

Rebuttal Testimony and Schedules
Farah L. Mandich

Before the North Dakota Public Service Commission
State of North Dakota

In the Matter of the Application of Northern States Power Company
for Authority to Increase Rates for Electric Service in North Dakota

Case No. PU-20-441
Exhibit___(FLM-1)

Resource Prudence Rebuttal

June 1, 2021

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1 **I. INTRODUCTION**

2

3 Q. PLEASE STATE YOUR NAME AND QUALIFICATIONS.

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. HAVE YOU PREVIOUSLY PROVIDED TESTIMONY IN THIS PROCEEDING?

9 A. No. My colleague Mr. Christopher J. Shaw submitted Direct Testimony
10 regarding Resource Prudence on behalf of the Company in this proceeding. I
11 am taking his place as the Company’s Resource Prudence witness for the
12 remainder of this Case.

13

14 Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

15 A. I have worked for Xcel Energy since April 2019 in the areas of Regulatory
16 Affairs and Resource Planning. I have been in my current position since
17 October 2020. In my first role with the Company, in the Regulatory Affairs
18 department, I worked with cross-functional teams to develop Integrated
19 Resource Plan and resource acquisition filings for NSP.

20

21 Prior to joining Xcel Energy, I worked as a Policy Advisor for Southern
22 California Edison, a large investor owned utility in California. In this role, I
23 supported development of Integrated Resource Planning and resource
24 acquisition regulatory filings before the California Public Utilities Commission.
25 My statement of qualifications is provided as Exhibit____(FLM-1), Schedule 1.

1 Q. WHAT ARE YOUR CURRENT RESPONSIBILITIES?

2 A. In my current role, I work within the Resource Planning team on the
3 development of resource plans and acquisitions for the five-state integrated
4 Upper Midwest Northern States Power Company system (NSP System), which
5 provides electric service to customers in North Dakota, South Dakota,
6 Minnesota, Wisconsin, and Michigan. This includes assisting the Company in
7 making reasonable and prudent acquisition decisions for electric generation
8 resources.

9

10 Q. DID ANY PARTY OTHER THAN NSP PROVIDE DIRECT TESTIMONY REGARDING
11 RESOURCE PRUDENCE ISSUES?

12 A. Yes. Dr. Karl R. Pavlovic and Mr. Dante Mugrace submitted Direct Testimony
13 on behalf of North Dakota Public Service Commission (Commission)
14 Advocacy Staff regarding the prudence of several resource additions and
15 retirements discussed in the Company's Direct Testimony. Additionally, Mr.
16 William H. Malcolm testified on behalf of intervenor AARP regarding the
17 prudence of the Company's plan to retire Sherburne County Generating Station
18 Units 1 and 2 (Sherco 1 and 2) and the Company's addition of 187 MW of Solar
19 Projects (187 MW Solar Portfolio).

20

21 Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

22 A. The purpose of my Rebuttal Testimony is to respond to the Direct Testimony
23 of Advocacy Staff and intervenor witnesses regarding the prudence of the
24 Company's resource retirements and additions.

25

26 Q. HOW IS YOUR REBUTTAL TESTIMONY ORGANIZED?

27 A. I present my testimony as outlined below.

- 1 • *Sherco Units 1 and 2*
- 2 • *Mankato Energy Center II PPA*
- 3 • *Prairie Island Extended Power Uprate*
- 4 • *187 MW Solar Portfolio*
- 5 • *Community Wind North and Jeffers Wind*

6

7 **II. SHERCO UNITS 1 AND 2**

8

9 Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR REBUTTAL TESTIMONY?

10 A. In this section, I respond to the testimony of Dr. Pavlovic, Mr. Mugrace, and
11 Mr. Malcolm regarding the prudence of the Company’s plan to retire Sherco
12 Units 1 and 2 in 2026 and 2023, respectively.

13

14 Q. WHAT DID THE COMPANY RECOMMEND IN DIRECT TESTIMONY WITH RESPECT
15 TO SHERCO UNITS 1 AND 2?

16 A. In his Direct Testimony, Mr. Shaw recommended that the Commission adjust
17 the remaining lives of Sherco Units 1 and 2 to reflect their retirement in 2026
18 and 2023, respectively. Mr. Shaw explained that the Company’s 2015 decision
19 to retire these Units was prudent, based on the Company’s qualitative analysis
20 of potential risks associated with maintaining the plants and quantitative
21 analysis, which showed that the 2015 Preferred Plan, which included the
22 retirement Sherco 1 and 2 in 2026 and 2023, produced virtually no additional
23 costs when compared with continuing the Company’s 2010 Resource Plan.
24 Ultimately, the Company concluded that the retirement plan appropriately
25 balanced the costs and future risks and uncertainty while taking advantage of
26 low cost renewables to transition our fleet and properly position ourselves for
27 the future. Additionally, Mr. Shaw noted that any additional cost gaps

1 associated with the Sherco 1 and 2 early retirement plan have continued to close
2 as the Company has updated its analysis with refreshed assumptions. Mr. Shaw
3 also noted that since this is a plant closure, and the Company is only seeking to
4 adjust the remaining lives of the plant to be consistent with their current
5 expected retirement dates, it is appropriate to continually refresh the retirement
6 analysis until retirement occurs. In all analyses presented on the record, it is
7 clear that the Company's plan to retire Sherco 1 and 2 in 2026 and 2023,
8 respectively, was prudent.

9
10 Q. WHAT DID ADVOCACY STAFF RECOMMEND WITH RESPECT TO SHERCO UNITS 1
11 AND 2?

12 A. Dr. Pavlovic concludes that the Company's 2015 decision to retire Sherco Units
13 1 and 2 early was not prudent because, according to the Company's analysis at
14 the time, the early retirement scenario would result in additional costs compared
15 to the North Dakota resource planning scenario (North Dakota Plan) in the
16 Company's 2016-2030 Upper Midwest Integrated Resource Plan (IRP).
17 Additionally, Dr. Pavlovic states that Commission Staff noted in June 2016
18 comments on the IRP that future regulatory requirements to reduce carbon
19 emissions were uncertain and early retirement of the Sherco units could result
20 in higher costs for replacement generation. Dr. Pavlovic notes that the
21 Company provided subsequent analyses of the early retirement plan in Direct
22 Testimony but did not provide any additional contemporaneous information
23 and data that were not before the Commission in 2015.

24
25 Mr. Mugrace recommends maintaining the current North Dakota depreciation
26 schedule for Sherco Units 1 and 2, pointing to the Commission Staff's 2016
27 comments on the IRP.

1 Q. DID ADVOCACY STAFF CONDUCT ANY ADDITIONAL ANALYSIS TO SUPPORT
 2 THEIR CONCLUSION THAT THE CURRENT RETIREMENT DATE FOR SHERCO
 3 UNITS 1 AND 2 IN NORTH DAKOTA SHOULD BE MAINTAINED?

4 A. No.

5
 6 Q. WHAT IS THE COMPANY’S RESPONSE TO DR. PAVLOVIC’S ARGUMENT THAT THE
 7 EARLY RETIREMENT OF SHERCO UNITS 1 AND 2 RESULTED IN \$109-133 MILLION
 8 IN ADDITIONAL COSTS?

9 A. We disagree with Dr. Pavlovic’s analysis. To obtain this number, Mr. Pavlovic
 10 compared present value of revenue requirements (PVRR) of the early
 11 retirement scenario to the North Dakota Plan in the IRP. The results of the
 12 Company’s analysis of the different resource plan options are provided in Table
 13 1 below. This analysis was presented in a January 29, 2016 Supplement to the
 14 2015 Resource Plan (2015 Resource Plan Supplement), filed in Case No. PU-
 15 15-019.

16
 17 **Table 1**
 18 **2015 Resource Plan Supplement Analysis**

	PVRR Results (\$M)	PVSC Results (\$M)	Costs (Savings) vs. Reference Case (\$M PVRR)	Costs (Savings) vs. Reference Case (\$M PVSC)
2015 Reference Case	\$45,605	\$52,422	-	-
2015 Updated Plan	\$45,606	\$51,293	\$1	(\$1,129)
2015 Original Preferred Plan	\$45,302	\$51,458	(\$303)	(\$964)
2015 North Dakota Plan	\$45,473	\$52,620	(\$132)	\$198

1 Q. WHAT DOES TABLE 1 SHOW?

2 A. Table 1 shows that the Company’s plan to retire Sherco Units 1 and 2 in 2026
3 and 2023, along with additional resource additions recommended in the plan,
4 referred to in the table as the “2015 Updated Plan,” had nearly identical costs
5 to the Reference Case on a PVRR basis (\$45,606 million versus \$45,605 million).
6 The Reference Case referred to in the table represents a continuation of the
7 Company’s prior Resource Plan, with expansions as necessary to meet
8 minimum system needs, including continued operation of Sherco 1 and 2
9 through the end of the 2016 – 2030 planning period. Table 1 also shows that,
10 on a PVRR basis, the 2015 Updated Plan was expected to result in up to \$133
11 million more costs than the North Dakota Plan.
12

13 Q. WHAT IS THE NORTH DAKOTA PLAN?

14 A. Consistent with the terms of the Settlement in Case No. PU-07-776, since 2008
15 we have filed our Upper Midwest IRPs with the North Dakota Commission,
16 and included in each of them an analysis of a Resource Plan scenario compliant
17 with Federal and North Dakota laws only. This analysis is referred to as the
18 “North Dakota Plan.”
19

20 Q. DOES IT MAKE SENSE TO COMPARE THE COMPANY’S RETIREMENT SCENARIO TO
21 THE NORTH DAKOTA PLAN?

22 A. No. As discussed above, at the time the Company made the decision to retire
23 Sherco Units 1 and 2, the retirement scenario had virtually identical costs to the
24 Reference Case, which represented a continuation of our business as usual
25 scenario, including continued operation of Sherco 1 and 2 through the end of
26 the 2016 – 2030 planning period. The Reference Case is a better comparison
27 point than the North Dakota Plan because the Reference Case is more

1 representative of a “business as usual” path for the Company that includes
2 keeping Sherco Units 1 and 2 online. For example, the Reference Case includes
3 material additions of wind resources approved in the previous resource plan and
4 solar additions approved in Minnesota that the Company was already seeking
5 to implement. Since the Company is not proposing to replace the Sherco Units
6 with like-for-like generation, it is more reasonable to view the retirements in the
7 context of the broader evolution of the NSP System. The Commission has had
8 an opportunity to review these resource additions in various ADP proceedings.
9 Notably, the Commission approved the material wind additions contemplated
10 in the 2015 Updated Plan in Case No. PU-17-220.

11
12 Q. WHAT IS THE COMPANY’S RESPONSE TO DR. PAVLOVIC’S ARGUMENT THAT
13 COMMISSION STAFF NOTED IN 2016 THAT FUTURE REGULATORY
14 REQUIREMENTS ON CARBON EMISSIONS WERE UNCERTAIN?

15 A. We agree with Staff’s assessment regarding the uncertainty of carbon regulation.
16 However, it is wholly prudent to make resource decisions to address such
17 potentiality – although on a qualitative, not quantitative basis. The Company
18 did not make the decision to retire Sherco Units 1 and 2 based solely on the
19 threat of future carbon regulation. While the Company prudently plans its
20 resource portfolio in anticipation of future regulation, it may not do so under
21 North Dakota law, which prohibits consideration of environmental externality
22 values in resource planning, including those values for speculative legislation.
23 Based on the regulations in place at the time and the overall marketplace,
24 Company leadership prudently made the decision to retire the Units and
25 transition our generation fleet to low-cost flexible natural gas resources paired
26 with significant investments in renewable generation. This analysis included the
27 consideration of the costs of Selective Catalytic Reduction (SCR) technology,

1 because those would likely be required to be added to the Sherco facility under
2 existing law. As discussed in Mr. Shaw's Direct Testimony, subsequent analyses
3 since 2015 have reinforced the prudence of this plan, and our most recent
4 analysis found that the retirement of Sherco Units 1 and 2 provides \$13 million
5 PVRR savings for customers.

6
7 Q. DID THE COMPANY'S QUALITATIVE ANALYSIS INCLUDE CONSIDERATION OF
8 THE COSTS OF SELECTIVE CATALYTIC REDUCTION TECHNOLOGY?

9 A. Yes, the Company considered this qualitatively. The Company's modeling for
10 the 2015 IRP Supplement did not include the costs of adding Selective Catalytic
11 Reduction (SCR) technology to Sherco Units 1 and 2, since additional
12 requirements under the national ambient air quality standards (NAAQS) and
13 Regional Haze rule requirements were speculative at that time. I would note that
14 the NAAQS and Regional Haze rules are existing federal obligations with which
15 the State of Minnesota must comply, but at the time it was not certain that
16 compliance with these laws would require SCRs to be installed at Sherco Units
17 1 and 2. Therefore, the Company did not include these costs in the 2015 IRP
18 Supplement model, meaning the results shown in Table 1 above do not include
19 the cost of SCRs. However, as part of the 2015 IRP process, Company
20 leadership did assess the risk of increased costs due to SCR requirements
21 qualitatively, outside of the model. Based on that qualitative analysis of the
22 likelihood that SCR technology would be required, and the estimated capital
23 cost of SCRs of approximately \$250 million per unit in 2015 dollars, the
24 Company's decision to retire Units 1 and 2 was prudent.

1 Q. WAS IT REASONABLE FOR THE COMPANY TO CONSIDER THE COST OF SCR
2 TECHNOLOGY IN ITS QUALITATIVE ANALYSIS OF RETIREMENT VERSUS KEEPING
3 THE SHERCO UNITS ONLINE?

4 A. Yes. The Regional Haze Rule looks at whether SO₂, NO_x and particulate matter
5 emissions from existing units negatively contribute to Visibility Impairment in
6 National Parks and Wilderness Areas with an ultimate goal of no human-caused
7 visibility impairment in these areas by 2064. Had the Company not announced
8 its retirement dates for Sherco Units 1 and 2, the units would have been subject
9 to a detailed control equipment evaluation as part of the second planning period
10 under the Regional Haze rule. The Minnesota Pollution Control Agency
11 (MPCA) has a deadline to submit an implementation plan for the second
12 planning period in 2021. This date was extended from 2018 through a
13 settlement with the U.S. Environmental Protection Agency. In the second
14 planning period, the MPCA must evaluate the cost-effectiveness of additional
15 NO_x controls on regulated units over the remaining useful life of each unit. The
16 announced retirement dates of the Sherco units have the effect of shortening
17 the remaining useful life of the units under this evaluation, rendering a detailed
18 Regional Haze analysis (or additional controls) unnecessary under the rules.
19 Such controls would have been considerably more likely if Sherco Units 1 and
20 2 were anticipated by MPCA to run through their remaining North Dakota
21 depreciable lives. Given these significant regulatory risks, it was appropriate for
22 the Company to qualitatively consider the impacts of SCR requirements on
23 Sherco Units 1 and 2 when it made the decision to retire the units early.

1 Q. IS THE COMPANY'S DECISION TO RETIRE SHERCO UNITS 1 AND 2 FINAL?

2 A. Not necessarily. The Company ultimately requires final approval from the
3 Midcontinent Independent System Operator (MISO) to retire the units.
4 Additionally, as noted in Mr. Shaw's Direct Testimony, in the case of a resource
5 *retirement* rather than a resource *addition*, the Company has the time, and
6 therefore ability, to continue to monitor its decision to determine if a different
7 course is appropriate. Thus it is important and entirely appropriate for the
8 Company to continue to evaluate its decision to retire these units, and the
9 updated analyses have confirmed the prudence of the Company's plan. The
10 updated analyses included in Mr. Shaw's Direct Testimony demonstrate that the
11 Company's plan to retire Sherco Units 1 and 2 and replace them with lower-
12 cost resources is projected to generate \$13 million in PVRR savings for
13 customers, with savings of up to \$176 million PVRR in the low gas prices
14 scenario. Dr. Pavlovic does not address or question this analysis in his Direct
15 Testimony

16

17 Ultimately, as discussed below, the Company is not seeking a prudence
18 determination on our decision to retire Sherco Units 1 and 2, but rather is only
19 seeking to adjust depreciation rates to reflect the current retirement dates.

20

21 Q. DOES DR. PAVLOVIC MAKE ANY OTHER ARGUMENTS OPPOSING THE PRUDENCE
22 OF THE COMPANY'S EARLY RETIREMENT PLAN?

23 A. No.

1 Q. DOES MR. MUGRACE MAKE ANY ADDITIONAL ARGUMENTS REGARDING THE
2 PRUDENCE OF THIS DECISION BEYOND WHAT DR. PAVLOVIC ARGUED?

3 A. No. Mr. Mugrace generally makes the same arguments as Dr. Pavlovic regarding
4 the prudence of the Company's decision to retire Sherco Units 1 and 2. However,
5 he points out that if the Commission does find this decision to be prudent, the
6 Commission would not necessarily be required to adjust its North Dakota
7 depreciation rates accordingly.

8

9 Q. WHAT IS THE COMPANY REQUESTING IN THIS CASE WITH RESPECT TO SHERCO
10 UNITS 1 AND 2?

11 A. As stated in the Direct Testimony of Mr. Shaw, the Company is requesting that
12 the Commission adjust the depreciation expense of Sherco Units 1 and 2 to
13 match the Company's announced retirement dates for these units of 2026 and
14 2023, respectively. The Company maintains that this decision was prudent, and
15 therefore the Commission should make the corresponding change to the
16 remaining lives of these assets in North Dakota for depreciation purposes.
17 Contrary to Mr. Mugrace's claim, if the Commission deems this retirement
18 decision prudent, there would be no basis for denying the Company's request
19 that the depreciation schedules be adjusted accordingly. Alternatively, if the
20 Commission does not adjust the depreciation rates of these assets in this Case,
21 it does not need to make a determination on the prudence of the Company's
22 retirement decision at this time.

23

24 Q. DOES MR. MALCOLM DISCUSS SHERCO UNITS 1 AND 2 IN HIS DIRECT
25 TESTIMONY?

26 A. Yes. Mr. Malcolm proposes to disallow the costs associated with the Company's
27 proposed early retirement of Sherco Units 1 and 2 because he claims North

1 Dakota stakeholders do not appear to have been consulted or involved in this
2 retirement decision, and NSP now forecasts that it will need new capacity in the
3 mid-2020s.

4
5 Q. DID MR. MALCOLM CONDUCT ANY ADDITIONAL ANALYSIS TO SUPPORT HIS
6 CONCLUSIONS REGARDING THE PRUDENCE OF THE COMPANY'S DECISIONS
7 SURROUNDING SHERCO?

8 A. No.

9
10 Q. WHAT IS THE COMPANY'S RESPONSE TO MR. MALCOLM'S ALLEGATION THAT
11 NORTH DAKOTA STAKEHOLDERS WERE NOT INVOLVED IN THE COMPANY'S
12 DECISION TO RETIRE SHERCO UNITS 1 AND 2?

13 A. This concern is unfounded. The Company has filed all of its IRPs with the
14 Commission since at least 2007, including the 2015 IRP Supplement in which
15 the early retirement was first proposed. As recognized in the Direct Testimony
16 of both Dr. Pavlovic and Mr. Mugrace, the Commission held an informal
17 hearing on the Company's 2015 IRP on February 11, 2015, and Commission
18 Staff provided comments on the IRP dated June 3, 2016. The Commission did
19 not take any formal action on the Company's IRP. While the Company
20 ultimately disagreed with Commission Staff's assessment of the regulatory
21 landscape as described above, it cannot be credibly alleged that the Company
22 did not involve North Dakota stakeholders in this process.

23
24 Q. WHAT IS THE COMPANY'S RESPONSE TO MR. MALCOLM'S ARGUMENT THAT THE
25 COMPANY NOW FORECASTS A CAPACITY NEED FOR THE MID-2020S?

26 A. The Company acknowledges that our most recent forecasts show a capacity
27 need arising in the mid-2020s. Regardless of this capacity need, as I noted earlier,

1 the most recent analyses included in Mr. Shaw's Direct Testimony demonstrate
2 that the Company's plan to retire Sherco Units 1 and 2 and replace them with
3 lower-cost resources is projected to generate savings for customers.

4
5 Q. IN LIGHT OF THE DIRECT TESTIMONY OF ADVOCACY STAFF AND
6 INTERVENORS, WHAT IS THE COMPANY'S POSITION REGARDING ITS PLAN TO
7 RETIRE SHERCO UNITS 1 AND 2?

8 A. The Company's plan to retire Sherco Units 1 and 2 in 2026 and 2023 was
9 prudent at the time, based on the Company's overall analysis of the costs and
10 regulatory risks to the facility, as well as comments from NSP stakeholders and
11 customers. Commission Staff weighed in as part of this stakeholder process, but
12 the Company ultimately concluded that the regulatory risks to the facility were
13 significant enough to favor early retirement of Units 1 and 2. Since that time,
14 the Company has continued to analyze this plan, and these subsequent analyses
15 have further demonstrated the prudence of the Company's 2015 decision. As a
16 result, the Company recommends that the Commission grant its request to
17 adjust the depreciation rates of Sherco 1 and 2 to match their current retirement
18 dates.

19
20 **III. MEC II PPA**

21
22 Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR REBUTTAL TESTIMONY?

23 A. In this section, I respond to the testimony of Dr. Pavlovic and Mr. Mugrace
24 regarding the prudence of the Company's decision to enter into the Power
25 Purchase Agreement for Mankato Energy Center Unit 2 (MEC II PPA).

1 Q. WHAT DID THE COMPANY RECOMMEND IN DIRECT TESTIMONY REGARDING
2 THE MEC II PPA?

3 A. In his Direct Testimony, Mr. Shaw recommended that the Commission find the
4 Company's addition of the MEC II PPA to be prudent because it is a low-cost,
5 combined-cycle facility that was added based on an identified capacity need at
6 the time the original decision was made. Due to the MEC II facility's greater
7 efficiencies and generation availability as a combined-cycle (CC) facility than a
8 traditional combustion turbine (CT) would have, combined with a cost of
9 construction that was competitive with the typically cheaper CT options, the
10 MEC II PPA was selected through the competitive acquisition process to fill
11 the capacity need. Due to this singular opportunity to get a CC at CT pricing,
12 it made sense to lock in this resource, despite a mismatch in the timing of our
13 capacity need that developed during the acquisition process.

14

15 Q. WHAT DID ADVOCACY STAFF RECOMMEND WITH RESPECT TO THE MEC II
16 PPA?

17 A. Dr. Pavlovic concludes the Company's decision to enter into the MEC II PPA
18 was not prudent based on the Commission's 2016 finding that NSP had not
19 shown that the MEC II PPA merited an advance determination of prudence
20 (ADP). In particular, Dr. Pavlovic cites the Commission's findings that (1) the
21 MEC II PPA would require North Dakota customers to pay for unneeded
22 capacity for a significant portion of the contract, and (2) the Company's load
23 forecasts and other assumptions were continually subject to change. Mr.
24 Mugrace echoes this point and argues that the costs of the MEC II PPA are not
25 known and measurable, prudent in nature, and used and useful in the provision
26 of utility service because they reflected capacity projections made at the time.
27 At the same time, Mr. Mugrace argues that because the PPA costs began in

1 2019, they cannot be recovered because collection of prior costs for future
2 recovery is considered retroactive ratemaking.

3
4 Q. DID ADVOCACY STAFF CONDUCT ANY ADDITIONAL ANALYSIS TO SUPPORT
5 THEIR CONCLUSION THAT THE COMPANY'S ADDITION OF THE MEC II PPA WAS
6 NOT PRUDENT?

7 A. No.

8
9 Q. WHAT IS THE COMPANY'S RESPONSE TO ADVOCACY STAFF'S ARGUMENT THAT
10 THE COMPANY'S DECISION TO ENTER THE MEC II PPA WAS NOT PRUDENT
11 BECAUSE THE COMMISSION PREVIOUSLY DECLINED TO GRANT AN ADP?

12 A. Both Dr. Pavlovic and Mr. Mugrace cite the Commission's prior order on the
13 ADP application to argue that the MEC II PPA would require North Dakota
14 customers to pay for unneeded capacity because the contract started before the
15 capacity need arose. As discussed below, the Commission's prior finding is not
16 binding and the PPA can still be deemed prudent in this Case. To that end, Mr.
17 Shaw's testimony demonstrated (1) the Company's Fall 2011 Forecast identified
18 a capacity need of up to 500 MW in 2019; (2) the Company selected the MEC
19 II PPA to fill this need, which provided CC capacity at CT pricing; (3) because
20 of this efficiency, the Company's modeling at the time showed PVRR savings
21 to customers in nearly all scenarios in which the MEC II PPA was added; and
22 (4) even if the capacity need was eventually delayed, the MEC II PPA is still less
23 costly than a greenfield CC addition in 2025 to meet the eventual need.

1 Q. DOES THE FACT THAT THE COMMISSION DECLINED TO GRANT AN ADP FOR
2 THE MEC II PPA MEAN THE RESOURCE ADDITION IS NOT PRUDENT?

3 A. No. Both Dr. Pavlovic and Mr. Mugrace rely on the Commission's prior
4 conclusion that an *advance* determination of prudence was not warranted to
5 conclude that the addition of the MEC II PPA was not prudent. In doing so,
6 the Advocacy Staff witnesses suggest that any time that prudence has not been
7 demonstrated in advance, a resource addition cannot later be found prudent by
8 the Commission. I am not an attorney, but this runs contrary to my
9 understanding of the Commission's long-standing implementation of the ADP
10 statute, which provides utilities with the ability to seek an ADP to obtain some
11 certainty of cost recovery but does not preclude a later prudence determination
12 if the ADP is denied or withdrawn. My understanding of the Commission's
13 policy is that denial of an ADP application does not mean the project is not
14 prudent—it just means that the project does not warrant a determination of
15 prudence *in advance*.

16

17 Q. WHAT IS THE COMPANY'S RESPONSE TO MR. MUGRACE'S ARGUMENT THAT THE
18 MEC II PPA COSTS ARE NOT "KNOWN AND MEASURABLE"?

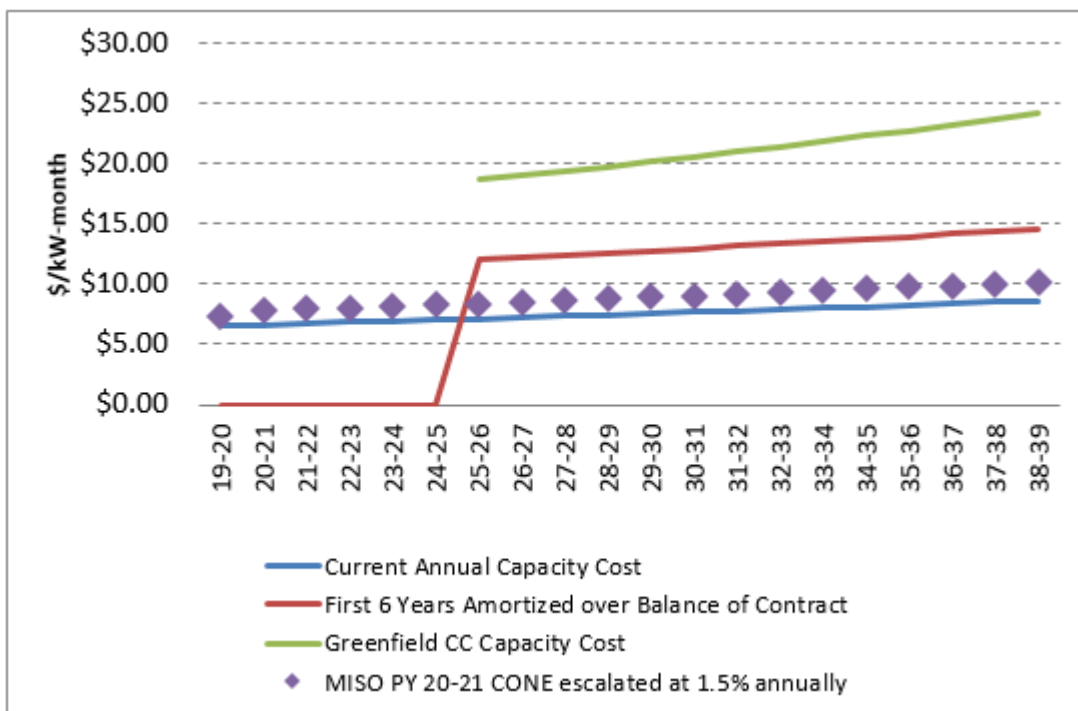
19 A. Mr. Mugrace's argument that the costs of the MEC II PPA are not "known and
20 measurable" because they reflected capacity projections made at the time is
21 impractical and sets up an impossible Catch-22 for the Company. Pursuant to
22 the Settlement Agreement in Case No. PU-07-776, the Company is obligated to
23 file an application for an ADP for any proposed new resource above 50 MW
24 where the Company proposes to assign all or part of the costs to the North
25 Dakota jurisdiction. Because the Company must seek the ADP *prior* to
26 committing to the resource, the need for the resource will necessarily be based
27 on capacity projections. Thus by Mr. Mugrace's reasoning, no ADP should ever

1 be granted by the Commission because the costs are not “known and
 2 measurable.” When combined with his recommendation that the Commission
 3 reject a prudence finding because it already declined to grant an ADP, the
 4 Company is left with no opportunity for cost recovery for this resource.

5
 6 Q. DID THE COMPANY PROVIDE ADDITIONAL CONTEMPORANEOUS INFORMATION
 7 AND DATA THAT WERE NOT BEFORE THE COMMISSION IN 2015?

8 A. Mr. Shaw’s Direct Testimony included an analysis comparing the annual fixed
 9 capacity costs associated with the MEC II PPA with other capacity options for
 10 meeting the identified need. This comparison is shown in Figure 1 below, which
 11 was previously provided as Figure 3 in Mr. Shaw’s Direct Testimony.

12
 13 **Figure 1**
 14 **MEC II Capacity Cost Comparison**



1 Q. WHAT DOES FIGURE 1 SHOW?

2 A. Figure 1 shows that the total fixed capacity costs that the Company expects to
3 pay for the MEC II PPA (the blue line) are lower than both the projected
4 levelized cost of a Greenfield CC unit constructed by the end of 2025 to meet
5 a 2026 capacity need, and the MISO planning year 2020-2021 Cost of New
6 Entry (CONE) price escalated at 1.5 percent annually for the period of the MEC
7 II PPA (2019-2039). I would note that although Figure 1 shows the 2020-2021
8 CONE price, the CONE has remained reasonably consistent since 2015, so this
9 figure would be reasonably similar to the above if it utilized the
10 contemporaneous 2015-16 planning year CONE instead. Figure 1 also includes
11 a depiction of an amortization of the full capacity cost of the MEC II PPA over
12 the 14-year period beginning when there is an identifiable need (2025) and
13 ending at the expiration of the PPA (2039) instead of over the entire 20-year
14 PPA term. Figure 1 shows that even if the full costs of the MEC II PPA are
15 amortized over the 2025-2039 period instead of over the entire 20-year PPA
16 term, the MEC II PPA is still a cheaper option to meet the capacity need in
17 2026 and beyond than the projected levelized cost of a Greenfield CC unit
18 constructed by the end of 2025 to meet a 2026 capacity need. Thus while the
19 Company maintains that its procurement of this resource was prudent, it would
20 also be prudent to defer the Company's recovery of this resource and amortize
21 it over the remaining term of the PPA beginning in 2025.

22

23 Q. WHAT IS THE COMPANY'S RESPONSE TO MR. MUGRACE'S ARGUMENT THAT
24 COLLECTION OF MEC II PPA COSTS CONSTITUTES RETROACTIVE
25 RATEMAKING?

26 A. The Company is only seeking to recover MEC II PPA costs on a prospective
27 basis in this Case. Any MEC II PPA costs expended but not recovered in a

1 given year are not requested for recovery now. Therefore, Mr. Mugrace's
2 concern about retroactive ratemaking is misplaced.

3
4 Q. MR. MUGRACE STATES THAT "[T]HE COMPANY ESSENTIALLY ABANDONED THE
5 PROJECT IN REACTION TO CHANGING FORECASTS." IS THIS CORRECT?

6 A. No. Mr. Mugrace misreads the Company's Direct Testimony—in fact, the exact
7 opposite is true. The point that Mr. Shaw made in his Direct Testimony is that
8 the Company did *not* abandon the MEC II PPA in reaction to changing
9 forecasts, because the Company favors a conservative approach to resource
10 planning to ensure that customers are not adversely affected by the Company
11 being caught unexpectedly short on capacity.

12
13 Q. IN LIGHT OF THE DIRECT TESTIMONY OF ADVOCACY STAFF, WHAT IS THE
14 COMPANY'S POSITION REGARDING ITS DECISION TO ADD THE MEC II PPA?

15 A. The Company's addition of the MEC II PPA was prudent at the time the
16 decision was made because it provided low-cost CC capacity to fill an identified
17 need. Even though the originally-forecasted capacity need, as identified in the
18 Fall 2011 Forecast, arrived later than expected, the MEC II PPA remains a
19 prudent resource addition and is less costly than other alternatives to fill the
20 Company's capacity need.

21 22 **IV. PI EPU**

23
24 Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR REBUTTAL TESTIMONY?

25 A. In this section, I respond to Mr. Mugrace's recommendation that the Prairie
26 Island Extended Power Uprate (PI EPU) be removed from Electrical Plant in
27 Service.

1 Q. WHAT DID THE COMPANY RECOMMEND IN DIRECT TESTIMONY WITH RESPECT
2 TO THE PI EPU?

3 A. Mr. Shaw's Direct Testimony showed that the history of the PI EPU indicates
4 that both the decision to undertake the PI EPU and the decision to cancel the
5 PI EPU were prudent based on the circumstances at the time. In 2008 when
6 the Company first sought approval for the PI EPU, the Company's economic
7 analysis indicated the potential for economic benefits to customers of
8 approximately \$519 million PVRR compared to the next most cost-effective
9 alternative. Additionally, the PI EPU was prudently viewed as a hedge against
10 then-high natural gas prices. However, during the approval process for the PI
11 EPU, circumstances changed considerably, changing the prudence calculus for
12 the project. As a result, despite the investment that had already been made in
13 obtaining approvals for the PI EPU, the Company prudently concluded that the
14 outstanding risks of delay and increased cost outweighed the small benefit that
15 may have been obtained from pushing forward.

16

17 Q. WHAT DID ADVOCACY STAFF RECOMMEND WITH RESPECT TO THE PI EPU?

18 A. Mr. Mugrace recommends removing the PI EPU from Electrical Plant in
19 Service. Mr. Mugrace argues that the decision to undertake and subsequently
20 abandon the Prairie Island EPU was a business decision with associated risks
21 that should stay with the Company. He argues that the project will not benefit
22 North Dakota ratepayers, will not provide utility service, and will not be used
23 and useful, thus these costs should not be recovered from North Dakota
24 customers in rates for service.

1 Q. DID MR. MUGRACE CONDUCT ANY ANALYSIS TO SUPPORT HIS
2 RECOMMENDATION THAT THE PI EPU COSTS BE DISALLOWED?

3 A. No.

4

5 Q. WHAT IS THE COMPANY'S RESPONSE TO MR. MUGRACE'S POSITION THAT PI
6 EPU COSTS SHOULD BE DISALLOWED?

7 A. The Company disagrees with Mr. Mugrace. Mr. Mugrace argues that because
8 the PI EPU Project has been abandoned, the costs and investments are not
9 "known and measurable, prudent in nature and used and useful." This argument
10 runs counter to traditional ratemaking principles which permit recovery of
11 abandoned plant costs in circumstances in which the abandonment is the
12 prudent course of action. As discussed in the Rebuttal Testimony of Company
13 Witness Mr. Greg Chamberlain, Mr. Mugrace's position would create distorted
14 incentives by discouraging utilities from abandoning plants or canceling
15 projects, even when it would be prudent to do so.

16

17 Q. DID THE COMPANY FILE AN ADP FOR THE PI EPU PROJECT?

18 A. Yes. As Mr. Mugrace notes in his Direct Testimony, the Company filed an ADP
19 for the PI EPU Project in Case No. PU-10-127.

20

21 Q. WAS IT PRUDENT FOR THE COMPANY TO UNDERTAKE THE PI EPU?

22 A. Yes. As described further in Mr. Shaw's Direct Testimony, at the time the
23 Project was initiated in 2008, the Company's analysis indicated that the PI EPU
24 would have provided the Company with an additional 164 MW of baseload
25 generation, addressing a projected capacity need at the lowest cost compared to
26 other available resources. Indeed, the Company's analysis at the time indicated
27 that the PI EPU provided economic benefits to customers of approximately

1 \$519 million PVRR compared to the next-best alternative for providing this
2 needed capacity.

3
4 Q. WHAT WAS THE RESULT OF THE PI EPU ADP PROCEEDING?

5 A. In 2012, the Company asked the Commission to postpone consideration of the
6 PI EPU based on several developments outside of the Company's control that
7 affected the prudence of the Project. Several changes in circumstances in the
8 2010-2012 timeframe affected the prudence of the Project, including: (1)
9 increased regulatory scrutiny and associated delayed regulatory approvals
10 following the Fukushima Daiichi incident in 2011; (2) a reduction in the
11 Project's size and an increase in cost per kilowatt; (3) reduced customer
12 forecasts following the economic downturn in 2008; and (4) a dramatic drop in
13 natural gas prices, which diminished the hedge value of the PI EPU Project.
14 Due to these and other factors, the projected benefits of the PI EPU Project
15 were diminished considerably, and there was risk that additional regulatory
16 delays could further reduce the benefits of the Project. As a result, the Company
17 withdrew its ADP application for the PI EPU in 2012.

18
19 Q. WAS IT PRUDENT FOR THE COMPANY TO WITHDRAW THE ADP AND ABANDON
20 THE PROPOSED PI EPU?

21 A. Yes. In his Direct Testimony, Mr. Shaw discusses the analyses that the Company
22 performed in 2012 when it was reconsidering the prudence of the PI EPU. As
23 described in Mr. Shaw's testimony, the Company's March 2012 analysis found
24 that the expected benefits of the PI EPU fell to \$50 million PVRR due to the
25 changes in circumstances described above. Additionally, changes to the
26 refueling schedule caused by the PI EPU were expected to decrease the
27 expected benefits of the PI EPU even further, to \$10 million. In a subsequent

1 analysis in September 2012, the Company identified up to an additional \$30
2 million in lost PVRR benefits of the Project due to further regulatory delays at
3 the federal level. This resulted in several modeling scenarios resulting in an
4 increase to the PVRR from the Project, rather than savings. Based on these
5 analyses and the trend of the numbers, the Company prudently concluded that
6 the outstanding risks of delay and increased costs of the Project outweighed the
7 small potential benefit and made further investment in the PI EPU imprudent.

8
9 Q. IN LIGHT OF MR. MUGRACE'S TESTIMONY, WHAT DO YOU RECOMMEND WITH
10 RESPECT TO THE PI EPU?

11 A. The Commission should authorize recovery of the Company's abandoned plant
12 costs associated with the PI EPU as set forth in Company Witness Mr.
13 Benjamin Halama's Direct Testimony.

14
15 **V. 187 MW SOLAR PORTFOLIO**

16
17 Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR REBUTTAL TESTIMONY?

18 A. In this section, I respond to the testimony of Dr. Pavlovic, Mr. Mugrace, and
19 Mr. Malcolm regarding the prudence of the Company's acquisition of the 187
20 MW Solar Portfolio.

21
22 Q. WHAT DID THE COMPANY RECOMMEND IN DIRECT TESTIMONY REGARDING
23 THE 187 MW SOLAR PORTFOLIO?

24 A. In his Direct Testimony, Mr. Shaw recommended that the Commission approve
25 rate recovery for the 187 MW Solar Portfolio going forward, notwithstanding
26 the fact that the resource was procured to comply with Minnesota's Solar
27 Energy Standard (SES). Mr. Shaw testified that although the addition of the 187

1 MW Solar Portfolio results in a relatively minor cost impact to NSP System
2 customers, this cost impact is balanced by qualitative benefits such as providing
3 a natural gas price hedge that overall favor the prudence of the acquisition.
4 Additionally, the Company has already under-recovered the PPA costs from
5 North Dakota by \$2.1 million since the Commission declined to grant an ADP
6 in 2014, which is more than double the estimated additional 840,000 PVRR
7 costs to North Dakota of adding the 187 MW Solar Portfolio. Thus it is
8 appropriate to approve rate recovery on a prospective basis.

9
10 Q. WHAT DID ADVOCACY STAFF RECOMMEND WITH RESPECT TO THE 187 MW
11 SOLAR PORTFOLIO?

12 A. Dr. Pavlovic concludes that the Company's addition of the 187 MW Solar
13 Portfolio was not prudent, based on the Commission's 2015 finding that the
14 Company had not demonstrated that the 187 MW Solar Portfolio merited an
15 ADP. Based on the Commission's denial of the ADP and Dr. Pavlovic's
16 testimony, Mr. Mugrace recommends that the costs of the 187 MW Solar
17 Portfolio be removed from rates.

18
19 Q. DID ADVOCACY STAFF CONDUCT ANY ADDITIONAL ANALYSIS TO SUPPORT
20 THEIR CONCLUSION THAT THE COMPANY'S ADDITION OF THE 187 MW SOLAR
21 PORTFOLIO WAS NOT PRUDENT?

22 A. No.

23
24 Q. WHAT IS THE COMPANY'S RESPONSE TO ADVOCACY STAFF WITNESSES'
25 TESTIMONY REGARDING THE PRUDENCE OF THE 187 MW SOLAR PORTFOLIO?

26 A. For the reasons I discussed earlier, the Commission's finding that an *advance*
27 determination of prudence was not warranted does not mean that the resource

1 addition cannot be deemed prudent in this Case. The Advocacy Staff witnesses
2 did not conduct any additional analysis to support their conclusion that this
3 resource addition was not prudent, although Dr. Pavlovic did note that the
4 Company's ADP application at the time showed marginal additional costs due
5 to the 187 MW Solar Portfolio.

6
7 Q. DOES A RESOURCE ADDITION NEED TO GENERATE COST SAVINGS IN ORDER TO
8 BE FOUND PRUDENT?

9 A. No. While the impact on overall system costs is an important factor in
10 determining the prudence of a resource addition, it should not be the sole factor.
11 Resource additions such as the 187 MW Solar Portfolio, which were added as a
12 hedge against fuel prices and to comply with regulations, can be prudent even
13 if they result in additional costs. The reverse can also be true. For example, the
14 Company's updated analysis indicates that the early retirement of Sherco Units
15 1 and 2 will reduce overall system costs, yet Advocacy Staff argue that this
16 decision is not prudent.

17
18 Q. DOES MR. MALCOLM DISCUSS THE 187 MW SOLAR PORTFOLIO IN HIS DIRECT
19 TESTIMONY?

20 A. Yes. Mr. Malcolm argues that the costs of the 187 MW Solar Portfolio should
21 be disallowed, because North Dakota electric rates should not be raised to
22 comply with a Minnesota legal mandate—the Minnesota SES.

23
24 Q. DID MR. MALCOLM CONDUCT ANY ADDITIONAL ANALYSIS TO SUPPORT HIS
25 RECOMMENDATION REGARDING THE 187 MW SOLAR PORTFOLIO?

26 A. No.

1 Q. WHAT IS THE COMPANY’S RESPONSE TO MR. MALCOLM’S ARGUMENT THAT
2 NORTH DAKOTA CUSTOMERS SHOULD NOT HAVE TO PAY FOR RESOURCES THAT
3 WERE ADDED TO COMPLY WITH MINNESOTA LEGAL MANDATES?

4 A. Although the 187 MW Solar Portfolio was added to comply with the SES,
5 participating in the 187 MW Solar Portfolio would provide North Dakota with
6 the other benefits of participating in the large, integrated NSP System. The
7 benefits of North Dakota’s participation in the NSP System—of which North
8 Dakota’s load makes up only approximately 6 percent—far outweigh the very
9 modest cost impacts of the 187 MW Solar Portfolio.

10

11 **VI. JEFFERS WIND AND COMMUNITY WIND NORTH**

12

13 Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR REBUTTAL TESTIMONY?

14 A. In this section, I respond to the testimony of Mr. Murgace regarding the
15 prudence of the Company’s acquisition of the Jeffers Wind and Community
16 Wind North resources.

17

18 Q. WHAT DID THE COMPANY RECOMMEND IN DIRECT TESTIMONY REGARDING
19 JEFFERS WIND AND COMMUNITY WIND NORTH?

20 A. In his Direct Testimony, Mr. Shaw recommended that the Commission find the
21 Company’s acquisition of the Jeffers Wind and Community Wind North
22 facilities to be prudent because the acquisition provides savings to customers
23 when compared to the existing PPAs, and leaves the Company with newly
24 repowered wind facilities whose useful lives stretch well beyond the original
25 terms of the PPAs.

1 Q. WHAT DID ADVOCACY STAFF RECOMMEND WITH RESPECT TO JEFFERS WIND
2 AND COMMUNITY WIND NORTH?

3 A. Mr. Mugrace recommends removing Jeffers Wind and Community Wind North
4 from the Company's Electrical Plant in Service. Mr. Mugrace states that the
5 Company is relying on the Minnesota Public Utilities Commission's (MPUC)
6 approval of the Jeffers Wind and Community Wind North projects for
7 prudence, which he argues should have no bearing on the Commission's
8 decision. Additionally, he suggests that updated analyses of the two projects
9 should have been performed because the resource portfolio may have changed
10 since the Company acquired the projects in 2019 and that "it would be prudent
11 to revisit the prudence issue."

12

13 Q. WHAT IS THE COMPANY'S RESPONSE TO MR. MUGRACE'S ARGUMENT THAT
14 JEFFERS WIND AND COMMUNITY WIND NORTH SHOULD BE REMOVED FROM
15 PLANT IN SERVICE?

16 A. The Company disagrees with this position. Because these resources serve the
17 entire NSP System, Mr. Mugrace's proposal to disallow these resources would
18 allow North Dakota customers to continue to receive the energy benefits of
19 these projects without contributing toward their costs. Mr. Mugrace does not
20 propose any mitigation to address this issue, therefore his proposal does not
21 comport with traditional cost causation principles and is not prudent.

22

23 Q. WHAT WILL HAPPEN IF THE COMMISSION DISALLOWS THESE RESOURCES?

24 A. When Jeffers Wind and Community Wind North were PPAs, the Company
25 recovered the system average cost of fuel for the MWh generated by these
26 resources through the Fuel Cost Rider (FCR). However, now that the resources
27 are owned by the Company, the Company can no longer recover the costs of

1 the PPA through the FCR, and the fuel cost of the wind projects is zero. If
2 these projects are not in base rates, then this means that North Dakota
3 customers would receive the energy benefits of the Jeffers Wind and
4 Community Wind North projects without contributing toward the costs of
5 those resources. Additionally, the fact that the fuel cost of these resources is
6 zero causes downward pressure on the system average cost of fuel, which
7 further decreases costs for North Dakota without contributing toward the costs
8 of these renewable resources.

9
10 For these reasons, if the Commission disallows Jeffers Wind and Community
11 Wind North from recovery in base rates, the Company believes it would be
12 appropriate for any market sales from those resources to not be credited to
13 North Dakota. Similarly, no other attributes of the projects (e.g., renewable
14 energy credits), would be returned to North Dakota in that situation. Under this
15 structure, the Company would retain the asset-based margins associated with
16 the Jeffers Wind and Community Wind North projects and North Dakota
17 customers would no longer obtain the benefits of these projects without
18 contributing toward their costs.

19
20 Q. WHAT IS THE COMPANY'S RESPONSE TO MR. MUGRACE'S ARGUMENT THAT THE
21 COMPANY SHOULD HAVE PERFORMED UPDATED ANALYSES OF THE TWO
22 PROJECTS?

23 A. As I discussed earlier, the prudence of these and all resource additions should
24 be evaluated based upon the information available at the time the decision was
25 made by the Company. As a result, updated analyses would not be appropriate
26 for the prudence determination.

1 **VII. CONCLUSION**

2

3 Q. PLEASE SUMMARIZE YOUR TESTIMONY.

4 A. For the reasons stated above and in the Direct Testimony of Mr. Shaw, the
5 Company's plan to retire Sherco Units 1 and 2 is prudent, along with the
6 Company's addition of the MEC II PPA, 187 MW Solar Portfolio, Jeffers Wind,
7 and Community Wind North projects. Additionally, as discussed further in the
8 Rebuttal Testimony of Mr. Chamberlain, the Company's initiation, and
9 subsequent abandonment, of the PI EPU project was prudent.

10

11 Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

12 A. Yes, it does.

1 STATE OF NORTH DAKOTA
2 BEFORE THE
3 PUBLIC SERVICE COMMISSION
4
5

6 In the Matter of the Application of Northern)
7 States Power Company, a Minnesota Corporation)
8 For Authority to Increase Rates for Electric Service) Case No. PU-20-441
9 in North Dakota)

10
11
12
13 **AFFIDAVIT OF**
14 **Farah L. Mandich**
15
16

17 I, the undersigned, being duly sworn, depose and say that the foregoing is the
18 Rebuttal Testimony of the undersigned, and that such Rebuttal Testimony and the
19 exhibits or schedules sponsored by me to the best of my knowledge, information
20 and belief, are true, correct, accurate and complete, and I hereby adopt said testimony
21 as if given by me in formal hearing, under oath.
22

23
24 
25 _____
26 Farah L. Mandich
27
28
29

30 Subscribed and sworn to before me, this 25 day of May, 2021.
31

32
33 
34 _____
35 Notary Public
36 My Commission Expires: 1/31/2025



Schedule 1
Farah L. Mandich
Statement of Qualifications

Farah Ladan Mandich is a Specialist, Resource Planning for Northern States Power Company – Minnesota. She currently works within the Company’s Resource Planning team on the development of resource plans and acquisitions for the NSP System, which provides electric service to customers in North Dakota, South Dakota, Minnesota, Wisconsin, and Michigan. Mandich joined Xcel Energy in April 2019 as a Regulatory Policy Specialist, where she was responsible for developing resource planning and resource acquisition regulatory filings for NSPM.

Prior to joining Xcel Energy, Mandich was a Policy Advisor at Southern California Edison (SCE), a large investor owned utility in California. In this role, she supported development of Integrated Resource Planning and resource acquisition regulatory filings before the California Public Utilities Commission. Before working on California regulatory issues, Mandich was a Knowledge Specialist in global consultancy McKinsey & Company’s Electric Power & Natural Gas practice, where she served as a subject matter expert to both US and international clients on North American renewable energy markets.

Mandich received her Bachelor of Science in Economics from Texas Christian University and her Master of Public Policy from the University of Michigan’s Gerald R. Ford School of Public Policy.