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

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION
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| IN THE MATTER OF A COMMISSION INVESTIGATION INTO XCEL ENERGY'S MONTICELLO LIFE CYCLE MANAGEMENT AND EXTENDED POWER UPRATE PROJECT AND REQUEST FOR RECOVERY OF COST OVERRUNS | MPUC Docket No. E002/CI-13-754<br>OAH Docket No. 48-2500-31139 |

**DIRECT TESTIMONY OF NANCY A. CAMPBELL**

**ON BEHALF OF**

**THE MINNESOTA DEPARTMENT OF COMMERCE**
**DIVISION OF ENERGY RESOURCES**

JULY 2, 2014

DIRECT TESTIMONY OF NANCY A. CAMPBELL
IN THE MATTER OF A COMMISSION INVESTIGATION INTO XCEL ENERGY'S LIFE CYCLE MANAGEMENT AND EXTENDED POWER UPRATE PROJECT AND REQUEST FOR RECOVERY OF COST OVERRUNS

DOCKET NO. E002/GR-13-754
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# I. INTRODUCTION

**Q. Would you state your name, occupation and business address?**

A. My name is Nancy A. Campbell. I am employed as a Public Utilities Financial Analyst by the Minnesota Department of Commerce, Division of Energy Resources (Department). My business address is 85 7th Place East, Suite 500, St. Paul, Minnesota 55101-2198.

**Q. What is your educational and professional background?**

A. I received a Bachelor of Science degree in Accounting with a minor in Business Administration in 1989 from Mankato State University (renamed Minnesota State University - Mankato). I also maintain an active Certified Public Accountant license in the state of Minnesota.

**Q. What is your business experience?**

A. My business background includes five years of experience with the Federal Energy Regulatory Commission (FERC) auditing electric and gas utilities. I also have over three years of experience performing accounting analysis and policy work for the FERC (including issues that came before the FERC on its agendas). Currently, I have worked for the Department for over 16 years as a Financial Analyst in the Energy Regulation and Planning Division.

As a Financial Analyst, I work on dockets with significant financial issues, including: rate cases, Minnesota Public Utilities Commission (Commission) and Department investigations, affiliated interest filings, purchase or sale of facilities filings, depreciation filings, and miscellaneous rate filings. I also monitor and participate in FERC issues, particularly issues involving the Midcontinent Independent System Operator, Inc. (MISO) and the Organization of MISO States (OMS) for the Department. For the period 2002 to 2005, I served as a member of the MISO Advisory Committee as a representative of the Public Consumer Group Sector. For the period 2004 to 2006, I chaired the OMS Markets and Tariffs Workgroup. I am currently serving as a member of the MISO Advisory Committee as a representative of the Public Consumer Group Sector, which began in January 2012.

## II. PURPOSE

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

A. My responsibility is to review and investigate the final cost of Northern States Power Company d/b/a Xcel Energy's (NSP, Xcel or the Company) Monticello Life Cycle Management (LCM) and Extended Power Uprate (EPU) projects. As outlined below, my testimony addresses the financial issues identified by the Department as a concern in this proceeding.

**Q. How did you conduct your review in this proceeding?**

A. In addition to my review of NSP's petition and pertinent documents, I issued written information requests and discussed with Company personnel various financial information and supporting documentation. The purpose of my testimony is to assist the Commission in evaluating the reasonableness and prudency of NSP's total costs of Monticello LCM and EPU projects for ratemaking purposes.

**Q. Please describe NSP, in general.**

A. NSP is a wholly owned subsidiary of Xcel Energy Inc. and is a Minnesota corporation. Xcel Energy Services Inc. (XES) is the service company for the Xcel Energy Inc. holding company system, and thus provides services to NSP and other Xcel Energy Inc. subsidiaries. NSP has electric energy operations in Minnesota, Wisconsin, North Dakota and South Dakota.

**Q. What is the scope of your Direct Testimony?**

A. My Direct Testimony focuses on areas of financial concerns regarding the Monticello LCM and EPU projects. In addition, I intend to use the Department's recommendation in this proceeding regarding those costs of the Monticello EPU that are not shown to be cost-effective to recommend an adjustment to NSP's current rate-case petition (Docket No. E002/GR-13-868) as that case proceeds.

## III. BACKGROUND INFORMATION REGARDING CONCERNS ABOUT PERFORMANCE AND MANAGEMENT OF MONTICELLO PLANT

**Q. Has the Nuclear Regulatory Commission (NRC) recently raised concerns about degraded performance at the Monticello Plant?**

A. Yes, the NRC has assigned the Monticello Plant to the NRC's Column 3 - Degraded Cornerstone category, which results in NRC doing more inspections and review at the Monticello plant for 2014. On March 31, 2014, the NRC held a public meeting to discuss three major areas of concern, including: lack of external flooding response procedures, improper weld test issue on dry cast storage canisters, and general human performance concerns.

**Q. Was there a newspaper article that discussed the NRC concerns raised at the Monticello March 31, 2014 public meeting?**

A. Yes. I attach a copy of the April 1, 2014 article by the Star Tribune newspaper entitled, "NRC troubled by 'degraded' performance at Monticello nuclear plant" which discussed NRC's concerns and Xcel's responses to those concerns at the Monticello public meeting. DOC Ex. ___ at NAC-1 (Campbell Direct).

**Q. Has Xcel provided further information about the NRC's concerns?**

A. Yes. In response to an information request issued in the current Xcel rate case in Docket No. E002/GR-13-868, Xcel addressed the concerns raised by the NRC at the Monticello public meeting. Specifically, the Company provided a lengthy response to the Office of Attorney General, Antitrust and Utilities Division (OAG-AUD) information request 116, which asked the Company to explain concerns raised by the NRC regarding deficiencies at the Company's Monticello nuclear plant. The Company noted that, while the NRC believes that Monticello is being operated in a safe manner, the NRC is concerned with certain categories, especially human performance concerns as noted above. The Company also noted that the external flooding procedure was corrected and human performance issues (which are contained on a fairly long list on pages 3 to 5 of the Company's response that appears to include the welding test canister issue) are being corrected with the NRC. DOC Ex. ___ at NAC-2 (Campbell Direct).

**Q. Is there other background information you would like to provide?**

A. Yes. Another article by the Star Tribune dated November 14, 2013 and entitled, "Minnesota to hire an expert as it studies Monticello cost overruns" suggested that a lack of strong managers contributed to the cost overruns at Monticello:

> A nuclear expert, David Lochbaum, who reviewed Xcel's response at the request of the Star Tribune said regulators should consider whether the Company had strong managers leading the complex project to replace pumps and other key equipment originally installed during the plan's construction in the 1960's.
>
> Lochbaum noted that in a recent regulatory filing, Xcel said that in December 2011 – about two years into the project – the Company hired a nuclear industry veteran Karen Fili as vice president of nuclear projects to take charge of the Monticello upgrade. Fili implemented "rigorous project management controls" after 2011, but was unable to halt the escalating costs, Xcel Chief Nuclear Officer Timothy O'Connor said in written testimony. Lochbaum said that suggests Xcel's management acted too late. Lochbaum also stated, "I don't think it is unfair in hindsight to suggest that acquiring experienced, skilled managers up front during the planning and before the implementation phase would have been prudent."

DOC Ex. ___ at NAC-3 (Campbell Direct).

**Q. Did you ask the Company to address the concerns raised in the November 14, 2013, newspaper article as noted above?**

A. Yes. In response to Department information request no. 20, the Company provided a seven page response to the concerns raised by this article. Xcel's response generally indicated that the Company believes it implemented controls and established a team to properly oversee the Monticello LCM/EPU project. The Company noted on page 7 of its response that it is easy to assume, as suggested by the article, that changes in the eight year project meant the original project was deficient. However, the Company indicated that: 1) changes that were made did not materially impact costs and 2) costs incurred were necessary to make the Monticello LCM/EPU project a success. The Company acknowledged on page 3 of its response that Xcel could have done a better job forecasting costs and sharing information about cost increases sooner; but states that, even if they had done better, costs may not have changed. DOC Ex. ___ at NAC-4 (Campbell Direct).

**Q. Do the Department nuclear engineering consultants agree with the Company that management issues did not contribute to cost increases for the Monticello LCM and EPU projects?**

A. No. The DOC consultants (Mr. Mark Crisp and Dr. William Jacobs) raised significant issues in their Direct Testimonies about lack of upfront planning and Xcel's inadequate understanding as to the true scope of the work as well as insufficient oversight of contractors that likely resulted in higher costs for the Monticello projects.

**Q. Did Xcel communicate adequately with Commission, Department, and interested parties about the higher costs of the Monticello LCM/EPU and, particularly the increased costs of the EPU, when Xcel asked for recovery of those costs?**

A. No. The first time Xcel requested recovery of the higher costs was in the prior rate case (Docket No. E002/GR-12-961, or 2012 Rate Case),[1] when Xcel asked the Commission to allow Xcel to charge ratepayers for the higher costs of the project,

[1] Xcel reduced its request for recovery of the Monticello LCM/EPU project in the prior rate case, Docket No. E002/GR-10-961.

even before Xcel met its statutory burden of proof to show that the costs were reasonable. As the Department and other parties indicated in that case, Xcel did a poor job making a reasonable case to recover the Monticello cost overruns in that proceeding:

> …the lack of detail and support in Xcel's initial filing hampered the efforts of the Department to evaluate the reasonableness of Xcel's test-year nuclear cost requests, as follows:
>
>> It was necessary to rely on information requests, which was a very slow and piecemeal process in this rate proceeding, as discussed above. Given that nuclear issues are the main driver in this case, it is most disturbing that Xcel provided so little financial information in their initial case.

DOC Initial Brief, page 34.

Clearly, the much higher Monticello EPU project costs should have been revealed at a minimum in Xcel's initial filing in the 2012 Rate Case or in Xcel's 2011 Notice of Changed Circumstances (NOCC) so the EPU project could have been reevaluated to ensure that it continued to be cost effective. Instead, the Company continued to incur significant costs for the project as if the final or total cost level would not matter for purposes of cost recovery from ratepayers. I note that in the Direct Testimony of DOC's consultant Mark Crisp and as I discussed later in my Direct Testimony, the Company clearly knew about the much higher cost levels in 2011.

Further, as Mr. Shaw notes, although Xcel filed a NOCC in 2011 regarding the timing of the EPU being in service, Xcel did not ask for reevaluation that the EPU was still cost-effective. Instead, Xcel's filing merely indicated that the Company was going to need a 3rd plant outage in 2013, because the work was not completed either for the 2009 or 2011 plant outages as initially planned. Clearly, the Company could have and should have identified these cost increases to the Commission, Department and interested parties.

**Q. Didn't Xcel provide some updates about cost increases for the Monticello LCM and EPU projects prior to its 2012 Rate Case?**

A. Yes; but only in passing. In response to DOC information request no. 94, the Company provided the following information regarding updating on Monticello LCM and EPU project costs in past rate cases:

> In the Company's 2011 test year rate case (E002/GR-10-971), we updated costs for the total LCM/EPU Project of about $361 million, including both uprate and life-cycle management costs, through 2011. (Koehl Direct, p. 31.) In rebuttal testimony, we further updated the estimate at $399.1 Million for the jointly-managed and implemented LCM/EPU Program. (Koehl Rebuttal, p. 15.) In November 2011, our prior Chief Nuclear Officer, Mr. Koehl, testified at hearing that the final cost of the Project was expected to be approximately $550-600 million. In our 2012 rate case (Docket E002/GR-12-961) the Company further updated the estimated cost to $587 million. The Company had spent approximately $494 million on the project as of August 31, 2012. (O'Connor Direct p. 17.) We further updated that estimate in our response to Information Request DOC-160, in the rate case to approximately $640 million. In the current rate case, we provided our latest estimate of the overall LCM/EPU Project costs as $655 million.

DOC Ex. ___ at NAC-5 (Campbell Direct).

**Q. How do you respond?**

A. First, it is concerning that Xcel appears to assert that fairly casual statements about its expected costs somehow is an acceptable substitute for demonstrating that such significant cost overruns are reasonable to be charged to ratepayers. Nonetheless, I note that the information provided by the Company in its testimony in the 2010 rate case, (MPUC Docket No. E-002/GR-10-971), where Xcel represented its costs for Monticello LCM and EPU projects to be in the $361 million to $399.1 million range, did not cause the Department to be concerned, for two reasons: 1) these costs were not much over CN-estimated costs when inflated and 2) Xcel was not requesting recovery of the cost overruns at that time.

Second, the Monticello LCM project was not put in-service until 2013 and in Xcel's 2012 Rate Case the Monticello EPU was estimated to be in service in 2013; thus the rate case impacts were not material until the 2012 Rate Case.

Third, in 2012 Rate Case, the Department recommended significant disallowance based on Xcel's lack of proof, and the Commission ordered a prudency review which is the basis for this proceeding.

Fourth, the Department notes that only Xcel bears the burden to show that Monticello LCM and EPU projects are reasonable and continue to be cost-effective; the burden of proof does not shift to the Commission, Department or other parties. As a result, if Xcel wished to enhance the likelihood that it would recover all of the costs of either the Monticello LCM or the Monticello EPU, it seems obvious that the Company should have filed updated actual costs of the Monticello LCM and EPU projects in a NOCC as soon as they knew that costs overruns were significant enough that they may be a concern.

**Q. When should the Company have known that cost overruns may have been a concern?**

A. Costs that exceed CN-approved levels are a concern for rate recovery purposes, especially if those costs result in the project not being cost-effective. The Department notes that in the 2010 Rate Case, Mr. Koehl's post hearing supplemental testimony filed on August 25, 2011 on page 7 indicated that the Company was forecasting at that time that Monticello LCM and EPU projects cost could "exceed $500 million".[2] However, the Company was not requesting recovery of those costs, nor was it clear, how much of the costs Xcel may request to recover from ratepayers in the future. However, the expectation is that utilities monitor costs of projects to ensure that the projects continue to be cost effective and decide when it is necessary to file a NOCC in the associated CN docket if that ongoing assessment indicates that a project may risk being not cost-effective.

Additionally, as noted by the Company in the above response, within two months of Mr. Koehl's post-hearing supplemental testimony, he added another $100 million to the projects costs when he testified in response to cross-examination at the Company's second evidentiary hearing in November 2011. Specifically, he was asked to comment on Xcel's estimate of final costs, and he stated that Monticello LCM and EPU projects were estimated to cost $550 to $600 million.[3] Again, Xcel did not file a NOCC in the CN docket as to a projection of $550 to $600 million in final costs. DOC Ex. ___ at NAC-6 (Campbell Direct).

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[2] Xcel [10-971] Ex. at 7 (Koehl Supplemental).
[3] Tr. at 16 (Koehl) (November 4, 2011).

The Company filed its modified CN in November 2011, but remarkably remained silent as to its then-current cost projections for the projects. Certainly, the Company could have updated its costs estimate in the CN docket proceeding, together with a rigorous evaluation of whether the Monticello LCM and Monticello EPU projects continued to be cost effective.

