PUBLIC

Rebuttal Testimony and Schedules

James R. Alders

Before the Public Utilities Commission of
The State of South Dakota

In the Matter of the Application of
Northern States Power Company, a Minnesota corporation

For Authority to Increase Rates for
Electric Service in South Dakota

Docket No. EL11-019
Exhibit___(JRA-1)

Cost Recovery for the Nobles Wind Project

April 27, 2012

I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is James R. Alders. My business address is 414 Nicollet Mall, Minneapolis, Minnesota 55401.

Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?

A. My title is Strategy and Communications Consultant and I work in the Regulatory Department of Northern States Power Company. For the last 4 years I held the position of Director, Regulatory Administration, for Xcel Energy Services Inc., and the Company, including its operations in South Dakota.

Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS AND EXPERIENCE.

A. I graduated from the University of Minnesota in 1973 with a Bachelor of Science degree in Urban Studies and later a Masters degree in Business Administration from St. Thomas in 1991. As the Director of Regulatory Administration since April 2008, my job responsibilities included oversight of the development, preparation and support of all the Company's regulatory requests for approval needed for resource plans, resource acquisitions, power plants and transmission lines in Minnesota, South Dakota, North Dakota, Wisconsin and Upper Michigan. Throughout my 33 year tenure with the Company, I have been employed in various positions responsible for the routing and siting of new energy facilities such as transmission lines and power plants, as well as the acquisition of regulatory approvals, including Certificates of Need for those facilities. Since 1994, I have been extensively involved in

the development of the Company's resource plans and have represented the Company before state regulators in various resource planning and Certificate of Need proceedings. My resume is included with my testimony as Exhibit___(JRA-1), Schedule 1.

Q. FOR WHOM ARE YOU TESTIFYING?

A. I am testifying on behalf of Northern States Power Company, a Minnesota corporation operating in South Dakota (Xcel Energy or the Company). The Company is a wholly owned utility operating company subsidiary of Xcel Energy Inc.

II. SUMMARY AND ORGANIZATION

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

A. I respond to the issues raised by Staff outside witness Ms. Kavita Maini and:

- Explain that the Nobles Wind Project (Nobles Project) was selected as part of a comprehensive resource planning process;
- Provide additional detail regarding the cost-effectiveness of the Nobles Project, demonstrating that it is a cost-effective addition to the resource base used to serve South Dakota customers; and
- Explain how the operation of an integrated system benefits our South Dakota customers.

Q. WHAT GENERAL COMMENTS DO YOU HAVE ABOUT THE STAFF'S RATIONALE TO DISALLOW A PORTION OF THE NOBLES PROJECT COST?

A. As we understand Staff's rationale to disallow a portion of the Nobles Project, we believe it is inconsistent with important principles of efficient and effective resource planning and integrated system design and operation. Further, we provide additional information that confirms that Nobles is a cost effective resource for South Dakota customers, indeed all customers served by the integrated system. The balance of my testimony provides more detail on these points, but for now I summarize them as follows:

The Company operates a fully integrated generation and transmission system under which all of our generation is used to meet system needs. Our large, integrated system allows us to:

- Reduce the total amount of generating resources used to reliably serve customers;
- Diversify the fleet of generating resources required to meet our customers' needs, lowering costs and risks; and,
- Lower costs by spreading costs over a substantially larger customer base.

As such it is not appropriate for any one jurisdiction to carve out elements of the integrated system that, based on a stand-alone view, it sees as incrementally more or less beneficial to customers in that jurisdiction.

Consistent with this system approach, the forecast used to determine the system's renewable resource needs includes our customers' needs in Minnesota, Michigan, North Dakota, South Dakota and Wisconsin. In determining these needs:

- We forecast the number of customers and MWh sales by customer class for each of the five state jurisdictions separately and then aggregate them.
- We then compare the forecasts of energy and peak demand requirements to the generation resources available.
- When we have identified a need for additional resources on our system, we evaluate the cost effectiveness of adding resources to meet that need.

Our resource planning process is described in detail in a later section. This process led us to the step of seeking proposals for a wind resource, which led to receiving the Nobles Project proposal. As with all potential resource additions, a critical aspect of our evaluation was Strategist modeling analyses to determine whether Nobles would be a cost-effective resource. We modeled the Nobles Project using two approaches:

First, under a very conservative analysis, Nobles was treated as being added after an additional 2000 MW of new wind was added. This made Nobles the last wind generation added to meet the full system renewable obligations and goals in the analysis. Nobles was, however, one of the first additions to the system. As a consequence of modeling Nobles last, Nobles was pushed deeper into the economic dispatch stack.

- The energy that Nobles avoided in the simulation was from units that are less costly to operate than the units Nobles actually displaces.
- This conservative modeling approach penalized the Nobles generation by allowing the 2000 MW of additional wind to meet renewables

requirements and objectives to be dispatched first, and did not capture the benefits of the higher avoided costs Nobles provides.

- The end result of that modeling presented Nobles in a worst case light and did not reflect the true value provided by the Project. Despite this worse case view, the cost impact of adding Nobles was within 0.11 percent of the No- Build alternative.

