



**BLACK HILLS ENERGY**  
**ENVIRONMENTAL IMPROVEMENT ADJUSTMENT**  
**For the Pro Forma Year End May 31, 2017**

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**BLACK HILLS ENERGY**  
**COST RECOVERY RATE - ENVIRONMENTAL IMPROVEMENTS**  
Rate Calculation Effective June 1, 2016

| Line No. | Description  | Reference                         | South Dakota Forecast |
|----------|--|-----------------------------------|-----------------------|
| 1        |  |                                   |                       |
| 2        | Environmental Improvement Year 2 Revenue Requirement (June 1, 2016 through May 31, 2017) | Schedule 4-3 line 2               | \$ 275,407            |
| 3        |  |                                   |                       |
| 4        | Production Capacity Allocators by Customer Class   |                                   |                       |
| 5        | Residential  | Docket No. EL14-026               | 38.072%               |
| 6        | Small General Service  | Docket No. EL14-026               | 30.920%               |
| 7        | Large General Service and Industrial   | Docket No. EL14-026               | 30.426%               |
| 8        | Lighting   | Docket No. EL14-026               | 0.582%                |
| 9        |  |                                   |                       |
| 10       | Revenue Requirement by Customer Class  |                                   |                       |
| 11       | Residential  |                                   |                       |
| 12       | Forecasted 2nd Year EIA Revenue Requirement  | line 2 x line 5                   | \$ 104,853            |
| 13       | Balancing Account Under/(Over) Recovery  | Schedule 4-2 line 10              | 112                   |
| 14       | Net Residential Revenue Requirement  | line 12 + line 13                 | \$ 104,965            |
| 15       |  |                                   |                       |
| 16       | Small General Service  |                                   |                       |
| 17       | Forecasted 2nd Year EIA Revenue Requirement  | line 2 x line 6                   | \$ 85,156             |
| 18       | Balancing Account Under/(Over) Recovery  | Schedule 4-2 line 23              | 13,080                |
| 19       | Net Small General Service Revenue Requirement  | line 17 + line 18                 | \$ 98,236             |
| 20       |  |                                   |                       |
| 21       | Large General Service and Industrial   |                                   |                       |
| 22       | Forecasted 2nd Year EIA Revenue Requirement  | line 2 x line 7                   | \$ 83,795             |
| 23       | Balancing Account Under/(Over) Recovery  | Schedule 4-2 line 36              | 8,570                 |
| 24       | Net Large General Service and Industrial Revenue Requirement                             | line 22 + line 23                 | \$ 92,365             |
| 25       |  |                                   |                       |
| 26       | Lighting   |                                   |                       |
| 27       | Forecasted 2nd Year EIA Revenue Requirement  | line 2 x line 8                   | \$ 1,603              |
| 28       | Balancing Account Under/(Over) Recovery  | Schedule 4-2 line 49              | 82                    |
| 29       | Net Lighting Revenue Requirement   | line 27 + line 28                 | \$ 1,685              |
| 30       |  |                                   |                       |
| 31       | Forecasted South Dakota kWh sales  |                                   |                       |
| 32       | Residential  | 6/1/16 - 5/31/17 BHP Sales Budget | 534,996,818           |
| 33       | Small General Service  | 6/1/16 - 5/31/17 BHP Sales Budget | 423,681,795           |
| 34       | Large General Service and Industrial   | 6/1/16 - 5/31/17 BHP Sales Budget | 551,372,025           |
| 35       | Lighting   | 6/1/16 - 5/31/17 BHP Sales Budget | 14,184,532            |
| 36       |  |                                   |                       |
| 37       | Environmental Improvement Adjustment Rate / kWh (June 1, 2016 through May 31, 2017)      |                                   |                       |
| 38       | Residential  | line 14 ÷ line 32                 | \$ 0.00020            |
| 39       | Small General Service  | line 19 ÷ line 33                 | \$ 0.00023            |
| 40       | Large General Service and Industrial   | line 24 ÷ line 34                 | \$ 0.00017            |
| 41       | Lighting   | line 29 ÷ line 35                 | \$ 0.00012            |



