



RESOLUTION NO. U-11338

1 A RESOLUTION related to approving a conceptual methodology template for
2 developing a Climate Commitment Act Cost Burden Estimate.

3 WHEREAS the City of Tacoma, Department of Public Utilities, Light
4 Division (d.b.a. "Tacoma Power"), is subject to the regulations of the Climate
5 Commitment Act ("CCA") concerning the reduction of economy-wide
6 greenhouse gas emissions, and

7 WHEREAS the Washington State Legislature specified that electric
8 utilities, which are subject to the CCA and are also subject to the 2019 Clean
9 Energy Transformation Act, are eligible for 'no-cost allowances' under the CCA,
10 and
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12 WHEREAS no-cost allowances are intended to mitigate for impacts
13 created by the duplicative nature of the two laws, as well as for other costs
14 related to: the impact on rates or charges to customers due to purchases and
15 imports of electricity that has associated carbon emissions, decarbonization of
16 other sectors of the economy through electrification, and administrative costs
17 associated with CCA program participation, and

18 WHEREAS the Washington State Department of Ecology is conducting a
19 rulemaking process and accepting comments on the proper development of a
20 cost burden methodology, and
21

22 WHEREAS Tacoma Power is requesting that the Tacoma Public Utilities
23 Board adopt a resolution to approve a conceptual methodology template to
24 guide Tacoma Power staff in developing an estimate of the full range of cost
25 burden effects associated with CCA program participation, and
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WHEREAS Tacoma Power has provided the Board with a narrative of the cost burden factors which are used as inputs to the conceptual methodology template for the CCA Cost Burden Estimate that Tacoma Power recommends for use by Ecology in developing cost burden estimates, and

WHEREAS Tacoma Power proposes to complete the CCA Cost Burden Estimate template and submit it to the Department of Ecology (Ecology) to inform the agency’s assignment of no-cost emissions allowances provided to Tacoma Power in advance of the statutory deadline of October 1, 2022, by which Ecology must establish methods and procedures and a schedule for allocating allowances to electric utilities; Now, therefore,

BE IT RESOLVED BY THE PUBLIC UTILITY BOARD OF THE CITY OF TACOMA:

That the Public Utility Board of the City of Tacoma hereby concurs and approves the development of a Climate Commitment Act Cost Burden Estimate Template substantially similar to the conceptual cost burden estimate template on file with the Clerk of the Board and agrees that a completed CCA Cost Burden Estimate template should be submitted to Ecology in advance of October 1, 2022.

Approved as to form:

/s/
Chief Deputy City Attorney

Clerk

Chair

Secretary

Adopted



Board Action Memorandum

TO: Jackie Flowers, Director of Utilities
COPY: Charleen Jacobs, Director and Board Offices
FROM: Lisa Rennie, Manager, Policy and Regulations
MEETING DATE: August 24, 2022
DATE: August 16, 2022

STRATEGIC DIRECTIVE ALIGNMENT (select as many that apply):

Please indicate which of the Public Utility Board's Strategic Directives is supported by this action.

- | | |
|--|--|
| <input checked="" type="checkbox"/> SD1 – Equity & Inclusion | <input type="checkbox"/> SD8 – Telecom |
| <input checked="" type="checkbox"/> SD2 – Financial Sustainability | <input type="checkbox"/> SD9 – Economic Development |
| <input checked="" type="checkbox"/> SD3 – Rates | <input type="checkbox"/> SD10 – Government Relations |
| <input type="checkbox"/> SD4 – Stakeholder Engagement | <input checked="" type="checkbox"/> SD11 – Decarbonization/Electric Vehicles |
| <input checked="" type="checkbox"/> SD5 – Environmental Leadership | <input type="checkbox"/> SD12 – Employee Relations |
| <input type="checkbox"/> SD6 – Innovation | <input type="checkbox"/> SD13 – Customer Service |
| <input type="checkbox"/> SD7 – Reliability & Resiliency | <input checked="" type="checkbox"/> SD14 – Resource Planning |

SUMMARY: Request that the Tacoma Public Utilities Board adopt a resolution to approve a conceptual methodology template to guide Tacoma Power staff in developing an estimate of the full range of cost burden effects imposed by the Climate Commitment Act (CCA). If the resolution is approved, Tacoma Power will complete the CCA Cost Burden Estimate template and submit it to the Department of Ecology (Ecology) to inform the agency's assignment of no-cost emissions allowances provided to Tacoma Power. Tacoma Power will submit the completed template in advance of the statutory deadline of October 1, 2022, by which Ecology must establish methods and procedures and a schedule for allocating allowances to electric utilities.

