BEFORE THE MINNESOTA OFFICE OF ADMINISTRATIVE HEARINGS
600 North Robert Street
St. Paul, Minnesota 55101

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION
121 7th Place East
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MPUC Docket No. E-002/CI-13-754
OAH Docket No. 48-2500-31139

In the Matter of a Commission Investigation into Xcel Energy's Monticello Life Cycle Management/Extended Power Uprate Project and Request for Recovery of Cost Overruns

SURREBUTTAL TESTIMONY AND SCHEDULE OF MINNESOTA OFFICE OF THE ATTORNEY GENERAL - ANTITRUST AND UTILITIES DIVISION WITNESS

JOHN LINDELL

September 19, 2014

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I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name and business address.

A. My name is John Lindell. My business address is Suite 1400, Bremer Tower, 445 Minnesota Street, St. Paul, Minnesota 55101.

Q. Have you previously submitted testimony in this proceeding?

A. Yes. I submitted Rebuttal Testimony on behalf of the Minnesota Office of the Attorney General – Antitrust and Utilities Division ("OAG").

Q. Briefly summarize this investigation and your Rebuttal Testimony.

A. The Commission opened an investigation of the cost overruns by Northern States Power Company ("NSP") for the Life Cycle Management and Extended Power Uprate ("LCM/EPU" or "Monticello project") project at the Monticello nuclear plant. The Commission ordered the investigation to evaluate whether NSP acted reasonably and prudently and should recover all of the costs for its Monticello project. As part of the investigation the Commission also ordered that consultants, with expertise in the area of nuclear plant operations and management, be hired. Those consultants investigated NSP's handling of the Monticello project and filed testimony highlighting substantial mismanagement of the project that produced the cost overruns and the related delays in implementing the project. My Rebuttal Testimony addressed the testimony of NSP, Department of Commerce ("DOC") analysts, and the consultants who worked with the DOC analysts to conduct their investigation. I recommended that the Commission find that NSP incurred cost overruns for installation, the distribution system, and the feedwater heater project. I recommended that the Commission deny recovery of at least

$321 million or 75% of the amount of cost in excess of NSP's budgeted costs of $320 million for the project.

A. Has NSP disputed the ability of the independent consultants to properly evaluate the management and costs for the Monticello project?

Q. Yes. NSP's Rebuttal Testimony disputes the consultants' investigation and analysis arguing that NSP's decisions and actions were prudent and reasonable. NSP's witness, Mr. Timothy O'Connor, provides extensive testimony explaining NSP's actions and the associated costs of the various aspects of the project that he claims were handled properly.

A. Does the investigation by the consultants in this case, who were hired to independently evaluate NSP's handling of the project as third-parties, present a challenge to identify all aspects of imprudent or improper handling of the project?

Q. Yes. NSP has all the information that would show whether it handled the Monticello project prudently and cost-effectively. Whereas, the consultants have a more limited and time constrained opportunity to identify all of NSP's failures to properly manage the project. Nevertheless, NSP has the burden to demonstrate the prudence and cost-effectiveness for the LCM/EPU project. Despite the limitations of being third parties, the independent consultants have been able to evaluate NSP's management of the project and identified specific areas of mismanagement. The Commission may choose to continue the investigation with a more detailed analysis of cost overruns if it finds that the record is insufficient to identify the level of costs that should not be recovered. For that reason the OAG recommended, in its Rebuttal Testimony, that a forensic audit may be

necessary.[1] A limited review of the extensive cost overruns and project delays, even without this current investigation, supports a finding that NSP failed to properly manage the project.

II. PURPOSE AND SUMMARY OF TESTIMONY

Q. What will you be addressing in your Surrebuttal Testimony?

A. My testimony will respond to the testimony of NSP's witnesses. Specifically, I will address the following:

- whether the investment in the Monticello project, even at its final cost of $748 million, is reasonable for recovery as NSP claims;
- whether NSP's failure to predict the total level of costs for the project was a symptom of mismanagement; and
- whether NSP's claim that its failure to build the project on time and on budget was due to the complexity of the project and the actions of others.

III. REASONABLENESS OF NSP'S INVESTMENT IN THE MONTICELLO PROJECT

Q. Does NSP's claim that even with the significant cost overruns, that the Monticello project was still cost effective?

A. Yes. NSP's witness, Mr. David Sparby, claims that the Monticello project benefitted customers.[2] The benefits he cites are his contention that the project was cost effective as

[1] Lindell Rebuttal, at 30.
[2] Sparby Rebuttal, at 4.

a whole, the cost per kW was $1,000 for the total 671 MWs of Monticello generation, and his belief that the 20 year life extension avoided the need to build another coal or nuclear plant.[3] He also mentioned that nuclear generation is carbon-free and the Monticello area benefits from the jobs derived from the plant.

