

MONTANA-DAKOTA UTILITIES CO.
A Division of MDU Resources Group, Inc.

Before the Public Service Commission of North Dakota

Case No. PU-11-395 and PU-11-396

Rebuttal Testimony
of
Andrea L. Stomberg

1 **Q. Please state your name and business address.**

2 A. My name is Andrea L. Stomberg and my business address is 400
3 North Fourth Street, Bismarck, North Dakota 58501.

4 **Q. What is your position with Montana-Dakota Utilities Co.?**

5 A. I am the Vice-President of Electric Supply for Montana-Dakota
6 Utilities Co. (Montana-Dakota), a Division of MDU Resources Group, Inc.

7 **Q. What is the purpose of this rebuttal testimony?**

8 A. My testimony is intended to provide further support for Montana-
9 Dakota's proposal to construct an 88 MW combustion turbine at the
10 Heskett Station in Mandan, North Dakota in response to the Initial
11 Testimony of Advocacy Staff witness Richard Hahn. In particular, I will
12 elaborate on the benefits of an owned on-system generation resource
13 located at the Heskett site.

14 **Q. Do the North Dakota Advance Determination of Prudence (ADP) and**
15 **Certificate of Public Convenience and Necessity (CPCN) statutes**
16 **require least cost, as suggested by Mr. Hahn?**

1 A. No. Least cost is not a requirement for issuing an advanced
2 determination of prudence or a certificate of public convenience and
3 necessity. Not all prudent resources are necessarily least cost resources
4 and vice versa. Montana-Dakota seeks the best overall value for its
5 customers, which may mean the selection of a resource that does not
6 carry the least cost price tag. Also, the statute contains a rebuttable
7 presumption that resources located in the state are prudent and requires
8 the Commission to consider the benefits of having the resource located in
9 the state. These provisions clearly imply that the resource need not be
10 least cost to be deemed prudent.

11 **Q. Did Mr. Hahn consider these qualitative benefits in his analysis and**
12 **recommendation?**

13 A. Mr. Hahn's analysis and testimony focuses on the modeling
14 conducted by the Montana-Dakota in the development of its 2011 IRP. He
15 offers various changes that he believes could have or should have been
16 made to the modeling; some of which the Company agrees and some of
17 which it disagrees as discussed in the Rebuttal Testimony of Mr. Neigum.
18 Based on his analysis of the modeling results, Mr. Hahn recommended
19 that Montana-Dakota's applications be denied because the modeling
20 identified the Illinois power purchase proposal as a lower cost resource
21 alternative.

22 It is important to recognize that the modeling is designed to identify
23 the least cost resource alternatives based upon the assumptions built into
24 the model. It is not intended to be the final or definitive step in determining

1 the best generation alternative for the customers. After the modeling has
2 identified the least cost alternatives, the Company must consider
3 subjective and qualitative factors in making final selections of the best
4 alternatives. Mr. Hahn's testimony did not address this aspect of the
5 selection process.

6 **Q. What are the benefits of an on-system resource compared to an off-
7 system generating resource?**

8 A. Resources located on the Montana-Dakota integrated system, in
9 contrast to those located outside of this system, particularly those located
10 outside the states of Montana-Dakota's service area, provide many
11 benefits to customers and communities including:

- 12 • Increased system reliability,
- 13 • Job creation and employment opportunities,
- 14 • Higher state income tax revenue,
- 15 • Higher local property tax revenue, and
- 16 • Indirect revenue additions to local communities from purchases
17 of materials and services.

18 **Q. Do off-system out-of-state generating resources provide these same
19 benefits to the states and communities that Montana-Dakota serves?**

20 A. No, they do not.

21 **Q. Are there other benefits of an owned resource rather than a power
22 purchase agreement (PPA) that are not reflected in the modeling
23 analysis?**

1 A. Certainly. The modeling analysis captures a 20-year period and
2 extends those benefits over a 50-year time frame. If a PPA was entered
3 into for the entire 20 years, clearly, another resource or PPA would have
4 to be available at the end of that term. Because the cost of the
5 replacement resource is unknown, the model prices the resource at the
6 same cost as the PPA that it replaced. Obviously, that is an unlikely
7 assumption that can provide, as it does in this instance, a modeling bias in
8 favor of power purchase arrangements. A generating resource such as a
9 combustion turbine is expected to have at least a 40 year life, and hence
10 provides longer-term cost certainty. For instance, Montana-Dakota's Miles
11 City combustion turbine, a 25 MW resource that was constructed in 1972,
12 has provided value to customers for 39 years. It has a current monthly
13 value of \$0.91/kw, compared to the Illinois proposed resource at \$4.55/kw.
14 In this example, replacing the Miles City combustion turbine capacity
15 today with a PPA priced at the Illinois proposal would cost Montana-
16 Dakota customers an additional \$1.1 million dollars annually. Montana-
17 Dakota customers have received the cost benefits of Montana-Dakota's
18 ownership of this resource for a number of years and will continue to
19 receive this value until the turbine is retired. This value would not have
20 been reflected in any least cost modeling of generation alternatives
21 conducted in 1972.