Overall, Xcel may choose how to present its request for cost-recovery to the Commission, but it remains Xcel's responsibility to show why it is reasonable for ratepayers to pay for cost overruns, as indicated by the Commission's September 3, 2013 *Findings of Fact, Conclusions of Law and Order* in Xcel's 2012 Rate Case, at page 19, which lead to this investigation:

> The Commission shares the Department's concern regarding the project's significant cost overruns. The Commission will open a separate docket to investigate whether the Company's handling of the LCM/EPU project was prudent, and whether the Company's request for recovery of the Monticello LCM/EPU cost overruns is reasonable.

**Q. Overall, do you think the Company did a reasonable job, for the Monticello LCM and EPU projects, of informing the Commission and interested parties to the CN docket on a timely basis that Xcel had and expected to continue to have significant cost overruns?**

A. No, based on my concerns noted above, the Company clearly did not reveal to the Commission and parties to the *CN docket* that its estimated costs for Monticello LCM and EPU projects that were approved in the CN were greatly exceeded by the actual costs being incurred. Additionally, the Company should have noted in its revised CN for Monticello LCM and EPU projects, filed on November 22, 2011, that its costs were expected to be significantly higher than the amount approved by the Commission in the original CN, and Xcel should have provided an evaluation as to whether one or both the Monticello LCM and Monticello EPU projects continued to be cost effective.

## IV. TOTAL CAPITAL COSTS OF MONTICELLO LCM AND EPU PROJECTS

**Q. Which Company witnesses discuss and show the total cost of the Monticello LCM and EPU projects costs?**

A. Both Company witnesses Scott L. Weatherby, who covered Project Cost and Accounting, and Timothy J. O'Connor, who covered Program Oversight, provided schedules in their Direct Testimonies showing the combined total costs of the Monticello projects, not including allowance for funds used during construction (AFUDC), to be $664.9 million.  Mr. Weatherby provided this information in his Schedule 3 Appendix A-1 by years (2004 to 2013), and Mr. O'Connor provided this information in his Schedule 7 by work order.

**Q. What is AFUDC?**

A. AFUDC is the net cost of financing funds used for construction purposes for the period of construction and a reasonable rate on other funds when so used.  The longer it takes for a plant to be constructed and placed in service, the higher total AFUDC becomes.

**Q. In November 2013, did you ask the Company to update Mr. Weatherby's Schedule 3 Appendix A-1, to include the AFUDC amounts?**

A. Yes. In DOC information request no. 1 dated November 13, 2013, I asked the Company to add a section at the end of Mr. Weatherby's Schedule 3 Appendix A-1 to include all AFUDC amounts assigned to Monticello LCM and EPU for the years 2004 to 2013. The Company included in their response (in Attachment A) the AFUDC amounts of $83.7 million assigned to the Construction Work in Progress (CWIP) amount of $636.7 million, plus the Retirement Work in Progress (RWIP or removal costs) amount of $28.2 million, for a total combined AFUDC cost of $748.6 million on a total company basis for the two projects. DOC Ex. ___ at NAC-7 (Campbell Direct).

**Q. Did you ask the Company to again update the final costs for the Monticello LCM and EPU projects as initially provided in response to DOC information request no. 1?**

A. Yes. On April 25, 2014, I asked the Company in information request no. 88 to updated Attachment A to show all actual costs of these projects through March 31, 2014 for CWIP, AFUDC and RWIP/removal costs. Plus, I asked the Company to provide a separate column for any remaining estimated costs after March 31, 2014 with an explanation of what remaining costs there are, if any.

**Q. What information did the Company provided in response to DOC information request no. 88?**

A. First, on Attachment A to the Company's response to DOC information request no. 88, the Company provided the actual costs as of March 31, 2014 of $752.6 million on a total company basis for Monticello LCM & EPU (which includes CWIP, AFUDC and RWIP/removal costs). The Company also provided additional estimated costs after March 31, 2014 of $4.1 million and estimated vendor settlement credits of ($8.6 million) for a net reduction to costs of ($4.5 million).

I note that using the $752.6 million actual costs through March 31, 2014 less the net reduction of costs of ($4.5 million) results in an estimated final combined cost for Monticello LCM and EPU projects of $748.1 million on a total company basis. The $748.1 million on a total company basis is comprised of $635.3 million for CWIP, $28.0 million for RWIP/removal costs, and $84.8 million for AFUDC. DOC Ex. ___ at NAC-8 (Campbell Direct).

**Q. Do you know which costs Department witness Mr. Shaw used in the models he used to evaluate whether the Monticello LCM and EPU projects are cost effective?**

A. Yes, he used the CWIP and RWIP/removal costs of $664.9 million noted in Mr. Weatherby's Schedule 3 Appendix A-1 and Mr. O'Connor's Schedule 7. He also included AFUDC costs in the models he used.

**Q. Did you ask the Company if it agrees that Xcel's response to DOC information request no. 88 represents the final total costs combined for Monticello LCM and EPU and that the Company agrees that CWIP, AFUDC and RWIP/removal costs make-up the total final costs?**

A. Yes. In response to DOC information request no. 89, the Company provided the following response:

> We assume that by "Above DOC information request" the DOC is referring to the immediately preceding DOC Information Request No. 88. The Company agrees that

> Attachment A to DOC Information Request No. 88 captures an estimate of final total cost of the Monticello LCM/EPU Project, including CWIP, AFUDC and RWIP. We note that the final total cost will include actual costs incurred after March 31, 2014, while DOC-88 Attachment A includes an estimate of those amounts.

DOC Ex. ___ at NAC-9 (Campbell Direct).

**Q. Since the $748.1 million still includes estimated costs and estimated vendor credits after March 31, 2014, which the Company plans to update to final costs of Monticello LCM and EPU projects, what do you recommend to address any final true-up of costs?**

A. I recommend that the Company file a compliance filing in this proceeding showing its final cost of the Monticello LCM and EPU, including all journal entries, as soon possible after the Company has incurred and recorded its final costs. I recommend that the Company explain any differences in such final costs from its estimated final costs as stated in response to DOC information 88, discussed above, which resulted in an estimated final cost of $748.1 million, on a total company basis.

I also recommend that the Company file this information no later than surrebuttal testimony, even if Xcel does not have a final number at that time so the Commission could consider its options such as whether to choose to take administrative notice of that information.

**Q. Did you review the Company's CWIP, AFUDC, and RWIP/removal costs for Monticello LCM and EPU projects?**

A. Yes. I conducted the following investigation:

- selected invoices for testing the accuracy of Xcel's calculation of CWIP costs,
- reviewed AFUDC calculations and their application to CWIP balances, and
- reviewed RWIP and removal costs.

**Q. What did you conclude from your investigation?**

A, Based on my review, I did not identify concerns with the accuracy of cost calculations included in the Monticello LCM and EPU projects that caused me to propose any adjustments.[4] Initially, I had some concerns with the Company's actual RWIP/removal costs of $28.3 million, since I was aware of the Company proposing to recover in its 2011 test year an $85.8 million estimate for RWIP/removal costs. I have included the Company's response to my concern with RWIP/removal costs as provided in response to DOC information request no 85; however, I did not pursue this issue because on a total recovery basis the Company appears to have under-recovered its Monticello total costs in prior years as discussed in the next section of my Direct Testimony. DOC Ex. ___ at NAC-10 (Campbell Direct).

**Q. Did you review the Company's rate recovery in past rate cases for the Monticello LCM and EPU projects?**

[4] Additionally, I did not attach to my Direct Testimony all DOC information requests and Company responses due to the number of responses, the size of some responses, and because some responses, such as invoice testing, were provided via disk. In case there is a desire for this information to be included in the record, for reference I note that DOC information request nos. 2 to 9 address AFUDC testing, DOC information request nos. 32-34 and 93 addresses invoice testing, and DOC information request nos. 29-30 and 84-87 address RWIP/removal costs.

A. Yes. I asked the Company in DOC information request nos. 84 to 87 about rate recovery of Monticello LCM and EPU projects compared to actual costs. In response to DOC information request no. 87, the Company provided a summary which shows that the Company likely under-recovered its Monticello LCM and EPU actual costs in comparison to the amount of costs that were included in rates in past rate cases, as follows:

| Year | Test Year MN Jurisdiction Revenue Requirement ($ in 000s) | Actual MN Jurisdiction Revenue Requirement ($ in 000s) | Difference |
|---|---|---|---|
| 2009 | 309 | 1,909 | 1,600 |
| 2011 | 17,374 | 19,361 | 1,987 |
| 2013 | 45,170 | 51,684 | 6,514 |
| 2014 | 79,615 | | |

DOC Ex. ___ at NAC-11 (Campbell Direct).

**Q. Based on your review of the Company's response above comparing test year recovery to actual costs on a revenue requirements basis for Monticello LCM and EPU projects, what do you note?**

A. First, I note that the Company's under-recovery for 2009 and 2011 was minor, only $1.6 million in 2009 and slightly less than $2 million 2011. Second, although the Company under-recovered costs by $6.5 million in the 2013 rate case, a portion of that cost was the result of the Monticello EPU not being in service, not only in 2011 as originally proposed but also not in 2013 (the EPU project was not used and useful and thus remained in CWIP rather than moving to base rates). Thus, the Company accrued an additional $6.4 million in AFUDC costs in 2013 as a result of the

Monticello EPU project remaining in CWIP. Third, the main reason for under recovery in the 2013 rate case was likely due to cost overruns.

**Q. Is it appropriate for Xcel to recover the higher AFUDC costs in 2013?**

A. I conclude that these costs need to be part of the overall assessment of the cost overruns. As noted above, the level of AFUDC increases over time so the level of AFUDC costs were higher in part because Xcel did a poor job in its 2012 Rate Case in meeting its responsibility to develop its budget cost recovery adequately to show that the rates they proposed to charge their customers were just and reasonable. Thus, the much higher costs for Monticello LCM and EPU projects (more than double its CN estimate (NSP Ex. ___ at 21 (Perkett Direct)) and Xcel's failings in its 2012 Rate Case should not be rewarded and should be considered in assessing the total costs of the cost overruns. As noted above, Mr. Shaw's analysis includes these costs; as a result, the Department's analysis incorporates the effects of the higher AFUDC costs.

## V. LACK OF COST CONTROLS AND TRACKING

**Q. Did you ask the Company about the costs Xcel estimated in its petitions for certificates of need (CN)?**

A. Yes. In response to DOC information request no. 94, the Company provided the following information (as summarized by the Department) regarding its CN estimated for Monticello LCM/EPU Docket No. E002/CN-08-185:

- Monticello LCM was estimated at $135 million (in 2004 $);
- Monticello EPU was estimated at $104, which increased $29 million to $133 million (in 2004 $) when the steam dryer was included;

- Monticello LCM/EPU total estimated cost is $320 to $346 million when escalated to current (2014) dollars. DOC Ex. ___ at NAC-5 (Campbell Direct).

**Q. How does the Commission's CN-approved cost for Monticello LCM and EPU compare to the estimated final costs of these projects as discussed above?**

A. The Commission's CN-approved costs of $346 million (escalated to current 2014 dollars and including the steam dryer) is a 116 percent cost overrun, or more than double compared to the total estimated final cost of $748.1 million.

**Q. Did the Company demonstrate that the manner in which it tracked its costs initially for the Monticello LCM and EPU made sense?**

A. No. The Company estimated the costs in the CN for Monticello in two separate components, the LCM and the EPU, which makes sense. However, for purposes of accounting the Company then (initially) tracked all costs in only one work order; this approach does not make sense, as I discuss below. Mr. Weatherby on page 8 of his Direct Testimony indicated that all of the Monticello LCM and EPU costs were accounted for in a single common work order, since the Company viewed the initiative as a single initiative. NSP Ex. ___ at 8 (Weatherby Direct).

**Q. Why doesn't it make sense for Xcel to have tracked the LCM and EPU in one work order?**

A First, Xcel treated the Monticello LCM and EPU projects as two separate projects for purposes of review and approval of the projects in CN proceedings before the Commission. Thus, it is not reasonable for Xcel to start tracking these costs for purposes of accounting as if they were one project. Xcel could have continued to track project costs separately and as combined, but Xcel eliminated any separate accounting of such costs. Xcel certainly knew or should have known that it would be subject to cost disallowance by the Commission at a later date as to cost overruns (costs in excess of the cost levels approved for the two projects in the CN) absent the Company's demonstration of the reasonableness of such costs, yet Xcel's practices assured that it would be very difficult to separately review the separate actual costs of the projects.

Second, Xcel's decision to include all of the costs of the Monticello LCM and EPU projects estimated at $346 million in a single work order is not reasonable since doing so guarantees that the costs of the two different projects are not transparent. When projects are significant even *before* cost overruns are incurred, it is important for tracking to be transparent to allow for better management of costs as the projects move forward. For this reason, when tracking costs in a work order it is common practice to break out the projects into in-service components rather than to just track $346 million as one large component for purposes of calculating AFUDC and for purposes of placing components in-service when work is completed. NSP Ex. ___ at 8 (Weatherby Direct).

Finally, I note that Xcel's choice in tracking these costs resulted in needlessly higher costs for this prudence review since it was necessary for the Department to hire a consultant to split apart what Xcel never should have put together.

**Q. Did the Company change its work order accounting process for Monticello LCM and EPU projects?**

A. Yes. According to Mr. Weatherby on pages 8 and 9 of his Direct Testimony, the Company began to create "child" work orders for certain modifications.[5] He noted that in preparation for and during the 2009 Monticello outage, the Company created a number of child work orders for various sub-projects. He also noted the child work orders were structured to roll up the individual sub-project costs to the overall parent work order. NSP Ex. ___ at 8-9 (Weatherby Direct).

**Q. Could the Commission rely on the child work orders to determine the cost of the Monticello LCM and EPU projects?**

A. Apparently not, due to the Company's contradictions in its positions in this proceeding. Mr. O'Connor's Schedule 7, which provides the Monticello LCM and EPU projects by child work orders and by year, states the title of that schedule as "EPU", as does almost every child work order. NSP Ex. ___ at Schedule 7 (O'Connor Direct). However, the Company's contradictory position in this proceeding is that most of the costs are LCM rather than EPU costs, based on the allocators provided by James R. Alders on pages 55 to 58 of his Direct Testimony. NSP Ex. ___ at 55-58 (Alders Direct).

Overall, the Company's tracking process for Monticello LCM and EPU projects does not make sense to me as an accountant.

**Q. What do you conclude about Xcel's tracking process for the Monticello LCM and EPU?**

[5] In general, "child" work orders allow costs subcomponents of a project to be rolled up to the "parent" work order. Here, Xcel used child work orders for modifications to the project.

A. Overall, the Company's tracking process for Monticello LCM and EPU projects does not make sense to me as an accountant for at least the following reasons. First, the Company combined significant work orders that never should have been combined, indicating that the Company did not think it was important to track the costs approved by the Commission in the CN process for Monticello LCM and EPU projects, or to report to the Commission and interested parties on a timely basis that they expected to have costs overruns that could make these projects not cost effective. Second, all of the Company's child work orders for modifications are labeled as being for the EPU, yet the Company claims in this proceeding the most of the costs are for the LCM. The point is that ratepayers are entitled to the benefit of any doubt as to Xcel's proposed showing of reasonableness and, thus, it is important to note that Xcel's selection of a non-transparent method of tracking costs appears to create significant doubt as to Xcel's claims regarding the attributable to one project rather than the other.