Q. What is your response to Mr. Sparby's claim of benefits for the Monticello project?

A. If the Monticello project had been constructed within budget and on-time then I would agree with Mr. Sparby. However, the excessive costs of the project results in excessive costs for power from the Monticello nuclear plant. Mr. Sparby's claim of cheap power from the Monticello nuclear plant contradicts my testimony in NSP's current rate case in Docket No. E002/GR-13-868 ("rate case docket"). Attached as Schedule 1 to my testimony are selected pages from NSP's response to OAG Information Request No. 155 which were included in the rate case docket. Schedule 1, page 1 is NSP's response showing the historical revenue requirements for the Monticello generation plant. Schedule 1, page 2, is the historical MWHs generated for the Monticello generation plant. Schedule 1, page 3 summarizes page 2 with the addition of my calculations for the historical revenue requirement per MWH. The following table shows the cost per MWH generated by year from the Monticello plant for the years 2011, 2012, and 2013 based on Schedule 1 information.

[3] *Id.*

Year	Revenue Requirement (000s)	MWH Generated (000s)	Revenue Requirement per MWH
2011	$42,935	3,356	$12.79
2012	$42,935	4,890	$8.78
2013	$50,716	2,994	$16.94

This table shows that the Monticello generation costs are excessive and contributed to the significant increase in revenues that NSP has requested in the rate case docket. NSP's current revenue per MWH sold is approximately $9 to $10. In comparison, the average revenue requirement for the Monticello plant, in isolation, for the years 2011 through 2013 is $12.83 per MWH. In conclusion, Mr. Sparby is incorrect when he claims that the Monticello project was cost effective as a whole. To the contrary, the Monticello project has produced excessive and unreasonable costs for power generated from the Monticello plant.

Q. Has NSP demonstrated that its Monticello project costs were reasonable and beneficial to its customers?

A. No, it has not.

IV. NSP'S ESTIMATE OF COSTS FOR THE MONTICELLO PROJECT

Q. What is NSP's position regarding underestimating Monticello project costs?

A. Both Mr. Sparby and Mr. O'Connor address the underestimation of costs for purposes of the Certificate of Need ("CON") and the work done for the Life Cycle Management, which did not require a CON. In response to criticisms by Mr. Mark Crisp, Mr. Sparby

acknowledges that NSP failed to accurately estimate the cost for the Monticello project.[4] However, Mr. Sparby attempts to dismiss this concern by stating that despite the high costs, the initiative still captured important benefits for customers and argues that more accurate estimates may not have resulted in different decisions regarding whether to proceed with the Monticello project.[5] Mr. Sparby also tries to suggest that legislation placed time constraints on NSP and required it to simultaneously seek approval from both the Nuclear Regulatory Commission and the Commission for the project. NSP claims that the shortened time frame, starting in 2004, limited its ability to put vendor contracts in place and to establish the scope of the project, which he claims also contributed to NSP's inability to accurately estimate the costs for the project.

Q. What is your response to Mr. Sparby's explanation for the inaccurate estimates for the project?

A. I disagree with Mr. Sparby, as did Mr. Crisp. One of the primary purposes of a CON is to determine the most cost-effective alternative for projects that require a CON. For example, the Monticello CON analysis included a comparison with alternative generation resources such as wind power, natural gas and coal fired generation. Failure to provide accurate cost estimates for a project leads to bad decisions on what alternative should be selected and what the level of investment should be. Mr. Crisp indicated that NSP should have planned better and its failure to plan and properly scope the project added to the costs to the project because of the changing scope and redesign of the project components. The failure to properly plan and scope the project was also the reason for NSP's failure to accurately estimate the costs.

[4] Sparby Rebuttal, at 21.
[5] *Id*.

In conjunction with his assertion that better planning would have lowered costs and improved the estimates, Mr. Crisp indicated that the project should have been scheduled for outages in 2011 and 2013 rather than the outages in 2009 and 2011. Mr. Sparby attempted to defend the decision to fast-track the project for the years 2009 and 2011 by explaining that it relied on industry experience and that NSP sought to obtain customer benefits earlier which supported the fast-track approach.[6] NSP's fast-track approach did not work. NSP has worked on the Monticello project during all three outages and even today, in late 2014, the NRC has not given its authorization to utilize the additional 71 MWs as part of normal uprate operations. Failure to properly estimate the cost of the project was due to NSP's desire to accelerate the timing without allowing time for proper scoping and design of the project as explained by Mr. Crisp. Despite NSP's failure to properly scope and plan the project, its initial estimate of $320 to $346 million may be a valid estimate if the project had been planned and designed in advance rather than using the ad hoc approach that NSP took.

