

Exhibit C



MEMORANDUM

To: Lin Alder, Rocky Mountain Power
From: Dimitry Burdjalov and Andy Hudson, AEG
CC: Clay Monroe, Rocky Mountain Power
Date: November 1, 2021
Re: Utah Wattsmart Business Program Cost-Effectiveness Analysis, High (+10%) Participation - PY2022-2023

AEG estimated the cost-effectiveness of Rocky Mountain Power's Wattsmart Business Program in the state of Utah using expected participation rates based on Program Year (PY) 2022 and 2023 costs and savings estimates developed by AEG and confirmed by Rocky Mountain Power. This memo provides cost-effectiveness results at the program level for the high (+10% participation) case. The program passes the Utility Cost Test (UCT) and the Participant Cost Test (PCT) under these conditions.

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

- Table 1: Cost-Effectiveness Analysis Inputs
- Table 2: Annual Program Costs by Program Year, Nominal - PY2022-2023
- Table 3: Annual Savings in kWh by Program Year - PY2022-2023
- Table 4: Benefit/Cost Ratios by Program Year - PY2022-2023
- Table 5: Wattsmart Business Program Cost-Effectiveness Results, PY2022-2023
- Table 6: Wattsmart Business Program Cost-Effectiveness Results, PY2022
- Table 7: Wattsmart Business Program Cost-Effectiveness Results, PY2023
- Table 8: Wattsmart Business Measure Category Level Cost-Effectiveness Results, PY2022
- Table 9: Wattsmart Business Measure Category Level Cost-Effectiveness Results, PY2023



The following assumptions were utilized in the analysis:

- **Avoided Costs:** Hourly values provided by Rocky Mountain Power based on the 2019 Integrated Resource Plan (IRP) Preferred Portfolio, converted into annual values using Utah load shapes from the same IRP.
- **Modeling Inputs:** measure savings, costs, measure lives, incentive levels, program delivery, and portfolio costs were based on estimates developed by implementers, developed and reviewed by AEG, or provided by Rocky Mountain Power.
- **Other Economic Assumptions:** Discount rate, line loss, retail rate, and inflation rate values were provided by Rocky Mountain Power and are presented in Table 1 below.

The following tables summarize cost-effectiveness assumptions and results for the Utah Wattsmart Business Program. The cost-effectiveness analysis inputs are shown in Table 2 and Table 3 below. Tables 4 through 7 present the cost-effectiveness results of the Wattsmart Business program for 2022 and 2023 individually as well as for 2022 and 2023 combined. All results are presented in 2022 dollars¹. Tables 8 and 9 present results at the measure category level for 2022 and 2023, respectively.

Table 1: Cost-Effectiveness Analysis Inputs

| Parameter | PY2022 | PY2023 |
|---------------------------------|----------|----------|
| Discount Rate | 6.92% | 6.92% |
| Commercial Line Loss | 5.86% | 5.86% |
| Industrial Line Loss | 4.10% | 4.10% |
| Irrigation Line Loss | 6.34% | 6.34% |
| Commercial Energy Rate (\$/kWh) | \$0.0809 | \$0.0827 |
| Industrial Energy Rate (\$/kWh) | \$0.0568 | \$0.0581 |
| Irrigation Energy Rate (\$/kWh) | \$0.0728 | \$0.0745 |
| Inflation Rate ² | 2.28% | 2.28% |
| Parameter | PY2022 | PY2023 |

Table 2: Annual Program Costs by Program Year, Nominal - PY2022-2023

| Program Year | Program Delivery | Utility Admin | Incentives | Total Utility Costs | Gross Customer Costs |
|--------------|------------------|---------------|--------------|---------------------|----------------------|
| 2022 | \$6,343,000 | \$335,310 | \$16,521,986 | \$23,200,295 | \$53,737,914 |
| 2023 | \$6,533,290 | \$345,369 | \$19,012,979 | \$25,891,637 | \$51,983,094 |
| 2022-2023 | \$12,876,290 | \$680,678 | \$35,534,965 | \$49,091,933 | \$105,721,009 |

¹ To align with annual budget expectations, cost-effectiveness inputs are presented in nominal dollars.

² Future rates determined using a 2.28% annual escalator.