## VI. COST RECOVERY CHALLENGES IN MINNESOTA

**Q. Has the Department challenged a utility's cost recovery of generation costs based on the Commission's CN-approved amounts or competitive bids, compared to final costs of a project?**

A. Yes. There have been several wind projects in various rate cases where the Department has challenged the reasonableness of the utility's final cost recovery of costs exceeding the CN and competitive bids, including Xcel's Grand Meadow and Nobles projects (discussed below) and Interstate Power and Light's Whispering Willow – East (WWE), beginning in E001/GR-10-276. Additionally, the Department has challenged utilities' proposed automatic recovery through riders of cost overruns, which I discussed in more detail below.

**Q. Please discuss the Department's challenge of the recovery of the Grand Meadow wind farm costs that exceeded above the Commission's approved CN amount in Xcel's 2008 Rate Case.**

A. In Xcel's 2008 Rate Case, the Department challenged the cost overruns and recommended an adjustment for the Grand Meadow wind farm costs that exceeded the CN-approved amount. Specifically, I discussed this adjustment for the Company's costs of Grand Meadow that exceeded the CN approved amount on pages 45 to 51 of my direct testimony in the 2008 Rate Case. I also note as discussed in my surrebuttal testimony in the 2008 Rate Case on page 16 to 21, that the Company determined in response to my recommendation that it had overstated its Grand Meadow costs and reduced the cost to below the CN approved amount, which resolved this issue. Thus, it should have been clear to Xcel that costs exceeding the levels approved in a CN proceeding would be subject to careful scrutiny.

**Q. Did the Department challenge Xcel's proposed rate recovery of Nobles Wind above the Company's competitive bid amount in the 2010 and 2012 Xcel Rate Cases?**

A. Yes. The Department challenged the costs of Nobles Wind that exceeded the Company's competitive bid amount in both the 2010 (Docket No. E002/GR-10-971) and 2012 Rate Cases. In the 2010 rate case I discussed the Department's concerns regarding allowing the Company rate recovery of $10.2 million above their competitive bid (which entities other than the Company would not have been able to recover) on pages 91 to 101 of my direct testimony and pages 79-90 of my surrebuttal testimony in the 2010 rate case.

**Q. Did the Administrative Law Judges (ALJs) agree with your recommendations in both the 2010 rate case and the 2012 Rate Case?**

A. Yes. Both ALJs agreed with the Department that the Company should not be allowed to recover costs for Nobles Wind that exceeded the competitive bid. In the 2010 rate case the ALJ Report dated February 22, 2012 Finding no. 405 and in the 2012 Rate Case the ALJ Report dated July 5, 2013 Finding no. 444.

**Q. Did the Commission agree with the Department's recommendation and ALJ's findings in the 2010 and 2012 Rate Cases?**

A. Unfortunately, no. The Commission decided to allow the Company recovery of the costs above the competitive bid amount, but did not allow the Company a return on these costs in either the 2010 or 2012 Rate Cases. In the present case, the Department discusses below why Xcel's failure of proof in this proceeding should result in the Commission denying a portion of the significant cost overrun of Monticello EPU since that portion or level of cost overrun rendered the project not to be cost effective.

**Q. Did the Department challenge rate recovery of the WWE wind farm of Interstate Power and Light (IPL)?**

A. Yes. WWE was located in Iowa and therefore did not require a CN in Minnesota. Nor did IPL seek approval from the Commission prior to the plant being placed in service that the project was reasonable. As a result, to estimate reasonable costs of the project, the Department used the average cost of three other MN wind farms that went into service around the same time as WWE to determine a reasonable cost level. Based on the Department's review the Department determined a $51 per MWh levelized costs level, compared to IPL's $62.50 per MWh (at a minimum) levelized cost level.

**Q. Did the Commission and ALJ approve a lower levelized cost amount for WWE?**

A. Yes. After numerous rounds of review, the ALJ recommended in her October 16, 2013 Report in Docket No. E001/GR-10-312 that the Commission approve the levelized cost of $56.40 MWh for WWE that was developed in that proceeding, based on the utility's agreement with the Department. The Commission accepted the ALJ report in its December 26, 2013 Order.

**Q. What are some of the riders where the Department has challenged recovery of capital costs and the Commission has approved Department adjustments by capping costs in the riders?**

A. The following are some of the orders that address cost caps (not an exhaustive list):

- The Commission's February 7, 2014 Order in Docket No. E002/M-12-50 for the capped costs of the Bemidji transmission project to $74 million for Xcel.

- The Commission's March 10, 2014 Order in Docket No. E017/M-13-103 for the capped costs of the Bemidji transmission project to $74 million for Otter Tail Power.
- The Commission's April 22, 2010 Order in Docket No. E002/M-09-1083 for the capped costs of the Nobles Wind and Wind2Battery projects.
- The Commission's January 23, 2014 Order in Docket No. E002/M-00-1583, requiring Xcel to return to the Renewable Development Fund (RDF) cost overruns for an RDF contract that the Commission previously approved but was "improperly amended and imprudently administered" in 2004.

**Q. What was the Commission's language in its April 22, 2010 Order regarding why the Commission decided to cap costs that exceeded approved CN amounts or Commission approved amounts?**

A. The Commission's April 22, 2010 Order stated the following on page 5:

> The Commission will allow Xcel to recover, through its RES rider, only the costs up to the amounts of the initial estimates at the time the projects are approved as eligible projects. No amounts above what Xcel initially indicated the projects would cost will be allowed to flow through the RES rider. Nor will additional cost overruns be eligible for deferred accounting.
>
> However, Xcel will be allowed to seek recovery, on a prospective basis, of additional costs at the time of its next rate case, upon a showing that it is reasonable to require ratepayers to pay for any such additional costs. **This approach allows Xcel to recover the majority of the costs for projects eligible for RES rider recovery promptly, while providing at least some incentive for Xcel to minimize costs and help protect ratepayers. [Emphasis added]**

**Q. Most cases cited above focused on no return on costs over the CN level or other Commission approved amounts, and some cases did not allow recovery over caps until the Company's next rate case. Do you see the Monticello cost overruns as being different from these cases?**

A. I would have a concern about denying Xcel a rate of return on the amount of the Monticello LCM and EPU projects costs over the CN-approved levels since these amounts, $402.1 million costs, are significantly higher than any cost overrun the Department has ever reviewed and, to my knowledge, is higher than any Minnesota public utility has ever incurred. As discussed above, the CN-approved costs of $346 million (escalated to current 2014 dollars and including the steam dryer) is more than double, or a 116 percent costs overrun, compared to Xcel's total estimated final cost of $748.1 million. While such a high cost overrun seems to suggest that it would make sense not to allow the Company to earn a return on any costs above the CN-approved levels, I would have a concern about whether Xcel could continue to operate the plant safely with such a significant disallowance. Instead, the Department proposes a different approach.

## VII. RESULTING DEPARTMENT ADJUSTMENT

**Q. What does the Department recommend to hold the Company accountable for its significant cost overruns?**

A. Instead of focusing on the $402.1 million costs cost increase above the CN-approved levels, the Department recommends an adjustment based on the amount of the cost overrun that made the EPU not cost-effective, compared to other alternatives that were available in 2008, as discussed in Mr. Shaw's testimony. I discuss further below the specific adjustment resulting from this approach.

**Q. Why do you believe this approach is reasonable?**

A. This approach balances Xcel's needs with the need to protect ratepayers. As noted above, setting the level of disallowance at the amount above the CN-approved levels could be considered excessive. However, as noted by Mr. Shaw in his Direct Testimony, the Company's costs are so high that it has resulted in part of the Monticello EPU not being cost effective. From the Department's perspective, it would be unreasonable to conclude that the Company should be able to recover all of its significant cost overruns from ratepayers; including those costs that are not cost effective. Instead, the Department recommends that the Commission use an appropriate balance and deny cost recovery only of the amount of the EPU costs that made the EPU no longer cost-effective, as discussed in Mr. Shaw's testimony.

**Q. According to DOC Witness Mr. Shaw, what is the amount he determined to be not cost effective for Monticello EPU?**

A. Mr. Shaw calculated $84.445 million without AFUDC on a total company basis, adjusted for reductions for vendor credits resulting in an $82.906 million total company basis without AFUDC, as the amount that is not cost effective for the Monticello EPU project.

**Q. So far you have been discussing the information on a total company basis; however, what is the Minnesota jurisdictional amount?**

A. The Company provided in response to DOC information request 88 part (b) the interchange demand allocators and Minnesota jurisdictional demand allocators for 2004 to 2013, the years in which the Company incurred costs for Monticello. The Company provided the following Minnesota electric jurisdictional allocators:

| | Interchange Demand Allocator | Jurisdictional Demand Allocator |
|---|---|---|
| 2004 | 84.7975% | 88.1144% |
| 2005 | 84.2527% | 87.7581% |
| 2006 | 84.0611% | 87.6279% |
| 2007 | 84.2864% | 86.6512% |
| 2008 | 84.4224% | 86.7317% |
| 2009 | 83.8829% | 87.0761% |
| 2010 | 83.6422% | 87.9815% |
| 2011 | 83.8019% | 88.3621% |
| 2012 | 83.9899% | 88.1030% |
| 2013 | 84.8812% | 87.7158% |

DOC Ex. ___ at NAC-8 (Campbell Direct).

**Q. Using the above allocators what is the approximate allocator to translate the total company into a Minnesota jurisdictional amount?**

A. The Minnesota jurisdictional amount is determined by multiplying together the two allocators above (Interchange Demand Allocator and Jurisdictional Demand Allocator) for each year. This calculation results in approximately 73 percent up to 74.8

percent of the total company amount assigned to the Minnesota jurisdiction depending on the year.

Using the total company amounts that Mr. Shaw calculates as not being cost effective, with the application of these allocators results in an adjustment of $63.378 million without AFUDC on Minnesota Jurisdictional basis. I have provided the detailed calculation by year and in total on my adjustment for Monticello EPU spreadsheet that I have attached to my testimony. DOC Ex. ___ at NAC-12 (Campbell Direct).

**Q. Should the Department's adjustment include an adjustment for AFUDC?**

A. Yes, since AFUDC is a part of the total capitalized cost of the plant. To calculate this amount, I note that AFUDC's percentage is applied to the CWIP balance; for example a 5 percent AFUDC rate times a $100,000 CWIP balance results in $5,000 in AFUDC costs assigned to the project for the year. Ratepayers should not pay interest on capital costs that Xcel failed to demonstrate were reasonable and cost-effective. Therefore, a reduction to the CWIP balance would reduce the associated capitalized AFUDC amount.

**Q. How did you calculate the related AFUDC adjustment?**

A. I simply used the 14.82 percent disallowed costs on a total company basis for purposes of calculating the portion of the Monticello EPU that is not cost effective and applied this percentage to the total Company AFUDC amount assigned to the Monticello EPU of $72.632 million. This calculation results in disallowed AFUDC capital costs of $10.763 million on a total company basis, and $8.042 million on a

Minnesota jurisdictional basis, or an approximate $1.206 revenue requirement reduction due to the translation from capital costs to revenue requirement.

**Q. What is the total adjustment recommended by the Department for Monticello EPU portion of the plant that is not cost effective?**

A. Based on the development of issues in this proceeding, the Department recommends a total adjustment for the portion of the Monticello EPU portion of the plant that is not cost effective, including related AFUDC, of $71.42 million on a Minnesota jurisdictional basis and estimated to be less than a $10.713 million annual revenue requirement on a Minnesota jurisdictional basis for 2015, as shown on my adjustment spreadsheet.

I note this adjustment would be for the remaining life of the Monticello EPU, stepping down each year for accumulated depreciation. Because it appears that the Monticello EPU is unlikely to be in service in 2014, the Department recommends that the Monticello EPU prudency disallowance recommended by the Department in this proceeding of $71.42 million be reflected in 2015, to avoid overlap and unnecessary complications that would be caused by recommending both this adjustment and the separate 2014 rate-case adjustment (to reflect that the EPU is not expected to be in-service in 2014). Additionally, the in-service date of the Monticello EPU is likely to be closer to the beginning of 2015, rather than 2014, so making the adjustment in 2015 would tie better to when the EPU is expected to be used and useful. DOC Ex. ___ at NAC-12 (Campbell Direct).

**Q. How does this adjustment compare to other Company numbers in the Monticello proceeding and in the current rate case?**

A. I note the following comparisons:

- The estimated $10.713 million revenue requirement reduction for Monticello EPU based on 2014 data (which would be lower for 2015 due to accumulated depreciation) is 5.6 percent of the Company's total 2014 revenue requirement deficiency of $192.71 million or only 3.7 percent of the 2014 and 2015 step revenue requirement deficiency of $291.243 million, all reflected on a Minnesota Jurisdictional basis. NSP Ex. ___ at 1 (Heuer Direct) in Docket No. E002/GR-13-868.
- The $10.713 million revenue requirement reduction for Monticello EPU based on 2014 data is only slightly more than 0.36 percent of the Company's total revenue requirement of $2.982 billion for 2014 or only 0.34 percent of the Company's total revenue requirement of $3.081 billion for 2014 and 2015 step combined, all reflected on a Minnesota Jurisdictional basis. NSP Ex. ___ at 1 (Heuer Direct) in Docket No. E002/GR-13-868.
- On a capital cost basis, the $71.42 million Department adjustment for the Monticello EPU that is not cost effective is only 12.9 percent of the Monticello total plant cost, which had a 116 percent cost overrun.

**Q. What if the Company has a higher or lower amount for the final cost of Monticello LCM and EPU than the $748.1 million on a total company basis?**

A. Since Monticello is not yet in service, the final costs are not known and may not be known by the time the Commission decides this case and Xcel's concurrent rate case. However, it is my expectation that the method I propose above for the disallowance in this proceeding could be applied to any further costs or offsets to costs. If, for example, the Company were to incur an additional $10 million in costs above the $748.1 million, then 85.7 percent (DOC consultants recommended allocator for EPU costs) of that $10 million or $8.57 million on total company basis would be not be cost-effective on top of the DOC's recommended adjustment for costs that are not shown to be cost-effective of $748.1 million at this time.[6]

**Q. Have you attached your Direct Testimony and related attachments regarding the Monticello EPU in-service date issue that you raised in Xcel's rate case, Docket 13-868?**

A. Yes. For ease of reference, I have attached my Direct Testimony and related attachments regarding the Monticello EPU in-service date issue that I raised in Xcel's concurrent rate case. However, I note that it is the Department's intention to address the Monticello EPU prudency in this proceeding (ultimately rolling the Commission decision into the rate case revenue requirement) and to address the Monticello EPU in-service date concern in the current rate case. DOC Ex. ___ at NAC-13 (Campbell Direct).

[6] In this example, if the $10 million is all attributable to the EPU, then the full $10 million would not be cost effective and not recoverable in rates.