BLACK HILLS ENERGY  
EIA ANNUAL BALANCING ACCOUNT TRUE-UP

| Line No.                                       | Actual Jun-15 | Actual Jul-15 | Actual Aug-15 | Actual Sep-15 | Actual Oct-15 | Actual Nov-15 | Actual Dec-15 | Actual Jan-16 | Forecasted Feb-16 | Forecasted Mar-16 | Forecasted Apr-16 | Forecasted May-16 | Forecasted Jun-16 |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b>1 Residential</b>                           |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| 2 Expected Recovery                            | \$ 2,223      | \$ 4,447      | \$ 10,754     | \$ 4,447      | \$ 4,447      | \$ 4,447      | \$ 4,447      | \$ 4,447      | \$ 4,447          | \$ 4,447          | \$ 4,447          | \$ 4,447          | \$ 2,223          |
| 3 Actual Revenues                              | \$ 1,649      | \$ 4,824      | \$ 5,292      | \$ 4,812      | \$ 3,906      | \$ 4,085      | \$ 5,979      | 6,662         | 5,629             | 5,555             | 4,583             | 4,392             | 2,386             |
| 4 Monthly Under/(Over) Recovery                | 575           | (378)         | 5,462         | (365)         | 540           | 362           | (1,532)       | (2,215)       | (1,182)           | (1,108)           | (136)             | 55                | (163)             |
| 5  |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| 6 Days in Current Month                        | 30            | 31            | 31            | 30            | 31            | 30            | 31            | 31            | 29                | 31                | 30                | 31                | 30                |
| 7 Interest Rate                                | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%             | 7.00%             | 7.00%             | 7.00%             | 7.00%             |
| 8 Monthly Interest                             | 3             | 1             | 34            | 31            | 35            | 36            | 29            | 16            | 8                 | 2                 | 1                 | 2                 | 1                 |
| 9  |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| 10 Balancing Account                           | \$ 578        | \$ 202        | \$ 5,698      | \$ 5,363      | \$ 5,938      | \$ 6,337      | \$ 4,833      | \$ 2,633      | \$ 1,459          | \$ 353            | \$ 218            | \$ 274            | \$ 112            |
| 11   |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| <b>12</b>                                      |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| <b>13 Small General Service</b>                |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| 14 Expected Recovery                           | \$ 1,806      | \$ 3,611      | \$ 17,971     | \$ 3,611      | \$ 3,611      | \$ 3,611      | \$ 3,611      | \$ 3,611      | \$ 3,611          | \$ 3,611          | \$ 3,611          | \$ 3,611          | \$ 1,806          |
| 15 Actual Revenues                             | \$ 1,320      | \$ 4,207      | \$ 4,766      | \$ 4,284      | \$ 3,757      | \$ 3,357      | \$ 3,989      | 4,039         | 3,370             | 3,610             | 3,339             | 3,416             | 1,976             |
| 16 Monthly Under/(Over) Recovery               | 486           | (595)         | 13,205        | (673)         | (146)         | 254           | (377)         | (427)         | 241               | 1                 | 272               | 195               | (170)             |
| 17   |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| 18 Interest:                                   |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| 19 Days in Current Month                       | 30            | 31            | 31            | 30            | 31            | 30            | 31            | 31            | 29                | 31                | 30                | 31                | 30                |
| 20 Interest Rate                               | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%             | 7.00%             | 7.00%             | 7.00%             | 7.00%             |
| 21 Monthly Interest                            | 3             | (1)           | 78            | 72            | 74            | 73            | 74            | 72            | 69                | 74                | 74                | 78                | 75                |
| 22   |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| 23 Balancing Account                           | \$ 489        | \$ (107)      | \$ 13,176     | \$ 12,575     | \$ 12,503     | \$ 12,830     | \$ 12,527     | \$ 12,172     | \$ 12,482         | \$ 12,557         | \$ 12,903         | \$ 13,176         | \$ 13,080         |
