

Three categories of programs:

1. Universal Systems Benefits (USB) funded programs - typically savings are not impacted by electric avoided cost changes and savings not addressed in the 2015-16 Electric Potential Assessment Study.
2. Northwest Energy Efficiency Alliance (NEEA) DSM funded programs - typically savings are not impacted by electric avoided cost changes and savings not addressed in the 2015-16 Electric Potential Assessment Study.
3. DSM funded programs - typically savings are impacted by electric avoided cost changes and savings are addressed in the 2015-16 Electric Potential Assessment Study.

| <b>5 Year Acquisition Plan (DSM, NEEA, and USB programs)</b>   |   |
|--|---|
| Mid Achievable Average Savings Potential per Year over a 5 year period (kWh)   |   |
| =  | 30,602,573 DSM kWh per year for 5 years                                   |
| =  | 3.49 DSM aMW per year for 5 years   |
| Mid Achievable Average Savings Potential per Year over a 5 year period (kWh), per sector   |   |
| =  | 9,859,730 Residential DSM kWh per year for 5 years                        |
| =  | 20,742,843 Commercial/Industrial DSM kWh per year for 5 years             |
| =  | 30,602,573 Total DSM kWh per year for 5 years                             |
| Mid Achievable Average Savings Potential per Year over a 5 year period (aMW), per sector   |   |
| =  | 1.13 Residential DSM aMW per year for 5 years                             |
| =  | 2.37 Commercial/Industrial DSM aMW per year for 5 years                   |
| =  | 3.49 Total DSM aMW per year   |
| Using a factor of 90% to account for the difference between "Mid Achievable" and "Program Potential" of DSM + NEEA and USB   |   |
|  | 1.01 Residential DSM aMW per year for 5 years                             |
|  | 2.13 Commercial/Industrial DSM aMW per year for 5 years                   |
|  | 0.41 aMW assumed savings for NEEA (see Method One Revised) for 5 years    |
|  | 0.45 aMW assumed savings for USB (see Method One Revised) for 5 years     |
|  | <b>4.00 aMW per year total for DSM, NEEA and USB Programs for 5 years</b> |
| <b>Conclusion: Propose a goal of 4.0 aMW for DSM, NEEA, and USB programs each year for 5 years in Montana</b>  |   |
| This method accounts for the higher potential in the first few years due to residential LEDs, but due the declining potential after 2021, the 4.0 aMW goal is really only valid for about 5 years. |   |

| <b>20 Year Mid-Achievable Potential (DSM only)</b>                                |  |
|---|--|
| The 50% incentive rate "20 yr. Sum of Annual Incremental Savings Potential (kWh)" |  |
| =   | 540,138,008 Total kWh 20 yr. Sum of Annual Incremental Savings Potential                 |
| =   | 123,083,672 Residential kWh 20 yr. Sum of Annual Incremental Savings Potential           |
| =   | 417,054,335 Commercial/Industrial kWh 20 yr. Sum of Annual Incremental Savings Potential |
| The 50% incentive rate "20 yr. Sum of Annual Incremental Savings Potential (aMW)" |  |
| =   | 61.66 Total aMW 20 yr. Sum of Annual Incremental Savings Potential                       |
| =   | 14.05 Residential aMW 20 yr. Sum of Annual Incremental Savings Potential                 |
| =   | 47.61 Commercial/Industrial aMW 20 yr. Sum of Annual Incremental Savings Potential       |

