

Direct Testimony and Schedules
Laura McCarten

Before the North Dakota Public Service Commission
State of North Dakota

IN THE MATTER OF THE APPLICATION OF NORTHERN STATES POWER COMPANY
FOR AN ADVANCE DETERMINATION OF PRUDENCE FOR THREE NATURAL GAS
COMBUSTION TURBINE GENERATORS

Case No. PU-13_____
Exhibit__ (LM-1)

Policy Testimony

April 26, 2013

46 **PU-13-195** Filed: 11/26/2013 Pages: 16
Exhibit NSP-2

Northern States Power Company

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Northern States Power Company

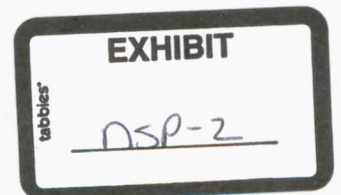


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Schedules

Resume

Schedule 1

1 **I. INTRODUCTION**

2
3 Q. PLEASE STATE YOUR NAME AND TITLE.

4 A. My name is Laura McCarten. I am Regional Vice President for Northern
5 States Power Company.

6
7 Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS AND EXPERIENCE.

8 A. I am responsible for regulatory, legislative, and customer and community
9 relations in North Dakota, South Dakota, and Minnesota. I provide strategic
10 leadership regarding the development and implementation of our initiatives to
11 most effectively serve our retail customers and communities we serve. My
12 resume is included as Exhibit ____ (LM-1), Schedule 1.

13
14 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

15 A. I provide an overview of our request for an Advance Determination of
16 Prudence (ADP) for three new natural gas combustion turbines (CT) – Black
17 Dog Unit 6, Red River Unit 1, and Red River Unit 2 – intended to meet our
18 identified resource needs in the 2017-2019 timeframe. In addition, I introduce
19 the witnesses we are sponsoring in support of our ADP Application. My
20 testimony highlights that our proposal:

- 21 • *Ensures a reliable power supply for our customers.* Our proposal closely
22 matches the implementation of electric resource additions with
23 identified customer electric power needs;
- 24 • *Implements a prudent, flexible approach.* The incremental generation
25 additions we propose prudently ensure we will have sufficient
26 generating resources under all reasonably foreseeable circumstances –
27 and will allow us to adjust resource deployment to better manage the

1 impacts of the inherent uncertainty in customer demand forecasts and
2 MISO reserve margin requirement changes;

- 3 • *Enhances the reliability of local system operations.* We have chosen to deploy
4 needed generation at locations that will appropriately balance cost,
5 reliability, and local considerations for our power supply that will
6 provide important diversity to the overall benefit of our system and
7 customers; and
- 8 • *Provides the most economical generation addition.* CTs require lower capital
9 investments than other new power plant options. In addition, the
10 Black Dog plant and Hankinson, North Dakota locations of our
11 proposed CTs take advantage of existing power plant, natural gas, and
12 transmission infrastructure.

13 14 **II. OVERVIEW**

15
16 Q. PLEASE PROVIDE AN OVERVIEW OF THE COMPANY'S PROPOSAL.

17 A. We meet our customer's needs for electricity with a combination of Company-
18 owned-and-operated generating facilities, and long- and short-term power
19 purchases. Our proposal is designed to meet the resource needs identified in
20 our most recent Midwest Resource Plan. It proposes an incremental approach
21 that allows flexibility to defer or cancel one or more components based on
22 changes in customer demand or MISO's reserve margin requirements.

23
24 Specifically, between 2017 and 2019 we propose to add to our system three
25 215 MW natural gas-fired, simple-cycle, combustion turbine generators. The
26 first CT would be constructed in 2017 at the Company's existing Black Dog
27 plant in Burnsville, Minnesota. This unit would substantially replace the coal-

1 fired generating capacity at this site, which is scheduled to retire in 2015. The
2 second 215 MW CT would be placed in service in 2018 in Hankinson, North
3 Dakota – becoming Red River Valley Unit 1 (RRV 1) – and would take
4 advantage of existing nearby transmission and natural gas infrastructure. The
5 third 215 MW CT would also be placed in Hankinson, and would be added in
6 2019 to the existing RRV plant site as Red River Valley Unit 2 (RRV 2).