BACKGROUND:

Tacoma Power must comply with the regulations of the CCA to help reduce economy-wide greenhouse gas emissions. The Washington State Legislature specified that electric utilities, which are also subject to the 2019 Clean Energy Transformation Act, are eligible for 'no-cost allowances' under the CCA. No-cost allowances are intended to mitigate for impacts created by the duplicative nature of the two laws, as well as for other costs related to: the impact on rates or charges to customers due to purchases and imports of electricity that has associated carbon emissions, decarbonization of other sectors of the economy through electrification, and administrative costs associated with CCA program participation.

Definition of Cost Burden:

"Cost burden' means the impact on rates or charges to customers of electric utilities in Washington state for the incremental cost of electricity service to serve load due to the compliance cost for greenhouse gas emissions caused by the program. Cost burden includes administrative costs from the utility's participation in the program."

The statute is unclear regarding whether Ecology or individual utilities should develop the utility-specific cost burden estimate. Tacoma Power and other utilities have previously commented on Ecology's draft



Board Action Memorandum

rules and recommended that utilities assume the role of producing and submitting a governing board or regulator approved CCA cost burden estimate to Ecology, as utilities are in a better position to provide timely, accurate and comprehensive data that could be used by Ecology in meeting its statutory deadlines.

The Department of Ecology has issued its final draft rules which propose granting the agency full discretion on the development of a cost burden methodology, including the ability to disregard or adjust estimates generated by utilities. Ecology is on track to finalize the CCA rulemaking in October 2022. Tacoma Power believes it is important to provide Ecology with an example of the template completed with the utility's best available data.

Attached is a narrative of the cost burden factors which are used as inputs to the template, as well as the conceptual CCA Cost Burden Estimate template. The template is essentially the same as the template developed in conjunction with other Washington utilities. The template is intended to function as a living document that will evolve over time. As Tacoma Power gains a better understanding of the Climate Commitment Act's implementation and impacts, the details of the implementation of the approved concept methodology will be improved.

ARE THE EXPENDITURES AND REVENUES PLANNED AND BUDGETED? No

IF THE EXPENSE IS NOT BUDGETED, PLEASE EXPLAIN HOW IT IS TO BE COVERED.

The provision of no-cost allowances is intended to offset anticipated costs incurred by Tacoma Power and driven by the CCA, including administrative costs and compliance costs driven by electrification of other sectors of the economy.

IF THE ACTION REQUESTED IS APPROVAL OF A CONTRACT, INCLUDE LANGUAGE IN RESOLUTION AUTHORIZING \$200,000 INCREASE IN ADMINISTRATIVE AUTHORITY TO DIRECTOR? No

ATTACHMENTS: List any attachments (contracts, policies, agreements, etc.).
CCA Cost Burden Estimate Narrative of Input factors
CCA Cost Burden Estimate Conceptual Methodology Template

CONTACT:

Primary Contact: Kyle Frankiewich, Energy Policy and Regulations Analyst, Tacoma Power, 253-278-2420
Supervisor's Name: Lisa Rennie, Manager, Policy and Regulations, Tacoma Power, 253-341-6466
Presenter (if different from primary contact):
Additional staff requiring a Zoom presentation link: Aimee Higby, Strategy and Policy Analyst, Tacoma Power, 253-281-0489

**Climate Commitment Act – Cost Burden Estimate:
Narrative of Input Factors for the Template for Tacoma Power**

The CCA Cost Burden Estimate is Tacoma Power’s best available estimate of the cost burden anticipated by the electric utility due to the Climate Commitment Act. The estimate reflects and reconciles two different ways of understanding Tacoma Power’s near-term future operations: forward-looking plans and forecasts such as the load forecast and IRP, and backward-looking empirical data reflecting our historical trading activities.