Q. What was Mr. O'Connor's explanation for the inaccurate estimates for the project?

A. Mr. O'Connor explained that there were various reasons that the cost estimates for the Monticello project were inaccurate in 2008 at the time it provided cost estimates in the CON. He claims that NSP based its estimation on nuclear industry benchmarks including EPUs and other major projects for other utilities.[7] He also claims that the circumstances changed since the initiative began which could not have been predicted. He further states that earlier decisions made in conjunction with the project estimation were based on

[6] Sparby Rebuttal, at 23.
[7] O'Connor Rebuttal, at 37-39.

information as it was then known rather than what is known now.[8] Mr. O'Connor now agrees that the project was much more difficult than NSP had anticipated.

Mr. O'Connor claims that the cost overruns were due to circumstances that NSP could not have foreseen. He identified evolving NRC requirements,[9] and necessary scope changes.[10] NSP acknowledged that it did its detailed engineering on an iterative process throughout the duration of the project,[11] which Mr. Crisp criticized. Mr. Crisp, attributed much of the cost overruns being due to the changes in scope while the project was underway.

Q. What is your response to Mr. O'Connor's explanation for the inaccurate estimates for the Monticello project?

A. I believe Mr. O'Connor's explanations support the criticisms by Mr. Crisp who generally concludes that NSP's failure to properly scope, plan, and engineer the project before starting the construction activities contributed to NSP's inability to properly estimate the project costs.

Q. Has NSP demonstrated that its actions were prudent for the Monticello project despite its failure to accurately estimate the final project costs?

A. No. NSP has not demonstrated that its actions were prudent in estimating the cost of the project. NSP attempted to fast-track the project by cutting corners at the front end and did not conduct the necessary scoping, engineering, and planning that was necessary to make an accurate estimate of the cost for the project.

[8] O'Connor Rebuttal, at 36.
[9] O'Connor Rebuttal, at 41.
[10] O'Connor Rebuttal, at 57.
[11] O'Connor Rebuttal, at 44.

V. MONTICELLO PROJECT OVER BUDGET AND PAST DUE

Q. Did NSP address the fact that the Monticello project was delayed and was over budget?

A. Yes. Mr. Sparby, Mr. O'Connor, and Mr. Richard Sieracki addressed the cost overruns and the delayed implementation of the Monticello project.

Q. What were Mr. Sparby's explanations for the cost overruns and project delays?

A. Mr. Sparby argued that the cost overruns and delays were not due to imprudent actions by NSP and explains that the context of the project was important to consider.[12] He also objects to claims by Mr. Crisp that NSP failed to understand the complexity of the Monticello project which contributed to the high cost and delays. According to Mr. Sparby, the cost overruns and delays were appropriate and necessary to ensure the project was done to produce safe and reliable service.

Q. What is your response to Mr. Sparby's explanation for excessive costs and delays?

A. Mr. Sparby's primary argument is that the cost overruns and delays were reasonable. He also claims that context is critical to any assessment of prudence for the Monticello project.[13] Based on the latest estimates, the cost overrun is $428 million or 133% higher than the original estimate of $320 million. NSP intended the project to be completed in 2011 but the final construction was not completed until 2013. The plant still has not received final NRC approval to run at its uprated output of 671 MW. Mr. Sparby's reference to context refers to NSP's decisions in the 2003/06 timeframe to consider the need for additional generation to meet rising customer needs, the need to address more

[12] Sparby Rebuttal, at 6-8.
[13] Sparby Rebuttal, at 7.

stringent NRC standards, and the difficult working conditions.[14] I disagree with Mr. Sparby's arguments. The current investigative review does not support NSP's position that the project was properly managed and only prudent costs were incurred.

Q. What did Mr. O'Connor conclude regarding the high cost and delays for the project?

A. Mr. O'Connor disputes most of the claims made by consultants Crisp and Jacobs but also acknowledges that some improvements in handling the project could have been made which could have reduced the costs somewhat. Mr. O'Connor addressed the costs for the NRC licensing and review and the prudency of project management.

A. NRC COSTS FOR THE PROJECT

Q. What did Mr. O'Connor discuss regarding the higher costs for NRC licensing and review?

A. In response to Mr. Crisp's criticisms that there were higher NRC costs due to a lack of necessary communications between NSP and the NRC, Mr. O'Connor responded that the communications were extensive.