| 24   |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| <b>25</b>                                      |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| <b>26 Large General Service and Industrial</b> |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| 27 Expected Recovery                           | \$ 1,777      | \$ 3,554      | \$ 9,877      | \$ 3,554      | \$ 3,554      | \$ 3,554      | \$ 3,554      | \$ 3,554      | \$ 3,554          | \$ 3,554          | \$ 3,554          | \$ 3,554          | \$ 1,777          |
| 28 Actual Revenues                             | \$ 745        | \$ 3,358      | \$ 3,478      | \$ 3,418      | \$ 3,379      | \$ 3,203      | \$ 3,037      | 3,073         | 3,904             | 3,478             | 3,688             | 4,103             | 2,104             |
| 29 Monthly Under/(Over) Recovery               | 1,032         | 196           | 6,398         | 135           | 175           | 351           | 517           | 481           | (350)             | 76                | (134)             | (549)             | (327)             |
| 30   |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| 31 Interest:                                   |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| 32 Days in Current Month                       | 30            | 31            | 31            | 30            | 31            | 30            | 31            | 31            | 29                | 31                | 30                | 31                | 30                |
| 33 Interest Rate                               | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%             | 7.00%             | 7.00%             | 7.00%             | 7.00%             |
| 34 Monthly Interest                            | 6             | 7             | 45            | 45            | 48            | 49            | 54            | 57            | 51                | 56                | 53                | 52                | 49                |
| 35   |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| 36 Balancing Account                           | \$ 1,038      | \$ 1,241      | \$ 7,685      | \$ 7,865      | \$ 8,088      | \$ 8,487      | \$ 9,057      | \$ 9,595      | \$ 9,296          | \$ 9,427          | \$ 9,346          | \$ 8,849          | \$ 8,570          |
| 37   |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| <b>38</b>                                      |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| <b>39 Lighting</b>                             |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| 40 Expected Recovery                           | \$ 34         | \$ 68         | \$ 26         | \$ 68         | \$ 68         | \$ 68         | \$ 68         | \$ 68         | \$ 68             | \$ 68             | \$ 68             | \$ 68             | \$ 34             |
| 41 Actual Revenues                             | \$ 11         | \$ 41         | \$ 46         | \$ 49         | \$ 56         | \$ 61         | \$ 65         | 65            | 76                | 73                | 68                | 59                | 26                |
| 42 Monthly Under/(Over) Recovery               | 23            | 27            | (20)          | 19            | 12            | 7             | 3             | 3             | (8)               | (5)               | (0)               | 9                 | 8                 |
| 43   |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| 44 Interest:                                   |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| 45 Days in Current Month                       | 30            | 31            | 31            | 30            | 31            | 30            | 31            | 31            | 29                | 31                | 30                | 31                | 30                |
| 46 Interest Rate                               | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%         | 7.00%             | 7.00%             | 7.00%             | 7.00%             | 7.00%             |
| 47 Monthly Interest                            | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0                 | 0                 | 0                 | 0                 | 0                 |
| 48   |               |               |               |               |               |               |               |               |                   |                   |                   |                   |                   |
| 49 Balancing Account                           | \$ 23         | \$ 51         | \$ 30         | \$ 50         | \$ 63         | \$ 70         | \$ 73         | \$ 76         | \$ 69             | \$ 64             | \$ 64             | \$ 74             | \$ 82             |