7
8 Q. HOW IS YOUR TESTIMONY ORGANIZED?

9 A. First I describe our identified future resource needs and resource planning
10 process, and then describe how our proposed new CTs prudently meet this
11 need. I also discuss the multi-state review process for our proposed new CTs
12 and the Company's compliance with its commitments to timely file ADPs
13 with the North Dakota Commission. Finally, I introduce the other witnesses
14 who provide testimony in this proceeding.

15
16 **III. RESOURCE NEED**

17
18 Q. WHAT CAPACITY NEEDS HAS THE COMPANY IDENTIFIED IN THE 2017-2019
19 TIMEFRAME?

20 A. The Company has identified a capacity shortfall of approximately 150 MW to
21 500 MW in the 2017-2019 time period for our five state, integrated NSP
22 System.

23
24 Q. HOW DID THE COMPANY IDENTIFY THESE RESOURCE NEEDS?

25 A. The Company engages in a regular resource planning process to ensure that it
26 continues to have the appropriate generation and transmission capacity to
27 meet the needs of all of our customers in all of the states we serve. This

1 resource planning process relies on rigorous forecasting of customer demand
2 and modeling of our system to determine if and when new resource additions
3 are needed. Additionally, this analysis is informed by our resource adequacy
4 requirements under the MISO Tariff. Company Witness Steven W. Wishart
5 provides a more in-depth discussion of the Company's resource planning
6 analysis.

7
8 Q. IS THERE REGULATORY OVERSIGHT OF THE RESOURCE PLANNING PROCESS?

9 A. Yes. As I describe later in my testimony, we engage in formal regulatory
10 proceedings, and seek input from all of our regulators and stakeholders to
11 ensure our resource planning efforts meet customer needs and comply with
12 regulatory requirements in all of the states we serve.

13
14 **IV. PROPOSAL TO MEET IDENTIFIED NEED**

15
16 Q. WHY IS THE COMPANY'S PROPOSAL A PRUDENT WAY TO ADDRESS THE
17 IDENTIFIED RESOURCE NEED?

18 A. Our proposal takes advantage of existing infrastructure, provides flexibility to
19 implement in a phased-approach to effectively manage the inherent
20 uncertainty in customer demand forecasts, and enhances reliability by
21 strategically locating generating units near regional load centers – making it a
22 cost-effective, prudent solution to reliably deliver adequate capacity to satisfy
23 current identified needs. In addition, our plan to add CTs requires lower
24 capital investment than other new power plant options, and fits well with our
25 existing generation portfolio.

26
27 As described in our Application, Black Dog Unit 6 will utilize existing

1 infrastructure at our existing plant and feed power directly to the existing 115
2 kV transmission system that directly serves distribution substations
3 throughout our largest load center – the Minneapolis-St. Paul metropolitan
4 area. Further, utilizing the existing Black Dog site with its existing natural gas
5 and transmission infrastructure significantly reduces the cost of this CT.
6

7 The Hankinson site identified for Red River Units 1 and 2 also appropriately
8 balances low cost and strategic location. This site is about 70 miles from our
9 Fargo load center, near the juncture of the 230 kV transmission system and a
10 large natural gas interstate pipeline in the area, thereby providing strong
11 economic justification. At the same time, this site places generation closer to
12 our regional load centers in North Dakota than our existing power plants.
13 Company Witness Gregory L. Ford provides further discussion on our
14 proposed generating units and implementation schedule.
15