Mr. O'Connor also objected to Mr. Crisp's claim that the withdrawal of NSP's license amendment for a steam dryer modification demonstrated poor planning and management indecisiveness. NSP withdrew its request for approval of a modification and instead decided to replace the steam dryer. Mr. O'Connor claims that the withdrawal was because the NRC wanted an increased level of detailed engineering analysis to modify rather than replace the existing steam dryer.[15] According to Mr. O'Connor, due to changing steam dryer analysis requirements by the NRC, NSP elected to withdraw its

[14] *Id*.
[15] O'Connor Rebuttal, at 22.

request to modify the steam dryer and instead to proceed with a plan for a replacement. NSP notified the NRC in February, 2010, of its intention to replace the steam dryer. The steam dryer replacement increased the project costs by approximately $35 million.[16] Mr. O'Connor claims that the NRC related costs for the project totaled approximately $84 million including the steam dryer addition.[17] The other specific items included increased NRC licensing costs, additional calculation costs, and additional monitoring equipment. Mr. O'Connor attributes these higher costs to higher NRC standards required of EPUs and other higher standards that were attributable to the Fukushima event.

Q. What is your response to Mr. O'Connor's explanation for increased NRC related costs?

A. Mr. O'Connor seems to indicate that NSP was surprised or did not anticipate what the NRC required or what changes the NRC made to its requirements. Mr. O'Connor acknowledges that at least $30 million of the additional $84 million that he attributes to NRC requirements was due to the initial underestimation of NRC licensing costs. Mr. Crisp's allegation and Mr. O'Connor's explanation of the higher costs to replace rather than modify the steam dryer appears to confirm Mr. Crisp's claim that NSP was starting and stopping the project, which added to the cost. Mr. O'Connor's admission that NSP was subject to evolving NRC requirements is a poor excuse. The NRC requirements will always be evolving and NSP should not have been surprised. The NRC does not formulate new requirements in secrecy. A federal agency must justify changes in its rules and requirements in an open forum with the opportunity for public comment. The NRC, as a federal agency, has the obligation to have a transparent process when

[16] O'Connor Rebuttal, at 23.
[17] O'Connor Rebuttal, at 24.

instituting new requirements. Mr. Crisp's analysis, that NSP failed to properly plan for its ultimate steam dryer replacement and anticipate evolving NRC requirements, is a fair criticism. I disagree with Mr. O'Connor's attempt to justify the additional $84 million that he claims was largely out of NSP's control.

B. PRUDENCY OF PROJECT MANAGEMENT

Q. How did Mr. O'Connor respond to claims of imprudent project management?

A. Mr. O'Connor addresses the prudency of project management discussing installation and craft labor, and implementation of the project. He also claims that project management was an evolving process, yet appropriate.

Q. How does Mr. O'Connor justify the cost overruns that are related to installation and craft labor?

A. Mr. Crisp determined that NSP failed to understand the difficulty of the project including the small footprint of the Monticello nuclear plant. In response, Mr. O'Connor claims that NSP fully took this into account and worked with vendors and craft laborers to estimate the costs. He also claims that the cost overruns for the installation work were not $290 million or ten times higher than originally estimated.[18] According to Mr. O'Connor, the $27.5 million that Mr. Crisp identified as the estimated installation costs were only for the General Electric portion of installation costs. To clarify the costs for installation, Mr. O'Connor attempted to establish what the correct amount for installation costs were by estimating what portion was for installation that were paid to two vendors – Day Zimmerman and Bechtel. Day Zimmerman provided the installation work for the 2009 and 2011 outages, while Bechtel was responsible for the installation work for the

[18] O'Connor, at 47.

2013 outage.[19] According to Mr. O'Connor, the installation cost estimate was more than the $27.5 million that Mr. Crisp identified.

Q. What is your response to Mr. O'Connor's explanation?

A. Mr. O'Connor acknowledges that the overall installation costs were $290 million but does not indicate what amount was initially estimated for installation. Mr. O'Connor failed to address what the correct amount of the initially estimated installation costs were that was included in the original overall estimate of $320 million. Mr. O'Connor's explanation is not useful in the effort to understand NSP's cost overruns and to show whether the cost overruns were prudent.

Q. What was Mr. O'Connor's explanation for Mr. Crisp's claim that NSP could have known but did not know about the physical limitations of the plant which contributed to the cost overruns?

A. According to Mr. O'Connor, NSP's lack of understanding of the physical limitations of the plant was normal and not imprudent. Mr. Crisp had argued that plant personnel should have been engaged in determining what the physical limitations of the plant were. In response, Mr. O'Connor explained that plant personnel inspect the plant during outages but it was not their responsibility to provide engineering information that would identify physical limitations of the plant.

