Appendix 5

2022-2023
Cost-effectiveness Memo

Pacific Power

May 31, 2024

MEMORANDUM

To: Alesha Mander, PacifiCorp

From: Eli Morris, Andy Hudson, Elizabeth Applegate, AEG

Date: May 24, 2024

Re: PacifiCorp Washington Portfolio Level Cost-Effectiveness Results: 2022–2023 Biennium

AEG estimated the cost-effectiveness of PacifiCorp's overall energy efficiency portfolio in the state of Washington based on 2020-2021 biennial costs and savings[1] provided by PacifiCorp. This memo provides cost-effectiveness results for the biennial period at the portfolio level. The portfolio passes the following cost effectiveness tests: Total Resource Cost Test (TRC), the PacifiCorp Total Resource Cost Test (PTRC), the Utility Cost Test (UCT), and the Participant Cost Test (PCT).

This memo provides analysis inputs and results in the following tables:

- Table 1: Cost-Effectiveness Analysis Inputs
- Table 2: PY2022-PY2023 Benefit/Cost Ratios by Portfolio Type
- Table 3: PY2022-PY2023 Total Portfolio Cost-Effectiveness Results (Including NEIs)
- Table 4: PY2022-PY2023 Total Portfolio Cost-Effectiveness Results (Including NEEA & NEIs)

The following assumptions were utilized in the analysis:

- Avoided Costs: derived from PacifiCorp's 2021 Integrated Resource Plan (IRP) Preferred Portfolio "P02-MM-CETA", converted into annual values using load shapes from the same IRP. These avoided costs are updated from the 2019 avoided costs used to assess cost-effectiveness for PacifiCorp's 2020-2021 Biennial Conservation Plan.
- Modeling Inputs: measure savings, costs, non-energy impacts (NEIs), measure lives, incentive levels, program delivery, and portfolio costs were based on estimates provided by PacifiCorp.
- Net-to-Gross (NTG): ratios are assumed to be 1.0, consistent with condition (8)(a) to Order 01 in Docket UE-152072.
- Retail Rates: 2021 rates provided by PacifiCorp and escalated by inflation for future years.

[1] [illegible]

Table 1: Cost-Effectiveness Analysis Inputs

Parameter	PY2022 - PY2023
Discount Rate[2]	6.88%
Residential Line Loss	7.68%
Commercial Line Loss	7.60%[3]
Residential Energy Rate ($/kWh)	$0.088
Commercial Energy Rate ($/kWh)	$0.084
Industrial Energy Rate ($/kWh)	$0.067
Irrigation Energy Rate ($/kWh)	$0.071
Inflation Rate	2.16%

Table 2: PY2022 - PY2023 Benefit/Cost Ratios by Portfolio Type

Program	PTRC	TRC	UCT	PCT	RIM
Total Portfolio with NEIs	2.17	2.00	2.05	3.52	0.75
Total Portfolio (Including NEIs and NEEA[4])	2.28	2.09	2.17	3.79	0.76

Table 3: PY2022 - PY2023 Total Portfolio Cost-Effectiveness Results (Including NEIs)

Cost-Effectiveness Test	Levelized $/kWh	NPV Costs	NPV Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.061	$35,808,908	$77,650,281	$41,841,373	2.17
Total Resource Cost Test (TRC) No Adder	$0.061	$35,808,908	$71,531,036	$35,722,128	2.00
Utility Cost Test (UCT)	$0.051	$29,807,711	$61,192,453	$31,384,741	2.05
Participant Cost Test (PCT)		$22,376,886	$78,796,565	$56,419,679	3.52
Rate Impact Test (RIM)		$81,890,003	$61,192,453	($20,697,551)	0.75
Lifecycle Revenue Impacts ($/kWh)					0.00125
Discounted Participant Payback (years)					2.80

2 [illegible]

3 [illegible]

4 [illegible]

Table 4: PY2022 - PY2023 Total Portfolio Cost-Effectiveness Results (Including NEEA & NEIs)

Cost-Effectiveness Test	Levelized $/kWh	NPV Costs	NPV Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.058	$37,607,947	$85,616,812	$48,008,865	2.28
Total Resource Cost Test (TRC) No Adder	$0.058	$37,607,947	$78,773,337	$41,165,390	2.09
Utility Cost Test (UCT)	$0.048	$31,606,750	$68,434,753	$36,828,004	2.17
Participant Cost Test (PCT)		$22,376,886	$84,757,140	$62,380,254	3.79
Rate Impact Test (RIM)		$89,649,618	$68,434,753	($21,214,864)	0.76
Lifecycle Revenue Impacts ($/kWh)					0.00136
Discounted Participant Payback (years)					2.67