## VIII. SUMMARY OF RECOMMENDATIONS

**Q. Please summarize your conclusions and recommendations for Monticello LCM and EPU Projects.**

A. My recommendations for Monticello LCM and EPU projects are as follows:

- The Monticello plant has issues, including the NRC status of degraded cornerstone, along inadequate planning and management for the Monticello LCM and EPU projects.
- The DOC consultants (Mark Crisp and William Jacobs) raised significant issues in their Direct Testimony about inadequate upfront planning and insufficient understanding about the true scope of the work, along with inadequate oversight of contractors that likely resulted in higher costs of Monticello LCM and EPU projects.
- Based on my concerns noted above regarding transparency, I conclude that the Company did not monitor its costs for Monticello LCM and EPU projects approved in the CN compared to actual costs being incurred. I have concerns with inconsistencies in how the Company tracked costs for accounting purposes compared to CN/IRP purposes that did not tie together or make sense. Additionally, I conclude that the Company should have filed a NOCC as soon as they were aware that the Monticello LCM and EPU project costs were expected to be significantly higher than the amount approved by the Commission in the original CNs, with an evaluation as to whether the Monticello LCM and Monticello EPU projects continued to be cost effective.

- Based on my review, I conclude that estimated final costs for Monticello LCM and EPU projects are $748.1 million on a total company basis, using actual information through March 31, 2014 and estimated vendor credits. The $748.1 million on a total company basis is comprised of $635.3 million for CWIP, $28.0 million for RWIP/removal costs, and $84.8 million for AFUDC. DOC Ex. ___ at NAC-8 (Campbell Direct).
- As noted above, the Department has challenged rate recovery of amounts that have exceeded CN approved amounts, competitive bids, and other amount approved by the Commission. However, the Department has limited its recommended adjustment in this proceeding to the amount of the Monticello EPU that is not cost effective.
- The Department recommends that the Commission disallow $71.42 million on a Minnesota jurisdictional basis with AFUDC costs, for the portion of the Monticello EPU that was not cost-effective due to cost overruns, which is approximately a $10.713 million revenue requirement reduction. This disallowance would continue for the remaining life of the plant, stepping down each year due to accumulated depreciation. DOC Ex. ___ at NAC-12 (Campbell Direct).
- The Department recommends that this adjustment be made in 2015.

**Q. Does this conclude your Direct Testimony?**

A. Yes.

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

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION
121 7th Place East, Suite 350
St Paul MN 55101-2147

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| IN THE MATTER OF A COMMISSION INVESTIGATION INTO XCEL ENERGY'S MONTICELLO LIFE CYCLE MANAGEMENT AND EXTENDED POWER UPRATE PROJECT AND REQUEST FOR RECOVERY OF COST OVERRUNS | MPUC Docket No. E002/CI-13-754<br>OAH Docket No. 48-2500-31139 |

**DIRECT ATTACHMENTS OF NANCY A. CAMPBELL**

**ON BEHALF OF**

**THE MINNESOTA DEPARTMENT OF COMMERCE**
**DIVISION OF ENERGY RESOURCES**

**JULY 2, 2014**

**Summary of Attachments to the**

**Direct Testimony of Nancy A. Campbell**

**MPUC Docket No. E002/GR-13-754**

**OAH Docket No. 48-2500-31139**

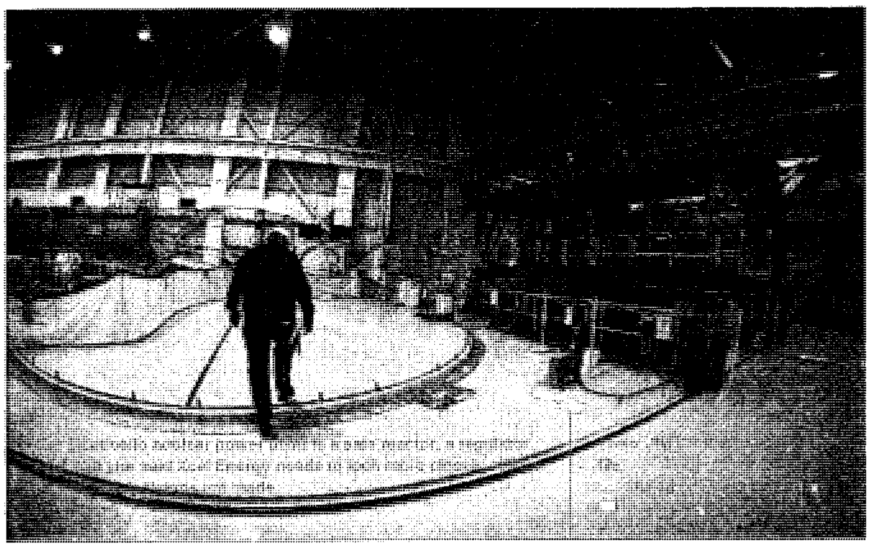
Docket No. E002/CI-13-754
DOC Ex. ____ NAC-1



# NRC troubled by 'degraded' performance at Monticello nuclear plant

Article by: DAVID SHAFFER , Star Tribune | Updated: April 1, 2014 - 9:07 AM

U.S. inspectors last year cited Xcel Energy for inadequate catastrophic flood planning. Now, the Nuclear Regulatory Commission wants to know why.





A top U.S. Nuclear Regulatory Commission official said Monday that Xcel Energy's Monticello nuclear power plant needs to improve its "degraded" performance in light of a serious lapse discovered last year in the reactor's flood-response plans.

"It is imperative that the licensee identify the depth and breadth of their performance issues and take corrective action," Cynthia Pederson, the NRC's regional administrator, said in an interview with the Star Tribune.

Pederson, who is based in Lisle, Ill., spoke Monday in Monticello at the plant's annual regulatory meeting for community members and plant workers. Such meetings usually are low-key events. Regional administrators typically attend only when a plant has slipped into a "degraded" status on one of NRC's "cornerstone" or significant performance issues.

Pederson said Monticello remains a safe nuclear reactor. However, she said Xcel managers need to look at how decisions are made and at "multiple examples of inadequate procedures or use of procedures."

Last June, NRC inspectors faulted the Monticello plant, which is on the banks of the Mississippi River, for being unprepared for worst-case flooding. The finding was classified as having "substantial safety significance," which is one step below the most serious safety shortcoming in NRC's rating system.

Xcel says it has corrected the problem by placing dike-building materials on site in case of a catastrophic flood. The plant is 40 miles northwest of the Twin Cities.

"There is always a surface-level answer," said Pederson, a native of Bemidji, Minn., who was appointed to the top regional post last August. "But you have to ask multiple 'why' questions. ... They need to get to the depth of the issue such that when they formulate their corrective action, they make sure they are dealing with the fundamental performance issues."

Karen Fili, Xcel's site vice president at Monticello, said the company "has performed a root-cause evaluation" and is implementing performance improvement plans.

"The NRC is aware of the progress being made and will continue monitoring the actions we take to continue to improve," Fili said in a statement.

The inadequate flood preparedness finding was the Monticello plant's most serious safety shortcoming since the NRC adopted a color-coded, four-step ranking system for inspection results. That flood preparedness problem was ranked "yellow," just below "red," the most serious, level. (The two lowest levels are "green" and "white.")

Pederson said the NRC also is concerned about lesser white and green findings at the plant that revealed weaknesses in human performance. She said the NRC will conduct extra inspections this year to assure that Xcel, the state's largest utility, is addressing regulators' concerns.

The federal scrutiny comes as the Minnesota Public Utilities Commission also is investigating whether it was prudent for Xcel to spend $665 million to extend the Monticello plant's life and boost its output. The upgrade cost more than double the original estimate.

In a separate action, the NRC on Friday issued the second and final amendment to the plant's license allowing it to operate at 671 megawatts, up from 600 megawatts. Xcel, which completed the plant upgrade last year, has been operating at the old power level. The company said it is still testing the systems, but expects to ramp up to the new power level by midyear.

David Shaffer • 612-673-7090 Twitter: @ShafferStrib

Xcel Energy

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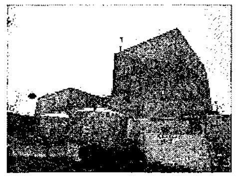

Xcel Energy's planning for a major flood at its Monticello nuclear power plant was found to be inadequate by federal inspectors.
**JIM GEHRZ • Star Tribune file**

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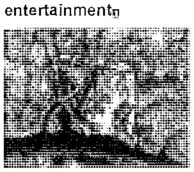

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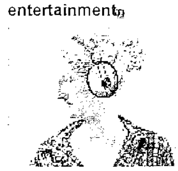

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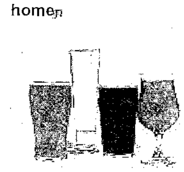

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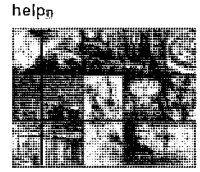

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| Xcel Energy | | | |
| Docket No.: | E002/GR-13-868 | | |
| Response To: | Office of Attorney General | Information Request No. | 116 |
| Requestor: | Ian Dobson | | |
| Date Received: | April 11, 2014 | | |

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Question:

For all responses show amounts for Total Company and the Minnesota jurisdictional electric unless indicated otherwise. Total Company is meant to include costs incurred by Xcel Energy Services and NSP Minnesota, both regulated and non-regulated operations.

Reference: Nuclear Plants.

A recent news article documented NRC concerns regarding deficiencies at NSP's Monticello nuclear plant which were raised in conjunction with an open meeting in Monticello.

(a) Explain the concerns raised by the NRC and NSP's response to those concerns.
(b) Provide a summary of all communications with the NRC regarding the safety and operations of NSP's nuclear plants during the years 2012, 2013, and through March 2014. Provide the date of the communications, the docket number if applicable, and a short description of the issues addressed in the communications.

Response:

The referenced news article was not specified in the request, so we are not able to confirm we are addressing the referenced article's content. However, we understand this question to be related to the April 2, 2014 public meeting with the NRC held at the Monticello Community Center.

(a) At the April 2nd meeting, the NRC Regional Administrator stated that the NRC believes the Monticello plant is being operated in a safe manner. However, the NRC did identify two areas of concern that are being worked on. One concern identified was the Monticello plant's ability to respond to a probable maximum external flood event as contained in the plant's operating license. The second area of concern was human performance.

The external flooding concern focused on the plants' capability to construct a wall along the river by the plant's intake structure to preclude flood waters from impacting the safe operation of the plant. In response to the NRCs's concern, in 2012 the Company revised its External Flooding Response Procedure to incorporate use of a large metal wall along with an earthen berm barrier, in order to protect the required plant safety equipment from the postulated external flood in accordance with the plant's design and licensing basis. Use of the metal wall was a new action and the NRC raised a question regarding how long it would take to construct the wall because the plant had not taken actions to validate how long erection of the wall would take. This led the NRC to conclude that the plant made an inappropriate/non conservative procedure change (requiring the wall installation) without understanding the impacts of the change. This conclusion led the NRC to issuing a finding classified as "yellow" based on the safety significance[1].

Monticello's external flooding procedure was corrected shortly after the concern was raised by the NRC. Materials were procured and delivered to the plant site to ensure that construction times could be met. The External Flooding Procedure was revised to credit erection of the metal wall in a timely fashion such that the conditions specified in the operating license could be met. In its June 11, 2013 letter informing us of their preliminary yellow finding, the NRC acknowledged our action, stating, "[o]n February 15, 2013, actions were completed to reduce the flood mitigation plan timeline to less than 12 days by developing an alternate plan for flood protection features, pre-staging equipment and materials, improving the quality of the A.6 procedure, and preplanning work orders necessary to carry out Procedure A.6 actions." In order to close the yellow finding, the NRC is required by its procedures to conduct a follow-up inspection to ensure the plant has addressed their concerns. This inspection is still pending.

The concern regarding human performance stems from several examples where human performance issues contributed to a number of findings of low safety significance that were identified by the NRC over the course of several inspections. In aggregate, the NRC determined that these human performance issues crossed the threshold for what the NRC calls a Substantive Cross-Cutting

[1] There are four levels of NRC findings with safety significance, the lowest level of concern being "green", and the highest level being "red." In between are "white," which is higher than green, and "yellow" which is higher than white but lower than red.

finding in the area of human performance. These human performance concerns were determined to be manifested in Inadequate Procedure and Work Instruction(s) preparation and usage. Many of the human performance issues were attributed to a loss of experience and skills within the Operations Department. Interim actions have been put in place by the plant to bridge the experience gaps, such as additional Control Room Oversight and coaching. Another area that was identified as a human performance issue was contractor procedure usage and control of work activities. During the recent EPU refueling outage, several thousand contractors were brought on-site to execute a very complex outage scope. During the contractors' in-processing, it was discovered that a substantial number of supplemental workers had limited nuclear experience. Although additional oversight was provided from both Xcel Energy and the primary vendors to mitigate the inexperience of the contract workforce, the limited experience of contractors was a major contributor to the procedure and work instruction human performance events at the plant.