Q. What is your response to Mr. O'Connor's explanation?

A. Again, Mr. O'Connor appears to acknowledge that NSP did not attempt to determine the physical limitations of the plant, and as a result NSP had to redesign and redo work while the project was underway. Mr. O'Connor acknowledges that there were approximately

[19] *Id.*

2,000 construction field changes due to discrepancies in as-found conditions.[20] Based on Mr. O'Connor's explanation, it appears that lack of planning was a significant impediment to construction and to completion of the project on time. It appears that NSP, at the time of construction, relied on design or engineering drawings that it knew were incorrect or could be incorrect. Mr. O'Connor's explanation supports Mr. Crisp's allegation of imprudence for failure to plan and understand the requirements of the project, including the physical limitations of the plant, before it was implemented.

Q. What was Mr. O'Connor's explanation for NSP's evolving project management?

A. According to Mr. O'Connor, Mr. Crisp inappropriately relied on an internal NSP document titled "2011 Cost History" which is critical of NSP's project management and the cost overruns.[21] Mr. O'Connor explained that the Monticello employee who prepared this document was unaware of information presented by the Nuclear Projects Team to the Board of Directors. He also explained that the document was prepared "…at a time when the Program was under substantial pressure for missing cost and timing targets. During that period, tensions were running high and attempts to assign blame naturally occurred."

Mr. O'Connor also discussed the changes to project management and the hiring of different vendors to conduct the work.[22] After the completion of project work during the 2011 outage, NSP decided to change its project management approach. According to Mr. O'Connor, NSP reevaluated its approach because of limitations on the use of NSP's own employees and that the remaining work required additional contract labor to complete the project. NSP was not happy with how the 2011 outage work was handled – it was

[20] According to Mr. O'Connor, NSP would only have been able to save less than $1 million if planning had been better.
[21] O'Connor Rebuttal, at 63-65.
[22] O'Connor Rebuttal, at 67-71.

delayed, increasing the duration by 16 days and the cost by $34 million above the planned cost. For the 2013 outage, NSP decided to outsource the work to Bechtel. The 2013 outage also incurred higher costs of $52 million and a much longer outage duration by 53 days.[23] Mr. O'Connor explained that it had conducted periodic evaluations of its management for this project, and those evaluations were critical to improvements that NSP made throughout the life of the project.

Q. What is your response to Mr. O'Connor's claim that evolving management for the project was appropriate?

A. I disagree that NSP's evolving management for the project described by Mr. O'Connor was appropriate. However, I appreciate his candid explanations of the difficulties NSP encountered and that the costs and outage duration were higher than what was planned. NSP's own criticism of its efforts in the "2011 Cost History" should not be dismissed. This document supports the allegations of imprudence and mismanagement of the project through 2011 that NSP's then Vice-President required NSP to prepare. Despite Mr. O'Connor's attempt to discount this document, it confirms that NSP was disappointed with its own work. NSP's subsequent decision to change its project management approach after the 2011 outage confirms that NSP's earlier approach was ineffective, costly and otherwise inappropriate, resulting in imprudent costs for the project.

[23] Mr. O'Connor does explain if the planned amount and duration were from updated plans or from the original 2008 estimate of the project.

C. NSP'S PROJECT MANAGEMENT

Q. What topics did Mr. Sieracki address regarding the high cost and delays for the project?

A. Mr. Sieracki is a consultant who was hired by NSP to respond to the criticisms of NSP's project management and project implementation. Mr. Sieracki addressed many of the same topics that Mr. O'Connor addressed.

Q. Is Mr. Sieracki an independent consultant hired to determine whether NSP properly managed and implemented the Monticello Project?

A. No. Mr. Sieracki is not independent. He was hired by NSP to respond to the criticisms of DOC's independent consultants and DOC's witnesses in this case.[24]

Q. What did Mr. Sieracki discuss in his testimony regarding NSP's project management?

A. Mr. Sieracki addressed various aspects of NSP's project management concluding that NSP's approach was appropriate. He also addressed early project estimation issues and project implementation. Mr. Sieracki, like Mr. O'Connor, acknowledges that NSP's decisions and actions were not perfect but determined that NSP's actions were not imprudent.[25] He addressed Mr. Crisp's criticism that NSP failed to provide accurate estimates of the Monticello project. Mr. Sieracki attributes the failure to provide accurate estimates as being due to "controlling factors" because accurate estimates could not have been determined until the design was complete based on an assessment of existing conditions at the plant. Mr. Sieracki also addressed Mr. Crisp's criticism that the addition of the 13.8 kV system should have been anticipated and planned for earlier,

[24] Sieracki Rebuttal, at 4.
[25] Sieracki Rebuttal, at 5.

which was needed for internal plant operations at the higher generation output. According to Mr. Sieracki, better project management would not have anticipated the need for the 13.8 kV system earlier nor would NSP have been able to foresee the challenging installation requirements for the 13.8 kV system. Mr. Sieracki disagreed with Mr. Crisp's assessment that the project suffered from "starts and stops" by switching contractors. Changing contractors is appropriate when the job and expertise require it.

