

**BEFORE THE SOUTH DAKOTA  
PUBLIC UTILITIES COMMISSION**

**BLACK HILLS POWER, INC. d/b/a BLACK )  
HILLS ENERGY'S APPLICATION FOR )  
APPROVAL OF ITS 2017 VEGETATION ) Docket No. EL17-\_\_\_\_  
ANNUAL REPORT AND APPROVAL TO )  
END THE VEGETATION MANAGEMENT )  
REGULATORY ASSET**

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**2017 VEGETATION MANAGEMENT ANNUAL REPORT AND APPROVAL TO END  
THE VEGETATION MANAGEMENT REGULATORY ASSET**

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Black Hills Power, Inc. (“Black Hills Power” or the “Company”), a South Dakota corporation, respectfully requests an order from the South Dakota Public Utilities Commission (“Commission”) approving its vegetation management activities from December 1, 2015 through March 31, 2017, the Vegetation Management Regulatory Asset (“VMRA”) balance as of March 31, 2017 and Commission approval to end the VMRA, subject to the condition that such approval shall not preclude Commission review of the project, including project and cost management, accounting data and methods, and the resulting balance in the regulatory asset, for prudence and reasonableness for rate recovery in any determination of rates, including both rate filings by Black Hills Power and rate reviews initiated by the Commission.

The Commission approved the establishment of the VMRA for Black Hills Power in Docket EL12-061. Per the associated Stipulation (“Stipulation”), Black Hills Power is required to provide an annual report to the Commission to demonstrate the actual vegetation management costs incurred. The report will outline the progress made on the overall five year plan, which is now complete.

On December 23, 2014, Black Hills Power filed for approval of the Company’s 2014 vegetation management report containing the Company’s vegetation management activities from April 2013 through November 2014, the Company’s 2015 vegetation management budget and the Company’s VMRA balance as of November 30, 2014 (Docket EL14-108). On March 18, 2015, the Commission approved the Company’s vegetation management activities from April 2013 through November 2014, the Company’s 2015 vegetation management budget and the Company’s VMRA balance as of November 30, 2014.

On December 10, 2015, Black Hills Power filed for approval for an extension until March 31, 2016, to update the Company’s vegetation budget for 2016 through 2018 (Docket

EL15-050). On December 29, 2015, the Commission approved the Company's request for extension.

On December 31, 2015, Black Hills Power filed for approval of the Company's 2015 vegetation management report containing the Company's vegetation management activities from December 2014 through November 2015 and the Company's VMRA balance as of November 30, 2015 (Docket EL15-051). On August 11, 2016, the Commission approved the Company's vegetation management report containing the Company's vegetation management activities from December 2014 through November 2015 and the Company's VMRA balance as of November 30, 2015.

On March 30, 2016, Black Hills Power filed for approval of the Company's 2016 through 2018 vegetation management Budget (Docket EL16-012). On August 11, 2016, the Commission approved the Company's 2016 through 2018 vegetation management budget filed in Docket EL16-012.

On December 12, 2016, Black Hills file for approval to delay its December 2016 filing requirements (EL16-039) until April 30, 2017. On December 21, 2016, the Commission approved the extension.

## **BACKGROUND**

Black Hills Power utilizes an integrated vegetation management approach to provide and manage a suitable Right-Of-Way ("ROW") clearance to control vegetation growth that could interfere with the safe and reliable delivery of electricity. Black Hills Power desires to maintain a ten year vegetation maintenance cycle for the Company's 230 kV transmission and 69 kV sub-transmission power lines. A four to five year trim cycle is desired for primary circuits with voltages less than 69 kV.

Black Hills Power is required to meet specific reliability compliance standards of the North American Electric Reliability Corporation ("NERC") as it relates to vegetation management associated with the Company's 230 kV transmission facilities. In addition, Black Hills Power's defined Distribution Transmission Vegetation Management Policy also follows arboricultural and industry best practice minimum clearances for power lines.

There are various types of vegetation located within Black Hills Power's service territory. The Black Hills forest in South Dakota is dominated by ponderosa pine and Black Hills spruce with areas of open prairie. In low lying areas, there are patches of cottonwood as well as oak. Urban environments have greater populations of elm, maple, and other ornamental species such as crab apple. In higher elevations there are pockets of aspen and birch.

In Docket EL12-061, Black Hills Power demonstrated that increases in vegetation management costs are necessary to maintain a normal vegetation trimming cycle. The two primary

cost drivers were an increase in annual precipitation throughout the Black Hills Power service territory and exposure to the Mt. Pine Beetle infestation. The Mt. Pine Beetle infestation also presented an increased exposure to vegetation impacts from outside the Company's ROW.

