

MONTANA-DAKOTA UTILITIES CO.  
 ELECTRIC UTILITY  
 NORTH DAKOTA  
 Embedded Class Cost of Service Study  
 Cost of Service by Component  
 Projected 2017 - Reflecting Staff Recommended Adjustments  
 (000's)

|  | Total<br>North Dakota | Residential Rate 10      |                        |             | Customer | Total<br>Residential<br>Rate 10 |
|--|-----------------------|--------------------------|------------------------|-------------|----------|---------------------------------|
|  |                       | Demand<br>Prod. & Trans. | Demand<br>Distribution | Energy      |          |                                 |
| Rate Base  | 520,229               | 145,788                  | 34,043                 | 1,328       | 62,055   | 243,214                         |
| Operating Income for Proposed Return                   | 38,805                | 10,877                   | 2,539                  | 99          | 4,629    | 18,144                          |
| Current Operating Income                               | 34,998                | (12,705)                 | (2,218)                | 26,388      | (173)    | 11,292                          |
| Increase in Operating Income                           | 3,807                 | 23,582                   | 4,757                  | (26,289)    | 4,802    | 6,852                           |
| Related Taxes for Increase                             |                       |                          |                        |             |          |                                 |
| State & Federal Income Taxes                           | 2,311                 | 14,328                   | 2,891                  | (15,977)    | 2,918    | 4,160                           |
| Total Increase in Revenue                              | 6,118                 | 37,910                   | 7,648                  | (42,266)    | 7,720    | 11,012                          |
| Total Revenue Before Increase                          | 186,308               | 1,471                    | 427                    | 62,441      | 11,201   | 75,540                          |
| Total Cost of Service Required from Rates              | 192,426               | 39,381                   | 8,075                  | 20,175      | 18,921   | 86,552                          |
| Less: Other Operating Revenues (Incl Contract Revenue) | 9,509                 | 1,471                    | 427                    | 1,213       | 980      | 4,091                           |
| Revenue Required from Rates                            | 182,917               | 37,910                   | 7,648                  | 18,962      | 17,941   | 82,461                          |
| Projected Rate of Return Before Increase               | 6.727%                |                          |                        |             |          | 4.643%                          |
| Projected Billing Units                                |                       |                          |                        |             |          |                                 |
| Kwh  | 2,014,529,000         | 770,939,000              | 770,939,000            | 770,939,000 |          |                                 |
| Kw Demand  | 3,304,802             |                          |                        |             |          |                                 |
| Bills  | 1,170,228             |                          |                        |             | 960,036  |                                 |
| Unit Cost of Service                                   |                       |                          |                        |             |          |                                 |
| \$ per Kwh   |                       | 0.049                    | 0.010                  | 0.025       |          |                                 |
| \$ per Kw Demand                                       |                       |                          |                        |             |          |                                 |
| \$ per Customer Per Month                              |                       |                          |                        |             | 18.69    |                                 |
| Operating Income/Inverse of Federal income tax rate:   |                       |                          | 62.1985%               |             |          |                                 |
| Operating Income for Proposed Return:                  |                       |                          | 7.459%                 |             |          |                                 |

**MONTANA-DAKOTA UTILITIES CO.**  
**ELECTRIC UTILITY**  
**NORTH DAKOTA**  
 Embedded Class Cost of Service Study  
 Cost of Service by Component  
 Projected 2017 - Reflecting Staff Recommended Adjustments  
 (000's)

|  | Total<br>North Dakota | Small General Rate 20    |                        |             | Total<br>Small General<br>Rate 20 |          |
|--|-----------------------|--------------------------|------------------------|-------------|-----------------------------------|----------|
|  |                       | Demand<br>Prod. & Trans. | Demand<br>Distribution | Energy      |                                   | Customer |
| Rate Base  | 520,229               | 21,245                   | 4,424                  | 194         | 12,015                            | 37,878   |
| Operating Income for Proposed Return                   | 38,805                | 1,585                    | 330                    | 14          | 896                               | 2,825    |
| Current Operating Income                               | 34,998                | (1,854)                  | (287)                  | 3,878       | 639                               | 2,376    |
| Increase in Operating Income                           | 3,807                 | 3,439                    | 617                    | (3,864)     | 257                               | 449      |
| Related Taxes for Increase                             |                       |                          |                        |             |                                   |          |
| State & Federal Income Taxes                           | 2,311                 | 2,090                    | 375                    | (2,348)     | 156                               | 273      |
| Total Increase in Revenue                              | 6,118                 | 5,529                    | 992                    | (6,212)     | 413                               | 722      |
| Total Revenue Before Increase                          | 186,308               | 212                      | 55                     | 9,157       | 3,126                             | 12,550   |
| Total Cost of Service Required from Rates              | 192,426               | 5,741                    | 1,047                  | 2,945       | 3,539                             | 13,272   |
| Less: Other Operating Revenues (Incl Contract Revenue) | 9,509                 | 212                      | 55                     | 147         | 176                               | 590      |
| Revenue Required from Rates                            | 182,917               | 5,529                    | 992                    | 2,798       | 3,363                             | 12,682   |
| Projected Rate of Return Before Increase               | 6.727%                |                          |                        |             |                                   | 6.273%   |
| Projected Billing Units                                |                       |                          |                        |             |                                   |          |
| Kwh  | 2,014,529,000         | 112,526,000              | 112,526,000            | 112,526,000 |                                   |          |
| Kw Demand  | 3,304,802             |                          |                        |             |                                   |          |
| Bills  | 1,170,228             |                          |                        |             | 138,144                           |          |
| Unit Cost of Service                                   |                       |                          |                        |             |                                   |          |
| \$ per Kwh   |                       | 0.049                    | 0.009                  | 0.025       |                                   |          |
| \$ per Kw Demand                                       |                       |                          |                        |             |                                   |          |
| \$ per Customer Per Month                              |                       |                          |                        |             | 24.34                             |          |