Forecast of Retail Electric Load	
<i>Description:</i> Forecast of energy to serve load (MWh) for each year of the four-year compliance period, including transmission and distribution losses.	<i>Data source:</i> Long-term 20-year load forecast, updated at least annually; if necessary, may be adjusted to account for anticipated large loads or unexpected load growth
Resources Used to Serve Retail Electric Load	
Declared Sources: Forecast of specified resources owned, contracted or expected to be acquired by Tacoma Power.	
<i>Inputs for CCA Cost Burden Estimate</i>	<i>Available Data Sources</i>
<i>BPA Specified-Source Purchases (MWh):</i> Estimate of annual energy generation provided by the Bonneville Power Administration (BPA) under long-term contract with Tacoma Power.	Generation portfolio from most recent IRP; long-term contracts. <i>Note:</i> Per contract terms, BPA specified-source purchases must align with load forecast.
<i>Coal (MWh):</i> Forecasted generation from owned or long-term contracted specified-source coal resources. <i>Note:</i> Not applicable; Tacoma Power does not purchase specified energy from coal-fired generators.	Generation portfolio from most recent IRP; long-term contracts.
<i>Natural Gas (MWh):</i> Forecasted generation from owned or long-term contracted specified-source natural gas resources. <i>Note:</i> Not applicable; Tacoma Power does not purchase specified energy from natural gas-fired generators.	Generation portfolio from most recent IRP; long-term contracts.
<i>Hydro (MWh):</i> Forecasted generation from owned or long-term contracted specified-source hydro resources. Assume “average,” “P50,” or “base case” hydro conditions.	Generation portfolio from most recent IRP; long-term contracts.
<i>Other Renewables & Non-Emitting Resources (MWh):</i> Enter total forecasted generation from owned or long-term contracted specified-source non-hydro renewables and other non-emitting resources.	Generation portfolio from most recent IRP; long-term contracts.
Unspecified Sources: Energy expected to be purchased on the wholesale electricity market.	
<i>Inputs for CCA Cost Burden Estimate</i>	<i>Available Data Sources</i>
<i>Unspecified Purchases (MWh):</i> Estimate of generation to be acquired through unspecified wholesale market purchases. Unspecified purchases are assumed to be the backstop resource.	Formula output in spreadsheet: Energy to Serve Load (MWh) minus the sum of all specified sources.