| <b>Remaining 15 Year Acquisition Plan (DSM, NEEA, and USB programs)</b>   |   |
|---|---|
| 5.06 Residential aMW cumulative savings for first 5 years of DSM programs   |   |
| 10.66 Commercial/Industrial aMW cumulative savings for first 5 years of DSM programs  |   |
| 2.04 aMW cumulative assumed savings for first 5 years of NEEA (see Method One Revised)  |   |
| 2.23 aMW cumulative assumed savings for first 5 years of USB (see Method One Revised)   |   |
| 19.99 aMW cumulative savings total for first 5 years of DSM, NEEA, and USB Programs   |   |
| 8.99 Residential aMW cumulative savings remaining over 15 year period of DSM Programs   |   |
| 36.95 Commercial/Industrial aMW cumulative savings remaining over 15 year period of DSM Programs                              |   |
| 5.99 aMW cumulative savings remaining over 15 year period of NEEA   |   |
| 6.33 aMW cumulative savings remaining over 15 year period of USB  |   |
| 58.26 aMW cumulative savings remaining over 15 year period of DSM, NEEA, and USB Programs                                     |   |
| Using a factor of 90% to account for the difference between "Mid Achievable" and "Program Potential" of DSM + NEEA and USB    |   |
|   | 0.54 Residential aMW savings per year remaining over 15 year period of DSM Programs           |
|   | 2.22 Commercial/Industrial aMW savings per year remaining over 15 year period of DSM Programs |
|   | 0.40 aMW per year for remaining 15 year period for NEEA                                       |
|   | 0.42 aMW per year for remaining 15 year period for USB  |
|   | <b>3.58 aMW per year remaining over 15 year period of DSM, NEEA, and USB Programs</b>         |
| <b>Conclusion: Propose a goal of 3.60 aMW for DSM, NEEA, and USB programs each year for the remaining 15 years in Montana</b> |   |

**Conclusion: Propose a goal of 4.0 aMW each year for 5 years (2016-2017 through 2020-2021) and 3.60 aMW each year for 15 years (2021-2022 through 2035-2036) for DSM, NEEA, and USB programs in Montana**

|   |               |
|---|---------------|
| 20-Year Levelized Avoided Cost (\$/MWh) | Discount rate |
| \$ 40.70                                | 7.03%         |

| Annual Cumulative Achievable DSM Potential (aMW) |           |             |                       | Adjustment for FORECAST of actual DSM |                                  |                                   | Levelized cost per kWh |                                       |
|--|-----------|-------------|-----------------------|---------------------------------------|----------------------------------|-----------------------------------|------------------------|---------------------------------------|
| Year   | Year      | Residential | Commercial/Industrial | Total                                 | MAXIMUM Cumulative Program Value | FORECAST Cumulative Program Costs |                        | FORECAST Cumulative Program Cost (PV) |
| 1  | 2016-2017 | 1.01        | 2.13                  | 3.14                                  | \$11,846,896                     | 37.36%                            | \$4,426,166            | \$ 0.015                              |
| 2  | 2017-2018 | 2.03        | 4.26                  | 6.29                                  | \$23,693,793                     | 39.23%                            | \$9,294,949            | \$ 0.016                              |
| 3  | 2018-2019 | 3.04        | 6.39                  | 9.43                                  | \$35,540,689                     | 41.19%                            | \$14,639,545           | \$ 0.017                              |
| 4  | 2019-2020 | 4.05        | 8.52                  | 12.58                                 | \$47,387,585                     | 43.25%                            | \$20,495,363           | \$ 0.018                              |
| 5  | 2020-2021 | 5.06        | 10.66                 | 15.72                                 | \$59,234,482                     | 45.41%                            | \$26,900,164           | \$ 0.018                              |
| 6  | 2021-2022 | 5.60        | 12.87                 | 18.48                                 | \$69,620,328                     | 47.68%                            | \$33,197,524           | \$ 0.019                              |
| 7  | 2022-2023 | 6.14        | 15.09                 | 21.23                                 | \$80,006,174                     | 50.07%                            | \$40,057,370           | \$ 0.020                              |
| 8  | 2023-2024 | 6.68        | 17.31                 | 23.99                                 | \$90,392,020                     | 52.57%                            | \$47,520,206           | \$ 0.021                              |
| 9  | 2024-2025 | 7.22        | 19.52                 | 26.75                                 | \$100,777,866                    | 55.20%                            | \$55,629,183           | \$ 0.022                              |
| 10   | 2025-2026 | 7.76        | 21.74                 | 29.50                                 | \$111,163,712                    | 57.96%                            | \$64,430,257           | \$ 0.024                              |
| 11   | 2026-2027 | 8.30        | 23.96                 | 32.26                                 | \$121,549,558                    | 60.86%                            | \$73,972,366           | \$ 0.025                              |
| 12   | 2027-2028 | 8.84        | 26.18                 | 35.01                                 | \$131,935,404                    | 63.90%                            | \$84,307,609           | \$ 0.026                              |
| 13   | 2028-2029 | 9.38        | 28.39                 | 37.77                                 | \$142,321,250                    | 67.10%                            | \$95,491,447           | \$ 0.027                              |
| 14   | 2029-2030 | 9.92        | 30.61                 | 40.53                                 | \$152,707,096                    | 70.45%                            | \$107,582,898          | \$ 0.029                              |
| 15   | 2030-2031 | 10.46       | 32.83                 | 43.28                                 | \$163,092,942                    | 73.97%                            | \$120,644,767          | \$ 0.030                              |
| 16   | 2031-2032 | 11.00       | 35.04                 | 46.04                                 | \$173,478,788                    | 77.67%                            | \$134,743,865          | \$ 0.032                              |
| 17   | 2032-2033 | 11.53       | 37.26                 | 48.80                                 | \$183,864,634                    | 81.56%                            | \$149,951,261          | \$ 0.033                              |
| 18   | 2033-2034 | 12.07       | 39.48                 | 51.55                                 | \$194,250,480                    | 85.63%                            | \$166,342,536          | \$ 0.035                              |
| 19   | 2034-2035 | 12.61       | 41.70                 | 54.31                                 | \$204,636,326                    | 89.91%                            | \$183,998,062          | \$ 0.037                              |
| 20   | 2035-2036 | 13.15       | 43.91                 | 57.07                                 | \$215,022,172                    | 94.41%                            | \$203,003,283          | \$ 0.038                              |

