

**BEFORE THE SOUTH DAKOTA
PUBLIC UTILITIES COMMISSION**

BLACK HILLS POWER, INC.’S)
APPLICATION FOR APPROVAL OF ITS)
2014-2015 VEGETATION MANAGEMENT) **Docket No.** _____
ACTIVITIES)

2015 VEGETATION MANAGEMENT REPORT

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 the vegetation management activities from December 2014 through November 2015, and the Vegetation Management Regulatory Asset (“VMRA”) balance as of November 30, 2015, 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 demonstrate the actual vegetation management costs incurred. The report will outline the progress made on the overall five year plan and update the forecast for the remaining years based on actual progress to date.

In Docket EL14-108, the Commission approved the 2013-2014 vegetation management activities, the 2015 vegetation management budget, and the VMRA balance as of November 30, 2014. This filing outlines the vegetation management activities from December 2014 through November 2015, and the VMRA balance as of November 30, 2015. The Company will provide the vegetation management budget for 2016 through 2018 by March 31, 2016, as approved in Docket EL15-050.

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 seeks 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 sought 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 are an increase in annual precipitation throughout the Black Hills Power service territory and exposure to the Mt. Pine Beetle infestation. From 2008 through 2011, there was a 15% increase in average annual precipitation compared to the 1971 to 2000 time period. The increase in average rainfall during this recent four year period has increased the vegetation growth activity experienced within the Company’s service territory. In addition, Black Hills Power has calculated that it has 1,451 miles of 230kV, 69kV, and distribution line miles of exposure to areas within the Black Hills National Forest that could be impacted by the Mt. Pine Beetle. The Mt. Pine Beetle infestation also presents an increased exposure to vegetation impacts from outside the Company’s ROW.

There are a number of benefits associated with maintaining a normal vegetation trimming cycle. These include increased system reliability with fewer outages caused by vegetation and various weather conditions, increased efficiencies with normal routine maintenance causing less inefficient hot spotting clearing, easier to patrol right-of-ways, and fewer outages during major weather events. All of these activities help Black Hills Power to improve our ability to provide safe, reliable, and economical service to our customers.

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.

2014 - 2015 VEGETATION MANAGEMENT ACTIVITIES

Black Hills Power’s goal is to trim the entire distribution system during the five year plan period. Exhibit A contains the list of distribution circuits, with line miles, within Black Hills Power’s service territory that were trimmed from January 2013 through November 2015. Vegetation maintenance is tracked by individual circuit by year and for completion.

The Company trimmed approximately 223 miles of overhead distribution line from December 2014 to November 2015. The following South Dakota communities saw maintenance trimming in 2015: Rapid City, Deadwood, Lead, Keystone, Hill City and Nemo.

Below is a table that compares our total company actual results with the budgets for 2014 and 2015 through November:

	2014 Budget	2014 Actual	% of Budget	2015 Budget	2015 Actuals Through November	% of Budget
Vegetation Management Expenditures	\$3,294,507	\$3,245,370	99%	\$3,343,341	\$3,774,489	113%
Line Miles Trimmed	449.05	426.43	95%	455.89	185.10	41%

In 2015, the Company experienced several challenges to trimming the planned distribution circuits within the budgeted cost. First, the Company performed vegetation hot spot patrols and clearing along distribution circuits that pulled resources away from normal maintenance trimming. Second, Black Hills Power’s vegetation management efforts focused primarily on forested areas rather than cities and open prairie areas. Third, ROW trimming in the forested areas continued later in 2015 than most years because of mild weather in the fourth quarter. Fourth, the Company did not maintain cost and resource records by distribution circuit prior to 2013. As such, the original budget was not based on documented experience. Each challenge is discussed below in more detail.

i. Hot Spot Patrols and Clearing

At the end of the first quarter of 2015, the Black Hills area was facing drought conditions. In order to maintain safe operation of electrical lines and reduce wildfire risk, the Company performed hot spot patrols and clearing on areas that needed vegetation management sooner than the plan had scheduled. The areas selected were distribution circuits that were known to be on the old trim cycle and within forested ROWs. Approximately 294 miles of overhead distribution lines were patrolled to identify the need for immediate vegetation management. Subsequent trimming and removal of several thousand hazardous trees was performed along these circuits. The total cost of this effort was approximately \$683,000, and is primarily reflected in the months of May and June of 2015 in Exhibit D.