This was the Strategist analysis used by Staff witness Ms. Maini in her recommendation to disallow costs in excess of benefits. This is not the best Strategist analysis to use if Nobles is to be evaluated on a standalone basis. In addition, neither this conservative analysis nor Ms. Maini's recommendation took into consideration:

- the additional $600,000 in benefits to South Dakota customers from the bonus depreciation tax law changes;
- or the loss of Production Tax Credit ("PTC") and Renewable Energy Credit ("REC") benefits to South Dakota customers if Nobles costs are disallowed.

Under the second Strategist modeling conducted by the Company, the Nobles project was credited with the higher avoided cost benefits that result from being one of the first wind projects added to our system. Under this analysis, the net benefit to customers is approximately $80 million. This is the more appropriate Strategist modeling to use if Nobles is to be evaluated as a standalone addition, as Ms. Maini has.

The Company has also conducted a market analysis using Midwest Independent System Operator ("MISO") energy costs for the purpose of comparing the cost of Nobles to the costs of replacement energy from the

MISO market. That analysis demonstrates that Nobles provides energy at a below market cost to the significant benefit of our customers.

Ms. Maini also proposes disallowing the portion of the Nobles Project costs that were higher than the costs estimated at the time of the Strategist modeling. The incremental costs were the Company's costs not included in the build transfer development agreement with the developer. Those were prudent costs, most of which would have been incurred by any other alternative, and therefore, did not affect Nobles competitiveness against other alternatives. Further, it is not reasonable to disallow the prudent incremental costs incurred to bring Nobles on line. Nor is Ms. Maini's suggestion accurate that the incremental construction costs would not be recovered if a PPA had been used. As I indicated, the incremental costs were incurred directly by the Company to oversee the construction of the Nobles Project and most of those incremental costs would have been incurred had there been a PPA.

III. RESOURCE PLANNING

Q. HOW WAS THE NOBLES PROJECT SELECTED AS A RESOURCE?

A. The Nobles Project was selected as part of a comprehensive resource planning process.

Q. PLEASE DESCRIBE IN GENERAL TERMS THE COMPANY'S RESOURCE PLANNING PROCESS.

A. The Company conducts its resource planning process as an ongoing iterative process that has as its primary goal the development of a reasonable portfolio

of generating resources to meet overall needs, within the public policy frameworks of the States we serve, as cost effectively as reasonably possible. The process is iterative because:

- our customers' needs for demand and energy change with the economy;
- the best means by which to meet those needs change depending on a host of factors, including:
  - the MISO market cost of energy;
  - the cost of alternative fuels;
  - changes in environmental regulation; and
  - the cost of different generation alternatives which can change for a number of reasons including changes in global demand for cement and steel.

Q. PLEASE EXPLAIN THE COMPANY'S USE OF THE STRATEGIST MODELING ANALYSIS IN THE RESOURCE PLANNING PROCESS.

A. As one component of the resource planning process, the Company utilizes the Strategist model to evaluate potential resource needs under a variety of assumed conditions and sensitivities. The Strategist modeling analysis simulates operation and expansion of the portfolio of the generation resources needed to reliably meet the demand for electricity over the long term. The analysis allows us to compare potential costs and benefits of different generation choices and explore the impact of different assumptions about the future. Since major power plant additions are long-lived assets, the model estimates the impact of generating choices on the cost of electricity over an extended period of time. Strategist modeling is, however, only a tool and does not replace the need for professional judgment based on all available

information, and weighing all potential risks and benefits when making resource decisions.

Q. MS. MAINI TESTIFIES THAT THE COMPANY DID NOT NEED TO ADD NOBLES TO MEET THE SOUTH DAKOTA RENEWABLES OBJECTIVE. WHY DID THE COMPANY DECIDE TO ADD THE NOBLES PROJECT?

A. The Company added Nobles because it provides cost-effective energy consistent with the system renewable energy policies and our goal to keep the cost of electricity low. It is not correct to treat Minnesota's renewable energy policy as the sole motivation for the addition of the Nobles Project.

Q. HOW DOES THE RESOURCE PLANNING PROCESS ADDRESS THE FACT THAT SOME OF THE STATES IN WHICH THE COMPANY OPERATES HAVE RENEWABLES OBJECTIVES RATHER THAN REQUIREMENTS?

A. The NSP system has historically been designed and operated as an integrated system regardless of where generation units are located or where the customers are located across the five states that NSPM serves. As a result, NSPM did not pick and choose certain resources or certain loads to include in the modeling of the Nobles Project. Rather, the forecast used to determine the system's resource needs includes our customers' needs in Minnesota, Michigan, North Dakota, South Dakota and Wisconsin. In determining these needs, we forecast the number of customers and MWh sales by customer class for each of the five state jurisdictions separately and then aggregate them. We then compare the forecasts of energy and peak demand requirements to the generation resources available. When we have identified a need for additional

resources on our system under those assumptions, we evaluate the cost effectiveness of adding resources to meet that need.

In the case of the Nobles project, we were able to add a generating resource that will lower the production cost of electricity and comply with the policies set by all of the States in which we provide service. Since the cost and benefits of the entire system flow to all customers, it is very difficult to pick and choose only certain generation sources or to selectively isolate the costs and benefits of certain generation sources.

