

Direct Testimony and Exhibits
Michael J. Fredrich

Before the South Dakota Public Utilities Commission
of the State of South Dakota

In the Matter of the Application of
Black Hills Power, Inc., a South Dakota Corporation

For a 230 kV Transmission Line and
Associated Substation Modification
Facility Permit

Docket No. EL14-____

June 30, 2014

TABLE OF CONTENTS

I. INTRODUCTION AND QUALIFICATIONS 1

II. PURPOSE OF TESTIMONY..... 3

III. PROPOSED TRANSMISSION LINE 4

IV. GOVERNMENTAL AGENCY APPROVALS..... 9

V. LANDOWNER CONTACT STATUS..... 13

Exhibits

Exhibit MJF - 1 – Project Map (Entire Project)

Exhibit MJF – 2 – Project Map (South Dakota Portion)

Exhibit MJF – 3 - Permits

1 **I. INTRODUCTION AND QUALIFICATIONS**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Michael J. Fredrich. My business address is 409 Deadwood
4 Avenue, P.O. Box 1400, Rapid City, South Dakota, 57701.

5 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

6 A. I am employed by Black Hills Utility Holdings Company (“BHUH”) as
7 Director, Engineering Services.

8 **Q. FOR WHOM ARE YOU TESTIFYING ON BEHALF OF TODAY?**

9 A. I am testifying on behalf of Black Hills Power, Inc. (“Black Hills Power” or
10 the “Company”).

11 **Q. PLEASE DESCRIBE YOUR EDUCATION AND BUSINESS**
12 **BACKGROUND.**

13 A. I graduated from the South Dakota School of Mines and Technology with a
14 Bachelor of Science Degree in Electrical Engineering in 1981. Following
15 graduation, I accepted a position with Black Hills Corporation (“BHC”). Since
16 that time, I have held a variety of engineering related roles.

17 From 1981 through 1986, I served as an electrical engineer in the Power
18 Resources Department where I was responsible for the operation and
19 maintenance of the generation and transmission protective relaying systems.

20 From 1987 to 1988, I served as the Substation Maintenance Supervisor for
21 Black Hills Power’s Electric Operations Department. From 1989 to 1991, I

1 served as the System Protection and Studies Engineer for the Black Hills
2 Power System Engineering Department, where I performed system study work
3 associated with the operational and planning requirements associated with the
4 Black Hills Power 230 kV and 69 kV transmission networks. From 1991 to
5 2000, I was the Manager for Planning and Coordination for Black Hills Power.
6 I was responsible for the development of operating and infrastructure plans
7 associated with maintaining the adequacy and reliability of all 230 kV and 69
8 kV transmission electrical facilities. From 2000 to 2005, I was the Director of
9 Transmission for Black Hills Power with responsibility for the entire
10 transmission network, including transmission planning, transmission contracts,
11 and Federal Energy Regulatory Commission (“FERC”) tariff administration.
12 From 2005 to 2008, I was the Director of System Operations and Maintenance,
13 Engineering, and Transmission for Black Hills Power. I was responsible for
14 the operation and maintenance of the transmission network, including electrical
15 maintenance, the 24 hour System Control Dispatch Center, all transmission
16 planning activities, transmission contract administration, and FERC Open
17 Access Transmission Tariff administration. I also had management
18 responsibility over the Black Hills Power Engineering Department, which was
19 responsible for the design and construction of the transmission and distribution
20 networks of Black Hills Power. In 2008, I was named Director, Engineering
21 Services. I continue in this role today.

1 **Q. WHAT ARE YOUR PRIMARY RESPONSIBILITIES IN YOUR**
2 **CURRENT POSITION?**

3 A. As Director, Engineering Services, I currently manage and oversee the
4 engineering, design, construction, operation, and maintenance functions
5 associated with the major transmission and distribution networks of BHC's
6 electric utilities; Black Hills Power, Cheyenne Light, Fuel & Power Company,
7 and Black Hills/Colorado Electric Utility Company. I also have responsibility
8 for the metering services, distribution planning, Geographic Information
9 Systems electronic mapping, and drafting support services for these electric
10 utilities.