ii. Forested vs. City\Prairie Trimming

The majority of the trimming work performed in 2015 was focused on forested areas. In previous years, the vegetation management plan included many distribution circuits within cities and open prairie areas. These environments cost less to trim and take less time to complete than forested areas because there are fewer trees in the ROW and there is better access to perform the work. In addition, the forested areas trimmed in 2015 required more resources than anticipated.

iii. Fourth Quarter Weather

The Black Hills has experienced mild weather during the fourth quarter of 2015, and that has allowed vegetation management crews to trim forested areas later in the year. In an ordinary year, the Black Hills forested areas would be snow-covered during much of the fourth quarter and require vegetation management crews to be redeployed to areas that are less impacted by winter weather. The focus on forested areas is a strategic decision to address the highest vegetation management risk areas of tree caused outages and other vegetation related damages.

iv. Vegetation Management Budget Assumptions

The Company did not maintain cost and resource records by distribution circuit during the previous trim cycle. As a result, the Company's budget was not based on documented experience. The Company will have better information to base its budget on during the next trim cycle using the data captured since 2013. In addition, the lessons learned in 2015 will help refine the 2016 through 2018 budget.

In addition, the Mt. Pine Beetle continues to cause significant damage to the Black Hills. Since the epidemic began in 1996, at least 430,000 acres have been infected, or nearly a quarter of the 1,500,000 acres of forested lands in the Black Hills. While U.S. Forest Service data suggests the rate of spread is slowing in the Black Hills National Forest (“BHNF”), the Mt. Pine Beetle infestation continues to spread aggressively in various regions of the BHNF and Black Hills Power’s service territory. In areas around Custer, Lead, and Deadwood, the infestation is in the early stages and will continue to spread for several more years.

The number of Mt. Pine Beetle trees removed and the associated cost in 2015 is trending comparable to 2013, or approximately 6,600 trees at \$325,000 on an annual basis. Please see Exhibit B for the Mt. Pine Beetle tree removal history from 2010 through September 2015. The infected trees pose a significant risk of falling into the ROWs, and requires Black Hills Power to manage more vegetation adjacent to electric line corridors.

Overall, 2015 was a challenging year and much different than the Company forecasted. After the hot spot patrolling and clearing cost is removed from the total 2015 vegetation management expenditures through November, the Company trimmed approximately 185 miles at a total cost of \$3,091,000. The cost to remove Mt. Pine Beetle trees is hard to predict because of uncertain penetration rates and can vary significantly from year to year. Generally, the vegetation conditions surpassed our budget assumptions, for both cost and time to complete. For example, the cost to trim the ROW in forested areas was higher than anticipated as more time was required to achieve Black Hills Power’s vegetation management specifications. The higher number of Mt. Pine Beetle trees removed in and near the ROWs resulted in increased costs. However, the Company remains focused on achieving the necessary trim cycle within the 5 year plan. Exhibit C demonstrates the significant progress made to reduce tree caused outages.

VEGETATION MANAGEMENT REGULATORY ASSET CALCULATION

Exhibit D contains the detailed calculation of the VMRA as of November 30, 2015.

The Company incurred \$1,030,035 of expenditures for vegetation management from December 1, 2014, through March 31, 2015, at the total Company level. The South Dakota allocated cost was \$977,040, using the allocations approved in Docket EL14-026. This amount was reclassified to the VMRA as Black Hills Power had expensed \$1,741,509 by November 2014, in accordance with the Stipulation. The rate of return approved in Docket EL12-061 was applied to the VMRA balance, and the balance of the VMRA as of March 31, 2015, was \$2,901,108.

From April 1, 2015, through November 30, 2015, the Company incurred \$3,125,176 of expenditures for vegetation management at the total Company level. The South Dakota allocated cost was \$2,964,386, using the allocations approved in Docket EL14-026. Black Hills Power reclassified the expenditures that exceeded \$1,741,509 during this time period, or \$1,228,877, to the VMRA. Including the rate of return, the balance of the VMRA as of November 30, 2015, was \$4,333,208.

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 2014 through November 2015, and the VMRA balance as of November 30, 2015, 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.

BEFORE THE PUBLIC UTILITY COMMISSION OF SOUTH DAKOTA

STATE OF SOUTH DAKOTA)
 SS:
COUNTY OF PENNINGTON)

I, Jon Thurber, being duly sworn, do hereby depose and say that I am Manager, Regulatory Services for Black Hills Corporation, that I have read such Application, and that the facts set forth therein are true and correct to the best of my knowledge, information and belief.

Jon Thurber

Jon Thurber – Manager, Regulatory Services

Subscribed and sworn to before me this 31st day of December, 2015.



Tammy Richey

Notary Public

My Commission Expires: 9-14-2021