant assumptions in fair value measurements, Statement No. 72 establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the Department can access at the measurement date.

- Level 2 inputs are inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly.

- Level 3 inputs are unobservable inputs for the asset or liability. Valuation adjustments such as for nonperformance risk or inactive markets could cause an instrument to be classified as Level 3 that would otherwise be classified as Level 1 or Level 2.

The valuation methods of the fair value measurements are disclosed as noted below.

Cash resources of the Department are combined with cash resources of the City to form a pool of cash and investments that is managed by the City's Department of Finance. The City records pooled investments at fair value based on quoted market prices.

The Department obtained the lowest level of observable input of the fair value measurement of energy exchanges and other non-monetary transactions in its entirety from subscription services or other independent parties. The observable inputs for the settled portion of the energy exchange contracts are Dow Jones price indices. The

observable inputs for the undelivered forward portion of energy exchanges and other non-monetary transactions are Kiodex forward curves and present value factors based on the interest rate for Treasury constant maturities, bond-equivalent yields.

Financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The Department's assessment of the significance of a particular input to the fair value measurement requires judgement and may affect the valuation of fair value assets and liabilities and their place within the fair value hierarchy levels.

The Department had no assets or liabilities that met the criteria for Level 3 at December 31, 2024 and 2023. The following fair value hierarchy table presents information about the Department's assets and liabilities, reported at fair value on a recurring basis or disclosed at fair value as of December 31, 2024 and 2023:

($ in millions)

2024	Credit Rating	Level 1	Level 2	Total
Assets				
Fair value investments				
Corporate Bonds	AA2 to A1	$ -	$ 4.3	$ 4.3
Commercial Paper	A1	-	6.4	6.4
International Bank for Reconstruction & Development	AAA	-	17.0	17.0
Local Government Investment Pool	N/A	61.1	-	61.1
Municipal Bonds	AA2	-	12.3	12.3
Repurchase Agreements	N/A	1.5	-	1.5
U.S. Government Agency Mortgage-Backed Securities	AAA	-	37.8	37.8
U.S. Government Agency Securities	AAA	-	102.2	102.2
U.S. Treasury and U.S. Government-Backed Securities	AAA	250.9	-	250.9
Total fair value investments		313.5	180.0	493.5
Total Assets at fair value		$ 313.5	$ 180.0	$ 493.5

($ in millions)

2023	Credit Rating	Level 1	Level 2	Total
Assets				
Fair value investments				
Corporate Bonds	AA+ to A	$ -	$ 9.0	$ 9.0
International Bank for Reconstruction & Development	AAA	-	6.5	6.5
Local Government Investment Pool	N/A	54.3	-	54.3
Municipal Bonds	AAA to A-	-	20.1	20.1
Repurchase Agreements	N/A	2.3	-	2.3
U.S. Government Agency Mortgage-Backed Securities	AA+	-	41.8	41.8
U.S. Government Agency Securities	AA+	-	189.4	189.4
U.S. Treasury and U.S. Government-Backed Securities	AA+	165.7	-	165.7
Total fair value investments		222.3	266.8	489.1
Total Assets at fair value		$ 222.3	$ 266.8	$ 489.1

3. UTILITY PLANT

Utility Plant—Utility plant is recorded at original cost, which includes both direct costs of construction or acquisition and indirect costs.

The capitalization threshold for tangible assets was $5,000, and for intangible assets, $500,000 in 2024 and 2023. Plant constructed with capital contributions or contributions in-aid-of construction received from customers is included in Utility plant. Capital contributions and capital grants totaled $87.9 million in 2024 and $43.3 million in 2023. The Department uses a straight-line composite method of depreciation and amortization and, therefore, groups assets into composite groups for purposes of depreciation. Estimated economic lives range from 4 to 50 years. Depreciation and amortization expense as a percentage of depreciable utility plant-in-service was approximately 2.6% in 2024 and 2.5% in 2023. When operating plant assets are retired, their original cost together with retirement costs and removal costs, less salvage, is charged to accumulated depreciation or amortization, if applicable. The cost of maintenance and repairs is charged to expense as incurred, while the cost of replacements and betterments are capitalized. The Department periodically reviews long-lived assets for impairment to determine whether any events or circumstances indicate the carrying value of the assets may not be recoverable over their economic lives. There were no impairments in 2024 and 2023.

Intangible assets are those that lack physical substance, are nonfinancial in nature, and have useful lives extending beyond a single reporting period. The Department's intangible assets are reported as capital assets under Utility Plant. The Department's intangible assets consist of easements, purchased and internally developed software, transmission rights, capitalized relicensing costs for Skagit and Boundary hydroelectric projects, Tolt hydroelectric project mitigation costs, and costs capitalized under the High Ross Agreement.

Utility plant-in-service at original cost, including land on December 31, 2024 and 2023, was:

	Hydroelectric Production	Transmission	Distribution	General	Intangibles	Total
2024						
($ in millions)						
Utility Plant-in-service - At original cost:						
Plant-in-service, excluding Land:						
1/1/2024 Balance	$ 1,035.2	$ 371.5	$ 3,692.4	$ 440.5	$ 838.1	$ 6,377.7
Acquisitions	31.6	10.8	201.6	42.4	15.9	302.3
Dispositions	-	(1.2)	(18.2)	(1.8)	-	(21.2)
Transfers and adjustments	-	-	-	-	-	-
12/31/2024 Balance	1,066.8	381.1	3,875.8	481.1	854.0	6,658.8
Accumulated depreciation and amortization:						
1/1/2024 Balance	$ 417.3	$ 99.4	$ 1,226.7	$ 292.6	$ 415.5	$ 2,451.5
Increase in accumulated depreciation and amortization	19.8	8.1	106.8	13.8	49.7	198.2
Retirements	(0.1)	(2.2)	(34.4)	(1.8)	-	(38.5)
Gain/Loss on Retirements	-	-	-	-	-	-
12/31/2024 Balance	437.0	105.3	1,299.1	304.6	465.2	2,611.2
Sub Total Plant-in-service - Net, excluding Land:	$ 629.8	$ 275.8	$ 2,576.7	$ 176.5	$ 388.8	$ 4,047.6
Land and land rights:						
1/1/2024 Balance	$ 60.6	$ 3.0	$ 86.6	$ 6.6	$ -	$ 156.8
Acquisitions	0.9	-	-	-	-	0.9
Dispositions	-	-	-	-	-	-
Transfers and adjustments	-	-	-	-	-	-
12/31/2024 Balance	61.5	3.0	$ 86.6	6.6	-	157.7
Construction work-in-process:						
1/1/2024 Balance	$ 81.6	$ 30.0	$ 339.9	$ 109.6	$ 95.9	$ 657.0
Additions	48.5	24.0	244.3	36.4	42.6	395.8
Closings	(28.0)	(13.2)	(214.2)	(41.5)	(14.6)	(311.5)
12/31/2024 Balance	102.1	40.8	$ 370.0	104.5	123.9	741.3
*** Total Plant-in-service - Net, including Land and CWIP:**	$ 793.4	$ 319.6	$ 3,033.3	$ 287.6	$ 512.7	$ 4,946.6

** Excludes Nonoperating property and Assets Held For Future Use.*

	Hydroelectric Production	Transmission	Distribution	General	Intangibles	Total
2023						
($ in millions)						
Utility Plant-in-service - At original cost:						
Plant-in-service, excluding Land:						
1/1/2023 Balance	$ 1,001.2	$ 361.9	$ 3,534.2	$ 438.3	$ 833.1	$ 6,168.7
Acquisitions	44.7	12.0	175.3	8.3	5.0	245.3
Dispositions	(10.7)	(2.4)	(17.1)	(6.1)	-	(36.3)
Transfers and adjustments	-	-	-	-	-	-
12/31/2023 Balance	1,035.2	371.5	3,692.4	440.5	838.1	6,377.7
Accumulated depreciation and amortization:						
1/1/2023 Balance	$ 410.3	$ 97.7	$ 1,150.0	$ 285.7	$ 383.3	$ 2,327.0
Increase in accumulated depreciation and amortization	19.1	8.1	101.7	13.0	32.2	174.1
Retirements	(12.1)	(6.4)	(25.0)	(6.1)	-	(49.6)
Gain/Loss on Retirements	-	-	-	-	-	-
12/31/2023 Balance	417.3	99.4	1,226.7	292.6	415.5	2,451.5
Sub Total Plant-in-service - Net, excluding Land:	$ 617.9	$ 272.1	$ 2,465.7	$ 147.9	$ 422.6	$ 3,926.2
Land and land rights:						
1/1/2023 Balance	$ 59.8	$ 3.0	$ 86.5	$ 6.6	$ -	$ 155.9
Acquisitions	0.8	-	0.1	-	-	0.9
Dispositions	-	-	-	-	-	-
Transfers and adjustments	-	-	-	-	-	-
12/31/2023 Balance	60.6	3.0	86.6	6.6	-	156.8
Construction work-in-process:						
1/1/2023 Balance	$ 87.1	$ 25.9	$ 294.9	$ 80.1	$ 43.9	$ 531.9
Additions	42.8	19.0	220.7	38.8	104.0	425.3
Closings	(48.3)	(14.9)	(175.7)	(9.3)	(52.0)	(300.2)
12/31/2023 Balance	81.6	30.0	339.9	109.6	95.9	657.0
*** Tota Plant-in-service - Net, including Land and CWIP:**	$ 760.1	$ 305.1	$ 2,892.2	$ 264.1	$ 518.5	$ 4,740.0

** Excludes Nonoperating property and Assets Held For Future Use.*

4. RATE STABILIZATION ACCOUNT

The Rate Stabilization Account (RSA) is a restricted cash reserve established to reduce the need for rapid and substantial rate increases solely to comply with the Department's bond covenants.

In March 2010, the Seattle City Council adopted Resolution No. 31187 and Ordinance No. 123260, establishing revised financial policies and parameters for the operation of the RSA created by Ordinance No. 121637 in 2004. Ordinance No. 123260 identified the sources of significant funding of the RSA and specified parameters for its operation. The RSA is drawn down to supplement revenues when surplus power sales revenues are below the budgeted amount, and conversely, deposits are to be made to the RSA when the surplus power sales revenues are greater than budgeted. Deposits or withdrawals may be made up to and including the date 90 days after the end of the applicable year.

Ordinance No. 123260 established a target size for the RSA of no less than $100.0 million and no greater than $125.0 million and authorized the imposition of automatic temporary surcharges on electric rates when the RSA balance is within specified levels. In December 2021, the Seattle City Council adopted Ordinance No. 126502, which established new thresholds and surcharge rates for the RSA applicable for 2024 and 2023 as follows:

RSA Balance at March 31 or September 30	Action
Less than or equal to $75.0 million but greater than $50.0 million:	Automatic 2.0% surcharge until RSA balance reaches $100.0 million
Less than or equal to $50.0 million but greater than $25.0 million	Automatic 4.0% surcharge until RSA balance reaches $100.0 million
Less than or equal to $25.0 million:	City Council must initiate rate review within 45 days and determine actions to replenish RSA to $100.0 million within 24 months

In 2024, actual net wholesale revenue was $33.7 million less than budgeted. The $37.0 million net transfer reflects a true-up from the previous year made from the RSA to the operating cash account during the year. At September 30, 2023, the RSA balance was $28.5 million (below the $50.0 million threshold) which triggered a 4.0% rate surcharge effective January 1, 2024. Transfers from the RSA were partially offset by $39.4 million surcharge revenue resulting from this 4.0% surcharge. The RSA balance was $68.2 million at December 31, 2024.

In 2023, actual net wholesale revenue was $105.0 million less than budgeted. The $109.2 million net transfer reflects a true-up from previous year made from the RSA to the operating cash account during the year. These transfers were partially offset by $100.0 million transferred to the RSA from operating cash in 2023, in accordance with Ordinance No. 126819, which authorized the discretionary transfers to prevent a surcharge from triggering. There was no surcharge in effect during 2023. The RSA balance was $65.8 million at December 31, 2023.

The RSA at December 31, 2024, and 2023, consisted of cash from the following sources:

($ in millions)	2024	2023
Rate Stabilization Account		
Beginning balance	$ 65.8	$ 75.0
Council authorized transfer to RSA	-	100.0
Surcharge revenue	39.4	-
Operating revenue	(37.0)	(109.2)
Ending balance	$ 68.2	$ 65.8

RSA transactions are recorded in accordance with GASB Statement No. 62 *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements*.

The regulatory deferred inflow of resources rate stabilization unearned revenue account at December 31, 2024, and 2023, consisted of the following:

($ in millions)	2024	2023
Unearned revenue - Rate Stabilization Account		
Beginning balance	$ 40.8	$ 50.0
Council authorized transfer to RSA	-	100.0
Surcharge revenue	39.4	-
Operating revenue	(37.0)	(109.2)
Ending balance	$ 43.2	$ 40.8

The RSA includes $25.0 million from the Contingency Reserve Account. This amount is not included in unearned revenue and is not available to be transferred to operating cash. The Contingency Reserve Account was established in 2005 with proceeds that had been deposited in the Bond Reserve Fund, which was replaced with a surety bond.

Net transfers from/(to) the RSA in the statements of revenues, expenses and net position for the periods ended December 31, 2024, and 2023 were as follows:

($ in millions)	2024	2023
Transfers from/(to) Rate Stabilization Account	$ (2.4)	$ 9.2

5. CASH AND EQUITY IN POOLED INVESTMENTS AND INVESTMENTS

Cash and Equity in Pooled Investments—Cash resources of the Department are combined with cash resources of the City to form a pool of cash that is managed by the City's Department of Finance. Under the City's investment policy, all temporary cash surpluses in the pool are invested. The Department's share of the pool is included on the statements of net position as Cash and Equity in Pooled Investments or as restricted assets. The pool operates like a demand deposit account in that all departments, including the Department, may deposit cash at any time and can also withdraw cash, out of the pool, up to the amount of the Department's fund balance, without prior notice or penalty. Accordingly, the statements of cash flows reconcile to cash and equity in pooled investments. The City considers investments in financial instruments having a maturity of 90 days or less as a cash equivalent.

Custodial Credit Risk – Deposits—Custodial credit risk of deposits is the risk that in the event of bank failure for one of the City's depository institutions, the City's deposits or related collateral securities may not be returned in a timely manner.

As of December 31, 2024, and 2023, the City did not have custodial credit risk. The City's deposits are covered by insurance provided by the Federal Deposit Insurance Corporation (FDIC) and the National Credit Union Association (NCUA) as well as protection provided by the Washington State Public Deposit Protection Commission (PDPC) as established in RCW 39.58. The PDPC makes and enforces regulations and administers a program to ensure public funds deposited in banks and thrifts are protected if a financial institution becomes insolvent. The PDPC approves which banks, credit unions, and thrifts can hold state and local government deposits and monitors collateral pledged to secure uninsured public deposits. This secures public treasurers' deposits when they exceed the amount insured by the FDIC or NCUA by requiring banks, credit unions, and thrifts to pledge securities as collateral.

As of December 31, 2024, and 2023, the City held $15,000 and $14,000 in its cash vault, respectively. Additional small amounts of cash were held in departmental revolving fund accounts with the City's various custodial banks, all of which fell within the NCUA/FDIC's $250,000 standard maximum deposit insurance amount. Any of the City's cash not held in its vault, or a local depository, was held in the City's operating fund (investment pool), and at the close of every business day, any cash remaining in the operating fund is swept into an overnight repurchase agreement that matures the next day.

Investments—The Department's cash resources may be invested by the Department of Finance separate from the cash and investments pool. Investments are managed in accordance with the City's Statement of Investment Policy, with limits and restrictions applied at the City-wide level rather than to specific investments of the Department. As of December 31, 2024, and 2023, the Department did not have any dedicated investments. The City's Statement of Investment Policy was revised in 2023 anujd includes, but is not limited to, the topics of Standards of Care, Objectives, Strategy, Investment Parameters, and Diversification.

The City follows a set of Standards of Care when it comes to its investments that include the following:

- Social Policies: A City social policy shall take precedence over furthering the City's financial objectives when expressly authorized by City Council resolution, except where otherwise provided by law or trust principles.

- Prudence: The standard of prudence to be used by investment personnel shall be the "Prudent Investor Rule" and will be applied in the context of managing an overall portfolio.

- Ethics and Conflict of Interest: The Finance Director, Treasury Services Director and employees involved in the investment process must refrain from any personal business activity that could conflict with proper execution of the investment program. Employees must comply with the City's Ethics Code (SMC 4.16.080) and annually submit a Financial Interest Statement to the City's Ethics & Elections Commission that identifies any potential financial interest that could be related to the performance of the City's investment portfolio.

- Delegation of Authority: The City Finance Director is authorized to manage the City's investment program and may delegate the day-to-day management responsibility to the City's Treasury Services Director who may delegate authority for program administration to appropriate individuals. No persons may engage in an investment transaction except as provided under the terms of the City Statement of Investment Policy and the procedures established therein.

The three objectives in managing the City of Seattle's investments define its risk profile and guide implementation of its investment strategy. In order of importance, they are Safety of Principal, Maintenance of Liquidity, and Investment Income.

Eligible investments for the City are those securities and deposits authorized by statute (RCW 39.59.040) and include, but are not limited to:

A. Bonds of the state of Washington and any local government in the state of Washington

B. General obligation bonds of a state and general obligation bonds of a local government of a state, which bonds have at the time of investment one of the three highest credit ratings of a nationally recognized rating agency

C. Subject to compliance with RCW 39.56.030, registered warrants of a local government in the same county as the government making the investment

D. Certificates, notes, or bonds of the United States, or other obligations of the United States or its agencies, or of any corporation wholly owned by the government of the United States

E. United States dollar denominated bonds, notes, or other obligations that are issued or guaranteed by supranational institutions, provided that at the time of investment, the institution has the United States government as its largest shareholder

F. Federal home loan bank notes and bonds, federal land bank bonds and federal national mortgage association notes, debentures, and guaranteed certificates of participation, or the obligations of any other government sponsored corporation whose obligations are or may become eligible as collateral for advances to member banks as determined by the board of governors of the federal reserve system

G. Bankers' acceptances purchased in the secondary market

H. Commercial paper purchased in the secondary market

I. Corporate bonds purchased in the secondary market.

State statute also permits investment in the following types of securities:

A. Certificates of deposit or demand deposits with financial institutions made in accordance with the provisions of Chapter 39.58 RCW

B. Washington State Local Government Investment Pool (LGIP), Chapter 43.250 RCW

C. Repurchase agreements collateralized by the above eligible securities issued by the U.S. Government and its sponsored entities.

As of December 31, 2024 and 2023, the City's pooled investments were as follows:

	2024		2023	
($ in millions)	Fair Value of City Pooled Investments	Weighted-Average Maturity (Days)	Fair Value of City Pooled Investments	Weighted-Average Maturity (Days)
Corporate Bonds	$ 32.9	544	$ 67.3	537
Commercial Paper	49.0	164	-	-
International Bank for Reconstruction & Development	130.3	942	48.9	247
Local Government Investment Pool	468.3	-	406.4	-
Municipal Bonds	94.4	591	150.8	772
Repurchase Agreements	11.3	9,131	17.3	9,497
U.S. Government Agency Mortgage-Backed Securities	290.3	1,508	312.8	1,754
U.S. Government Agency Securities	784.2	599	1,417.0	404
U.S. Treasury and U.S. Government-Backed Securities	1,924.5	710	1,240.5	679
Total	$ 3,785.2		$ 3,661.0	
Portfolio Weighted Average Maturity		682		626

As of December 31, 2024 and 2023, the Department's share of the City pool was as follows:

($ in millions)	2024	2023
Operating cash and equity in pooled investments	$ 269.4	$ 263.2
Restricted cash	224.1	225.9
Total	$ 493.5	$ 489.1
Balance as a percentage of City pool cash and investments	13.0%	13.4%

Fair Value of Pooled Investments—The City reports investments at fair value and categorizes its fair value measurements within the fair value hierarchy established by GASB Statement No. 72, *Fair Value Measurement and Application*. See Note 2 Fair Value Measurement. Fair value of the City's pooled investments fluctuates with changes in interest rates and the underlying size of the pooled investment portfolio. To mitigate interest rate risk in the City's pooled investment portfolio, the City typically holds its investments to maturity and manages its maturities to ensure sufficient monthly cash flow to meet its liquidity requirements. After declining for several consecutive months through September, interest rates reversed course in a curve-steeping manner during Q4 reaching 6-month highs as 2-year Treasury note yields increased by 60 basis points to 4.24% while 5-year notes climbed by 82 basis points to 4.38%. Driving the rise in rates was a recent stall in the disinflationary trend as well as an increasingly uncertain outlook on fiscal policy. The Federal Open Market Committee (FOMC) continued to ease monetary policy by lowering the federal funds rate by 25 basis points at each of the November and December meetings bringing the upper bound from 5.00% to 4.50%. Job growth remained robust with the labor market adding 227,000 workers to payrolls in November while wage growth advanced at an annual pace of 4.0%. Forecast shows the FOMC will proceed easing policy at a slower pace by pausing until more progress on inflation achieved or if the labor market begins to deteriorate. Even with the recent rise in rates that saw the yield on 2-year Treasury notes increase by 60 basis points in Q4, market forecasters are still calling for lower yields in the year ahead as the Fed continues to fight inflation by holding a restrictive stance on monetary policy.

The City held $468.3 million in 2024, and $406.4 million in 2023 in the Washington State Local Government Investment Pool (LGIP) managed by the Office of the Washington State Treasurer. The City's investments in the LGIP are reported at amortized cost which approximates fair value. It is overseen by the Office of the State Treasurer, the State Finance Committee, the Local Government Investment Pool Advisory Committee, and the Washington State Auditor's Office.

To provide for the City's investment objectives, parameters have been established that guide the investment officers. Management of the Pool is subject to the restrictions outlined in the following sections.

Interest Rate Risk—Interest rate risk is the risk that changes in interest rates over time will adversely affect the fair value of an investment. To mitigate interest rate risk, the City intentionally immunizes its known and expected cash flow needs. To best accomplish its investment objectives, the City has divided the Pool into two separate portfolios: Operating and Strategic.

The Operating Portfolio is invested to meet reasonably expected liquidity needs over a period of twelve to eighteen months. This portfolio has low duration and high liquidity. Consistent with this profile, and for the purpose of comparing earnings yield, its benchmark is the net earnings rate of the State of Washington's Local Government Investment Pool (LGIP).

The Strategic Portfolio consists of cash that is in excess of known and expected liquidity needs. Accordingly, this portfolio is invested in debt securities with longer maturities than the Operating Portfolio, which over a market cycle, is expected to provide a higher return and greater investment income. Consistent with this profile, and for the purpose of comparing duration, yield and total return, the benchmark for the Strategic portfolio is the Barclays U.S. Government 1-7 year index. The duration of the Strategic Portfolio is targeted between 75 percent and 125 percent of the benchmark.

To further mitigate interest rate risk a minimum of 60% of the Operating Portfolio and 30% of the Strategic Portfolio must be invested in asset types with high liquidity, specifically U.S. government obligations, U.S. government agency obligations, LGIP, demand accounts, repo, sweep, commercial paper and Banker's Acceptances.

Credit Risk—Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations.

To mitigate credit risk, municipal bonds must have one of the three highest credit ratings of a Nationally Recognized Statistical Rating Agency (NRSRO) at the time of purchase. The Office of the State Treasurer interprets the three highest credit ratings to include AAA, AA and A including gradations within each category. For example, the lowest credit rating allowable is A3 by Moody's and A- by S&P and Fitch.

Commercial paper and corporate bond investments must adhere to the Washington State Investment Board Policy Number 2.05.500, and together are defined as the "credit portfolio" with the following constraints in place to mitigate credit risk:

Commercial paper investments may not have maturities exceeding 270 days and must hold the highest short-term credit rating by all the major credit rating agencies that rate the issuer at the time of purchase.

Corporate bonds must be rated at least weak single-A or better by all the major rating agencies that rate the note at the time of purchase. Corporate bonds rated in the broad single-A category with a negative outlook may not be purchased. Portfolio holdings of corporate bonds downgraded to below single A and portfolio holdings of securities rated single A with their outlooks changed to negative may continue to be held. No additional purchases are permitted.

Municipal bonds must have a credit rating of weak single-A or better by all the major rating agencies that rate the issuer at the time of purchase. No single issuer may exceed 5 percent of the Pool's fair value.