(b) The table below identifies the written correspondence between Xcel Energy and the NRC regarding the "Yellow" finding and Human Performance issues discussed in response to part (a) of this information request. In addition to the written correspondence reported in the table, communication with the NRC is accomplished in many ways. The plant sites meet weekly with the NRC's resident inspectors and communicate monthly with contacts at the NRC's regional office. In addition, there are a series of meetings conducted with personnel at NRC headquarters in Washington DC. The NRC formally communicates in correspondence containing annual and mid-cycle assessments, as well as periodic inspection reports to document their safety and operations concerns. We list below the formal Mid-Year and End-of-Year Performance Assessments for 2012, 2013 and 2014, and the inspection reports for this same period. Xcel Energy's correspondence on the "Yellow" finding with regard to the flood issue is also identified in the list below:

| Date of Report | Description of Document and Issues Addressed | Addresses Yellow Finding | Addresses Human Cross Cutting Issue |
|---|---|---|---|
| Mar 4, 2014 | ANNUAL ASSESSMENT REPORT NO. 05000263/2013001. Provides annual assessment and includes an inspection plan. | X | X |
| Sep 3, 2013 | MID-CYCLE ASSESSMENT REPORT 05000363/2013006. Provides the mid-cycle assessment and includes an inspection plan. | X | |
| Mar 4, | ANNUAL ASSESSMENT LETTER REPORT NO. | | |

| Date of Report | Description of Document and Issues Addressed | Addresses Yellow Finding | Addresses Human Cross Cutting Issue |
|---|---|---|---|
| 2013 | 05000263/2012001. Provides annual assessment and includes an inspection plan. | | |
| Sep 4, 2012 | MID-CYCLE ASSESSMENT LETTER - MONTICELLO NUCLEAR GENERATING PLANT. Provides the mid-cycle assessment and includes an inspection plan. | | |
| Mar 5, 2012 | ANNUAL ASSESSMENT REPORT NO. 05000263/2011007. Provides annual assessment and includes an inspection plan. | | |
| Feb 12, 2014 | EMERGENCY PREPAREDNESS ANNUAL INSPECTION REPORT NOS. 05000263/2013501; 05000263/2013502. Provides the notice of completion of the annual inspection of the Emergency Preparedness Program at Monticello. | | |
| Feb 7, 2014 | INTEGRATED AND POWER UPRATE INSPECTION REPORT NOS. 05000263/2013005 AND 07200058/2013001. Provides the integrated inspection report at Monticello covering a three-month period of inspection by resident inspectors. Three green findings were identified. | | X |
| Dec 30, 2013 | EVALUATIONS OF CHANGES, TESTS, AND EXPERIMENTS, PERMANENT PLANT MODIFICATIONS BASELINE INSPECTION, AND POWER UPRATE INSPECTION REPORT 05000263/2013007. Documents the results of the inspection, which examined activities conducted under the license as they relate to safety and compliance with the NRC's rules and regulations and with the conditions of our license. Four green findings were identified. | | X |
| Nov 18, 2013 | INTEGRATED AND POWER UPRATE INSPECTION REPORT 05000263/2013004 AND EXERCISE OF ENFORCEMENT DISCRETION. Documents the results of the inspection. Four green findings were identified. | | X |
| Nov 5, 2013 | SECURITY BASELINE INSPECTION REPORT 05000263/2013406. Documents the results of the inspection. One green finding was identified. | | X |
| Aug 28, 2013 | FINAL SIGNIFICANCE DETERMINATION OF A YELLOW FINDING WITH ASSESSMENT FOLLOWUP AND NOTICE OF VIOLATION; NRC INSPECTION REPORT NO. | X | |

| Date of Report | Description of Document and Issues Addressed | Addresses Yellow Finding | Addresses Human Cross Cutting Issue |
|---|---|---|---|
| | 05000263/2013009. Documents the final significance determination of the preliminary yellow finding. | | |
| Aug 28, 2013 | EMERGENCY PREPAREDNESS BIENNIAL EXERCISE INSPECTION REPORT NO. 05000263/2013503. Documents the completion of the inspection. No findings were identified. | | |
| Aug 5, 2013 | INTEGRATED INSPECTION REPORT AND POWER UPRATE REVIEW INSPECTION REPORT 05000263/2013003. Docuuments the results of the inspection. Two green findings were identified. | | X |
| Jun 11, 2013 | NRC INSPECTION REPORT 05000263/2013008; PRELIMINARY YELLOW FINDING. Documents the results of the inspection. Identifies the preliminary yellow finding regarding the flood plan and one green finding. | X | X |
| May 13, 2013 | INTEGRATED AND POWER UPRATE REVIEW INSPECTION REPORT 05000263/2013002. Documents the results of the inspection. Two green findings were identified. | X | X |
| Feb 6, 2013 | INTEGRATED INSPECTION REPORT 05000263/2012005. Documents the results of the inspection. One green finding was identified. | X | X |
| Jan 7, 2013 | EMERGENCY PREPAREDNESS ANNUAL INSPECTION REPORT NOS. 05000263/2012501 AND 05000263/2012502. Documents the completion of the inspection. | | |
| Nov 5, 2012 | INTEGRATED INSPECTION REPORT 05000263/2012004. Documents the results of the inspection. Two green findings were identified. | X | X |
| Aug 9, 2012 | INTEGRATED INSPECTION REPORT 05000263/2012003. Documents the results of the inspection. Two green findings were identified. | | X |
| Apr 17, 2012 | INTEGRATED INSPECTION REPORT 05000263/2012002. Documents the results of the inspection. Four green findings were identified. | | X |
| Mar 28, 2014 | LER 2013-007-01 "Unanalyzed Condition Due to Inadequate Flooding Procedures." Includes a supplement to the Licensee Event Report for this event. | X | |
| Oct 28, 2013 | LER 2013-007 "Unanalyzed Condition Due to Inadequate Flooding Procedures." Provides the | X | |

| Date of Report | Description of Document and Issues Addressed | Addresses Yellow Finding | Addresses Human Cross Cutting Issue |
|---|---|---|---|
| | Licensee Event Report for this event. | | |
| Jul 11, 2013 | Response to an Apparent Violation in NRC Inspection Report 05000263/2013008. Provides the Company's response to the apparent violation and includes additional information for the NRC's consideration in its final determination of the significance of the apparent violation. | X | |
| Jun 19, 2013 | Notification of Intention Regarding NRC Inspection Report 05000263/2013008. Provides notice of the Company's intent to submit a formal position in writing. | X | |

Note:

1. The reports that address the issues raised during the April 2, 2014 NRC public Meeting have been marked with an "X" on the Table's right two columns.
2. We include as Attachment A to this response the most recent annual assessment letter as an example for your review. We include as Attachment B to this response the August 28, 2013 Final Significance Determination of the yellow finding.

---

Witness: Timothy J. O'Connor
Preparer: Mark A. Schimmel
Title: Site Vice President
Department: Nuclear
Telephone: 612-215-4613
Date: April 28, 2014

UNITED STATES
**NUCLEAR REGULATORY COMMISSION**
REGION III
2443 WARRENVILLE RD. SUITE 210
LISLE, IL 60532-4352

March 4, 2014

Ms. Karen Fili
Site Vice President
Monticello Nuclear Generating Plant
Northern States Power Company, Minnesota
2807 West County Road 75
Monticello, MN 55362-9637

SUBJECT: ANNUAL ASSESSMENT LETTER FOR MONTICELLO NUCLEAR GENERATING PLANT (REPORT 05000263/2013001)

Dear Ms. Fili:

On February 12, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed its end-of-cycle performance review of Monticello Nuclear Generating Plant. The NRC reviewed the most recent quarterly performance indicators (PIs) in addition to inspection results and enforcement actions from January 1, 2013 through December 31, 2013. This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility.

The NRC determined the performance of Monticello Nuclear Generating Plant during the most recent quarter was within the Degraded Cornerstone Column of the NRC's Reactor Oversight Process (ROP) Action Matrix because of one Yellow finding, with substantial safety significance, in the Mitigating Systems Cornerstone. The finding involved the failure to maintain a procedure addressing all of the effects of an external flooding scenario on the plant. This failure resulted in the site not being able to support the timely implementation of flood protection activities within the 12-day timeframe credited in the design basis as stated in the Updated Final Safety Analysis Report.

In addition to ROP baseline inspections, the NRC plans to conduct a supplemental inspection in accordance with Inspection Procedure (IP) 95002, "Supplemental Inspection for One Degraded Cornerstone or Any Three White Inputs in a Strategic Performance Area." Your staff has not yet notified the NRC of your readiness for a supplemental inspection to review the actions taken to address the performance issues.

The NRC identifies substantive cross-cutting issues (SCCIs) to communicate a concern with the licensee's performance in a cross-cutting area and to encourage the licensee to take appropriate actions before more significant performance issues emerge. The NRC identified a cross-cutting theme in the Human Performance Resources component. Specifically, four or more inspection findings for the current 12-month assessment period were assigned a cross-cutting aspect of H.2(c), "Complete, accurate and up-to-date design documentation, procedures, and work packages, and correct labeling of components." The NRC determined that an SCCI exists because the NRC has a concern with your staff's scope of effort and progress in addressing the cross-cutting theme associated with H.2(c). The NRC noted that your staff had recognized this potential cross-cutting theme in the second quarter of the assessment period. Your staff performed an apparent cause evaluation and developed corrective actions. However, these actions have not yet proven effective in substantially mitigating the cross-cutting theme even though a reasonable duration of time has passed.

This human performance SCCI will remain open until the number of findings with a cross-cutting aspect of H.2(c) is reduced, the corrective actions taken to mitigate the cross-cutting theme prove effective, and sustained performance improvement is observed in the H.2(c) aspect of the human performance area. The NRC will monitor your staff's effort and progress in addressing the SCCI by evaluating your corrective action program, any root cause evaluations for the SCCI, and performance improvement initiatives.

As a result of the Safety Culture Common Language Initiative, the terminology and coding of cross-cutting aspects were revised. All cross-cutting aspects identified during inspections conducted in calendar year 2014 will reflect this revision to Inspection Manual Chapter (IMC) 0310. The CY 2013 end-of-cycle assessments were conducted using the IMC 0310 guidance in effect in CY 2013 (dated October 28, 2011). Cross-cutting aspects identified in 2013 using the 2013 terminology will be converted to the latest revision in accordance with the cross-reference in IMC 0310 during the mid-cycle assessment review and evaluated for cross-cutting themes and potential substantive cross-cutting issues in accordance with IMC 0305. The SCCI in the Human Performance area identified during this assessment period will be carried forward to the mid-cycle assessment period using the revised terminology.

The enclosed inspection plan lists the inspections scheduled through June 30, 2015. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last nine months of the inspection plan are tentative and may be revised at the mid-cycle performance review. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes. This inspection plan does not include security related inspections, which will be sent via separate, non-publicly available correspondence.

Additionally, an NRC audit of licensee efforts towards compliance with Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" is ongoing. This audit includes an onsite component in order for the NRC to evaluate mitigating strategies as described in licensee submittals, and to receive and review information relative to associated open items. This onsite activity will occur in the months prior to a declaration of compliance for the first unit at each site, and will ultimately aid staff in development of Safety Evaluation for the site. The date for the onsite component at your site is being coordinated with your staff. A site-specific audit plan for the visit will be provided in advance to allow sufficient time for preparations.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure, will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records System (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Please contact Kenneth Riemer at (630) 829-9628 with any questions you have regarding this letter.

Sincerely,

***/RA/***

Cynthia D. Pederson
Regional Administrator

Docket Nos. 50-263
License Nos. DPR-22

Enclosure:
Monticello Nuclear Generating Plant
Inspection/Activity Plan

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staff in development of Safety Evaluation for the site. The date for the onsite component at your site is being coordinated with your staff. A site-specific audit plan for the visit will be provided in advance to allow sufficient time for preparations.

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Cynthia D. Pederson
Regional Administrator

Docket Nos. 50-263
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Enclosure:
Monticello Nuclear Generating Plant
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Letter to Karen Fili from Cynthia Pederson dated March 4, 2014

SUBJECT: ANNUAL ASSESSMENT LETTER FOR MONTICELLO NUCLEAR GENERATING PLANT (REPORT 05000263/2013001)

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Northern States Power Company


02/25/2014 13:42:47
Report 22

**Monticello**
**Inspection / Activity Plan**
**03/01/2014 - 06/30/2015**

| Unit Number | Planned Dates Start | End | Inspection Activity | Title | No. of Staff on Site |
|---|---|---|---|---|---|
| | | | **BI ENG** | **- FIRE PROTECTION INSPECTION & BAG TRIP** | **7** |
| 1 | 02/24/2014 | 03/28/2014 | IP 7111105T | Fire Protection [Triennial] | |
| | | | **ISFSI** | **- ISFSI OPERATION INSPECTION** | **2** |
| 1 | 02/01/2014 | 05/31/2014 | IP 60855.1 | Operation of an Independent Spent Fuel Storage Installation at Operating Plants | |
| | | | **BI RP** | **- RADIATION PROTECTION BASELINE INSPECTION** | **1** |
| 1 | 03/24/2014 | 03/28/2014 | IP 71124.01 | Radiological Hazard Assessment and Exposure Controls | |
| | | | **BI EPR** | **- EP ROUTINE INSPECTION / PI VERIFICATION** | **2** |
| 1 | 07/07/2014 | 07/11/2014 | IP 7111402 | Alert and Notification System Testing | |
| 1 | 07/07/2014 | 07/11/2014 | IP 7111403 | Emergency Preparedness Organization Staffing and Augmentation System | |
| 1 | 07/07/2014 | 07/11/2014 | IP 7111405 | Correction of Emergency Preparedness Weaknesses and Deficiencies | |
| 1 | 07/07/2014 | 07/11/2014 | IP 71151 | Performance Indicator Verification | |
| | | | **BI RP** | **- RADIATION PROTECTION BASELINE INSPECTION** | **1** |
| 1 | 08/04/2014 | 08/08/2014 | IP 71124.05 | Radiation Monitoring Instrumentation | |
| | | | **PI&R** | **- BIENNIAL PI&R INSPECTION** | **1** |
| 1 | 09/22/2014 | 10/10/2014 | IP 71152B | Problem Identification and Resolution | |
| | | | **BI RP** | **- RADIATION PROTECTION BASELINE INSPECTION** | **2** |
| 1 | 10/27/2014 | 10/31/2014 | IP 71124.06 | Radioactive Gaseous and Liquid Effluent Treatment | |
| 1 | 10/27/2014 | 10/31/2014 | IP 71151-BI01 | Reactor Coolant System Activity | |
| 1 | 10/27/2014 | 10/31/2014 | IP 71151-OR01 | Occupational Exposure Control Effectiveness | |
| 1 | 10/27/2014 | 10/31/2014 | IP 71151-PR01 | RETS/ODCM Radiological Effluent | |
| | | | **BI RP** | **- RADIATION PROTECTION BASELINE INSPECTION** | **1** |
| 1 | 12/01/2014 | 12/06/2014 | IP 71124.08 | Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation | |
| | | | **BI RP** | **- RADIATION PROTECTION BASELINE INSPECTION** | **1** |
| 1 | 01/12/2015 | 01/16/2015 | IP 71124.03 | In-Plant Airborne Radioactivity Control and Mitigation | |
| 1 | 01/12/2015 | 01/16/2015 | IP 71124.04 | Occupational Dose Assessment | |
| | | | **BI RP** | **- RADIATION PROTECTION BASELINE INSPECTION** | **1** |
| 1 | 03/02/2015 | 03/06/2015 | IP 71124.01 | Radiological Hazard Assessment and Exposure Controls | |
| 1 | 03/02/2015 | 03/06/2015 | IP 71124.02 | Occupational ALARA Planning and Controls | |
| | | | **BI ISI** | **- ISI INSPECTION** | **1** |
| 1 | 04/11/2015 | 05/11/2015 | IP 7111108G | Inservice Inspection Activities - BWR | |
| | | | **OL PREP** | **- INIT EXAM/JUNE 2015** | **3** |
| 1 | 05/11/2015 | 05/15/2015 | W90331 | OL - INITIAL EXAM - 2015 MAY-JUN - MONTICELLO | |

This report does not include INPO and OUTAGE activities.
This report shows only on-site and announced inspection procedures.

**Monticello**
**Inspection / Activity Plan**
**03/01/2014 - 06/30/2015**

| Unit Number | Planned Dates Start | End | Inspection Activity | Title | No. of Staff on Site |
|---|---|---|---|---|---|
| | | | **OL PREP** | **- INITIAL EXAM - 10/2014** | 3 |
| 1 | 06/01/2015 | 06/05/2015 | W90307 | OL - INITIAL EXAM - 2014 AUG-APR - MONT | |
| | | | **OL EXAM** | **- INIT EXAM/JUNE 2015** | 3 |
| 1 | 06/01/2015 | 06/12/2015 | W90331 | OL - INITIAL EXAM - 2015 MAY-JUN - MONTICELLO | |
| | | | **OL PREP** | **- INITIAL EXAM - 10/2014** | 3 |
| 1 | 06/08/2015 | 06/12/2015 | W90307 | OL - INITIAL EXAM - 2014 AUG-APR - MONT | |
| | | | **BI ENG** | **- COMPONENT DESIGN BASIS INSPECTION** | 1 |
| 1 | 06/22/2015 | 07/24/2015 | IP 7111121 | Component Design Bases Inspection | |

This report does not include INPO and OUTAGE activities.
This report shows only on-site and announced inspection procedures.