**BLACK HILLS ENERGY**  
**COST OF SERVICE - ENVIRONMENTAL IMPROVEMENTS**  
**Year Two Revenue Requirement Calculation**

| Line No. | Description                             | Reference                                | South Dakota<br>Jurisdiction |
|----------|---|--|------------------------------|
| 1        | Operating Revenue Required              |  |                              |
| 2        | Environmental Improvement Revenue       |  | \$ 275,407                   |
| 3        |   |  |                              |
| 4        | Operating Expenses                      |  |                              |
| 5        | Depreciation                            | Schedule 4-5, line 10                    | 69,692                       |
| 6        | Assessed Filing Fee                     | Docket EL15-008                          | 2,505                        |
| 7        | Total Operating Expenses                |  | <u>72,196</u>                |
| 8        |   |  |                              |
| 9        | Operating Income Before Tax             | (line 2 - line 7)                        | 203,211                      |
| 10       |   |  |                              |
| 11       | Federal Income Tax                      | Schedule 4-5, line 21                    | 51,562                       |
| 12       |   |  |                              |
| 13       | Return (Operating Income)               | Schedule 4-5, line 18 (line 9 - line 11) | <u>\$ 151,649</u>            |
| 14       |   |  |                              |
| 15       | Rate of Return                          |  | <u>7.76%</u>                 |
| 16       |   |  |                              |
| 17       | Rate Base                               |  |                              |
| 18       | Plant in Service                        | Schedule 4-4, line 8                     | 2,445,972                    |
| 19       | Less: Accumulated Depreciation          | Schedule 4-4, line 13                    | 69,516                       |
| 20       | Less: Accumulated Deferred Income Taxes | Schedule 4-4, line 23                    | 422,214                      |
| 21       |   |  |                              |
| 22       | Total Rate Base                         | (line 18 - line 19 - line 20)            | <u>\$ 1,954,242</u>          |



**BLACK HILLS ENERGY**  
**RATE BASE - ENVIRONMENTAL IMPROVEMENTS**  
**Year Two Revenue Requirement Calculation**

| Line No. | Description   | (a)<br>Plant in Service for Rate Base | (b)<br>South Dakota Jurisdictional Allocation | (c)<br>(a) * (b)<br>South Dakota Plant in Service for Rate Base | (d)<br>Date in Service | (e)<br>Note (1)<br>Allocation Based on In-Service Date | (f)<br>(d) * (e)<br>South Dakota Allocation Based on In-Service Date |
|----------|---|---------------------------------------|---|---|------------------------|--|--|
| 1        | Property, Plant, and Equipment                                      |                                       |   |   |                        |  |  |
| 2        | Wyodak - Mercury Control System                                     | \$ 1,146,209                          | 89.831%                                       | \$ 1,029,651  | 4/15/2015              | 100.00%  | \$ 1,029,651   |
| 3        | Wygen III - CO & O2 Grid Install                                    | 144,171                               | 89.831%                                       | 129,510   | 12/31/2015             | 100.00%  | 129,510  |
| 4        | NS Common - Compressed Air  | 701,460                               | 89.831%                                       | 630,129   | 6/1/2016               | 100.00%  | 630,129  |
| 5        | NSII - Electrostatic precipitator (ESP)                             | 1,314,100                             | 89.831%                                       | 1,180,469   | 4/30/2017              | 8.77%  | 103,527  |
| 6        | NS Common - Amended Silicates Silo - Neil Simpson II                | 972,017                               | 89.831%                                       | 873,173   | 12/31/2016             | 41.64%   | 363,589  |
| 7        | NS Common - Amended Silicates Silo - Wygen III                      | 506,786                               | 89.831%                                       | 455,251   | 12/31/2016             | 41.64%   | 189,566  |
| 8        | Total Plant in Service - Environmental Improvements                 | <u>\$ 4,784,743</u>                   |   | <u>\$ 4,298,182</u>   |                        |  | <u>\$ 2,445,972</u>  |
| 9        |   |                                       |   |   |                        |  |  |
| 10       |   |                                       |   |   |                        |  |  |
| 11       | Book Depreciation Reserve Year 2 Assets                             |                                       |   |   |                        |  | \$ 18,412  |
| 12       | Book Depreciation Reserve Year 1 Assets                             |                                       |   |   |                        |  | 51,104   |
| 13       | Total Book Depreciation Reserve                                     |                                       |   |   |                        |  | <u>\$ 69,516</u>   |
| 14       |   |                                       |   |   |                        |  |  |
| 15       |   |                                       |   |   |                        |  |  |
| 16       | Accumulated Deferred Taxes  |                                       |   |   |                        | Year 1 Assets  | Year 2 Assets  |
| 17       | Environmental Improvements - Plant in Service - South Dakota        |                                       |   |   |                        | 1,159,161  | 1,286,811  |
| 18       | MACRS Table - Depreciation Rate (20 year life)                      |                                       |   |   |                        | 55.485%  | 51.875%  |
| 19       | South Dakota Tax Depreciation                                       |                                       |   |   |                        | 643,155  | 667,533  |
| 20       | South Dakota Book Depreciation                                      |                                       |   |   |                        | 67,537   | 36,825   |
| 21       | Timing Difference   |                                       |   |   |                        | 575,618  | 630,709  |
| 22       | Federal Income Tax Rate   |                                       |   |   |                        | 35.00%   | 35.00%   |
| 23       | South Dakota Deferred Tax   |                                       |   |   |                        | 201,466  | 220,748  |
| 24       |   |                                       |   |   |                        |  |  |
| 25       |   |                                       |   |   |                        |  |  |
| 26       | South Dakota Rate Base  |                                       |   |   |                        | (line 8 - line 13 - line 23)                           | <u>\$ 1,954,242</u>  |
| 27       |   |                                       |   |   |                        |  |  |
| 28       |   |                                       |   |   |                        |  |  |
| 29       | Note (1) - Allocation is for the time period 6/1/16 through 5/31/17 |                                       |   |   |                        |  |  |



