

Appendix 1

Program and Portfolio Level Cost-Effectiveness



MEMORANDUM

To: Don Jones, Jr. and Eli Morris, Pacific Power

From: Kurtis Kolnowski and Brielle Bushong

CC: Ingrid Rohmund

Date: October 22, 2018

Re: Washington Portfolio Level Cost-Effectiveness Analysis – 2018-2019 Biennium, 2018 Update

AEG re-estimated the cost-effectiveness of Pacific Power's overall energy efficiency portfolio and individual programs in the state of Washington based on Program Year (PY) 2018 and PY2019 mid-cycle costs and savings estimates provided by Pacific Power.¹ The memo provides analysis inputs and results in the following tables:

Table 1: Utility Inputs

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Table 16: Home Energy Savings Non-Energy Impacts - PY2018 and PY2019

¹ Consistent with Section 480-109-100 (10) (b) of the Washington Administrative Code, the Low-Income Weatherization program is excluded from this analysis.

The following assumptions were utilized in the analysis:

- **Avoided Costs:** developed from PacifiCorp's 2017 Class 2 DSM Decrement Study,² converted into annual values using load shapes from the 2017 PacifiCorp Integrated Resource Plan.
- **Modeling Inputs:** measure savings, costs, non-energy impacts (NEIs), measure lives, incentive levels, program delivery, and portfolio costs were updated based on mid-cycle 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-152-072.
- **Retail Rates:** 2018 rates provided by PacifiCorp and escalated by inflation for future years.

The following tables summarize cost-effectiveness assumptions and results for the Washington portfolio and associated programs.

Table 1: Utility Inputs

Parameter	Value
Discount Rate ³	6.57%
Residential Line Loss	9.67%
Commercial Line Loss	9.53%
Industrial Line Loss	8.16%
Irrigation Line Loss	9.67%
Residential Energy Rate (\$/kWh)	\$0.0836
Commercial Energy Rate (\$/kWh)	\$0.0717
Industrial Energy Rate (\$/kWh)	\$0.0887
Irrigation Energy Rate (\$/kWh)	\$0.1327
Inflation Rate ⁴	2.22%

Table 2: Portfolio-Level Costs, Nominal - PY2018 and PY2019

Category	PY2018	PY2019
Be Wattsmart, Begin at Home	\$60,000	\$60,000
Customer Outreach/Communication	\$250,000	\$250,000
Program Evaluations (and Savings Verification)	\$323,283	\$436,473
Potential Study Update/Analysis	\$101,651	\$25,374
Technical Reference Library	\$27,400	\$50,360
End Use Load Research	\$41,762	\$61,077
Total	\$804,096	\$883,284

Table 3: Program Costs, Nominal - PY2018 and PY2019

Program	Program Delivery	Utility Admin	Incentives	Total Utility Budget	Gross Customer Costs
Home Energy Savings	\$1,878,559	\$171,443	\$2,557,692	\$4,607,693	\$5,430,218
Home Energy Reports	\$602,165	\$50,555	\$0	\$652,720	\$0
Wattsmart Business	\$4,789,978	\$1,066,352	\$6,154,259	\$12,010,590	\$14,068,358
NEEA	\$1,690,685	\$50,555	\$0	\$1,741,240	\$0
Total	\$8,961,387	\$1,338,905	\$8,711,951	\$19,012,244	\$19,498,576

² PacifiCorp's 2017 Class 2 Demand-Side Management Decrement Study is available at: <http://www.pacificorp.com/es/dsm.html>