Q. MS. MAINI ARGUES THAT A DISALLOWANCE IS APPROPRIATE IN PART BECAUSE NOBLES WAS NOT NEEDED TO MEET SOUTH DAKOTA'S RENEWABLE GOALS. PLEASE RESPOND.

A. We do not view the South Dakota goal of serving 10 percent of our retail needs with renewable resources as a requirement regardless of cost nor as a cap on the amount of renewable resources we can add if adding more will be cost effective.

To determine our goals for renewables, we evaluate each jurisdiction's retail sales separately and calculate that jurisdiction's renewable potential requirements and goals based on its specific law. We compare those requirements against available renewable energy production to determine if additional resources may be needed and we examine the cost effectiveness of renewable-based generation additions. If our resource planning indicates that renewable energy additions have the potential to be cost effective, we then use competitive acquisition processes to obtain actual proposals from developers.

Q. IN ADDITION, MS. MAINI BASES HER RECOMMENDATION THAT ALL OR A PORTION OF THE COST OF THE NOBLES WIND PROJECT SHOULD BE DENIED BECAUSE NOBLES WAS NOT CONSTRUCTED TO FULFILL A CAPACITY OR ENERGY NEED. DO YOU AGREE THAT NSPM COULD MEET THE ENERGY NEEDS OF THE SYSTEM FROM OTHER GENERATION RESOURCES?

A. Yes, but that is not the appropriate question to ask. Ms. Maini appears to focus on the development of generation for reliability purposes and to ignore the independent need to provide economic energy. In its daily operations NSP decides if it should burn coal or natural gas to produce electricity or buy from the market. This daily and hourly decision is an economic dispatch process and not a reliability issue. The Company has numerous options or methods to satisfy the on-going energy needs of the system, such as burning coal, natural gas, buying energy in the market, or buying wind energy. The decision on which fuel or source of energy to use to meet the daily needs of the system is an economic decision that results in real costs and real avoided costs. Wind energy, like any other source of energy, be it coal or gas, has a real cost and a real value to the system that needs to be considered even though it does not provide additional capacity and other resources could have supplied the energy.

As we demonstrate below, the addition of the Nobles Project is a cost-effective resource for all of our customers.

IV. COST COMPARISON OF NOBLES TO OTHER RESOURCES

Q. PLEASE DESCRIBE THE COMPANY'S ANALYSIS OF THE COST OF NOBLES AT THE TIME IT WAS SELECTED.

A. Major power plant additions like Nobles are long lived. Consequently, their cost effectiveness must be judged based on estimates of performance compared to the alternatives over a 25 year or longer period into the future. When we explored various assumptions about the future, the costs of the Nobles Project were within a reasonable range of nonrenewable alternatives at the time it was selected, under very conservative assumptions and was a lower cost alternative under more refined assumptions.

Q. PLEASE EXPLAIN HOW THE SELECTION OF THE NOBLES PROJECT WAS DEVELOPED IN THE COMPANY'S RESOURCE PLANNING AND ACQUISITION PROCESS.

A. Our Resource Planning work first examined whether compliance with the combined renewable energy requirements of the States we serve might be cost effective. Our analysis indicated that additional increments of wind power could be cost effective depending on various assumptions about prices and federal renewable incentives. Our analysis also indicated that customers could benefit by adding wind resources owned by the company to diversify risk. As a result, proposals were sought from developers. Nobles was the most cost effective proposal received.

We then conducted two analyses, using Strategist, of the impact the addition of Nobles would have on the cost of electricity. Our first modeling looked at the role Nobles might perform as part of the full portfolio of wind generation needed to comply with state renewable policies through the year 2035. Rather

than look at Nobles as a standalone wind project we chose to model Nobles as if 2000 MW of additional wind generation had already been added and that the addition of 200 MW from Nobles would bring the total to the 2200 MW needed to meet our State renewable obligations and objectives. The model treated Nobles as the last project added to that fleet, rather than its actual position as one of the first new increments added.

Q. PLEASE EXPLAIN THE BASIS FOR MODELING THE NOBLES PROJECT AS THE LAST ADDITION WHEN IT WAS ACTUALLY ONE OF THE FIRST.

A. This modeling approach provided a very conservative estimate of the cost-effectiveness of the Nobles Project. In the Company's resource selection process, we intentionally apply conservative assumptions. If the resource is still cost-effective under these conservative assumptions, it provides greater assurance that it is a good resource for our customers.

The relative position of Nobles in the sequence of adding resources is important because the addition of wind displaces energy production from other sources, such as natural gas and coal. Consistent with the economic dispatch of resources, the first additions of wind will displace the highest cost alternatives—historically, natural gas. As more wind is added, the later added resources will displace other resources with lower operating costs. Thus, in comparing the cost-effectiveness of the Nobles Project against other resources, the model assumed that the highest cost resources had already been displaced by other wind additions when, in fact, the Nobles Project will be used to displace resources with higher operating costs.

Q. HOW COMPETITIVE IS NOBLES UNDER THE COMPANY'S FIRST, CONSERVATIVE APPROACH TO STRATEGIST MODELING?

A. The results were very competitive. If the Company's conservative modeling were the sole test, the addition of Nobles was slightly more expensive but within 0.11 percent of the cost of the scenario in which it was not added.