**BLACK HILLS ENERGY**  
**OPERATING EXPENSES AND TAXES - ENVIRONMENTAL IMPROVEMENTS**  
**Year 2 Revenue Requirement Calculation**

| Line No. | Description   | Reference                       | South Dakota                     |                      |                         |
|----------|---|---------------------------------|----------------------------------|----------------------|-------------------------|
|          |   |                                 |                                  | Note (1)             |                         |
|          |   |                                 | South Dakota<br>Plant in Service | Depreciation<br>Rate | Depreciation<br>Expense |
| 1        |   |                                 |                                  |                      |                         |
| 2        |   |                                 |                                  |                      |                         |
| 3        | Depreciation Expense                                      |                                 |                                  |                      |                         |
| 4        | Wyodak - Mercury Control System                           | Schedule 4-4 ln 2               | 1,029,651                        | 2.86%                | 29,448                  |
| 5        | Wygen III - CO & O2 Grid Install                          | Schedule 4-4 ln 3               | 129,510                          | 2.64%                | 3,419                   |
| 6        | NS Common - Compressed Air                                | Schedule 4-4 ln 4               | 630,129                          | 2.90%                | 18,274                  |
| 7        | NSII - Electrostatic precipitator (ESP)                   | Schedule 4-4 ln 5               | 103,527                          | 2.90%                | 3,002                   |
| 8        | NS Common - Amended Silicates Silo - Neil Simpson II      | Schedule 4-4 ln 6               | 363,589                          | 2.90%                | 10,544                  |
| 9        | NS Common - Amended Silicates Silo - Wygen III            | Schedule 4-4 ln 7               | 189,566                          | 2.64%                | 5,005                   |
| 10       | Depreciation Expense - South Dakota                       |                                 |                                  |                      | <u>69,692</u>           |
| 11       |   |                                 |                                  |                      |                         |
| 12       |   |                                 |                                  |                      |                         |
| 13       | Federal Tax   |                                 |                                  |                      |                         |
| 14       | Rate Base - South Dakota                                  | Schedule 4-4 line 26            |                                  |                      | 1,954,242               |
| 15       |   |                                 |                                  |                      |                         |
| 16       | Interest Expense  | calculated                      |                                  |                      | 55,891                  |
| 17       | Return on Equity  | calculated                      |                                  |                      | 95,758                  |
| 18       | Return  | line 16 + line 17               |                                  |                      | <u>151,649</u>          |
| 19       |   |                                 |                                  |                      |                         |
| 20       | Authorized Return   | Docket No. EL14-026             |                                  |                      | <u>7.76%</u>            |
| 21       | Federal Tax Expense - South Dakota                        | ((line 17 x line 25) - line 17) |                                  |                      | <u>51,562</u>           |
| 22       |   |                                 |                                  |                      |                         |
| 23       |   |                                 |                                  |                      |                         |
| 24       | Assumptions   |                                 |                                  |                      |                         |
| 25       | Tax Multiplier - Federal Tax Rate at 35% - tax multiplier | (1/(1-.35))                     |                                  |                      | 1.5385                  |
| 26       |   |                                 |                                  |                      |                         |
| 27       | Allocation Factor   |                                 |                                  | <u>Total</u>         | <u>South Dakota</u>     |
| 28       | Demand Production (12 CP)                                 | Docket No. EL14-026             |                                  | 100%                 | 89.831%                 |
| 29       |   |                                 |                                  |                      |                         |
| 30       |   |                                 |                                  |                      |                         |
| 31       | Note (1) - Depreciation rate is from Docket No. EL14-026. |                                 |                                  |                      |                         |