Concentration Risk—Concentration Risk is the risk of loss attributed to the magnitude of investments in a single issuer. The City manages concentration risk by limiting its investments in any one issuer in accordance with the City's investment policy and state statutes. The policy limits vary for each investment category.

The maturity of a corporate bond shall be 5.5 years or less at the time of purchase. The maximum duration of aggregate corporate bond investments shall not exceed 3 years. No corporate bond issuer may exceed 3 percent of the fair value of the assets of the total portfolio. The percentage of corporate bonds that may be purchased from any single issuer rated AA or better by all major rating agencies that rate the bond is 3 percent of assets of the total portfolio. The percentage of corporate bonds that may be purchased from any single issuer in the broad single-A category from all the major rating agencies that rate the security is 2 percent of the total portfolio.

The credit portfolio may not exceed 25 percent of the Pool's fair value. Credit investments must be diversified by sector and industry. Commercial paper and corporate bonds must be purchased in the secondary market and directly from an issuer. No single issuer shall exceed 3 percent of the total portfolio's fair value.

The individual country limit of non-U.S. and non-Canadian exposure is 2 percent of the total portfolio. The exposure is determined by the country of domicile of the issuer.

State statute and the City's Statement of Investment Policy do not stipulate concentration limits for holdings of U.S. Government or U.S. Government Agency Obligations. There is a maximum of 5 percent of the Pool in any municipal issuer. The City's investments in which 5% or more is invested in any single issuer as of December 31, 2024 and 2023 are as follows:

($ in millions)	2024	
Issuer	**Fair Value**	**Percent of Total Investments**
U.S. Treasury and Government-Backed Securities	$ 1,924.5	51%
Federal Agriculture Mortgage Corporation	741.0	20%
Local Government Investment Pool	468.3	12%
Federal National Mortgage Association	256.1	7%
Total	$ 3,389.9	90%

($ in millions)	2023	
Issuer	**Fair Value**	**Percent of Total Investments**
U.S. Treasury and Government-Backed Securities	$ 1,240.5	34%
Federal Home Loan Bank	572.7	16%
Local Government Investment Pool	406.4	11%
Federal National Mortgage Association	293.7	8%
Federal Farm Credit Bank	291.4	8%
Federal Home Loan Mortgage Corporation	287.1	8%
Federal Agriculture Mortgage Corporation	248.0	7%
Total	$ 3,339.8	92%

Custodial Credit Risk – Investments—Custodial credit risk for investments is the risk that, in the event of failure of the counterparty, the City will not have access to, or be able to recover, its investments or collateral securities that are in the possession of an outside party. The City mitigates custodial credit risk for its investments by having its investment securities held by the City's contractual custodial agent. The City maintains a custody relationship with Wells Fargo under the State of Washington's statewide custody provider program arranged by the State Treasurer's Office. The City mitigates counterparty risk by settling trades through its custodian on a delivery-versus-payment method.

By investment policy, the City maintains a list of approved securities dealers for transacting business. The City also conducts its own due diligence as to the financial wherewithal of its counterparties.

Foreign Currency Risk—The City's pooled investments do not include securities denominated in foreign currencies.

The City of Seattle's Annual Comprehensive Financial Report may be obtained by writing to The City of Seattle, Department of Finance and Administrative Services, P.O. Box 94689, Seattle, WA 98124-4689; telephone: (206) 684-2489, or obtained on-line at http:/www.seattle.gov/financial-services/comprehensive- annual-financial-report.

6. ACCOUNTS RECEIVABLE

Accounts receivable at December 31, 2024 and 2023, consist of:

($ in millions)	Retail Electric	Wholesale Power	Other Operating	Operating Subtotal	Nonoperating Subtotal	Total
2024						
Accounts receivable	$ 112.5	$ 6.4	$ 41.2	$ 160.1	$ 94.1	$ 254.2
Less allowance for doubtful accounts	(33.7)	-	(25.9)	(59.6)	-	(59.6)
	$ 78.8	$ 6.4	$ 15.3	$ 100.5	$ 94.1	$ 194.6
2023						
Accounts receivable	$ 111.2	$ 8.4	$ 37.8	$ 157.4	$ 82.6	$ 240.0
Less allowance for doubtful accounts	(26.7)	-	(19.5)	(46.2)	-	(46.2)
	$ 84.5	$ 8.4	$ 18.3	$ 111.2	$ 82.6	$ 193.8

There was no exchange energy at fair value under long-term contracts within Wholesale power receivables at December 31, 2024 and 2023. (see Note 20 Long-Term Purchased Power, Exchanges, and Transmission).

7. OTHER ASSETS

Seattle City Council passed resolutions authorizing debt financing and reporting as regulatory assets certain costs in accordance with Statement No. 62 of the GASB, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB & AICPA Pronouncements*. Programmatic conservation costs incurred by the Department and not funded by third parties, Endangered Species Act costs, and environmental costs are reported as regulatory assets in accordance with GASB Statement No. 62. Conservation costs reported as regulatory assets are amortized over 20 years. Endangered Species Act costs reported as regulatory assets are amortized over the remaining license period (see Note 21 Commitments and Contingencies). Environmental costs reported as regulatory assets are amortized over 25 years, beginning in the year costs are paid.

Other assets, which are not covered under GASB Statement No. 62, consist of:

- Suburban infrastructure long-term receivables are underground electrical infrastructure costs for suburban jurisdictions, which are recovered through rates from customers within the respective jurisdictions for a period of approximately 25 years, as approved by the Seattle City Council.
- Long-term interfund receivable for expected recoveries related to environmental costs covered under GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations* (see Note 15 Environmental Liabilities).
- Long-term lease receivable, amortized over the life of various leases (See Note 18 Leases).
- Studies, surveys, and investigations are reported as other assets until such time they result in active projects, or when it is determined no assets will result, at which time they are expensed.
- Long-term customer loans receivable and the remaining components of other assets are not amortized.

Regulatory assets and other assets, net, at December 31, 2024 and 2023, consisted of the following:

($ in millions)	2024	2023
Regulatory assets:		
Conservations costs--net	$ 256.4	$ 255.6
Environmental costs	136.2	116.4
	392.6	372.0
Other charges and assets--net		
Suburban infrastructure long-term receivables	39.7	41.7
Long-term interfund receivable for environmental costs	6.8	7.4
Long-term customer notes receivable	2.5	8.7
Long-term lease receivable	52.8	57.7
Studies, surveys, and investigations	2.3	2.3
Endangered Species Act costs--net	0.5	0.7
Other	(0.5)	(0.5)
	104.1	118.0
Total Other Assets	$ 496.7	$ 490.0

8. DEFERRED OUTFLOWS OF RESOURCES

In accordance with the requirements of GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – an amendment of GASB Statement No. 27 and Statement No. 71, Pension Transition for Contributions Made Subsequent to the Measurement Date – an amendment of GASB Statement No. 68*, the Department recognizes pension contributions made between the pension plan measurement date and the Department's fiscal year end as deferred outflows of resources. Also recognized as deferred outflows of resources are losses resulting from differences between projected and actual earnings on plan investments, which are amortized over a closed five-year period, and losses related to differences between expected and actual experience with regard to economic or demographic factors in the measurement of total pension liability, which are amortized to pension expense over a period equal to the expected remaining service life of employees receiving pension benefits. See

Note 13 Seattle City Employees' Retirement System.

In accordance with the requirements of GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (OPEB*), the Department records the contributions subsequent to the net OPEB liability measurement date, but before the end of the reporting period, as deferred outflows of resources. Also, the deferred outflows of resources result from (1) differences between expected and actual experience, (2) changes in assumptions, and (3) differences between projected and actual investment earnings. Deferred outflows of resources from assumption changes and experience differences are amortized using a systematic and rational method over a closed period equal to the average remaining service lives of all plan participants. Deferred outflows from investment earnings differences are amortized over a closed five-year period. See Note 14 Other Postemployment Benefits.

The excess of costs incurred over the carrying value of bonds refunded on early extinguishment of debt are reported as Deferred outflows of resources and amortized as a component of interest expense using the effective interest method over the terms of the issues to which they pertain. See Note 9 Long-term Debt.

Deferred outflows of resources at December 31, 2024 and 2023 consisted of the following:

($ in millions)	2024	2023
Deferred outflows of resources:		
Unrealized contributions and losses related to pension	$ 76.6	$ 101.7
Unrealized contributions and losses related to OPEB	6.0	1.9
Charges on advance refunding	7.7	9.6
Total	$ 90.3	$ 113.2

9. LONG-TERM DEBT

At December 31, 2024 and 2023, the Department's long-term debt consisted of the following prior lien or parity bonds:

LONG-TERM *($ in millions)*		Rate	Maturity Year	Original Issuance	2024	2023
Prior Lien Bonds:						
2024	ML&P Improvement and Refunding Revenue Bonds	5.000%–5.000%	2054	$ 199.7	$ 199.7	$ -
2023A	ML&P Improvement and Refunding Revenue Bonds	5.000%–5.000%	2053	273.6	268.8	273.6
2023B	ML&P Refunding Revenue Bonds	variable rates	2046	85.8	83.5	85.8
2022	ML&P Improvement and Refunding Revenue Bonds	5.000%–5.000%	2052	257.7	220.8	239.5
2021A	ML&P Improvement and Refunding Revenue Bonds	4.000%–5.000%	2051	259.8	234.2	243.0
2021B	ML&P Refunding Revenue Bonds	variable rates	2045	100.6	100.6	100.6
2020A	ML&P Improvement Revenue Bonds	4.000%–5.000%	2050	198.3	189.4	191.7
2019A	ML&P Improvement Revenue Bonds	5.000%–5.000%	2049	210.5	193.0	196.8
2019B	ML&P Refunding Revenue Bonds	5.000%–5.000%	2026	140.3	46.2	71.5
2018A	ML&P Improvement Revenue Bonds	4.000%–5.000%	2048	263.8	235.2	240.7
2017C	ML&P Improvement and Refunding Revenue Bonds	4.000%–5.000%	2047	385.5	293.9	306.8
2016A	ML&P Revenue Bonds	4.050% -4.050%	2041	31.9	31.9	31.9
2016B	ML&P Refunding Revenue Bonds	4.000%–5.000%	2029	116.9	63.2	74.1
2016C	ML&P Improvement and Refunding Revenue Bonds	4.000%–5.000%	2046	160.8	110.4	119.6
2015A	ML&P Revenue Bonds	4.000%–5.000%	2045	171.9	90.1	96.5
2014	ML&P Improvement and Refunding Revenue Bonds	4.000%–5.000%	2044	265.2	61.8	95.6
2012A	ML&P Improvement and Refunding Revenue Bonds	2.000%–5.000%	2041	293.3	39.3	39.3
2012C	ML&P Clean Renewable Energy Bonds	3.400%–3.750%	2033	43.0	43.0	43.0
2011B	ML&P Clean Renewable Energy Bonds	5.750%–5.750%	2027	10.0	10.0	10.0
2010A	ML&P Build America Bonds	4.447%–5.570%	2040	181.6	154.6	162.4
2010C	ML&P Recovery Zone Economic Development Bonds	5.590%–5.590%	2040	13.3	13.3	13.3
Total prior lien bonds				$ 3,663.5	$ 2,682.9	$ 2,635.7

The Department had the following activity in long-term debt during 2024 and 2023:

($ in millions)	Balance at 1/1/24	Additions	Reductions	Balance at 12/31/24	Current Portion
2024					
Prior Lien Bonds - fixed rate	$ 2,449.3	$ 199.7	$ (150.2)	$ 2,498.8	$ 122.6
Prior Lien Bonds - variable rate	186.4	-	(2.3)	184.1	2.4
	$ 2,635.7	$ 199.7	$ (152.5)	$ 2,682.9	$ 125.0

($ in millions)	Balance at 1/1/23	Additions	Reductions	Balance at 12/31/23	Current Portion
2023					
Prior Lien Bonds - fixed rate	$ 2,455.3	$ 273.6	$ (279.6)	$ 2,449.3	$ 129.3
Prior Lien Bonds - variable rate	188.2	85.8	(87.6)	186.4	2.3
	$ 2,643.5	$ 359.4	$ (367.2)	$ 2,635.7	$ 131.6

Prior Lien Bonds—In July 2024, the Department issued $199.7 million of tax-exempt Municipal Light and Power (ML&P) Improvement and Refunding Revenue Bonds (2024 Bonds). Proceeds from the 2024 Bonds were used to finance certain capital improvement and conservation programs and to refund $20.8 million of the 2014 Bonds on a current basis. The 2024 Bonds had coupon interest rates of 5.00% and mature serially from October 1, 2025 through October 1, 2049, with term bonds maturing from October 1, 2050 through October 1, 2054. The arbitrage yield was 3.57% for the 2024 Bonds. Arbitrage yield, when used in computing the present worth of all payments of principal and interest on the Bonds in the manner prescribed by the Internal Revenue Code, produces an amount equal to the issue price of the Bonds.

The debt service on the 2024 Bonds requires a cash flow over the life of the bonds of $380.9 million, including $181.2 million in interest. The refunding gain on the 2024 Bonds was $2.6 million. The difference between the cash flows required to service the old and new debt and to complete the refunding for the 2024 Bonds totaled $1.3 million and the aggregate economic gain on refunding totaled $1.1 million at present value. Current refunding is a refunding in which the outstanding (refunded) bonds are redeemed within 90 days of the date the refunding bonds are issued. Advance refunding is a refunding in which the refunded issue(s) remains outstanding for a period of more than 90 days after a bond defeasance transaction, the proceeds of which are held in escrow invested in securities and used to pay principal and interest on the refunded issue(s). The source of refunding for the 2014 bonds was from operating cash whereby $21.1 million of state and local government securities were purchased and placed in escrow to pay principal and interest on the refunded bonds.

Prior Lien Bonds—In July 2023, the Department issued $273.6 million of tax-exempt Municipal Light and Power (ML&P) Improvement and Refunding Revenue Bonds (2023A Bonds) and in August 2023 defeased $93.5 million of tax-exempt ML&P Improvement and Refunding Revenue Bonds (2014, 2015A and 2017C Bonds). Proceeds from the 2023A Bonds were used to finance certain capital improvement and conservation programs and to refund $12.4 million of the 2012A Bonds and $48.3 million of the 2013 Bonds on a current basis. In October 2023 the Department issued $85.8 million of variable rate demand Municipal Light and Power (ML&P) Refunding Revenue Bonds (2023B Bonds) which initially bear interest at a daily interest rate and are subject to mandatory purchase upon conversion to a Weekly Interest Rate, Long-Term Interest Rate, or Index Floating Rate. Payments of principal, purchase price, and redemption price of and interest on the 2023B Bonds will be initially supported by an irrevocable transferable direct-pay letter of credit that has a scheduled termination date of October 25, 2028 subject to extension or earlier termination. The Letter of Credit is issued by the Letter of Credit provider in accordance with the terms of the Reimbursement Agreement between the City and the Letter of Credit provider and dated as of October 1, 2023. Proceeds from the 2023B Bonds were used to refund $85.4 million of the 2018C C1, C2 Bonds. The 2023A Bonds had coupon interest rates of 5.00% and mature serially from March 1, 2024 through March 1, 2043, with term bonds maturing from March 1, 2044 through March 1,

2053. The arbitrage yield was 3.23% for the 2023A Bonds and 4.03% for the 2023B Bonds. Arbitrage yield, when used in computing the present worth of all payments of principal and interest on the Bonds in the manner prescribed by the Internal Revenue Code, produces an amount equal to the issue price of the Bonds.

The debt service on the 2023A Bonds requires a cash flow over the life of the bonds of $463.0 million, including $189.4 million in interest. The refunding gain on the 2023A Bonds was $3.6 million and there was no gain or loss on the 2023B Bonds. The difference between the cash flows required to service the old and new debt and to complete the refunding for the 2023A Bonds totaled $4.6 million and the aggregate economic gain on refunding totaled $3.1 million at present value. Bonds defeased in August 2023 partially refunded certain 2014, 2015A Bonds and 2017C Bonds on an advanced refunding basis. Advance refunding is a refunding in which the refunded issue(s) remains outstanding for a period of more than 90 days after a bond defeasance transaction, the proceeds of which are held in escrow invested in securities and used to pay principal and interest on the refunded issue(s). The source of refunding for the 2014, 2015A and 2017C bonds was from operating cash whereby $99.1 million of state and local government securities were purchased and placed in escrow to pay principal and interest on the refunded bonds and the accounting gain on refunding for 2023 was $3.9 million.

The Department has certain bonds outstanding that provide a refundable tax credit, or federal subsidy, paid to state or local governmental issuers by the U.S. Treasury. The amount of the federal subsidy is equal to the lesser of the amount of interest payable based on the coupon interest rate or a percentage of the amount of interest payable based on the tax credit rate on the sale date with respect to those bonds. This federal subsidy ultimately results in a net decrease to debt service, although debt service payments are paid gross. The federal subsidies are recorded as nonoperating revenues on the statements of revenues, expenses, and changes in net position.

Federal Sequestration—The sequestration provisions of the Budget Control Act of 2011 went into effect on March 1, 2013. The only direct impact of sequestration on the Department for 2024 was a 5.7% reduction through the end of 2024 in the amount the Department expects to receive from the federal government in connection with its ML&P Revenue Bonds, 2010A (Taxable Build America Bonds—Direct Payment); ML&P Revenue Bonds, 2010C (Taxable Recovery Zone Economic Development Bonds—Direct Payment); ML&P Improvement Revenue Bonds, 2011B (Taxable New Clean Renewable Energy Bonds—Direct Payment); ML&P Improvement Revenue Bonds, 2012C (Taxable New Clean Renewable Energy Bonds—Direct Payment); and ML&P Revenue Bonds, 2016A (Taxable New Clean Renewable Energy Bonds—Direct Payment). Because of this reduction, the Department received $0.3 million less in interest subsidies than originally anticipated for 2024. The Department has sufficient revenues to pay the interest without these subsidies. The effect for the accrual of federal subsidies as of December 31, 2024 was inconsequential. The effect during 2025 is estimated to be lower federal subsidies by approximately $0.3 million. The effect thereafter for federal subsidies is indeterminable. Sequestration was originally in effect through 2021 and has subsequently been extended through approximately September 30, 2030.

Debt service requirements for prior lien bonds, excluding federal subsidies for the 2016, 2012, 2011 and 2010 bonds are shown in the table below. Future debt service requirements on the variable 2021B and 2023B Bonds are estimated based on actual interest rates in effect as of December 31, 2024.

($ in millions)

Years Ending December 31	Fixed Rate Bonds: Principal Redemptions	Fixed Rate Bonds: Interest Requirements	Variable Rate Bonds: Principal Redemptions	Variable Rate Bonds: Interest Requirements	Total
2025	$ 122.6	$ 113.0	$ 2.4	$ 6.7	$ 244.7
2026	116.9	107.1	5.9	6.9	236.8
2027	96.4	101.4	6.1	6.7	210.6
2028	100.0	96.5	6.4	6.4	209.3
2029	96.1	91.8	6.6	6.2	200.7
2030 – 2034	438.4	396.5	37.4	26.8	899.1
2035 – 2039	522.8	288.3	45.6	18.9	875.6
2040 – 2044	500.0	173.3	55.6	9.2	738.1
2045 – 2049	365.3	76.4	18.1	0.7	460.5
2050 – 2054	140.3	15.9	-	-	156.2
Total	$ 2,498.8	$ 1,460.2	$ 184.1	$ 88.5	$ 4,231.6

Reserve Fund—The Department has created and is required under Ordinance No. 125459 (Bond Ordinance) to maintain a Reserve Fund for the purpose of securing the payment of the principal of and interest on all Parity Bonds outstanding and all amounts due under Parity Payment Agreements. The Reserve Fund is a pooled reserve and is an account within the books of the Department.

Reserve Fund Requirement—Under the Bond Ordinance, the aggregate Reserve Fund Requirement for all Parity Bonds is equal to the sum of the Reserve Fund Requirements established for each issue of Parity Bonds outstanding. The Bond Ordinance permits the City to establish the Reserve Fund Requirement (if any) for each issue of the Bonds or of Future Parity Bonds in connection with approving the sale of each such issue. Solely for purposes of setting the Reserve Fund Requirement, all series issued together under a single bond sale resolution are treated as a single "issue". Upon issuance of the 2024 Bonds, the aggregate Reserve Fund Requirement for all Parity Bonds outstanding was $171.0 million. The Reserve Fund Requirement is satisfied by cash held in the Reserve Fund and the current value of the surety bond (see below). The reserve fund balance of $110.2 million at December 31, 2024 consisted of $106.3 million in cash and $3.9 million in interest. The reserve fund balance at December 31, 2023 of $106.3 million consisted of $106.3 million in cash.

Surety Bond—Under the Bond Legislation, the City is permitted to provide for the Reserve Fund Requirement with an Alternate Reserve Security consistent with the Bond Legislation requirements. Under the Bond Legislation, a surety bond qualifies as Qualified Insurance for purposes of satisfying the Reserve Fund Requirement if the provider's ratings are in one of the top two rating categories at the time the policy is issued. The Bond Legislation does not require that the Reserve Fund be funded with cash or an Alternate Reserve Security if the provider of qualified insurance is subsequently downgraded. The City currently has a surety bond (the "Surety Bond") purchased from Assured Guaranty Municipal Corporation (AGM), with a policy limit that is equal to $71.5 million. This amount is used to satisfy a large proportion of the aggregate Reserve Fund Requirement.

AGM is currently rated A1, AA, and AA+ by Moody's Investors Service, Standard & Poor's Global Ratings, and Kroll Bond Rating Agency, respectively.

Irrevocable Trust Accounts—$21.1 million of proceeds from the 2024 Bonds was placed in a separate irrevocable trust account to partially defease the 2014 Bonds on a current refunding basis. There were balances

outstanding in the irrevocable trust account during 2024 for prior lien bonds advance refunded or defeased in 2024 with balances outstanding for prior lien bonds advance refunded in 2023. The ending balance of irrevocable trust accounts for the defeased bonds outstanding was $65.9 million and $107.4 million as of December 31, 2024 and 2023, respectively. During 2024, $62.3 million of the defeased bonds were called and paid from the 2024 irrevocable trust account. Neither the assets of the trust accounts nor the liabilities for the defeased bonds are reflected in the Department's financial statements. Funds held in the irrevocable trust accounts at December 31, 2024 are sufficient to service and redeem the defeased bonds outstanding.

Bond Ratings—The 2024 and 2023A Bonds, along with other outstanding parity bonds, were rated "Aa2" and "AA"; and "Aa2" and "AA", by Moody's Investors Service, Inc. and Standard Poor's Rating Services, respectively. The 2023B Bonds were rated Aa1 and AA- (Long-term), and VMIG 1 and A-1+ (Short-term), by Moody's and Standard Poor's Rating Services, respectively.

Revenue Pledged— Revenue bonds are special limited obligations payable from and secured solely by the gross revenues of the Department, less charges for maintenance and operations, and by money in the debt service account and Reserve Fund. Principal and interest paid during 2024 and 2023 was $251.3 million and $241.3 million, respectively. Total revenue available for debt service as defined for the same periods was $451.7 million and $412.5 million, respectively. Annual interest and principal payments are expected to require 53.9% of revenues available for debt service for 2024 and 60.9% in 2023.

Federal Arbitrage Regulations—Revenue bonds are subject to federal arbitrage regulations and the Department has complied with these regulations. As of December 31, 2024 and 2023, arbitrage liability existed for certain bonds outstanding totaling $0.5 million and $0.3 million, respectively.

Certain Disclosures Related to Debt – There were no direct borrowings, direct placements, or conduit debt for the Department as of December 31, 2024 and 2023, respectively.

The Department has an arrangement with the City of Seattle Department of Finance regarding potential sources of funds that could be accessed if cash resources of the Department are insufficient for a period of less than 90 days. The Department relies on ready access to the City's consolidated cash pool via interfund loans as a source of short-term emergency liquidity. Interfund loans of longer than 90 days require review by the Debt Management Policy Advisory Committee (DMPAC) and City Council approval. As of December 31, 2024, and 2023, there were no interfund loans outstanding. Also, there were no financed purchases of underlying assets or accounts payable for finance leases as of December 31, 2024 and 2023, respectively.

Default of Debt – – In the event of a default, Bond owners would be permitted to pursue remedies available under State law, including the right to bring action against the City to compel the setting aside and payment of the amounts pledged to be paid into the Parity Bond Fund in respect of the then-Outstanding Parity Bonds.

