## Updated Response No. 1.2 Attachment B

# MONTANA-DAKOTA UTILITIES CO. ELECTRIC OPERATIONS - SOUTH DAKOTA INFRASTRUCTURE RIDER - REVENUE REQUIREMENT 

|  | Update |  |
| :---: | :---: | :---: |
| 2016 Amount to be Recovered |  | \$726,797 |
| 2016 Actual Revenue Recovery |  | $(552,526)$ |
| 2016 (Over)/Under Recovery |  | \$174,271 |
| 2016 Deferred Carrying Charge Balance 1/ |  | 3,652 |
| 2017 Projected Revenue Requirement |  | 669,599 |
| 2017 Projected Carrying Charge 1/ |  | 5,856 |
| Amount to be Recovered in 2017 |  | \$853,378 |
| 2017 Sales |  | 1,318,000 |
| 2017 Tracker Adjustment per Kwh | \$ | 0.00564 |
| 2016 Tracker Adjustment per Kwh | \$ | 0.00497 |
| Change | \$ | 0.00067 |

1/ Rate equal to Approved ROR of $7.216 \%$ in Docket No. EL15-024.

## Rate Base

Plant Balance
Accumulated Depreciation
Net Plant in Service
Accum Def Income Taxes PTC Carryforward

Total Plant in Service

## Return on Rate Base

Expenses
Operating Expenses
Labor

## Benefits

Maintenance Costs
Annual Easements Insurance - Property Other O\&M
Total O\&M Expense Depreciation
Taxes Other Than Income Total Expenses
income before Taxes

Interest Expense
Taxable income
Income Taxes 51
Less: Production Tax Credit
Net Income Taxes
Operating Income

Required Return
Operating Income Required Increase in Operating Income Required Gross Revenue Conversion Factor
Revenue Increase
Gross Receipts Tax (.00135)
Required Revenue Increase

Actual Revenue Collected Interim Revenue Collected
Total Revenue Collected
Monthly (Over)/Under Recovery
Cumulative (Over)/Under Recovery