Table 3: Annual Savings in kWh by Program Year - PY2022-2023

| Program Year | Gross kWh Savings at Site | Realization Rate | Adjusted Gross kWh Savings at Site | Net to Gross Ratio | Net kWh Savings at Site | Measure Life |
|--------------|---------------------------|------------------|------------------------------------|--------------------|-------------------------|--------------|
| 2022 | \$104,671,918 | 97% | \$101,784,069 | 84% | \$85,786,885 | 14.15 |
| 2023 | \$104,970,305 | 96% | \$100,340,210 | 84% | \$84,412,729 | 14.76 |
| 2022-2023 | \$209,642,223 | 96% | \$202,124,279 | 84% | \$170,199,614 | 14.46 |

Table 4: Benefit/Cost Ratios by Program Year - PY2022-2023

| Program Year | UCT | TRC | PTRC | PCT | RIM |
|--------------|------|------|------|------|------|
| 2022 | 1.91 | 0.88 | 0.97 | 1.92 | 0.40 |
| 2023 | 1.85 | 0.91 | 1.00 | 1.95 | 0.41 |
| 2022-2023 | 1.88 | 0.89 | 0.98 | 1.94 | 0.41 |

Table 5: Wattsmart Business Program Cost-Effectiveness Results, PY2022-2023

| Cost-Effectiveness Test | Levelized \$/kWh | NPV Costs | NPV Benefits | Net Benefits | Benefit/Cost Ratio |
|------------------------------------------------------|------------------|---------------|---------------|-----------------|--------------------|
| Utility Cost Test (UCT) | \$0.0296 | \$47,416,193 | \$89,103,428 | \$41,687,235 | 1.88 |
| Total Resource Cost Test (TRC) No Adder | \$0.0614 | \$99,774,959 | \$89,103,428 | (\$10,671,531) | 0.89 |
| Total Resource Cost Test (PTRC) + Conservation Adder | \$0.0614 | \$99,774,959 | \$98,013,771 | (\$1,761,188) | 0.98 |
| Participant Cost Test (PCT) | | \$105,721,009 | \$204,721,376 | \$99,000,367 | 1.94 |
| Rate Impact Test (RIM) | | \$217,574,258 | \$89,103,428 | (\$128,470,830) | 0.41 |
| Lifecycle Revenue Impacts (\$/kWh) | | | | | \$0.0006953 |



Table 6: Wattsmart Business Program Cost-Effectiveness Results, PY2022

| Cost-Effectiveness Test | Levelized \$/kWh | NPV Costs | NPV Benefits | Net Benefits | Benefit/Cost Ratio |
|------------------------------------------------------|-------------------------|------------------|---------------------|---------------------|---------------------------|
| Utility Cost Test (UCT) | \$0.0281 | \$23,200,295 | \$44,423,549 | \$21,223,254 | 1.91 |
| Total Resource Cost Test (TRC) No Adder | \$0.0601 | \$50,469,357 | \$44,423,549 | (\$6,045,808) | 0.88 |
| Total Resource Cost Test (PTRC) + Conservation Adder | \$0.0601 | \$50,469,357 | \$48,865,904 | (\$1,603,453) | 0.97 |
| Participant Cost Test (PCT) | | \$53,737,914 | \$103,320,337 | \$49,582,422 | 1.92 |
| Rate Impact Test (RIM) | | \$109,864,872 | \$44,423,549 | (\$65,441,323) | 0.40 |
| Lifecycle Revenue Impacts (\$/kWh) | | | | | \$0.0003604 |

Table 7: Wattsmart Business Program Cost-Effectiveness Results, PY2023

| Cost-Effectiveness Test | Levelized \$/kWh | NPV Costs | NPV Benefits | Net Benefits | Benefit/Cost Ratio |
|------------------------------------------------------|-------------------------|------------------|---------------------|---------------------|---------------------------|
| Utility Cost Test (UCT) | \$0.0312 | \$24,215,897 | \$44,679,879 | \$20,463,982 | 1.85 |
| Total Resource Cost Test (TRC) No Adder | \$0.0627 | \$49,305,602 | \$44,679,879 | (\$4,625,723) | 0.91 |
| Total Resource Cost Test (PTRC) + Conservation Adder | \$0.0627 | \$49,305,602 | \$49,147,867 | (\$157,735) | 1.00 |
| Participant Cost Test (PCT) | | \$51,983,094 | \$101,401,039 | \$49,417,945 | 1.95 |
| Rate Impact Test (RIM) | | \$107,709,386 | \$44,679,879 | (\$63,029,507) | 0.41 |
| Lifecycle Revenue Impacts (\$/kWh) | | | | | \$0.0003735 |