If any Bond of a Series is not paid when properly presented at its maturity or redemption date, the City will be obligated to pay, solely from the Seattle Municipal Light Revenue Parity Bond Fund (the "Parity Bond Fund") and the other sources pledged in the Bond Ordinance, interest on that Bond at the same rate provided in that Bond from and after its maturity or redemption date until that Bond, principal, premium, if any, and interest, is paid in full or until sufficient money for its payment in full is on deposit in the Parity Bond Fund and that Bond has been called for payment by giving notice of that call to the Registered Owner of that Bond.

Other— There were no liens on property or revenue pertaining to parity bonds and all bond covenants were in compliance for the Department's prior lien bonds as of December 31, 2024 and 2023, respectively.

Amortization— Discounts and premiums are amortized using the effective interest method over the term of the bonds. The excess of costs incurred over the carrying value (refunding loss), or the excess of carrying value over costs (refunding gain) of bonds refunded on early extinguishment of debt is amortized as a component of interest expense using the effective interest method over the terms of the issues to which they pertain. Net refunding losses and gains amortized to interest expense totaled $(0.5) million in 2024 and $(4.4) million in 2023. Charges on advance refunding in the amount of $7.7 million and $9.6 million are included as a component of Deferred Outflows of Resources on the 2024 and 2023 statements of net position, respectively. Gains on advance refunding included as a component of Deferred Inflows of Resources were $6.5 million in 2024 and $6.2 million in 2023.

10. NONCURRENT LIABILITIES

The Department had the following activities during 2024 and 2023:

($ in millions)

	Balance at 1/1/24	Additions	Reductions	Balance at 12/31/24
2024				
Net pension liability	$ 302.6	$ -	$ (38.4)	$ 264.2
Accumulated provision for injuries and damages	111.2	14.3	(1.2)	124.3
Compensated absences	20.3	4.3	(0.3)	24.3
Other	7.2	5.2	-	12.4
Total	$ 441.3	$ 23.8	$ (39.9)	$ 425.2

	Balance at 1/1/23	Additions	Reductions	Balance at 12/31/23
2023				
Net pension liability	$ 171.7	$ 130.9	$ -	$ 302.6
Accumulated provision for injuries and damages	83.9	27.4	(0.1)	111.2
Compensated absences	20.7	-	(0.4)	20.3
Other	8.1	-	(0.9)	7.2
Total	$ 284.4	$ 158.3	$ (1.4)	$ 441.3

Additional information on the Net pension liability can be found in Note 13 Seattle City Employees' Retirement System. Information about the provision for injuries and damages can be found in Note 11 Provision for Injuries and Damages and Note 15 Environmental Liabilities. Other includes primarily a liability for Other Postemployment Benefits; see Note 14 Other Postemployment Benefits.

11. PROVISION FOR INJURIES AND DAMAGES

The Department establishes liabilities for claims based on estimates of the ultimate projected cost of claims. Environmental related expenses are discussed in Note 15 Environmental Liabilities. The length of time for which such costs must be estimated varies depending on the nature of the claim. Actual claims costs depend on such factors as inflation, changes in doctrines of legal liability, damage awards, and specific incremental claim adjustment expenses. Claims liabilities are recomputed periodically using actuarial and statistical techniques to produce current estimates, which reflect recent settlements, claim frequency, industry averages, City-wide cost allocations, and economic and social factors. For 2024 and 2023, liabilities for lawsuits, claims, and workers' compensation were discounted over a period of 21 to 35 years at the City's average annual rate of return on investments, which was 3.38% and 1.80%, respectively.

To address the risk for certain losses arising from personal and property damage claims by third parties and for job-related illnesses and injuries to employees, the Department as part of the City of Seattle, has been self-insured for most of its general liability risks, for workers' compensation, and for employees' health care benefits. For the June 1, 2024 to June 1, 2025 coverage period, the City had general liability insurance coverage for losses over a $10.0 million self-insured retention per occurrence with a $20.0 million limit per occurrence in the aggregate. The Department had no settled claims exceeding coverage in the last three years.

The City also purchased an all-risk comprehensive property insurance policy that provides $500.0 million in limits subject to various deductible levels. This includes a $100.0 million earthquake and flood sublimit. Hydroelectric and certain other utility producing and processing projects are not covered by the property policy. The City also purchased insurance for excess workers' compensation, cyber, fiduciary and crime liability, inland marine transportation, an assortment of medical/accidental death and dismemberment, and miscellaneous policies. Bonds are purchased for public officials, public notaries, pension exposures, and specific projects and activities as necessary.

The changes in the provision for injuries and damages at December 31, 2024 and 2023 are as follows:

($ in millions)	**2024**	**2023**
Beginning unpaid claims liability	$ 16.2	$ 17.6
Payments	(7.4)	(8.6)
Incurred Claims	7.6	7.2
Ending balance	$ 16.4	$ 16.2

The provision for injuries and damages included in current and noncurrent liabilities at December 31, 2024 and 2023 is as follows:

($ in millions)	**2024**	**2023**
Noncurrent liabilities	$ 10.3	$ 11.2
Accounts payable and other current liabilities	6.1	5.0
Ending balance	$ 16.4	$ 16.2

12. ACCOUNTS PAYABLE

Accounts Payable and Other Current Liabilities— The composition of accounts payable and other current liabilities at December 31, 2024 and 2023, is as follows:

($ in millions)	2024	2023
Vouchers payable	$ 38.3	$ 57.3
Power accounts payable	32.4	36.7
Taxes payable	22.0	20.8
Claims payable	12.1	8.0
Guarantee deposit and contract retainer	50.1	45.0
Other accounts payable	5.3	6.9
Total	$ 160.2	$ 174.7

13. SEATTLE CITY EMPLOYEES' RETIREMENT SYSTEM

Plan Description— The Seattle City Employees' Retirement System (SCERS) is a cost-sharing multiple-employer defined benefit public employee retirement system, covering employees of the City and administered in accordance with Chapter 41.28 of the Revised Code of Washington and Chapter 4.36 of the Seattle Municipal Code. SCERS is a pension trust fund of the City. SCERS is administered by the Retirement System Board of Administration (the Board). The Board consists of seven members including the Chair of the Finance Committee of the Seattle City Council, the City of Seattle Finance Director, the City of Seattle Personnel Director, two active members and one retired member of the System who are elected by other system members, and one outside board member who is appointed by the other six board members. Elected and appointed board members serve for three-year terms.

All employees of the City are eligible for membership in SCERS with the exception of uniformed police and fire personnel who are covered under a retirement system administered by the State of Washington. Employees of the King County Departments of Transportation and Public Health who established membership in SCERS when these organizations were City departments were allowed to continue their SCERS membership.

Beginning with employees with hire dates of January 1, 2017, all new members are enrolled in SCERS Plan II, which has contribution and benefit calculation rates different than the SCERS I Plan.

Following is membership data for employees covered by the benefit terms as of the reporting date, December 31, 2024, and the measurement date, December 31, 2023 and the reporting date December 31, 2023, and the measurement date December 31, 2022:

	2024	2023
Active members	9,884	9,827
Retired members and beneficiaries receiving benefits	7,830	7,689
Vested terminated employees entitled to benefits	1,743	1,711

Summary of Significant Accounting Policies—SCERS financial statements and schedules are presented using the economic resources measurement focus and the accrual basis of accounting. For purposes of measuring the net pension liability (NPL), deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of SCERS and additions to and deductions from SCERS fiduciary net position have been determined on the same basis as they are reported by SCERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value in accordance with GASB 72.

The NPL was measured as of December 31, 2023 and December 31, 2022, and the total pension liability used to calculate the NPL was based on an actuarial valuation as of January 1, 2023 and January 1, 2022, respectively.

Pension Benefits— Service retirement benefits are calculated on the basis of age, salary, and service credit.

SCERS I – Members are eligible for retirement benefits after 30 years of service, at age 52 after 20 years of service, at age 57 after 10 years of service, and at age 62 after 5 years of service. Annual retirement benefits are calculated as 2% multiplied by years of creditable service, multiplied by average salary, based on the highest 24 consecutive months, excluding overtime. Members who retire before meeting the age and/or years of service requirement receive a 0.1% reduction for each year that retirement precedes the date of eligibility. Retirement benefits vest after 5 years of credited service.

SCERS II – Members are eligible for retirement benefits at age 55 after 20 years of service, at age 57 after 10 years of service, and at age 60 after 5 years of service. Annual retirement benefits are calculated as 1.75% multiplied by years of creditable service, multiplied by average salary, based on the highest 60 consecutive months, excluding overtime. Members who retire before meeting the age and/or years of service requirement receive a 0.1% reduction for each year that retirement precedes the date of eligibility. Retirement benefits vest after 5 years of credited service.

Disability Benefits—An active member is eligible to receive disability benefits when: (a) member has achieved 10 years of credited service within the 15 years preceding disability retirement, or (b) the disability occurs in the course of City employment in which no service requirement exists. The amount of the disability benefit is the greater of (a) 1.5% times the final compensation times completed years of creditable service, or (b) 1.5% times final compensation total years of service that could have been earned to age 62, but not to exceed one-third of final compensation. Disability benefits vest after 10 years of credited service.

Death Benefits—Death benefits may be paid to a member's designated beneficiary. If a member's death occurs before retirement, the benefit options available are (a) payment to the beneficiary of accumulated contributions, including interest, or (b) if the member had completed 10 years of service at the time of death, a surviving spouse or registered domestic partner may elect to receive, in place of (a) above, either: (1) A monthly allowance for life equal to the benefit the spouse would have received had the member just retired with a 100% contingent annuitant option in force, or (2) A cash payment of no more than one-half of the member's accumulated contributions, along with a correspondingly reduced retirement allowance. If a member's death occurs after retirement, the death benefit received by the beneficiary (if any) is based on the retirement plan the member selected at retirement. Death benefits vest after 10 years of credited service.

Contributions— Member and employer contributions rates are established by Seattle Municipal Code Chapter 4.436. The overall contribution rate is determined by the actuarial formula identified as the Entry Age Cost Method. Member contribution rates are also set via collective bargaining contracts. The overall formula determines the amount of contributions necessary to fund the current service cost, representing the estimated amount necessary to pay for benefits earned by the employees during the current service year and the amount of contributions necessary to pay for prior service costs. Total required contributions, including amounts necessary to pay administrative costs, are determined through annual actuarial valuations. Contribution rates and amounts were as follows as of the reporting dates, December 31, 2024 and December 31, 2023, and the measurement dates, December 31, 2023 and December 31, 2022:

($ in millions)	Contributions					
	Rates				Amounts	
	SCERS I Employer	SCERS I Employee	SCERS II Employer	SCERS II Employee	City	Department
2024	15.31%	10.03%	14.91%	7.00%	$176.8	$36.8
2023	15.91%	10.03%	15.56%	7.00%	$150.0	$29.6

Net Pension Liability—The Department reported a liability of $264.2 million and $302.6 million for its proportionate share of net pension liability as of December 31, 2024 and December 31, 2023, respectively. The Department's proportion of the NPL as of December 31, 2024 and December 31, 2023 was based on contributions to SCERS during the fiscal year ended December 31, 2023 and December 31, 2022, respectively. The Department's proportionate share was 19.69% and 20.00% for the years ended December 31, 2024 and December 31, 2023, respectively. The net pension liability was measured as of December 31, 2023 and December 31, 2022, and the total pension liability used to calculate the net pension liability was based on an actuarial valuation as of January 1, 2023 and January 1, 2022, respectively.

Changes in Net Pension Liability

($ In millions)

	Fiscal Year Ended December 31	
	2024	2023
Total Pension Liability		
Service cost	$ 24.9	$ 25.6
Interest on total pension liability	68.3	67.0
Effect of economic/demographic gains or losses	1.7	(2.2)
Benefit payments	(49.1)	(46.9)
Refund of contributions	(6.4)	(5.8)
Net change in total pension liability	39.4	37.7
Total pension liability, beginning of period	1,030.4	1,028.5
Effect of change in proportionate share	(16.0)	(35.8)
Adjusted total pension liability, beginning of period	1,014.4	992.7
Total pension liability, end of period	1,053.8	1,030.4
Plan fiduciary net position		
Benefit payments	(49.1)	(46.9)
Refunds of contributions	(6.4)	(5.8)
Administrative expenses	(1.6)	(1.6)
Member contributions	16.8	16.6
Employer contributions	29.6	29.1
Net investment income	83.9	(90.6)
Net change in Plan fiduciary net position	73.2	(99.2)
Plan fiduciary net position, beginning of period	727.8	856.8
Effect of change in proportionate share	(11.4)	(29.8)
Adjusted fiduciary net position, beginning of period	716.4	827.0
Plan fiduciary net position, end of period	789.6	727.8
Net pension liability, end of period	$ 264.2	$ 302.6

The Department incurred pension expense of $22.4 million and $34.3 million for the years ended December 31, 2024, and 2023, respectively.

Actuarial assumptions— The total pension liability at December 31, 2024 and 2023 was based on actuarial valuations as of December 31, 2023 and 2022, respectively, using the following actuarial methods and assumptions:

Actuarial Cost Method	Individual Entry Age normal
Amortization Method	
Level percent or level dollar	Level percent
Closed, open, or layered periods	Closed
Amortization period and start date	30 years as of January 1, 2013 Valuation
Amortization growth rate	3.35%
Asset Valuation Method	
Smoothing period	5 years
Recognition method	Non-asymptotic
Corridor	None
Inflation	2.60%
Investment Rate of Return	6.75%
Cost of Living Adjustments	Annual compounding COLA of 1.5% assumed. Additional restoration of purchasing power benefits available based on an assumed 2.6% if purchasing level decreases to 65%.
Mortality	Various rates based on PubG-2010 mortality tables and using generational projection of improvement using MP-2021 Ultimate projection scale.

All other actuarial assumptions used in the December 31, 2023 valuation and the December 31, 2022 valuation were based on the results of an actuarial experience study for the period January 1, 2018 through December 31, 2021.

Discount Rate—The discount rate used to measure the total pension liability for FY 2024 and FY 2023 was 6.75%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and the participating governmental entity contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods on projected benefit payment to determine the total pension liability.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and gross of administrative expenses) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The following table reflects long-term expected (30 year) real rate of return by asset class. The rate of return was calculated using the capital market assumptions applied to determine the discount rate and asset allocation. The expected inflation rate for FY 2024 and FY 2023 is projected at 2.60% for both periods.

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Equity		
Public Equity	48%	4.70%
Private Equity	11%	7.50%
Fixed Income		
Core Fixed Income	18%	2.30%
Credit Fixed Income	7%	5.80%
Real Assets		
Real Estate	12%	4.20%
Infrastructure	4%	4.50%

Sensitivity of the Net Pension Liability to Changes in the Discount Rate—The following table presents the Department's proportionate share of the net pension liability of SCERS, calculated using a discount rate of 6.75% for FY 2024 and FY 2023, as well as what the Department's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower or 1 percentage point higher:

Discount Rate Sensitivity

(In millions)

	Net Pension Liability at December 31,	
	2024	**2023**
Discount Rate		
1% decrease - 5.75%	$ 397.1	$ 432.2
Current discount Rate - 6.75%	264.2	302.6
1% increase - 7.75%	153.1	194.3

Plan Fiduciary Net Position—Detailed information about the SCERS's fiduciary net position is available in the separately issued, audited financial statements as of December 31, 2024, which are publicly available at http://www.seattle.gov/retirement/forms-and-publications/publications.

Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pension— The following table presents information about the pension-related deferred outflows of resources and deferred inflows of resources for the Department at December 31, 2024, and December 31, 2023:

($ in millions)	December 31,	
	2024	**2023**
Deferred outflows of resources		
Differences between expected and actual experience	$ 1.7	$ 0.4
Changes of assumptions	11.9	18.9
Net difference between projected and actual earnings	26.2	52.8
Contributions made subsequent to measurement date	36.8	29.6
Total deferred outflows of resources	$ 76.6	$ 101.7
Deferred inflows of resources		
Differences between expected and actual experience	$ 2.3	$ 3.9
Changes in employer proportion and differences between employer contributions and proportionate share of contributions	9.0	8.5
Total deferred inflows of resources	$ 11.3	$ 12.4

Department contributions made in 2024 in the amount of $36.8 million are reported as deferred outflows of resources and will be recognized as a reduction of the net pension liability in the year ended December 31, 2025. These contributions along with the net difference between projected and actual earnings reported as deferred outflows of resources will be recognized as pension expense in the future as shown in the following table.

Year Ending December 31 *($ in millions)*	Amortization
2025	$ 1.3
2026	13.3
2027	22.4
2028	(8.3)
2029	(0.2)
Total	$ 28.5

14. OTHER POSTEMPLOYMENT BENEFITS

Plan Description – Health care plans for active and retired employees are administered by the City of Seattle as single-employer defined benefit public employee health care plans.

Employees retiring under the City may continue their health insurance coverage under the City's health insurance plans for active employees. When a retired participant dies, the spouse remains fully covered until age 65 and covered by the Medicare supplement plan thereafter. Employees that retire with disability retirement under the City may continue their health coverage through the City with same coverage provisions as other retirees. Eligible retirees self-pay 100 percent of the premium based on blended rates which were established by including the experience of retirees with the experience of active employees for underwriting purposes. The postemployment benefit provisions are established and may be amended by ordinance of the Seattle City Council and as provided in Seattle Municipal Code 4.50.020. The City provides an implicit rate subsidy of the post-retirement health insurance costs and funds the subsidy on a pay-as-you-go basis. The City of Seattle covers 11,978 active employee plan participants and 399 retiree, disabled, and survivor plan participants as of the January 1, 2024 valuation date.

Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. Actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future. Calculations are based on the types of benefits provided under the terms of the substantive plan at the time of each valuation and on the pattern of sharing of costs between the employer and plan members to that point. The projection of benefits for financial reporting purposes does not explicitly incorporate the potential effects of legal or contractual funding limitations on the pattern of cost sharing between the employer and plan members in the future. Actuarial calculations reflect a long-term perspective. Consistent with that perspective, actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets. Based on the latest biennial actuarial valuation date the significant methods and assumptions are as follows:

Actuarial data and assumptions – the demographic assumptions of mortality, termination, retirement, and disability are set equal to the assumptions used for City pension actuarial valuations based on a Seattle City Employees' Retirement System Experience Report for the period 2018-2021.

Valuation date	FY 2024: January 1, 2024 FY 2023: January 1, 2022
Actuarial cost method	Entry age normal
Amortization method	Level dollar
Discount rate	FY 2024: 3.26% FY 2023: 3.72%
Participation	25% of Active Employees who retire participate

Health care cost trend rates - The health care cost trend assumptions shown below were based on national average information from a variety of sources, including S&P Healthcare Economic Index, NHCE data, plan renewal data, and vendor Rx reports, with adjustments based on the provisions of the benefits sponsored by City of Seattle.

"Recommended Trend Rates" – December 31, 2023 and January 1, 2024

Fiscal Yar	Medical	Rx	Medical/Rx/Admin Composite
2024–2025	8.00%	13.00%	9.15%
2025–2026	7.50%	12.25%	8.63%
2026–2027	7.00%	11.50%	8.11%
2027–2028	6.69%	10.63%	7.69%
2028–2029	6.38%	9.75%	7.25%
2029–2030	6.06%	8.88%	6.81%
2030–2031	5.75%	8.00%	6.36%
2031–2032	5.44%	7.13%	5.90%
2032–2033	5.13%	6.25%	5.44%
2033–2034	4.81%	5.38%	4.97%
2034–2035	4.50%	4.50%	4.50%

Mortality

General Service

Actives: PubG-2010 Employee Table multiplied by 95%
Retirees: PubG-2010 Retired Mortality Table multiplied by 95%
Disabled: PubG-2010 Disabled Mortality Table multiplied by 95%
Rates are projected generationally using Scale MP-2021 ultimate rates.

Dependent Coverage – 25% of members electing coverage are assumed to be married or have a registered domestic partner. Male spouses are assumed to be two years older than their female spouses. It is assumed that children will have aged off of coverage.

Health Care Claims Development – The sample per capita claim cost assumptions shown below by age and plan represent the true underlying baseline experience estimated for the City of Seattle's sponsored postretirement benefits and costs.

Pre65 Medical, Rx, and Admin Combined (including cost of children)						
Age	Aetna Preventive	Aetna Traditional	Aetna Medicare Pre65	Kaiser Standard	Kaiser Deductible	Kaiser MAPD Pre65
50	$ 18,062	$ 16,082	$ 13,016	$ 10,627	$ 8,253	$ 6,857
55	$ 22,293	$ 19,850	$ 16,066	$ 13,117	$ 10,186	$ 8,464
60	$ 27,649	$ 24,619	$ 19,925	$ 16,268	$ 12,633	$ 10,497

The pre-65 average medical and prescription drug per capita claims costs were developed from 2025 calendar year self-funded premium-equivalent composite active and pre-65 retiree rates, increasing the Aetna Preventative and Aetna Traditional rates by an underwriting factor of 1.345 to approximate true pre-65 retiree costs. Premium-equivalent rates and the adjustment factor were provided by City of Seattle's health pricing actuary. The average medical and prescription drug per capita "adult-equivalent" claims costs were based on the respective pre-65 enrollment weighted average of the 2025 four-tier rate structure including the add-on cost of dependent children and trended back from 2025 at assumed trend from 2024 to 2025 to be centered at the mid-point of the annual period following the 1/1/2024 valuation date. Average medical/Rx per capita claims costs were then age-adjusted based on the demographics of the pre-65 retiree population, and the assumed health care aging factors shown in the Morbidity Factors table below. Administrative costs are included in the premium-equivalent rates below and the per capita claims costs per year in the tables above.

Morbidity Factors – The claim costs for medical and prescription drugs were assumed to increase with age according to the table below.

Age Band	Medical	Rx	Composite
40 - 44	3.00%	4.80%	3.30%
45 - 49	3.70%	4.70%	3.80%
50 - 54	4.20%	4.70%	4.30%
55 - 59	4.40%	4.60%	4.40%
60 - 64	3.70%	4.60%	3.80%

Net OPEB Liability – The Department reported an OPEB liability of $11.9 million and $6.9 million for the years ended December 31, 2024 and 2023, respectively. The OPEB liability is included under Other noncurrent liabilities on the Department's statements of net position. The Department's proportionate share of the OPEB liability was 13.66% and 13.88% for the years ended December 31, 2024 and 2023, respectively. Based on the actuarial valuation date of January 1, 2024 and measurement dates January 1, 2024 and January 1, 2023, details regarding the Department's Total OPEB Liability, Plan Fiduciary Net Position, and Net OPEB Liability as of December 31, 2024 and 2023 are shown below.

Changes in Net OPEB Liability

($ in millions)	Fiscal Year Ended December 31, 2024	Fiscal Year Ended December 31, 2023
Total OPEB Liability		
Service cost	$ 0.3	$ 0.5
Interest on the total OPEB liability	0.3	0.2
Differences between expected and actual experience	(0.2)	-
Changes of assumptions	4.9	(1.2)
Benefit payments	(0.3)	(0.3)
Net Changes	5.0	(0.8)
Total OPEB liability, beginning of period	7.7	10.0
Effect of change in proportionate share	(0.8)	(2.3)
Adjusted total OPEB liability, beginning of period	6.9	7.7
Total OPEB liability, end of period	11.9	6.9
Plan fiduciary net position		
Benefit payments	(0.3)	(0.3)
Employer contributions	0.3	0.3
Net change in Plan fiduciary net position	-	-
Net OPEB liability, end of period	$ 11.9	$ 6.9

The Department recorded an expense for OPEB of $0.5 million and ($0.1) million in 2024 and 2023, respectively. The Health Care Subfund of the General Fund is reported in The City of Seattle's Annual Report.

Discount Rate and Healthcare Cost Trend Rates – The discount rate used to measure the total OPEB liability is 3.26% and 3.72% for the years ended December 31, 2024 and 2023, respectively. The following tables present the sensitivity of net OPEB liability calculation to a 1% increase and a 1% decrease in the discount rate used to measure the total OPEB liability:

Discount Rate Sensitivity

(In millions)

	Net OPEB Liability at December 31,	
	2024	2023
Discount Rate		
1% decrease - 2.26%	$ 13.0	
Current discount Rate - 3.26%	11.9	
1% increase - 4.26%	10.9	
1% decrease - 2.72%		$ 7.6
Current discount Rate - 3.72%		6.9
1% increase - 4.72%		6.4

The following table presents the impact of healthcare cost trend sensitivity on the net OPEB liability calculation to a 1% increase and a 1% decrease in the healthcare cost trend rates:

Healthcare Cost Trend Rate Sensitivity

(In millions)

	Net OPEB Liability at December 31,	
	2024	2023
Discount Rate		
1% decrease	$ 10.5	$ 6.1
Trend rate	11.9	6.9
1% increase	13.5	7.9

Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB – The following table presents information about the OPEB-related deferred outflows of resources and deferred inflows of resources for the Department at December 31, 2024 and December 31, 2023.