The Commission approved the creation of the VMRA effective April 1, 2013. Black Hills Power is allowed to treat a portion of its South Dakota expenditures for vegetation management as a regulatory asset, as follows:

1. Prudent expenditures for vegetation management totaling \$1,741,509 or less per year will continue to be expensed by Black Hills Power.
2. Expenditures for vegetation management in each of the next five years that exceed \$1,741,509 annually are considered a VMRA. If an annual expenditure for VMRA is less than \$1,741,509, the VMRA shall be reduced by the difference between \$1,741,509, and said annual expenditure.
3. Black Hills Power shall receive a rate of return on the balance in the VMRA, calculated on a monthly basis. The rate of return shall be equal to the rate of return approved by the Commission in rate case Docket EL12-061.
4. At the end of the five-year period, the principal balance in the VMRA account shall be amortized over a five-year period.
5. The recovery in years six through ten of the balance of the VMRA account commence in year six in the form of a tariff or rate increase to be approved by the Commission prior to year six.

#### **DECEMBER 2015 THROUGH MARCH 2017 VEGETATION MANAGEMENT ACTIVITIES**

The Company's vegetation management program is designed to provide a suitable ROW clearance by controlling vegetation growth that could interfere with the safe and reliable delivery of electricity. Due to the extensive vegetation management activities performed over the last four (4) years, Black Hills' electric transmission grid should produce better grid reliability and limit preventable line outages. The benefits of a normal vegetation trim cycle include fewer outages caused by vegetation and various weather conditions, increased efficiencies with normal routine maintenance causing less inefficient hot spotting clearing, easier to patrol ROWs and fewer outages during major weather events.

During the 2016-2017 plan period, the Company completed the work necessary to trim the remaining circuits with a variance to budget of \$391,907 (approximately 3.67% in variance from budget). The budget variance for 2016-2017 expenditures was due to uncontrollable factors including extreme heat and cold temperatures, abnormal amounts of snowfall that limited access, mountain pine beetle, and unforeseen obstacles along the ROW – all of which increase expenses.

During the 2016-2017 time period, Black Hills Power trimmed a total of 1,175.98 line miles compared to the 1,212.77 line miles budgeted. There are 10.2 miles that remain incomplete due to landowner issues and an additional 5.29 miles that will be completed by the end of 2017. The additional variance between budget and actual is due to timing from year to year. Exhibit A provides the vegetation plan by district.

The following table provides a comparative analysis of the Company's actual vegetation expense compared to forecasted budget, approved in Docket EL16-012, and the line miles actually trimmed as compared to budgeted line miles presented in Docket EL16-012.

	Actual 2016	Actual 2017	Forecast 2018	Total
Vegetation Expenses	\$ 8,557,969	\$ 2,501,615	\$ -	\$ 11,059,584
EL16-012 Budget	\$ 6,278,762	\$ 4,388,915	\$ -	\$ 10,667,677
Over / (Under) Spend	\$ 2,279,207	\$ (1,887,300)	\$ -	\$ 391,907
Budgeted Line Miles	749.60	463.17	-	1,212.77
Line Miles Trimmed	890.01	285.97	-	1,175.98

As a result of the focused effort with respect to vegetation management the Company believes that system reliability will continue to improve. Fewer outages caused by vegetation and various weather conditions were experienced during 2014-2016 when compared to 2011-2013 as depicted in Exhibit C – Tree Caused Outage Trend. In addition, maintaining a normal vegetation trimming cycle has and will continue to increase efficiencies with normal routine maintenance and easier to patrol right-of-ways.

Black Hills Power's goal was to trim the entire distribution system during the five year plan period. At this time, the appropriate ROW clearance has been reclaimed. Black Hills Power proposes that future expenditures for vegetation management should not be considered a vegetation management regulatory asset. Going forward Black Hills Power plans to maintain a normal vegetation management trim cycle in order to sustain and continue to improve system reliability.

### THE CONDITION OF THE FOREST

Since 1997, when the Mt. Pine Beetle epidemic began, about 448,000 acres of the Black Hills National Forest has been effected. This equates to more than one-third of the total acreage of the Black Hills National Forest. While the U.S. Forest Service data suggest that the pine beetle epidemic has officially ended, Black Hills Power's fight against the tree-killing insect is not over. Black Hills Power will still have to remain on high alert in areas of its service territory like Custer, Lead and Deadwood where the infestation is in the early stages and outbreaks are still occurring and might continue to occur for several more years. Black Hills Power will still have to monitor areas cleared of Mt. Pine Beetle trees as the healthy trees are at greater risk of causing vegetation management related outages because they are no longer shielded from high

winds by adjacent trees. Additionally, forest thinning will continue to cause new threats to the Company's power lines and require additional pruning in the future.

Since the start of the VMRA (2013), Black Hills Power has removed over 25,000 Mt. Pine Beetle infested trees and has estimated the cost of removal to be close to \$1.4MM. Please see Exhibit B for the Mt. Pine Beetle tree removal history from 2013 to 2016. Any Mt. Pine Beetle infested tree, within and outside the Company's ROW, pose a significant risk of falling into the ROW and the Company faces no other option but to remove the tree.