Table 8: Wattsmart Business Measure Category Level Cost-Effectiveness Results, PY2022

| Program | Measure Category | Utility Benefits (\$) | Utility Costs (\$) | Utility Cost Test | TRC Benefits (\$) | TRC Costs (\$) | TRC Test | P-TRC Benefits (\$) | P-TRC Costs (\$) | P-TRC Test | Participant PV Benefits (\$) | Participant PV Costs (\$) | PCT Test | Ratepayer PV Benefits (\$) | Ratepayer PV Costs (\$) | RIM Test |
|--------------------|------------------|-----------------------|--------------------|-------------------|-------------------|----------------|----------|---------------------|------------------|------------|------------------------------|---------------------------|----------|----------------------------|-------------------------|----------|
| Wattsmart Business | Building Shell | \$824,677 | \$671,846 | 1.23 | \$824,677 | \$1,812,856 | 0.45 | \$907,144 | \$1,812,856 | 0.50 | \$2,153,430 | \$2,099,398 | 1.03 | \$824,677 | \$2,260,714 | 0.36 |
| Wattsmart Business | Compressed Air | \$1,338,776 | \$564,112 | 2.37 | \$1,338,776 | \$824,251 | 1.62 | \$1,472,653 | \$824,251 | 1.79 | \$2,119,136 | \$711,150 | 2.98 | \$1,338,776 | \$2,299,848 | 0.58 |
| Wattsmart Business | Energy Mngmt. | \$1,209,259 | \$827,331 | 1.46 | \$1,209,259 | \$1,697,739 | 0.71 | \$1,330,185 | \$1,697,739 | 0.78 | \$2,687,906 | \$1,662,954 | 1.62 | \$1,209,259 | \$2,832,196 | 0.43 |
| Wattsmart Business | Farm & Dairy | \$134,388 | \$81,117 | 1.66 | \$134,388 | \$130,045 | 1.03 | \$147,827 | \$130,045 | 1.14 | \$248,108 | \$123,200 | 2.01 | \$134,388 | \$276,425 | 0.49 |
| Wattsmart Business | Food Service | \$213,745 | \$101,905 | 2.10 | \$213,745 | \$215,061 | 0.99 | \$235,120 | \$215,061 | 1.09 | \$518,211 | \$214,361 | 2.42 | \$213,745 | \$565,835 | 0.38 |
| Wattsmart Business | HVAC | \$8,959,176 | \$8,834,712 | 1.01 | \$8,959,176 | \$16,852,988 | 0.53 | \$9,855,093 | \$16,852,988 | 0.58 | \$29,497,888 | \$21,705,364 | 1.36 | \$8,959,176 | \$30,837,598 | 0.29 |
| Wattsmart Business | Irrigation | \$963,158 | \$495,495 | 1.94 | \$963,158 | \$774,062 | 1.24 | \$1,059,473 | \$774,062 | 1.37 | \$1,995,513 | \$758,196 | 2.63 | \$963,158 | \$2,141,473 | 0.45 |
| Wattsmart Business | Lighting | \$29,885,188 | \$11,068,499 | 2.70 | \$29,885,188 | \$27,541,600 | 1.09 | \$32,873,707 | \$27,541,600 | 1.19 | \$61,614,460 | \$25,841,885 | 2.38 | \$29,885,188 | \$64,612,019 | 0.46 |
| Wattsmart Business | Motors | \$538,921 | \$183,139 | 2.94 | \$538,921 | \$229,926 | 2.34 | \$592,813 | \$229,926 | 2.58 | \$1,121,999 | \$160,386 | 7.00 | \$538,921 | \$1,214,655 | 0.44 |
| Wattsmart Business | Refrigeration | \$312,930 | \$303,231 | 1.03 | \$312,930 | \$259,484 | 1.21 | \$344,222 | \$259,484 | 1.33 | \$1,072,701 | \$300,300 | 3.57 | \$312,930 | \$1,161,132 | 0.27 |
| Wattsmart Business | Water Heating | \$43,333 | \$68,908 | 0.63 | \$43,333 | \$131,346 | 0.33 | \$47,666 | \$131,346 | 0.36 | \$157,210 | \$160,721 | 0.98 | \$43,333 | \$160,980 | 0.27 |