³ Consistent with PacifiCorp's 2017 Integrated Resource Plan

⁴ Consistent with PacifiCorp's 2017 Integrated Resource Plan

Table 4: Savings by Program - PY2018 and PY2019

Program	Gross kWh Savings at Site	Realization Rate	Adjusted Gross kWh Savings at Site	Net to Gross Ratio	Net kWh Savings at Site	Average Measure Life
Home Energy Savings	13,245,195	100%	13,245,195	100%	13,245,195	10
Home Energy Reports	7,300,000	100%	7,300,000	100%	7,300,000	2
Wattsmart Business	55,132,676	96%	52,962,555	100%	52,962,555	13
NEEA	6,228,683	100%	6,228,683	100%	6,228,683	15
Total Program	81,906,553	97%	79,736,433	100%	79,736,433	10

Table 5: Portfolio-Level Benefit/Cost Ratios - PY2018 and PY2019

Program	PTRC	TRC	UCT	PCT	RIM
Total Portfolio	1.06	0.96	1.47	3.40	0.39
Total Portfolio with NEIs	1.19	1.09	1.47	3.60	0.39
Total Portfolio with NEEA	1.06	0.96	1.47	3.40	0.39
Total Portfolio with NEEA and NEIs	1.18	1.09	1.47	3.61	0.39

Table 6: Total Portfolio Cost-Effectiveness Results - PY2018 and PY2019

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.0491	\$30,288,485	\$32,117,081	\$1,828,596	1.06
Total Resource Cost Test (TRC) No Adder	\$0.0491	\$30,288,485	\$29,197,346	(\$1,091,138)	0.96
Utility Cost Test (UCT)	\$0.0322	\$19,882,591	\$29,197,346	\$9,314,755	1.47
Participant Cost Test (PCT)		\$18,767,901	\$63,771,519	\$45,003,618	3.40
Rate Impact Test (RIM)		\$75,292,103	\$29,197,346	(\$46,094,756)	0.39
Lifecycle Revenue Impacts (\$/kWh)					\$0.0012930
Discounted Participant Payback (years)					2.57

Table 7: Total Portfolio Including NEIs Cost-Effectiveness Results - PY2018 and PY2019

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.0491	\$30,288,485	\$35,962,347	\$5,673,862	1.19
Total Resource Cost Test (TRC) No Adder	\$0.0491	\$30,288,485	\$33,042,612	\$2,754,127	1.09
Utility Cost Test (UCT)	\$0.0322	\$19,882,591	\$29,197,346	\$9,314,755	1.47
Participant Cost Test (PCT)		\$18,767,901	\$67,616,785	\$48,848,883	3.60
Rate Impact Test (RIM)		\$75,292,103	\$29,197,346	(\$46,094,756)	0.39
Lifecycle Revenue Impacts (\$/kWh)					\$0.0012930
Discounted Participant Payback (years)					2.57

Table 8: Total Portfolio Including NEEA Cost-Effectiveness Results - PY2018 and PY2019

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.0491	\$30,507,985	\$32,282,666	\$1,774,681	1.06
Total Resource Cost Test (TRC) No Adder	\$0.0491	\$30,507,985	\$29,347,878	(\$1,160,107)	0.96
Utility Cost Test (UCT)	\$0.0322	\$20,016,894	\$29,347,878	\$9,330,984	1.47
Participant Cost Test (PCT)		\$18,919,566	\$64,380,154	\$45,460,588	3.40
Rate Impact Test (RIM)		\$75,968,573	\$29,347,878	(\$46,620,695)	0.39
Lifecycle Revenue Impacts (\$/kWh)					\$0.0013046
Discounted Participant Payback (years)					2.57

Table 9: Total Portfolio Including NEIs and NEEA Cost-Effectiveness Results - PY2018 and PY2019

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.0491	\$30,507,985	\$36,127,931	\$5,619,947	1.18
Total Resource Cost Test (TRC) No Adder	\$0.0491	\$30,507,985	\$33,193,143	\$2,685,159	1.09
Utility Cost Test (UCT)	\$0.0322	\$20,016,894	\$29,347,878	\$9,330,984	1.47
Participant Cost Test (PCT)		\$18,919,566	\$68,225,420	\$49,305,854	3.61
Rate Impact Test (RIM)		\$75,968,573	\$29,347,878	(\$46,620,695)	0.39
Lifecycle Revenue Impacts (\$/kWh)					\$0.0013046
Discounted Participant Payback (years)					2.57