Q. What is your response to Mr. Sieracki's assessment of NSP's project management?

A. Mr. Sieracki dismisses NSP's failure to accurately estimate the project costs because a more accurate estimate would not have been possible without completing a thorough design in advance. That is the point that Mr. Crisp made – that the *failure* to do an upfront scope and design of the project resulted in poor project cost estimates. NSP's actions were imprudent because it estimated costs without full knowledge of what the project required. As an example, the addition of the 13.8 kV system later in the project shows that NSP was not thinking or planning ahead. I agree with Mr. Crisp that NSP's failure to plan for the 13.8 kV from the beginning demonstrates poor project management. Similarly, the changing of contractors in the middle of the project undoubtedly added costs to the project. NSP, and its contractors, needed to work together with a common understanding of the project. It appears that NSP chose to blame its contractor for NSP's own failures to properly scope and design the project before hiring contractors to perform the work. Having worked for a manufacturing/construction company, I know that it is an industry practice for a contractor to present a cost estimate along with a proposed scope of work and deliverables which the owner must approve prior to beginning work. It appears that NSP did not follow normal construction industry

practices resulting in disputes and replacement of contractors because NSP was not aware what the scope and design should be when it initially hired contractors. Mr. Sieracki acknowledges that NSP failed to do its upfront work on scope and design but disagreed with Mr. Crisp that NSP's approach was imprudent. Mr. Sieracki has not justified NSP's approach. I agree with Mr. Crisp that NSP's approach was improper and resulted in additional costs for the project.

Q. Does Mr. Sieracki discuss NSP's decision to start the project and then proceed with the design?

A. Yes. According to Mr. Sieracki, NSP was under time constraints to meet the anticipated growth in demand in the 2011 to 2015 time frame and had to proceed with obtaining regulatory approvals, design the LCM/EPU program, and implement the modifications, all on parallel paths.[26]

Q. What is your response to Mr. Sieracki's assessment?

A. The project was way over budget and late. I agree with Mr. Crisp that NSP's approach to proceed on parallel paths was the reason for the high cost and late implementation for the project. In particular, NSP's failure to scope and design the project prior to implementation had to be a major factor in the high cost and delayed implementation.

Q. If time was of the essence to start the Monticello Project, were there other alternatives to obtain generation resources in the short-term which would have allowed NSP to scope and design the Monticello project prior to implementation?

A. Yes. Utilities have a number of options to obtain additional generation resources. NSP, like other utilities, has the option of entering into bilateral agreements to buy power from

[26] Sieracki Rebuttal, at 11-12.

another utility or to buy energy through the Midwest Independent System Operator ("MISO") market. It appears that NSP did not consider these other options and only considered the option to do an uprate on the Monticello nuclear plant on an expedited basis.

Q. Did Mr. Sieracki argue that NSP properly managed the Monticello project from beginning to end?

A. Essentially yes. Mr. Sieracki discusses NSP's project management including the timing of events and decisions, the implementation approach, risks, estimating, and project management structure.[27] According to Mr. Sieracki, all of NSP's management activities and decisions were in accordance with industry standards and construction management practices. He found no fault in how NSP managed the project from beginning to end.

Q. Is Mr. Sieracki's assessment reasonable?

A. No. Mr. Sieracki was hired to support NSP's actions and decisions to manage the Monticello project. His assessment is not plausible given the colossal cost overrun and the continuous delays in the project. If everything that NSP did was consistent with good project management standards and practices then we would not now be conducting this investigation. Mr. Crisp's and Dr. Jacobs's independent analysis contradict Mr. Sieracki's testimony that NSP was prudent in managing the project from beginning to end. I believe the independent analysis of Mr. Crisp and Dr. Jacobs is more credible and the Commission should consider that Mr. Sieracki is not independent and was hired to support NSP's actions and decisions for this project.

[27] Sieracki Rebuttal, at 8-31.

Q. Did Mr. Sieracki discuss Mr. Crisp's allegation that NSP failed to use the as-built design information from NSP's last uprate for the Monticello plant completed in 1998?