16 Q. WHY IS FLEXIBILITY IMPORTANT TO THE COMPANY'S PROPOSAL?

17 A. Given the inherent uncertainty in being able to accurately forecast future
18 demand, as discussed by Mr. Wishart, we have built into our proposal the
19 ability to adjust both the size and timing of additions to our generation
20 portfolio as future circumstances may dictate. This flexibility also enables us
21 to better manage the impact of capital commitments on customer rates. As
22 new information becomes available in 2014 and 2015, the Company, with
23 input from all of its stakeholders and regulators, will be able to determine
24 whether it is more appropriate to delay or cancel one or two CTs at a relatively
25 nominal cost, if circumstances warrant doing so to better match customer
26 needs.
27

1 **V. RESOURCE REVIEW PROCESS**

2
3 Q. PLEASE SUMMARIZE THE REVIEW PROCESS FOR THE COMPANY'S RESOURCE
4 PLANNING AND RESOURCE ADDITION PROPOSALS.

5 A. The NSP System is an integrated system that serves and benefits all of our
6 customers in the five states it serves. A large, integrated system allows the
7 Company to: (1) reduce the total amount of generating resources needed to
8 serve customers; (2) diversify the fleet of generating resources required to
9 meet our customers' needs; and (3) lower costs and fuel volatility risk by
10 spreading them over a substantially larger and geographically diverse customer
11 base. Because the NSP System provides service to customers in many states,
12 the process is enhanced when all of our stakeholders have meaningful input
13 into our resource decisions.

14
15 Our Midwest Resource Plan and specific resource addition proposals are
16 subject to review and stakeholder involvement in all of the states we serve. As
17 I discuss below, we have made commitments in North Dakota to make certain
18 filings, so that the Public Service Commission (Commission) and its Staff can
19 have timely input into our plans. In Minnesota, we are subject to state Statute
20 and Rules regarding the Public Utilities Commission (MPUC) involvement in
21 review and approval of our resource plans and resource additions. In South
22 Dakota, while we file resource plan documents, the Public Utilities
23 Commission (SDPUC) does not apply a formal review and approval process.

24
25 Q. WHAT ROLE DOES THE NORTH DAKOTA COMMISSION PLAY IN THE
26 COMPANY'S RESOURCE PLANNING PROCESS?

27 A. In Case No. PU-07-776, the Company committed to filing its resource plans

1 with the Commission so that it could provide timely input into our current
2 plans. In that same Case, the Company also committed to filing Applications
3 for ADPs with the Commission, so that it has the opportunity to provide
4 input into our resource addition proposals.

5
6 The most recent Midwest Resource Plan we filed with the Commission was in
7 2010, in Case No. PU-10-580, and was updated as refreshed information
8 became available. Commission Staff issued discovery in that case, including
9 requesting information with respect to the feasibility of constructing a natural
10 gas plant in the Fargo area. We are now filing our Application for an ADP in
11 this Case, consistent with our commitments.

12
13 Q. WHAT ROLE DOES THE MPUC PLAY IN THE COMPANY'S RESOURCE PLANNING
14 PROCESS?

15 A. Minn. Stat. § 216B.2422 requires utilities to file resource plans with the
16 MPUC, which undertakes an extensive review of our resource planning
17 process and either accepts, rejects, or modifies the plan. On March 5, 2013,
18 the MPUC issued an Order in Docket No. E002/RP-10-825 confirming the
19 capacity need I have described. A specific outcome of the MPUC proceeding
20 that reviewed the Company's Midwest Resource Plan was a Competitive
21 resource Acquisition Process (CAP) to fill the Company's identified 150-500
22 MW need in the 2017-2019 time period.¹

23
24 Q. PLEASE DESCRIBE THE MPUC'S COMPETITIVE ACQUISITION PROCESS.

25 A. If the Company proposes to meet its resource needs with generation it will
26 build and own, the MPUC requires the proposal to be subject to a CAP. As

¹ Docket No. E002/CN-12-1240.

1 part of the CAP proceeding, the Company's proposal for phased construction
2 of three gas CTs will be evaluated against competing proposals. As described
3 in our Application, the CAP is structured to allow independent power
4 producers to submit other resource proposals that can meet some or all of our
5 identified need. Such proposals had to be filed with the MPUC on the same
6 day that the Company filed its Certificate of Need application for its three CT
7 proposal.

