

**BEFORE THE PUBLIC UTILITIES COMMISSION OF
THE STATE OF SOUTH DAKOTA**

**In the Matter of Commission Staff's Request to)
Investigate Northern States Power Company d/b/a)
Xcel Energy's Proposed Fuel Clause Rider) Docket EL16-037**

**DIRECT TESTIMONY AND EXHIBITS OF JON THURBER
ON BEHALF OF
THE COMMISSION STAFF**

July 28, 2017

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1 I. INTRODUCTION AND QUALIFICATIONS

2
3 **Q. Please state your name and business address.**

4 A. Jon Thurber, Public Utilities Commission, State Capitol Building, 500 East Capitol
5 Avenue, Pierre, South Dakota, 57501.
6

7 **Q. By whom are you employed and in what capacity?**

8 A. I am a utility analyst for the South Dakota Public Utilities Commission (“Commission”). I
9 am responsible for analyzing and presenting recommendations on utility dockets filed
10 with the Commission that best serves the public interest.
11

12 **Q. Please describe your educational and business background.**

13 A. I graduated summa cum laude from the University of Wisconsin – Stevens Point in
14 December of 2006, with a Bachelors of Science Degree in Managerial Accounting,
15 Computer Information Systems, Business Administration, and Mathematics. My
16 regulated utility work experience began in 2008 as a utility analyst for the Commission.
17 At the Commission, my responsibilities included analyzing and testifying on ratemaking
18 matters arising in rate proceedings involving electric and natural gas utilities. In 2013, I
19 joined Black Hills Corporation as Manager of Rates. During my time at Black Hills
20 Corporation, I held various regulatory management roles and was responsible for the
21 oversight of electric and natural gas filings in Wyoming, Montana, and South Dakota. In
22 July of 2016, I returned to the Commission as a utility analyst.
23

24 In my nine years of regulatory experience, I have either reviewed or prepared over 170
25 regulatory filings. These filings included ten utility rate cases, three integrated resource
26 plans, and six fuel clause proceedings. I have provided written and oral testimony on the
27 following topics: the appropriate test year, rate base, revenues, expenses, taxes, cost
28 allocation, rate design, power cost adjustments, capital investment trackers, PURPA
29 standards, and avoided costs.
30
31
32

1 **Q. Are you familiar with Northern States Power Company’s (“Xcel Energy” or**
2 **“Company”) proposed fuel clause rider, Docket EL16-037?**

3 A. Yes. I have reviewed the Company’s prefiled testimony, exhibits, working papers and
4 responses to data requests as it pertains to the issues that I am addressing.
5

6 **II. PURPOSE OF TESTIMONY**
7

8 **Q. What is the purpose of your direct testimony?**

9 A. The purpose of my direct testimony is to provide an overview of the evaluation
10 performed by Commission Staff on the resources at issue in this proceeding, and
11 Commission Staff’s recommendation resulting from this review.
12

13 First, I will discuss the standard of review for this proceeding. Within this section, I will
14 respond to policy issues raised by Mr. Chandarana and Mr. Martin regarding the
15 integrated system and the standard of review for challenged resources. Second, I will
16 discuss the MEC I and Cannon Falls purchase power agreements (PPAs). Third, I will
17 discuss the remaining resources that were acquired to comply with other states’
18 renewable energy standards and laws that are not economically reasonable generation
19 resources for South Dakota customers. Fourth, I will discuss additional resources that
20 Commission Staff identified through discovery that need to be supported for recovery by
21 Xcel Energy. Finally, I will propose changes to the fuel clause rider (“FCR”) so that
22 future resources requested for recovery by Xcel Energy are transparent and allows for a
23 more efficient review of prudence and reasonableness.
24

25 **III. STANDARD OF REVIEW**
26

27 **Q. Do you agree with Mr. Chandarana’s standard established on Page 14 for the**
28 **Commission’s review of challenged resources?**

29 A. I think the standard needs to be elaborated upon and put into context. In addition, Mr.
30 Chandarana provides guidance on how the Commission should review the challenged
31 resources in other areas of his testimony with which I do not agree.
32
33

1 **Q. Which parts of Mr. Chandarana’s guidance are appropriate for the Commission’s**
2 **review?**

3 A. The underlying costs in the FCR should be prudent, efficient, and economical, and be
4 reasonable and necessary to provide service to the public utility’s customers in South
5 Dakota. Consistent with the Commission’s decision in Docket EL09-018, the facts and
6 circumstances available at the time the decision to proceed with a resource addition
7 should be considered when evaluating prudence.
8

9 **Q. Do you interpret the Commission’s decision in Docket EL11-019 regarding the**
10 **approval for cost recovery of the Nobles Wind Project in the same manner as Xcel**
11 **Energy?**

12 A. No, I interpret the Commission’s decision differently. Mr. Chandarana referenced
13 Finding of Fact 34 in the Order from Docket EL11-019 to support a shift from least cost
14 planning. Here is the complete Finding of Fact referenced by Xcel Energy:
15

16 “In addition, the standard for testing cost recovery provided in Section 49-34A-8.4
17 includes consideration of whether the expenditure was "efficient, and
18 economical." That standard provides Xcel with a certain amount of flexibility to
19 pick alternatives that are best for the overall system, not strictly the least-cost
20 alternative. Other factors such as fuel diversity and diversification of risk are also
21 factors in such a decision. The facts sufficiently demonstrate that Xcel's selection
22 of Nobles satisfies the "efficient and economical" component of that standard.”
23

24 There are other relevant findings in that Order that need to be considered to properly
25 interpret the Commission’s decision. Specifically, Finding of Fact 43 provides a
26 conclusory finding that assists in interpreting the Commission’s decision on the Nobles
27 Wind Project:
28

29 “The Commission wishes to stress that the approval for cost recovery of the
30 Nobles Wind Project in this Final Decision and Order is limited to the Nobles
31 Wind Project itself as a discrete project on a next-in basis and is not intended
32 and should not be construed as an approval of prudence or cost recovery for
33 additional projects or a portfolio of projects to satisfy state renewable energy
34 standards or objectives.” (emphasis added)
35

36 This finding properly reflects a case-by-case evaluation of reasonableness of the
37 resource. Regarding the next-in, standalone basis cited above, the Commission “found
38 that Nobles was the least cost, and benefits exceeded costs by \$80 million.” (Finding of

1 Fact 32) Rather than base its decision on qualitative factors alone, the Commission
2 relied on a quantitative resource planning model to support its decision. In Finding of
3 Fact 38, the Commission found that “these models, and in particular the standalone,
4 next-in model showed that Nobles is a cost effective resource.”
5

6 **Q. Is the Commission permitted to look beyond a strict least-cost plus need
7 paradigm when evaluating prudence?**

8 A. The Commission can approve cost recovery of resources that are not least cost, but the
9 Commission is required to evaluate reasonableness and need. The Commission is
10 required to determine that underlying costs are necessary to provide service to the
11 public utility’s customer, and necessary is defined by Merriam-Webster as “absolutely
12 needed.” While the Commission has the flexibility to approve resources that do not meet
13 a least cost planning requirement, the burden falls on the utility to show that other factors
14 justify a deviation from least-cost planning. In my view, the Nobles Wind Project
15 decision relied upon consideration of such factors.
16

17 Based on the decision rendered in Docket EL11-019, the Commission appears
18 concerned about deviating from least cost resource planning when the primary factor for
19 selecting a resource is complying with another state’s renewable energy standard.
20 Excluding the MEC I and Cannon Falls PPAs, every resource that is challenged by
21 Commission Staff complies with a Minnesota law. The fundamental question is whether
22 there is adequate support to deviate from a strict least cost plus need paradigm for
23 resources that were acquired primarily to comply with another state’s laws.
24

25 **Q. Consistent with the Findings of Facts in Docket EL11-019, does Xcel Energy
26 advocate that the Commission review each of the twenty-nine resources in
27 question as discrete projects?**

28 A. Xcel Energy’s advocacy is inconsistent. In one section of his direct testimony, Mr.
29 Chandarana is critical of the approach employed by the North Dakota Public Service
30 Commission of performing a resource-by-resource analysis, and states that this type of
31 evaluation undervalues the benefits of the integrated system. In another section, Mr.
32 Chandarana confirms that the Company has an obligation to demonstrate to the
33 Commission that all resources serving its South Dakota customers are prudent,
34 economical and efficient. Even though Xcel Energy affirms its burden by law, the

1 Company repeatedly requests the Commission consider these individual resources
2 within the context of the integrated system. The integrated system should not be used
3 as a term in a package deal to achieve recovery of over twenty-five individual resources
4 that cannot withstand a prudency review on their individual merits. Further, one cannot
5 claim a truly integrated system is subject to command and control of one jurisdiction.
6

7 I recommend a prudency review of each discrete resource, consistent with how
8 resources are reviewed and evaluated for all other public utilities in the State of South
9 Dakota.
10

11 **Q. Do you believe an integrated system has value for customers?**

12 A. Yes, an integrated system has value if resources are planned based on economic
13 principles. Mr. Martin and Mr. Chandarana touch on the advantages and benefits of the
14 integrated system in detail in their respective testimonies. Unfortunately, Xcel Energy no
15 longer plans all of its resource decisions to maximize the benefits of the integrated
16 system.
17

18 **Q. How does Xcel Energy plan for the integrated system?**

19 A. Mr. Chandarana and Mr. Martin claim that “each resource in the NSP System – whether
20 generation or transmission – was developed in consideration of the whole.” In the same
21 testimony, both witnesses state Xcel Energy is “obligated to meet the regulatory
22 requirements of each jurisdiction, including South Dakota, which – as a practical matter
23 – means that the state with the most stringent requirements sets the bar for our
24 compliance.” *(emphasis added)* These statements directly conflict with one another.
25

26 **Q. How can each resource be developed in consideration of the whole if the state**
27 **with the most stringent generation resource requirements sets the bar for Xcel’s**
28 **compliance over the integrated system?**

29 A. Xcel Energy’s definition of the integrated system is that the most stringent state can
30 control the resource decisions for the entire integrated system. This defies the meaning
31 of integrated.
32

33 With stringent state compliance requirements, Xcel Energy’s resource options are limited
34 in a way that impacts the economics of the integrated system. First of all, Xcel Energy is

1 required to invest in fuel types without regard to economics. The Company is required to
2 have a certain percentage of electricity or capacity from biomass and solar resources to
3 comply with Minnesota laws that are not cost effective when compared to other resource
4 alternatives. Second, Xcel Energy is required to locate generation resources in specific
5 states. Minnesota law requires the Company to acquire biomass and community based
6 energy development (“C-BED”) located within the state of Minnesota. While good for
7 economic development in Minnesota communities, there may be opportunities to locate
8 generation resources in communities outside of Minnesota that could deliver electricity at
9 a lower cost to the integrated system. Third, Xcel Energy is required to acquire
10 resources that are not utility-scale. Again, Minnesota law requires the Company to
11 acquire small-scale C-BED and solar facilities that do not allow customers to benefit
12 from the economies of scale and the associated lower per-unit costs that the integrated
13 system can provide.

14
15 Based on how Xcel Energy has defined its integrated resource planning process and
16 allocates generation costs across its state jurisdictions, the value of the integrated
17 system is diminishing to South Dakota customers because the cost of the most stringent
18 state’s uneconomic compliance mandates and regulatory decisions is being allocated to
19 South Dakota.

20
21 **Q. Should the Commission interpret Commission Staff’s investigation in this docket
22 as a change in how the integrated system is valued?**

23 A. No. The generation resources being investigated do not benefit the integrated system;
24 the challenged resources are for the benefit of the jurisdiction mandating the generation
25 resource. While jurisdictions may differ with respect to a single resource, Commission
26 Staff is concerned about over twenty five resources, not one. Other state’s uneconomic
27 legislative mandates and jurisdiction-specific initiatives are dictating an increasing
28 proportion of Xcel Energy’s generation resource decisions, and the Commission needs
29 to address cost recovery of generation resources that are acquired to comply with a
30 specific state’s requirements rather than for the benefit of the integrated system.

1 **Q. How could the Commission maintain the value of the integrated system while**
2 **addressing the generation resources that do not benefit the integrated system?**

3 A. The cost of the resources that do not benefit the integrated system can either be direct
4 assigned to the customers in the state where these generation resources were required,
5 or adjusted to reflect a fair and reasonable price for energy.
6

7 **Q. Is it unreasonable to challenge any generation resource that has previously been**
8 **recovered by Xcel Energy through the FCR or base rates?**

9 A. Generation resources should be subject to prudence and reasonableness reviews, and
10 these resources have been recovered without review. While the underlying costs of
11 these resources may have been included in base rates or the FCR rates, Xcel Energy
12 has not established the challenged resources as prudent, efficient, economical,
13 reasonable and necessary. Xcel Energy's general rate case and fuel clause filings did
14 not notify the Commission of the inclusion of these resources in rates or supported the
15 prudence of these resources.
16

17 Commission Staff was aware that the biomass resources were being recovered through
18 the FCR, but Commission Staff was unaware of the cost of these resources. Xcel
19 Energy asserted that it "appears unlikely that this technology will mature into a cost
20 effective generation product" in Mr. Chandarana's direct testimony. Xcel Energy
21 provided no support to show that these resources were ever cost effective, but instead
22 asserted that these resources should be recovered from South Dakota customers
23 because they were necessary to comply with a Minnesota law that allowed for the
24 continued operation of its nuclear fleet. While I may agree that Minnesota law required
25 these resources, each state which hosts Xcel Energy generation resources could
26 legislatively mandate certain requirements that advance its own state energy and
27 economic development policy goals as a condition for the continued operation of a
28 facility. Such legislative mandates could be detrimental to the integrated system if each
29 state does not share the same policy goals.
30

31 Commission Staff was unaware that the Renewable Development Fund ("RDF") and C-
32 BED resources were being recovered through the fuel clause. Our understanding was
33 that these resources were being recovered from the jurisdiction that mandated the
34 resources. It took this investigation to find out otherwise.

1 **Q. Do you have any other concerns about how Xcel Energy has framed its arguments**
2 **around “historic resources” and the FCR?**

3 A. The FCR was not intended to be used as a cost recovery mechanism for purchase
4 power agreements that avoids a prudence and reasonableness review. Based on Xcel
5 Energy’s rate case and FCR filings with the Commission, initial recovery of the
6 challenged resources has occurred without notice. Without notice, the Commission’s
7 ability to detect and review the resources at the time of inclusion is significantly impaired.
8 Commission Staff is concerned that Xcel Energy is advocating for a regulatory
9 framework that weakens the Commission’s ability to review purchase power agreements
10 for prudence through the fuel clause. I will be proposing modifications to the FCR filings
11 and processes later in testimony that allows for a more transparent review of purchase
12 power agreements.

13

14 **Q. Mr. Chandarana stated that “disallowing resources that have enjoyed cost**
15 **recovery for years provides no such signal and materially impairs our ability to**
16 **plan the system with any reasonable degree of confidence. I believe such a result**
17 **is unreasonable and calls into question our ability to manage the system on a**
18 **going forward basis.” Do you have any comments on this claim?**

19 A. The Commission could not provide a signal because Xcel Energy’s rate recovery filings
20 did not allow for detection of these resources. Had Xcel Energy’s filings been open and
21 transparent, Commission Staff would have questioned these resources earlier. Proper
22 signals can be provided only when a utility has appeared before any and all jurisdictions
23 requesting inclusion of resource costs in rates. For some states there must be pre-
24 approval, but in South Dakota that approval should come whenever the utility intends to
25 collect the costs.

26

27 Furthermore, while Mr. Chandarana states that disallowing these resources would
28 materially impair Xcel Energy’s ability to plan the system, he defines the impact of these
29 resources on the system differently elsewhere in his testimony. When Mr. Chandarana
30 advocates that the Commission consider the larger context of the integrated system in
31 this proceeding, the resources under review are characterized as at the “margins” of
32 Xcel Energy’s system:

33

1 “Excluding the MEC I and Cannon Falls PPAs (which are capacity resources), the
2 resources at issue make up less than five percent of the Company’s installed
3 capacity and less than five percent of the Company’s overall energy production. In
4 other words, this hearing is singling out resources at the margins of our system.”
5

6 Resources at the margin would not materially impair system planning and Xcel Energy’s
7 ability to manage the system, so materiality should not be argued both ways. The
8 contracted capacity of the C-BED, solar, biomass, and RDF resources is approximately
9 270 MWs, 262 MWs, 115 MWs, and 7 MWs, respectively. In total, 654 MWs of
10 contracted capacity is under review. For some perspective, South Dakota customers
11 make up approximately 500 MWs of Xcel Energy’s integrated system. Also note that
12 this review does not include all resources that are utilized for compliance with other
13 states’ mandates.
14

15 In total, the resources at issue in this proceeding are cumulatively significant, and the
16 amount of resources that are required to comply with state mandates are forecasted to
17 grow in the coming years.
18

19 **Q. Please summarize the standard of review Commission Staff is recommending to**
20 **the Commission in this docket.**

21 A. The underlying costs in the FCR should be prudent, efficient, and economical, and be
22 reasonable and necessary to provide service to the public utility’s customers in South
23 Dakota. Each discrete generation resource recovered through the fuel clause should be
24 reviewed on a case-by-case basis. Consistent with the Commission’s decision in
25 Docket EL09-018, the facts and circumstances available at the time the decision to
26 proceed with a resource addition should be considered when evaluating prudence.
27

28 The Commission can approve cost recovery of generation resources that are not least
29 cost, but the Commission is required to evaluate reasonableness and need. The
30 fundamental question in this docket is whether there is adequate support to deviate from
31 a strict least cost plus need paradigm for resources that were primarily acquired to
32 comply with another state’s laws and initiatives.
33

34 Stringent state compliance requirements are requiring Xcel Energy to acquire
35 uneconomic and unreasonable resources that should not be recovered through the fuel

1 clause from South Dakota customers. The challenged resources were not least cost,
2 and the qualitative factors were not sufficient to justify the resource decision. The
3 unreasonable resource decisions were primarily driven by state requirements that either
4 required a (1) specific fuel type regardless of cost, (2) the facility be located in a specific
5 state, or (3) the facility be non-utility-scale. As a result, the cost of these generation
6 resources should either be direct assigned to the customers in the state where these
7 generation resources were required, or adjusted to reflect a fair and reasonable price for
8 energy.

9
10 **IV. MEC I AND CANNON FALLS PPAs**

11
12 **Q. Please explain Commission Staff's concerns regarding the MEC I and Cannon**
13 **Falls PPAs.**

14 A. As an initial step to review the cost of generation resources recovered through the FCR,
15 Commission Staff requested that the Company provide the levelized cost of each
16 purchase power agreement in Commission Staff Data Request 1-5. Rather than
17 provide the levelized cost, the Company submitted the 2015 average cost per MWh of
18 \$108.00 and \$245.00 for the MEC I and Cannon Falls PPAs, respectively. The cost
19 information filed was higher than Commission Staff anticipated for a natural gas
20 generation resource, so the MEC I and Cannon Falls PPAs were included in
21 Commission Staff's motion to show cause.

22
23 **Q. Did the Company provide additional information regarding the MEC I and Cannon**
24 **Falls PPAs since the Commission's Order to Show Cause?**

25 A. Yes. On June 22, 2017, the Company and Commission Staff met in person to discuss
26 the challenged resources. At this meeting, Mr. Martin stated that the average cost per
27 MWh provided to Commission Staff for these PPAs included a capacity charge that is
28 recovered through base rates. In addition, Mr. Martin explained how the MEC I and
29 Cannon Falls PPA energy charge, which is recovered through the FCR, is derived.

30
31 **Q. Was this capacity and energy charge information apparent in the Company's**
32 **response to Commission Staff Data Request 1-5?**

33 A. No, it was not. The capacity and energy charge cost information should have been
34 separated in the response since the Company is not seeking recovery of the capacity

1 charge through the fuel clause. The average cost per MWh for a natural gas
2 combustion turbine with a low capacity factor will be high because the majority of the
3 cost is a fixed capacity charge that is calculated over a small number of MWhs. Cost
4 information provided in this format for capacity units is nonsensical.

5
6 **Q. Did the Company provide revised resource cost information for the MEC I and
7 Cannon Falls PPAs in its direct testimony?**

8 A. Yes, Mr. Chandarana provided new cost information for the MEC I and Cannon Falls
9 PPAs on Exhibit AHC-1 - Schedule 6. According to footnotes 6-1 and 6-2, the energy
10 charge collected through the FCR in 2016 for the MEC I and Cannon Falls PPAs was
11 \$26.06 and \$47.79 per MWh, respectively. This is significantly lower than the previously
12 provided 2015 average cost per MWh of \$108.00 and \$245.00 for the MEC I and
13 Cannon Falls PPAs, respectively. Commission Staff's concerns about the MEC I and
14 Cannon Falls PPAs have been addressed and I recommend no disallowance at this
15 time.

16
17 **Q. Did Commission Staff have any other concerns about natural gas generation
18 resource PPAs?**

19 A. Yes. The Commission ordered the Company to show cause why the costs associated
20 with the St. Paul Cogeneration resource should be recovered through the fuel clause. In
21 response to Commission Staff Data Request 1-5, the Company identified the fuel type of
22 the St. Paul Cogeneration resource as natural gas. On Exhibit AHC-1 - Schedule 6, Mr.
23 Chandarana changed the fuel type of the resource from natural gas to biomass. The
24 Company should explain this change in its rebuttal testimony. If the St. Paul
25 Cogeneration resource is a natural gas generation resource, the Company has provided
26 no support to justify recovery through the FCR.

27
28 **V. STATE COMPLIANCE RESOURCES**

29
30 **Q. Please discuss the other resources that are being evaluated by the Commission in
31 this proceeding.**

32 A. The remaining challenged resources were acquired pursuant to Minnesota laws. While
33 a resource obtained to comply with another state's law does not automatically lead to an
34 imprudent resource decision, Commission Staff is concerned that policy decisions made

1 by another state’s legislature or commission may impose uneconomical and
2 unreasonable costs for South Dakota customers. After evaluating each resource, the
3 economic analysis and qualitative factors do not support the resources as prudent and
4 reasonable. This section of my testimony will be organized by the four statutory
5 requirements that support specific resources: RDF, C-BED, Biomass, and Solar Energy
6 Standard (“SES”).
7

8 **a) RDF PPAs**
9

10 **Q. Please describe the RDF program.**

11 A. The RDF program was authorized by the Minnesota Legislature in 1994 (Minn. Stat.
12 §116C.779), and requires Xcel Energy to pay into the fund for the right to store spent
13 nuclear waste at the Monticello and Prairie Island facilities. At the time Xcel Energy
14 acquired the challenged RDF generation resources, the RDF statute provided that funds
15 may be expended to (1) increase the market penetration *in Minnesota* of renewable
16 resources, (2) promote the start-up, expansion, and attraction of renewable energy
17 projects and companies *in Minnesota*, (3) stimulate research and development *within*
18 *Minnesota* into renewable energy technologies, and (4) develop near-commercial and
19 demonstration scale electric infrastructure delivery projects if those delivery projects
20 enhance the delivery of renewable energy. (*emphasis added*)
21

22 **Q. Has the Commission previously made rulings on the costs associated with the**
23 **RDF?**

24 A. Yes. In Docket EL04-015, the Commission denied Xcel Energy’s petition for approval to
25 include RDF program costs in the FCR. In Xcel Energy’s 2009 South Dakota rate case,
26 Docket EL09-009, the Commission removed the recovery of expenses for payments by
27 Xcel Energy to the RDF.
28

29 **Q. Was Commission Staff aware Xcel Energy was recovering the costs associated**
30 **with energy generated by RDF resources in the FCR?**

31 A. No, Commission Staff was not. Based on the previous Commission decisions,
32 Commission Staff believed all costs, including payments for energy, would not be
33 recovered from South Dakota customers. In addition, the Company did not provide

1 notice to the Commission that it was recovering costs associated with energy generated
2 by RDF resources through the FCR.

3
4 **Q. Was there any economic analysis submitted in the docket to support the**
5 **acquisition of the RDF resources?**

6 A. No, there was not. Instead, Mr. Chandarana asserted that the RDF resources were
7 acquired to allow Xcel Energy to continue its nuclear operation, and provide the
8 Company experience with newer generation technologies.

9
10 **Q. Should recovery of the RDF resources be allowed since they were acquired for**
11 **compliance with state law?**

12 A. The RDF resources should not be recovered because the compliance requirement is
13 unreasonable, inefficient, and uneconomic. The RDF statute promotes Minnesota's
14 energy policy goals and initiatives, and should be recovered from Minnesota customers.
15 It is unfair for customers in the integrated system to pay for Minnesota's energy policy
16 initiatives under the veil of compliance. While the South Dakota legislature could enact
17 requirements as a condition for the continued operation of the Angus Anson generation
18 facility, I would not recommend it as good energy policy and would expect South Dakota
19 customers to burden those compliance costs if the benefits would not exist for the
20 integrated system.

21
22 **Q. Are you persuaded by the qualitative argument that RDF resources were prudent**
23 **because they allowed Xcel Energy to test emerging technologies?**

24 A. Not all technologies end up being cost effective for customers. Whether customers
25 should fund research and development initiatives through Xcel Energy retail rates is a
26 public policy decision for the Commission. Delaying investments in new technologies
27 until proven cost effective is prudent if the Commission's primary objective is to minimize
28 customer costs.

29
30 Since Xcel Energy acquired RDF resources to comply with a legislative mandate, it is
31 difficult to ascertain whether the Company's management team would pursue these
32 resources absent requirements. With the number of emerging technology requirements
33 imposed by the Minnesota legislature, this justification is broadly being applied to many
34 resources and is not persuasive.

1 **Q. Has the RDF statute been recently modified?**

2 A. Yes. In 2017, the Minnesota legislature amended the law to fundamentally change the
3 RDF program. The RDF funds can now be used for non-renewable sources, and
4 provides the Minnesota legislature final approval of RDF projects rather than the
5 Minnesota PUC. Attached as Exhibit_JPT-5 is a redline version of the legislative
6 changes.

7
8 **Q. Why are the legislative changes relevant to this docket?**

9 A. Although the revised law was not effective when the resources were acquired, the
10 amendments clearly show that the RDF program is utilized to fund Minnesota legislative
11 initiatives. If the Commission does allow recovery of costs of the challenged RDF
12 resources through the fuel clause, I would recommend that no additional RDF projects
13 be allowed to be recovered through the FCR unless a request is made and approved
14 through a docketed filing for each specific project.

15

16 **b) C-BED PPAs**

17

18 **Q. Please describe the C-BED program.**

19 A. Per Minnesota statute 216B.1612, public utilities were to file with the Minnesota PUC for
20 approval of a C-BED tariff to “optimize local, regional, and state benefits from renewable
21 energy development and to facilitate widespread development of community-based
22 renewable energy projects *throughout Minnesota*” by December 1, 2007. (*emphasis*
23 *added*)

24

25 **Q. Was there any economic analysis submitted in the docket to support the**
26 **acquisition of the C-BED resources?**

27 A. On Exhibit__(AHC-1), Schedule 7, Mr. Chandarana outlined the acquisition process for
28 C-BED projects. Economic analysis for each discrete project was not provided.

29

30 **Q. Do you have any concerns with how the acquisition process for C-BED projects**
31 **impacts the integrated system?**

32 A. Yes. The statute required that the C-BED projects be located within Minnesota. Xcel
33 Energy may have selected cost effective resources compared to other Minnesota C-BED
34 resources, but there is no information to support that these projects were cost effective

1 resources compared to projects located in other states that could interconnect to Xcel
2 Energy's system. In addition, the statute required that 51% of the revenue from the C-
3 BED PPA be flowed to qualifying owners, which are generally defined to be residing in
4 Minnesota. The majority of the economic benefits from these projects are required to
5 stay within the state of Minnesota, yet are requested to be recovered from the entire
6 integrated system. This public policy interferes with integrated system planning.

7
8 **Q. What are some of the qualitative factors Xcel Energy used to support C-BED**
9 **resources?**

10 A. Xcel Energy stated that C-BED resources provide resource and fuel diversity. The
11 Company also states it gained valuable experience with negotiating renewable energy
12 purchase contracts, understanding community-based energy development, developing
13 knowledge of FERC's interconnection requirements, and integrating wind resources on
14 its system. Generally, Xcel Energy asserts that these resources make up a relatively
15 small percentage of the overall energy produced (2%) and accredited capacity (< .5%)
16 on its system.

17
18 **Q. Do you find this support compelling?**

19 A. No, I do not. The Company is required through the Minnesota Renewable Energy
20 Standard ("Minnesota RES") to obtain 30% of its electricity from renewable resources by
21 2020. Of the 30% in 2020, at least 25% must be generated by wind energy conversion
22 systems and the remaining 5% by other eligible energy technology. The Minnesota
23 RES already required the Company to invest in wind resources to provide resource and
24 fuel diversity, and gain experience with the technology, without requiring the facilities to
25 be located in Minnesota and owned by Minnesota residents. Not only that, the
26 Minnesota RES allowed utility-scale investments, rather than small C-BED facilities,
27 where the Company could have used economies of scale to build larger wind resources
28 and lower the per unit costs to achieve the qualitative factors more cost effectively.

29
30 Regarding the overall energy production and accredited capacity from C-BED facilities, it
31 is easy to minimize the impact of the C-BED resources in comparison to the entire
32 system. If one's perspective is shifted from the entire system to specifically South
33 Dakota's jurisdiction, C-BED resources (277 MW) would cover approximately half of
34 South Dakota's peak load if the wind is blowing (approx. 500 MW). However, all

1 resources, no matter the size, should be evaluated for prudence and reasonableness,
2 and a large system should not be used to subsidize inefficient and unreasonable
3 resources. In addition, the four types of resources being challenged in this proceeding
4 (RDF, C-BED, biomass, and solar resources) comprise a larger portion of the system
5 when considered cumulatively rather than individually.
6

7 **Q. What is your recommendation for cost recovery of C-BED resources?**

8 A. The C-BED resources should not be recovered from South Dakota customers because
9 the resources have not been proven to be cost effective and efficient compared to
10 resources located in other states that could interconnect to Xcel Energy's system. In
11 addition, the C-BED program is primarily intended to drive economic development in the
12 state of Minnesota associated with the wind industry, and South Dakota customers
13 should not be required to fund economic development initiatives in the state of
14 Minnesota. The costs and benefits of such a policy should be direct assigned to
15 Minnesota.
16

17 **c) BIOMASS PPAs**

18
19 **Q. Please describe the Biomass Power Mandate.**

20 A. The Biomass Power Mandate established by Minnesota Statute §216B.2424 requires
21 Xcel Energy to build or contract 110 MW of electricity generated from biomass
22 resources. The Biomass Power Mandate applies to Xcel Energy because it operates
23 nuclear-powered electric generation within Minnesota.
24

25 **Q. Did Xcel Energy provide economic analysis to support the Biomass Power
26 Mandate resource decisions?**

27 A. No, they did not. Similar to the RDF projects, the Company stated the resources were
28 necessary for the continued operation of its nuclear fleet.
29

30 **Q. What does the Company propose regarding to the Biomass resources in
31 question?**

32 A. The Company is seeking to terminate or restructure the Biomass PPAs. Xcel Energy
33 has labeled it a customer cost-saving initiative, and stated the termination would

1 materially moot the need for Commission review of the Biomass PPAs in this
2 proceeding.

3
4 **Q. Do you agree that the termination or restructuring of the Biomass PPAs would**
5 **moot the need for Commission review?**

6 A. No. If the Commission disallowed or adjusted cost recovery associated with the
7 Biomass PPAs, the Commission's decision would be effective December 1, 2016,
8 consistent with the date of the FCR suspension. The Commission may adjust the cost
9 recovery associated with the Biomass PPA resources from December 1, 2016, through
10 the termination or restructuring date. The Company did not identify when the
11 transactions were effective, but Commission Staff was not aware of the potential
12 termination of Biomass PPAs until June 2017.

13
14 **Q. Would you characterize the termination or restructuring of the Biomass PPAs as a**
15 **customer cost-savings initiative?**

16 A. I think that characterization confuses what is actually occurring. The Company entered
17 into above market contracts for Biomass resources to comply with a Minnesota
18 legislative mandate for the right to store spent nuclear waste. In essence, Xcel Energy
19 is attempting to buy out contracts that were never cost justified in the first place. A
20 disallowance or repricing of the resource could serve as a larger cost-savings initiative
21 for customers, so that characterization is relative to perspective.

22
23 **Q. What is your recommendation for cost recovery of Biomass resources?**

24 A. As Mr. Chandarana already recognized through direct testimony, the Biomass resources
25 are some of Xcel Energy's highest-cost resources on the system. Commission Staff
26 recommends cost recovery of the Biomass resources cease.

27
28 **d) SES PPAs**

29
30 **Q. Please describe the Minnesota SES.**

31 A. In addition to the Minnesota RES, the Company is required to serve 1.5% of its
32 Minnesota retail electricity sales with solar energy by the end of 2020. It is an energy
33 goal of the state of Minnesota that by 2030, ten percent of the retail electric sales in
34 Minnesota be generated by solar energy.

1 **Q. Which SES compliance resources are requested for recovery through the FCR?**

2 A. The Marshall Solar PPA was requested for recovery in the December 2016 FCR filing.
3 Through discovery, the Company stated that it intended to request recovery of the North
4 Star Solar and Aurora Solar PPAs in the January 2017 FCR filing. The Commission
5 may review the North Star Solar and Aurora Solar PPAs in this proceeding because the
6 resources were used and useful and requested for recovery during the FCR suspension
7 period.

8
9 **Q. Who will be testifying on behalf of Commission Staff regarding the Marshall Solar,
10 Aurora Solar, and North Star Solar PPAs?**

11 A. Commission Staff will have Ms. Kavita Maini discuss the evaluation and review
12 performed on each resource. Ms. Maini found that the Aurora Solar, Marshall Solar, and
13 North Star PPA acquisitions cannot be considered prudent or reasonable.

14
15 **Q. Are there any subparts in the Minnesota SES that may interest the Commission?**

16 A. There are two subparts that are relevant to this proceeding. First, at least ten percent of
17 the 1.5% goal must be met by solar energy generated by or procured from solar
18 photovoltaic devices with a nameplate capacity of 20 kilowatts or less. This policy
19 promotes distributed generation that may be less economical than the per-unit costs of
20 utility scale facilities.

21
22 Second, specific industrial customer types (paper mill, wood products manufacturer,
23 sawmill, oriented strand board manufacturer, and iron mining extraction and processing
24 facility) are exempt from the Minnesota SES and may not have any costs of satisfying
25 the solar standard included in the rates. Minnesota businesses were active in the
26 legislative process to protect their rates from unreasonable compliance costs. This
27 Commission should take a similar approach on behalf of South Dakota businesses and
28 consumers. Similar cost allocation and system planning principles that are used for a
29 specific customer can be applied to a jurisdiction without sacrificing the integrated
30 system.

31
32
33
34

1 (LMP) as a proxy to fuel and purchased energy costs. The Company believes it
2 is a fair and reasonable approach. If there had been no Community Solar
3 Gardens program, the Company would have to stream for resources to serve the
4 program participants' energy requirement. Therefore, the derived proxy
5 Community Solar Gardens costs are part of NSP System costs. The Community
6 Solar Gardens program costs above the MISO LMP proxy price will be recovered
7 from the Minnesota jurisdiction only."
8

9 This proxy price method has not been approved by the Commission as a reasonable
10 method for cost recovery. Commission Staff requests that the Company fully explain
11 and support this method in its rebuttal testimony.
12

13 In addition, it is unclear what costs associated with the Made In Minnesota and Net
14 Metering solar projects, if any, are being recovered from South Dakota customers
15 through the FCR or base rates. Commission Staff requests that the Company provide a
16 complete explanation of the Made In Minnesota and Net Metering solar projects, explain
17 what costs, if any, associated with the energy production from these resources are being
18 recovered from South Dakota customers, and provide the cost per MWh associated with
19 Made In Minnesota and Net Metering solar projects.
20

21 **Q. How many MWs of Solar*Rewards Community solar garden projects are currently**
22 **scheduled to be developed?**

23 A. As of June 21, 2017, there were 763 MWs in the pipeline in various stages of
24 development. This is in addition to the 80 MWs currently on the system.
25

26 **VII. FCR FILING CHANGES**

27

28 **Q. Do you agree with Mr. Chandarana's assertion that the Commission is revisiting**
29 **the costs of Historic Resources?**

30 A. No, the Historic Resources were never reviewed. In response to Staff Data Request 6-
31 20a, the Company was unable to provide any Commission orders that approved the cost
32 recovery associated with the Historic Resources. See Exhibit_JPT-8 for the Company's
33 response to Staff Data Request 6-20.
34
35

1 **Q. Did Commission Staff request any documentation submitted by the Company to**
2 **notify the Commission that any of the twenty six resources questioned were**
3 **included for recovery in the FCR?**

4 A. Yes. In response to Staff Data Request 6-20e, the Company stated it provided the
5 following notice:
6

7 "The Company submits monthly FCR compliance filings. Also, purchased power
8 costs including energy production from C-BED project are booked in FERC
9 Account 555 (Purchased Power) for recovery in the FCR. In its monthly FCR
10 filing submitted to the South Dakota Commission, Purchased Power is a line item
11 included in our calculation of monthly fuel cost charge factors. Going forward, we
12 are open to discussing new FCR reporting measures."
13

14 **Q. Do you find this to be adequate notice to identify and detect any new PPA**
15 **resources in the monthly FCR filings?**

16 A. Absolutely not. Finding a new PPA by only reviewing the cumulative costs reflected in
17 FERC Account 555 is unreasonably difficult to deduce or infer. With the quantity of
18 financial transactions that are recorded in FERC Account 555 and the relative volatility of
19 costs in that account, Xcel Energy is requesting that the Commission find the proverbial
20 "needle in a hay stack" in order to detect a new PPA resource that needs review.
21

22 **Q. Is Xcel Energy unique in the quantity of PPA resources it collects through the**
23 **FCR?**

24 A. Yes. Xcel Energy recovers the costs associated with more PPA resources through the
25 FCR than any other electric utility in South Dakota. This is primarily driven by the
26 Company's utilization of PPA resources to meet other states' laws and initiatives.
27

28 **Q. What information would you recommend that Xcel Energy include in the monthly**
29 **FCR filing to properly notice new PPA resources requested for recovery?**

30 A. Commission Staff would recommend that the Company provide an attachment to the
31 monthly FCR that lists each specific new PPA requested for recovery of one year or
32 longer. The list should include, but not be limited to:
33

- 34 • List of all PPA Counterparty Names
- 35 • Project Descriptions including project names, fuel type, project types, site location
- 36 • Year of Petition or Contract
- 37 • Minnesota Public Utility Commission docket number, as available

- 1 • Commercial Operation Date
- 2 • Contracted Capacity
- 3 • PPA Term
- 4 • PPA Price
- 5

6 The Company should disclose any new resource or cost recovered through the FCR that
7 are acquired pursuant to another states' laws and initiatives in each monthly filing.

8 Commission Staff will work with the Company to develop a more transparent FCR filing
9 that provides the Commission adequate information to review the costs. Generally, I
10 would recommend increasing the information included in the FCR filing so that all
11 stakeholders are aware of when new resources requested for recovery.

12

13 **Q. Does this conclude your testimony?**

14 A. Yes, this concludes my written testimony. However, I would like the opportunity to
15 supplement my written testimony with oral testimony at the hearing to respond to Xcel
16 Energy's rebuttal testimony and responses to discovery.

17