Q. PLEASE ADDRESS MS. MAINI'S CONCLUSION THAT THE PROJECT WAS NOT COST-EFFECTIVE BASED ON THIS CONSERVATIVE MODELING.

A. The conservative analysis described above indicated that Nobles was cost competitive, that is, power supply costs simulations were within 0.11 percent of the no build alternative. We also knew that the modeling did not capture all of the potential benefits of a wind addition. We used the conservative analysis as the basis for our Minnesota filing because we wanted to demonstrate the cost effectiveness of meeting all of our renewable obligations and goals. It appears Ms. Maini is applying a "least cost" standard as the basis for her recommendation. The numbers in the Minnesota filing, on their face, do not demonstrate least cost. Rather, they demonstrate that the project was very competitive even when evaluated on a worst case basis.

Q. PLEASE COMMENT ON THE RELIABILITY OF A LEAST-COST APPROACH.

A. Such an approach does not consider the inherent uncertainty around the results of a long-term simulation like that using Strategist nor the uncaptured benefits. Attempting to identify isolated costs and/or benefits of specific generation sources at any point in time is very difficult because these costs and benefits will change as the energy markets change over time.

Q WHAT WERE THE POTENTIAL BENEFITS THAT WERE NOT CAPTURED IN THE CONSERVATIVE MODELING?

A. The analysis assumed the Nobles Project will be replaced in 25 years. If the life of the project is extended without the need for major capital investments or significant increases in O&M costs, the effective cost of energy from Nobles will be less than that assumed in the analysis. Furthermore, since Nobles is a Company owned resource, any changes in tax incentives or other financial benefits are considered in ratemaking and can be used to the benefit of customers to keep rates lower. For example, since the time of the original present value analysis, federal corporate income tax changes were put in place that allow for accelerated or bonus depreciation calculations. The effect of bonus depreciation provisions of the tax code will be to reduce income taxes and the present value associated with the Nobles project has been reduced by approximately $600,000 for our South Dakota customers[1]. That direct benefit to customers was not captured in the analysis.

Q. WAS THE CONSERVATIVE ANALYSIS DESCRIBED SO FAR THE ONLY ANALYSIS THE COMPANY UNDERTOOK?

No. We also did analysis to examine the incremental impact of adding the Nobles project. Instead of assuming 2000 MW of wind power would have already been added to comply with renewable energy requirements, we constructed a scenario in which no additional wind power other than Nobles was added to the system. Changing the analysis so that only existing renewable resources are considered when adding Nobles indicated that the

[1] Schedule 4 provides the calculation of the $600,000 in revenue requirement offsets.

Nobles Project will provide a cost savings to all customers. As presented in Table 1 below, the less conservative incremental analysis shows that Nobles results in a reduction in the present value of revenue requirements ("PVRR") of $80 million, assuming a $17/ton carbon cost. A $4/ ton future carbon cost, as suggested by Ms. Maini, results in customer savings from the addition of Nobles of approximately $22 million. Removing the impact of carbon costs completely from the analysis results in the Nobles project providing savings of nearly $4 million.

Table 1

		CO2 $17/ton	CO2 $4/ton	No CO2 $0/ton
Conservative analysis of full renewables compliance with incremental impact of Nobles		+$64	+$123	+$140
Incremental analysis only looking at the addition of Nobles without any additional wind for future compliance.		($80)	($22)	($4)
1) Numbers are reported as present value of revenue requirements in millions				
2) ($) indicates a system savings				

Q. HOW CAN REMOVING THE 2000 MW OF WIND MAKE SUCH A DIFFERENCE IN THE FINANCIAL ANALYSIS?

A. Since the conservative modeling convention that essentially put the 200 MW of Nobles wind after the 2000 MW of wind added to meet the all State renewable requirements, Nobles was pushed deeper into the economic dispatch stack. The energy that Nobles avoided in the simulation was from units that are less costly to operate. This conservative modeling approach

penalized the Nobles generation by allowing the 2000 MW of additional RES wind to be dispatched first, avoiding higher operating cost units and capturing the benefits of higher avoided cost. The end result of that modeling presented Nobles in a worst case light and did not reflect the true value provided by the project. The less conservative incremental modeling better reflects the true position of Nobles in dispatch and the impact of adding Nobles before or without any additional wind. The less conservative, incremental analysis still does not capture all the potential benefits associated with the project as previously described. But even without consideration of those uncaptured benefits, the incremental analysis demonstrates that Nobles is not only cost competitive but also meets a least-cost standard regardless of your view of the risk of future carbon regulation. The addition of Nobles was a prudent investment on behalf of our ratepayers and will, over time, result in lower energy costs from our system.

Q. ARE THERE OTHER WAYS FOR THE COMPANY TO EVALUATE THE COST-EFFECTIVENESS OF A RESOURCE LIKE THE NOBLES PROJECT?

A. Yes. In addition to the Strategist modeling, NSP also compares the cost of energy from a proposed resource to the cost of energy in the general MISO market. When analyzing the system as a whole, Strategist provides an analysis of the costs and benefits of a new generation resource in comparison to the dispatch of all of the resources of the NSP generation fleet. To see how the resource would fair in the MISO market, NSP can also compare the cost of energy from the new generation source to a forecast of the energy cost from the MISO market over the life of the project.