11 **II. PURPOSE OF TESTIMONY**

12 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

13 A. The purpose of my testimony is to provide the Commission with a description
14 of the proposed transmission line project. I also discuss the steps the Company
15 has taken to obtain approval of the proposed transmission line from other
16 governmental entities. Lastly, I provide a status of the communications
17 regarding the project the Company has had with potentially impacted South
18 Dakota land owners.

1 **III. PROPOSED TRANSMISSION LINE**

2 **Q. PLEASE GENERALLY DESCRIBE THE TRANSMISSION LINE THE**
3 **COMPANY IS PROPOSING THROUGH ITS APPLICATION.**

4 A. The proposed transmission line will be approximately 144 miles long and will
5 cross private lands, National Forest Service (NFS) lands, Bureau of Land
6 Management (BLM) lands (in Wyoming), and state lands (in Wyoming). The
7 Facility will connect the Teckla Substation in Campbell County, Wyoming to
8 the Osage Substation in Weston County, Wyoming and the Lange Substation
9 located in Pennington County near Rapid City, South Dakota. Please refer to
10 Exhibit MJF – 1 – Project Map.

11 **Q. IS THE ENTIRE PROPOSED LINE THE SUBJECT OF THE**
12 **COMPANY’S APPLICATION?**

13 A. No, the Application before the Commission only pertains to the South Dakota
14 portion of the proposed transmission line and associated modifications to the
15 Lange Substation. The subject line segment includes approximately 45.4 miles
16 of transmission line that will be constructed between the Wyoming/South
17 Dakota border and the Lange Substation located in Pennington County near
18 Rapid City, South Dakota. Please refer to Exhibit MJF – 2 – Project Map.

19 **Q. PLEASE DESCRIBE WITH MORE SPECIFICITY THE PROPOSED**
20 **LOCATION FOR THE PORTION OF THE LINE THAT WILL BE**
21 **CONSTRUCTED IN SOUTH DAKOTA.**

1 A. From the Osage substation in Wyoming, the proposed Facility travels east
2 approximately 17 miles before crossing the Wyoming/South Dakota border
3 where it continues in a north easterly manner for approximately 30 miles
4 towards the Pactola Substation. This portion of the route will utilize a currently
5 unused Black Hills Power transmission line right of way (“ROW”). The
6 existing ROW has a cleared width of 40 to 50 feet, which will be widened to
7 100 feet on public land. The ROW acquired on any private land will have a
8 width of 125 feet. The route continues east from near the Pactola substation for
9 approximately five and one-half miles and then travels north and east
10 approximately ten miles to terminate at the Lange substation in Rapid City,
11 South Dakota.

12 **Q. BEYOND THE TRANSMISSION LINE, ARE THERE OTHER**
13 **ADDITIONS THAT WILL BE MADE IN SOUTH DAKOTA?**

14 A. Yes, Black Hills Power will modify the existing Lange 230 kilovolt (kV)
15 substation to accommodate the termination of the new 230 kV line section
16 from Osage to Rapid City. In particular, the existing 230 kV, 2000 Amp 4-
17 position ring bus will be expanded to a 5-position ring bus by the addition of
18 one line terminal. This expansion will include the addition of one 230 kV,
19 2000 Amp power circuit breaker, three 230 kV, 2000 Amp gang operated
20 disconnect switches, three 230 kV Capacitive Coupled Voltage Transformers
21 (CCVT’s), and associated line terminal relay, protection, meter, and control

1 equipment. These modifications will occur within the existing fenced area of
2 the Lange Substation.

3 **Q. DID THE COMPANY CONSIDER ALTERNATE ROUTES TO THE**
4 **ROUTE THAT IS PROPOSED IN ITS APPLICATION?**

5 A. Yes, Black Hills Power considered two alternate routes and other route
6 proposals as part of its detailed route analysis. The alternate routes that were
7 considered are briefly summarized as follows:

8 a. Northern Alternative

9 The northern alternative was a route that was generally north of the proposed
10 route along the entire length of the project from Teckla-Osage-Lange. The
11 portion of this northern alternative route, starting from the Osage substation,
12 traveled northeast paralleling an existing transmission line ROW for 26 miles
13 in Wyoming. At this point, the route turned east for approximately 3 miles
14 before crossing the Wyoming/South Dakota border where it continued in a
15 easterly direction south of the Pennington County line to the Lange
16 Substation.