Table 10: Benefit/Cost Ratios by Program - PY2018 and PY2019

Program	PTRC	TRC	UCT	PCT	RIM
Home Energy Savings	0.61	0.55	0.90	2.09	0.31
Home Energy Savings with NEIs	1.14	1.08	0.90	2.82	0.31
Home Energy Reports	0.97	0.88	0.88	n/a	0.25
Wattsmart Business	1.24	1.13	1.88	3.41	0.42
NEEA	1.94	1.76	1.76	n/a	0.43

Table 11: Home Energy Savings Cost-Effectiveness Results - PY2018 and PY2019

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.0804	\$7,224,186	\$4,388,636	(\$2,835,550)	0.61
Total Resource Cost Test (TRC) No Adder	\$0.0804	\$7,224,186	\$3,989,669	(\$3,234,517)	0.55
Utility Cost Test (UCT)	\$0.0496	\$4,449,943	\$3,989,669	(\$460,274)	0.90
Participant Cost Test (PCT)		\$5,251,878	\$10,951,864	\$5,699,986	2.09
Rate Impact Test (RIM)		\$12,924,172	\$3,989,669	(\$8,934,503)	0.31
Lifecycle Revenue Impacts (\$/kWh)					\$0.0002220
Discounted Participant Payback (years)					3.12

Table 12: Home Energy Savings Including NEIs Cost-Effectiveness Results - PY2018 and PY2019

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.0804	\$7,224,186	\$8,233,902	\$1,009,716	1.14
Total Resource Cost Test (TRC) No Adder	\$0.0804	\$7,224,186	\$7,834,935	\$610,749	1.08
Utility Cost Test (UCT)	\$0.0496	\$4,449,943	\$3,989,669	(\$460,274)	0.90
Participant Cost Test (PCT)		\$5,251,878	\$14,797,130	\$9,545,252	2.82
Rate Impact Test (RIM)		\$12,924,172	\$3,989,669	(\$8,934,503)	0.31
Lifecycle Revenue Impacts (\$/kWh)					\$0.0002220
Discounted Participant Payback (years)					3.12

Table 13: Home Energy Reports Cost-Effectiveness Results - PY2018 and PY2019

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.0338	\$633,888	\$613,484	(\$20,404)	0.97
Total Resource Cost Test (TRC) No Adder	\$0.0338	\$633,888	\$557,713	(\$76,175)	0.88
Utility Cost Test (UCT)	\$0.0338	\$633,888	\$557,713	(\$76,175)	0.88
Participant Cost Test (PCT)		\$0	\$1,598,912	\$1,598,912	n/a
Rate Impact Test (RIM)		\$2,232,800	\$557,713	(\$1,675,087)	0.25
Lifecycle Revenue Impacts (\$/kWh)					\$0.0002013
Discounted Participant Payback (years)					0.00

Table 14: Wattsmart Business Cost-Effectiveness Results - PY2018 and PY2019

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.0423	\$19,328,872	\$24,008,948	\$4,680,076	1.24
Total Resource Cost Test (TRC) No Adder	\$0.0423	\$19,328,872	\$21,826,316	\$2,497,445	1.13
Utility Cost Test (UCT)	\$0.0254	\$11,612,023	\$21,826,316	\$10,214,293	1.88
Participant Cost Test (PCT)		\$13,667,688	\$46,670,923	\$33,003,235	3.41
Rate Impact Test (RIM)		\$52,332,107	\$21,826,316	(\$30,505,791)	0.42
Lifecycle Revenue Impacts (\$/kWh)					\$0.0011136
Discounted Participant Payback (years)					3.67