| Actual 2016 |  |  |  |  |  |  |  |  |  |  |  | 2016 Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jan 2016 | Feb 2016 | Mar 2016 | Apr 2016 | May 2016 | June 2016 | July 2016 | Aug 2016 | Sept 2016 | Oct 2016 | Nov 2016 | Dec 2016 |  |
| \$10,504,666 | \$10,500,013 | \$10,073,525 | \$10,446,704 | \$10,447,423 | \$10,448,368 | \$10,449,846 | \$10,450,402 | \$10,439,879 | \$10,441,708 | \$10,445,072 | \$10,421,480 |  |
| 34,427 | 69,443 | 104,443 | 138,021 | 172,176 | 206,340 | 240,396 | 274,457 | 308,520 | 342,548 | 378,408 | 412,453 |  |
| \$10,470,239 | \$10,430,570 | \$9,969,082 | \$10,308,683 | \$10,275,247 | \$10,242,028 | \$10,209,450 | \$10,175,945 | \$10,131,359 | \$10,099,160 | \$10,066,664 | \$10,009,027 |  |
| \$255,858 | \$363,552 | \$471,246 | \$578,940 | \$686,634 | \$794,327 | \$902,021 | \$1,009,715 | \$1,117,409 | \$1,225,103 | \$1,332,797 | \$1,438,193 |  |
| 35,329 | 74.799 | 113,219 | 155,593 | 191,531 | 231,457 | 263,305 | 298,124 | 340,921 | 381,328 | 424,709 | 481,726 |  |
| \$10,249,710 | \$10,141,817 | \$9,611,055 | \$9,885,336 | \$9,780,144 | \$9,679,158 | \$9,570,734 | \$9,464,354 | \$9,354,871 | \$9,255,385 | \$9,158,576 | \$9,052,560 |  |
| \$61,635 | \$60,986 | \$57,794 | \$59,444 | \$58,811 | \$58,204 | \$57,552 | \$56.912 | \$56,254 | \$55,656 | \$55,074 | \$54,436 |  |
| \$125 | \$98 | \$393 | \$312 | \$547 | \$377 | \$574 | \$768 | \$627 | \$637 | \$667 | \$1.011 |  |
| 23 | 21 | 78 | 69 | 117 | 81 | 113 | 138 | 108 | 114 | 122 | 193 |  |
| 0 | 0 | 13,074 | 23 | 13,060 | 6,747 | 6,551 | 6,560 | 6,551 | 6,546 | 6,534 | 7,311 |  |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 808 | 0 | 0 | 0 | 21,964 |  |
| 562 | 562 | 562 | 562 | 562 | 562 | 562 | 562 | 562 | 562 | 562 | 562 |  |
| 99 | 61 | 91 | (9) | 43 | 77 | 23 | 27 | 29 | 40 | 46 | 114 |  |
| \$809 | \$742 | \$14.198 | \$957 | \$14.329 | \$7.844 | \$7,823 | \$8,863 | \$7,877 | \$7,899 | \$7,931 | \$31,155 |  |
| 34,422 | 35,016 | 35,000 | 33,578 | 34,155 | 34,163 | 34,056 | 34,061 | 34.063 | 34,028 | 34,034 | 34,045 |  |
| 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,313 |  |
| \$36,332 | \$36,859 | \$50,299 | \$35,636 | \$49,585 | \$43,108 | \$42,980 | \$44,025 | \$43,041 | \$43,028 | \$43,066 | \$66,513 |  |
| (\$36,332) | (\$36.859) | (\$50.299) | ( $\$ 35,636$ ) | (\$49,585) | (\$43,108) | ( $\$ 42,980$ ) | (\$44,025) | $(\$ 43,041)$ | $(\$ 43,028)$ | $(\$ 43,066)$ | (\$66,513) |  |
| \$22,028 | \$21,796 | \$20,656 | \$21,245 | \$21,019 | \$20,802 | \$20,569 | \$20,340 | \$20,105 | \$19,891 | \$19,683 | \$19,455 |  |
| ( $\$ 58,360$ ) | ( $\$ 58,655$ ) | (\$70,955) | ( $\$ 56,881$ ) | (\$70,604) | (\$63,910) | $(563,549)$ | (\$64,365) | ( $\$ 63,146$ ) | (\$62,919) | $(\$ 62,749)$ | ( $\$ 85,968$ ) |  |
| $(\$ 20,426)$ | $(\$ 20,529)$ | (\$24,834) | $(\$ 19,908)$ | (\$24,711) | $(\$ 22,369)$ | (\$22,242) | $(\$ 22,528)$ | $(\$ 22,101)$ | $(\$ 22,022)$ | $(\$ 21,962)$ | $(\$ 30,089)$ |  |
| 35,329 | 39,470 | 38,420 | 42,374 | 35,938 | 39,926 | 31,848 | 34,819 | 42,797 | 40,407 | 43,381 | 57,017 |  |
| $(\$ 55,755)$ | ( $\$ 59,999$ ) | $(\$ 63,254)$ | $(\$ 62,282)$ | (\$60,649) | (\$62,295) | ( $\$ 54,090$ ) | $(\$ 57,347)$ | (\$64.898) | $(\$ 62,429)$ | $(\$ 65,343)$ | (\$87,106) |  |
| \$19,423 | \$23,140 | \$12,955 | \$26,646 | \$11,064 | \$19,187 | \$11,110 | \$13,322 | \$21,857 | \$19,401 | \$22,277 | \$20,593 |  |
| 7.216\% | 7.216\% | 7.216\% | 7.216\% | 7.216\% | 7.216\% | 7.216\% | 7.216\% | 7.216\% | 7.216\% | 7.216\% | 7.216\% |  |
| \$61,635 | \$60,986 | \$57,794 | \$59,444 | \$58,811 | \$58,204 | \$57,552 | \$56,912 | \$56,254 | \$55,656 | \$55,074 | \$54,436 |  |
| \$42,212 | \$37,846 | \$44,839 | \$32,798 | \$47,747 | \$39,017 | \$46,442 | \$43,590 | \$34,397 | \$36,255 | \$32,797 | \$33,843 |  |
| 1.53846 | 1.53846 | 1.53846 | 1.53846 | 1.53846 | 1.53846 | 1.53846 | 1.53846 | 1.53846 | 1.53846 | 1.53846 | 1.53846 |  |
| \$64.941 | \$58,225 | \$68,983 | \$50,458 | \$73,457 | \$60,026 | \$71,449 | \$67,061 | \$52,918 | \$55,777 | \$50,457 | \$52,066 | \$725,818 |
| 88 | 79 | 93 | 68 | 99 | 81 | 96 | 91 | 71 | 75 | 68 | 70 | 979 |
| \$65,029 | \$58,304 | \$69,076 | \$50,526 | \$73,556 | \$60,107 | \$71,545 | \$67,152 | \$52,989 | \$55,852 | \$50,525 | \$52,136 | \$726,797 |