**BLACK HILLS ENERGY**  
**REVENUE REQUIREMENT BY CUSTOMER CLASS - ENVIRONMENTAL IMPROVEMENTS**  
**Year One Revenue Requirement Calculation**

| Line No. | Description   | Reference           | South Dakota Forecast |                   |                 |
|----------|---|---------------------|-----------------------|-------------------|-----------------|
| 1        |   |                     |                       |                   |                 |
| 2        | Environmental Improvement Year 1 Revenue Requirement                            | Schedule 4-7 line 2 | \$ 140,156            |                   |                 |
| 3        | (June 1, 2015 through May 31, 2016)   |                     |                       |                   |                 |
| 4        |   |                     |                       |                   |                 |
| 5        | Production Capacity Allocators by Customer Class                                |                     |                       |                   |                 |
| 6        | Residential   | Docket No. EL14-026 | 38.072%               |                   |                 |
| 7        | Small General Service   | Docket No. EL14-026 | 30.920%               |                   |                 |
| 8        | Large General Service and Industrial  | Docket No. EL14-026 | 30.426%               |                   |                 |
| 9        | Lighting  | Docket No. EL14-026 | 0.582%                |                   |                 |
| 10       |   |                     |                       |                   |                 |
| 11       | Revenue Requirement by Customer Class   |                     |                       | EL12-062          | Revised Revenue |
| 12       | Residential   | line 2 x line 6     | \$ 53,360             | Actual PIPR       | Requirement by  |
| 13       | Small General Service   | line 2 x line 7     | \$ 43,336             | Balancing Account | Customer Class  |
| 14       | Large General Service and Industrial  | line 2 x line 8     | \$ 42,644             |                   |                 |
| 15       | Lighting  | line 2 x line 9     | \$ 816                |                   |                 |
| 16       |   |                     |                       |                   |                 |
| 17       | Note: The actual PIPR balancing account credit/charge is supported by Exhibit 6 |                     |                       |                   |                 |



**BLACK HILLS ENERGY**  
**COST OF SERVICE - ENVIRONMENTAL IMPROVEMENTS**  
**Year One Revenue Requirement Calculation**

| Line No. | Description                             | Reference                                | South Dakota<br>Jurisdiction |
|----------|---|--|------------------------------|
| 1        | Operating Revenue Required              |  |                              |
| 2        | Environmental Improvement Revenue       |  | \$ 140,156                   |
| 3        |   |  |                              |
| 4        | Operating Expenses                      |  |                              |
| 5        | Depreciation                            | Schedule 4-9, line 6                     | 34,670                       |
| 6        | Assessed Filing Fee                     | Docket EL15-008                          | 2,505                        |
| 7        | Total Operating Expenses                |  | <u>37,175</u>                |
| 8        |   |  |                              |
| 9        | Operating Income Before Tax             | (line 2 - line 7)                        | 102,981                      |
| 10       |   |  |                              |
| 11       | Federal Income Tax                      | Schedule 4-9, line 17                    | 26,130                       |
| 12       |   |  |                              |
| 13       | Return (Operating Income)               | Schedule 4-9, line 14 (line 9 - line 11) | <u>\$ 76,851</u>             |
| 14       |   |  |                              |
| 15       | Rate of Return                          |  | <u>7.76%</u>                 |
| 16       |   |  |                              |
| 17       | Rate Base                               |  |                              |
| 18       | Plant in Service                        | Schedule 4-8, line 4                     | 1,216,405                    |
| 19       | Less: Accumulated Depreciation          | Schedule 4-8, line 7                     | 17,335                       |
| 20       | Less: Accumulated Deferred Income Taxes | Schedule 4-8, line 17                    | 208,719                      |
| 21       |   |  |                              |
| 22       | Total Rate Base                         | (line 18 - line 19 - line 20)            | <u>\$ 990,351</u>            |