<p><i>Operational Adjustment (MWh):</i> Estimate of shorter-term unspecified resource purchases that Tacoma Power makes to balance the system, hedge against the variability of load and resource conditions, and maximize value of our generation resources. In the template, this adjustment is equal to Energy to Serve Load (MWh) multiplied by an historical data-driven estimate of unspecified market purchases as a percentage of total load. Forecasted unspecified purchases made through the Energy Imbalance Market are included in this operational adjustment.</p>	<p>Annual MWh is formula output in spreadsheet. The estimate of unspecified market purchases as a percentage of load is informed by the following data:</p> <ul style="list-style-type: none"> ➤ Tacoma Power’s historical wholesale transactions ➤ Tacoma Power’s historical and forecasted EIM transactions ➤ Where Tacoma Power’s historical EIM transaction data is limited, EIM transaction information from other WA utilities ➤ Qualitative information based on professional experience of Tacoma Power staff
<p><i>Wholesale Purchases Scheduled from BPA, if BPA is not FJD (MWh).</i> In the event that BPA decides not to participate in the cap-and-invest program as a first jurisdictional deliverer (FJD), purchases made on an unspecified basis and scheduled from BPA will likely cause the purchaser, e.g., Tacoma Power, to incur CCA compliance obligations. This input is calculated using an estimate of BPA-scheduled unspecified purchases as a percentage of all unspecified purchases.</p>	<p>Annual MWh is formula output in spreadsheet. The estimate of BPA-scheduled unspecified purchases as a percentage of all unspecified purchases is informed by the following data:</p> <ul style="list-style-type: none"> ➤ Historical wholesale transactions ➤ Where Tacoma Power’s historical transaction data is limited, information and analysis from other WA utilities ➤ Qualitative information based on professional experience of Tacoma Power staff
<p><i>Emissions Associated with Resources Used to Serve Retail Electric Load</i></p>	
<p>This section of the CCA cost burden estimate template converts MWh identified in the previous section into metric tons of carbon dioxide equivalent (MTCO_{2e}). This section of the template is formula-driven: declared resource MWh multiplied by that declared resource’s emissions intensity factor expressed as MTCO_{2e}/MWh.</p> <ul style="list-style-type: none"> ➤ <i>BPA Specified-Source Purchases (MTCO_{2e}):</i> Asset Controlling Supplier (ACS) emissions intensity factor is the average of the ACS factors for the last four years, as established by the California Air Resources Board. When the WA Dept. of Ecology begins assigning ACS factors, those ACS factors will be used. - BPA’s average ACS factor for 2019-2022 - 0.0154 MTCO_{2e}/MWh ➤ <i>Coal:</i> default coal emissions factor - 1.0614 MTCO_{2e}/MWh ➤ <i>Natural Gas:</i> default natural gas emissions factor - 0.4354 MTCO_{2e}/MWh ➤ <i>Unspecified Purchases:</i> unspecified emissions factor - 0.437 MTCO_{2e}/MWh, pursuant to WAC 173-444-040. ➤ <i>Operational Adjustment (MTCO_{2e}):</i> unspecified emissions factor - 0.437 MTCO_{2e}/MWh ➤ <i>Wholesale Purchases Scheduled From BPA, if BPA is not FJD (MTCO_{2e}):</i> unspecified emissions factor - 0.437 MTCO_{2e}/MWh 	

- **Energy supplied to EITEs (MWh):** Electricity supplied by Tacoma Power to energy-intensive, trade-exposed entities (EITEs) that intend to claim carbon emissions associated with purchased electricity. Tacoma Power will input MWh sold to such EITE customers upon receiving notice of intent from EITEs. Otherwise, Tacoma Power includes emissions associated with electricity supplied to EITEs in its utility-specific emissions.
 - **EITE Emissions (MTCO₂e):** Calculated as the energy supplied to industrial covered entities divided by Energy to Serve Load, then multiplied by the sum of all emissions associated with declared resources, including the unspecified source categories.

Total Utility-Specific Emissions (MTCO₂e): Total metric tons of carbon dioxide equivalent associated with energy to serve load, calculated as the sum of all emissions associated with declared resources subtracted by emissions associated with MWh claimed by EITE entities.

Cost Burden Calculation

- **Utility-Specific Emissions (MTCO₂e):** As described above
- **Administrative Costs Allowance Adjustment:** Projected administrative costs associated with participation in the CCA program and allowance market/auction, calculated as projected administrative costs per year divided by the projected price for one allowance. For the first compliance window (2023-2026) projected prices are sourced from in [Appendix H.1 of Ecology's Preliminary Regulatory Analysis for Chapter 173-446 WAC \(Table 87, page 194\)](#).
- **Power Cost Adjustment:** Projected power cost impacts due to redispatch—the cost of carbon in thermal dispatch decreases wholesale market sales and increases average production cost. This input is more relevant for electric utilities with owned or contracted thermal generation.
- **Allowance Allocation (allowances):** Utility-specific emissions allowances + Administrative costs allowance adjustment + Power cost adjustment