($ in millions)

	December 31,	
	2024	2023
Deferred outflows of resources		
Difference between actual and expected experience	$ 0.9	$ 1.2
Assumption changes	4.6	0.4
Contributions made after measurement date	0.5	0.3
Total deferred outflows of resources	$ 6.0	$ 1.9
Deferred inflows of resources		
Difference between actual and expected experience	$ 1.6	$ 1.7
Assumption changes	2.4	3.1
Total deferred inflows of resources	$ 4.0	$ 4.8

Department contributions made in 2024 in the amount of $0.5 million are reported as deferred outflows of resources and will be recognized as a reduction of the net OPEB liability in the year ended December 31, 2025. These contributions will be recognized in the future as shown in the following table. Note that additional future deferred outflows and inflows of resources may impact these amounts.

Year Ending December 31	Amortization
($ in millions)	
2025	$ -
2026	-
2027	0.1
2028	0.1
2029	0.2
Total Thereafter	1.1
Total	$ 1.5

15. ENVIRONMENTAL LIABILITIES

Environmental liabilities were $120.0 million and $103.1 million, at December 31, 2024, and 2023, respectively.

The following is a brief description of the significant Superfund sites:

- The Harbor Island Superfund Site – In 1983, the U.S. Environmental Protection Agency (EPA) designated this site as a federal Superfund site. The Department and other entities are sharing costs equally for investigating contamination in the East Waterway alongside Harbor Island. The City of Seattle's (the City's) share is split between the Department 45% and Seattle Public Utilities (SPU) 55%. The Department's involvement stems from its sale of transformers to a company on Harbor Island. The Port of Seattle (the Port), King County (the County), and the City are performing the work under a Memorandum of Agreement. EPA approved the Remedial Investigation (RI) report in January 2014 and approved the final Feasibility Study (FS) in June 2019. The EPA released the Proposed Plan in April 2023. EPA released the interim Record of Decision in May 2024. The next major milestone for the project is negotiation of an Administrative Settlement Agreement and Order on Consent for remedial design. Ongoing technical work includes post Record of Decision work required by EPA (updating the particle tracking model and the recontamination model). Ongoing technical and legal work is estimated to cost the City $0.5 million for 2025. The interim remedial action for the East Waterway Operable Unit consists of the removal of contaminated sediment from a majority of the waterway, along with smaller areas of capping, in situ treatment, and enhanced or monitored natural recovery. Common consultant costs are being shared equally among three parties, including the City, on an interim basis, subject to eventual reallocation through litigation or an alternative dispute resolution process.

The City anticipates that EPA will issue a notification letter to Potential Responsible Parties (PRP) informing them of their potential liability for the East Waterway Cleanup. The timing of this notification is unknown. The current East Waterway Group is working to define an allocation or mediation process that will commence once additional PRPs are identified. The Department owns adjacent property but does not own any of the waterway or sediments. The Department recorded a liability of $69.1 million as of December 31, 2024, and $72.1 million as of December 31, 2023. The ultimate liability is indeterminate.

● The Lower Duwamish Waterway Superfund Site (LDW) – In 2001, the EPA designated this site as a federal Superfund site for contaminated sediments. The Department's involvement is attributable to its land ownership or use of property along the river. In 2000, the City was one of four parties who signed an Administrative Order on Consent (AOC) with the EPA and Washington State Department of Ecology (DOE) to conduct an RI and FS to prepare a site remedy. The EPA approved the RI in 2010 and the FS in November 2012. In February 2013, the EPA issued the Proposed Plan for cleanup of the Lower Duwamish Waterway. In December 2014, the EPA issued its final Record of Decision. The selected remedy includes dredging, capping and enhanced or monitored natural recovery. EPA estimated the cost of the preferred alternative clean-up with an estimated cost of $342.0 million (in discounted 2014 dollars), or $394.0 million (in non-discounted dollars). The City estimates the future costs are $758 million in 2024 dollars due to inflation and revised estimates. In 2024, EPA updated their estimate to approximately $667.0 million. The LDW project team estimate for the project is more than the EPA estimate as the project team have better idea of construction cost after the completion of the Upper Reach design.

There are currently three PRP's (The City, the County and Boeing), actively participating in the project. They are collectively called the Lower Duwamish Waterway Group (LDWG). The Port, previously an active LDWG member, is not currently an active participant. The City and the other three parties that signed the AOC in 2001 have agreed with EPA on several amendments to the order. Under the current amendments (AOC4 and AOC5), the parties are designing the remedy for the upper two-thirds of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) site. The Port is continuing to pay their share of the AOC4 and AOC5 for now.

The design work for the upper third of the waterway began in 2019 pursuant to amendments to the existing EPA order. The 100% design was submitted to EPA in January 2024. Construction in the Upper Reach began in December 2024. Pre-design work for the Middle Reach began in 2022 and is ongoing. The EPA, the City and other parties have been negotiating a Consent Decree that will supersede the administrative order and govern implementation of the remedy. The Consent Decree is expected to be effective in mid-2025. In order to begin construction of the remedy in the Upper Reach during the 2024 fish window, EPA issued a Unilateral Administrative Order to the LDWG members that requires recipients implement the remedy. This Order is intended to serve as a bridge until the Consent Decree effective date.

From 2016 to mid-2022, the City and over forty other parties participated in a confidential alternative dispute resolution process (the "allocation process") to resolve their respective shares of past and future costs. Since then, nearly all the allocation parties have been engaged in settlement negotiations with the goal of finalizing settlements in 2025. If the Consent Decree and settlements with other allocation parties are finalized as expected, going forward the City will be paying about 31.5% of the costs. The Department pays 15% of the City's costs and SPU pays the remainder. The Department owns some properties adjacent to the Waterway but does not own any of the waterway channels or its sediments. The Department recorded a liability of $38.7 million as of December 31, 2024 and $23.7 in December 2023. The Department's ultimate liability is indeterminate.

● The Slip 4 Early Action Area, Duwamish Waterway Sediments (Slip-4) – The City was the lead on the study and clean-up of an identified Early Action Area: Slip 4. Most of the EPA identified Slip 4 cleanup boundary (sediment area) is owned by the City. One percent of the Slip 4 Early Action Site is owned by Boeing. Work on Slip 4 began in 2003. Upland source control was implemented by Boeing (2009-2011) and the City (2009). Cleanup in Slip 4 began on September 15, 2011, and was completed in February 2012.

The City and Boeing implemented institutional controls in Slip 4 in 2013. The Institutional Controls Implementation Report was approved by EPA in November 2013. Three addendums to the Report were issued to and approved by EPA in 2014. These addendums added additional institutional controls in the form of

environmental covenants, transfer of property to the City, and a U.S. Coast Guard registered navigation area.

The Long-Term Monitoring and Reporting Plan was approved by EPA in March 2013. Long term monitoring events are completed annually in July. Monitoring events began in 2013 and occurred annually for the first 5 years. Thereafter, monitoring events were completed in year 7 (2019) and year 10 (2022). Two additional monitoring events were agreed to with EPA; the first occurred in 2024 and the second will occur in 2027 after which future monitoring will be conducted as part of the Lower Duwamish site-wide monitoring. The Department's ultimate liability is indeterminate.

- Terminal 117 Upland & Sediments, Duwamish Waterway Sediments (T-117) – The T-117 is not owned by The Department which has been sharing costs with the Port to study and clean-up contaminated sediments at the T-117 Early Action Area. During 2007 the T-117 site was expanded to include the upland parcel adjacent to the sediments and the nearby streets (discussed below). Current PRPs include the City and the Port. The Port is the lead on the sediment and upland cleanup. A Settlement Agreement between the City, Malarkey, Sannes and the Duwamish Manufacturing Company, the Port and the County was effective July 30, 2008. The Engineering Evaluation and Cost Analysis (EE/CA) was finalized in 2010, and an Agreed Order was signed June 6, 2011. The clean-up of the sediments and the upland began in May 2013 and was finished in 2015. EPA approval of the final construction closeout and project closeout was received in July 2018. The Long-Term Monitoring and Maintenance Plan was approved by EPA in September 2018. Long-term monitoring events are completed in accordance with the Plan. An annual report is submitted in March each year. Annual monitoring reports were submitted in 2018, 2019, 2020, 2022, and 2023. The annual monitoring report covering January 1 through December 31, 2024, was submitted to EPA in March 2025. The Department recorded a liability of $2.1 million as of December 31, 2024 and $3.3 million as of December 31, 2023 and the ultimate liability is indeterminate.

- South Park Marina (the Marina) – In 2016 DOE has notified the City that it is a Potentially Liable Party (PLP) for contamination at the Marina, which is adjacent to Terminal 117. The Department is the lead for the City at this site. Negotiations for an Agreed Order between the DOE and PLP's (the City, the Port, and the Marina) resulted in an Agreed Order to conduct an RI. The Agreed Order was finalized in April 2019. The Common Interest for Cost Sharing agreement between PLPs was signed in 2019. The City, the Port, and the Marina have agreed to share costs equally with the City administering the contract with a common consultant to complete the RI. The City share is split between the Department 97.5% and SPU 2.5%. In 2019, the City contracted with a consultant to complete the RI. A draft workplan was submitted to the DOE in May 2020 and comments were received. A revised draft workplan was submitted in December 2020. Phase 1 field activities and some data analyses were completed in 2021. Approval of the Source Control memorandum and preparation of workplan addendum for Phase 2 Field activities were completed in 2022. Phase 2 field sampling and preparation and submittal of the draft RI report were completed in 2023. The Department recorded a liability of $0.9 million as of December 31, 2024 and $0.7 million as of December 31, 2023. The ultimate liability is indeterminate.

- North Boeing Field/Georgetown Steam Plant (NBF/GTSP) – The City, the County, and Boeing signed an Administrative Order issued by the DOE requiring them to investigate and possibly remove contamination in an area that encompasses the NBF, the Department's GTSP, and the King County Airport. This site was also the subject of the lawsuit brought by the City against Boeing. Boeing agreed to pay 67% of the costs for DOE's implementation of the current order. The order requires completion and then implementation of an RI and FS. The final RI work plan was issued in November 2013. In January 2015, all parties executed the First Amendment to the NBF/GTSP Agreed Order, making the PLP's responsible for conducting and completing remedial action at the site. The City is responsible for one third of the costs, with the Department's share at 95% and SPU's share at 5%. The draft RI was submitted in June 2016. DOE directed additional investigation in offsite areas

following the submittal of RI. The additional investigation and negotiation on RI comments delayed the submittal of the revised draft RI. The revised draft RI was submitted in late 2023.

In 2022, the DOE notified the PRP's that Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) were determined to be hazardous substances under Model Toxic Control Act and additional investigation was necessary to address these potential contaminants. The PLPs are currently drafting a work plan for PFAS investigation with sampling expected to occur in 2025. Incorporation of the PFAS investigation results into the RI report is under negotiation with DOE.

The FS process will begin following approval of RI which may not occur until the after the PFAS investigation is complete. The timing of the approval is currently unknown. It is also unknown how much the Department would have to pay for any future cleanup at the GTSP. The Department owns approximately 10% of the study site including the GTSP and area around the flume leased to Boeing.

Boeing and the City will each pay 100% of cost for remedial action at their own facilities. In 2016, storm drain sampling conducted during the RI revealed the presence of polycyclic aromatic hydrocarbons in the storm lines that drain the GTSP roof. The Department replaced the GTSP roof as an interim action prior to finalization of the RI/FS. Roof replacement began in December 2020 and was completed in early 2021.

In 2024, Ecology notified the City that it is a Potentially Liable Party for contamination on the property where the GTSP Pump Station is located. Authority over that property was previously transferred to the Parks Department but the Department retained responsibility for any contamination there. Ecology is expected to issue an administrative order to the City and possibly to other parties to perform a RI. The Department recorded a liability of $0.9 million as of December 31, 2024, and $0.8 million as of December 31, 2023. The ultimate liability is indeterminate.

- Newhalem Ladder Creek Settling Tank – This project is one of three sites within The Department's Skagit River Hydroelectric Project being conducted under a 2019 Settlement Agreement with the National Park Service (the NPS) which owns all three sites. The project is located near Newhalem, WA, and is a cleanup of contaminated debris and soil resulting from the incineration of a building structure that covered a large water settling tank during the 2015 Goodell Creek Forest Fire. The removal work was completed in 2018 to comply with CERCLA requirements under a Time Critical Removal Action (the Action) administered by the NPS. The final Action Completion Report has been approved, and a Notice of Completion of Removal Action was issued by the NPS in January 2025 following post-Action vegetative restoration monitoring.

- Newhalem Penstock – This project is the second of three sites within The Department's Skagit River Hydroelectric Project being conducted under the 2019 Settlement Agreement with the NPS. The project is also located near Newhalem and included preparation of an EE/CA to comply with CERCLA requirements under a Non-time Critical Removal Action administered by the NPS. The final EE/CA was approved by the NPS in 2023 and fully executed in Q1 2024. Annual vegetative restoration monitoring is required by the EE/CA through at least 2028.

- Diablo Dry Dock – This project is the third of three sites within The Department's Skagit River Hydroelectric Project being conducted under the 2019 Settlement Agreement with the NPS. The project is located near Diablo, WA and includes preparation of an EE/CA to comply with CERCLA requirements under a Non-time Critical Removal Action administered by the NPS. GeoSyntec is under a contract to provide The Department with consulting services related to the EE/CA. The EE/CA field investigation was completed in October 2022, the draft EE/CA Report was completed in 2023/2024, and a final EE/CA Report are planned for 2025-2026.

The Department recorded a liability of $1.7 million as of December 31, 2024, and $1.5 million as of December 31, 2023 for all three Skagit sites. The ultimate liability is indeterminate.

- Mercury Cleanups – The Department locations where mercury may have been released from past filling of rectifiers were identified. Voluntary investigations and cleanups were conducted at several sites. A portion of the University Rectifier site beneath existing buildings is the only area that remains unaddressed. Demolition of the buildings at the University Rectifier site will likely be scheduled at some point in the future, at which time additional soil cleanup may be necessary. The Department's liability is indeterminate.

- Substations – Cleanup activities are being conducted at a number of substation sites. At Magnolia Substation, site assessment performed in 1999 identified Polychlorinated Biphenyl's (PCB's) on two concrete pads located outside of the concrete substation yard. Further evaluation done in 2015 identified pesticide, cadmium, and PCB contamination on the property. The site has a designated Environmental Critical Area along the eastern property line, a steep slope, requiring the cleanup to be permitted with the Seattle Department of Construction and Inspections (SDCI). Cleanup and restoration of most of the site was completed in 2020 and 2021. One small area of contamination was left in place and covered with a protective layer of soil due to desired preservation of an overlying mature tree. Removal of this soil is not currently planned. Soil within an enclosed courtyard on the property is planned for characterization and possible cleanup during 2025. Other former substations are in the process of being characterized and/or remediated in 2025-2028. The Department recorded a liability of $4.4 million as of December 21, 2024 and $0.2 million and of December 31, 2023. and the ultimate liability is indeterminate.

- Ross Lower Level Outlet Cleanup at Ross Dam – The tunnel that houses a bypass penstock designed to convey water from Ross reservoir beneath Ross Dam is contaminated with metals residues from former coating operations. To prevent their release into Skagit River, work to remove the accumulated sediment in the lower tunnel system was completed in 2023. Due to unanticipated conditions, physical constraints and significant delays caused by the Sourdough Creek wildfire, portions of the upper tunnel could not be addressed during the 2023 work. On-going monitoring of the system and water quality is planned to be implemented in 2025. The Department recorded a liability of $1.6 million as of December 31, 2024, and $0.1 million as of December 31, 2023 respectively. The Department's ultimate liability is indeterminate.

- Cedar Falls Lead Abatement – In 2008, lead contamination exceeding State cleanup levels in soil was discovered in several locations along The Department's Cedar Falls penstocks and associated structures during an investigation related to planned seismic upgrades. The penstocks are located in Seattle's Cedar River Municipal Watershed. An assessment of the nature and extent of contamination along the entirety of the Penstock System conducted from 2009 through 2012 determined that, in some locations, soil near the penstocks and bridges contained lead and arsenic above state cleanup standards. Paint coatings in some areas, including three locations directly over the Cedar River, also contained lead and asbestos. Mercury was also discovered in soils in one isolated area. Future project costs include continuing implementation of a Long-term Environmental Management Plan, including several contaminant source removal activities and associated monitoring. The Department owns the penstocks and most associated structures. SPU owns the land.

This program currently includes two general areas of work: Overall Penstocks System Environmental Management Plan Implementation and Source Control/Removal projects. Lead- based paint removal and recoating on the three penstock bridges was completed in November 2016 under a public works contract, Upper Truss Bridge bank soil stabilization was completed in spring 2017, a Trestle Bridge contaminated soil stability survey was completed in summer 2019, and Gatehouse lead paint abatement was completed in 2024. Other planned projects and their general timelines include Gatehouse mercury soil cleanup (2025) and ongoing

Penstock monitoring. The Department is responsible for 100% of these costs. The Department recorded a liability of $0.6 million as of December 31, 2024 and $0.4 million as of December 31, 2023. The ultimate liability is indeterminate.

- Ground Water Sites – Environmental assessments have found contamination exceeding the state residential cleanup thresholds at three of The Department's properties: the Interbay Pole Yard, University Rectifier, and Roy Street Shops sites. The Department contracted with a consultant during 2022 and has recently completed an assessment of the University Rectifier site and continues to assess the Interbay Pole Yard site. The Department anticipates selling the Roy Street Shops property, but the site may require cleanup. Remedial assessment and possible remedial design work for the other two sites will be completed during 2025-2027. The Department has included in the estimated environmental liability those portions of the environmental remediation work that are currently deemed to be reasonably estimable. The Department's ultimate liability is indeterminate.

- Other miscellaneous sites – Various other sites comprise the remainder of the liability. The Department recorded a liability of $0.0 million as of December 31, 2024 and $0.3 million as of December 31, 2023. The ultimate liability is indeterminate.

Cost estimates were developed using the expected cash flow technique in accordance with GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations*. Estimated outlays were based on current cost and no adjustments were made for discounting or inflation accept as noted earlier for LDW. Cost scenarios were developed that defined a particular solution for a given site. Scenarios considered relevant potential requirements and alternatives for remediation of a site. Costs were calculated on a weighted average that was based on the probabilities of each scenario being selected and reflected cost-sharing agreements in effect. In addition, certain estimates were derived from independent engineers and consultants. The estimates were made with the latest information available; as new information becomes available, estimates may vary significantly due to price increases or reductions, technology, or applicable laws or regulations.

The Department is aggressively pursuing other third parties that may have contributed to the contamination of Superfund sites for appropriate cost sharing. The Department's estimate for realized recoveries was $0.5 million at December 31, 2024, and $0.2 million at December 2023, respectively, primarily representing an interfund receivable from SPU for recovery of remediation costs incurred related to the lower Duwamish Waterway site. The Department's estimate for not yet realized recoveries from other parties for their share of remediation work performed that partially offset the Department's estimated environmental liabilities was zero at December 31, 2024. As of December 31, 2024, and 2023, environmental costs of $136.2 million and $116.4 million respectively were deferred primarily for cleanup estimates of the Department's responsibility for the LDW and East Waterway Superfund Sites; and these costs are being amortized and will be recovered through future rates in accordance with GASB Statement No. 62.

The changes to the deferred environmental costs at December 31, 2024 and 2023 were as follows:

($ in millions)	2024	2023
Beginning Deferred Environmental Costs	$ 116.4	$ 93.1
Incurred	(3.6)	(6.7)
Amortization	(1.0)	(0.9)
Adjustment of items directly booked to Regulatory Asset	3.3	-
Trailing Transaction	0.5	0.2
Sharing Percentage change/Increase in Long liability	20.5	30.6
Trailing Transaction	0.1	0.1
Ending Deferred Environmental Costs net of Recoveries	$ 136.2	$ 116.4

The changes in the provision for environmental liabilities at December 31, 2024, and 2023 were as follows:

($ in millions)	2024	2023
Beginning Environmental Liability, Net of Recoveries	$ 103.1	$ 79.1
Payments	(3.6)	(6.6)
Incurred Environmental Liability	20.5	30.6
Ending Environmental Liability, Net of Recoveries	$ 120.0	$ 103.1

The provision for environmental liabilities included in current and noncurrent liabilities at December 31, 2024 and 2023, was as follows:

($ in millions)	2024	2023
Noncurrent Liabilities	$ 114.0	$ 100.0
Accounts Payable and Other Current Liabilities	6.0	3.1
Ending Non-Current Liabilities	$ 120.0	$ 103.1

16. OTHER LIABILITIES

Other liabilities include unearned capital fees which are amortized to revenues as earned, deposits and certain other unearned revenues which expire at contract completion.

Other liabilities at December 31, 2024 and 2023 consisted of the following:

($ in millions)	2024	2023
Other liabilities		
Unearned capital fees	$ 22.5	$ 30.1
Customer deposits - sundry sales	16.2	3.2
Unearned revenues - other	3.0	3.0
Total	$ 41.7	$ 36.3

17. DEFERRED INFLOWS OF RESOURCES

Seattle City Council passed resolutions authorizing the reporting of certain credits as regulatory deferred inflows of resources in accordance with Statement No. 62 of the GASB, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB & AICPA Pronouncements*.

The unearned revenue for the Rate Stabilization Account for 2024 and 2023 is the result of spreading retail electric revenues and related activity over multiple periods to reduce the need for rapid and substantial rate increases (see Note 4 Rate Stabilization Account). Payments received from Bonneville's Energy Conservation Agreement are amortized to revenues over 20 years.

In accordance with the requirements of GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – an amendment of GASB Statement No. 27*, decreases in Net Pension Liability resulting from changes in employer proportion and differences between contributions and proportionate share of pension expense are recognized as deferred inflows of resources. These deferred inflows are amortized over a closed five-year period. See Note 13 Seattle City Employees' Retirement System for more information.

In accordance with the requirements of GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (OPEB)*, amounts related to assumption changes are recognized as deferred inflows of resources, which are amortized over a closed five-year period. See Note 14 Other Postemployment Benefits for more information.

In accordance with the requirements of GASB Statement No. 87, *Leases*, for lessor arrangements, deferred inflows will increase due to the recognition of a deferred inflow of resources related to the leases. This deferred inflow will initially be measured at the amount of the lease receivable. This deferred inflow will be amortized over the life of the leases as revenues are recognized. See Note 18 Leases for more information.

The Department purchases electric energy from the U.S. Department of Energy, Bonneville Power Administration under the Block and Slice Power Sales Agreement, exclusively purchasing Block. Seattle City Council affirmed the Department's practice of recognizing the effects of reporting the fair value of exchange contracts in future periods for rate making purposes and maintaining regulatory accounts to spread the accounting impact of these accounting adjustments, in Resolution No. 30942 adopted January 16, 2007. See Note 19 Long-Term Purchased Power, Exchanges, and Transmission for more information.

In 2020, the Department became aware that the Federal Energy Regulatory Commission (FERC) overcharged the Department for the use of approximately 5,200 acres of federal land located in the High Ross Inundation

Zone. In 2021, FERC agreed to refund $11.2 million paid by the Department for the period of 1996 to 2019 in the form of credit to future invoices beginning 2022. The refund of $11.2 million was recognized as a deferred inflow and is being amortized as applied to future FERC invoices.

Deferred inflows of resources at December 31, 2024 and 2023 consisted of the following:

($ in millions)	2024	2023
Deferred inflows of resources:		
Unearned revenue—rate stabilization account	$ 43.2	$ 40.8
Changes in Net Pension Liability	11.3	12.4
Changes in OPEB Liability	4.0	4.8
Gains on advanced refunding	6.5	6.2
Bonneville energy conservation agreement	41.3	40.1
Lease related amounts	56.4	62.1
FERC land use fee refund	-	3.3
Other deferred inflows	-	0.1
Total	$ 162.7	$ 169.8

18. LEASES

GASB Statement No. 87, *Leases*, requires the recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. The standard establishes a single model for lease accounting based on the foundational principle that leases are financings of the right-to-use an underlying asset. Under the Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, which enhances the relevance and consistency of information about leasing activities.