| Annual Incremental Achievable Potential (aMW) |           |             |                       | MAXIMUM Annual Incremental Program Value | Adjustment for FORECAST of actual DSM Program Costs | FORECAST Incremental Program Cost (PV) (col. G * Col. H) | Scaling Factor | Levelized cost per kWh |          |
|---|-----------|-------------|-----------------------|--|---|--|----------------|------------------------|----------|
| Year  | Year      | Residential | Commercial/Industrial |  |   |  |                |                        | Total    |
| 1   | 2016-2017 | 1.01        | 2.13                  | 3.14                                     | \$11,846,896  | 37.36%   | \$ 4,426,166   | 0.0%                   | \$ 0.015 |
| 2   | 2017-2018 | 1.01        | 2.13                  | 3.14                                     | \$11,846,896  | 39.23%   | \$ 4,647,475   | 5.0%                   | \$ 0.016 |
| 3   | 2018-2019 | 1.01        | 2.13                  | 3.14                                     | \$11,846,896  | 41.19%   | \$ 4,879,848   | 5.0%                   | \$ 0.017 |
| 4   | 2019-2020 | 1.01        | 2.13                  | 3.14                                     | \$11,846,896  | 43.25%   | \$ 5,123,841   | 5.0%                   | \$ 0.018 |
| 5   | 2020-2021 | 1.01        | 2.13                  | 3.14                                     | \$11,846,896  | 45.41%   | \$ 5,380,033   | 5.0%                   | \$ 0.018 |
| 6   | 2021-2022 | 0.54        | 2.22                  | 2.76                                     | \$10,385,846  | 47.68%   | \$ 4,952,352   | 5.0%                   | \$ 0.019 |
| 7   | 2022-2023 | 0.54        | 2.22                  | 2.76                                     | \$10,385,846  | 50.07%   | \$ 5,199,970   | 5.0%                   | \$ 0.020 |
| 8   | 2023-2024 | 0.54        | 2.22                  | 2.76                                     | \$10,385,846  | 52.57%   | \$ 5,459,968   | 5.0%                   | \$ 0.021 |
| 9   | 2024-2025 | 0.54        | 2.22                  | 2.76                                     | \$10,385,846  | 55.20%   | \$ 5,732,967   | 5.0%                   | \$ 0.022 |
| 10  | 2025-2026 | 0.54        | 2.22                  | 2.76                                     | \$10,385,846  | 57.96%   | \$ 6,019,615   | 5.0%                   | \$ 0.024 |
| 11  | 2026-2027 | 0.54        | 2.22                  | 2.76                                     | \$10,385,846  | 60.86%   | \$ 6,320,596   | 5.0%                   | \$ 0.025 |
| 12  | 2027-2028 | 0.54        | 2.22                  | 2.76                                     | \$10,385,846  | 63.90%   | \$ 6,636,625   | 5.0%                   | \$ 0.026 |
| 13  | 2028-2029 | 0.54        | 2.22                  | 2.76                                     | \$10,385,846  | 67.10%   | \$ 6,968,457   | 5.0%                   | \$ 0.027 |
| 14  | 2029-2030 | 0.54        | 2.22                  | 2.76                                     | \$10,385,846  | 70.45%   | \$ 7,316,879   | 5.0%                   | \$ 0.029 |
| 15  | 2030-2031 | 0.54        | 2.22                  | 2.76                                     | \$10,385,846  | 73.97%   | \$ 7,682,723   | 5.0%                   | \$ 0.030 |
| 16  | 2031-2032 | 0.54        | 2.22                  | 2.76                                     | \$10,385,846  | 77.67%   | \$ 8,066,860   | 5.0%                   | \$ 0.032 |
| 17  | 2032-2033 | 0.54        | 2.22                  | 2.76                                     | \$10,385,846  | 81.56%   | \$ 8,470,203   | 5.0%                   | \$ 0.033 |
| 18  | 2033-2034 | 0.54        | 2.22                  | 2.76                                     | \$10,385,846  | 85.63%   | \$ 8,893,713   | 5.0%                   | \$ 0.035 |
| 19  | 2034-2035 | 0.54        | 2.22                  | 2.76                                     | \$10,385,846  | 89.91%   | \$ 9,338,398   | 5.0%                   | \$ 0.037 |
| 20  | 2035-2036 | 0.54        | 2.22                  | 2.76                                     | \$10,385,846  | 94.41%   | \$ 9,805,318   | 5.0%                   | \$ 0.038 |