**BLACK HILLS ENERGY**  
**RATE BASE - ENVIRONMENTAL IMPROVEMENTS**  
**Year One Revenue Requirement Calculation**

| Line No. | Description  | (a)<br>Plant in Service for Rate Base | (b)<br>South Dakota Jurisdictional Allocation | (c)<br>(a) * (b)<br>South Dakota Plant in Service for Rate Base | (d)<br>Date in Service    | (e)<br>Allocation Based on In-Service Date | (f)<br>(d) * (e)<br>South Dakota Allocation Based on In-Service Date |
|----------|--|---------------------------------------|---|---|---------------------------|--|--|
| 1        | Property, Plant, and Equipment   |                                       |   |   |                           |  |  |
| 2        | Wyodak - Mercury Control System  | \$ 1,146,209                          | 89.831%                                       | \$ 1,029,651  | 4/15/2015                 | 112.88% (1)                                | \$ 1,162,270   |
| 3        | Wygen III - CO & O2 Grid Install   | 144,171                               | 89.831%                                       | 129,510   | 12/31/2015                | 41.80% (2)                                 | 54,135   |
| 4        | Total Plant in Service - Environmental Improvements                                      | <u>\$ 1,290,380</u>                   |   | <u>\$ 1,159,161</u>   |                           |  | <u>\$ 1,216,405</u>  |
| 5        |  |                                       |   |   |                           |  |  |
| 6        |  |                                       |   |   |                           |  |  |
| 7        | Book Depreciation Reserve  |                                       |   |   | Schedule 4-9 line 6 x 50% |  | <u>17,335</u>  |
| 8        |  |                                       |   |   |                           |  |  |
| 9        |  |                                       |   |   |                           |  |  |
| 10       | Accumulated Deferred Taxes   |                                       |   |   |                           |  |  |
| 11       | Environmental Improvements - Plant in Service - South Dakota                             |                                       |   |   |                           | line 4                                     | 1,216,405  |
| 12       | MACRS Table - Depreciation Rate (20 year life)   |                                       |   |   |                           |  | <u>51.875%</u>   |
| 13       | South Dakota Tax Depreciation  |                                       |   |   |                           | line 11 x line 12                          | 631,010  |
| 14       | South Dakota Book Depreciation   |                                       |   |   |                           | Schedule 4-9 line 6                        | <u>34,670</u>  |
| 15       | Timing Difference  |                                       |   |   |                           | line 13 - line 14                          | 596,340  |
| 16       | Federal Income Tax Rate  |                                       |   |   |                           |  | <u>35.00%</u>  |
| 17       | South Dakota Deferred Tax  |                                       |   |   |                           | line 15 x line 16                          | <u>208,719</u>   |
| 18       |  |                                       |   |   |                           |  |  |
| 19       |  |                                       |   |   |                           |  |  |
| 20       | South Dakota Rate Base   |                                       |   |   |                           | (line 4 - line 7 - line 17)                | <u>\$ 990,351</u>  |
| 21       |  |                                       |   |   |                           |  |  |
| 22       |  |                                       |   |   |                           |  |  |
| 23       | Note (1) - Allocation is for the time period from the in-service date through 5/31/2016. |                                       |   |   |                           |  |  |
| 24       | Note (2) - Allocation is for the time period of 12/31/2015 through 5/31/2016.            |                                       |   |   |                           |  |  |



**BLACK HILLS ENERGY**  
**OPERATING EXPENSES AND TAXES - ENVIRONMENTAL IMPROVEMENTS**  
**Year One Revenue Requirement Calculation**