The Department has not identified any leases as of December 31, 2024 and 2023, in which the Department is the lessee that meets the requirements of Statement No. 87.

As of December 31, 2024 and 2023, the Department is a lessor that meets the requirements of Statement No. 87. The table below presents the inflow of resources for comparative purposes at December 31, 2024 and 2023.

($ in millions)

	2024	2023
Lease revenue	$ 5.7	$ 5.2
Lease interest revenue	$ 1.1	$ 1.0

Lease balances at December 31, 2024 and 2023, where the Department is the lessor, are summarized below.

Balances as of December 31, 2024
($ in millions)

Lease Classification	Lease Receivable	Current Portion of Receivable	Deferred Inflow of Resources	Lease Terms in Years	Implicit Interest Rate
Buildings	$ 0.1	$ -	$ 0.1	11	0.4%
Land	10.8	0.5	10.3	23 - 75	0.3% - 3.5%
Other - Wireless Pole Attachments	42.3	2.2	41.6	20	1.6%
Other - Wireline Pole Attachments	4.5	2.2	4.4	5	0.5%
Total	$ 57.7	$ 4.9	$ 56.4		

Balances as of December 31, 2023
($ in millions)

Lease Classification	Lease Receivable	Current Portion of Receivable	Deferred Inflow of Resources	Lease Terms in Years	Implicit Interest Rate
Buildings	$ 0.1	$ -	$ 0.1	11	0.4%
Land	11.2	0.4	10.8	23 - 75	0.3% - 3.5%
Other - Wireless Pole Attachments	44.4	2.2	44.5	20	1.6%
Other - Wireline Pole Attachments	6.7	2.2	6.7	5	0.5%
Total	$ 62.4	$ 4.8	$ 62.1		

On the statements of net position, the current portion of lease receivables is located in current receivables (see Note 6 Accounts Receivable) and the long-term lease receivable is located within other assets (see Note 7 Other Assets). The deferred lease inflows are reported within the deferred inflows of resources (see Note 17 Deferred Inflows of Resources).

The wireless and wireline pole attachment leases contain variable payment components determined annually per SMC 21.49.065 that are not included in the measurement of the lease receivable under Statement No. 87. The inflow of resources due to variable components during 2024 and 2023 were $0.4 million and $0.4 million, respectively.

The Department has not identified any leases as of December 31, 2024, where City Light, as the lessor, has issued debt for which the principal and interest payments are secured by the lease payments.

19. SHORT-TERM ENERGY CONTRACTS AND DERIVATIVE INSTRUMENTS

The Department engages in an ongoing process of resource optimization, which involves the economic selection from available energy resources to serve the Department's load obligations and using these resources to capture available economic value. The Department makes frequent projections of electric loads at various points in time based on, among other things, estimates of factors such as customer usage and weather, as well as historical data and contract terms. The Department also makes recurring projections of resource availability at these points in time based on variables such as estimates of stream flows, availability of generating units, historic and forward market information, contract terms, and experience. Based on these projections, the Department purchases and sells wholesale electric capacity and energy to match expected resources to expected electric load requirements,

and to realize earnings from surplus energy resources. These transactions can be up to 60 months forward. Under these forward contracts, the Department commits to purchase or sell a specified amount of energy at a specified time, or during a specified time in the future.

Except for limited intraday and interday trading to take advantage of owned hydro storage, the Department does not take market positions in anticipation of generating profit. Energy transactions in response to forecasted seasonal resource and demand variations require approval by the Department's Risk Oversight Council. In April 2020 the Department entered the California ISO Energy Imbalance Market (EIM) which is an energy market system that balances fluctuations in supply and demand by automatically finding lower cost resources to meet real-time power needs and serve consumer demand across the western region. The EIM manages congestion on transmission lines to maintain grid reliability and supports integrating renewable resources. In addition, the EIM makes excess renewable energy available to participating utilities at low cost.

It is the Department's policy to apply the normal purchase and normal sales exception of Statement No. 53 of the GASB, *Accounting and Financial Reporting for Derivative Instruments*, as appropriate. Certain forward purchase and sale of electricity contracts meet the definition of a derivative instrument but are intended to result in the purchase or sale of electricity delivered and used in the normal course of operations. Accordingly, the Department considers these forward contracts as normal purchases and normal sales under GASB Statement No. 53. These transactions are not required to be recorded at fair value in the financial statements.

The undiscounted aggregate contract amounts, fair value, and unrealized gain or (loss) of the Department's commodity derivative instruments qualifying as normal purchases and normal sales at December 31, 2024 and 2023 consisted of the following:

($ in millions)	Aggregate Contract Amount	Aggregate Fair Value	Unrealized Gain (Loss)
2024			
Sales	$ 0.1	$ 0.6	$ (0.5)
Purchases	-	-	-
Total	$ 0.1	$ 0.6	$ (0.5)

($ in millions)	Aggregate Contract Amount	Aggregate Fair Value	Unrealized Gain (Loss)
2023			
Sales	$ 0.1	$ 0.1	$ -
Purchases	3.8	3.8	-
Total	$ 3.9	$ 3.9	$ -

All derivative instruments not considered as normal purchases and normal sales are to be recorded within the financial statements using derivative accounting according to GASB Statement No. 53. In 2010, the Seattle City Council adopted a resolution granting the Department authority to enter into certain physical put and call options that would not be considered normal purchases and normal sales under GASB Statement No. 53. The Department did not have any such activity for 2024 and 2023. In addition, the Seattle City Council has deferred recognition of the effects of reporting the fair value of derivative financial instruments for rate-making purposes, and the Department maintains regulatory accounts to defer the accounting impact of these accounting adjustments in accordance with GASB Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements* (see Note 7 Other Assets and Note 17

Deferred Inflows of Resources).

Market Risk—Market risk is, in general, the risk of fluctuation in the market price of the commodity being traded and is influenced primarily by supply and demand. Market risk includes the fluctuation in the market price of associated derivative commodity instruments. Market risk may also be influenced by the number of active, creditworthy market participants, and to the extent that nonperformance by market participants of their contractual obligations and commitments affects the supply of, or demand for, the commodity. Because the Department is active in the wholesale energy market, it is subject to market risk.

Credit Risk—Credit risk relates to the potential losses that the Department would incur as a result of nonperformance by counterparties of their contractual obligations to deliver energy or make financial settlements. Changes in market prices may dramatically alter the size of credit risk with counterparties, even when conservative credit limits are established. The Department seeks to mitigate credit risk by entering into bilateral contracts that specify credit terms and protections against default; applying credit limits and duration criteria to existing and prospective counterparties; and actively monitoring current credit exposures. The Department also seeks assurances of performance through collateral requirements in the form of letters of credit, parent company guarantees, or prepayment.

The Department has concentrations of suppliers and customers in the electric industry including electric utilities; electric generators and transmission providers; financial institutions; and energy marketing and trading companies. In addition, the Department has concentrations of credit risk related to geographic location as it operates in the western United States. These concentrations of counterparties and concentrations of geographic location may impact the Department's overall exposure to credit risk, either positively or negatively, because the counterparties may be similarly affected by changes in conditions.

Other Operational and Event Risk—There are other operational and event risks that can affect the supply of the commodity, and the Department's operations. Due to the Department's primary reliance on hydroelectric generation, the weather, including springtime snow melt, runoff, and rainfall, can significantly affect the Department's operations. Other risks include regional planned and unplanned generation outages, transmission constraints or disruptions, environmental regulations that influence the availability of generation resources, and overall economic trends.

20. LONG-TERM PURCHASED POWER, EXCHANGES, AND TRANSMISSION

Bonneville Power Administration—The Department purchases electric energy from the U.S. Department of Energy, Bonneville Power Administration (Bonneville) under the Block and Slice Power Sales Agreement, a 17-year contract, for the period October 1, 2011 through September 30, 2028. Effective October 1, 2017 there was an amendment to the agreement whereby the Department no longer participates as a Slice customer and will exclusively purchase Block. Block quantities are expected to be recalculated periodically during the term of the contract. Rates will be developed and finalized every two years. Accordingly, certain estimates and assumptions were used in the calculations in the estimated future payments table below.

Lucky Peak—In 1984, the Department entered into a purchase power agreement with four irrigation districts to acquire 100% of the net surplus output of a hydroelectric facility that began commercial operation in 1988 at the existing Army Corps of Engineers Lucky Peak Dam on the Boise River near Boise, Idaho. The irrigation districts are owners and license holders of the project, and the FERC license expires in 2030. The agreement, which expires in 2038, obligates the Department to pay all ownership and operating costs, including debt service, over

the term of the contract, whether or not the plant is operating or operable.

The Department incurred $9.0 million and $9.5 million in 2024 and 2023, respectively, including operations costs and royalty payments to the irrigation districts. The Department provided and billed Lucky Peak $0.4 million and $0.3 million in 2024 and 2023 respectively for operational and administrative services. These amounts are recorded as offsets to purchased power expense.

The Department's receivables from Lucky Peak were less than $0.1 million on December 31, for 2024 and 2023. The Department's payables to Lucky Peak were less than $0.1 million on December 31, for 2024 and $0.0 million on December 31, 2023.

British Columbia—High Ross Agreement— In 1984, an agreement was reached between the Province of British Columbia and the City under which British Columbia will provide the Department with energy equivalent to that which would have resulted from an addition to the height of Ross Dam. Delivery of this energy began in 1986 and is to be received for 80 years. In addition to the direct costs of energy under the agreement, the Department incurred costs of approximately $8.0 million in prior years related to the proposed addition and was obligated to help fund the Skagit Environmental Endowment Commission through four annual $1.0 million payments. The final fixed capital payment was made to BC Hydro in 2020. Operations and maintenance payments will be made through the life of the agreement. These other costs are included in utility plant-in-service as an intangible asset and are being amortized to purchase power expense over 15 years, from 2021 through 2035 (see Note 3 Utility Plant).

Expenses incurred, and energy received under these and other long-term purchased power agreements at December 31, 2024 and 2023 were as follows:

	Expense		Average Megawatts	
($ in millions)	**2024**	**2023**	**2024**	**2023**
Long-term purchased power-Bonneville	$ 165.1	$ 138.2	488.4	461.1
Bonneville South Fork Tolt billing credit	(3.8)	(3.7)	-	-
Grant County Public Utility District	1.3	1.4	2.2	2.2
British Columbia - High Ross Agreement	13.0	13.0	35.8	34.6
Columbia Basin Hydropower	7.2	6.0	28.8	28.5
Lucky Peak	9.0	9.5	33.2	37.9
Renewable energy - Other	5.6	5.9	9.0	9.8
Condon Wind - Reported as long-term purchased power in 2024 and future years	3.2	-	8.4	-
Exchanges and loss returns energy at fair value	-	5.1	28.5	51.4
Long-term purchase power-other	35.5	37.2	145.9	164.4
Subtotal	$ 200.6	$ 175.4	634.3	625.5
Condon Wind - Reported as short-term purchased power in 2023	-	1.2	-	3.8
Total long-term purchased power	$ 200.6	$ 176.6	634.3	629.3

Renewable Energy Purchase and/or Exchanges— The Energy Independence Act, Chapter 19.285 Revised Code of Washington, requires all qualifying utilities in Washington State with more than 25,000 customers to meet certain annual targets of eligible new renewable resources and/or equivalent renewable energy credits (RECs) as a percentage of total energy delivered to retail customers. The annual target is at least 15% for 2024 and 2023. The law also has a compliance option for utilities with declining load to spend 1% of revenue requirements on eligible RECs and/or resources. The Department met the requirements of the compliance option in both 2024 and 2023.

Fair Value of Exchange Energy— During 2024 and 2023, exchange energy settled deliveries were valued using Dow Jones U.S Daily Electricity Price Indices.

Estimated Future Payments Under Purchased Power, Transmission and Related Contracts— The Department's estimated payments for purchased power and transmission, RECs, and other contracts for the period from 2024 through 2065, undiscounted, are as follows:

($ in millions) Years Ending December 31,	Estimated Payments
2025	$ 296.3
2026	336.8
2027	336.0
2028 [a]	318.5
2029	157.5
2030-2034	689.1
2035-2039 [b]	696.5
2040-2044	635.7
2045-2049 [c] [d]	618.1
2050-2054 [e]	499.9
Thereafter (through 2065) [f] [g]	56.9
Total	$ 4,641.3

(a) Bonneville Block & Slice agreement expires September 30, 2028.
(b) Lucky Peak contract expires March 30, 2038.
(c) Prineville Solar contract expires January 1, 2046.
(d) Fort Rock Solar contract expires April 26, 2046.
(e) Grant County Priest Rapids contract expires April 17, 2052.
(f) Bonneville transmission agreements expire July 31, 2055.
(g) BC Hydro (High Ross) contract expires January 1, 2066.

21. COMMITMENTS AND CONTINGENCIES

2025 Capital Program—The budget for the Department's 2025 program for capital improvement, conservation, and deferred operations and maintenance including required expenditures on assets owned by others is $482.8 million. At December 31, 2024, the Department had approximately $119.9 million in commitments relating thereto. Department overhead costs and other allocations associated with the capital program are included in the budget amount.

2025 Operations and Maintenance Budget—The Department's 2025 Operating and Maintenance budget is $1,222.5 million for labor and related benefits, purchased power, outside services, supplies, taxes, injuries and damages, interest, debt-related costs, maintenance of Department assets, and other non-capital expenditures incurred in the normal course of operations.

Federal Energy Regulatory Commission Fees—Estimated Federal land use and administrative fees related to hydroelectric licenses total $125.3 million through 2055; these estimates are subject to change. The estimated portion of fees attributed to the Skagit and Tolt licenses are excluded after 2025, when their existing FERC licenses expire. The estimated portion of Boundary fees is included through 2055, the year the current license issued by FERC expires. The Boundary FERC license and related issues are discussed below.

Current Boundary License—The Department's FERC license for the Boundary Project was re-issued on March 20, 2013 with a 42-year life and a total cost of $48.6 million. The terms and conditions of the new license have been evaluated and the Department continues the license implementation process, which imposes mitigation of endangered species including water quality standards and conservation management.

As part of the license renewal process, the Department negotiated a settlement with external parties such as owners of other hydroelectric projects, Indian tribes, conservation groups and other government agencies. The settlements sought to preserve the Department's operational flexibility at Boundary Dam while providing for natural resource protection, mitigation and enhancement measures.

The cost projections for such mitigation over the expected 42-year life of the license, included in the Department's license application, were estimated to be $424.0 million adjusted to 2024 dollars, of which $158.3 million were expended through 2024. Projected mitigation cost estimates are subject to revision as more information becomes available.

Skagit and South Fork Tolt Licensing Mitigation and Compliance—In 1995, the FERC issued a license for operation of the Skagit hydroelectric facilities through April 30, 2025. On July 20, 1989, the FERC license for operation of the South Fork Tolt hydroelectric facilities through July 19, 2029, became effective. As a condition for both licenses, the Department has taken and will continue to take required mitigating and compliance measures.

Total Skagit license mitigation costs from the effective date until expiration of the federal operating license were estimated at December 31, 2024, to be $185.2 million, of which $179.5 million has been expended. Total South Fork Tolt license mitigation costs were estimated at $2.6 million, of which $2.6 million were expended through 2023 for the rest of the life of the license with no additional costs in 2024. In addition to the costs listed for South Fork Tolt mitigation, the license and associated settlement agreements required certain other actions related to wildlife studies and wetland mitigation for which no set dollar amount was listed. Requirements for these actions have been met, and no further expenditures need to be incurred for these items.

Capital improvement, other deferred costs, and operations and maintenance costs are included in the estimates related to the settlement agreements for both licenses. Amounts estimated are adjusted to 2024 dollars. Department labor and other overhead costs associated with the activities required by the settlement agreements for the licenses are not included in the estimates.

Hydroelectric projects must satisfy the requirements of the Endangered Species Act (ESA) and the Clean Water Act to obtain a FERC license. ESA and related issues are discussed below.

Endangered Species—Several fish species that inhabit waters where hydroelectric projects are owned by the Department, or where the Department purchases power, have been listed under the ESA as threatened or endangered. Although the species were listed after FERC licenses were issued for all the Department's hydroelectric projects, the ESA listings still affect operations of the Department's Boundary, Skagit, Tolt, and Cedar Falls hydroelectric projects.

Federal Regulations in response to the listing of species affect flow in the entire Columbia River system. As a result of these regulations, the Department's power generation at its Boundary Project is reduced in the fall and winter when the region experiences its highest sustained energy demand. The Boundary Project's firm capability is also reduced.

The Department, with the support of City Council, elected to take a proactive approach to address issues identified within the ESA. The Department is carrying out an ESA Early Action program in cooperation with agencies, tribes, local governments, and watershed groups for bull trout, Chinook salmon, and steelhead in the South Fork Tolt and Skagit Watersheds. The ESA Early Action program is authorized by City Council but is separate from any current FERC license requirements. The program includes habitat acquisition, management and restoration. The ESA Early Action has been successful in protecting listed species. Total costs for the Department's share of the Early Action program from inception in 1999 through December 31, 2024, are estimated to be $20.6 million, and $2.1 million has been allocated for the program in the 2025 budget.

Project Impact Payments—Effective May 2020, the Department renewed its contract with Pend Oreille County and committed to pay a total of $29.8 million over 10 years ending in 2029 to Pend Oreille County for impacts on county governments from the operations of the Department's hydroelectric projects. Effective January 2024, the Department renewed its contract with Whatcom County committing to pay annual impact compensation payments subject to an escalator tied to the Consumer Price Index and ending in 2038. The payments compensate the counties, and certain school districts and towns located in these counties, for loss of revenues and additional financial burdens associated with the projects. The Boundary Project, located on the Pend Oreille River, affects Pend Oreille County, and Skagit River hydroelectric projects affect Whatcom County. The impact payments totaled $3.1 million and $3.0 million to Pend Oreille County in 2024 and 2023, respectively, and $1.4 million and $1.2 million to Whatcom County in 2024 and 2023, respectively.

Brooks-Joseph v. City of Seattle, Seattle City Light, et. al. – Plaintiff alleged discrimination based on race, gender and age, negligent supervision and retention, wrongful discharge, and violation of the Washington State Whistleblower Act. Plaintiff also named City Light employee Britt Luzzi and SPU employee Lourdes Podwell as individual defendants. On October 5, 2023, the court granted the City's Motion for Summary Judgment and dismissed this action. On March 19, 2024, the court denied the plaintiff's Motion for Reconsideration. In April, 2024, the plaintiff appealed to the 9th Circuit Court of Appeals. The parties have filed briefs and are awaiting a decision from the 9th Circuit. An adverse result could be reversal of the summary judgment dismissal and demand for further trial proceedings, which could include awards of compensatory damages and attorneys' fees. At this juncture, City Light's

ultimate liability is indeterminate.

Damian Mims v. City of Seattle, Seattle City Light, et. al. Plaintiff Mims alleges claims of discrimination, hostile work environment, retaliation, due process violations and wrongful termination. Mims has filed a Summons and Complaint in King County Superior Court but has not served the City. The plaintiff is currently representing himself and the trial is set for June 30, 2025. An adverse result could include awards of compensatory damages and attorneys' fees. At this juncture, City Light's ultimate liability is indeterminate.

***Monica Jones v. City of Seattle, Seattle City Light, et.al.* –** Plaintiff Jones alleges religious, racial and age discrimination, violation of public policy against discrimination, disparate impact, failure to accommodate, wage theft, and numerous violations of the Washington Constitution, all resulting from the City's vaccine mandate. On April 4, 2023, the Court dismissed the individual defendants, as they were never properly served by the plaintiff. This matter was filed in federal court in the Western District of Washington and was set for trial on July 29, 2024. On June 28, 2024, the Court granted the City's Motion for Summary Judgment and dismissed the case. On July 25, 2024, the plaintiff appealed to the 9th Circuit Court of Appeals. The parties have filed briefs and are awaiting a decision from the 9th Circuit. An adverse result could be reversal of the summary judgment dismissal and remand for further trial proceedings, which could include awards of compensatory damages and attorneys' fees. At this juncture, City Light's ultimate liability is indeterminate.

Rochester, et, al. v. City of Seattle - A group of plaintiffs, including twenty-six former City Light employees, allege they were unlawfully separated from employment with various departments within the City of Seattle when they failed to get a COVID-19 vaccine. The matter was filed in King County Superior Court on December 15, 2023, and is currently set for trial on September 22, 2025. Given the number of plaintiffs and the need for extensive discovery, it is likely the trial date will be extended. Given the uncertainty with vaccine mandate litigation, and the need for extensive discovery, the Department's ultimate liability is indeterminate at this time.

***Schildbach v. City of Seattle* –** Plaintiff alleges that after a tree knocked out a primary line, City Light negligently re-energized a service line causing a house fire. Plaintiff claims damages totaling over $1 million. The City's ultimate liability is indeterminate at this time.

Vaccine Mandate Claims Not Yet In Litigation - Several current and former City Light employees have filed tort Claims for Damages related to the City's implementation of a COVID-19 vaccine mandate in October 2021. These claimants allege a variety of claims, including but not limited to discrimination, wrongful discharge, failure to accommodate and violations of the Washington and federal US Constitutions. Each claim is fact specific to the claimant and dependent on evolving public health guidelines and newly emerging caselaw in response to the pandemic. City Light's ultimate liability is indeterminate; however, an adverse result could include awards of compensatory damages and attorneys' fees.

Hunter, et. al. v. ***City of Seattle -*** Plaintiffs allege on-going violations of local, state and federal wage and hour law resulting from the City's implementation of Workday, a new human resources and payroll delivery system.

This matter was filed in King County Superior Court and is a class action brought on behalf of all City employees. This matter is set for trial on February 7, 2026. The Department's ultimate liability is indeterminate.

The following cases from 2023 were resolved:

Akopyan v. City of Seattle — Plaintiff Estate alleged that City Light failed to adequately light a street in the City of Shoreline. The decedent attempted to cross the North Richmond Beach Road at night on September 2, 2020 and was hit by a car. The City was dismissed from this case on summary judgment. The order dismissing the City was entered on January 7, 2025.

Del Castillo v. City of Seattle & Seattle City Light – Plaintiff Del Castillo alleged discrimination and retaliation based on race, national origin and/or disability, as well as claims of a hostile work environment and wrongful discharge in violation of public policy. An adverse result could have included awards of compensatory damages and attorneys' fees. Trial was set for August 25, 2025 in King County Superior Court. However, this matter resolved in October, 2024 for $60,000.

Margaret Owens Demand Letter – City Light received an attorney demand letter dated March 14, 2024 from a former City Light employee alleging claims of sexual harassment. A formal claim or lawsuit was never filed. However, in August, 2024, this matter resolved for $1.0 million.

Other Contingencies—In addition to those noted above, in the normal course of business, the Department has various other legal claims and contingent matters outstanding. The Department believes that any ultimate liability arising from these actions will not have a material adverse impact on the Department's financial position, operations, or cash flows.

22. SUBSEQUENT EVENTS

The Department evaluated subsequent events through April 30, 2025, the date that the financial statements were available to be issued, for events requiring recording or disclosure in the financial statements.