Total FORECAST DSM Plan Cost = \$ 131,322,006

| Default Supply Load Forecast (MWH) | DSM Goal as % of DSM Sales |
|------------------------------------|----------------------------|
| 6,713,404                          | 0.41%                      |
| 6,777,795                          | 0.41%                      |
| 6,842,844                          | 0.40%                      |
| 6,908,555                          | 0.40%                      |
| 6,974,935                          | 0.39%                      |
| 7,057,098                          | 0.34%                      |
| 7,138,482                          | 0.34%                      |
| 7,220,561                          | 0.33%                      |
| 7,303,342                          | 0.33%                      |
| 7,386,831                          | 0.33%                      |
| 7,471,034                          | 0.32%                      |
| 7,555,957                          | 0.32%                      |
| 7,641,607                          | 0.32%                      |
| 7,727,990                          | 0.31%                      |
| 7,815,113                          | 0.31%                      |
| 7,902,982                          | 0.31%                      |
| 7,991,603                          | 0.30%                      |
| 8,080,984                          | 0.30%                      |
| 8,171,132                          | 0.30%                      |
| 8,262,052                          | 0.29%                      |

| Historical DSM Savings & Spending (DSM only - not including NEEA or USB) |                 |             |                 |
|--|-----------------|-------------|-----------------|
| Year   | Spend or Budget | DSM Savings | \$/aMW acquired |
| 2011-2012  | \$ 7,720,989    | 5.24        | \$ 1,473,803    |
| 2012-2013  | \$ 9,380,246    | 5.97        | \$ 1,571,073    |
| 2013-2014  | \$ 7,526,764    | 5.14        | \$ 1,463,928    |
| 2014-2015  | \$ 4,399,366    | 4.19        | \$ 1,050,340    |
| 2015-2016  | \$ 4,831,958    | 3.51        | \$ 1,375,707    |
|  | \$ 33,859,322   | 24.05       | \$ 1,407,769    |