Table 15: NEEA Cost-Effectiveness Results - PY2018 and PY2019

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$0.0302	\$1,688,113	\$3,271,597	\$1,583,484	1.94
Total Resource Cost Test (TRC) No Adder	\$0.0302	\$1,688,113	\$2,974,179	\$1,286,066	1.76
Utility Cost Test (UCT)	\$0.0302	\$1,688,113	\$2,974,179	\$1,286,066	1.76
Participant Cost Test (PCT)		\$0	\$5,158,455	\$5,158,455	n/a
Rate Impact Test (RIM)		\$6,846,568	\$2,974,179	(\$3,872,388)	0.43
Lifecycle Revenue Impacts (\$/kWh)					\$0.0001307
Discounted Participant Payback (years)					0.00

Table 16: Home Energy Savings Non-Energy Impacts - PY2018 and PY2019

Measure	Annual Non-Energy Impacts per Measure	Total Installs	Measure Life	Total Present Value NEIs
Clothes Washers - CEE Tier 2 - Electric DHW & Electric Dryer - WA - Existing	\$24.57	145	14	\$32,332
Clothes Washers - CEE Tier 2 - Electric DHW & Gas Dryer - WA - Existing	\$24.57	16	14	\$3,638
Clothes Washers - CEE Tier 2 - Gas DHW & Electric Dryer - WA - Existing	\$24.57	20	14	\$4,521
Clothes Washers - CEE Tier 3 - Electric DHW & Electric Dryer - WA - Existing	\$27.20	40	14	\$10,407
Clothes Washers - CEE Tier 3 - Electric DHW & Gas Dryer - WA - Existing	\$27.20	0	14	\$0
Clothes Washers - CEE Tier 3 - Gas DHW & Electric Dryer - WA - Existing	\$27.20	17	14	\$4,423
Clothes Dryer - Ventless - UCEF 3.20 to 3.79 - WA - Existing	\$3.95	0	12	\$0
Clothes Dryer - Ventless - UCEF 3.80 to 4.79 - WA - Existing	\$3.56	0	12	\$0
Clothes Dryer - Ventless - UCEF 4.80 to 5.99 - WA - Existing	\$2.90	0	12	\$0
Clothes Dryer - Ventless - UCEF 6.00 to 6.99 - WA - Existing	\$2.52	0	12	\$0
Clothes Dryer - Ventless - UCEF 7.00 to 7.99 - WA - Existing	\$2.35	0	12	\$0
Clothes Dryer - Ventless_UCEF 3.20 to 3.39 - WA - New	\$4.06	0	12	\$0
Clothes Dryer - Ventless_UCEF 3.40 to 3.59 - WA - New	\$3.88	0	12	\$0
Clothes Dryer - Ventless_UCEF 3.60 to 3.79 - WA - New	\$3.72	0	12	\$0
Clothes Dryer - Ventless_UCEF 3.80 to 4.19 - WA - New	\$3.52	0	12	\$0
Clothes Dryer - Ventless_UCEF 4.20 to 4.69 - WA - New	\$3.27	0	12	\$0
Clothes Dryer - Ventless_UCEF 4.70 to 5.29 - WA - New	\$3.01	0	12	\$0
Clothes Dryer - Ventless_UCEF 5.30 to 6.09 - WA - New	\$2.77	0	12	\$0
Clothes Dryer - Ventless_UCEF 6.10 to 7.19 - WA - New	\$2.51	0	12	\$0
Clothes Dryer - Ventless_UCEF 7.20 to 8.00 - WA - New	\$2.31	0	12	\$0
Ductless Heat Pump - eFAF to DHP 9.5 and above - WA - Existing	\$118.91	33	15	\$36,726
Ductless Heat Pump - eFAF to DHP 9.0 to 9.4 - WA - Existing	\$109.15	70	15	\$74,824
Ductless Heat Pump - Zonal to DHP 9.0 to 11.0 - WA - Existing	\$54.43	94	15	\$49,650