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

DEFINED BENEFIT PENSION PLAN

The Department's schedule of the employer's proportionate share of the net pension liability for the years ended December 31 (dollar amounts in millions):

	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Employer's proportion of the net pension liability	19.69%	20.00%	20.72%	20.38%	21.10%	21.17%	21.00%	22.13%	24.46%	24.53%
Employer's proportionate share of total pension liability	$ 1,053.8	$ 1,030.4	$ 1,028.5	$ 941.4	$ 929.8	$ 896.9	$ 831.6	$ 839.5	$ 883.5	$ 841.5
Employer's proportionate share of plan fiduciary net position	$ 789.6	$ 727.8	$ 856.8	$ 741.9	$ 664.6	$ 575.3	$ 599.1	$ 550.7	$ 565.7	$ 569.7
Employer's proportionate share of the net pension liability	$ 264.2	$ 302.6	$ 171.7	$ 199.5	$ 265.2	$ 321.6	$ 232.5	$ 288.8	$ 317.8	$ 271.8
Employer's covered-employee payroll	$ 186.2	$ 180.3	$ 179.3	$ 178.1	$ 165.3	$ 163.7	$ 153.6	$ 156.5	$ 157.0	$ 152.3
Employer's proportionate share of net pension liability as a percentage of its covered-employee payroll	141.86%	167.83%	95.75%	112.03%	160.44%	196.42%	151.41%	184.49%	202.44%	178.48%
Plan fiduciary net position as a percentage of the total pension liability	74.93%	70.63%	83.31%	78.81%	71.48%	64.14%	72.04%	65.60%	64.03%	67.70%

Actuarial Methods and Assumptions:

Actuarial cost method	Individual Entry Age Normal
Amortization method	Level percent
Amortization Growth Rate	3.35% for FY 2022-2024, 3.50% for FY 2019-2021, 4.0% for prior years
Remaining amortization period	30 years as of January 1, 2013 Valuation
Asset valuation method	5 years, Non-asymptotic
Inflation	2.60% for FY 2022-2024, 2.75% for FY 2019-2021, 3.25% for prior years
Investment rate of return	6.75% for FY 2022-2024, 7.25% for FY 2019-2021, 7.50% for prior years
Mortality	Based on PubG-2010 mortality tables using generational projection of improvement using MP-2021 Ultimate projection scale for FY 2022-2024. FY 2019-2021 based on RP-2014 mortality tables. Prior years based on RP- 2000 mortality tables.

THE CITY OF SEATTLE—CITY LIGHT DEPARTMENT

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

The Department's proportionate schedule of employer's contributions (dollar amounts in millions):

	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Contractually required contribution	$ 36.8	$ 29.6	$ 29.0	$ 28.9	$ 28.7	$ 24.8	$ 24.7	$ 23.7	$ 25.3	$ 24.9
Contributions in relation to contractually required contribution	36.8	29.6	29.0	28.9	28.7	24.8	24.7	23.7	25.3	24.9
Contribution deficiency (excess)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Covered-employee payroll	$ 242.6	$ 186.2	$ 180.3	$ 179.3	$ 178.1	$ 165.3	$ 163.7	$ 153.6	$ 156.5	$ 157.0
Contributions as a percentage of covered-employee payroll	15.17%	15.90%	16.08%	16.12%	16.11%	15.00%	15.09%	15.43%	16.17%	15.86%

CHANGES IN THE NET OPEB LIABILITY AND RELATED RATIOS

The Department's schedule of the employer's proportionate share of the net OPEB liability for the years ended December 31:

($ in millions)	2024	2023	2022	2021	2020	2019	2018
Employer's proportion of the net OPEB liability	13.66%	13.88%	14.17%	14.38%	14.14%	14.34%	14.61%
Employer's proportionate share of total OPEB liability	$ 11.9	$ 6.9	$ 7.9	$ 10.1	$ 9.0	$ 8.7	$ 8.9
Employer's proportionate share of plan fiduciary net position	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Employer's proportionate share of the net OPEB liability	$ 11.9	$ 6.9	$ 7.9	$ 10.1	$ 9.0	$ 8.7	$ 8.9
Employer's covered-employee payroll	$ 182.5	$ 159.0	$ 162.4	$ 161.7	$ 159.0	$ 145.6	$ 148.3
Employer's proportionate share of net OPEB liability as a percentage of its covered-employee payroll	6.50%	4.36%	4.86%	6.25%	5.66%	6.00%	6.02%
Plan fiduciary net position as a percentage of the total OPEB liability	-	-	-	-	-	-	-

Notes to Schedule

This schedule is intended to show information for 10 years. Since 2018 was the first year of this presentation, data on years preceding 2018 are not available. Additional years' data will be included as they become available.

Actuarial Methods and Assumptions:

Actuarial cost method	Entry Age Normal
Amortization method	Level dollar
Discount Rate	3.26% for FY 2024, 3.72% for FY 2023, 2.06% for FY 2022, 2.12% for FY 2021, 2.74% for FY 2020, 4.10% for FY 2019, and 3.44% for FY 2018
Health care cost trend rate- Medical	8.00% initial, decreasing to an ultimate rate of 4.50% for FY 2024-2025. 6.09% initial, decreasing to an ultimate rate of 4.50% for FY 2022-2023. 6.55% initial, decreasing to an ultimate rate of 4.50% for FY 2020-2021. 7.00% initial, decreasing to an ultimate rate of 4.50% for prior years.
Health care cost trend rate- RX	13.00% initial, decreasing to an ultimate rate of 4.50% for FY 2024-2025. 8.00% initial, decreasing to an ultimate rate of 4.50% for FY 2022-2023. 9.00% initial, decreasing to an ultimate rate of 4.50% for FY 2020-2021. 10.00% initial, decreasing to an ultimate rate of 4.50% for prior years.
Mortality	Based on PubG-2010 mortality tables using generational projection of improvement using MP-2021 Ultimate projection scale for FY 2022-2024. Based on RP-2014 mortality tables using generational projection of improvement using MP-2014 Ultimate projection scale for prior years.

There were no changes to benefit terms in 2024. See Note 14 for details regarding actuarial methods and assumptions.

OTHER INFORMATION (UNAUDITED)

DEBT SERVICE COVERAGE

Following is a table that provides information for the Department's debt service coverage for years 2024, 2023, and 2022. The target level for debt service coverage was 1.8x on all bonds for 2024, 2023, and 2022 in accordance with current financial policies (which include a Rate Stabilization Account that will result in greater compliance of actual debt service coverage with the policy-specified level).

($ in millions)

Debt Service Coverage	**December 31**		
	2024	**2023**	**2022**
OPERATING REVENUES:			
Retail power revenues	$ 1,125.2	$ 1,033.7	$ 1,021.5
Short-term wholesale power revenues	75.6	56.2	97.7
Other power-related revenues (a)(b)(c)	34.4	71.1	76.5
Transfers from/(to) rate stabilization account (d)	(2.4)	9.2	24.4
Other operating revenues	21.4	20.7	18.5
Total operating revenues	$ 1,254.2	$ 1,190.9	$ 1,238.6
OPERATING EXPENSES:			
Long-term purchased power—Bonneville and other (b)	$ 200.6	$ 175.4	$ 150.5
Short-term wholesale power purchases	63.8	124.5	86.2
Other power expenses (b)	95.2	101.9	111.9
Transmission (e)	80.8	68.2	61.1
Distribution	110.1	84.4	73.2
Customer service	78.4	59.8	42.4
Conservation	27.8	26.4	26.3
Administrative and general	136.3	140.8	96.6
Taxes	128.7	112.4	119.0
Depreciation and amortization	172.9	159.5	156.8
Total operating expenses	$ 1,094.6	$ 1,053.3	$ 924.0
NET OPERATING REVENUE (f)	$ 159.6	$ 137.6	$ 314.6
Adjustments to Net Operating Revenue (g)			
City Taxes (h)	$ 68.4	$ 57.6	$ 66.8
Depreciation and amortization	172.9	159.5	156.8
Depreciation & amortization included in operating & maintenance expenses (i)	49.5	38.4	49.8
Pension expense (j)	22.4	34.3	(2.5)
Pension contributions (j)	(36.9)	(29.6)	(29.0)
Valuation on exchange power, net (b)(c)	-	-	-
BPA Conservation Augmentation/Agreement revenue (k)	(3.1)	(2.9)	(2.7)
Investment income (l)	20.7	19.0	12.1
Non-cash expenses (m)	-	-	1.4
Other (n)	(1.8)	(1.3)	1.0
Total adjustments	$ 292.1	$ 275.0	$ 253.7
Net Revenue Available for Debt Service	$ 451.7	$ 412.6	$ 568.3
Total Debt Service (o)	$ 245.4	$ 236.5	$ 224.2
Ratio of Available Net Revenue to Debt Service	1.84x	1.74x	2.53x

Notes

(a) Includes conservation and renewable credits under the power sales contract with BPA, the recognition of payments from BPA for the purchase of conservation savings, revenue from deliveries of power to Pend Oreille PUD pursuant to the Boundary Project's FERC license, and other energy credits.
(b) Effective January 1, 2016, the Department adopted GASB Statement No. 72, *Fair Value Measurement and Application.* Non-monetary transactions are measured at fair value and are valued at market. Disclosures required by GASB Statement No. 72 are available in Note 2 Fair Value Measurement.
(c) Includes significant activity for the valuation of energy delivered under seasonal exchanges, basis sales, and other power exchange contracts. Energy exchanges have both revenue and expense components; therefore, a net revenue or expense adjustment is made for a given year.
(d) Transfers from/(to) the RSA in accordance with Ordinance No. 123260, primarily to address fluctuations in surplus power sales.
(e) Includes revenue from the short-term sale of excess transmission capacity.
(f) Operating Income per audited financial statements.
(g) Effective 2023 Changes to Debt Service Coverage calculation: Many of the adjustments to Net Operating Revenue for the calculation of Debt Service Coverage are at the discretion of the utility. Effective 2023, expenses for claims are being treated 100% as cash and gains on property sales as opposed to only the cash proceeds will be used (no impact in 2023). Significant non-cash transactions are adjusted from Net Operating Revenue to calculate Revenue Available for Debt Service. Furthermore, some types of revenue in addition to Operating Revenue are included to calculate Revenue Available for Debt Service. These adjustments are listed in the remaining lines within the table.
(h) City taxes are excluded because the lien on such taxes is junior to debt service in accordance with the Bond Legislation.
(i) The majority of the depreciation and amortization (non-cash) expenses included in Operating and Maintenance Expense are for amortization of conservation expenses that are recognized over a 20-year period.
(j) GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, a non-cash item.
Two components: (1) Pension expense is an estimated amount based on actuarial reports. (2) Pension contributions is an adjustment for the payments made by the department to the Seattle City Retirement System after the measurement date of the actuarial reports to classify as deferred outflows. Actual pension expense posts with payroll related to employee expense, and is auto-allocated through payroll. Actuarial pension + pension contributions + minor retirement settlement payouts = FERC 92610 YTD amount. We subtract out this FERC 92610 balance except minor retirement settlement payouts for the debt coverage calculation, because the actual cash contributions were already recorded via payroll.
(k) Payments received for conservation measures are initially recorded as unearned revenue. The adjustment represents the amount of revenue amortized and recognized over future periods for financial reporting, a non-cash transaction.
(l) Investment income is not included in Total Revenue in this table; therefore, an adjustment is made to Net Operating Revenue, consisting primarily of interest earnings from City's cash pool and interest receipts from suburban underground charges. This amount excludes unrealized gains and losses, which are non-cash adjustments.
(m) Effective 2023 expenses for claims are being treated as 100% cash. Effective 2018 includes adjustment for GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* in addition to primarily claim expenses and capital projects expenditures from prior year which were determined not to be capital expenditures.
(n) Includes proceeds from sale of properties, principal receipts from suburban underground charges from local jurisdictions, and miscellaneous items.
(o) Net of federal bond subsidies.

DEBT SERVICE COVERAGE: ALL BONDS

Year Ending December 31	Revenue Available for Debt Service	Debt Service Requirements	Debt Service Coverage
($ in millions)			
2024	$ 451.7	$ 245.4	1.84
2023	412.6	236.5	1.74
2022	568.3	224.2	2.53
2021	449.0	216.3	2.08
2020	386.3	223.0	1.73

INTEREST REQUIREMENTS AND PRINCIPAL REDEMPTION ON LONG-TERM DEBT

Year Ending December 31 *($ in millions)*	Fixed Rate Bonds			Variable Rate Bonds			
	Principal	Interest	Subtotal	Principal	Interest	Subtotal	Total [a]
2025	$ 122.6	$ 113.0	$ 235.6	$ 2.4	$ 6.7	$ 9.1	$ 244.7
2026	116.9	107.1	224.0	5.9	6.9	12.8	236.8
2027	96.4	101.4	197.8	6.1	6.7	12.8	210.6
2028	100.0	96.5	196.5	6.4	6.4	12.8	209.3
2029	96.1	91.8	187.9	6.6	6.2	12.8	200.7
2030	81.3	87.5	168.8	6.9	5.9	12.8	181.6
2031	83.7	83.1	166.8	7.2	5.6	12.8	179.6
2032	87.3	79.1	166.4	7.4	5.4	12.8	179.2
2033	92.1	75.5	167.6	7.8	5.1	12.9	180.5
2034	94.0	71.3	165.3	8.1	4.8	12.9	178.2
2035	98.6	67.1	165.7	8.4	4.5	12.9	178.6
2036	108.7	62.5	171.2	8.7	4.1	12.8	184.0
2037	100.0	57.6	157.6	9.1	3.8	12.9	170.5
2038	105.6	52.9	158.5	9.5	3.4	12.9	171.4
2039	109.9	48.2	158.1	9.9	3.1	13.0	171.1
2040	114.3	43.4	157.7	10.3	2.7	13.0	170.7
2041	105.0	38.6	143.6	10.7	2.3	13.0	156.6
2042	92.7	34.5	127.2	11.1	1.8	12.9	140.1
2043	96.8	30.5	127.3	11.5	1.4	12.9	140.2
2044	91.2	26.3	117.5	12.0	1.0	13.0	130.5
2045	86.0	22.3	108.3	12.5	0.5	13.0	121.3
2046	81.5	18.7	100.2	5.6	0.2	5.8	106.0
2047	77.5	15.0	92.5	-	-	-	92.5
2048	66.4	11.6	78.0	-	-	-	78.0
2049	53.9	8.8	62.7	-	-	-	62.7
2050	42.6	6.6	49.2	-	-	-	49.2
2051	37.6	4.6	42.2	-	-	-	42.2
2052	29.7	2.8	32.5	-	-	-	32.5
2053	19.2	1.3	20.5	-	-	-	20.5
2054	11.2	.6	11.8	-	-	-	11.8
Total	$ 2,498.8	$ 1,460.2	$ 3,959.0	$ 184.1	$ 88.5	$ 272.6	$ 4,231.6

[a] Maximum debt service of $244.7 million is due in 2025. See Note 9 Long-term debt.
Note: All parity bonds of the Department are fixed rate bonds except the 2021B and 2023B bonds which are variable rate bonds.

STATEMENT OF LONG-TERM DEBT

As of December 31, 2024

($ in millions)

Bond Series	When Due	Interest Rate (%)	Amount Issued	Amount Outstanding	Amount Due Within One Year	Accrued Interest
Series 2010A	2025	5.047	8.0	8.0	8.0	0.2
Series 2010A	2026	5.147	8.2	8.2	-	0.2
Series 2010A	2027	5.247	8.5	8.5	-	0.2
Series 2010A	2028-2030	5.470	27.4	27.4	-	0.6
Series 2010A	2031-2040	5.570	102.6	102.6	-	2.3
Series 2010C	2022-2040	5.590	13.3	13.3	-	0.3
Series 2011B	2027	5.750	10.0	10.0	-	0.2
Series 2012A	2037-2041	4.000	49.1	39.3	-	0.1
Series 2012C	2028	3.400	4.3	4.2	-	-
Series 2012C	2029	3.500	7.7	7.7	-	-
Series 2012C	2030	3.500	7.7	7.7	-	-
Series 2012C	2031-2033	3.750	23.4	23.4	-	0.1
Series 2014	2030-2038	4.000	53.9	13.6	-	0.2
Series 2014	2039-2040	4.000	14.8	14.8	-	0.2
Series 2014	2041-2044	4.000	33.3	33.3	-	0.4
Series 2015A	2022-2026	5.000	62.9	10.4	6.7	0.1
Series 2015A	2027-2045	4.000	109.0	79.7	-	0.5
Series 2016A	2036-2041	4.050	31.9	31.9	-	0.6
Series 2016B	2022-2028	5.000	103.0	49.3	11.4	0.6
Series 2016B	2029	4.000	13.9	13.9	-	0.2
Series 2016C	2022-2026	5.000	56.9	6.5	3.2	0.1
Series 2016C	2027-2046	4.000	103.9	103.9	-	1.1
Series 2017C	2022-2032	5.000	174.2	82.6	13.6	1.2
Series 2017C	2033-2047	4.000	211.3	211.3	-	3.0
Series 2018A	2022-2029	5.000	60.2	31.6	5.7	0.7
Series 2018A	2030-2048	4.000	203.6	203.6	-	4.2
Series 2019A	2022-2049	5.000	210.5	193.0	4.0	2.4
Series 2019B	2022-2026	5.000	140.3	46.2	26.6	1.0
Series 2020A	2022-2030	5.000	78.5	69.6	2.4	1.5
Series 2020A	2031-2050	4.000	119.8	119.8	-	2.6
Series 2021A	2022-2031	5.000	63.6	38.0	9.3	0.8
Series 2021A	2032-2051	4.000	196.2	196.2	-	4.1
Series 2021B	2022-2045	2.15 - 4.80 [A]	100.6	100.6	-	0.3
Series 2022	2024 - 2052	5.000	257.7	220.8	19.6	5.5
Series 2023A	2024 - 2053	5.000	273.6	268.8	5.9	4.5
Series 2023B	2024 - 2046	.55 - 4.75 [A]	85.8	83.5	2.4	0.2
Series 2024	2025 - 2054	5.000	199.7	199.7	6.2	2.5
Total			$ 3,229.3	$ 2,682.9	$ 125.0	$ 42.7

[A] Range of adjustable rates in effect during 2024.

Note: All parity bonds of the Department are fixed rate bonds except the 2021B bond and 2023B bond, which are variable rate bonds.

POWER COSTS AND STATISTICS

Year ending December 31 *($ in millions)*	2024	2023	2022	2021	2020
POWER COSTS					
Hydroelectric generation[a][c]	$ 74.4	$ 57.5	$ 67.5	$ 63.0	$ 58.2
Long-term purchased power[b]	200.6	175.4	150.5	207.5	216.6
Wholesale power purchases[c][e]	63.8	124.5	86.2	38.5	10.0
Fair valuation & other power purchases[b][c]	10.1	34.8	38.3	34.1	15.2
Owned transmission[a]	23.4	21.1	15.3	16.9	16.4
Wheeling expenses	65.5	55.2	53.3	45.9	44.9
Other power expenses	30.6	28.7	24.6	15.9	16.3
Total power costs	468.4	497.2	435.7	421.8	377.6
Less short-term wholesale power sales[c]	(75.6)	(56.2)	(97.6)	(66.3)	(51.3)
Less fair valuation other power-related[b]	(10.7)	(40.2)	(45.0)	(32.6)	(11.4)
Less other power-related revenues	(23.7)	(30.9)	(31.6)	(26.7)	(29.3)
Net power costs	$ 358.4	$ 369.9	$ 261.5	$ 296.2	$ 285.6
POWER STATISTICS (MWh)					
Hydroelectric generation[c]	4,541,858	4,598,884	6,184,745	6,009,237	6,017,176
Long-term purchased power[b]	5,559,612	5,591,837	5,343,858	5,945,779	6,173,078
Wholesale power purchases[c][e]	1,195,161	1,574,433	1,148,487	1,281,656	633,111
Wholesale power sales[c][e]	(1,764,382)	(1,364,663)	(1,951,244)	(2,543,488)	(2,605,592)
Other[d]	(88,230)	(761,962)	(907,823)	(1,164,379)	(1,003,455)
Total power available	9,444,019	9,638,529	9,818,023	9,528,805	9,214,318
Less self consumed energy	(27,695)	(26,797)	(27,466)	(26,537)	(26,203)
Less system losses	(477,392)	(571,666)	(472,664)	(423,886)	(549,228)
Total power delivered to retail customers	8,938,932	9,040,066	9,317,893	9,078,382	8,638,887
Net power cost per MWh delivered (Net power costs divided by Total power delivered to retail customers)	$ 40.09	$ 40.91	$ 28.06	$ 32.62	$ 33.05

(a) Including depreciation.
(b) Long-term purchased power, fair valuation & other power purchases, and fair valuation other power-related include energy exchanged under seasonal and other exchange contracts are valued at market.
(c) The level of generation (and consequently the amount of power purchased and sold on the wholesale market) can fluctuate widely from year to year depending upon water conditions in the Northwest region.
(d) "Other" includes seasonal exchange power delivered and miscellaneous power transactions.
(e) Bookout purchases are excluded from wholesale power purchases and are reported on a net basis in wholesale power sales, however MWh are presented gross.

HISTORICAL ENERGY RESOURCES (in MWh)

	2024	2023	2022	2021	2020
Department-Owned Generation					
Boundary Project	3,025,434	2,851,570	3,712,739	3,211,443	3,576,351
Skagit Hydroelectric Project:					
Gorge	689,925	726,576	989,832	988,738	958,211
Diablo	363,142	551,388	590,907	847,067	703,719
Ross	411,631	413,109	749,013	823,907	655,524
Cedar Falls/Newhalem	6,841	25,809	83,538	83,424	81,065
South Fork Tolt	44,885	30,432	58,716	54,658	42,306
Subtotal	4,541,858	4,598,884	6,184,745	6,009,237	6,017,176
Energy Purchases					
Bonneville	4,278,100	4,039,150	3,804,606	4,119,204	4,299,280
Priest Rapids	19,184	19,221	26,770	23,601	25,596
Columbia Basin Hydropower	251,860	249,373	262,947	265,850	258,498
High Ross	313,966	303,454	305,764	315,101	309,960
Lucky Peak	290,821	332,046	234,067	221,981	254,619
Stateline Wind Project	-	-	74,161	360,191	380,795
Condon	73,796	33,437	-	-	-
Columbia Ridge	69,586	78,333	86,968	92,937	102,421
Seasonal and Other Exchange[(a)]	262,299	536,823	548,575	546,914	541,909
Wholesale Market Purchases[(b)]	1,195,161	1,574,433	1,148,487	1,281,656	633,111
Subtotal	6,754,773	7,166,270	6,492,345	7,227,435	6,806,189
Total Department Resources	11,296,631	11,765,154	12,677,090	13,236,672	12,823,365
Minus Offsetting Energy Sales					
Firm Energy Transactions and Marketing Losses[(c)(d)]	(173,356)	187,728	426,932	695,102	505,727
Seasonal and Other Exchange[(a)]	261,586	574,234	480,891	469,277	497,728
Wholesale Market Sales	1,764,382	1,364,663	1,951,244	2,543,488	2,605,592
Total Energy Resources	9,444,019	9,638,529	9,818,023	9,528,805	9,214,318

(a) Includes exchange contracts with Grant County and Lucky Peak Project (no 2024 Lucky Peak exchange contract).

(b) Purchases to compensate for low water conditions and to balance loads and resources.

(c) Energy provided to Public Utility District of Pend Oreille County under the Boundary Project's FERC license including incremental losses due to expanded activity in the wholesale market.

(d) Starting in 2015, Power Management stopped reporting secondary area line losses. We have retroactivly adjusted Firm Energy Sales and Marketing Losses to reflect this change.

THE CITY OF SEATTLE—CITY LIGHT DEPARTMENT

OTHER INFORMATION (UNAUDITED)

CUSTOMER STATISTICS

Years ended December 31,		2024		2023		2022		2021		2020
Average number of customers: *										
Residential		460,925		451,055		441,926		433,686		426,359
Industrial		58		60		60		61		
Commercial		52,521		52,106		51,677		51,408		51,219
Total		513,504		503,221		493,663		485,155		477,578
Megawatt-hours[a]:										
Residential	34%	3,073,143	35%	3,158,610	36%	3,334,209	37%	3,320,729	37%	3,192,877
Industrial	8%	710,217	8%	758,764	9%	808,355	9%	817,060		
Commercial	58%	5,155,572	57%	5,122,692	55%	5,175,329	54%	4,940,593	63%	5,446,010
Total	100%	8,938,932	100%	9,040,066	100%	9,317,893	100%	9,078,382	100%	8,638,887
Average annual revenue per customer[a]:										
Residential		$ 949		$ 900		$ 917		$ 902		$ 890
Industrial		$ 1,257,761		$ 1,162,685		$ 1,183,231		$ 1,126,113		
Commercial		$ 11,664		$ 10,688		$ 10,514		$ 9,779		$ 10,651

* Seattle City Light changed customer counts to Service Agreement effective September 2016 with the implementation of the new retail electric billing system. Service Agreement determines how Seattle City Light and Seattle Public Utilities charge customers for services provided. An account can have several Service Agreements for the different types of services. No revisions were made to prior year customer counts.

*Beginning 2021, Seattle City Light separated the non-residential category into industrial and commercial categories in the customer statistics table.