# Montana-Dakota Utilities Co. <br> lectric Utility - South D <br> Infrastructure Ride <br> Revenue Requirement - Thunder Spirit Wind 

| Rate Base |  |
| :---: | :---: |
|  | Plant Balance |
|  | Accumulated Depreciation |
|  | Net Plant in Service |
| Accum Def Income TaxesPTC Carryforward 1/ |  |
|  |  |
| Total Plant in Service |  |
| Return on Rate Base 21 |  |
| Expenses |  |
| Operating Expenses |  |
| O8M 3/ |  |
| Depreciation |  |
| Taxes Other Than Income 4/ Total Expenses |  |
| Income before Taxes |  |
| Interest Expense |  |
| Taxable income |  |
| Income Taxes 51 |  |
| Less: Production Tax Credit 1/ Net Income Taxes |  |
| Operating Income |  |
| Required Return |  |
| Operating income Required |  |
| Increase in Operating income Required |  |
| Gross Revenue Conversion Factor |  |
| Revenue Increase |  |
| Gross Receipts Tax (.00135) |  |
|  | Required Revenue Increase |


| Projected |  |  |  |  |  |  |  |  |  |  |  | 2017 Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jan 2017 | Feb 2017 | Mar 2017 | Apr 2017 | May 2017 | June 2017 | July 2017 | Aug 2017 | Sept 2017 | Oct 2017 | Nov 2017 | Dec 2017 |  |
| \$10,416,670 | \$10,416,670 | \$10,416,670 | \$10,416,670 | \$10,416,670 | \$10,416,670 | \$10,416,670 | \$10,416,670 | \$10,416,670 | \$10,416,670 | \$10,416,670 | \$10,416,670 |  |
| 444,469 | 478,503 | 512,537 | 546,570 | 580,604 | 614,638 | 648,671 | 682,705 | 716,738 | 750,772 | 784,806 | 818,839 |  |
| \$9,972,201 | \$9,938,167 | \$9,904,133 | \$9,870,100 | \$9,836,066 | \$9,802,032 | \$9,767,999 | \$9,733,965 | \$9,699,932 | \$9,665,898 | \$9,631,864 | \$9,597,831 |  |
| \$1,485,813 | \$1,536,505 | \$1,582,080 | \$1,622.701 | \$1,658,199 | \$1,688,743 | \$1,714,170 | \$1,734,481 | \$1,749,837 | \$1,760,077 | \$1,765,363 | \$1,765,526 |  |
| 521,441 | 561,157 | 600,872 | 640,587 | 680,302 | 720,018 | 759,733 | 799,448 | 839,163 | 878,879 | 918,594 | 958,309 |  |
| \$9,007,829 | \$8,962,819 | \$8,922,925 | \$8,887,986 | \$8,858,170 | \$8,833,307 | \$8,813,562 | \$8,798,933 | \$8,789,258 | \$8,784,700 | \$8,785,095 | \$8,790,614 |  |
| \$54,167 | \$53,896 | \$53,657 | \$53,446 | \$53,267 | \$53,118 | \$52,999 | \$52,911 | \$52,853 | \$52,825 | \$52,828 | \$52,861 |  |
| \$7,206 | \$7,206 | \$7,206 | \$7.206 | \$7,206 | \$7,206 | \$7,206 | \$7,206 | \$7,206 | \$7,206 | \$7,206 | \$30,992 |  |