Operating Income/Inverse of Federal income tax rate:  
 Operating Income for Proposed Return:

**MONTANA-DAKOTA UTILITIES CO.**  
**ELECTRIC UTILITY**  
**NORTH DAKOTA**  
 Embedded Class Cost of Service Study  
 Cost of Service by Component  
 Projected 2017 - Reflecting Staff Recommended Adjustments  
 (000's)

|  | Total<br>North Dakota | Irrigation Rate 25       |                        |           | Total<br>Irrigation<br>Rate 25 |          |
|--|-----------------------|--------------------------|------------------------|-----------|--------------------------------|----------|
|  |                       | Demand<br>Prod. & Trans. | Demand<br>Distribution | Energy    |                                | Customer |
| Rate Base  | 520,229               | 92                       | 241                    | 2         | 156                            | 491      |
| Operating Income for Proposed Return                   | 38,805                | 7                        | 18                     | 0         | 12                             | 37       |
| Current Operating Income                               | 34,998                | (7)                      | (6)                    | 17        | (6)                            | (2)      |
| Increase in Operating Income                           | 3,807                 | 14                       | 24                     | (17)      | 18                             | 39       |
| Related Taxes for Increase                             |                       |                          |                        |           |                                |          |
| State & Federal Income Taxes                           | 2,311                 | 9                        | 15                     | (10)      | 11                             | 25       |
| Total Increase in Revenue                              | 6,118                 | 23                       | 39                     | (27)      | 29                             | 64       |
| Total Revenue Before Increase                          | 186,308               | 1                        | 19                     | 59        | 12                             | 91       |
| Total Cost of Service Required from Rates              | 192,426               | 24                       | 58                     | 32        | 41                             | 155      |
| Less: Other Operating Revenues (Incl Contract Revenue) | 9,509                 | 1                        | 3                      | 2         | 1                              | 7        |
| Revenue Required from Rates                            | 182,917               | 23                       | 55                     | 30        | 40                             | 148      |
| Projected Rate of Return Before Increase               | 6.727%                |                          |                        |           |                                | (0.407%) |
| Projected Billing Units                                |                       |                          |                        |           |                                |          |
| Kwh  | 2,014,529,000         |                          |                        | 1,267,000 |                                |          |
| Kw Demand  | 3,304,802             | 8,085                    | 8,085                  |           |                                |          |
| Bills  | 1,170,228             |                          |                        |           | 552                            |          |
| Unit Cost of Service                                   |                       |                          |                        |           |                                |          |
| \$ per Kwh   |                       |                          |                        | 0.024     |                                |          |
| \$ per Kw Demand                                       |                       | 2.84                     | 6.80                   |           |                                |          |
| \$ per Customer Per Month                              |                       |                          |                        |           | 72.46                          |          |

Operating Income/Inverse of Federal income tax rate:  
 Operating Income for Proposed Return:

**MONTANA-DAKOTA UTILITIES CO.**  
**ELECTRIC UTILITY**  
**NORTH DAKOTA**  
 Embedded Class Cost of Service Study  
 Cost of Service by Component  
 Projected 2017 - Reflecting Staff Recommended Adjustments  
 (000's)

|  | Total<br>North Dakota | Large General Primary Rate 30 |                        |             | Customer | Total<br>LG Primary<br>Rate 30 |
|--|-----------------------|-------------------------------|------------------------|-------------|----------|--------------------------------|
|  |                       | Demand<br>Prod. & Trans.      | Demand<br>Distribution | Energy      |          |                                |
| Rate Base  | 520,229               | 27,557                        | 6,571                  | 334         | 236      | 34,698                         |
| Operating Income for Proposed Return                   | 38,805                | 2,055                         | 490                    | 25          | 18       | 2,588                          |
| Current Operating Income                               | 34,998                | (2,404)                       | 2,116                  | 3,229       | 17       | 2,958                          |
| Increase in Operating Income                           | 3,807                 | 4,459                         | (1,626)                | (3,204)     | 1        | (370)                          |
| Related Taxes for Increase                             |                       |                               |                        |             |          |                                |
| State & Federal Income Taxes                           | 2,311                 | 2,710                         | (988)                  | (1,947)     | 1        | (224)                          |
| Total Increase in Revenue                              | 6,118                 | 7,169                         | (2,614)                | (5,151)     | 2        | (594)                          |
| Total Revenue Before Increase                          | 186,308               | 275                           | 4,188                  | 10,185      | 53       | 14,701                         |
| Total Cost of Service Required from Rates              | 192,426               | 7,444                         | 1,574                  | 5,034       | 55       | 14,107                         |
| Less: Other Operating Revenues (Incl Contract Revenue) | 9,509                 | 275                           | 83                     | 254         | 4        | 616                            |
| Revenue Required from Rates                            | 182,917               | 7,169                         | 1,491                  | 4,780       | 51       | 13,491                         |
| Projected Rate of Return Before Increase               | 6.727%                |                               |                        |             |          | 8.525%                         |
| Projected Billing Units                                |                       |                               |                        |             |          |                                |
| Kwh  | 2,014,529,000         |                               |                        | 195,765,000 |          |                                |
| Kw Demand  | 3,304,802             | 468,864                       | 468,864                |             |          |                                |
| Bills  | 1,170,228             |                               |                        |             | 516      |                                |
| Unit Cost of Service                                   |                       |                               |                        |             |          |                                |
| \$ per Kwh   |                       |                               |                        | 0.024       |          |                                |
| \$ per Kw Demand                                       |                       | 15.29                         | 3.18                   |             |          |                                |
| \$ per Customer Per Month                              |                       |                               |                        |             | 98.84    |                                |