### **ACCELERATION OF VMRA ACTIVITIES**

Due to the changing conditions of the forest, the small fires the Company experienced in 2015, and the on-going risks associated with a thinning forest, the Company decided to accelerate its vegetation management activities for the benefit of public safety. For the reported plan period, this resulted in an increase in activity in 2016 compared to plan, and a corresponding decrease in activity in 2017 as a result of early completion. In addition to the public safety concern, the acceleration of the Company's vegetation management activities provided Black Hills Power's customers financial protection by mitigating potential cost increases of insuring the Company from catastrophic events. If the number of claims associated with tree-related fires were to increase, or the Company's vegetation management policies were to be found inconsistent with utility best practices, the Company may not be able to obtain cost effective insurance.

Currently, the Company is authorized to recover from South Dakota customers in base rates \$1,741,509. Black Hills Power expects to spend significantly more on normal annual vegetation management activities upon conclusion of the VMRA. The Company estimates the cost to perform normal vegetation management activities on the entire system over a four year period will be \$16,400,000 for distribution circuits.

### **VMRA CALCULATION**

Exhibit D contains the detailed calculation of the VMRA as of March 31, 2017, per the Stipulation. The balance contained within FERC account 182304, the VMRA Regulatory Asset account, will differ from the VMRA balance calculation contained in Exhibit D by not containing the Return on Equity component of the calculation. The Return on Equity component for the VMRA recovery mechanism should not be capitalized in the regulatory asset since it's not considered an incurred cost in accordance with ASC 980-340-25-1.

The Company incurred \$11,693,725 of expenditures for vegetation management from December 1, 2015, through March 31, 2017, at the total Company level. The South Dakota allocated cost was \$11,092,084, using the allocations approved in Docket EL14-026. The amount reclassified to the VMRA was \$9,350,575, in accordance with the Stipulation. The rate of return

approved in Docket EL12-061 was applied to the VMRA balance, and the ending balance of the VMRA as of March 31, 2017, was \$14,793,656, as calculated per the Stipulation and shown in Exhibit D.

The following table provided a comparative analysis of the total Company forecast for yearly vegetation management costs (for the entire life of the VMRA) compared to the original yearly VMRA budget established in EL16-012:

	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Forecast 2018	Total
Vegetation Expenses	\$ 3,040,928	\$ 3,245,370	\$ 4,408,631	\$ 8,557,969	\$ 2,501,615	\$ -	\$ 21,754,513
EL16-012 Budget	\$ 2,743,893	\$ 3,294,507	\$ 3,343,341	\$ 6,278,762	\$ 3,599,996	\$ 741,449	\$ 20,001,948
Over / (Under) Spend	\$ 297,035	\$ (49,137)	\$ 1,065,290	\$ 2,279,207	\$ (1,098,381)	\$ (741,449)	\$ 1,752,565
Line Miles Trimmed	353.34	426.43	222.50	890.01	285.97	-	2,178.25

As presented in the 2015 Vegetation Management report, Docket EL15-051, the overspend in 2015 is a result of hot spot patrolling, a larger focus on heavily forested areas and mild weather which allowed for additional ROW trimming into the winter months. In addition the 2015 program period was over budget due to the unpredictable impact of the pine beetle epidemic. In 2015 the pine beetle infestation continued to increase the amount of vegetation removal required directly impacting program costs. Black Hills Power also continued to use outside contractors to perform vegetation management trimming. In order to minimize costs, contractors were selected using a competitive bid process.

### VMRA ACCOUNT RECOVERY/AMORTIZATION

Black Hills Power declares that appropriate ROW clearance has been reclaimed and therefore, proposes to end the VMRA. The Company will work with Staff to determine the appropriate next steps.

### COMPANY CONTACTS

The Company will be represented in this proceeding by the following persons. Correspondence regarding this proceeding should be directed to the following:

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## **EXHIBITS**

In support of this Application, the Company submits the following:

- Exhibit A: Vegetation Management Plan by District
- Exhibit B: Mountain Pine Beetle Trees Removed by Year
- Exhibit C: Tree Caused Outage Trend
- Exhibit D: Vegetation Management Regulatory Asset Calculation

## **CONCLUSION**

Based on this Application, Black Hills Power respectfully requests that the Commission issue an order approving the vegetation management costs incurred from December 2015 through March 2017, the VMRA balance as of March 31, 2017 and approval to end the VMRA, subject to the condition that such approval shall not preclude Commission review of the project, including project and cost management, accounting data and methods, and the resulting balance in the regulatory asset, for prudence and reasonableness for rate recovery in any determination of rates, including both rate filings by Black Hills Power and rate reviews initiated by the Commission.