| 34,034 | 34,034 | 34,034 | 34,034 | 34,034 | 34.034 | 34,034 | 34,034 | 34,034 | 34,034 | 34,034 | 34,034 |  |
| 1,947 | 1,947 | 1,947 | 1,947 | 1,947 | 1.947 | 1.947 | 1,947 | 1,947 | 1,947 | 1.947 | 1,947 |  |
| \$43,187 | \$43,187 | \$43,187 | \$43,187 | \$43,187 | \$43,187 | \$43,187 | \$43,187 | \$43,187 | \$43,187 | \$43,187 | \$66,973 |  |
| $(\$ 43,187)$ | (\$43,187) | ( $\$ 43,187$ ) | ( $\$ 43,187$ ) | (\$43,187) | (\$43,187) | (\$43,187) | (\$43,187) | (\$43,187) | $(\$ 43,187)$ | $(\$ 43,187)$ | $(\$ 66,973)$ |  |
| 19,359 | 19,263 | 19,177 | 19,102 | 19,038 | 18,984 | 18,942 | 18,910 | 18,890 | 18,880 | 18,881 | 18,892 |  |
| $(\$ 62,546)$ | $(\$ 62,450)$ | $(\$ 62,364)$ | $(\$ 62,289)$ | (\$62,225) | (\$62,171) | $(\$ 62,129)$ | $(\$ 62,097)$ | (\$62,077) | $(\$ 62,067)$ | $(\$ 62,068)$ | (\$85,865) |  |
| ( $\$ 21,891$ ) | (\$21,857) | (\$21,827) | ( $\$ 21,801$ ) | ( 521,779 ) | (\$21.760) | ( $\$ 21,745$ ) | (\$21,734) | (\$21,727) | (\$21,723) | ( $\$ 21,724$ ) | ( $\$ 30,053$ ) |  |
| 39,715 | 39,715 | 39,715 | 39,715 | 39,715 | 39,715 | 39,715 | 39,715 | 39,715 | 39,715 | 39,715 | 39,715 |  |
| (\$61,606) | (\$61,572) | (\$61,542) | $(\$ 61,516)$ | (\$61,494) | (\$61,475) | ( $\$ 61,460$ ) | $(\$ 61,449)$ | (\$61,442) | (\$61,438) | (\$61,439) | ( $\$ 69,768$ ) |  |
| \$18,419 | \$18,385 | \$18,355 | \$18,329 | \$18,307 | \$18,288 | \$18,273 | \$18,262 | \$18,255 | \$18,251 | \$18,252 | \$2,795 |  |
| 7.216\% | 7.216\% | 7.216\% | 7.216\% | 7.216\% | 7.216\% | 7.216\% | 7.216\% | 7.216\% | 7.216\% | 7.216\% | 7.216\% |  |
| \$54,167 | \$53,896 | \$53,657 | \$53,446 | \$53,267 | \$53,118 | \$52.999 | \$52.911 | \$52,853 | \$52,825 | \$52,828 | \$52,861 |  |
| \$35,748 | \$35,511 | \$35,302 | \$35,117 | \$34,960 | \$34,830 | \$34,726 | \$34,649 | \$34,598 | \$34,574 | \$34,576 | \$50,066 |  |
| 1.53846 | 1.53846 | 1.53846 | 1.53846 | 1.53846 | 1.53846 | 1.53846 | 1.53846 | 1.53846 | 1.53846 | 1.53846 | 1.53846 |  |
| \$54,996 | \$54,632 | \$54,310 | \$54,026 | \$53,784 | \$53,584 | \$53,424 | \$53,306 | \$53.227 | \$53,190 | \$53,193 | \$77,024 | \$668,696 |
| 74 | 74 | 73 | 73 | 73 | 72 | 72 | 72 | 72 | 72 | 72 | 104 | 903 |
| \$55,070 | \$54,706 | \$54,383 | \$54,099 | \$53,857 | \$53,656 | \$53,496 | \$53,378 | \$53,299 | \$53,262 | \$53,265 | \$77,128 | \$669,599 |