22 **Q. What are the reliability benefits that a 88 MW combustion turbine**
23 **located near Mandan, North Dakota will have for the integrated**
24 **system?**

1 A. A new generating resource located near the Heskett Station will
2 provide reliability benefits by adding an additional resource in an area that
3 is experiencing growth. While this resource will help meet the growing
4 capacity and energy needs of Montana-Dakota's interconnected system
5 customers, it adds particular value to Montana-Dakota's largest electric
6 load area, the Bismarck-Mandan area.

7 In the Bismarck-Mandan area, transmission outages at the East
8 Bismarck Substation or Heskett Substation can impact the Company's
9 ability to reliably serve its customers. On December 5, 2011, Montana-
10 Dakota experienced the failure of a transformer at Heskett Unit #1 which
11 caused both Heskett coal-fired power units to trip off-line. The failure of
12 this transformer led to the failure of a larger transformer at the Heskett
13 Substation. The resultant loss of generation in the Bismarck-Mandan area
14 coupled with the inability to inject power into the area from the Heskett
15 Substation because of the larger transformer failure, caused Montana-
16 Dakota, to announce a public appeal to conserve energy as well as
17 request the running of all distributed generation in the Bismarck-Mandan
18 area on the December 6, 2011.

19 **Q. How would the proposed 88 MW combustion turbine (Heskett CT)**
20 **been used during that event?**

21 A. Had the proposed Heskett CT been available, it would have been
22 started to quickly provide additional energy support into the Bismarck-
23 Mandan area and avert the public appeal to conserve energy on the sixth
24 of December. The Heskett CT will be connected to the 115kV

1 transmission system and would have been able to support loads in the
2 Bismarck-Mandan area even with the failed transformer at the Heskett
3 Substation. It takes around 24 hours to restart Heskett Unit #2, while the
4 new CT is expected to be able to achieve full load within 30 minutes.

5 **Q. What would have happened if Heskett Unit #2 had not been available**
6 **to restart or if a transmission problem had occurred at the East**
7 **Bismarck Substation?**

8 A. If Montana-Dakota had not have been able to start the Heskett Unit
9 #2 generator or if a transmission problem had occurred at the East
10 Bismarck Substation, we would have had to implement load-shedding
11 procedures in the Bismarck-Mandan area.

12 **Q. Are there other reasons this location is important?**

13 A. Yes. For many years, Montana-Dakota's integrated system
14 customers have benefitted from transmission facilities Montana-Dakota
15 shares with the Western Area Power Administration (WAPA) under a
16 transmission service agreement. This agreement will expire permanently
17 on December 31, 2015, and Montana-Dakota will be required to take
18 additional transmission service from the WAPA Integrated Transmission
19 System (IS) for loads that the Company is unable to serve without support
20 from the IS, particularly in the western portion of its service territory. An
21 additional generating resource at Heskett Station will help offset the need
22 to use the IS to serve customer load requirements east of Beulah, North
23 Dakota. The monetary benefit of having an 88 MW combustion turbine at
24 the Heskett location is the potential avoidance of paying \$3.1 million (in

1 2011 dollars) annually to the WAPA IS, based on Montana-Dakota's
2 projected usage of the IS lines.

3 **Q. Does a generating resource in Illinois provide these same benefits?**

4 A. No, it does not.

5 **Q. Does selection of a combustion turbine at the Heskett site offer other
6 benefits and opportunities?**

7 A. Montana-Dakota has evaluated the Heskett site for a possible
8 future combined cycle application of the proposed 88 MW Heskett CT in
9 conjunction with the Heskett Unit #1 steam turbine. The Heskett Unit #1
10 plant has been in service since 1954. When this plant is ultimately retired,
11 the steam turbine equipment will be well-suited to be used in a combined
12 cycle application with the proposed 88 MW Heskett CT. In this scenario,
13 the Company would only need to install a heat recovery steam generator
14 onto the exhaust of the 88 MW Heskett CT to continue to power the
15 Heskett Unit #1 steam turbine and generator. This solution allows
16 Montana-Dakota to bring continuing value from this depreciated asset to
17 our customers. As discussed in the Application for an Advance
18 Determination of Prudence, even without the addition of the combined
19 cycle application, the Heskett location offers opportunities for synergies by
20 being co-located at the site with the Heskett coal plants.

21 **Q. Did the EGEAS modeling for the 2011 IRP reflect the economic
22 efficiencies of combining the 88 MW Heskett CT with the Unit #1
23 steam turbine and generator?**

1 A. No. The economic opportunities of this combination were not
2 reflected in the EGEAS modeling in order for the model to select least cost
3 alternatives before consideration of these opportunities and other
4 qualitative factors.

5 **Q. Would the inclusion of the synergies such as staffing and**
6 **infrastructure existing at the Heskett Station strengthen the**
7 **economic analysis for selection of the 88 MW Heskett CT project?**

8 A. Yes, it would have strengthened the economic analysis, but these
9 synergies were excluded in order not to bias the model.

10 **Q. Does this conclude your rebuttal testimony?**

11 A. Yes, it does.