17 b. Southern Alternative

18 The southern alternative was a route that was generally south of the proposed
19 route along the entire length of the project from Teckla-Osage-Lange. The
20 portion of this southern alternative route, starting from the Osage substation,
21 traveled southeast for approximately 7.5 miles where it turns due east for

1 approximately 12 miles before crossing the Wyoming/South Dakota border.
2 From the South Dakota border, the southern line route continued east for
3 approximately 21 miles and then turned in a north eastern path for
4 approximately 17 miles towards the Pactola substation. From the Pactola
5 substation, this southern route continued on a north and eastern route for
6 approximately 10 miles to the Lange Substation, located near Rapid City.

7 c. Other Alternatives

8 During the public scoping process, there were additional alternatives suggested
9 by members of the public to follow existing highway ROW's, construct line in
10 a straight line manner from Teckla-Osage, and follow existing transmission
11 ROW. These were determined to be non-viable alternatives for multiple
12 reasons, such as significant increase in line mileage and construction costs,
13 land use, and system reliability issues.

14 **Q. PLEASE EXPLAIN WHY BLACK HILLS POWER HAS CHOSEN TO**
15 **PROCEED WITH THE ROUTE SET FORTH IN ITS APPLICATION.**

16 A. The proposed route for the entire project was selected based on a number of
17 factors. These factors include: a low amount of greater sage grouse core area
18 crossed, a low amount of current or future mine operations crossed, a relatively
19 low amount of timbered acres requiring tree clearing, a relatively high amount
20 of existing access roads, and a relatively low overall length. In addition, this

1 route takes advantage of utilizing approximately 47 miles of a currently unused
2 transmission line ROW.

3 **Q. DOES BLACK HILLS POWER ANTICIPATE CHANGES TO THE**
4 **PROPOSED ROUTE?**

5 A. The Company does not anticipate any major changes to the proposed route.
6 There are a couple of locations where the line routing is still being reviewed,
7 one area around Deerfield Lake and the other near the Rapid City end of the
8 line. There may also be some minor modifications to pole locations on a given
9 property as ROW negotiations continue with landowners, but these potential
10 changes would not be considered to be major modifications to the line route
11 and would be within the presently defined ROW boundaries.

12 **Q. WHEN DOES THE COMPANY PLAN TO BEGIN CONSTRUCTION OF**
13 **THE PROPOSED LINE AND SUBSTATION ADDITIONS?**

14 A. Provided the Commission approves the Application, Black Hills Power plans
15 to begin construction of the South Dakota portion of the Project, as early as
16 possible. The Company's current schedule provides for a construction start
17 date in January of 2015.

18 **Q. WHEN DOES THE COMPANY EXPECT CONSTRUCTION TO BE**
19 **COMPLETE?**

1 A. Black Hills Power plans on completing construction in the last quarter of 2015.
2 This target completion timeframe is necessary to ensure that the Project is
3 placed into service no later than December 31, 2015.

4 **IV. GOVERNMENTAL AGENCY APPROVAL**

5 **Q. WHAT STEPS HAS THE COMPANY TAKEN TO OBTAIN**
6 **APPROVAL OF THE PROPOSED TRANSMISSION LINE PROJECT**
7 **FROM OTHER IMPACTED GOVERNMENTAL ENTITIES?**

8 A. In addition to filing this Application, Black Hills Power worked with the
9 Black Hills National Forest Service (“Forest Service”), in cooperation with the
10 Thunder Basin National Grasslands, and the Bureau of Land Management
11 (“BLM”) to prepare a Draft Environmental Impact Statement (“DEIS”) to
12 comply with the National Environmental Policy Act (“NEPA”) and other
13 relevant Federal and State laws and regulations.