**UNITED STATES**
**NUCLEAR REGULATORY COMMISSION**
Region III
2443 Warrenville Road, Suite 210
Lisle IL 60532-4352

August 28, 2013

EA-13-096

Ms. Karen Fili
Site Vice President
Monticello Nuclear Generating Plant
Northern States Power Company, Minnesota
2807 West County Road 75
Monticello, MN 55362-9637

SUBJECT: FINAL SIGNIFICANCE DETERMINATION OF A YELLOW FINDING WITH ASSESSMENT FOLLOWUP AND NOTICE OF VIOLATION; NRC INSPECTION REPORT NO. 05000263/2013009; MONTICELLO NUCLEAR GENERATING PLANT

Dear Ms. Fili:

This letter provides you the final significance determination of the preliminary Yellow finding discussed in our previous communication dated June 11, 2013, which included U.S. Nuclear Regulatory Commission (NRC) Inspection Report No. 05000263/2013008. The finding involved the licensee's failure to maintain a procedure addressing all of the effects of an external flooding scenario on the plant. Specifically, Monticello Nuclear Generating Plant (Monticello) failed to maintain flood Procedure A.6, "Acts of Nature," such that it could support the timely implementation of flood protection activities within the 12-day timeframe credited in the design basis as stated in the updated safety analysis report.

In a letter dated July 11, 2013, you provided a response to the NRC staff's preliminary determination regarding the finding. In your July 11, 2013, letter, you agreed there was a performance deficiency; and, you provided additional information for the NRC's consideration in its final determination of the significance of the apparent violation. You provided a probabilistic risk analyses to support a best-estimate assessment of the significance of the finding as well as a bounding analyses to support the final significance determination prior to corrective actions taken by the site. Based on your analysis, you concluded that the best-estimate risk assessment was of very low safety assessment, with a bounding assessment of low-to-moderate risk. Enclosure 1 provides our detailed assessment of the major points that you raised in your letter, along with our final assessment.

The NRC determined that the information provided in your letter did not change the NRC's bounding quantitative evaluation nor did it change the qualitative evaluation attributes used for the NRC's decision making, as communicated to you in our preliminary risk assessment. As a result, the conclusions reached in our preliminary significance determination process (SDP) evaluation remain unchanged. Therefore, after considering the information developed during the inspection and the additional information provided in your letter dated July 11, 2013, the NRC has concluded that the finding is appropriately characterized as Yellow; a finding having substantial safety significance.

You have 30 calendar days from the date of this letter to appeal the staff's determination of significance for the identified Yellow finding. Such appeals will be considered to have merit only if they meet the criteria given in Inspection Manual Chapter 0609, Attachment 2, "Process for Appealing NRC Characterization of Inspection Findings (SDP Appeal Process)." An appeal must be sent in writing to the Regional Administrator, Region III, 2443 Warrenville Road, Lisle, IL 60532-4352.

The NRC has also determined that the failure of Northern States Power Company, Minnesota to maintain a procedure addressing all of the effects of an external flooding scenario on the plant is a violation of Technical Specification 5.4.1 as cited in the Notice of Violation (Notice) provided in Enclosure 2. The circumstances surrounding the violation were described in detail in NRC Inspection Report No. 05000263/2013008. In accordance with the NRC Enforcement Policy, the Notice is considered escalated enforcement action because it is associated with a Yellow finding.

The NRC has concluded that information regarding the reasons for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance was achieved, is already adequately addressed on the docket in NRC Inspection Report No. 05000263/2013008. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

As a result of our review of Monticello's performance, including this Yellow finding in the Mitigating Systems Cornerstone, we have assessed the plant to be in the Degraded Cornerstone column (Column III) of the NRC's Action Matrix, as of the second quarter of 2013. Therefore, we plan to conduct a supplemental inspection using Inspection Procedure 95002, "Supplemental Inspection for One Degraded Cornerstone or Any Three White Inputs in a Strategic Performance Area," when your staff has notified us of your readiness for this inspection. This inspection procedure is conducted to provide assurance that the root cause and contributing causes of risk significant performance issues are understood, the extent of condition and the extent of cause are identified, and the corrective actions are sufficient to prevent recurrence. In addition, this procedure is conducted to provide an independent determination of whether safety culture components caused or significantly contributed to the risk-significant performance issues.

For administrative purposes, this letter is issued as NRC Inspection Report 05000263/2013009. Additionally, apparent violation (AV) 05000263/2013008-01 is now closed, and violation (VIO) 05000263/2013008-01 is opened in its place.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. The NRC also includes significant enforcement actions on its Web site at http://www.nrc.gov/reading-rm/doc-collections/enforcement/actions.

Sincerely,

***/RA/***

Cynthia D. Pederson
Regional Administrator

Docket No. 50-263
License No. DPR-22

Enclosures:
1. Analysis of Licensee Information
2. Notice of Violation

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## ANALYSIS OF LICENSEE INFORMATION

In your July 11, 2013, letter, you provided information that the probable maximum flood was not an instantaneous event, but rather a slowly developing evolution that you believe allows for plant staff to monitor, predict, prepare, and implement appropriate actions to provide the required flood protection. You provided data to show that the probability of a probable maximum flood at the site was extremely low. You provided additional insight into estimation of Mississippi River exceedance probabilities based on annual peak flood estimates. You estimated flood frequencies using a split record approach for spring and summer.

You provided information regarding human error probabilities (HEPs) for flood mitigation actions. Specifically, you changed certain HEPs to match the NRC-derived values discussed in the preliminary risk assessment, except for the HEPs associated with inventory control and decay heat removal (i.e., manual operation of reactor core isolation cooling (RCIC) and hard pipe vent). You stated that following identification of the performance deficiency, actions were taken to procure the bin wall and levee materials, and with these materials in place, performance of a reasonable simulation demonstrated that the levee and bin wall system could now be installed within the available time as defined in the licensing basis.

You provided information about an open house session to share information with members of the Monticello community on its operations and preparedness to handle potential emergencies and how it would respond to flooding, earthquakes and other unforeseen challenges. Finally, you provided information on an expert panel that you assembled to examine the behavioral and cultural aspects impacting decision making within the nuclear business unit.

NRC Evaluation

Regarding preparation for extreme flood events, for the construction of the bin wall and levee at the time of the violation, we maintain our position that you did not have procedures in place and would not have been able to construct the bin wall and levee system within the required time stated in the licensing basis. The NRC agreed that, as of February 15, 2013, you had taken action to pre-stage the necessary material and that, based on simulation results, the levee and bin wall system could be installed within the time frame stated in the licensing basis.

Regarding flood frequencies, the NRC noted that you used a split record method as opposed to the traditional single annual exceedance approach used by the NRC and recommended by the Army Corps of Engineers. One concern identified with the split-record approach is that a dependency is expected between the two seasons given that a record flow may be affected by an early or late snowmelt. We understand you chose this method because there is a difference in probability distributions considering the individual seasons and you wanted to determine whether you could gain some risk insight as to how predictable a flood would be during the different seasons. You determined that overall above 930' elevation summer floods were just as likely as the spring floods. Also, you used the $84^{th}$ percentile flood hazard curve as a best estimate to develop the initiating event frequencies. We noted that applying your $90^{th}$ and $95^{th}$ percentile hazard curve frequencies to the NRC human error probability modeling assumptions did not change the NRC's preliminary estimation of significance for this issue. Overall, the uncertainty of the frequency estimates was large enough that the NRC's preliminary estimation of frequency remained valid and unchanged when weighted against defense-in-depth and other risk-informed information.

Regarding manual operation of RCIC and the hard pipe vent, the NRC determined that your revised HEPs were much more credible than the overly optimistic values used in your earlier analysis. Yet the NRC determined that the HEPs were still too low because they did not address potential challenges in running RCIC for an extended period of time during or after the flood event. For example, during the manual operation of RCIC validation process, the NRC noted that you found that reactor water level monitoring, as specified in the RCIC procedure, would not work as written, without additional actions by instrumentation and controls (I&C) or operations personnel, outside of the procedure, to obtain valid level readings. Your position was that there would be time for plant staff to informally troubleshoot in order to obtain the correct level indications, and that the level discrepancies could easily be corrected by an individual with an I&C background and an individual with an operations background. Further, Procedure A.6 did not direct manual operation of RCIC and the hard pipe vent; instead, those actions were directed by the Emergency Director or Technical Support Center judgment. The plant would be originally aligned for cold shutdown for this event which was not factored into job performance measures developed subsequent to this issue; and as a result, it did not appear to have been addressed as an item contributing as a potential source of human error. In the preliminary analysis, the NRC stated that little credit was granted for other sites for similar findings. Monticello has not shown that its strategy was significantly different than strategies at other sites, thus the NRC HEP value for operating RCIC during extended flood-induced Station Blackout remained unchanged.

The NRC appreciated the information that you provided about the open house session and the expert panel. However, we did not consider this information to affect our significance determination assessment.

# NOTICE OF VIOLATION

| | |
|---|---|
| Northern States Power Company, Minnesota<br>Monticello Nuclear Generating Plant | Docket Nos. 50-263<br>License Nos. DPR-22<br>EA-13-096 |

During an NRC inspection conducted from September 24, 2012, to May 15, 2013, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

> Technical Specification Section 5.4.1 requires, in part, that written procedures be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978.
>
> Regulatory Guide 1.33, Revision 2, Appendix A, Paragraph 6 addresses "Procedures for Combating Emergencies and Other Significant Events" and lists Item w "Acts of Nature (e.g., tornado, flood, dam failure, earthquakes)" as an activity under Paragraph 6 to be covered by written procedures.
>
> Contrary to the above, from February 29, 2012, to February 15, 2013, the licensee failed to maintain a flood plan to protect the site against external flooding events. Specifically, the site failed to maintain flood Procedure A.6, "Acts of Nature," such that it could support the timely implementation of flood protection features within the 12-day timeframe credited in the design basis, as stated in the updated safety analysis report.

This violation is associated with a Yellow SDP finding.

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance was achieved is already adequately addressed on the docket in NRC Inspection Report No. 05000263/2013008 and in your letter dated July 11, 2013. However, you are required to submit a written statement or explanation pursuant to Title 10 of the Code of Federal Regulations Section 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, EA-13-096" and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region III, and a copy to the NRC Resident Inspector at the Monticello Station, within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html. Therefore, to the extent possible, the response should not include any personal privacy or proprietary information so that it can be made available to the Public without redaction.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 28th day of August, 2013

should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. The NRC also includes significant enforcement actions on its Web site at http://www.nrc.gov/reading-rm/doc-collections/enforcement/actions.

Sincerely,

***/RA/***

Cynthia D. Pederson
Regional Administrator

Docket No. 50-263
License No. DPR-22

Enclosures:
1. Analysis of Licensee Information
2. Notice of Violation

cc w/encls: Distribution via ListServ

**SEE PREVIOUS CONCURRENCE**

FILE NAME: G:\ORAIII\EICS\ENFORCEMENT\Cases\Enforcement Cases 2013\EA-13-096 Monticello Flooding\EA-13-096 Monticello draft final significance letter.docx

| OFFICE | RIII | RIII | RIII | RIII | D:OE | RIII | RIII |
|---|---|---|---|---|---|---|---|
| NAME | Lougheed | Passehl | Riemer | O'Brien | Zimmerman[1] LCasey | Orth | Pederson |
| DATE | 08/20/13 | 08/21/13 | 08/20/13 | 08/21/13 | 08/26/13 | 08/28/13 | 08/28/13 |

***OFFICIAL RECORD COPY***

1 OE concurrence received via email from L. Casey on August 26, 2013.

Letter to Mark Schimmel from Cynthia D. Pederson dated August 28, 2013

SUBJECT: FINAL SIGNIFICANCE DETERMINATION OF A YELLOW FINDING WITH ASSESSMENT FOLLOWUP AND NOTICE OF VIOLATION; NRC INSPECTION REPORT NO. 05000263/2013009; MONTICELLO NUCLEAR GENERATING PLANT

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Docket No. E002/CI-13-754
DOC Ex. ____ NAC-3

# Nuclear expert to help study Monticello plant's cost overruns

Article by: David Shaffer
Star Tribune
November 14, 2013 - 9:29 PM

Minnesota regulators are hiring a nuclear expert for their investigation of Xcel Energy Inc.'s massive cost overruns during upgrades to its Monticello nuclear power plant.

The state Public Utilities Commission on Thursday decided that a consulting engineer would help the state Commerce Department review the $665 million spent to extend the plant's life and boost its output. The final cost was more than double the original estimate.

The PUC in August decided to investigate whether the investment was prudent — and whether ratepayers should pay for the overruns. The Minneapolis-based utility last month submitted to regulators a lengthy explanation, asserting that the five-year project turned out to be more complicated than first envisioned, but still worth doing.

A nuclear expert who reviewed Xcel's response at the request of the Star Tribune said regulators should consider whether the company had strong managers leading the complex project to replace pumps and other key equipment originally installed during the plant's construction in the late 1960s.

"These were major construction projects for which Xcel admittedly had little in-house experience," said David Lochbaum, director of the Union of Concerned Scientists Nuclear Safety Project.

The state's investigation will be overseen by an administrative law judge who will hold a hearing similar to a trial. The state's expert has not yet been hired. A Commerce Department official said the posting for the temporary consulting job hasn't gone up yet.

The construction project, completed in June at Minnesota's oldest operating nuclear reactor 45 miles northwest of the Twin Cities, allows Xcel to keep the plant running another 20 years and to increase power output by 12 percent.

In a recent regulatory filing, Xcel said that in December 2011 — about two years into the project — the company hired nuclear industry veteran Karen Fili as vice president-nuclear projects to take charge of the Monticello upgrade. Fili implemented "rigorous project management controls" after 2011, but was unable to halt the escalating costs, Xcel Chief Nuclear Officer Timothy O'Connor said in written testimony.

Lochbaum said that suggests Xcel's management acted too late.

"I don't think it's unfair in hindsight to suggest that acquiring experienced, skilled managers up front during the planning and before the implementation phases would have been prudent," Lochbaum said in an e-mail. "Xcel could have hired a baseball team's worth of experienced managers circa 2008 and used that skill to avoid far greater cost overruns."

Xcel denies that it had weak management early in the project. In an e-mail response to the Star Tribune, the company said the work became more challenging as the project evolved. After one phase of work in 2011, the company "analyzed the remaining work ... and determined a change in approach was warranted to most efficiently complete the remaining work while maintaining safe plant operations."

In August, Fili was named the Monticello plant's top executive.

The cost-overrun investigation is expected to last into 2014, and is likely to play a role in the PUC's eventual decision on Xcel rates. The company in October asked for a $291 million rate hike that will raise customers' bills 4.6 percent increase in January, with a slightly larger increase possible in 2015.

If the PUC declares some of the Monticello costs imprudent, Xcel investors, rather than ratepayers, would pick up the tab.