A. Yes. Mr. Crisp refers to as-built information as plant design as it existed after NSP's previous uprate in 1998. The as-built information should have been used to determine how to scope and design the next uprate, which began in 2009. Mr. Sieracki disputes the need to use as-built information from NSP's prior uprate in 1998. He argued that the Monticello plant was a 1970s vintage plant, and that no detailed as-built design drawings were thought necessary to retain, given that the plant was only planned to have an operating life of 40 years and then shut down.[28] He claims that in 1998, NSP did not anticipate that it would someday need as-built information to make further modifications to the plant.

Q. What is your response to Mr. Sieracki's assessment?

A. It appears obvious that detailed design drawings should have been the starting point for this project to avoid the stops and starts that NSP experienced. NSP has construction projects every year at its nuclear plants and if updated drawings were not prepared at the time that each of those projects were implemented then NSP had only two other options. NSP could have updated its design drawings at the beginning of the project or elected to not update the design drawings prior to the project implementation. NSP chose the latter and began the implementation without an understanding of footprint constraints and other design requirements. As discussed earlier, Mr. O'Connor also explained that footprint and existing design constraints were not addressed during outages due to time constraints

[28] Sieracki Rebuttal, at 33.

for the outages. Doing design analysis either prior to the beginning of the project or during earlier outages could have limited NSP's exposure to starts and stops on the project as discussed by Mr. Crisp. I believe that Mr. Crisp appropriately identified this as a management error that caused the project to be over budget and delayed.

D. PROJECT IMPLEMENTATION

Q. What are project implementation issues that Mr. Sieracki addressed?

A. Mr. Sieracki addressed project coordination, starts and stops, and the impact on project management costs.[29]

Q. What issues did Mr. Sieracki address regarding project coordination and starts and stops for the project?

A. Mr. Sieracki disagreed with Mr. Crisp that project coordination was lacking and that the change in contractors caused the project to start and stop. He agreed with Mr. Crisp that there needs to be coordination between the design and construction functions or teams working on the project. Despite some apparent tension between the plant site and LCM/EPU project teams that were identified in the "2011 Cost History" report, Mr. Sieracki determined that even if there were resulting cost increases from NSP's approach it was still appropriate under the circumstances.

Mr. Sieracki also addressed Mr. Crisp's concern that changing contractors may have caused the project to start and stop resulting in additional costs. The three contractors at issue were General Electric, which was hired as the initial design contractor, Day Zimmerman, which was selected rather than General Electric for the 2009 and 2011 installations, and Bechtel, which was selected to replace Day Zimmerman

[29] Sieracki Rebuttal, at 40-50.

as the installation contractor for the 2013 outage. According to Mr. Sieracki, NSP was prudent to replace Day Zimmerman given Bechtel's expertise. Mr. Sieracki disagreed with Mr. Crisp that replacing major contractors would require that a new contractor spend time to analyze and reassess the previous contractor's work. Mr. Sieracki also noted that Day Zimmerman remained on the project, at the insistence of NSP, as a subcontractor for Bechtel and concluded that there were no additional costs for these contractor changes.

Q. What is your response to Mr. Sieracki's disagreement with Mr. Crisp regarding project coordination and start and stop concerns?

A. The concerns raised by Mr. Crisp are valid including his determination that changing contractors resulted in starts and stops on the project. The fact that Mr. Crisp was not able to specifically identify costs for his concerns does not demonstrate that NSP's actions were prudent. Logically it would make sense that there were higher costs associated with replacing major contractors, especially for a large project such as this one. Mr. Sieracki acknowledges that Bechtel's hiring did require some up-front cost to allow Bechtel to become familiar with the project.[30] NSP's replacement of contractors appears to implicate NSP's project management deficiencies. The changing of contractors is another example of NSP's failure to properly manage the project.

Mr. Sieracki agreed that coordination between design and build teams is critical. The "2011 Cost History" indicates that there were problems with coordination that produced additional costs. Mr. Sieracki's attempt to dismiss the "2011 Cost History" as not being well-informed contradicts Mr. Sieracki's analysis and the information he relied on to form his analysis. Mr. Sieracki based his third-party analysis on a review of

[30] Sieracki Rebuttal, at 49.

documents, interviewing personnel, reviewing information requests and other people's testimony. Mr. Sieracki's third-party analysis is less reliable than NSP's own internal analysis and conclusions contained in the "2011 Cost History" report.

VI. FINAL ANALYSIS AND CONCLUSIONS

Q. Has NSP demonstrated that its Monticello Project was prudent and that the costs were reasonable and should be recovered?