14 **Q. WHAT IS A DEIS?**

15 A. A DEIS is a document required by NEPA for certain actions “significantly
16 affecting the quality of the human environment.” The DEIS is a tool that the
17 aforementioned agencies utilize for decision making purposes. In particular,
18 the DEIS describes the positive and negative environmental impacts of the
19 Project.

20 **Q. PLEASE GENERALLY DESCRIBE THE STEPS INVOLVED IN THE**
21 **PREPARATION OF THE DEIS?**

1 A. During the project development and analysis period, the above mentioned
2 federal entities lead a collaborative effort to review NEPA and internal agency
3 requirements associated with the Project. In addition, the collaborative effort
4 also involved interaction with other individuals and groups that were interested
5 in the Project.

6 **Q. WAS THE PUBLIC PROVIDED AN OPPORTUNITY TO PROVIDE**
7 **COMMENT DURING THE PROJECT EVALUATION AND ANALYSIS**
8 **PERIOD?**

9 A. Yes. The Forest Service announced the project scoping period and public
10 meetings in the Federal Register on August 26, 2011. In addition, in the fall of
11 2011, over 3,000 scoping notification letters produced by the Forest Service
12 were sent to government agencies, tribes, elected officials, property owners
13 near the proposed project, various non-governmental organizations and other
14 interested stakeholders. News releases about the project and public meetings
15 were also published in three local newspapers: the News Letter Journal (WY),
16 the Hill City Prevailor (SD), and the Rapid City Journal (SD).

17 **Q. DID THE PUBLIC PROVIDE COMMENTS RELATED TO THE**
18 **PROEJCT?**

19 A. Yes, the public provided comments through a variety of means such as letters,
20 faxes, emails, and orally at public meetings.

21 **Q. WERE THE PUBLIC'S COMMENTS ADDRESSED?**

1 A. Yes, the Forest Service has responded to a large portion of the comments
2 received to date. The comments received during the scoping process were
3 used to help define issues, develop alternatives and mitigation measures, and
4 analyze Project effects. Through the review and analysis of the scoping
5 comments and input, the Forest Service and the BLM identified and analyzed
6 the key issues set forth in the DEIS. Further, this input will be utilized to
7 develop alternatives that will be addressed in the Final Environmental Impact
8 Statement (“FEIS”).

9 **Q. ARE THE FOREST SERVICE AND THE BLM SUPPORTIVE OF THE**
10 **PROJECT?**

11 A. The Forest Service and BLM have been active participants in the NEPA
12 process since the Project inception and continue to work closely with Black
13 Hills Power. The Environmental Impact Statement is still in a “Draft” format
14 and therefore, Black Hills Power has not received final approval from the
15 Forest Service or the BLM. However, as noted within the DEIS, the Forest
16 Service and BLM have identified a need to authorize Black Hills Power to
17 construct, install and operate the 230kV line to strengthen the regional
18 transmission network, improve the reliability of the transmission system, and
19 to provide additional transmission capacity to help meet the growing demand
20 for electricity and development in the region.

21 **Q. WHAT ARE THE NEXT STEPS THAT WILL BE TAKEN?**

1 A. Responses to comments related to the DEIS continue to be addressed. At the
2 request of the Forest Service, additional alternatives are currently being
3 evaluated in select areas. Those alternatives will go out for a public comment
4 period and responses will become part of the FEIS. The Forest Service has also
5 taken the lead on the approval of a Programmatic Agreement (“PA”) between
6 federal agencies, State History Preservation Office (“SHPO”), Advisory
7 Council, and recognized tribes. The purpose of the PA is to comply with
8 Section 106 of the National Historic Preservation Act. All participating
9 agencies will need to approve both the FEIS and the PA.

10 **Q. CAN BLACK HILLS POWER COMMENCE CONSTRUCTION OF**
11 **THE PROJECT BEFORE THE FEIS AND THE PA ARE APPROVED?**

12 A. No. Once all final decisions have been received on the FEIS and the PA, the
13 Record of Decision (“ROD”) will be issued by all required agencies. At this
14 time, Black Hills Power can commence construction if the Application has
15 been approved by the Commission.