Operating Income/Inverse of Federal income tax rate:  
 Operating Income for Proposed Return:

**MONTANA-DAKOTA UTILITIES CO.**  
**ELECTRIC UTILITY**  
**NORTH DAKOTA**  
 Embedded Class Cost of Service Study  
 Cost of Service by Component  
 Projected 2017 - Reflecting Staff Recommended Adjustments  
 (000's)

|  | Total<br>North Dakota | Large General Secondary Rate 30 |                        |             | Total<br>LG Secondary<br>Rate 30 |          |
|--|-----------------------|---------------------------------|------------------------|-------------|----------------------------------|----------|
|  |                       | Demand<br>Prod. & Trans.        | Demand<br>Distribution | Energy      |                                  | Customer |
| Rate Base  | 520,229               | 128,549                         | 27,046                 | 1,302       | 11,032                           | 167,929  |
| Operating Income for Proposed Return                   | 38,805                | 9,588                           | 2,017                  | 97          | 823                              | 12,525   |
| Current Operating Income                               | 34,998                | (11,214)                        | 13,350                 | 13,110      | 533                              | 15,779   |
| Increase in Operating Income                           | 3,807                 | 20,802                          | (11,333)               | (13,013)    | 290                              | (3,254)  |
| Related Taxes for Increase                             |                       |                                 |                        |             |                                  |          |
| State & Federal Income Taxes                           | 2,311                 | 12,643                          | (6,888)                | (7,909)     | 176                              | (1,978)  |
| Total Increase in Revenue                              | 6,118                 | 33,445                          | (18,221)               | (20,922)    | 466                              | (5,232)  |
| Total Revenue Before Increase                          | 186,308               | 1,284                           | 24,793                 | 40,566      | 2,636                            | 69,279   |
| Total Cost of Service Required from Rates              | 192,426               | 34,729                          | 6,572                  | 19,644      | 3,102                            | 64,047   |
| Less: Other Operating Revenues (Incl Contract Revenue) | 9,509                 | 1,284                           | 336                    | 990         | 159                              | 2,769    |
| Revenue Required from Rates                            | 182,917               | 33,445                          | 6,236                  | 18,654      | 2,943                            | 61,278   |
| Projected Rate of Return Before Increase               | 6.727%                |                                 |                        |             |                                  | 9.396%   |
| Projected Billing Units                                |                       |                                 |                        |             |                                  |          |
| Kwh  | 2,014,529,000         |                                 |                        | 755,983,226 |                                  |          |
| Kw Demand  | 3,304,802             | 2,281,944                       | 2,281,944              |             |                                  |          |
| Bills  | 1,170,228             |                                 |                        |             | 55,044                           |          |
| Unit Cost of Service                                   |                       |                                 |                        |             |                                  |          |
| \$ per Kwh   |                       |                                 |                        | 0.025       |                                  |          |
| \$ per Kw Demand                                       |                       | 14.66                           | 2.73                   |             |                                  |          |
| \$ per Customer Per Month                              |                       |                                 |                        |             | 53.47                            |          |

Operating Income/Inverse of Federal income tax rate:  
 Operating Income for Proposed Return:

**MONTANA-DAKOTA UTILITIES CO.**  
**ELECTRIC UTILITY**  
**NORTH DAKOTA**  
 Embedded Class Cost of Service Study  
 Cost of Service by Component  
 Projected 2017 - Reflecting Staff Recommended Adjustments  
 (000's)

|  | Total<br>North Dakota | TOD Large General Rate 31 Primary |                        |           | Customer | Total<br>TOD LG Primary<br>Rate 31 |
|--|-----------------------|-----------------------------------|------------------------|-----------|----------|------------------------------------|
|  |                       | Demand<br>Prod. & Trans.          | Demand<br>Distribution | Energy    |          |                                    |
| Rate Base  | 520,229               | 292                               | 85                     | 4         | 6        | 387                                |
| Operating Income for Proposed Return                   | 38,805                | 22                                | 6                      | 0         | 0        | 28                                 |
| Current Operating Income                               | 34,998                | (25)                              | 18                     | 25        | 1        | 19                                 |
| Increase in Operating Income                           | 3,807                 | 47                                | (12)                   | (25)      | (1)      | 9                                  |
| Related Taxes for Increase                             |                       |                                   |                        |           |          |                                    |
| State & Federal Income Taxes                           | 2,311                 | 29                                | (7)                    | (15)      | (1)      | 6                                  |
| Total Increase in Revenue                              | 6,118                 | 76                                | (19)                   | (40)      | (2)      | 15                                 |
| Total Revenue Before Increase                          | 186,308               | 3                                 | 40                     | 92        | 1        | 136                                |
| Total Cost of Service Required from Rates              | 192,426               | 79                                | 21                     | 52        | (1)      | 151                                |
| Less: Other Operating Revenues (Incl Contract Revenue) | 9,509                 | 3                                 | 1                      | 3         | 0        | 7                                  |
| Revenue Required from Rates                            | 182,917               | 76                                | 20                     | 49        | (1)      | 144                                |
| Projected Rate of Return Before Increase               | 6.727%                |                                   |                        |           |          | 4.910%                             |
| Projected Billing Units                                |                       |                                   |                        |           |          |                                    |
| Kwh  | 2,014,529,000         |                                   |                        | 2,081,000 |          |                                    |
| Kw Demand  | 3,304,802             | 3,954                             | 3,954                  |           |          |                                    |
| Bills  | 1,170,228             |                                   |                        |           | 12       |                                    |
| Unit Cost of Service                                   |                       |                                   |                        |           |          |                                    |
| \$ per Kwh   |                       |                                   |                        | 0.024     |          |                                    |
| \$ per Kw Demand                                       |                       | 19.22                             | 5.06                   |           |          |                                    |
| \$ per Customer Per Month                              |                       |                                   |                        |           | (83.33)  |                                    |