Q. HAS THE COMPANY COMPLETED SUCH A COMPARISON OF THE NOBLES PROJECT TO THE FORECAST OF THE ENERGY COST FOR MISO OVER THE LIFE OF THE PROJECT?

A. Yes. An analysis comparing the expected cost of the Nobles Project to a forecast of the energy prices for MISO from October 2008 is presented in Exhibit ___ (JRA-1), Schedule 2 to my testimony. This analysis shows that based on the October 2008 energy price forecast for MISO the cost of the energy displaced by the energy produced by the Nobles Wind project would have cost approximately **CONFIDENTIAL DATA BEGINS [ ] CONFIDENTIAL DATA ENDS** on a levelized energy cost basis. This is higher than the comparison cost of the Nobles Project of **CONFIDENTIAL DATA BEGINS [ ] CONFIDENTIAL DATA ENDS**. It should be noted that the cost comparison to the MISO market forecast does not take into consideration any avoided carbon cost, or capacity value. Based on this analysis of the expected value of the Nobles Wind project in MISO, the project was cost effective.

Q. MS. MAINI DISAGREES WITH THE COMPANY'S USE OF A $17/TON CARBON REGULATION COST OF THE ALTERNATIVE TO NOBLES. WHY WERE THE COSTS OF GREENHOUSE GAS EMISSIONS CONSIDERED IN THE EVALUATION OF NOBLES?[2]

[2] Ms. Maini's testimony states that we used $17.50/ton. As we indicated in our response to data request 4-8, we actually used $17/ton in the Strategist modeling.

A. It would be imprudent not to include reasonable estimates of future carbon dioxide regulation costs when evaluating new generation. The evaluation of proceeding with a Company-owned wind resource was first presented with the 2007 resource plan. In section 11 of that plan, we identified that there were several proposals for greenhouse gas regulation both at the state and federal levels, particularly with respect to carbon, on the state and federal level. I include a copy of section 11 of the 2007 resource plan submitted in MPUC Docket No. E002/RP-07-1572 as Exhibit ____ (JRA-1), Schedule 3.

Q. WHY DID THE COMPANY USE $17/TON TO EXAMINE THE RISK OF CARBON REGULATION.?

A. Based on what was known at the time of our selection, we did not believe a scenario based on $4/ton was a reasonable representation of the impact of future carbon regulation. Based on extensive testimony before the Minnesota Public Utilities Commission in 1996, the future cost of carbon regulation was predicted to fall within a range of $4 to $30.[3] As Ms. Maini indicated, the Company used the middle of that range in its analysis.

The Company used the middle of the range not because the range was approved by the Minnesota Public Utilities Commission. Rather, we used the middle of the range because it is supported by the expert testimony in that proceeding. In addition, at the time we made the decision to pursue Nobles, there was active legislation in Congress to implement carbon regulation and

[3] MPUC Docket No. E999/CI-93-583.

the range being discussed at that time was in the $12 to $21 range. Therefore, $17/ton was a reasonable amount to include to capture the risk of future carbon regulation costs.

Q. WOULD $4/TON BE AN ADEQUATE RISK ESTIMATE OF FUTURE CARBON COSTS?

A. No. It is at the bottom of the range established in 1996 and is well below carbon costs anticipated at the time we conducted the analysis in 2008 that resulted in selecting the Nobles Project. A $4/ ton scenario did not adequately capture the risk of increased cost of the alternative to Nobles and based on what was known at the time underestimates the risk mitigation benefits associated with a windpower addition.

Q. PLEASE EXPLAIN HOW THE COST EFFECTIVENESS OF NOBLES SHOULD BE EVALUATED.

A. No single Strategist modeling scenario can precisely predict the future. The work presented in our Minnesota submission demonstrates that Nobles is cost competitive under a wide range of assumptions. The less conservative incremental analysis better captures the role Nobles will play in our resource mix and demonstrates Nobles is not only cost competitive but can lower costs for our customers. In addition, a comparison of Nobles to predictions of market prices for energy indicates that Nobles is a cost effective resource addition to our system.

Q. WHAT ARE THE NOBLES PROJECT COSTS THE COMPANY IS REQUESTING TO RECOVER?

A. The Company is requesting to recover the South Dakota jurisdictional portion of the actual Nobles construction costs, which translates into a revenue requirement of $2.039 million. Ms. Maini proposes to cap recovery based on the estimated cost used at the time the Company conducted the Strategist modeling. This would reduce the associated revenue requirement to $1.926 million (a reduction of $0.113 million). This adjustment is inappropriate.

Q. WHY WERE THE ACTUAL COSTS HIGHER THAN THE ESTIMATED COST USED IN THE STRATEGIST MODELING?

A. Actual costs often vary from the estimated cost for large construction projects like the Nobles Project. In this case, the actual costs were within 2 percent of the estimated cost. The reason for the higher investment cost was that we performed our Strategist modeling using the cost of the contract with the developer. We did not include the associated costs the Company incurred for the Project. These costs included payments to landowners, compensation for crop damage, sales tax, builders risk insurance, transmission interconnection, title insurance, and project oversight and overheads. The omission of those costs did not materially affect the selection of Nobles because most of the costs would have been incurred by the other two competing wind projects. Nor was the change of a magnitude that it changed the cost-effectiveness of the Project.