Measure	Annual Non-Energy Impacts per Measure	Total Installs	Measure Life	Total Present Value NEIs
Ductless Heat Pump - Zonal to DHP 11.1 to 12.5 - WA - Existing	\$54.61	55	15	\$28,984
Ductless Heat Pump - Zonal to DHP 12.6 and above - WA - Existing	\$54.82	20	15	\$10,237
Heat Pump - Conversion with Best Practice Install & Sizing - Convert FAF without CAC - WA - Existing	\$23.98	176	15	\$40,571
Heat Pump - Conversion with Best Practice Install & Sizing - Convert Federal FAF w/out CAC - WA - Existing	\$23.98	1	15	\$239
Energy Savings Kit - Best - 1 Bathroom - WA - Existing	\$66.75	1,581	9	\$709,675
Energy Savings Kit - Best - 2 Bathrooms - WA - Existing	\$104.53	2,570	9	\$1,808,942
Energy Savings Kit - LED - WA - Existing	\$1.46	904	5	\$5,551
Energy Savings Kit - Water Feature 1 - WA - Existing	\$65.29	0	10	\$0
Energy Savings Kit - Water Feature 2 - WA - Existing	\$103.07	0	10	\$0
LEDs - Decorative & Mini-Base - 250 to 1049 Lumens - WA - Existing	\$0.71	0	4	\$0
LEDs - General Purpose & Three-Way - 250 to 1049 Lumens - WA - Existing	\$0.39	298,500	5	\$514,595
LEDs - General Purpose & Three-Way - 1050 to 1489 Lumens - WA - Existing	\$0.65	25,000	6	\$83,652
LEDs - General Purpose & Three-Way - 1490 to 2600 Lumens - WA - Existing	\$0.44	500	7	\$1,283
LEDs - Globe - 250 to 1049 Lumens - WA - Existing	\$0.69	0	4	\$0
LEDs - Reflectors & Outdoor - 250 to 1049 Lumens - WA - Existing	\$1.30	0	6	\$0
LEDs - Reflectors & Outdoor - 1050 to 1489 Lumens - WA - Existing	\$1.71	12,000	7	\$119,641
LEDs - Reflectors & Outdoor - 1490 to 2600 Lumens - WA - Existing	\$7.34	0	12	\$0
LEDs - MR 250 to 499 Lumens (Pin Base) - WA - Existing	\$0.59	0	10	\$0
LEDs - MR 500 to 999 Lumens (Pin Base) - WA - Existing	\$0.76	0	11	\$0
LEDs - Non-MR Bi-Pin 250 to 499 Lumens (Pin Base) - WA - Existing	\$0.30	0	11	\$0
LEDs - Non-MR Bi-Pin 500 to 999 Lumens (Pin Base) - WA - Existing	\$0.41	0	11	\$0
LEDs - Decorative & Mini-Base - 250 to 1049 Lumens - WA - New	\$0.55	2,515	3	\$3,674
LEDs - General Purpose & Three-Way - 250 to 1049 Lumens - WA - New	\$0.24	116,730	3	\$95,788
LEDs - General Purpose & Three-Way - 1050 to 1489 Lumens - WA - New	\$0.63	2,006	5	\$6,079
LEDs - General Purpose & Three-Way - 1490 to 2600 Lumens - WA - New	\$0.25	9,708	4	\$8,140
LEDs - Globe - 250 to 1049 Lumens - WA - New	\$0.47	640	3	\$1,035
LEDs - Globe - 1050 to 1489 Lumens - WA - New	\$1.14	0	4	\$0
LEDs - Globe - 1490 to 2600 Lumens - WA - New	\$0.59	0	5	\$0
LEDs - Reflectors & Outdoor - 250 to 1049 Lumens - WA - New	\$0.21	46,070	3	\$25,747
LEDs - Reflectors & Outdoor - 1050 to 1489 Lumens - WA - New	\$0.21	5,920	3	\$3,221
LEDs - Reflectors & Outdoor - 1490 to 2600 Lumens - WA - New	\$1.05	658	4	\$2,868
Fixture - Bathroom Vanity - 0 to 249 Lumens - WA - Existing	\$0.09	0	9	\$0
Fixture - Bathroom Vanity - 250 to 499 Lumens - WA - Existing	\$0.19	2,000	9	\$2,687