8
9 After the MPUC reviews all proposals for adequacy, the matter is referred to
10 an Administrative Law Judge who provides findings of fact and
11 recommendations to the MPUC on which proposal to select. The MPUC will
12 then consider the record and the ALJ's recommendation to make its resource
13 selection and grant any necessary Certificates of Need. If the MPUC selects a
14 proposal of an independent power producer, the Company and selected party
15 will then negotiate a Power Purchase Agreement, which is also submitted to
16 the MPUC for approval.

17
18 Q. PLEASE DESCRIBE THE COMMISSION'S REVIEW PROCESS.

19 A. As I noted earlier, the Company has committed to keep the Commission
20 informed of its resource needs and its intended resource additions through the
21 periodic filing of our Midwest Resource Plan with the Commission, as well as
22 seeking ADPs for our intended resource additions. The ADP process allows
23 the Commission to make a determination of prudence for a particular
24 resource addition and retain ongoing oversight of the implementation of that
25 resource addition. Through the ADP process, the Commission has the
26 opportunity to evaluate our proposal and provide guidance as to the prudence
27 of our intended resource addition.

1

2 Q. HOW WILL THE MPUC'S CAP PROCEEDING IMPACT THE COMMISSION'S
3 REVIEW IN THIS CASE?

4 A. By initiating the ADP process now, the Commission can provide its views on
5 the Company's proposal as it undergoes contemporaneous review by the
6 MPUC in the CAP. Similarly, the CAP provides an opportunity for the
7 MPUC to provide its views on the Company's proposal while the Commission
8 considers our ADP Application. There is the potential for different positions
9 to be taken by regulators in North Dakota and Minnesota regarding the
10 optimum resource selection to meet the needs forecasted for the 2017-2019
11 period. The Company commits to keeping the Commission fully- and timely-
12 informed of any such developments, and to work with both Commissions to
13 address any issues or conflicts in a constructive manner.

14

15 Q. IF THE PROPOSED CTs CAN BE QUICKLY IMPLEMENTED AND MAY NOT BE
16 NEEDED FOR SEVERAL YEARS, WHY IS THE COMPANY FILING AN ADP
17 APPLICATION NOW?

18 A. The Commission has indicated its interest in reviewing the Company's
19 intended resource additions in advance of any final decision or commitment
20 to construct a generation facility or engage in a power purchase contract. At
21 the Commission's request in Case No. PU-12-59, the Company committed to
22 file an ADP Application with the Commission within 14 days of filing with
23 the MPUC, an Application for a Certificate of Need for resource addition or a
24 Petition for approval of a PPA. Because we have recently filed a Certificate of
25 Need Application for our proposed CTs with the MPUC, we are now filing
26 our ADP Application with the Commission.

27

1 Given the unique nature of our proposal and its multi-year implementation,
2 we commit to working with the Commission and its Staff on a schedule and
3 process for reviewing and working toward a final Order in this case.
4

5 Q. HAVE ALTERNATIVE PROPOSALS BEEN SUBMITTED TO THE MPUC FOR
6 EVALUATION IN THE CAP PROCEEDING?

7 A. Yes. Great River Energy, Calpine Corporation, Invenergy, and Geronimo
8 Wind have submitted proposals. Due to certain logistical issues regarding the
9 appropriate protection of trade secret and other commercially-sensitive
10 information, the Company does not currently have all of the details of these
11 proposals. When such information is available, we will supplement our
12 Testimony and Application as appropriate.
13

14 Q. BASED ON WHAT YOU CURRENTLY KNOW, ARE ANY OF THE PROPOSALS
15 SUBMITTED TO THE MPUC A MORE PRUDENT WAY FOR THE COMPANY TO
16 MEET ITS RESOURCE NEEDS?