| Projected |  |  |  |  |  |  |  |  |  |  |  | 2017 Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jan 2017 | Feb 2017 | Mar 2017 | Apr 2017 | May 2017 | June 2017 | July 2017 | Aug 2017 | Sept 2017 | Oct 2017 | Nov 2017 | Dec 2017 |  |


| 1/ Annual Projected Production Tax Credit | 425,669,000 Kwh <br> S0.023 PTC/Kwh <br> $9,790,387$ Total PTC <br> $4.867867 \%$ SD Allocation Factor \#271 <br> 476,583  |  |
| :---: | :---: | :---: |
| $2 /$ Authorized ROR per Docket No. EL 15-024. | 7.216\% |  |
| 3/ Projected O\&M Expenses | \$1,628,333 Jan - Nov: 11 month estimate $\frac{4.867867 \%}{79,265}$ SD Allocation Factor \#271 | \$636,667 December Estimate (Easements paid annually in December). <br> 4.867867\% SD Allocation Factor \#271 <br> 30,992 |
| 4/ Projected Annual ND Wind Generation Tax | $\$ 480,000$ $4.867867 \%$ 23,366 SD Allocation Factor \#271 |  |
| $\begin{aligned} & \text { 5/ Tax Rate } \\ & \text { 1- tax rate } \end{aligned}$ | $\begin{aligned} & 35.0000 \% \text { (Federal Tax Rate }=35 \% \text {, SD } \\ & 65.0000 \% \end{aligned}$ | $\text { Tax Rate }=0 \% \text { ) }$ |

## DIT Proration Methodology Required:

| January 1. 2017 ADIT Balance (after re-alloc.) | $1,430,498$ |
| :--- | ---: |
| Projected 2017 DITs (per FR\&P) | 723,224 |
| Projected December 31, 2017 ADIT Balance | $2,153,722$ |
| 2017 Monthly Increment | $60,268,67$ |


| $\begin{gathered} \text { Beg. Balance } \\ \& \\ \text { Monthly Changes } \\ \hline \end{gathered}$ | Month | Year | Weighting For Projection | Monthly Increments | Balancel Increments | Average Balance | Days in Month | Days <br> Remaining | Factor |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Balance | December | 2016 | 100.00\% |  |  | \$1,430,498 | 31 | 365 | 100.00\% |
| Increment | January | 2017 | 91.78\% | \$60,269 | \$55,315 | 1,485,813 | 30 | 335 | 91.78\% |
| Increment | February | 2017 | 84.11\% | 60,269 | 50,692 | 1,536,505 | 28 | 307 | 84.11\% |
| Increment | March | 2017 | 75.62\% | 60,269 | 45,575 | 1,582,080 | 31 | 276 | 75.62\% |
| Increment | April | 2017 | 67.40\% | 60,269 | 40,621 | 1,622,701 | 30 | 246 | 67.40\% |
| Increment | May | 2017 | 58.90\% | 60,269 | 35,498 | 1,658,199 | 31 | 215 | 58.90\% |
| Increment | June | 2017 | 50.68\% | 60,269 | 30,544 | 1,688,743 | 30 | 185 | 50.68\% |
| Increment | July | 2017 | 42.19\% | 60,269 | 25,427 | 1,714,170 | 31 | 154 | 42.19\% |
| Increment | August | 2017 | 33.70\% | 60,269 | 20,311 | 1,734,481 | 31 | 123 | 33.70\% |
| Increment | September | 2017 | 25.48\% | 60,269 | 15,356 | 1,749,837 | 30 | 93 | 25,48\% |
| increment | October | 2017 | 16.99\% | 60,269 | 10,240 | 1,760,077 | 31 | 62 | 16.99\% |
| Increment | November | 2017 | 8.77\% | 60,269 | 5,286 | 1,765,363 | 30 | 32 | 8.77\% |
| Increment | December | 2017 | 0.27\% | 60,269 | 163 | 1,765,526 | 31 | 1 | 0.27\% |
| Total |  |  |  | \$723.224 | \$335,028 |  |  |  |  |