Enter Data
Formula

WA Utility (non multi-jurisdictional)		Allowance Allocation Calculation for 2023-2026				
YEAR	Formula descriptions	2023	2024	2025	2026	Field description Data source and calculation method
Energy to Serve Load (MWh)	A					Forecasted annual energy demand, including transmission and other losses.
DECLARED RESOURCES: Generation forecasts are informed by IRP analysis and inclusive of CEIP specific actions.						
BPA Specified-source purchases (total) (MWh)	B					Estimate of annual energy generation provided by the Bonneville Power Administration. E.g. specified-source purchases including block, slice, and load-following products or other specified ACS purchases.
Coal - Total (MWh)	C	-	-	-	n/a - not permitted under CETA	Total forecasted generation from owned or long-term contracted specified-source coal resources.
Aggregate Coal Generation (Less Specified Resources)	C1				n/a - not permitted under CETA	Energy acquired from aggregate coal generation (less specified resources).
Specified Coal Resource #1	C2				n/a - not permitted under CETA	Generation from Specified Coal Resource #1, an owned or long-term contracted resource.
Specified Coal Resource #2	C3				n/a - not permitted under CETA	Generation from Specified Coal Resource #2, an owned or long-term contracted resource.
Natural Gas - Total (MWh)	D	-	-	-	-	Total forecasted generation from owned or long-term contracted specified-source natural gas resources.
Aggregate Natural Gas Generation (Less Specified Resources)	D1					Energy acquired from aggregate natural gas generation (less specified resources).
Specified Natural Gas Resource #1	D2					Generation from Specified Natural Gas Resource #1, an owned or long-term contracted resource.
Specified Natural Gas Resource #2	D3					Generation from Specified Natural Gas Resource #2, an owned or long-term contracted resource.
Hydro - Total (MWh)	E					Total forecasted generation from owned or long-term contracted specified-source hydro resources. Assume "average," "P50," or "base case" hydro conditions
Other Renewables & Non-Emitting Resources - Total (MWh)	F					Total forecasted generation from owned or long-term contracted specified-source non-hydro renewables and other non-emitting resources.
Unspecified Purchases (MWh)	G = A - (sum of B through F)					Estimate of generation to be acquired through unspecified wholesale market purchases. Unspecified purchases are assumed to be the backstop resource. Energy to serve load minus the sum of all specified sources.
Operational adjustment (MWh)	H = A * 0%	-	-	-	-	Energy to serve load multiplied by an estimate of balancing purchases and sales as a percentage of total energy to serve load. This adder reflects expected short term balancing transactions that carry CCA compliance obligations.
BPA Unspecified Imports, if BPA is not FJD (MWh)	I	-	-	-	-	Estimate of shorter-term balancing transactions that carry CCA compliance obligations. Estimate of unspecified imports from BPA for each year, if BPA is not the FJD. Utility-specific estimate
EMISSIONS ASSOCIATED WITH DECLARED RESOURCES:						
MT CO ₂ e BPA purchases	J = B * BPA's ACS emissions factor	-	-	-	-	Metric tons of CO ₂ equivalent associated with BPA purchases. Total BPA purchases multiplied by BPA's ACS factor.
MT CO ₂ e Coal	K = C * coal emissions factor(s)	-	-	-	n/a - not permitted under CETA	Metric tons of CO ₂ equivalent associated with specified-source coal generation. Total generation from owned or long-term contracted specified-source coal resources multiplied by the relevant coal emissions factor(s) (default coal emissions factor or specific emissions factors, when known).
MT CO ₂ e Natural gas	L = D * natural gas emissions factor(s)	-	-	-	-	Metric tons of CO ₂ equivalent associated with specified-source natural gas generation. Total generation from owned or long-term contracted specified-source natural gas resources multiplied by the relevant natural gas emissions factor(s) (default natural gas factor or specific natural gas factor, when known).
MT CO ₂ e Unspecified purchases	M = G * unspecified emissions factor	-	-	-	-	Metric tons of CO ₂ equivalent associated with unspecified purchases. Total generation estimated to be acquired through unspecified purchases multiplied by the unspecified emissions factor established in WAC 173-444-040
MT CO ₂ e Operational adjustment	N = K * unspecified emissions factor	-	-	-	-	Metric tons of CO ₂ equivalent associated with the operational adjustment. Operational adjustment value multiplied by the unspecified emissions factor established in WAC 173-444-040
MT CO ₂ e BPA unspecified imports	O = I * unspecified emissions factor	-	-	-	-	Metric tons of CO ₂ equivalent associated with importing unspecified BPA power if BPA chooses not to be the FJD. Total BPA imports multiplied by the unspecified emissions factor established in WAC 173-444-040
Energy supplied to EITEs (MWh)	P	-	-	-	-	Energy supplied to industrial covered entities by the utility. Fill out this field ONLY if EITEs are receiving allowances for energy consumption directly. Otherwise, assume inclusion of energy supplied to EITEs in utility-specific emissions ("R").
EITE Emissions (MTCO ₂ e)	Q = (P / A) * sum of J through O	-	-	-	-	EITE Purchased Electricity multiplied by Utility-Specific Emissions Factor. Energy provided to EITE customers divided by all energy to serve load, then multiplied by the sum of all emissions associated with declared resources.
Utility-Specific Emissions (MTCO ₂ e)	R = sum of J through O - Q	-	-	-	-	Total metric tons of CO ₂ equivalent associated with energy to serve load. Sum of all emissions associated with declared resources subtracted by emissions associated with industrial covered entities.
COST BURDEN CALCULATION:						
Utility-Specific emissions allowances	S	-	-	-	-	Total metric tons of CO ₂ equivalent associated with energy to serve load. Total metric tons of CO ₂ equivalent associated with energy to serve load.
Administrative Costs Allowance Adjustment	T = estimated annual administrative cost / allowance floor price	-	-	-	-	Projected administrative costs associated with participation in the CCA program and allowance market/auction. Projected administrative cost per year divided by the estimated floor price for one emissions allowance.
Power Cost Adjustment	U = estimated annual power cost impacts / allowance price used to estimate power costs	-	-	-	-	Projected power cost impacts due to redispatch - CO ₂ cost in thermal dispatch decreases wholesale market sales, increases average production cost. Projected increased power costs per year divided by the assumed price of emissions allowance equal to forecast in Appendix H.1 of Ecology's Preliminary Regulatory Analysis for Chapter 173-446 WAC.
Annual Allocation (allowances)	V = S + T + U	-	-	-	-	Utility-Specific Emissions Allowances PLUS Administrative cost allowance adjustment PLUS Power Cost Adjustment. Utility-Specific Emissions less EITE Emissions PLUS Administrative cost allowance adjustment PLUS Power adjustment