|           | DSM Acquisition (aMW) | NEEA DSM Acquisition (aMW) | Total DSM Acquisition* (aMW) | DSM FORECAST Incremental Program Cost | NEEA FORECAST Incremental Program Cost | TOTAL FORECAST Incremental Program Cost (DSM + NEEA) |
|-----------|-----------------------|----------------------------|------------------------------|---------------------------------------|--|--|
| 2016-2017 | 3.14                  | 0.41                       | <b>3.55</b>                  | \$ 4,426,166                          | \$ 1,240,781                           | \$ <b>5,666,947</b>                                  |
| 2017-2018 | 3.14                  | 0.41                       | <b>3.55</b>                  | \$ 4,647,475                          | \$ 1,500,000                           | \$ <b>6,147,475</b>                                  |
| 2018-2019 | 3.14                  | 0.41                       | <b>3.55</b>                  | \$ 4,879,848                          | \$ 1,500,000                           | \$ <b>6,379,848</b>                                  |
| 2019-2020 | 3.14                  | 0.41                       | <b>3.55</b>                  | \$ 5,123,841                          | \$ 1,500,000                           | \$ <b>6,623,841</b>                                  |
| 2020-2021 | 3.14                  | 0.41                       | <b>3.55</b>                  | \$ 5,380,033                          | \$ 1,500,000                           | \$ <b>6,880,033</b>                                  |
| 2021-2022 | 2.76                  | 0.40                       | <b>3.16</b>                  | \$ 4,952,352                          | \$ 1,500,000                           | \$ <b>6,452,352</b>                                  |
| 2022-2023 | 2.76                  | 0.40                       | <b>3.16</b>                  | \$ 5,199,970                          | \$ 1,500,000                           | \$ <b>6,699,970</b>                                  |
| 2023-2024 | 2.76                  | 0.40                       | <b>3.16</b>                  | \$ 5,459,968                          | \$ 1,500,000                           | \$ <b>6,959,968</b>                                  |
| 2024-2025 | 2.76                  | 0.40                       | <b>3.16</b>                  | \$ 5,732,967                          | \$ 1,500,000                           | \$ <b>7,232,967</b>                                  |
| 2025-2026 | 2.76                  | 0.40                       | <b>3.16</b>                  | \$ 6,019,615                          | \$ 1,500,000                           | \$ <b>7,519,615</b>                                  |
| 2026-2027 | 2.76                  | 0.40                       | <b>3.16</b>                  | \$ 6,320,596                          | \$ 1,500,000                           | \$ <b>7,820,596</b>                                  |
| 2027-2028 | 2.76                  | 0.40                       | <b>3.16</b>                  | \$ 6,636,625                          | \$ 1,500,000                           | \$ <b>8,136,625</b>                                  |
| 2028-2029 | 2.76                  | 0.40                       | <b>3.16</b>                  | \$ 6,968,457                          | \$ 1,500,000                           | \$ <b>8,468,457</b>                                  |
| 2029-2030 | 2.76                  | 0.40                       | <b>3.16</b>                  | \$ 7,316,879                          | \$ 1,500,000                           | \$ <b>8,816,879</b>                                  |
| 2030-2031 | 2.76                  | 0.40                       | <b>3.16</b>                  | \$ 7,682,723                          | \$ 1,500,000                           | \$ <b>9,182,723</b>                                  |
| 2031-2032 | 2.76                  | 0.40                       | <b>3.16</b>                  | \$ 8,066,860                          | \$ 1,500,000                           | \$ <b>9,566,860</b>                                  |
| 2032-2033 | 2.76                  | 0.40                       | <b>3.16</b>                  | \$ 8,470,203                          | \$ 1,500,000                           | \$ <b>9,970,203</b>                                  |
| 2033-2034 | 2.76                  | 0.40                       | <b>3.16</b>                  | \$ 8,893,713                          | \$ 1,500,000                           | \$ <b>10,393,713</b>                                 |
| 2034-2035 | 2.76                  | 0.40                       | <b>3.16</b>                  | \$ 9,338,398                          | \$ 1,500,000                           | \$ <b>10,838,398</b>                                 |
| 2035-2036 | 2.76                  | 0.40                       | <b>3.16</b>                  | \$ 9,805,318                          | \$ 1,500,000                           | \$ <b>11,305,318</b>                                 |

**Total EXPECTED Cost = \$ 131,322,006 \$ 29,740,781 \$ 161,062,787**

\*Total DSM Acquisition (aMW) includes DSM program potential savings calculated from the Nexant Electric Energy Efficiency Potential Study and savings estimates from the Northwest Energy Efficiency Alliance (NEEA) initiatives. NEEA is a DSM-funded program held to the same cost-effectiveness tests as other DSM funded programs.