Operating Income/Inverse of Federal income tax rate:  
 Operating Income for Proposed Return:

**MONTANA-DAKOTA UTILITIES CO.**  
**ELECTRIC UTILITY**  
**NORTH DAKOTA**  
 Embedded Class Cost of Service Study  
 Cost of Service by Component  
 Projected 2017 - Reflecting Staff Recommended Adjustments  
 (000's)

|  | Total<br>North Dakota | TOD Large General Rate 31 Secondary |                        |            | Total<br>TOD LG Seconda<br>Rate 31 |          |
|--|-----------------------|-------------------------------------|------------------------|------------|------------------------------------|----------|
|  |                       | Demand<br>Prod. & Trans.            | Demand<br>Distribution | Energy     |                                    | Customer |
| Rate Base  | 520,229               | 3,010                               | 634                    | 30         | 190                                | 3,864    |
| Operating Income for Proposed Return                   | 38,805                | 225                                 | 47                     | 2          | 14                                 | 288      |
| Current Operating Income                               | 34,998                | (263)                               | 313                    | 206        | 4                                  | 260      |
| Increase in Operating Income                           | 3,807                 | 488                                 | (266)                  | (204)      | 10                                 | 28       |
| Related Taxes for Increase                             |                       |                                     |                        |            |                                    |          |
| State & Federal Income Taxes                           | 2,311                 | 297                                 | (162)                  | (124)      | 6                                  | 17       |
| Total Increase in Revenue                              | 6,118                 | 785                                 | (428)                  | (328)      | 16                                 | 45       |
| Total Revenue Before Increase                          | 186,308               | 30                                  | 582                    | 785        | 39                                 | 1,436    |
| Total Cost of Service Required from Rates              | 192,426               | 815                                 | 154                    | 457        | 55                                 | 1,481    |
| Less: Other Operating Revenues (Incl Contract Revenue) | 9,509                 | 30                                  | 7                      | 23         | 1                                  | 61       |
| Revenue Required from Rates                            | 182,917               | 785                                 | 147                    | 434        | 54                                 | 1,420    |
| Projected Rate of Return Before Increase               | 6.727%                |                                     |                        |            |                                    | 6.729%   |
| Projected Billing Units                                |                       |                                     |                        |            |                                    |          |
| Kwh  | 2,014,529,000         |                                     |                        | 17,694,774 |                                    |          |
| Kw Demand  | 3,304,802             | 46,446                              | 46,446                 |            |                                    |          |
| Bills  | 1,170,228             |                                     |                        |            | 816                                |          |
| Unit Cost of Service                                   |                       |                                     |                        |            |                                    |          |
| \$ per Kwh   |                       |                                     |                        | 0.025      |                                    |          |
| \$ per Kw Demand                                       |                       | 16.90                               | 3.16                   |            |                                    |          |
| \$ per Customer Per Month                              |                       |                                     |                        |            | 66.18                              |          |

Operating Income/Inverse of Federal income tax rate:  
 Operating Income for Proposed Return:

**MONTANA-DAKOTA UTILITIES CO.**  
**ELECTRIC UTILITY**  
**NORTH DAKOTA**  
 Embedded Class Cost of Service Study  
 Cost of Service by Component  
 Projected 2017 - Reflecting Staff Recommended Adjustments  
 (000's)