Q. WHY WOULD A RATE ADJUSTMENT BASED ON COSTS BEING HIGHER THAN ORIGINALLY ESTIMATED BE INAPPROPRIATE?

A. Utilities recover their actual cost of providing service. Just as we would have flowed through the savings if costs had been less, we are entitled to recover

our higher prudently incurred costs. In this case, the change in costs were all prudently incurred and necessary for the safe and efficient operation of Nobles. Ms. Maini has presented no information to the contrary. Because the Company was prudent in pursuing the Nobles project, and the incremental costs were prudently incurred to bring the project on line, there is no basis in law or policy to disallow recovery of these incremental costs.

Q. IF THE COMMISSION ADOPTS MS. MAINI'S PROPOSAL TO DISALLOW COSTS IN EXCESS OF THE BENEFITS IDENTIFIED IN THE CONSERVATIVE SCENARIO FROM THE STRATEGIST MODEL, SHOULDN'T THESE HIGHER ACTUAL COSTS ALSO BE DISALLOWED?

A. No. The decision to proceed with the Nobles project should be evaluated separately from the recovery of the slightly higher actual cost. The incremental actual costs should be recoverable if they were prudently incurred, which they were.

Q. MS. MAINI ARGUES THAT COST RECOVERY SHOULD BE CAPPED IN THE SAME MANNER AS A POWER PURCHASE AGREEMENT ("PPA"). DO YOU AGREE?

A. No. First, if the Company had used a PPA for Nobles instead of build transfer development arrangement, many of these incremental costs would still have been incurred. The original cost estimate was for the contractor's cost, and did not include the Company's costs. The Company would have still incurred many of these costs under a PPA scenario. If the developer rather than the Company had been responsible for some of the costs, such as the cost of interconnection and landowner costs, then the cost of the contract

with the developer would have been higher. Under any scenario, these were a prudent cost of the project and should be recovered in rates.

Second, as I noted earlier, our ownership of Nobles has brought more value to customers than our analysis suggested. Since the time of the original cost estimate and present value analysis, federal corporate income tax changes were put in place that allow for accelerated or bonus depreciation calculations. The effect of bonus depreciation provisions of the tax code will be to reduce the present value of revenue requirements associated with the Nobles project by approximately $600,000 for our South Dakota customers. As a result of the build transfer development arrangement, and ultimately Company ownership of the project, that tax benefit will be enjoyed by our customers over the life of the project. This is in contrast to what would have happened under a PPA. I therefore disagree with Ms. Maini that a PPA risk approach is appropriate. Had we contracted for a PPA, the developer would have borne the risk of variances from the cost estimate, but would have also captured the unanticipated benefits, such as bonus depreciation.

Q. IF THE COMMISSION WERE TO DISALLOW A PART OF THE COST FROM NOBLES, SHOULD OTHER ADJUSTMENTS BE MADE?

A. Yes. If, for example, South Dakota elects to pay for only 70 percent of the cost of Nobles on the grounds that those costs were incurred to meet Minnesota requirements, then South Dakota should not receive a full share of the energy generated by Nobles. Thirty percent of the energy that would otherwise be allocated to the South Dakota Fuel Clause Rider from the

Nobles project would need to be replaced, presumably with MISO market based energy costs.

Similarly, the opportunity to provide South Dakota customers any revenue from the sale of associated Renewable Energy Credits would be lost.

Finally, 30 percent of the South Dakota share of project PTCs would also need to be reallocated to other jurisdictions. That would reduce PTC benefits to South Dakota customers by approximately $275,000.

V. THE BENEFITS OF AN INTEGRATED SYSTEM.

Q. PLEASE DESCRIBE WHAT YOU MEAN BY THE TERM "INTEGRATED SYSTEM."

A. By "integrated system," I mean the operation of our entire, multi-state system of generating, transmitting, and delivering electricity services to our customers. The Company provides electric service in five states in the upper Midwest, including Minnesota, Michigan, North Dakota, South Dakota, and Wisconsin. The Company's assets are all connected to an interconnected network of transmission lines that allow us to dispatch generation to the benefit of all customers.

Q. WHAT ADVANTAGES DOES AN INTEGRATED SYSTEM OFFER?

A. Connection with this larger, regional network of assets allows us to plan and operate our entire five-state system on an integrated basis. That means, for example, that we can plan our fleet of generating plants on a total-system

basis, as opposed to attempting to plan on a state-by-state or community-by-community basis. A large, integrated system allows us to:

- Reduce the total amount of generating resources used to reliably serve customers.
- Diversify the fleet of generating resources required to meet our customers' needs, lowering costs and risks.
- Lower costs by spreading costs over a substantially larger customer base.