Years ended December 31,		2024	2023	2022	2021	2020
Average annual consumption per customer (kWhs)[a][b]:						
Residential	- Seattle	6,667	7,003	7,545	7,657	7,489
	- National	n/a	10,263	10,791	10,632	10,715
Industrial	- Seattle	12,245,121	12,646,067	13,472,583	13,394,426	
	- National	n/a	936,014	971,886	978,871	966,514
Commercial	- Seattle	98,162	98,313	100,148	96,105	106,329
	- National	n/a	73,007	72,567	69,875	68,651
Average rate per kilowatt-hour (cents)[a][b]:						
Residential	- Seattle	14.23	12.85	12.16	11.78	11.88
	- National	n/a	16.00	15.04	13.66	13.15
Industrial	- Seattle	10.27	9.19	8.78	8.41	
	- National	n/a	8.04	8.32	7.18	6.67
Commercial	- Seattle	11.88	10.87	10.50	10.18	10.02
	- National	n/a	12.60	12.41	11.21	10.59

(a) Source of national data: Department of Energy (www.eia.doe.gov/electricity/annual/). 2024 National average annual consumption data and average rate data not available. Certain 2022-2019 national average annual consumption and national average rate data were updated with revised actuals.
(b) Seattle amounts include an allocation for the net change in unbilled revenue. Unbilled revenue excludes retail customer voluntary payments for conservation and solar energy as well as revenue from diverted electricity and electric vehicle charging.

NOTE 1: A comprehensive rate change representing an overall increase of 4.5% became effective Janaury 1, 2024

NOTE 2: A Bonneville Power Administration (BPA) passthrough adjustment of 1.01% is being applied to all retail energy charges beginning January 1, 2024.

NOTE 3: Notice of public hearings on future rate actions may be obtained on request to:
The Office of the City Clerk, 600-4th Ave, Floor Three, Seattle, WA 98104. Phone number 206-684-8344.
Additional information about city of Seattle Council meetings can be found on the Web at www.seattle.gov/council/calendar.

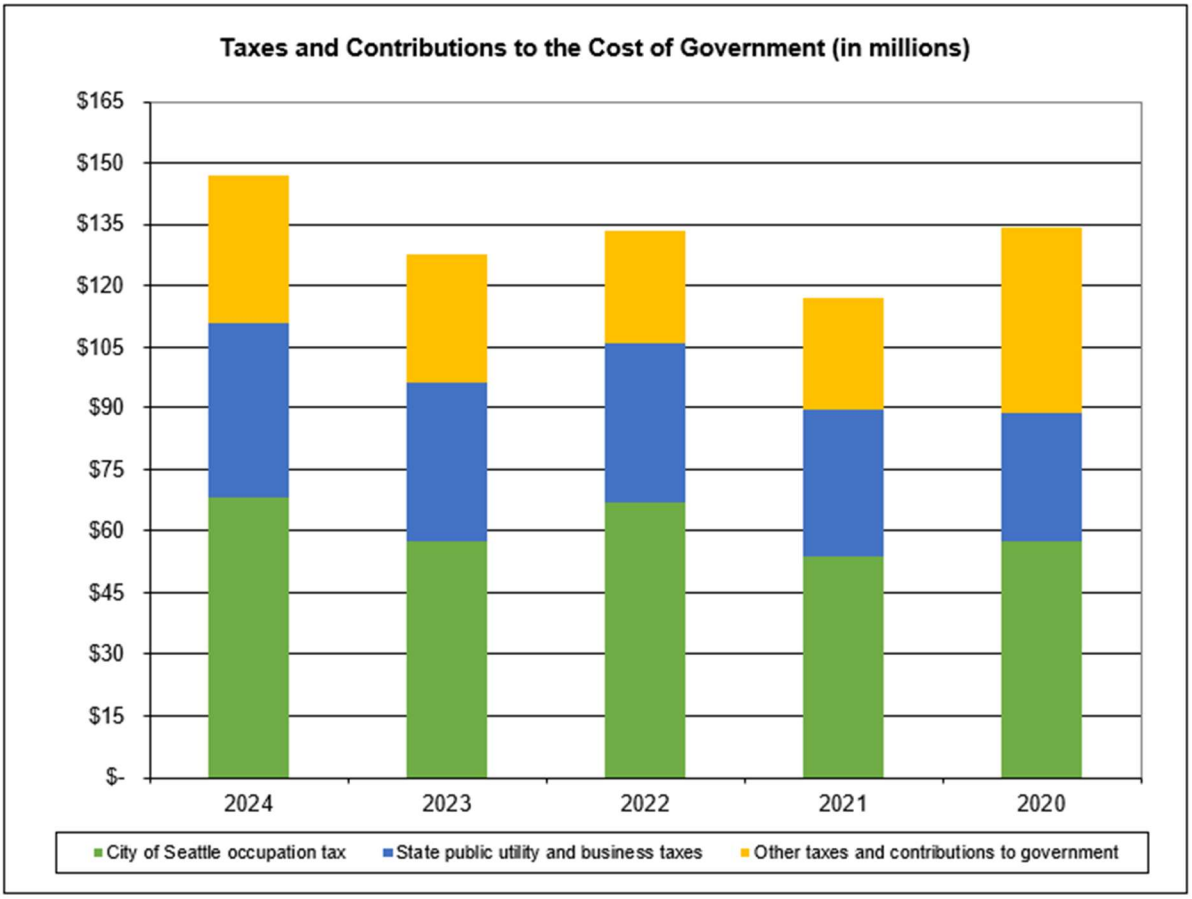
OTHER INFORMATION (UNAUDITED)

TAXES AND CONTRIBUTIONS BY SEATTLE CITY LIGHT TO THE COST OF GOVERNMENT

(in millions)

Years ended December 31,	2024	2023	2022	2021	2020
Taxes					
City of Seattle occupation utility tax	$ 68.3	$ 57.6	$ 66.7	$ 53.6	$ 57.5
State public utility and business taxes	42.6	38.6	39.1	35.7	31.3
Suburban contract payments and other	11.5	10.2	7.5	6.9	7.3
Contract payments for government services	6.3	6.0	5.7	5.3	5.1
Total taxes as shown in statement of revenues and expenses	128.7	112.4	119.0	101.5	101.2
Taxes/licenses charged to accounts other than taxes	2.3	1.8	2.4	2.1	16.7
Other contributions to the cost of government	15.8	13.5	11.9	13.4	16.5
Total miscellaneous taxes	18.1	15.3	14.3	15.5	33.2
Total taxes and contributions	$ 146.8	$ 127.7	$ 133.3	$ 117.0	$ 134.4

Note: Electric rates include all taxes. The State Public Utility Tax rate for retail electric power sales was 3.8734%. The City of Seattle Occupation Utility Tax rate was 6% for in-state retail electric power sales.



PUBLIC PURPOSE EXPENDITURES (Unaudited)

Years ended December 31,	2024	2023	2022	2021	2020
CONSERVATION					
Annual energy savings (megawatt hours) [A]	65,545	63,046	47,364	91,271	80,731
Programmatic conservation expenses [B]					
Non-low income	$ 22.4	$ 21.8	$ 19.1	$ 19.7	$ 20.3
Low income	3.3	3.3	2.4	2.7	1.7
Non-programmatic conservation expenses [C]	5.0	4.1	4.2	4.7	4.8
Subtotal	30.7	29.2	25.7	27.1	26.8
OTHER PUBLIC PURPOSE EXPENDITURES					
Low-income energy assistance [D]	31.3	28.4	26.7	29.2	23.4
Non-hydro renewable resources [E]	20.9	17.5	19.4	38.3	39.7
Subtotal	52.2	45.9	46.1	67.5	63.1
NET PUBLIC PURPOSE SPENDING	82.9	75.1	71.8	94.6	89.9
Revenue from retail electric sales	$ 1,125.2	$ 1,033.7	$ 1,021.5	$ 964.3	$ 926.7
PERCENT PUBLIC PURPOSE SPENDING TO RETAIL ELECTRIC SALES					
Conservation only	2.7%	2.8%	2.5%	2.8%	2.9%
Low-income assistance & non-hydro renewables	4.6%	4.4%	4.5%	7.0%	6.8%
Total	7.3%	7.2%	7.0%	9.8%	9.7%

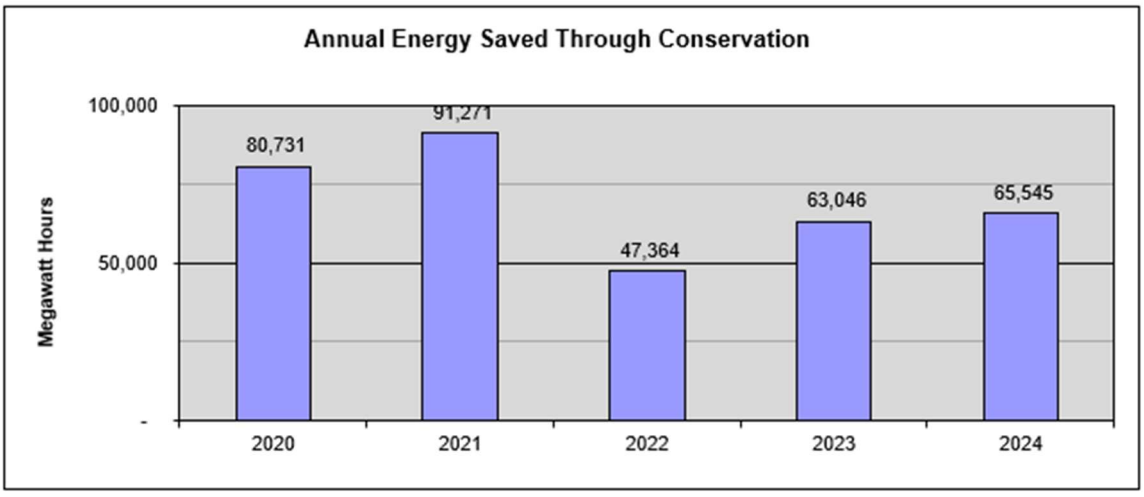
A Energy savings are from completed projects in that year including those from the Northwest Energy Efficiency Alliance, residential behavior programs, and applicable Transmission & Distribution benefits.

B Programmatic conservation expenditures are deferred and amortized over a 20-year period in accordance with City Council-passed resolutions and Statement No. 62 of the GASB, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB & AICPA Pronouncements.* Non-low income programmatic conservation includes expenditures for program measures, customer incentives, field staff salaries, energy code enforcement, and direct program administration. They do not include expenditures related to solar or other renewable programs. Low-income programmatic conservation includes these types of expenditures for the Department's HomeWise and Low-Income Multifamily Programs.

C Non-programmatic expenditures include program planning, evaluation, data processing, and general administration. These expenses are not associated with measured energy savings.

D Low-income assistance includes rate discounts and other programs that provide assistance to low income customers.

E Non-hydro renewable resources include energy generated from various sources bundled with renewable energy certificates (RECs) and purchased RECs which are funded from current revenues to comply with State of Washington Energy Independence Act (RCW 19.285).



Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With *Government Auditing Standards*

Independent Auditors' Report

To the Sustainability, City Light, Arts & Culture Committee of
City of Seattle, City Light Department

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States (*Government Auditing Standards*), the financial statements of the City of Seattle, City Light Department (Department), which comprise the Department's statement of net position as of December 31, 2024, and the related statements of revenues, expenses, and changes in net position, and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated April 30, 2025.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Department's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Department's internal control. Accordingly, we do not express an opinion on the effectiveness of the Department's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that were not identified.

to their clients and are not licensed CPA firms.

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Department's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of This Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Madison, Wisconsin
April 30, 2025

Reporting and insights from the 2024 audit:

The City of Seattle – City Light Department

December 31, 2024

Executive summary

April 30, 2025

To the Sustainability, City Light, Arts & Culture Committee
The City of Seattle – City Light Department
700 5th Ave, Ste 3300
Seattle, WA 98124

We have completed our audit of the financial statements of City of Seattle – City Light Department (the Department) for the year ended December 31, 2024, and have issued our report thereon dated April 30, 2025. This letter presents communications required by our professional standards.

Your audit should provide you with confidence in your financial statements. The audit was performed based on information obtained from meetings with management, data from your systems, knowledge of your Department's operating environment and our risk assessment procedures. We strive to provide you clear, concise communication throughout the audit process and of the final results of our audit.

Additionally, we have included information on key risk areas the Department should be aware of in your strategic planning. We are available to discuss these risks as they relate to your organization's financial stability and future planning.

If you have questions at any point, please connect with us:

- Aaron Worthman, Principal: Aaron.Worthman@bakertilly.com or +1 (512) 975 7281
- Dan La Haye, Director: Dan.LaHaye@bakertilly.com or +1 (608) 240 2534

Sincerely,

Baker Tilly US, LLP

Aaron Worthman, CPA, Principal

Dan La Haye, CPA, Director

Responsibilities

Our responsibilities

As your independent auditor, our responsibilities include:

- Planning and performing the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement. Reasonable assurance is a high level of assurance.
- Assessing the risks of material misstatement of the financial statements, whether due to fraud or error. Included in that assessment is a consideration of the Department's internal control over financial reporting.
- Performing appropriate procedures based upon our risk assessment.
- Evaluating the appropriateness of the accounting policies used and the reasonableness of significant accounting estimates made by management.
- Forming and expressing an opinion based on our audit about whether the financial statements prepared by management, with the oversight of those charged with governance:
  - Are free from material misstatement
  - Present fairly, in all material respects and in accordance with accounting principles generally accepted in the United States of America
- Performing tests related to compliance with certain provisions of laws, regulations, contracts and grants, as required by *Government Auditing Standards.*
- Our audit does not relieve management or those charged with governance of their responsibilities.

We are also required to communicate significant matters related to our audit that are relevant to the responsibilities of those charged with governance, including:

- Internal control matters
- Qualitative aspects of the Department's accounting practice including policies, accounting estimates and financial statement disclosures
- Significant unusual transactions
- Significant difficulties encountered
- Disagreements with management
- Circumstances that affect the form and content of the auditors' report
- Audit consultations outside the engagement team
- Corrected and uncorrected misstatements
- Other audit findings or issues

Audit status

Significant changes to the audit plan

There were no significant changes made to either our planned audit strategy or to the significant risks and other areas of emphasis identified during the performance of our risk assessment procedures.

Audit approach and results

Planned scope and timing

Audit focus

Based on our understanding of the Department and environment in which you operate, we focused our audit on the following key areas:

- Key transaction cycles
- Areas with significant estimates
- Implementation of new accounting standards

Our areas of audit focus were informed by, among other things, our assessment of materiality. Materiality in the context of our audit was determined based on specific qualitative and quantitative factors combined with our expectations about the Department's current year results.

Key areas of focus and significant findings

Significant risks of material misstatement

A significant risk is an identified and assessed risk of material misstatement that, in the auditor's professional judgment, requires special audit consideration. Within our audit, we focused on the following areas below.

Significant risk areas	Testing approach	Conclusion
Management override of controls	Incorporate unpredictability into audit procedures, emphasize professional skepticism and utilize audit team with industry expertise	Procedures identified provided sufficient evidence for our audit opinion
Improper revenue recognition due to fraud	Confirmation or validation of certain revenues supplemented with detailed predictive analytics based on non-financial data and substantive testing of related receivables	Procedures identified provided sufficient evidence for our audit opinion

Other areas of emphasis

We also focused on other areas that did not meet the definition of a significant risk but were determined to require specific awareness and a unique audit response.

Other areas of emphasis		
Cash and investments	Revenues and receivables	General disbursements
Payroll	Pension and OPEB liabilities	Long-term debt
Capital assets including infrastructure	Net position calculations	Financial reporting and required disclosures
Wholesale power purchases and sales	Regulatory accounting	Environmental remediation liabilities

Internal control matters

We considered the Department's internal control over financial reporting as a basis for designing our audit procedures for the purpose of expressing an opinion on the financial statements. We are not expressing an opinion on the effectiveness of the Department's internal control.

Our consideration of internal control was for the limited purpose described in the preceding paragraph and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and, therefore, material weaknesses or significant deficiencies may exist that were not identified.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis.

A material weakness is a deficiency or combination of deficiencies in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. We did not identify any deficiencies in internal control that we consider to be material weaknesses.

Required communications

Qualitative aspect of accounting practices

- Accounting policies: Management is responsible for the selection and use of appropriate accounting policies. In accordance with the terms of our engagement letter, we have advised management about the appropriateness of accounting policies and their application. The significant accounting policies used by Department are described in Note 1 to the financial statements. As described in Note 1, the Department changed accounting policies related to compensated absences by adopting GASB Statement No. 101 *Compensated Absences* in 2024. The impact of implementation was not material. We noted no transactions entered by the Department during the year for which accounting policies are controversial or for which there is a lack of authoritative guidance or consensus or diversity in practice.
- Accounting estimates: Accounting estimates, including fair value estimates, are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements, the degree of subjectivity involved in their development and because of the possibility that future events affecting them may differ significantly from those expected. The following estimates are of most significance to the financial statements:

Estimate	Management's process to determine	Baker Tilly's conclusions regarding reasonableness
Net pension liability and related deferrals	Evaluation of information provided by the Seattle City Employees' Retirement System	Reasonable in relation to the financial statements as a whole
Self-insurance claims	Historical claims analysis and report provided by a 3rd party administrator	Reasonable in relation to the financial statements as a whole
Allowance for doubtful accounts	Evaluation of historical revenues and loss levels with the analysis on collectability of individual amounts	Reasonable in relation to the financial statements as a whole
Net/Total OPEB liability and related deferrals	Key assumptions set by the City of Seattle with the assistance of a third-party actuary	Reasonable in relation to the financial statements as a whole
Unbilled revenues	Evaluation of unbilled revenues based on consumption quantities and existing rates	Reasonable in relation to the financial statements as a whole
Environmental remediation liabilities	Evaluation of key factors and assumptions used in estimation	Reasonable in relation to the financial statements as a whole
Leased assets/liabilities and/or lease receivable and related deferral	Evaluation of leases by management and incremental borrowing rate used for present value calculation	Reasonable in relation to the financial statements as a whole

There have been no significant changes made by management to either the processes used to develop the particularly sensitive accounting estimates, or to the significant assumptions used to develop the estimates, noted above.

- Financial statement disclosures: The disclosures in the financial statements are neutral, consistent and clear.

Significant unusual transactions

There have been no significant transactions that are outside the normal course of business for the Department or that otherwise appear to be unusual due to their timing, size or nature.

Significant difficulties encountered during the audit

We encountered no significant difficulties in dealing with management and completing our audit.

Disagreements with management

Professional standards define a disagreement with management as a matter, whether or not resolved to our satisfaction, concerning a financial accounting, reporting, or auditing matter that could be significant to the financial statements or the auditors' report. We are pleased to report that no such disagreements arose during the course of our audit.

Audit report

There have been no departures from the auditors' standard report.

Audit consultations outside the engagement team

We encountered no difficult or contentious matters for which we consulted outside of the engagement team.

Uncorrected misstatements and corrected misstatements

Professional standards require us to accumulate misstatements identified during the audit, other than those that are clearly trivial, and to communicate accumulated misstatements to management. The schedule, attached to the management representation letter, within the attachments summarizes the uncorrected misstatements that were provided and identified by management. In our judgment, none of the uncorrected misstatements, either individually or in the aggregate, indicate matters that could have had a significant effect on the Department's financial reporting process.

Management has determined that the effects of the uncorrected misstatements are immaterial, both individually and in the aggregate, to the financial statements as a whole. The uncorrected misstatements or the matters underlying them could potentially cause future period financial statements to be materially misstated, even though, in our judgment, such uncorrected misstatements are immaterial to the financial statements under audit.

Other audit findings or issues

We encountered no other audit findings or issues that require communication at this time.

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the Department's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Other information in documents containing audited financial statements

The Department's audited financial statements will be included in an Annual Report. Our responsibility for this information does not extend beyond the financial information identified in the audit report, and we are not required to perform any procedures to corroborate such other information. Upon completion, we will read the Annual Report to determine whether a material inconsistency exists between the other information and the financial statements and to ensure nothing comes to our attention that causes us to believe that such information, or its manner of presentation, is materially inconsistent with the information, or manner of its presentation, in the financial statements.

The Department's audited financial statements are "general purpose" financial statements. General purpose financial statements consist of the financial statements that can be used by a broad group of people for a broad range of activities. Once we have issued our audit report, we have no further obligation to update our report for events occurring subsequent to the date of our report. The Department can use the audited financial statements in other client prepared documents, such as official statements related to the issuance of debt, without our acknowledgement. Unless we have been engaged to perform services in connection with any subsequent transaction requiring the inclusion of our audit report, as well as to issue an auditors' acknowledgment letter, we have neither read the document nor performed subsequent event procedures in order to determine whether or not our report remains appropriate.

Management's consultations with other accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters. Management informed us that, and to our knowledge, there were no consultations with other accountants regarding auditing or accounting matters.

Written communications between management and Baker Tilly

The attachments include copies of other material written communications, including a copy of the management representation letter.

Compliance with laws and regulations

We did not identify any non-compliance with laws and regulations during our audit.

Fraud

We did not identify any known or suspected fraud during our audit.

Going concern

Pursuant to professional standards, we are required to communicate to you, when applicable, certain matters relating to our evaluation of the Department's ability to continue as a going concern for a reasonable period of time but no less than 12 months from the date of the financial statements, including the effects on the financial statements and the adequacy of the related disclosures, and the effects on the auditor's report. No such matters or conditions have come to our attention during our engagement.

Independence

We are not aware of any relationships between Baker Tilly and the Department that, in our professional judgment, may reasonably be thought to bear on our independence.

Related parties

We did not have any significant findings or issues arise during the audit in connection with the Department's related parties.

Other matters

We applied certain limited procedures to the required supplementary information (RSI) that supplements the financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were not engaged to report on the other information, which accompanies the financial statements but are not RSI. We did not audit or perform other procedures on this other information, and we do not express an opinion or provide any assurance on it.

Audit committee resources

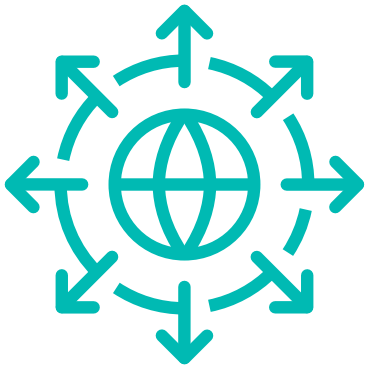
Our business is to know every aspect of yours and to maintain a constant lookout for what's next. We invite you to learn about some of the trending challenges and opportunities for public sector organizations like yours and how Baker Tilly can help.

To explore more trending topics and regulatory updates, visit our resource page at https://www.bakertilly.com/insights/audit-committee-resource-page.

Funding evaluation and pursuit

Public sector organizations may be eligible for grants, tax credits and other financial incentives through funding opportunities such as the Inflation Reduction Act, the Clean Communities Investment Accelerator, and the Infrastructure Investment and Jobs Act.

Baker Tilly can help you navigate, understand and pursue various federal and state funding sources through grant research and tracking, advising and writing, and management and compliance services.



Digital transformation

Digitizing public services can be a game changer for governments. Streamlining inefficient processes, providing digital access and delivery of services to meet public expectations, implementing technology to protect constituent data, leveraging information to make data-driven decisions and migrating outdated on-premises systems to the cloud are crucial to an entity's success.

Through these types of digital services, Baker Tilly can help you scale with future demand and be better positioned to rapidly respond to changing demands.

Cybersecurity

Public sector organizations face significant challenges from cyber threats and IT regulations. It can feel like you are on the defense keeping up with the latest risks, regulations and emerging trends. To mitigate risk, you must understand your organization's unique vulnerabilities, cybersecurity processes and controls.

Baker Tilly can help enhance your cybersecurity posture and ensure compliance, with solutions in IT compliance and security and cybersecurity and data protection to safeguard your data and navigate complex risk environments.

Management representation letter

Seattle City Light

700 5th Ave. | P.O. Box 34023 | Seattle WA 98124-4023
TEL (206) 684-3000 TTY/TDD (206) 684-3225 FAX (206) 625-3709
seattle.gov/city-light

April 30, 2025

Baker Tilly US, LLP
4807 Innovate Lane
PO Box 7398
Madison, WI 53707-7398

Dear Baker Tilly US, LLP:

We are providing this letter in connection with your audits of the financial statements of the City of Seattle, City Light Department (Department) as of December 31, 2024 and 2023 and for the years then ended for the purpose of expressing an opinion as to whether the financial statements present fairly, in all material respects, the financial position of the Department and the respective changes in financial position and cash flows thereof in conformity with accounting principles generally accepted in the United States of America (GAAP). We confirm that we are responsible for the fair presentation of the previously mentioned financial statements in conformity with accounting principles generally accepted in the United States of America. We are also responsible for adopting sound accounting policies, establishing and maintaining internal control over financial reporting, and preventing and detecting fraud.