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| | | | |
|---|---|---|---|
| Xcel Energy | | | |
| Docket No.: | E002/CI-13-754 | | |
| Response To: | Department of Commerce | Information Request No. | 020 |
| Requestor: | Nancy Campbell, Chris Shaw & Steve Rakow | | |
| Date Received: | December 10, 2013 | | |

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Question:

Reference: Star Tribune November 14, 2013 article "Minnesota to hire an expert as its studies Monticello cost overruns" The above referenced article suggests that a lack of strong managers contributed to the costs overruns at Monticello. The article also suggests that management controls after 2011 were too late and that acquiring experienced and skilled managers up front during the planning and before implementation would have been prudent. How does the Company respond to these concerns raised in this article?

Response:

Xcel Energy appreciates the perspective raised in the news article but does not believe that the Company's project management practices before or after 2011 materially contributed to the magnitude of the costs incurred. We established project management practices that were appropriate to the circumstances we encountered. As the complexity of the job increased, we adapted our practices to address those evolving circumstances. While the Company's filing acknowledges our actions were not perfect during the Program's eight-year duration, the costs we incurred were reasonable and necessary to achieve the desired outcome of upgrading Monticello for an additional 20 years of safe and reliable operations at increased capacity levels. We provide this additional detail to support our conclusion that the criticisms in the news article were not justified.

**Overview**

The article suggests two shortcomings in our performance: (i) the lack of strong management in the beginning, and (ii) the 2011 management practices were too late to be effective. We respectfully disagree with both assertions.

Our initial project management structure was adequate to the circumstances at the beginning of the Program and modifying those practices in 2011 to meet evolving circumstances was appropriate and effective. While actual costs were significantly higher than anticipated, it was not because of ineffective or late project management practices. While we did not do a good job of forecasting the costs we incurred, those costs were all necessary and reasonable to achieve the desired outcome. This issue is described at length on pages 58 through 90 of my Direct Testimony.

Our record shows strong performance in terms of safety, quality and NRC compliance, which are fundamental priorities in any nuclear project. Weak performance in these areas would not only increase project costs, it would create significant safety issues, which typically require stand-downs that delay work and further increase costs. Poor quality assurance performance can cause costs down the road if the work is not implemented properly. And the NRC's heightened oversight of project work makes managing compliance critical to a successful outcome.

We were successful at ensuring the work was done well, as demonstrated by the fact that we have thus far experienced no significant equipment issues after start-up. Mr. Stall's testimony (page 60) recognizes that Monticello "could readily be expected to result in relatively more difficulties than were encountered here. The relative absence of problems speaks well for the quality of design and implementation."[1] Our safety results were also much better than expected. We had no radiation dose exposure issues and only two OSHA recordable events in our most difficult 2013 outage (which was much lower than the experience at another recent EPU implementation).

Oversight of the quality of design and engineering was also strong. We proactively addressed issues as they arose. For example, we were strict in requiring our vendors' to provide quality designs and rejected design work when it did not meet our specifications. Several pieces of equipment required rework to meet our standards. Other equipment was rejected, including one motor that did not perform according to our specifications and a pump that was damaged prior to delivery to the plant and had to be returned and reworked. We deployed resources to manufacturing sites to assure our standards were being met. For example, in 2010 we rejected all vendor designs and required recovery plans to meet our expectations. We had strong quality assurance/quality control (QA/QC) practices under which we rigorously reviewed

[1] Only minor performance concerns have been identified. We are monitoring one minor issue with a pump seal. If performance of that piece of equipment degrades, we may need to take the unit off-line for a few days to repair it.

project performance and required rework when necessary to comply with our requirements. We validated performance and as a result the Program encountered no compliance issues. These practices and the internal leadership was in place at the outset to achieve these results in both our 2009 and 2011 outages before the changes referenced in the Star Tribune article were made.

All of these examples demonstrate our proactive management and were important to the Program's ultimate success. We have acknowledged in my testimony that we could have done a better job in forecasting costs and sharing information about cost increases sooner. This does not mean the costs would have changed. Our adoption of a different approach to project management in 2011 did not avoid incurring costs. Indeed, our greatest cost increases occurred in the 2013 outage, despite having brought in additional internal and external resources.

**Initial Project Structure:**

We initially implemented a series of core principles that guided project implementation. Many of these controls around engineering and quality worked extremely well. We implemented project controls consistent with other capital projects within the nuclear department. Our vendors contracts include an orderly process for change orders. We also require vendors to develop and implement recovery plans to overcome performance issues that arise during implementation. We also implement rigorous QA/QC procedures to ensure quality control.

An internal project manager led the team and oversaw our key contractors, General Electric (design/engineering) and Day Zimmerman (initial installations). Project staff was separate from the regular staff at the plant and reported through our project management function. That structure worked reasonably well during the scoping, high-level design and initial implementation phases of the Program. The initial team was responsible for developing the project, refining the scope, and seeking the EPU certificate of need and the NRC license amendment. While we encountered challenges in attracting and retaining qualified resources throughout this process, our team was able to develop a reasonable project management plan.

**2009 and 2011 Implementation**

Initial implementation was reasonably successful. While we experienced some delay and cost increases in 2009, the magnitude of the issues we encountered during that implementation outage were not beyond those often encountered in other major construction projects at an operating nuclear plant. The following chart compares the planned duration and cost with our actual experience.

| 2009 Outage | Duration | Costs Incurred |
|---|---|---|
| Planned | 45 days | $25 million |
| Actual | 56 days | $34 million |
| Ratio of Actual to Planned | 1.24 | 1.36 |

The work on the 2009 outage included (i) high pressure turbine replacement; (ii) low pressure turbine modification; (iii) cross around relief valve (CARV) replacement; (iv) power range neutron monitor (PRNM) installation; (v) replace the 1AR transformer; and (vi) piping and instrumentation modifications. This work went relatively well. The costs incurred during the 2009 outage were not the result of imprudent oversight but rather were attributable to expected scope changes and complications that we encountered with respect to the alignment of the turbine. A key success in 2009 was installation of the PRNM system, which was installed without operational issues. (No other utility has successfully implemented this system without initial startup issues.)

After the 2009 outage we assessed our performance and concluded that our project management practices remained reasonable. We immediately began work on preparation for the second outage. Planning for implementation of a major capital project takes significant preparation, and coordination. Xcel Energy's team was charged with overseeing our contractors for that preparatory work. We decided to continue using Day Zimmerman as our lead installation contractor because of their experience with the Program and their performance in the 2009 outage.[2]

In 2010 (during the planning process) we determined that remaining work needed to be split into two outages. By splitting the remaining work we allowed ourselves time to complete final designs and planning, ensured our vendors met design and quality specifications. We also avoided conflicts with other work in 2011 as the Company was also installing the CapX2020 transmission upgrades at the Monticello substation and it would have been difficult to proceed with the electrical work at Monticello while the CapX2020 work was going on. At the same time, our NRC license

[2] We noted that some key personnel had left the contractor for other firms, and we addressed these concerns with Day Zimmerman senior management who indicated that they had retained sufficient quality personnel to continue in this role. Based on those discussions we believed Day Zimmerman retained reasonable experience and the ability to proceed with implementation of the 2011 outage.

amendment was delayed so taking additional time to ensure quality installations did not adversely impact our customers. Rather, that decision was prudent project management based on the evolving circumstances we encountered.

The results from the 2011 outage are shown below.

| 2011 Outage | Duration | Costs Incurred |
|---|---|---|
| Planned | 65 days | $101 million |
| Actual | 81 days | $133 million |
| Ratio of Actual to Planned | 1.25 | 1.32 |

While the 2011 outage had its challenges, we were successful in deploying a number of important systems, including: (i) replacement of the 14 A/B and 15 A/B feedwater heaters, (ii) main transformer replacement; (iii) condensate demineralizer replacement; (iv) steam dryer replacement; (v) generator rewind; and (vi) piping and conduit work for 13.8 kV system. A key success in 2011 was the steam dryer replacement, which has been an issue at other units.

Our concerns arising from the 2011 outage were only in part about outage duration and cost (which, while over the forecast, were within a range similar to the 2009 outage) but more about the level of resource commitment from other plant personnel that was required to achieve this result. We also were concerned about the adequacy of internal estimates of our overall project costs. With respect to our first concern, our primary contractors were not as effective as we had hoped in 2011, requiring our personnel to fill some gaps that took them away from their other work. The difficulties we encountered in 2011 suggested that the remaining work for final implementation would be significant and that it was not sustainable to rely as heavily on internal resources.

## Evolving Project Management Structure

As a result, during and immediately following the 2011 installations, we began adapting our process to ensure that we had additional resources in place to complete the work. We recognized that it was evolving and final implementation was going to be difficult and complex and we decided to deploy additional resources to ensure success.

In late 2010, we retained Bechtel as our primary contractor to assist us generally with nuclear projects. (Bechtel began helping with a number of projects at Prairie Island but initially was not involved with the LCM/EPU Program.) Early in 2011 we began discussions with Bechtel to determine if they had the capacity to assist us with the final stages of the LCM/EPU Program at Monticello. When the 2011 outage was concluded we decided to bring Bechtel in as our primary contractor because of its greater depth and experience.

Also at the conclusion of the 2011 outage, the Company undertook a project management assessment for its nuclear department generally. We identified a number of improvement opportunities. Actions related to staffing, construction estimates, design process, safety education, spare parts inventory, project controls and cost tracking were proposed.

Specifically for the LCM/EPU Program, we hired a new internal project manager as our initial manager had met his five-year commitment to Xcel Energy and resigned to take a job managing an EPU program for another utility. We changed plans to better implement the NRC-mandated fatigue rules (this was a newer rule that significantly impacted our labor practices and our ability to hire qualified craft). We adapted our procedure to improve the integration of station personnel and project personnel. We implemented improvements in expediting change request process. And we implemented changes to better integrate emerging technologies such as 3-D models and computerized support.[3]

In late 2011, the Company hired Karen Fili as a new Vice President-Nuclear Projects to oversee all projects for the nuclear department. The newspaper article implies that this decision was a sign that the early project management at Monticello was not strong enough. We respectfully disagree. Ms. Fili is a recognized industry expert and while she clearly brought value to the remaining Monticello effort, she was hired to implement consistent project procedures across the nuclear department, not just the Program.[4] Upon joining the Company, Ms. Fili took steps to reorganize the nuclear capital project group, including (1) realigning the group's structure; (2) emphasizing individual budget and forecasting; and (3) establishing firm outage milestones. This

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[3] We also determined that we needed additional executive oversight of projects given the large number of them anticipated. At this time we also had the Prairie Island steam generator project as well as the Prairie Island LCM/EPU project on our horizon.

[4] In hiring a Vice President-Nuclear Projects, we recognized that we had a large number of significant capital projects, including the Monticello LCM/EPU; but also the Prairie Island Steam Generator Project and at the time we began our search, the combined Prairie Island LCM/EPU projects. The goal with a VP of Projects was to assure a systematic approach to project management of the various plants and plant projects.

systematic approach meant that the history of each unit's project oversight needed to be reviewed and the best practices adapted for a single form of oversight.

The Company and Bechtel had over 18 months to put in place a detailed plan for the final 2013 implementations. Rather than being 'too late' (as suggested in the news article) we were well positioned to implement the final modifications. Nevertheless, the 2013 outage exceeded our initial estimate by roughly $52 million which is more than the higher than expected cost from both the 2009 and 2011 outages combined.

| 2013 Outage | **Duration** | **Costs Incurred** |
|---|---|---|
| Planned | 85 days | $99 million |
| Actual | 138 days | $151 million |
| Ratio of Actual to Plan | 1.62 | 1.53 |

Even with our more detailed planning and reporting helped provide more transparency on how and why costs were incurred; however, we could not keep costs from increasing because the costs were necessary to complete the modifications successfully.

## Conclusion

At the time the Company initiated the Program, we implemented controls and established a dedicated team to oversee the initiative that were adequate for that effort, especially given the vendors we had in place for the overall scope of the initiative. As the Program proceeded, we faced additional challenges and responded appropriately by changing our key implementation vendor and adding additional executive oversight of all nuclear projects. This change was a reasonable response to evolving circumstances.

It is easy to assume, as suggested by the article, that the mere fact that changes were made in the course of an eight year project meant the original approach was deficient. However, the facts support that the changes we made, while attempting to improve our planning, forecasting and implementation, would not have materially impacted costs either down or up. The costs we incurred were reasonable and necessary to make the Program a success. Adapting our processes and procedures to evolving circumstances is precisely what we believe our stakeholders expect of the Company.

| | |
|---|---|
| Preparer: | Timothy J. O'Connor |
| Title: | Chief Nuclear Officer |
| Department: | Nuclear Operations |
| Telephone: | 612-330-7643 |
| Date: | December 24, 2013 |

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|---|---|---|---|
| Xcel Energy | | | |
| Docket No.: | E002/CI-13-754 | | |
| Response To: | Department of Commerce | Information Request No. | 94 |
| Requestor: | Nancy Campbell, Chris Shaw | | |
| Date Received: | April 25, 2014 | | |

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Question:

Reference: Docket Nos. E002/CN-05-123 and E002/CN-08-185

Based on DOC's review of the two above referenced certificate of need (CN) dockets, the Department considers the below numbers (including pages references to CN's) to be the breakout of costs for Monticello for CN purposes.

a) Please confirm if Xcel agrees with the numbers below, or if not please explain the Company's disagreement with the numbers.
b) Are the ISFSI costs included in the Company's final cost for the Monticello LCM/EPU of $664,918,471 (Scott Weatherby's Schedule 3, Appendix A-1) as of August 2013, excluding AFUDC and removal costs?
c) Are the ISFSI costs included in the Company's filing for the Monticello Cost Overrun (E002/CI-13-754)? If no, should these costs be included? Please explain your response.

| | |
|---|---|
| Monticello Life Cycle Management (LCM) | $135 million |
| Monticello Extended Power Uprate (EPU) | $133 million |
| Independent Spent Fuel Storage Installation (ISFSI) | $ 55 million |

1. Xcel's Petition, dated February 14, 2008, in Docket No. E002/CN-08-185 (Monticello EPU), page 1-6:

   The total project cost for the power uprate will be approximately $104 million. The final cost will depend upon whether a new steam dryer is required.[2] If required, the new steam dryer will add $29 million to the project for a total project cost of $133 million.

[2] Equipment has been installed to assess the need for the new steam dryer. The decision will be made after analyzing data obtained following startup after the 2009 uprate modifications are complete.

2. Xcel's Petition, dated January 18, 2005, in Docket No. E002/CN-05-123 (Monticello LCM), states at page 1-12:

   Based on the plant assessment and industry experience in the relicensing process, Monticello identified and included approximately $135 million in investments above normal annual investments that may occur in the future as part of the cost benefit analysis associated with license renewal.