Constants Used in Calculations	
0.0154	Asset Controlling Supplier (ACS) Factor for Bonneville Power Administration - Average of ACS factors used in previous four years (2019-2022) (MTCO ₂ e/MWh)
1.0614	Default Coal Emissions Factor (MTCO ₂ e/MWh)
	Specified Coal Resource #1 emissions factor, if known (MT CO ₂ e/MWh)
	Specified Coal Resource #2 emissions factor, if known (MT CO ₂ e/MWh)
0.4354	Default Natural Gas Emission Factor (MTCO ₂ e/MWh)
	Specified Natural Gas Resource #1 emissions factor, if known (MT CO ₂ e/MWh)
	Specified Natural Gas Resource #2 emissions factor, if known (MT CO ₂ e/MWh)
0.437	Unspecified emissions factor established in WAC 173-444-040
	Estimated balancing purchases and sales as a percentage of total energy to serve load
0.437	Estimated percentage of unspecified purchases that are scheduled from BPA. Unspecified emissions factor established in WAC 173-444-040
	Estimated cost burden for administration each year: reporting, market participation, modifying internal data systems, auction tracking, etc. In dollars.
\$58.31	Estimated allowance price for 2023 per Table 87, Appendix H of Ecology's Preliminary Regulatory Analysis for Chapter 173-446 WAC
\$61.21	Estimated allowance price for 2024 per Table 87, Appendix H of Ecology's Preliminary Regulatory Analysis for Chapter 173-446 WAC
\$64.76	Estimated allowance price for 2025 per Table 87, Appendix H of Ecology's Preliminary Regulatory Analysis for Chapter 173-446 WAC
\$69.96	Estimated allowance price for 2026 per Table 87, Appendix H of Ecology's Preliminary Regulatory Analysis for Chapter 173-446 WAC