16 **Q. WHEN WILL THE FEIS BE ISSUED BY THE FOREST SERVICE AND**
17 **THE BLM?**

18 A. Although the Forest Service and the BLM are unable to provide a firm
19 issuance date, all information Black Hills Power has received to date suggests
20 that the FEIS, PA, and the ROD will be issued in the fourth quarter of 2014.

1 **Q. DOES BLACK HILLS POWER ANTICIPATE SEEKING APPROVAL**
2 **FOR THIS PROJECT FROM THE STATE OF WYOMING?**

3 A. Yes, Black Hills Power anticipates filing an Application for a Certificate of
4 Public Convenience and Necessity with the Wyoming Public Service
5 Commission in July 2014.

6 **Q. ARE THERE PERMITS THAT MUST BE OBTAINED FROM**
7 **GOVERNMENTAL ENTITIES FOR THIS PROJECT?**

8 A. Yes, there are a number of permits that must be obtained. Please refer to
9 Exhibit MJF - 3 – Permits.

10 **V. LANDOWNER CONTACT STATUS**

11 **Q. HOW MANY SOUTH DAKOTA LAND OWNERS ARE**
12 **POTENTIALLY IMPACTED BY THE PROPOSED TRANSMISSION**
13 **LINE PROJECT?**

14 A. Approximately 36.3 miles of the South Dakota portion of the project cross
15 Forest Service land. With respect to the remaining 9.1 miles in South Dakota,
16 the Company will likely need to obtain ROWs over the property owned by 8
17 commercial and 23 private land owners.

18 **Q. WHAT CONTACT HAS THE COMPANY HAD WITH ALL**
19 **POTENTIALLY IMPACTED LANDOWNERS IN SOUTH DAKOTA?**

20 A. Public meetings were held in June of 2010 in Rapid City to provide the public
21 an opportunity to learn about the Project. In September of 2010,

1 approximately 1250 landowners in South Dakota were sent informational
2 packets about the project and invited to a second public meeting. Due to
3 additional line route alternatives being reviewed in the vicinity of Rapid City
4 since the September 2010 public meeting, an additional 400 landowners were
5 notified of a third public meeting that was held in May 2011.

6 Written requests for the right to enter property for surveying purposes were
7 provided to all potentially impacted South Dakota land owners on or before
8 November 8, 2013. In addition, Black Hills Power and its contractors have had
9 several subsequent verbal communications with landowners related to the
10 Company's request for permission to perform surveys on the potentially
11 impacted property.

12 **Q. WHEN DOES BLACK HILLS POWER PLAN TO BEGIN**

13 **NEGOTIATING EASEMENTS WITH IMPACTED LAND OWNERS?**

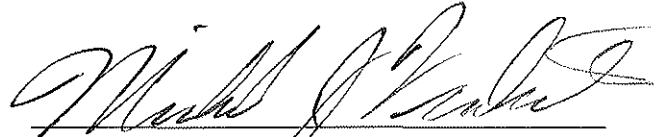
14 A. Black Hills Power plans to make initial offers to South Dakota land owners on
15 or before August 1, 2014.

16 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

17 A. Yes, it does.

STATE OF SOUTH DAKOTA)
) ss
COUNTY OF PENNINGTON)

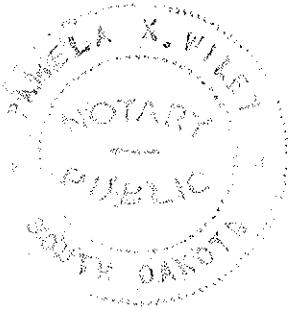
I, Michael J. Fredrich, being duly sworn on oath, depose and state that I am the witness identified in the foregoing prepared testimony and I am familiar with its contents, and that the facts set forth are true to the best of my knowledge, information and belief.

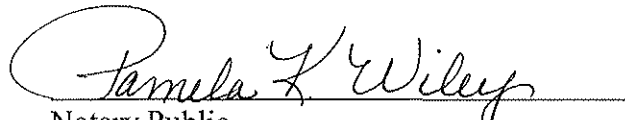


Michael J. Fredrich

Subscribed and sworn to before me this 26th day of June, 2014.

SEAL





Notary Public

My Commission Expires: 10-5-2015