|  | Total<br>North Dakota | Space Heating Rate 32    |                        |            | Customer      | Total<br>Space Heating<br>Rate 32 |
|--|-----------------------|--------------------------|------------------------|------------|---------------|-----------------------------------|
|  |                       | Demand<br>Prod. & Trans. | Demand<br>Distribution | Energy     |               |                                   |
| Rate Base  | 520,229               | 6,858                    | 2,836                  | 96         | 282           | 10,072                            |
| Operating Income for Proposed Return                   | 38,805                | 512                      | 212                    | 7          | 21            | 752                               |
| Current Operating Income                               | 34,998                | (597)                    | 159                    | 1,143      | (6)           | 699                               |
| Increase in Operating Income                           | 3,807                 | 1,109                    | 53                     | (1,136)    | 27            | 53                                |
| Related Taxes for Increase                             |                       |                          |                        |            |               |                                   |
| State & Federal Income Taxes                           | 2,311                 | 674                      | 32                     | (690)      | 16            | 32                                |
| Total Increase in Revenue                              | 6,118                 | 1,783                    | 85                     | (1,826)    | 43            | 85                                |
| Total Revenue Before Increase                          | 186,308               | 69                       | 591                    | 3,282      | 118           | 4,060                             |
| Total Cost of Service Required from Rates              | 192,426               | 1,852                    | 676                    | 1,456      | 161           | 4,145                             |
| Less: Other Operating Revenues (Incl Contract Revenue) | 9,509                 | 69                       | 35                     | 73         | 6             | 183                               |
| Revenue Required from Rates                            | 182,917               | 1,783                    | 641                    | 1,383      | 155           | 3,962                             |
| Projected Rate of Return Before Increase               | <b>6.727%</b>         |                          |                        |            | <b>6.940%</b> |                                   |
| Projected Billing Units                                |                       |                          |                        |            |               |                                   |
| Kwh  | 2,014,529,000         |                          |                        | 55,941,000 |               |                                   |
| Kw Demand  | 3,304,802             | 273,550                  | 273,550                |            |               |                                   |
| Bills  | 1,170,228             |                          |                        |            | 7,476         |                                   |
| Unit Cost of Service                                   |                       |                          |                        |            |               |                                   |
| \$ per Kwh   |                       |                          |                        | 0.025      |               |                                   |
| \$ per Kw Demand                                       |                       | 6.52                     | 2.34                   |            |               |                                   |
| \$ per Customer Per Month                              |                       |                          |                        |            | 20.73         |                                   |

Operating Income/Inverse of Federal income tax rate:  
 Operating Income for Proposed Return:

**MONTANA-DAKOTA UTILITIES CO.**  
**ELECTRIC UTILITY**  
**NORTH DAKOTA**  
 Embedded Class Cost of Service Study  
 Cost of Service by Component  
 Projected 2017 - Reflecting Staff Recommended Adjustments  
 (000's)

|  | Total<br>North Dakota | Small Municipal Rate 40  |                        |           | Total<br>Sm Municipal<br>Rate 40 |          |
|--|-----------------------|--------------------------|------------------------|-----------|----------------------------------|----------|
|  |                       | Demand<br>Prod. & Trans. | Demand<br>Distribution | Energy    |                                  | Customer |
| Rate Base  | 520,229               | 711                      | 175                    | 7         | 389                              | 1,282    |
| Operating Income for Proposed Return                   | 38,805                | 53                       | 13                     | 1         | 29                               | 96       |
| Current Operating Income                               | 34,998                | (62)                     | 18                     | 80        | 11                               | 46       |
| Increase in Operating Income                           | 3,807                 | 115                      | (5)                    | (79)      | 18                               | 50       |
| Related Taxes for Increase                             |                       |                          |                        |           |                                  |          |
| State & Federal Income Taxes                           | 2,311                 | 70                       | (3)                    | (48)      | 11                               | 29       |
| Total Increase in Revenue                              | 6,118                 | 185                      | (8)                    | (127)     | 29                               | 79       |
| Total Revenue Before Increase                          | 186,308               | 7                        | 50                     | 234       | 79                               | 370      |
| Total Cost of Service Required from Rates              | 192,426               | 192                      | 42                     | 107       | 108                              | 449      |
| Less: Other Operating Revenues (Incl Contract Revenue) | 9,509                 | 7                        | 1                      | 5         | 4                                | 17       |
| Revenue Required from Rates                            | 182,917               | 185                      | 41                     | 102       | 104                              | 432      |
| Projected Rate of Return Before Increase               | 6.727%                |                          |                        |           |                                  | 3.588%   |
| Projected Billing Units                                |                       |                          |                        |           |                                  |          |
| Kwh  | 2,014,529,000         |                          |                        | 4,076,000 |                                  |          |
| Kw Demand  | 3,304,802             | 9,468                    | 9,468                  |           |                                  |          |
| Bills  | 1,170,228             |                          |                        |           | 3,708                            |          |
| Unit Cost of Service                                   |                       |                          |                        |           |                                  |          |
| \$ per Kwh   |                       |                          |                        | 0.025     |                                  |          |
| \$ per Kw Demand                                       |                       | 19.54                    | 4.33                   |           |                                  |          |
| \$ per Customer Per Month                              |                       |                          |                        |           | 28.05                            |          |

Operating Income/Inverse of Federal income tax rate:  
 Operating Income for Proposed Return:

**MONTANA-DAKOTA UTILITIES CO.**  
**ELECTRIC UTILITY**  
**NORTH DAKOTA**  
 Embedded Class Cost of Service Study  
 Cost of Service by Component  
 Projected 2017 - Reflecting Staff Recommended Adjustments  
 (000's)