A. No. Mr. Sparby argues that "Any disallowance should be limited to those costs actually caused by an imprudent decision or action. If a cost would have to be incurred regardless of the imprudent decision or action, then the Commission should not order a disallowance because the excess cost was not caused by imprudence."[31] The analysis provided in this investigation points directly to an overall mismanagement of the project resulting in excessive costs that could only be attributable to imprudent actions and decisions. The project was poorly planned, poorly managed, poorly implemented, and extremely expensive. The project never should have been recommended or approved because it was ill conceived with reliance in the original CON proceeding on bad information, such as improper load forecasts, and an assumption that gas prices would remain high. In addition, the shot-in-the dark approach that NSP took to estimate the cost for the LCM/EPU led DOC to recommend approval of the project and for the Commission to approve it. NSP's management appears to have been overwhelmed and substantially uninformed about what this project would require.

[31] Sparby Rebuttal, at 14.

The OAG continues to support its initial recommendation to disallow at least $321 million of cost overruns for this project.

Q. Does this conclude your testimony?

A. Yes it does.

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☐ **Public Document – Trade Secret Data Excised**
☒ **Public Document**

Xcel Energy
Docket No.: E002/GR-13-868
Response To: Office of Attorney General Information Request No. 155
Requestor: John Lindell
Date Received: April 23, 2014

Question:

For each of the last three NSP electric rate cases for NSP's Prairie Island nuclear plant and NSP's Monticello nuclear plant provide the rate base, all expenses including fuel and depreciation, return and revenue requirement. Also provide the actual amount of MW generation for each plant for each year 2009 through 2013. Also explain and provide dates for when each plant was not producing power for refueling or other reasons.

Response:

a) Rate Base, Expenses, Return & Revenue Requirement

For purpose of this response, we assumed that fuel is not part of plant and excluded the return on RB for nuclear fuel. However, we included nuclear fuel expense.

Please see Attachment A to this response for the O&M expenses by Prairie Island and Monticello nuclear plants for the last three NSPM electric rate cases. Also included with this response is Attachment B, the Revenue Requirement on capital related items. A summary of the revenue requirements by plant for each year 2009 – 2013 is included in the table below.

Revenue Requirements			
	2009	2011	2013
Monticello	$24,131,164	$42,934,615	$50,716,065
Prairie Island	$46,476,243	$52,657,614	$60,868,658
Total	$70,607,407	$95,592,229	$111,584,723

Northern States Power Company

Docket No. E002/GR-13-868
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Attachment C - Page 1 of 1

Xcel Energy
Monticello Plant
NORTHERN STATES POWER CO.

GENERATION SUMMARY REPORT

	Gross MWh	House Power	Net MWh
NSP - 2009			
Monticello Plant	4,318,579.00	176,115.00	4,142,464.00
NSP - 2010			
Monticello Plant	4,892,160.00	197,047.00	4,695,113.00
NSP - 2011			
Monticello Plant	3,509,914.00	153,636.00	3,356,278.00
NSP - 2012			
Monticello Plant	5,090,073.00	199,699.00	4,890,374.00
NSP - 2013			
Monticello Plant	3,131,937.00	138,363.00	2,993,574.00
Report Totals for Monticello Plant	20,942,663.00	864,860.00	20,077,803.00

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Monticello Revenue Requirements

	2009	2011	2013	Percent Increase 2009-2013
Monticello	$24,131,164	$42,934,615	$50,716,065	110%
Prairie Island	$46,476,243	$52,657,614	$60,868,658	31%
Total	$70,607,407	$95,592,229	$111,584,723	58%

From OAG Information Request No. 155

Xcel Energy	GENERATION SUMMARY REPORT			
Monticello Plant	Gross MWh	House Power	Net MWh	
NORTHERN STATES POWER CO.				Rev. per MWh
NSP – 2009				
Monticello Plant	4,318,579.00	176,115.00	4,142,464.00	$5.83
NSP – 2010				
Monticello Plant	4,892,160.00	197,047.00	4,695.113.00	$5.14
NSP – 2011				
Monticello Plant	3,509,914.00	153,636.00	3,356,278.00	$12.79
NSP – 2012				
Monticello Plant	5,090,073.00	199,699.00	4,890,374.00	$8.78
NSP – 2013				
Monticello Plant	3,131,937.00	138,363.00	2,993,574.00	$16.94
Report Totals for				
Monticello Plant	20,942,663.00	864,860.00	20,077,803.00	

Report Period: JAN-01-09 to DEC-31-13 Unit Scope: NSP, Page 1 of 1