| Line No. | Description   | Reference                       | South Dakota                  |                      |
|----------|---|---------------------------------|-------------------------------|----------------------|
|          |   |                                 | Note (1)                      |                      |
|          |   |                                 | South Dakota Plant in Service | Depreciation Rate    |
|          |   |                                 |                               | Depreciation Expense |
| 1        |   |                                 |                               |                      |
| 2        |   |                                 |                               |                      |
| 3        | Depreciation Expense                                      |                                 |                               |                      |
| 4        | Wyodak - Mercury Control System                           | Schedule 4-8 ln 2               | 1,162,270                     | 33,241               |
| 5        | Wygen III - CO & O2 Grid Install                          | Schedule 4-8 ln 3               | 54,135                        | 1,429                |
| 6        | Depreciation Expense - South Dakota                       |                                 |                               | 34,670               |
| 7        |   |                                 |                               |                      |
| 8        |   |                                 |                               |                      |
| 9        | Federal Tax   |                                 |                               |                      |
| 10       | Rate Base - South Dakota                                  | Schedule 4-8 line 20            |                               | 990,351              |
| 11       |   |                                 |                               |                      |
| 12       | Interest Expense  | calculated                      |                               | 28,324               |
| 13       | Return on Equity  | calculated                      |                               | 48,527               |
| 14       | Return  | line 12 + line 13               |                               | 76,851               |
| 15       |   |                                 |                               |                      |
| 16       | Authorized Return   | Docket No. EL14-026             |                               | 7.76%                |
| 17       | Federal Tax Expense - South Dakota                        | ((line 13 x line 21) - line 13) |                               | 26,130               |
| 18       |   |                                 |                               |                      |
| 19       | Assumptions   |                                 |                               |                      |
| 20       |   |                                 |                               |                      |
| 21       | Tax Multiplier - Federal Tax Rate at 35% - tax multiplier |                                 | (1/(1-.35))                   | 1.5385               |
| 22       |   |                                 |                               |                      |
| 23       | Allocation Factor   |                                 | <u>Total</u>                  | <u>South Dakota</u>  |
| 24       | Demand Production (12 CP)                                 | Docket No. EL14-026             | 100%                          | 89.831%              |
| 25       |   |                                 |                               |                      |
| 26       |   |                                 |                               |                      |
| 27       | Note (1) - Depreciation rate is from Docket No. EL14-026. |                                 |                               |                      |



**BLACK HILLS ENERGY  
RESIDENTIAL CUSTOMER IMPACT  
EIA Rate Change**

| <u>LINE NO.</u> | <u>CUSTOMER IMPACT</u>                                      | <u>CURRENT RATES</u> | <u>PROPOSED EIA RATE</u> | <u>INCREASE OR (DECREASE)</u> |
|-----------------|---|----------------------|--------------------------|-------------------------------|
| 1               |   |                      |                          |                               |
| 2               | <b><u>Residential Service</u></b>                           |                      |                          |                               |
| 3               | <b>ENVIRONMENTAL IMPROVEMENT ADJUSTMENT RATE</b>            |                      |                          |                               |
| 4               | EIA Rate  | \$ / kWh \$ 0.00012  | \$ 0.00020               | \$ 0.00008                    |
| 5               |   |                      |                          |                               |
| 6               |   |                      |                          |                               |
| 7               |   |                      |                          |                               |
| 8               | Monthly Customer Charge                                     | \$ 9.25              |                          | \$ 9.25                       |
| 9               | Energy Charge - Base Rate at average monthly kWh            | \$ 0.09989 x         | 650 kWh                  | 64.93                         |
| 10              | Base Costs  | \$ 0.02270 x         | 650 kWh                  | 14.76                         |
| 11              | Energy Cost Adjustment at average monthly kWh               | \$ 0.00960 x         | 650 kWh                  | 6.24                          |
| 12              | Transmission Facility Adjustment at average monthly kWh     | \$ 0.00010 x         | 650 kWh                  | 0.07                          |
| 13              | Environmental Improvement Adjustment at average monthly kWh | \$ 0.00012 x         | 650 kWh                  | 0.08                          |
| 14              | Energy Efficiency at average monthly kWh                    | \$ 0.00040 x         | 650 kWh                  | 0.26                          |
| 15              | Current Total Bill at monthly average                       |                      |                          | \$ 95.59                      |
| 16              | EIA Rate Change at monthly average kWh                      | \$ 0.00008 x         | 650 kWh                  | 0.05                          |
| 17              | Proposed Total Residential Bill                             |                      |                          | \$ 95.64                      |
| 18              | Percent Change  |                      |                          | 0.05%                         |