|  | Total<br>North Dakota | Municipal Lighting Primary Rate 41 |                        |           | Total<br>Mun Lighting Pri<br>Rate 41 |          |
|--|-----------------------|------------------------------------|------------------------|-----------|--------------------------------------|----------|
|  |                       | Demand<br>Prod. & Trans.           | Demand<br>Distribution | Energy    |                                      | Customer |
| Rate Base  | 520,229               | 114                                | 82                     | 3         | 28                                   | 227      |
| Operating Income for Proposed Return                   | 38,805                | 9                                  | 6                      | 0         | 2                                    | 17       |
| Current Operating Income                               | 34,998                | (9)                                | (5)                    | 51        | (2)                                  | 34       |
| Increase in Operating Income                           | 3,807                 | 18                                 | 11                     | (51)      | 4                                    | (17)     |
| Related Taxes for Increase                             |                       |                                    |                        |           |                                      |          |
| State & Federal Income Taxes                           | 2,311                 | 11                                 | 7                      | (31)      | 2                                    | (12)     |
| Total Increase in Revenue                              | 6,118                 | 29                                 | 18                     | (82)      | 6                                    | (29)     |
| Total Revenue Before Increase                          | 186,308               | 1                                  | 0                      | 126       | 0                                    | 127      |
| Total Cost of Service Required from Rates              | 192,426               | 30                                 | 18                     | 44        | 6                                    | 98       |
| Less: Other Operating Revenues (Incl Contract Revenue) | 9,509                 | 1                                  | 0                      | 2         | 0                                    | 3        |
| Revenue Required from Rates                            | 182,917               | 29                                 | 18                     | 42        | 6                                    | 95       |
| Projected Rate of Return Before Increase               | 6.727%                |                                    |                        |           |                                      | 14.978%  |
| Projected Billing Units                                |                       |                                    |                        |           |                                      |          |
| Kwh  | 2,014,529,000         | 1,719,000                          | 1,719,000              | 1,719,000 |                                      |          |
| Kw Demand  | 3,304,802             |                                    |                        |           |                                      |          |
| Bills  | 1,170,228             |                                    |                        |           |                                      |          |
| Unit Cost of Service                                   |                       |                                    |                        |           |                                      |          |
| \$ per Kwh   |                       | 0.017                              | 0.010                  | 0.024     |                                      |          |
| \$ per Kw Demand                                       |                       |                                    |                        |           |                                      |          |
| \$ per Customer Per Month                              |                       |                                    |                        |           |                                      |          |

Operating Income/Inverse of Federal income tax rate:  
 Operating Income for Proposed Return:

**MONTANA-DAKOTA UTILITIES CO.**  
**ELECTRIC UTILITY**  
**NORTH DAKOTA**  
 Embedded Class Cost of Service Study  
 Cost of Service by Component  
 Projected 2017 - Reflecting Staff Recommended Adjustments  
 (000's)

|  | Total<br>North Dakota | Municipal Lighting Secondary Rate 41 |                        |                    | Total<br>Mun Lighting Sec<br>Rate 41 |         |
|--|-----------------------|--------------------------------------|------------------------|--------------------|--------------------------------------|---------|
|  |                       | Demand<br>Prod. & Trans.             | Demand<br>Distribution | Energy<br>Customer |                                      |         |
| Rate Base  | 520,229               | 1,139                                | 1,278                  | 31                 | 2,192                                | 4,640   |
| Operating Income for Proposed Return                   | 38,805                | 85                                   | 95                     | 2                  | 164                                  | 346     |
| Current Operating Income                               | 34,998                | (100)                                | (82)                   | 599                | 136                                  | 553     |
| Increase in Operating Income                           | 3,807                 | 185                                  | 177                    | (597)              | 28                                   | (207)   |
| Related Taxes for Increase                             |                       |                                      |                        |                    |                                      |         |
| State & Federal Income Taxes                           | 2,311                 | 112                                  | 108                    | (363)              | 17                                   | (126)   |
| Total Increase in Revenue                              | 6,118                 | 297                                  | 285                    | (960)              | 45                                   | (333)   |
| Total Revenue Before Increase                          | 186,308               | 11                                   | 16                     | 1,434              | 645                                  | 2,106   |
| Total Cost of Service Required from Rates              | 192,426               | 308                                  | 301                    | 474                | 690                                  | 1,773   |
| Less: Other Operating Revenues (Incl Contract Revenue) | 9,509                 | 11                                   | 16                     | 24                 | 645                                  | 696     |
| Revenue Required from Rates                            | 182,917               | 297                                  | 285                    | 450                | 45                                   | 1,077   |
| Projected Rate of Return Before Increase               | 6.727%                |                                      |                        |                    |                                      | 11.918% |
| Projected Billing Units                                |                       |                                      |                        |                    |                                      |         |
| Kwh  | 2,014,529,000         | 18,127,000                           | 18,127,000             | 18,127,000         |                                      |         |
| Kw Demand  | 3,304,802             |                                      |                        |                    |                                      |         |
| Bills  | 1,170,228             |                                      |                        |                    |                                      |         |
| Unit Cost of Service                                   |                       |                                      |                        |                    |                                      |         |
| \$ per Kwh   |                       | 0.016                                | 0.016                  | 0.025              |                                      |         |
| \$ per Kw Demand                                       |                       |                                      |                        |                    |                                      |         |
| \$ per Customer Per Month                              |                       |                                      |                        |                    |                                      |         |

Operating Income/Inverse of Federal income tax rate:  
 Operating Income for Proposed Return:

**MONTANA-DAKOTA UTILITIES CO.**  
**ELECTRIC UTILITY**  
**NORTH DAKOTA**  
 Embedded Class Cost of Service Study  
 Cost of Service by Component  
 Projected 2017 - Reflecting Staff Recommended Adjustments  
 (000's)

|  | Total<br>North Dakota | Municipal Pumping Primary Rate 48 |                        |            | Customer | Total<br>Mun Pumping Pri<br>Rate 48 |
|--|-----------------------|-----------------------------------|------------------------|------------|----------|-------------------------------------|
|  |                       | Demand<br>Prod. & Trans.          | Demand<br>Distribution | Energy     |          |                                     |
| Rate Base  | 520,229               | 2,056                             | 645                    | 24         | 28       | 2,753                               |
| Operating Income for Proposed Return                   | 38,805                | 153                               | 48                     | 2          | 2        | 205                                 |
| Current Operating Income                               | 34,998                | (179)                             | 67                     | 189        | 0        | 77                                  |
| Increase in Operating Income                           | 3,807                 | 332                               | (19)                   | (187)      | 2        | 128                                 |
| Related Taxes for Increase                             |                       |                                   |                        |            |          |                                     |
| State & Federal Income Taxes                           | 2,311                 | 202                               | (12)                   | (114)      | 1        | 77                                  |
| Total Increase in Revenue                              | 6,118                 | 534                               | (31)                   | (301)      | 3        | 205                                 |
| Total Revenue Before Increase                          | 186,308               | 20                                | 184                    | 658        | 1        | 863                                 |
| Total Cost of Service Required from Rates              | 192,426               | 554                               | 153                    | 357        | 4        | 1,068                               |
| Less: Other Operating Revenues (Incl Contract Revenue) | 9,509                 | 20                                | 8                      | 18         | 0        | 46                                  |
| Revenue Required from Rates                            | 182,917               | 534                               | 145                    | 339        | 4        | 1,022                               |
| Projected Rate of Return Before Increase               | 6.727%                |                                   |                        |            |          | 2.797%                              |
| Projected Billing Units                                |                       |                                   |                        |            |          |                                     |
| Kwh  | 2,014,529,000         |                                   |                        | 13,894,000 |          |                                     |
| Kw Demand  | 3,304,802             | 35,805                            | 35,805                 |            |          |                                     |
| Bills  | 1,170,228             |                                   |                        |            | 48       |                                     |
| Unit Cost of Service                                   |                       |                                   |                        |            |          |                                     |
| \$ per Kwh   |                       |                                   |                        | 0.024      |          |                                     |
| \$ per Kw Demand                                       |                       | 14.91                             | 4.05                   |            |          |                                     |
| \$ per Customer Per Month                              |                       |                                   |                        |            | 83.33    |                                     |

Operating Income/Inverse of Federal income tax rate:  
 Operating Income for Proposed Return:

**MONTANA-DAKOTA UTILITIES CO.**  
**ELECTRIC UTILITY**  
**NORTH DAKOTA**  
 Embedded Class Cost of Service Study  
 Cost of Service by Component  
 Projected 2017 - Reflecting Staff Recommended Adjustments  
 (000's)

|  | Total<br>North Dakota | Municipal Pumping Secondary Rate 48 |                        |            | Customer | Total<br>Mun Pumping Sec<br>Rate 48 |
|--|-----------------------|-------------------------------------|------------------------|------------|----------|-------------------------------------|
|  |                       | Demand<br>Prod. & Trans.            | Demand<br>Distribution | Energy     |          |                                     |
| Rate Base  | 520,229               | 3,802                               | 1,350                  | 43         | 659      | 5,854                               |
| Operating Income for Proposed Return                   | 38,805                | 284                                 | 101                    | 3          | 49       | 437                                 |
| Current Operating Income                               | 34,998                | (331)                               | 281                    | 375        | (36)     | 289                                 |
| Increase in Operating Income                           | 3,807                 | 615                                 | (180)                  | (372)      | 85       | 148                                 |
| Related Taxes for Increase                             |                       |                                     |                        |            |          |                                     |
| State & Federal Income Taxes                           | 2,311                 | 374                                 | (109)                  | (226)      | 52       | 91                                  |
| Total Increase in Revenue                              | 6,118                 | 989                                 | (289)                  | (598)      | 137      | 239                                 |
| Total Revenue Before Increase                          | 186,308               | 38                                  | 613                    | 1,250      | 47       | 1,948                               |
| Total Cost of Service Required from Rates              | 192,426               | 1,027                               | 324                    | 652        | 184      | 2,187                               |
| Less: Other Operating Revenues (Incl Contract Revenue) | 9,509                 | 38                                  | 16                     | 33         | 10       | 97                                  |
| Revenue Required from Rates                            | 182,917               | 989                                 | 308                    | 619        | 174      | 2,090                               |
| Projected Rate of Return Before Increase               | 6.727%                |                                     |                        |            |          | 4.937%                              |
| Projected Billing Units                                |                       |                                     |                        |            |          |                                     |
| Kwh  | 2,014,529,000         |                                     |                        | 25,168,000 |          |                                     |
| Kw Demand  | 3,304,802             | 91,118                              | 91,118                 |            |          |                                     |
| Bills  | 1,170,228             |                                     |                        |            | 3,828    |                                     |
| Unit Cost of Service                                   |                       |                                     |                        |            |          |                                     |
| \$ per Kwh   |                       |                                     |                        | 0.025      |          |                                     |
| \$ per Kw Demand                                       |                       | 10.85                               | 3.38                   |            |          |                                     |
| \$ per Customer Per Month                              |                       |                                     |                        |            | 45.45    |                                     |

Operating Income/Inverse of Federal income tax rate:  
 Operating Income for Proposed Return:

**MONTANA-DAKOTA UTILITIES CO.**  
**ELECTRIC UTILITY**  
**NORTH DAKOTA**  
 Embedded Class Cost of Service Study  
 Cost of Service by Component  
 Projected 2017 - Reflecting Staff Recommended Adjustments  
 (000's)

|  | Total<br>North Dakota | Outdoor Lighting Rate 52 |                        |           | Customer | Total<br>Outdoor Lighting<br>Rate 52 |
|--|-----------------------|--------------------------|------------------------|-----------|----------|--------------------------------------|
|  |                       | Demand<br>Prod. & Trans. | Demand<br>Distribution | Energy    |          |                                      |
| Rate Base  | 520,229               | 747                      | 389                    | 13        | 635      | 1,784                                |
| Operating Income for Proposed Return                   | 38,805                | 56                       | 29                     | 1         | 47       | 133                                  |
| Current Operating Income                               | 34,998                | (66)                     | (27)                   | 324       | 1        | 232                                  |
| Increase in Operating Income                           | 3,807                 | 122                      | 56                     | (323)     | 46       | (99)                                 |
| Related Taxes for Increase                             |                       |                          |                        |           |          |                                      |
| State & Federal Income Taxes                           | 2,311                 | 74                       | 34                     | (196)     | 28       | (60)                                 |
| Total Increase in Revenue                              | 6,118                 | 196                      | 90                     | (519)     | 74       | (159)                                |
| Total Revenue Before Increase                          | 186,308               | 8                        | 4                      | 715       | 209      | 936                                  |
| Total Cost of Service Required from Rates              | 192,426               | 204                      | 94                     | 196       | 283      | 777                                  |
| Less: Other Operating Revenues (Incl Contract Revenue) | 9,509                 | 8                        | 4                      | 10        | 209      | 231                                  |
| Revenue Required from Rates                            | 182,917               | 196                      | 90                     | 186       | 74       | 546                                  |
| Projected Rate of Return Before Increase               | 6.727%                |                          |                        |           |          | 13.004%                              |
| Projected Billing Units                                |                       |                          |                        |           |          |                                      |
| Kwh  | 2,014,529,000         | 7,437,000                | 7,437,000              | 7,437,000 |          |                                      |
| Kw Demand  | 3,304,802             |                          |                        |           |          |                                      |
| Bills  | 1,170,228             |                          |                        |           |          |                                      |
| Unit Cost of Service                                   |                       |                          |                        |           |          |                                      |
| \$ per Kwh   |                       | 0.026                    | 0.012                  | 0.025     |          |                                      |
| \$ per Kw Demand                                       |                       |                          |                        |           |          |                                      |
| \$ per Customer Per Month                              |                       |                          |                        |           |          |                                      |

Operating Income/Inverse of Federal income tax rate:  
 Operating Income for Proposed Return:

**MONTANA-DAKOTA UTILITIES CO.**  
**ELECTRIC UTILITY**  
**NORTH DAKOTA**  
 Embedded Class Cost of Service Study  
 Cost of Service by Component  
 Projected 2017 - Reflecting Staff Recommended Adjustments  
 (000's)

|  | Total<br>North Dakota | Interruptible Demand Response Rate 38 |                        |            |          | Total<br>IT Demand Response<br>Rate 38 |
|--|-----------------------|---------------------------------------|------------------------|------------|----------|--|
|  |                       | Demand<br>Prod. & Trans.              | Demand<br>Distribution | Energy     | Customer |  |
| Rate Base  | 520,229               | 3,917                                 | 1,169                  | 54         | 16       | 5,156                                  |
| Operating Income for Proposed Return                   | 38,805                | 292                                   | 87                     | 4          | 1        | 384                                    |
| Current Operating Income                               | 34,998                | (343)                                 | 286                    | 432        | 10       | 386                                    |
| Increase in Operating Income                           | 3,807                 | 635                                   | (199)                  | (428)      | (9)      | (2)                                    |
| Related Taxes for Increase                             |                       |                                       |                        |            |          |  |
| State & Federal Income Taxes                           | 2,311                 | 386                                   | (121)                  | (260)      | (5)      | 1                                      |
| Total Increase in Revenue                              | 6,118                 | 1,021                                 | (320)                  | (688)      | (14)     | (1)                                    |
| Total Revenue Before Increase                          | 186,308               | 39                                    | 601                    | 1,507      | 18       | 2,165                                  |
| Total Cost of Service Required from Rates              | 192,426               | 1,060                                 | 281                    | 819        | 4        | 2,164                                  |
| Less: Other Operating Revenues (Incl Contract Revenue) | 9,509                 | 39                                    | 15                     | 41         | 0        | 95                                     |
| Revenue Required from Rates                            | 182,917               | 1,021                                 | 266                    | 778        | 4        | 2,069                                  |
| Projected Rate of Return Before Increase               | 6.727%                |                                       |                        |            |          | 7.486%                                 |
| Projected Billing Units                                |                       |                                       |                        |            |          |  |
| Kwh  | 2,014,529,000         |                                       |                        | 31,911,000 |          |  |
| Kw Demand  | 3,304,802             | 85,568                                | 85,568                 |            |          |  |
| Bills  | 1,170,228             |                                       |                        |            | 36       |  |
| Unit Cost of Service                                   |                       |                                       |                        |            |          |  |
| \$ per Kwh   |                       |                                       |                        | 0.024      |          |  |
| \$ per Kw Demand                                       |                       | 11.93                                 | 3.11                   |            |          |  |
| \$ per Customer Per Month                              |                       |                                       |                        |            | 111.11   |  |

Operating Income/Inverse of Federal income tax rate:  
 Operating Income for Proposed Return: