

**STATE OF NORTH DAKOTA
BEFORE THE
NORTH DAKOTA PUBLIC SERVICE COMMISSION**

In the Matter of the Application of Northern States Power Company
for an Advance Determination of Prudence
Heartland Divide Wind II

Case No. PU-20-433
OAH FILE NO. 20200421

Exhibit____(FLM-2)

Resource Planning

May 14, 2021

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1 **I. INTRODUCTION**

2

3 Q. PLEASE STATE YOUR NAME AND TITLE.

4 A. My name is Farah L. Mandich. I am a Specialist, Resource Planning for
5 Northern States Power Company-Minnesota (NSP or Xcel Energy or the
6 Company).

7

8 Q. ARE YOU THE SAME FARAH L. MANDICH WHO SUBMITTED PRE-FILED DIRECT
9 TESTIMONY IN THIS PROCEEDING?

10 A. Yes.

11

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

14 A. The purpose of my Rebuttal Testimony is to respond to the Direct Testimony
15 of Commission Advocacy Staff Witness Mr. James A. Heidell filed in this
16 Case. In particular, I respond to issues that Mr. Heidell raised with regard to
17 the location of the 200 MW Heartland Divide Wind II facility (Heartland
18 Divide II) in the Midcontinent Independent System Operator's (MISO) Local
19 Resource Zone 3 (MISO Zone 3). My rebuttal testimony supports the
20 conclusion that the North Dakota Public Service Commission (Commission)
21 should grant an advance determination of prudence (ADP) for the proposed
22 Heartland Divide II power purchase agreement (Heartland Divide II PPA or
23 Project).

1 **II. SYSTEM RESOURCES IN MISO ZONE 3**

2
3 Q. WHAT CONCERNS DOES MR. HEIDELL HAVE ABOUT HEARTLAND DIVIDE II
4 BEING LOCATED OUTSIDE OF MISO ZONE 1?

5 A. Mr. Heidell's testimony notes that there will be pricing differences between
6 the price at which the Company buys energy to meet its retail load obligations
7 and the price that will be paid for the Heartland Divide II PPA's energy sold
8 in MISO Zone 3. Mr. Heidell argues that the Company is essentially
9 arbitraging the MISO energy market by assuming it will be profitable to sell
10 energy from the Project into MISO Zone 3. In particular, Mr. Heidell finds
11 that based on his firm's market price assumptions for MISO Zones 1 and 3,
12 the Heartland Divide II PPA would generate approximately \$40 million less
13 in savings when compared to dispatching it into MISO Zone 1. As a result of
14 this alleged pricing spread, Mr. Heidell estimated fewer savings to North
15 Dakota customers from the Project than the Company's estimates.

16
17 Q. DO YOU AGREE WITH MR. HEIDELL'S CONCERNS WITH RESPECT TO
18 HEARTLAND DIVIDE II BEING LOCATED IN MISO ZONE 3?

19 A. No. Mr. Heidell's concerns are unwarranted and do not reflect the actual facts
20 regarding the impact of the Company obtaining generation resources in MISO
21 Zone 3 or how the Heartland Divide II project will be utilized by the
22 Company.

23
24 Q. WHY DID THE COMPANY SELECT A RESOURCE IN MISO ZONE 3 TO FILL THE
25 IDENTIFIED NEED?

26 A. The Company sought out projects to meet the identified need in both MISO
27 Zones 1 and 3 since these are MISO load zones in which the Company

1 currently has generation and load. As discussed in the Direct Testimony of
2 Company Witness Mr. Christopher J. Shaw, the Company conducted a
3 targeted solicitation in MISO Zones 1 and 3 for resources that had or would
4 soon have transmission cost certainty since expanding the search outside of
5 MISO Zone 1 could present additional opportunities for resource
6 procurement. Due to major delays in MISO's generator interconnection queue
7 study process and high transmission upgrade costs, only two projects were
8 identified that had sufficient transmission cost certainty. Of these projects,
9 only Heartland Divide II provided a bid and engaged in negotiations with the
10 Company for a PPA.

11
12 Q. DOES THE COMPANY HAVE LOAD AND RESOURCES IN MISO ZONE 3?

13 A. Yes. The Company has a small amount of load in the Alliant Local Balancing
14 Area which is in MISO Zone 3. Further, the Company has several generation
15 resources in Zone 3. For example, the Company's Mower County Wind
16 Facility is located in MISO Zone 3 and was granted an ADP by the
17 Commission on August 26, 2020, in Case No. PU-19-310.

18
19 Q. DOES MISO'S ZONAL CONSTRUCT IMPACT THE PROVISION OF ENERGY FROM
20 THE PROJECT?

21 A. No. Local Resource Zones are applicable only to MISO's capacity market.
22 Pricing in MISO's energy market is determined on a CPNode basis without
23 regard to Zone.

24

1 Q. IS THE COMPANY “BETTING ON THE MISO MARKET” WITH THE HEARTLAND
2 DIVIDE II PROJECT?

3 A. No. Mr. Heidell’s characterization of the Company’s acquisition of Heartland
4 Divide II as “betting on the MISO market” is incorrect and mischaracterizes
5 the purpose of the Project. Heartland Divide II is not a financial play or an
6 attempt to generate profit by selling the output of the Project into MISO Zone
7 3. As discussed further in the Rebuttal Testimony of Company Witness Mr.
8 Allen D. Krug, the Company is procuring the Heartland Divide II PPA to
9 support (1) our Retail Electric Service Agreement with Honeycrisp LLC (an
10 affiliate of Google LLC), and (2) an expansion of the Renewable*Connect
11 program in Minnesota.

12
13 Whether a project is located in Zone 1, Zone 3, or any other Local Resource
14 Zone, its pricing in MISO’s energy market is determined on a CPNode basis
15 based on its actual location, without regard to the Zone in which it is located.
16 In order to minimize “betting on the MISO market” the Company limited the
17 siting of this project to the two Zones where it has load; namely, Zones 1 or
18 3; to the exclusion of other Zones within or external to MISO that are further
19 from the topology of the Company’s load. I note that the same considerations
20 are also true for generators located in Zone 1. For example, the Company’s
21 Border Winds project located in ND is geographically remote from the
22 Company’s load centers. That it is located in Zone 1 rather than Zone 3 is
23 immaterial to the analysis as to whether the project is prudent.

24

1 Q. DOES HEARTLAND DIVIDE II'S LOCATION IN ZONE 3 AFFECT ITS ABILITY TO
2 BE ACCREDITED AS A CAPACITY RESOURCE FOR THE NSP SYSTEM?

3 A. No. Zonal considerations do come into play regarding MISO's capacity
4 market. By limiting siting to Zones 1 or 3, the project can qualify for capacity
5 in a Zone where the Company has load; again minimizing "betting on the
6 MISO market" with respect to the capacity market.

7

8 Q. HOW WILL HEARTLAND DIVIDE II SERVE THE NSP SYSTEM?

9 A. Heartland Divide II is taking Network Resource Interconnection Service
10 (NRIS) from MISO and will therefore qualify as a Capacity Resource for the
11 NSP System upon completion of the required Network Upgrades for the
12 interconnection of the Project.

13

14 Q. WHAT IS NRIS?

15 A. NRIS is a type of interconnection service available from MISO. When
16 interconnecting under NRIS, an Interconnection Customer, in this case
17 Heartland Divide II, will fund certain Network Upgrades that allow it to
18 integrate the facility with the transmission system and qualify as a Capacity
19 Resource that can be used to satisfy a load serving entity's Planning Reserve
20 Margin Requirement (capacity obligation).

21

22 Q. WILL THE COMPANY UTILIZE HEARTLAND DIVIDE II AS A CAPACITY
23 RESOURCE?

24 A. As I noted above, yes. Heartland Divide II's NRIS status is conditioned on
25 certain Network Upgrades being built. We expect those Network Upgrades to
26 be completed in 2024, which will allow Heartland Divide II to obtain
27 unconditional capacity accreditation for the project.

1

2 Q. WHY IS THIS IMPORTANT?

3 A. Heartland Divide II's ability to qualify as a Capacity Resource in Zone 3, where
4 the Company has load, demonstrates that the Company fully intends to utilize
5 the project to serve the integrated NSP System.

6

7 Q. WHAT DO YOU CONCLUDE FROM THE ABOVE DISCUSSION?

8 A. I conclude that Heartland Divide II's location in MISO Zone 3 enables the
9 Company to serve NSP customers in a manner that minimized "betting on
10 the MISO market" with respect to MISO's energy market, and satisfy its
11 Planning Reserve Margin Requirements where the Company has load.

12

13 Q. HAS THE COMPANY ANALYZED THE POTENTIAL BASIS SPREAD THAT MR.
14 HEIDELL NOTED?

15 A. Yes. The Company analyzed the potential locational marginal price (LMP)
16 risks and found that the location of the Project in MISO Zone 3 does not
17 negatively impact customers. Specifically, the Company performed LMP
18 screenings for the Heartland Divide II project that showed that the basis
19 differential between existing nodes in the general area of the Project and
20 Company load were consistent with other Company-owned and contracted
21 wind projects. Table 1 below shows the basis differentials between the NSP
22 load node (NSP.NSP), two Company-owned wind projects (the Nobles and
23 Grand Meadows wind facilities, identified in the table as "NSP Owned1" &
24 "NSP Owned2"), and two nodes used as proxies for the Heartland Divide II
25 project over the 2018-2020 period in the Mid-American Balancing Area
26 (MEC.Carol_W1 and MEC.Eclipse1, identified in the table as "HD Proxy1"
27 and "HD Proxy2").

1

2 **Table 1: Historical Comparison of Basis Differentials Between NSP.NSP**

3 **Load Node, Company-Owned Wind, and Heartland Divide II**

Year	NSP.NSP	NSP Owned1	NSP Owned2	HD Proxy1	HD Proxy2	Differential – NSP Owned1	Differential – NSP Owned2	Differential – HD Proxy1 & HD Proxy2 (average)
2018	\$27.54	\$25.80	\$26.57	\$26.33	\$26.02	(\$1.74)	(\$0.97)	(\$1.37)
2019	\$22.91	\$20.29	\$21.25	\$20.90	\$21.12	(\$2.62)	(\$1.66)	(\$1.90)
2020	\$17.66	\$14.81	\$14.74	\$14.39	\$17.25	(\$2.85)	(\$2.92)	(\$1.84)

4

5 Q. WHAT DOES TABLE 1 SHOW?

6 A. Table 1 compares the LMP separation of sample Company wind resources to
7 the Company’s load (LMP gap) with the separation of the Heartland Divide
8 II proxy generators to the Company’s load. This analysis demonstrates that
9 the estimated LMP gap for Heartland Divide II is historically similar to or less
10 than the LMP gap for other Company wind projects, meaning the basis risk
11 of Heartland Divide II is lower than other wind resources in the Company’s
12 existing portfolio. I would note that the LMP gap issue is market-wide and
13 applies to every generator in MISO, thus it is impossible to entirely eliminate
14 this risk. Our historical analysis indicates, however, that the Heartland Divide
15 II project location and its distance from NSP’s load does not present
16 additional LMP risk beyond other wind projects in our portfolio.

17

18 **III. CONCLUSION**

19

20 Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

21 A. Yes, it does.