Q. PLEASE EXPLAIN HOW AN INTEGRATED SYSTEM REDUCES THE TOTAL NEED FOR GENERATING RESOURCES.

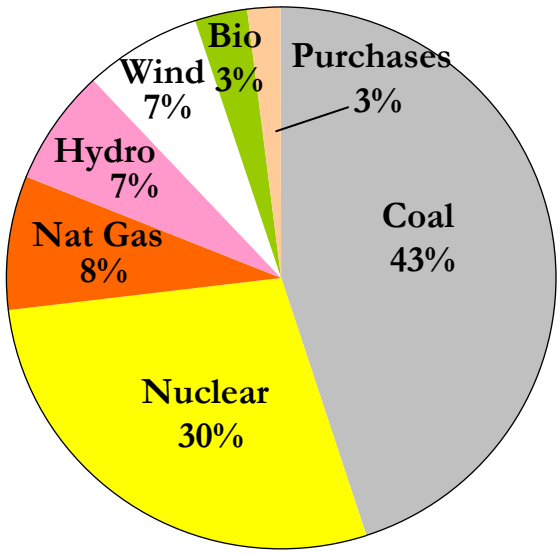
A. A large, integrated system such as ours requires fewer total generating resources compared to several, smaller systems serving a similar number of customers. This result arises from our ability to take advantage of load diversity across a large number of customers and broad geographic area. For example, a system that combines the usage of relatively peak-sensitive, low load-factor customers with the usage of large, industrial customers with significant off-peak usage will require a lower total amount of generating capacity as compared to two separate systems serving each group. Generally speaking, the larger and broader the range of customers, the greater the diversity of their energy load and usage characteristics will be; and the greater the diversity of load, creating an advantage for generation planning.

Q. PLEASE ELABORATE ON YOUR SECOND POINT REGARDING DIVERSITY OF GENERATING RESOURCES.

A. The more than 9,000 MW system such as ours provides the breadth and scope to support a variety of generating resources that could not otherwise be justified in a smaller system. Our generating fleet is among the most diverse in the nation and is powered by nuclear, coal, hydro, natural gas, oil, wind, and biomass -- even garbage. Such a diverse fuel mix allows us to not only reduce costs for customers, but also to diversify risk:

Figure 1: Xcel Energy's Portfolio of Resources

percent of MW produced



- costs are lower, as we have sufficient scale to justify investments in base load nuclear and coal plants that reduce average costs to all customers;
- risks are lower because we are not dependent on any one fuel source.

In times of significant fuel price volatility like we are currently experiencing, a diversified fuel mix provides a tremendous price hedge for our customers compared to an electric system dependent on only one or two fuel sources.

Q. CAN YOU EXPLAIN YOUR THIRD POINT REGARDING REDUCED COSTS DUE TO A LARGER CUSTOMER BASE?

A. Yes. Operating an electric system requires certain basic infrastructure investments and services to simply run the business. Because such business costs can be spread over a larger customer base, the average cost of providing service is lower.

Q. DO YOU BELIEVE XCEL ENERGY'S INTEGRATED SYSTEM HAS PROVIDED BENEFITS SUCH AS THOSE YOU DESCRIBE TO SOUTH DAKOTA CUSTOMERS?

A. I believe there can be no question that our five-state, integrated system offers tremendous benefits to our customers.

Q. ARE THERE ANY PARTICULAR ADVANTAGES TO SOUTH DAKOTA CUSTOMERS DUE TO XCEL ENERGY'S INTEGRATED SYSTEM?

A. Yes. The smaller jurisdictions of our five-state service territory enjoy the greatest benefits from being part of a larger system. Our South Dakota load accounts for approximately 400 MW of the more than 9,000 MW system. To meet the needs of this size load on a stand-alone basis, we would likely need to rely on either natural gas generation or a smaller coal plant supplemented with purchased power – there would certainly be no way to support the broad, diverse portfolio of resources currently serving our system.

Q. CAN YOU ELABORATE FURTHER ON THESE OVERALL BENEFITS?

A. Yes. The resource options that are available to a large integrated system such as ours are numerous and are due in large part to the overall size of the customer base we serve. As a more than 9,000 MW system, we can consider large resource additions of significant size to take full advantage of the economies of scale available through large facility generation. For example, the recent addition of 515 MW at the new High Bridge facility could not have easily been absorbed into a smaller, stand-alone system. The fuel efficiency of the combined cycle units now available at the new High Bridge facility represents a 45 percent advantage compared to the addition of a smaller, simple cycle turbine. Based on current fuel prices, this translates into a cost savings of $10/MWh or $15 million per year in savings for all of our customers.

Similar advantages are made available due to the load diversity on our system. Our overall system diversity factor is 59.7%. This means that 60% of our load occurs in the on-peak period. While some large integrated systems throughout the country may have similar system diversity factors, it is quite difficult for smaller systems to achieve this level of diversity. This means that, for these smaller systems, a larger percentage of their load will be exposed to on-peak market prices a larger percentage of the time than would be the case for larger systems. Given that on-peak prices for energy in our region are currently twice off-peak prices, this is a significant benefit for larger, integrated systems.

Finally, the Company has built a highly diverse fleet of generation and load management resources. My above Figure 1 provides a summary of the relative contributions from all of our resources to meeting the needs of our customers. It is obvious from this graph that the Company has limited its exposure to price volatility from any single resource.