Measure	Annual Non-Energy Impacts per Measure	Total Installs	Measure Life	Total Present Value NEIs
Fixture - Bathroom Vanity - 500 to 999 Lumens - WA - Existing	\$0.35	0	9	\$0
Fixture - Bathroom Vanity - 1000 to 1999 Lumens - WA - Existing	\$0.62	1	9	\$4
Fixture - Bathroom Vanity - 2000 to 3999 Lumens - WA - Existing	\$1.21	5	9	\$43
Fixture - Bathroom Vanity - 4000 to 7999 Lumens - WA - Existing	\$2.26	0	9	\$0
Fixture - Ceiling & Wall Flush Mount - 0 to 249 Lumens - WA - Existing	\$0.12	0	8	\$0
Fixture - Ceiling & Wall Flush Mount - 250 to 499 Lumens - WA - Existing	\$0.42	900	8	\$2,446
Fixture - Ceiling & Wall Flush Mount - 500 to 999 Lumens - WA - Existing	\$0.45	352	8	\$1,025
Fixture - Ceiling & Wall Flush Mount - 1000 to 1999 Lumens - WA - Existing	\$0.80	300	8	\$1,553
Fixture - Ceiling & Wall Flush Mount - 2000 to 3999 Lumens - WA - Existing	\$1.56	80	8	\$808
Fixture - Ceiling & Wall Flush Mount - 4000 to 7999 Lumens - WA - Existing	\$2.92	0	8	\$0
Fixture - Downlight - 2000 to 3999 Lumens - WA - Existing	\$5.36	0	9	\$0
Fixture - Downlight - 4000 to 7999 Lumens - WA - Existing	\$10.02	0	9	\$0
Fixture - Exterior Porch - 500 to 999 Lumens - WA - Existing	\$0.66	161	5	\$470
Fixture - Exterior Porch - 1000 to 1999 Lumens - WA - Existing	\$1.18	0	5	\$0
Fixture - Exterior Porch - 2000 to 3999 Lumens - WA - Existing	\$2.28	0	5	\$0
Fixture - Exterior Porch - 4000 to 7999 Lumens - WA - Existing	\$4.27	0	5	\$0
Fixture - Exterior Security - 250 to 499 Lumens - WA - Existing	\$0.48	0	12	\$0
Fixture - Exterior Security - 500 to 999 Lumens - WA - Existing	\$0.89	0	12	\$0
Fixture - Exterior Security - 1000 to 1999 Lumens - WA - Existing	\$1.58	0	12	\$0
Fixture - Exterior Security - 2000 to 3999 Lumens - WA - Existing	\$3.07	0	12	\$0
Fixture - Exterior Security - 4000 to 7999 Lumens - WA - Existing	\$5.75	0	12	\$0
Fixture - Track - 250 to 499 Lumens - WA - Existing	\$0.48	0	15	\$0
Fixture - Track - 500 to 999 Lumens - WA - Existing	\$0.89	0	15	\$0
Fixture - Track - 1000 to 1999 Lumens - WA - Existing	\$1.57	0	15	\$0
Fixture - Track - 2000 to 3999 Lumens - WA - Existing	\$3.06	0	15	\$0
Fixture - Track - 4000 to 7999 Lumens - WA - Existing	\$5.72	0	15	\$0
Fixture - Bathroom Vanity - 0 to 249 Lumens - WA - New	\$0.09	0	9	\$0
Fixture - Bathroom Vanity - 250 to 499 Lumens - WA - New	\$0.19	0	9	\$0
Fixture - Bathroom Vanity - 500 to 999 Lumens - WA - New	\$0.36	0	9	\$0
Fixture - Bathroom Vanity - 1000 to 1999 Lumens - WA - New	\$0.63	0	9	\$0
Fixture - Bathroom Vanity - 2000 to 3999 Lumens - WA - New	\$1.23	0	9	\$0
Fixture - Bathroom Vanity - 4000 to 7999 Lumens - WA - New	\$2.30	0	9	\$0
Fixture - Ceiling & Wall Flush Mount - 0 to 249 Lumens - WA - New	\$0.10	0	7	\$0
Fixture - Ceiling & Wall Flush Mount - 250 to 499 Lumens - WA - New	\$0.21	0	7	\$0

Measure	Annual Non-Energy Impacts per Measure	Total Installs	Measure Life	Total Present Value NEIs
Fixture - Ceiling & Wall Flush Mount - 500 to 999 Lumens - WA - New	\$0.38	379	7	\$884
Fixture - Ceiling & Wall Flush Mount - 1000 to 1999 Lumens - WA - New	\$0.68	4,195	7	\$17,392
Fixture - Ceiling & Wall Flush Mount - 2000 to 3999 Lumens - WA - New	\$1.33	1,083	7	\$8,717
Fixture - Ceiling & Wall Flush Mount - 4000 to 7999 Lumens - WA - New	\$2.48	3,584	7	\$54,000
Fixture - Downlight - 2000 to 3999 Lumens - WA - New	\$1.72	0	6	\$0
Fixture - Downlight - 4000 to 7999 Lumens - WA - New	\$3.23	0	6	\$0
Fixture - Exterior Porch - 500 to 999 Lumens - WA - New	\$0.68	249	5	\$821
Fixture - Exterior Porch - 1000 to 1999 Lumens - WA - New	\$1.21	0	5	\$0
Fixture - Exterior Porch - 2000 to 3999 Lumens - WA - New	\$2.36	121	5	\$1,379
Fixture - Exterior Porch - 4000 to 7999 Lumens - WA - New	\$4.41	0	5	\$0
Fixture - Exterior Security - 250 to 499 Lumens - WA - New	\$0.27	0	11	\$0
Fixture - Exterior Security - 500 to 999 Lumens - WA - New	\$0.50	0	11	\$0
Fixture - Exterior Security - 1000 to 1999 Lumens - WA - New	\$0.89	0	11	\$0
Fixture - Exterior Security - 2000 to 3999 Lumens - WA - New	\$1.72	0	11	\$0
Fixture - Exterior Security - 4000 to 7999 Lumens - WA - New	\$3.22	0	11	\$0
Fixture - Track - 250 to 499 Lumens - WA - New	\$0.29	0	8	\$0
Fixture - Track - 500 to 999 Lumens - WA - New	\$0.54	0	8	\$0
Fixture - Track - 1000 to 1999 Lumens - WA - New	\$0.96	0	8	\$0
Fixture - Track - 2000 to 3999 Lumens - WA - New	\$1.86	0	8	\$0
Fixture - Track - 4000 to 7999 Lumens - WA - New	\$3.48	0	8	\$0
Multifamily - Ductless Heat Pump - eFAF to DHP 9.5 and above - WA - Existing	\$61.88	0	15	\$0
Multifamily - Ductless Heat Pump - Zonal to DHP 9.0 and above - WA - Existing	\$29.75	0	15	\$0
Multifamily - Ductless Heat Pump - Zonal to DHP 11.1 to 12.5 - WA - Existing	\$29.85	0	15	\$0
Multifamily - Ductless Heat Pump - Zonal to DHP 12.6 and above - WA - Existing	\$29.96	0	15	\$0
Manufactured Home - Contractor Install - eFAF - WA - Existing	\$18.79	0	18	\$0
Manufactured Home - Contractor Install - Heat Pump - WA - Existing	\$18.50	5	18	\$1,023
Manufactured Home - Ductless Heat Pump - eFAF to DHP 9.5 and above - WA - Existing	\$43.85	8	15	\$3,607
Manufactured Home - Ductless Heat Pump - Zonal to DHP 9.0 to 11.0 - WA - Existing	\$54.43	8	15	\$4,066
Manufactured Home - Ductless Heat Pump - Zonal to DHP 11.1 to 12.5 - WA - Existing	\$54.61	1	15	\$545
Manufactured Home - Ductless Heat Pump - Zonal to DHP 12.6 and above - WA - Existing	\$54.82	3	15	\$1,365

Measure	Annual Non-Energy Impacts per Measure	Total Installs	Measure Life	Total Present Value NEIs
Manufactured Home - Heat Pump - Conversion with Best Practice Install & Sizing - Convert FAF w/out CAC - WA - Existing	\$35.97	86	15	\$29,753
New Manufactured Home - Ecorated - Any Electric - WA - Existing	\$17.53	2	42	\$595
New Manufactured Home - ENERGY STAR - Any Electric - WA - Existing	\$17.28	41	44	\$10,323
Manufactured Home - Windows - Ufactor 30 to Ufactor 25 - Electric Resistance - WA - Existing	\$0.01	0	25	\$0
Manufactured Home - Windows - Ufactor 30 to Ufactor 25 - Heat Pump - WA - Existing	\$0.01	0	25	\$0
Low Flow Showerheads - Retail - 2.00 GPM - WA - Existing	\$3.71	0	10	\$0
Low Flow Showerheads - Retail - 1.75 GPM - WA - Existing	\$10.14	0	10	\$0
Low Flow Showerheads - Retail - 1.50 GPM - WA - Existing	\$15.60	0	10	\$0
Low Flow Showerheads - Direct Install - 2.00 GPM - WA - Existing	\$8.80	0	10	\$0
Low Flow Showerheads - Direct Install - 1.75 GPM - WA - Existing	\$16.03	0	10	\$0
Low Flow Showerheads - Direct Install - 1.50 GPM - WA - Existing	\$22.17	0	10	\$0
Insulation - Attic - eFAF - R11 to R49 - WA - Existing	\$0.01	19,162	45	\$2,931
Insulation - Attic - Zonal or DHP - R11 to R49 - WA - Existing	\$0.01	2,079	45	\$318
Insulation - Attic - Gas Heated - R11 to R49 - WA - Existing	\$0.01	19,950	45	\$2,863
Insulation - Floor - eFAF - R0 to R19 - WA - Existing	\$0.02	323	45	\$85
Insulation - Floor - eFAF - R0 to R30 - WA - Existing	\$0.02	2,789	45	\$823
Insulation - Floor - Zonal or DHP - R0 to R19 - WA - Existing	\$0.02	0	45	\$0
Insulation - Floor - Zonal or DHP - R0 to R30 - WA - Existing	\$0.02	6,033	45	\$1,799
Insulation - Floor - Heat Pump - R0 to R19 - WA - Existing	\$0.00	4,743	46	\$284
Insulation - Floor - Heat Pump - R0 to R30 - WA - Existing	\$0.00	5,746	48	\$391
Insulation - Wall - eFAF - R0 to R11 - WA - Existing	\$0.04	4,133	45	\$2,529
Insulation - Wall - Zonal or DHP - R0 to R11 - WA - Existing	\$0.03	1,179	45	\$541
Insulation - Wall - Heat Pump - R0 to R11 - WA - Existing	\$0.02	6,162	45	\$1,885
Windows - Ufactor 30 to Ufactor 25 - eFAF - WA - Existing	\$0.04	1,054	45	\$641
Windows - Ufactor 30 to Ufactor 25 - Zonal or DHP - WA - Existing	\$0.03	0	45	\$0
Windows - Ufactor 30 to Ufactor 25 - Heat Pump - WA - Existing	\$0.02	777	45	\$225