## Montana-Dakota Utilities Co.

Electric Utility - South Dakota
Infrastructure Rider
Revenue Requirement - Thunder Spirit Wind
Carry Charge Calculation

|  | Revenue Requirement | Revenue Collected $1 /$ | (Over)/Under Collection | Cumulative (Over)/Under | Deferred Income Tax | Net Balance | Rate 21 | Carrying Charge 3/ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2016 |  |  |  |  |  |  |  |  |
| Interim Activity | \$376,598 | \$246,715 | \$129,883 | \$129,883 |  |  |  |  |
| July | 71,545 | 16,563 | 54,982 | 184,865 | \$64,703 | \$120,162 |  |  |
| August | 67,152 | 65,790 | 1,362 | 186,227 | 65,179 | 121,048 | 7.2160\% | \$723 |
| September | 52,989 | 56,784 | $(3,795)$ | 182,432 | 63,851 | 118,581 | 7.2160\% | 728 |
| October | 55,852 | 48,146 | 7,706 | 190,138 | 66,548 | 123,590 | 7.2160\% | 713 |
| November | 50,525 | 50,080 | 445 | 190,583 | 66,704 | 123,879 | 7.2160\% | 743 |
| December | 52,136 | 68,448 | $(16,312)$ | 174,271 | 60,995 | 113,276 | 7.2160\% | 745 |
| Total |  |  |  |  |  |  |  | \$3,652 |
| 2017 |  |  |  |  |  |  |  |  |
| January | \$55,070 | \$74,441 | (\$19,371) | \$154,900 | \$54,215 | \$100,685 | 7.2160\% | \$681 |
| February | 54,706 | 76,334 | $(21,628)$ | 133,272 | 46,645 | 86,627 | 7.2160\% | 605 |
| March | 54,383 | 62,577 | $(8,194)$ | 125,078 | 43,777 | 81,301 | 7.2160\% | 521 |
| April | 54,099 | 54,874 | (775) | 124,303 | 43,506 | 80,797 | 7.2160\% | 489 |
| May | 53,857 | 52,921 | 936 | 125,240 | 43,834 | 81,406 | 7.2160\% | 486 |
| June | 53,656 | 51,032 | 2,624 | 127,864 | 44,752 | 83,112 | 7.2160\% | 490 |
| July | 53,496 | 65,912 | $(12,416)$ | 115,447 | 40,407 | 75,040 | 7.2160\% | 500 |
| August | 53,378 | 56,574 | $(3,196)$ | 112,252 | 39,288 | 72,964 | 7.2160\% | 451 |
| September | 53,299 | 58,507 | $(5,208)$ | 107,044 | 37,465 | 69,579 | 7.2160\% | 439 |
| October | 53,262 | 53,462 | (200) | 106,844 | 37,395 | 69,449 | 7.2160\% | 418 |
| November | 53,265 | 68,536 | $(15,271)$ | 91,572 | 32,050 | 59,522 | 7.2160\% | 418 |
| December | 77,128 | 76,881 | 247 | 91,820 | 32,137 | 59,683 | 7.2160\% | 358 |
| Total |  |  |  |  |  |  |  | \$5,856 |

1/ 2017 Revenue collections based on 2016 Tracker Adjustment of \$0.00497 per Kwh.
$2 /$ Authorized ROR in Docket No. EL15-024.
3/ Based on prior month ending balance.