Q. PLEASE ELABORATE ON THE BENEFITS OF A LARGE INTEGRATED SYSTEM FROM A RESOURCE ACQUISITION PERSPECTIVE.

A. When the Company wishes to acquire new generation resources, it can issue RFPs for new resources exceeding 150 MWs in size. RFPs of this magnitude are sufficient to draw the attention of large power plant developers with resources to bring large projects on-line in a timely manner, assuming the numerous risks that are present in power plant development. The Company can also weigh these offers against large Company-owned projects that provide other advantages. It would be difficult for a smaller stand-alone system to participate effectively in this market.

There are also advantages to size in the mid- and short-term power acquisition markets that the Company must operate in to meet customers' needs. The Company has developed extensive energy trading and risk management expertise to better serve our customers in the mid-term markets and the day-ahead and real-time markets facilitated by MISO. It would be nearly impossible for a smaller stand-alone entity to cost-effectively develop the expertise needed to participate in these markets.

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS REGARDING THE BENEFITS TO ALL CUSTOMERS OF BEING PART OF A LARGE INTEGRATED SYSTEM.

A. There are significant advantages because of our size that result primarily from the existence of economies of scale in the electric power industry. I have attempted to provide examples of these advantages, based on my experience in system planning and resource acquisition. While some advantages are more difficult to quantify, I believe that my discussion demonstrates the overall advantages of participation in a large integrated system compared to system planning and resource acquisition on a stand-alone basis.

Q. PLEASE COMPARE THESE ADVANTAGES TO THE PROPOSAL IN THIS CASE TO DISALLOW ALL OR A PORTION OF THE COST OF NOBLES?

A. The Direct Testimony of Ms. Maini challenges the fundamental premise of an integrated system: instead of recommending acceptance of a proportionate share of our total system costs, Ms. Maini recommends significant disallowances because Nobles was acquired to meet system renewable resource needs rather than South Dakota standalone needs. At least part of the basis of this recommendation is disagreement that South Dakota customers should pay a share of the costs of meeting certain Minnesota requirements. The problem with this approach is that once we begin to disaggregate total system costs in any way other than proportionately across our entire system, we will quickly lose the very nature and benefits of an integrated system.

Q. MS. MAINI INDICATES THAT THE COSTS OF RENEWABLES COMPLIANCE SHOULD BE RECOVERED BY JURISDICTION, SIMILAR TO COST RECOVERY FOR ENERGY EFFICIENCY PROGRAMS. DO YOU AGREE?

A. No. The costs of energy efficiency programs are paid for by ratepayers in the discrete jurisdictions but those ratepayers are also the only ones eligible to participate in the programs they pay for.

Q. DO THE ENERGY EFFICIENCY PROGRAMS PAID FOR IN ONE STATE BENEFIT CUSTOMERS IN OTHER STATES?

A. Yes. In all of our NSPM jurisdictions, the Company has had the longest-running and most funded conservation program in Minnesota pursuant to Minn. Stat. § 216B.241, which sets forth a minimum spending requirement for utilities in Minnesota. Our Minnesota customers in 2010 paid $71.9 million for conservation improvement programs and incentives that are wholly recovered from Minnesota ratepayers. In contrast, conservation investment in South Dakota is much more limited. Our expanded conservation program in South Dakota was approved late in 2011 and our related tariffs went into effect just this year. In contrast, the Minnesota ratepayers funded 115,530 kW and 415,591,395 kWh in avoided demand and energy in 2010. The resulting cost benefits from the avoided demand and energy are not allocated just to Minnesota. Instead those savings are reflected in a lower cost generation portfolio that benefits all of our customers. If South Dakota were to disallow cost recovery for a portion of our generation that it would prefer Minnesota customers pay for, it is reasonable to expect Minnesota regulators to consider their own disaggregated interests.

VI. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY?

A. The Nobles Project is an important part of our strategy to meet our renewable energy obligations in a cost-effective manner:

- It, along with the rest of our renewable based portfolio of generation, meets our customers' electricity requirements cost effectively while satisfying public policy directives.
- Using conservative Strategist modeling in which Nobles was treated as the being added after an additional 2000 MW of new wind, it was within 0.11 percent of the no build alternative.
- Using an incremental Strategist modeling approach in which Nobles was recognized as the next unit of wind to be added, the Nobles project reduces the cost of energy.
- Similarly, when a market analysis is used to determine the cost/benefit of Nobles, it lowers the cost of Nobles significantly, making it a fully competitive resource alternative.
- When the additional benefits from the bonus depreciation income tax change is considered along with the reduced South Dakota share of PTCs, RECs and free energy that would result from any cost disallowance the benefits from Nobles become even greater.
- In addition, the benefits to South Dakota as a full participant in our large integrated system more than offset any added costs associated with including Nobles in our portfolio.

It is also not reasonable to disallow the prudent incremental costs incurred to bring Nobles on line. Nor is the suggestion accurate that the incremental construction costs would not be recovered if a PPA had been used. The incremental costs were incurred directly by the Company to oversee the construction of the Nobles Project and most of those costs would also have been incurred had there been a PPA.

Therefore, the Commission should approve full cost recovery for the Nobles project.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.