17 A. Based on the information currently available, the Company continues to
18 believe that the phased implementation of Black Dog Unit 6 and Red River
19 Units 1 and 2 is the most prudent way to meet the needs of all of our
20 customers in all of the states served by the NSP System.
21

22 Q. WOULD THE COMPANY ACCEPT ANY OF THE PROPOSED PPA ARRANGEMENTS
23 IN LIEU OF CONSTRUCTING THE PROPOSED CTs?

24 A. The Company always seeks to meet its resource needs in the most prudent
25 and cost-effective way it can. If, after thorough regulatory review, any of the
26 proposed PPAs, either separately or combined with our proposed CTs, are
27 determined to be a more prudent approach to meeting our resource needs, we

1 would pursue such a PPA in lieu of constructing some or all of our proposed
2 CTs.

3
4 **VI. PRESENTATION OF WITNESSES**

5
6 Q. PLEASE INTRODUCE THE WITNESSES THE COMPANY IS SPONSORING IN THIS
7 PROCEEDING.

8 A. In addition to my Policy Testimony, the Company sponsors the following
9 witnesses:

- 10 • *Steve Wisbart* – who testifies regarding the Company’s resource planning
11 and the identified capacity need for the 2017-19 time period.
12 • *Gregory Ford* – who testifies regarding the CT generators’ design,
13 operation and maintenance, and construction costs and schedule.

14
15 Together, these witnesses provide the information and support necessary to
16 evaluate and approve our application for an ADP for our proposed Black Dog
17 Unit 6 and Red River Units 1 and 2.

18
19 **VII. CONCLUSION**

20
21 Q. PLEASE SUMMARIZE YOUR TESTIMONY.

22 A. Our proposal to incrementally add three 215 MW simple-cycle natural gas-
23 fired CTs to our integrated system efficiently and effectively meets our
24 customers’ resource needs identified as part of our most recent Midwest
25 Resource Plan. It provides important geographic diversity to our integrated
26 system, and prudently takes advantage of existing electric and natural gas
27 supply infrastructure and provides for an incremental and flexible

1 implementation – minimizing costs and providing benefits for our customers.
2 We look forward to working constructively with the Commission and its Staff
3 in meeting our customers' resource needs.

4

5 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

6 A. Yes, it does.

Laura McCarten

Experience	2008-Present	Northern States Power Co.	Minneapolis, MN
	Regional Vice President, NSPM		
	<ul style="list-style-type: none"> ▪ For NSPM's North Dakota service territory, responsible for regulatory and legislative interface and policy development, customer and community relations and public affairs, gas business development, and providing strategic leadership on initiatives to effectively serve customers. ▪ For NSPM's South Dakota service territory, responsible for regulatory and legislative interface and policy development, customer and community relations and public affairs, and providing strategic leadership on initiatives to effectively serve customers. ▪ For NSPM's Minnesota service territory, responsible for managing relationships with communities and large customer accounts, natural gas business development and our HomeSmart service. 		
	2006-2008	Xcel Energy Services Inc.	Minneapolis, MN
	Director, Regional Transmission Development		
	1997-2005	Xcel Energy Services Inc.	Minneapolis, MN
	Director, Minnesota Community Services		
	1994-1997	Northern States Power Co.	Mankato, MN
	Regional General Manager		
	1992-1994	Northern States Power Co.	Minneapolis, MN
	Manager, Regulatory Affairs		
	1979-1991	Northern States Power Co.	Minneapolis, MN
	Nuclear Generation: Spent Nuclear Fuel Project Manager, Engineer		
Education	1979	University of Wisconsin	Madison, WI
	Bachelor of Science in Nuclear Engineering		
Professional Development	<ul style="list-style-type: none"> ▪ Xcel Energy Leadership Advantage Program (2004) ▪ University of Michigan Business School, Strategic Marketing Planning (1998) ▪ University of Minnesota, Carlson School of Management, Minnesota Management Institute (1996) 		
Community Service	<ul style="list-style-type: none"> ▪ Lignite Energy Council, Board of Directors ▪ Minneapolis Regional Chamber of Commerce, Board of Directors ▪ North Central Electrical League, Board of Directors ▪ Ordway Center for the Performing Arts, Board of Directors ▪ University Enterprise Laboratories, Board of Directors 		