Certain representations in this letter are described as being limited to matters that are material. Items are considered material, regardless of size, if they involve an omission or misstatement of accounting information that, in the light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would be changed or influenced by the omission or misstatement. An omission or misstatement that is monetarily small in amount could be considered material as a result of qualitative factors.

We confirm, to the best of our knowledge and belief, the following representations made to you during your audits.

Financial Statements

1) We have fulfilled our responsibilities, as set out in the terms of the audit engagement letter dated October 26, 2022, including our responsibility for the preparation and fair presentation of the financial statements in accordance with U.S. GAAP.
2) The financial statements referred to above are fairly presented in conformity with accounting principles generally accepted in the United States of America.
3) We acknowledge our responsibility for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.
4) We acknowledge our responsibility for the design, implementation, and maintenance of internal control to prevent and detect fraud.
5) Significant assumptions we used in making accounting estimates, including those measured at fair value, if any, are reasonable in accordance with U.S. GAAP.

6) Related party relationships and transactions, including revenues, expenditures/expenses, loans, transfers, leasing arrangements, and guarantees, and amounts receivable from or payable to related parties have been appropriately accounted for and disclosed in accordance with the requirements of accounting principles generally accepted in the United States of America.

7) All events subsequent to the date of the financial statements and for which accounting principles generally accepted in the United States of America require adjustment or disclosure have been adjusted or disclosed. No other events, including instances of noncompliance, have occurred subsequent to the financial statement date and through the date of this letter that would require adjustment to or disclosure in the aforementioned financial statements.

8) All material transactions have been recorded in the accounting records and are reflected in the financial statements.

9) We believe the effects of the uncorrected financial statement misstatements summarized in the attached schedule are immaterial, both individually and in the aggregate, to the financial statements as a whole.

10) The effects of all known actual or possible litigation, claims, and assessments have been accounted for and disclosed in accordance with accounting principles generally accepted in the United States of America.

11) Guarantees, whether written or oral, under which the Department is contingently liable, if any, have been properly recorded or disclosed.

Information Provided

12) We have provided you with:

    a) Access to all information, of which we are aware, that is relevant to the preparation and fair presentation of financial statements, such as financial records and related data, documentation, and other matters.

    b) Additional information that you have requested from us for the purpose of the audit.

    c) Unrestricted access to persons within the entity from whom you determined it necessary to obtain audit evidence.

    d) Minutes of the meetings of the Sustainability, City Light, Arts & Culture Committee or summaries of actions of recent meetings for which minutes have not yet been prepared.

13) We have disclosed to you results of our assessment of the risk that the financial statements may be materially misstated as a result of fraud.

14) We have no knowledge of any fraud or suspected fraud that affects the entity and involves:

    a) Management,

    b) Employees who have significant roles in internal control, or

    c) Others where the fraud could have a material effect on the financial statements.

15) We have no knowledge of any allegations of fraud or suspected fraud affecting the entity received in communications from employees, former employees, regulators, or others.

16) We have no knowledge of known instances of noncompliance or suspected noncompliance with provisions of laws, regulations, contracts, or grant agreements, or abuse, whose effects should be considered when preparing financial statements.

17) We have disclosed to you the names of our related parties and all the related party relationships and transactions, including side agreements, of which we are aware.

Other

18) There have been no communications from regulatory agencies concerning noncompliance with, or deficiencies in, financial reporting practices.

19) We have a process to track the status of audit findings and recommendations.

20) We have identified to you any previous financial audits, attestation engagements, and other studies related to the audit objectives and whether related recommendations have been implemented.

21) We have provided our views on reported findings, conclusions, and recommendations, as well as our planned corrective actions, for our report.

22) The Department has no plans or intentions that may materially affect the carrying value or classification of assets, deferred outflows of resources, liabilities, deferred inflows of resources or net position.

23) We are responsible for compliance with federal, state, and local laws, regulations, and provisions of contracts and grant agreements applicable to us, including tax or debt limits, debt contracts, and IRS arbitrage regulations; and we have identified and disclosed to you all federal, state, and local laws, regulations and provisions of contracts and grant agreements that we believe have a direct and material effect on the determination of financial statement amounts or other financial data significant to the audit objectives, including legal and contractual provisions for reporting specific activities in separate funds.

24) There are no:

    a) Violations or possible violations of budget ordinances, federal, state, and local laws or regulations (including those pertaining to adopting, approving and amending budgets), provisions of contracts and grant agreements, tax or debt limits, and any related debt covenants whose effects should be considered for disclosure in the financial statements or as a basis for recording a loss contingency, or for reporting on noncompliance, except those already disclosed in the financial statement, if any.

    b) Other liabilities or gain or loss contingencies that are required to be accrued or disclosed by accounting principles generally accepted in the United States of America.

    c) Rates being charged to customers other than the rates as authorized by the applicable authoritative body.

    d) Violations of restrictions placed on revenues as a result of bond resolution covenants such as revenue distribution or debt service funding.

25) The Department has satisfactory title to all owned assets, and there are no liens or encumbrances on such assets nor has any asset been pledged as collateral.

26) The Department has complied with all aspects of contractual agreements that would have a material effect on the financial statement in the event of noncompliance.

27) Components of net position (net investment in capital assets; restricted; and unrestricted) are properly classified and, if applicable, approved.

28) The Department has no derivative financial instruments such as contracts that could be assigned to someone else or net settled, interest rate swaps, collars or caps.

29) We believe that we have properly identified all derivative instruments and any embedded derivative instruments that require bifurcation. The Department's hedging activities are in accordance with its documented and approved hedging and risk management policies. The Department follows the valuation, accounting, reporting and disclosure requirements outlined in GASB Statement No. 53. We believe the timing, nature, and amounts of all forecasted transactions are probable of occurring. The fair values of all derivatives and hedged items have been determined based on prevailing market prices or by using financial models that we believe are the most appropriate models for valuing such instruments and that incorporate market data and other assumptions that we have determined to be reasonable and appropriate at year end.

30) Provisions for uncollectible receivables have been properly identified and recorded.

31) Interfund, internal, and intra-entity activity and balances have been appropriately classified and reported.

32) Deposits and investments are properly classified, valued, and disclosed (including risk disclosures, collateralization agreements, valuation methods, and key inputs, as applicable).

33) Provision, when material, has been made to reduce excess or obsolete inventories to their estimated net realizable value.

34) Capital assets, including infrastructure and intangible assets, are properly capitalized, reported, and, if applicable, depreciated/amortized. Any known impairments have been recorded and disclosed.

35) We believe the estimates made for the pollution remediation liabilities are in accordance with GASB Statement No. 49 and reflect all known available facts at the time they were recorded.

36) Tax-exempt bonds issued have retained their tax-exempt status.

37) The operations and rate setting process meet the condition for application of accounting for regulated operations as outlined in GASB Statement No. 62. All regulatory items included in the financial statements have been approved and are being accounted for in accordance with specific action taken by the regulatory body and as such the expectation of future recovery or refund is reasonable.

38) We have appropriately disclosed the Department's policy regarding whether to first apply restricted or unrestricted resources when an expense is incurred for purposes for which both restricted and unrestricted net position are available and have determined that net position were properly recognized under the policy.

39) We acknowledge our responsibility for the required supplementary information (RSI). The RSI is measured and presented within prescribed guidelines and the methods of measurement and presentation have not changed from those used in the prior period. We have disclosed to you any significant assumptions and interpretations underlying the measurement and presentation of the RSI.

40) We have no intention of terminating our participation in the Seattle City Employee's Retirement System ("SCERS") or withdrawing from any multi-employer plans, or taking any other action that could result in an effective termination or reportable event for any of the plans. We are not aware of any occurrences that could result in the termination of any of our participation in the "SCERS" defined benefit plan or multi-employer plans to which we contribute. We believe that the actuarial assumptions and methods used to measure pension liability and costs for financial accounting purposes are appropriate in the circumstances.

41) We assume responsibility for, and agree with, the findings of specialists in evaluating the net pension liability, net other post-employment benefit liability, pollution remediation liabilities, and provision for injuries and damages and have adequately considered the qualifications of the specialists in determining the amounts and disclosures used in the financial statements and underlying accounting records. We did not give or cause any instructions to be given to specialists with respect to the values or amounts derived in an attempt to bias their work, and we are not otherwise aware of any matters that have had impact on the independence or objectivity of the specialists.

42) We have evaluated the requirements of GASB Statement No. 83 – *Asset Retirement Obligations*, and concluded that the Department does not own any assets that have an asset retirement obligation.

43) We have implemented GASB Statement No. 86, *Certain Debt Extinguishment Issues*, and believe that all required disclosures and accounting considerations have been identified and properly classified in the financial statements in compliance with the Standard.

44) We have implemented GASB Statement No. 87, *Leases*, and believe that all required disclosures and accounting considerations have been identified and properly classified in the financial statements in compliance with the Standard.

45) We have implemented GASB Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*, and believe that all direct borrowings, direct placements, lines of credit or debt default clauses have been identified and properly disclosed in the financial statements in compliance with the Standard.

46) We have reviewed our long-term debt agreements and believe that all terms related to significant events of default with finance-related consequences, termination events with finance-related consequences and subjective acceleration clauses have been properly identified and disclosed.

47) Unused lines of credit, collateral pledged to secure debt and direct borrowings and private placements have been properly identified and disclosed.

48) We have identified any leases or other contracts that are required to be reported as leases and are in agreement with the key assumptions used in the measurement of any lease related assets, liabilities or deferred inflows of resources.

49) Management has appropriately estimated and accrued for all unprocessed invoices pertaining to 2024.

50) The auditing standards define an annual report as “a document, or combination of documents, typically prepared on an annual basis by management or those charged with governance in accordance with law, regulation, or custom, the purpose of which is to provide owners (or similar stakeholders) with information on the entity’s operations and the entity’s financial results and financial position as set out in the financial statements.” Among other items, an annual report contains, accompanies, or incorporates by reference the financial statements and the auditor’s report thereon. Our annual report will contain the audited financial statements, or reference to the audited financial statements. We will provide you with the final version of the annual report once available, prior to distribution to our stakeholders, such that you may complete your required procedures.

51) We have evaluated GASB Statement No. 96, *Subscription-Based Information Technology Arrangements*, and believe these arrangements are immaterial to the financial statements and thus are not recorded.

52) We have reviewed existing contracts and determined there are no items requiring accounting or reporting under GASB Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements.*

53) We have implemented GASB Statement No. 101, *Compensated Absences*, and believe that all required disclosures and accounting considerations have been identified and properly classified in the financial statements in compliance with the Standard.

Sincerely,

City of Seattle, City Light Department

Signed: Julia Levin
Julia Levin (Apr 30, 2025 10:18 PDT)

Julia Levin
General Accounting Manager
Seattle City Light

04/30/2025
Date

Signed: Natalie Hayashi
Natalie Hayashi (Apr 30, 2025 11:35 PDT)

Natalie Hayashi
Accounting Director,Controller
Seattle City Light

04/30/2025
Date

Signed:

Kirsty Grainger
Chief Financial Officer
Seattle City Light

04/30/2025
Date

Signed: Dawn Rae Lindell
Dawn Lindell (Apr 30, 2025 15:47 PDT)

Dawn Lindell
General Manager and CEO
Seattle City Light

04/30/2025
Date

CITY OF SEATTLE - CITY LIGHT DEPARTMENT

SUMMARY OF PASSED ADJUSTING JOURNAL ENTRIES
December 31, 2024

	2024									
	Financial Statements Effect - Increase (Decrease) to Financial Statement Total									
	Current Assets	Long-Term Assets	Total Assets	Current Liabilities	Long-Term Liabilities	Total Liabilities	Total Net Position	Total Revenues	Total Expenses	Net Income
Total Net Audit Differences	$ -	$ 2,505,880	$ 2,505,880	$ 3,268,739	$ -	$ 3,268,739	$ (762,859)	$ -	$ (737,141)	$ 737,141

Accounting changes relevant to City of Seattle – City Light Department

Future accounting standards update

GASB Statement Number	Description	Potentially impacts you	Effective date
102	Certain Risk Disclosures	✓	12/31/25
103	Financial Reporting Model Improvements	✓	12/31/26
104	Disclosures of Certain Capital Assets	✓	12/31/26

Further information on upcoming GASB pronouncements.

New guidance on disclosure of certain risks

The requirements in GASB Statement No. 102, *Certain Risk Disclosures* is meant to provide financial statement users with information about certain risks when circumstances make a government vulnerable to a heightened possibility of loss or harm. It requires governments to disclose essential information about risks related to vulnerabilities due to certain concentrations or constraints.

(a) The Statement defines a concentration as a lack of diversity related to an aspect of a significant inflow or outflow of resources—for example, a small number of companies that represent a majority of employment in a government's jurisdiction, or a government that relies on one revenue source for most of its revenue.

(b) The Statement defines a constraint as a limitation imposed on a government by an external party or by formal action of the government's highest level of decision-making authority—such as a voter-approved property tax cap or a state-imposed debt limit.

Concentrations and constraints may limit a government's ability to acquire resources or control spending.

The Statement generally requires a government to disclose information about a concentration or constraint if all of the following criteria are met:

(a) The concentration or constraint is *known* to the government prior to issuing the financial statements.

(b) The concentration or constraint makes the government vulnerable to the risk of a substantial impact.

(c) An event or events associated with the concentration or constraint that could cause a substantial impact have occurred, have begun to occur, or are more likely than not to begin to occur within 12 months of the date the financial statements are issued.

The disclosures should include a description of the following:

- The concentration or constraint,
- Each event associated with the concentration or constraint that could cause a substantial impact if the event has occurred or has begun to occur prior to the issuance of the financial statements, and
- Actions taken by the government to mitigate the risk prior to the issuance of the financial statements.

Changes to the financial reporting model

GASB Statement 103, *Financial Reporting Model Improvements*, builds on Statement 34 by providing key targeted improvements to the financial reporting model. Its requirements are designed to:

- Enhance the effectiveness of governmental financial reports in providing information essential for decision making and assessing a government's accountability, and
- Address certain application issues.

The targeted improvements contained in Statement 103 establish or modify existing accounting and financial reporting requirements related to:

- Management's discussion and analysis - While the overall requirements do not substantially change management's discussion and analysis, the modifications are meant to improve the analysis included in this section and provide details about the items that should be discussed as currently known facts, decisions, or conditions expected to have a significant financial effect in the subsequent period.
- Unusual or infrequent items (previously known as extraordinary and special items) - The new Statement simplifies GASB literature by eliminating the separate presentation of extraordinary and special items. Under the requirement of Statement 103, applicable items will either be identified as unusual or infrequent, or both.
- Presentation of the proprietary fund statement of revenues, expenses, and changes in fund net position - The changes are designed to improve consistency around the classification of items in these statements by better defining what should be included in operating revenues and expenses and nonoperating revenues and expenses including, for example, the addition of subsidies received or provided as a new category of nonoperating revenues and expenses.
- Major component unit information, and Budgetary comparison information - Statement 103 is designed to improve the consistency of the reporting of major component unit information and budgetary comparison information by specifying required placement of that information.

Two-way audit communications

As part of our audit of your financial statements, we are providing communications to you throughout the audit process. Auditing requirements provide for two-way communication and are important in assisting the auditor and you with more information relevant to the audit.

As this past audit is concluded, we use what we have learned to begin the planning process for next year's audit. It is important that you understand the following points about the scope and timing of our next audit:

a. We address the significant risks of material misstatement, whether due to fraud or error, through our detailed audit procedures.

b. We will obtain an understanding of the five components of internal control sufficient to assess the risk of material misstatement of the financial statements whether due to error or fraud, and to design the nature, timing and extent of further audit procedures. We will obtain a sufficient understanding by performing risk assessment procedures to evaluate the design of controls relevant to an audit of financial statements and to determine whether they have been implemented. We will use such knowledge to:

    - Identify types of potential misstatements.
    - Consider factors that affect the risks of material misstatement.
    - Design tests of controls, when applicable, and substantive procedures.

c. We will not express an opinion on the effectiveness of internal control over financial reporting or compliance with laws, regulations and provisions of contracts or grant programs. For audits performed in accordance with *Government Auditing Standards*, our report will include a paragraph that states that the purpose of the report is solely to describe the scope of testing of internal control over financial reporting and compliance and the result of that testing and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance and that the report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering internal control over financial reporting and compliance. The paragraph will also state that the report is not suitable for any other purpose.

d. The concept of materiality recognizes that some matters, either individually or in the aggregate, are important for fair presentation of financial statements in conformity with generally accepted accounting principles while other matters are not important. In performing the audit, we are concerned with matters that, either individually or in the aggregate, could be material to the financial statements. Our responsibility is to plan and perform the audit to obtain reasonable assurance that material misstatements, whether caused by errors or fraud, are detected.

Our audit will be performed in accordance with auditing standards generally accepted in the United States of America and *Government Auditing Standards.*

We will not express an opinion on the effectiveness of internal control over financial reporting or compliance with laws, regulations, and provisions of contracts or grant programs. For audits done in accordance with *Government Auditing Standards*, our report will include a paragraph that states that the purpose of the report is solely to describe (a) the scope of testing of internal control over financial reporting and compliance and the result of that testing and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance, (b) the scope of testing internal control over compliance for major programs and major program compliance and the result of that testing and to provide an opinion on compliance but not to provide an opinion on the effectiveness of internal control over compliance and, (c) that the report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering internal control over financial reporting and compliance in considering internal control over compliance and major program compliance. The paragraph will also state that the report is not suitable for any other purpose.

We are very interested in your views regarding certain matters. Those matters are listed here:

a. We typically will communicate with your top level of management unless you tell us otherwise.

b. We understand that the governing board has the responsibility to oversee the strategic direction of your organization, as well as the overall accountability of the entity. Management has the responsibility for achieving the objectives of the entity.

c. We need to know your views about your organization's objectives and strategies, and the related business risks that may result in material misstatements.

d. We anticipate that the Department will receive an unmodified opinion on its financial statements.

e. Which matters do you consider warrant particular attention during the audit, and are there any areas where you request additional procedures to be undertaken?

f. Have you had any significant communications with regulators or grantor agencies?

g. Are there other matters that you believe are relevant to the audit of the financial statements?

Also, is there anything that we need to know about the attitudes, awareness and actions of the governing body concerning:

a. The entity's internal control and its importance in the entity, including how those charged with governance oversee the effectiveness of internal control?

b. The detection or the possibility of fraud?

We also need to know if you have taken actions in response to developments in financial reporting, laws, accounting standards, governance practices, or other related matters, or in response to previous communications with us.

With regard to the timing of our audit, here is some general information. If necessary, we may do preliminary financial audit work during the months of October-December. Our final financial fieldwork is scheduled during March-April to best coincide with your readiness and report deadlines. After fieldwork, we wrap up our financial audit procedures at our office and may issue drafts of our report for your review. Final copies of our report and other communications are issued after approval by your staff. This is typically 4-6 weeks after final fieldwork but may vary depending on a number of factors.

Keep in mind that while this communication may assist us with planning the scope and timing of the audit, it does not change the auditor's sole responsibility to determine the overall audit strategy and the audit plan, including the nature, timing and extent of procedures necessary to obtain sufficient appropriate audit evidence.

We realize that you may have questions on what this all means or wish to provide other feedback. We welcome the opportunity to hear from you.

City of Seattle ~ City Light Department

Sustainability, City Light, Arts & Culture Committee

Report on the 2024 Financial Audit

Presented by Aaron Worthman, CPA, Principal

August 1, 2025

AGENDA

- Audit Overview
- Main Areas of Audit Focus
- Internal Control Communication
- Auditors' Communication with Those Charged with Governance
- Questions

Audit overview

- Management and staff were prepared, cooperative and readily available.
- Audit schedule was maintained and communication between management and auditors was good.
- Four weeks of “fieldwork” were conducted onsite and remotely (one week of preliminary and three weeks of final).
- Last day of “fieldwork” was April 4, 2025.
- No adjusting journal entries were noted.

Audit overview

- Audit performed in accordance with Generally Accepted Auditing Standards and *Government Auditing Standards*.
- Audit objective – reasonable assurance that financial statements are free from material misstatement.
- Financial statements received an Unmodified Opinion.

Main areas of audit focus

- Control Environment
- Control Activities
- Information Technology
- Cash and Investments
- Capital Assets
- Revenues and Accounts Receivable
- Pension and OPEB
- Regulatory Accounting
- Environmental Liabilities
- Leases/Subscription Based Information Technology Arrangements
- Expenditures and Payables
- Payroll
- Financing
- Net Position
- Compliance with Laws and Regulations
- Contracts and Contingencies
- Financial Reporting

Internal control communication

- AU-C Section 265
- Communicating Internal Control Related Matters Identified in an Audit
- Material weaknesses noted in the Department's internal control:
  - None noted
- Significant deficiencies noted in the Department's internal control:
  - None noted

Auditors' communication with those charged with governance (*Significant findings from the audit)*

Area to be Communicated	Auditor's Response
Auditor's View on Qualitative Aspects of Significant Accounting Policies	> The significant accounting policies used in the preparation of your financial statements are discussed in Note 1 to the financial statements. > Accounting estimates are an integral part of the financial statements prepared by management's knowledge and experience about past and current events and assumptions about future events. We feel that all estimates made by management are in accordance with generally accepted accounting principles.

Auditors' communication with those charged with governance (*Significant findings from the audit)*

Area to be Communicated	Auditor's Response
Significant Difficulties Encountered in Performing the Audit	> We encountered no difficulties in performing our audit.
Uncorrected Misstatements	> By Professional Auditing Standards, uncorrected misstatements refer to immaterial passed audit adjustments – a summary of the uncorrected financial statement misstatements is included with the Reporting and Insights Letter.

Auditors' communication with those charged with governance (*Significant findings from the audit)*

Area to be Communicated	Auditor's Response
Disagreements with Management	> Professional standards define a disagreement with management as a matter, whether or not resolved to our satisfaction, concerning a financial accounting, reporting, or auditing matter that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements were encountered during the course of the audit.
Other Findings or Issues	> There are no other issues to disclose as part of the audit in connection with these Professional Auditing Standards.

Auditors' communication with those charged with governance (*Significant findings from the audit)*

Area to be Communicated	Auditor's Response
Material Corrected Misstatements	> Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. > There were no adjustments as part of this year's audit.

Auditors' communication with those charged with governance (*Significant findings from the audit)*

Area to be Communicated	Auditor's Response
Management Representations	> We have requested certain representations from management that are included in the management representation letter. A copy of this letter is included with our Reporting and Insights Letter.

Auditors' communication with those charged with governance (*Significant findings from the audit)*

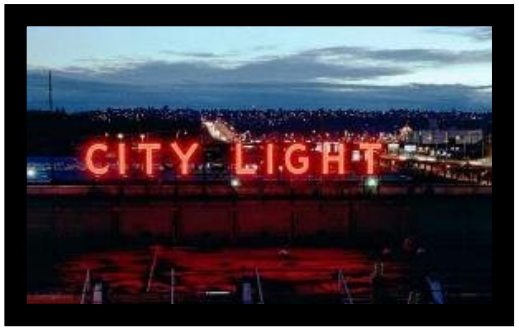
Area to be Communicated	Auditor's Response
Management's Consultations with Other Accountants	> To the best of our knowledge, management has not consulted with or obtained opinions from other independent accountants on auditing and or the application of accounting principles during the past year. > Professional standards require the consulting accountant to discuss any such contacts with the current auditor to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Auditors' communication with those charged with governance (*Significant findings from the audit)*

Area to be Communicated	Auditor's Response
Auditor Independence	> We are not aware of any relationships between Baker Tilly US, LLP and the Department that, in our professional judgment, may reasonably be thought to bear on our independence.

Thank You!

We appreciate the work done by the Department's accounting staff and management in preparing for and assisting in the audit.



Seattle City Light


Questions?

Baker Tilly Contact Information

Aaron Worthman, CPA
Principal

P: +1 (512) 975 7281
E: aaron.worthman@bakertilly.com