Table 9: Wattsmart Business Measure Category Level Cost-Effectiveness Results, PY2023

| Program | Measure Category | Utility Benefits (\$) | Utility Costs (\$) | Utility Cost Test | TRC Benefits (\$) | TRC Costs (\$) | TRC Test | P-TRC Benefits (\$) | P-TRC Costs (\$) | P-TRC Test | Participant PV Benefits (\$) | Participant PV Costs (\$) | PCT Test | Ratepayer PV Benefits (\$) | Ratepayer PV Costs (\$) | RIM Test |
|--------------------|------------------|-----------------------|--------------------|-------------------|-------------------|----------------|----------|---------------------|------------------|------------|------------------------------|---------------------------|----------|----------------------------|-------------------------|----------|
| Wattsmart Business | Building Shell | \$252,873 | \$197,177 | 1.28 | \$252,873 | \$527,974 | 0.48 | \$278,160 | \$527,974 | 0.53 | \$637,661 | \$609,792 | 1.05 | \$252,873 | \$670,178 | 0.38 |
| Wattsmart Business | Compressed Air | \$1,371,879 | \$554,814 | 2.47 | \$1,371,879 | \$808,630 | 1.70 | \$1,509,067 | \$808,630 | 1.87 | \$2,093,416 | \$692,901 | 3.02 | \$1,371,879 | \$2,275,053 | 0.60 |
| Wattsmart Business | Energy Mngmt. | \$7,042,368 | \$5,510,169 | 1.28 | \$7,042,368 | \$9,905,777 | 0.71 | \$7,746,604 | \$9,905,777 | 0.78 | \$16,365,340 | \$9,850,078 | 1.66 | \$7,042,368 | \$16,999,863 | 0.41 |
| Wattsmart Business | Farm & Dairy | \$167,304 | \$95,980 | 1.74 | \$167,304 | \$153,181 | 1.09 | \$184,035 | \$153,181 | 1.20 | \$295,386 | \$144,033 | 2.05 | \$167,304 | \$329,637 | 0.51 |
| Wattsmart Business | Food Service | \$213,001 | \$96,771 | 2.20 | \$213,001 | \$202,603 | 1.05 | \$234,302 | \$202,603 | 1.16 | \$494,662 | \$200,487 | 2.47 | \$213,001 | \$540,664 | 0.39 |
| Wattsmart Business | HVAC | \$8,394,148 | \$8,069,857 | 1.04 | \$8,394,148 | \$14,416,699 | 0.58 | \$9,233,563 | \$14,416,699 | 0.64 | \$27,250,254 | \$18,657,525 | 1.46 | \$8,394,148 | \$28,415,173 | 0.30 |
| Wattsmart Business | Irrigation | \$998,974 | \$488,556 | 2.04 | \$998,974 | \$752,884 | 1.33 | \$1,098,872 | \$752,884 | 1.46 | \$1,991,464 | \$729,549 | 2.73 | \$998,974 | \$2,139,639 | 0.47 |
| Wattsmart Business | Lighting | \$25,307,010 | \$8,634,682 | 2.93 | \$25,307,010 | \$21,917,107 | 1.15 | \$27,837,711 | \$21,917,107 | 1.27 | \$49,738,803 | \$20,481,533 | 2.43 | \$25,307,010 | \$52,121,393 | 0.49 |
| Wattsmart Business | Motors | \$533,333 | \$174,094 | 3.06 | \$533,333 | \$217,852 | 2.45 | \$586,666 | \$217,852 | 2.69 | \$1,071,539 | \$150,006 | 7.14 | \$533,333 | \$1,161,006 | 0.46 |
| Wattsmart Business | Refrigeration | \$356,084 | \$329,092 | 1.08 | \$356,084 | \$279,791 | 1.27 | \$391,692 | \$279,791 | 1.40 | \$1,188,285 | \$316,872 | 3.75 | \$356,084 | \$1,287,298 | 0.28 |
| Wattsmart Business | Water Heating | \$42,905 | \$64,706 | 0.66 | \$42,905 | \$123,103 | 0.35 | \$47,195 | \$123,103 | 0.38 | \$149,114 | \$150,319 | 0.99 | \$42,905 | \$152,898 | 0.28 |