3. Xcel's Petition, dated January 18, 2005, in Docket No. E002/CN-05-123 (Monticello LCM), states at page 1-12:

   The estimated installed cost of the ISFSI in 2004 dollars is $55 million. The estimate includes the following component costs:

| | |
|---|---|
| Regulatory Process | $2.0 M |
| Engineering and Design | $12.0 M |
| Plant Upgrades | $4.0 M |
| ISFSI construction | $3.5 M |
| 30 canisters and storage | $26.0 M |
| Canister Loading Campaigns | $7.5 M |

<u>Response</u>:

a) We agree that these are numbers that were presented in those two separate Certificate of Need proceedings.

   However, we note that the ISFSI Certificate of Need pertained to the on-site fuel storage facility itself, not life-cycle management activities that would be needed if Monticello's operating license was extended. In the 2005 ISFSI Certificate of Need filing, we requested authority to install the on-site fuel storage facility whether or not Monticello's operating license was extended because we identified a need for on-site storage even if Monticello were to have been shut down at the end of its initial operating license in 2010. The LCM activities described in the ISFSI Certificate of Need filing were representative of the types of activities we anticipated would be needed if the NRC extended our operating license and we anticipated the potential for additional items as new information became available. (*See* ISFSI CON Application, p. 5-13.)

We also note that in the 2008 EPU Certificate of Need filing, the Company provided economic inputs to the cost benefit analysis for the EPU project, that included an updated estimate of LCM capital spending (above normal annual investments) of approximately $170 million (including the addition of the Steam Dryer) along with the $133 million for the uprate. The remainder of the initial $320-346 million modeled in that docket was built through escalation of the costs over time. Those amounts were based on additional project design and scoping in 2007.

In the Company's 2011 test year rate case (E002/GR-10-971), we updated costs for the total LCM/EPU Project of about $361 million, including both uprate and life-cycle management costs, through 2011. (Koehl Direct, p. 31.) In rebuttal testimony, we further updated the estimate at $399.1 Million for the jointly-managed and implemented LCM/EPU Program. (Koehl Rebuttal, p. 15.) In November 2011, our prior Chief Nuclear Officer, Mr. Koehl, testified at hearing that the final cost of the Project was expected to be approximately $550-600 million. In our 2012 rate case (Docket E002/GR-12-961) the Company further updated the estimated cost to $587 million. The Company had spent approximately $494 million on the project as of August 31, 2012. (O'Connor Direct p. 17.) We further updated that estimate in our response to Information Request DOC-160, in the rate case to approximately $640 million. In the current rate case, we provided our latest estimate of the overall LCM/EPU Project costs as $655 million.

b) No. The direct ISFSI costs (for additional dry cask storage of spent nuclear fuel) has never been part of either the estimated or actual Monticello LCM/EPU Project costs, from the inception of the Project. The ISFSI work was its own separate project based on the Commission's granting of the Certificate of Need in Docket E002/CN-05-123. ISFSI additional dry cask storage of spent nuclear fuel construction work has always been planned, managed, and constructed separately from LCM/EPU Project work. The Company separately considered and approved the ISFSI work as part of the decision to seek an extended operating license. In addition, on page 5-15 of the ISFSI Certificate of Need Application, we note that $55 million for the ISFSI project is included as a cost in the Strategist Model that was constructed to compare the cost of Monticello to other alternatives. In addition, as a separate item, on pages 5-12 and 5-13 of the ISFSI Certificate of Need Application we also included $135 million for LCM upgrades as a separate amount.

c) No. While the ISFSI costs are referenced in the 2005 certificate of need, they have not been treated as part of either the LCM or EPU activities at the plant. The ISFSI was needed irrespective of whether Monticello's operating license was extended or whether the Company had increased the capacity of the plant. As noted on page 1-10 of the ISFSI Certificate of Need Application: "The need for dry on site storage is not eliminated if the plant does not operate beyond 2010. If a Certificate of Need were not granted, the Monticello plant would shut down by the end of 2010. In order to decommission the plant, spent fuel would have to be removed from the reactor and spent fuel pool. A dry storage facility utilizing 40 storage containers would be needed in order to decommission the plant." Thus, the ISFSI has never been considered a cost of continued operations. The costs of potential LCM upgrades necessary to support an extended operating license were treated separately from the costs of the ISFSI itself.

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| | |
|---|---|
| Preparer: | Terry A. Pickens / Scott L. Weatherby |
| Title: | Director, Regulatory Policy / VP, Nuclear Finance & Business Planning |
| Department: | Regulatory Policy / Nuclear Finance & Planning |
| Telephone: | 612-330-1906 / 612-330-7643 |
| Date: | May 7, 2014 |

Post-Hearing Supplemental Testimony
Dennis L. Koehl

Before the Minnesota Public Utilities Commission
State of Minnesota

In the Matter of the Application of Northern States Power Company,
a Minnesota corporation
for Authority to Increase Rates for Electric Service in Minnesota

OAH Docket No. 15-2500-21773-2
Docket No. E002/GR-10-971
Exhibit___(DLK-3)

**Nuclear Operations**

August 25, 2011

A. Yes. We installed a significant portion of the life cycle management/extended power uprate project during the Spring 2011 outage completed in June. The costs of the work completed in the Spring outage were greater than anticipated as the planned scope of work expanded to address unanticipated impacts on support systems. Costs for the spring outage including both RWIP and CWIP were closed into service at approximately $188 million, about $42 million above the project levels forecasted for the Spring outage. The current CWIP balance as of June 30, 2011 was approximately $195 million. Total project costs incurred through June 30 are approximately $419 million compared to an estimated $399 million included in the rate case for the entire year. We currently forecast that the project capital expenditures will exceed $500 million.

Q. WHAT IS CAUSING THE COSTS TO INCREASE?

A. There are a number of reasons for the increase. Primary causes of the increase in costs are due to greater knowledge of the ultimate scope of work necessary to complete the projects and significantly greater complexity in implementing this work than had been forecast. As our degree of planning and design has matured, the impacts of the life cycle management/extended power uprate project on affected systems and components is broader than originally estimated. For example, support system work is more extensive than initially contemplated. Where we had projected that some of the life cycle management/extended power uprate work could be implemented fairly seamlessly with equipment change-outs, we are realizing that the upgraded equipment often requires upgraded support infrastructure as well. That is, if we change a pump or turbine, we may also need to upgrade the piping system serving that unit or the electrical system related to that unit and conduct

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|---|---|---|---|
| Xcel Energy | | | |
| Docket No.: | E002/CI-13-754 | | |
| Response To: | Department of Commerce | Information Request No. | 001 |
| Requestor: | Nancy Campbell | | |
| Date Received: | November 13, 2013 | | |

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Question:

Reference: Exhibit ___(SLW-1), Schedule 3, Appendix A-1.

Please add a section at the end of this schedule to include all allowance for funds used during construction (AFUDC) amounts assigned to the Monticello life cycle management (LCM) and extended power uprate (EPU) for the years 2004 to 2013.

Response:

Please see Attachment A to this response for a revised schedule of Construction Work in Progress (CWIP) costs, Retirement Work in Progress (RWIP) costs, and AFUDC incurred by year through August 31, 2013 for the Monticello LCM/ EPU project. The attachment splits the prior Exhibit (referenced above) to separate CWIP costs from RWIP costs.

The first page shows CWIP costs incurred by source and by year, and then shows the AFUDC Debt and Equity costs charged to the project by year. The page total shows the costs incurred through August 31, 2013 that are being placed in service as the project is completed.

The second page shows the RWIP costs incurred by source and by year through August 31, 2013 that have been or will be recorded in Accumulated Depreciation as the assets are placed in service.

The page 1 total of CWIP cost of $636.7 million (excluding AFUDC) plus the page 2 total of RWIP cost of $28.2 million reconcile to the $664.9 million shown in Witness Weatherby's testimony in Exhibit__(SLW-1), Schedule 3, Appendix A-1.

| | |
|---|---|
| Preparer: | Linda Erickson |
| Title: | Sr. Financial Director & Nuclear Controller |
| Department: | Nuclear Finance |
| Telephone: | 612-330-7862 |
| Date: | November 25, 2013 |

Northern States Power Company

Xcel Energy®

# Overview

Monticello Nuclear Generating Plant

**August 2013**

**All Projects**
**CWIP**

| | Records | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **JE** | | | | | | | | | | | | |
| | 4,359 | | | -13 | -234,896 | 993,546 | 445,465 | 700,071 | -21,792 | -996,422 | 668,818 | 1,554,778 |
| Accruals | 8,477 | 0 | | | 7,400 | 932,025 | 9,426,491 | -5,004,958 | 3,836,461 | -1,463,040 | 4,997,046 | 12,731,425 |
| Allocations | 2,120 | | | | | | | | 0 | 0 | 0 | 0 |
| NMC Entries | 185 | 795,026 | 13,756 | 821,121 | 2,942,032 | | | | | | | 4,571,935 |
| O&M to Cap Xfers | 905 | | | | | 175,120 | 1,494,393 | 272,117 | 2,080,464 | 55,157 | 3,762,686 | 7,839,937 |
| Prepay | 7 | | | | | | | -10,000,000 | 8,500,000 | 1,500,000 | | 0 |
| Sales Tax Refund | 136 | | | | | -3,920 | -4,749,556 | -1,811,688 | -1,194,266 | -127,893 | -90,785 | -7,978,107 |
| Transfer | 38 | | | | | | | | 0 | | | 0 |
| Transfer - FWH | 419 | | | | | | | | 0 | 0 | 0 | 0 |
| Transfer - GE | 13 | | | | | | | | 0 | | | 0 |
| Transfer - License | 140 | | | | | | | | 0 | 0 | | 0 |
| Transfer - Non-EPU | 129 | | | | | | | | -863,001 | -2,601,804 | | -3,464,805 |
| Transfer - RWIP | 9 | | | | | | | | -18,589,890 | | | -18,589,890 |
| **JE** | 16,937 | **795,026** | **13,756** | **821,108** | **2,714,536** | **2,096,772** | **6,616,794** | **-15,844,458** | **-6,252,025** | **-3,634,001** | **9,337,765** | **-3,334,727** |
| **OVERHEAD** | | | | | | | | | | | | |
| E&S | 15,045 | | | | | 263,303 | 5,727,164 | 1,330,939 | 3,677,596 | 833,376 | 963,816 | 12,796,194 |
| PwrPlant | 1,185 | 1,268 | 2 | 2,219 | 16,595 | 69,955 | 176,820 | 1,196,838 | 1,820,137 | 576,629 | 258,699 | 4,119,162 |
| **PASSPORT** | | | | | | | | | | | | |
| AP / CM | 50,132 | | | 6,135,498 | 12,832,250 | 68,121,980 | 91,812,771 | 84,447,462 | 142,165,841 | 43,897,543 | 115,530,440 | 564,943,785 |
| IM / PO | 29,472 | | | | | 124,515 | 2,145,712 | 864,885 | 2,639,469 | 909,480 | 4,772,936 | 11,456,997 |
| **PAYROLL** | | | | | | | | | | | | |
| Non Prod JE | 3,062 | | | | | -6,155 | -3,089 | 7,371 | -510 | 1,269 | 15 | -1,098 |
| TIME | 18,486 | | | 27,987 | 141,561 | 2,410,203 | 9,909,031 | 3,260,217 | 10,330,297 | 2,459,142 | 15,559,007 | 44,097,446 |
| TIME Non Prod | 3,040 | | | | | 298,654 | 326,864 | 301,083 | 347,473 | 242,817 | 275,416 | 1,792,306 |
| **EXPENSES** | | | | | | | | | | | | |
| Expense Reports | 2,974 | | | | | 175,377 | 138,302 | 196,552 | 212,682 | 58,345 | 39,390 | 820,648 |
| Totals | 140,333 | 796,294 | 13,757 | 6,986,812 | 15,704,942 | 73,554,605 | 116,850,369 | 75,760,888 | 154,940,960 | 45,344,600 | 146,737,484 | 636,690,712 |
| AFDUC Debt | | 11,976 | 25,858 | 101,363 | 679,464 | 2,610,821 | 4,712,644 | 6,129,323 | 6,607,715 | 5,589,732 | 3,483,304 | 29,952,200 |
| AFDUC Equity | | 18,468 | 28,224 | 149,048 | 841,710 | 4,014,317 | 7,513,550 | 10,824,826 | 12,088,145 | 10,339,588 | 7,927,222 | 53,745,096 |
| Totals With AFUDC | | 826,738 | 67,839 | 7,237,222 | 17,226,115 | 80,179,743 | 129,076,562 | 92,715,037 | 173,636,820 | 61,273,921 | 158,148,010 | 720,388,009 |

Northern States Power Company

Xcel Energy®

# Overview

Monticello Nuclear Generating Plant

**August 2013**

**All Projects**
**RWIP**

| | Records | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **JE** | | | | | | | | | | | | |
| | 246 | | | | | -223 | 135,273 | 0 | -48,927 | 511,303 | 160,174 | 757,599 |
| Accruals | 219 | | | | | | -50,000 | | 97,562 | -44,138 | 1,084,867 | 1,088,291 |
| Allocations | 404 | | | | | | | | 0 | 0 | 0 | 0 |
| O&M to Cap Xfers | 1 | | | | | | 5,493 | | | | | 5,493 |
| Transfer - FWH | 32 | | | | | | | | | 0 | 0 | 0 |
| Transfer - Non-EPU | 2 | | | | | | | | | -2,011 | | -2,011 |
| Transfer - RWIP | 19 | | | | | | | | 18,589,890 | | | 18,589,890 |
| **JE** | 923 | | | | | **-223** | **90,765** | **0** | **18,638,525** | **465,154** | **1,245,041** | **20,439,262** |
| **OVERHEAD** | | | | | | | | | | | | |
| E&S | 21 | | | | | | 2,523 | | | | | 2,523 |
| PwrPlant | 169 | | | | | -7 | 3,619 | 4,998 | 4,525 | 23,000 | 15,772 | 51,907 |
| **PASSPORT** | | | | | | | | | | | | |
| AP / CM | 300 | | | | | | 1,709,297 | 294,655 | 295,892 | 1,208,110 | 4,128,352 | 7,636,307 |
| IM / PO | 31 | | | | | 5,198 | 22,298 | 5,038 | | | | 32,533 |
| **PAYROLL** | | | | | | | | | | | | |
| Non Prod JE | 6 | | | | | -6 | | -44 | -101 | -11 | | -162 |
| TIME | 83 | | | | | 199 | 30,443 | 12,168 | 5,944 | 531 | 13,751 | 63,035 |
| TIME Non Prod | 6 | | | | | 30 | | 1,161 | 663 | 56 | | 1,911 |
| **EXPENSES** | | | | | | | | | | | | |
| Expense Reports | 1 | | | | | | | | 442 | | | 442 |
| Totals | 1,540 | | | | | 5,191 | 1,858,946 | 317,977 | 18,945,890 | 1,696,840 | 5,402,916 | 28,227,759 |
| AFDUC Debt | | | | | | | | | | | | |
| AFDUC Equity | | | | | | | | | | | | |
| Totals With AFUDC | | | | | | 5,191 | 1,858,946 | 317,977 | 18,945,890 | 1,696,840 | 5,402,916 | 28,227,759 |

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| | | | |
|---|---|---|---|
| Xcel Energy | | | |
| Docket No.: | E002/CI-13-754 | | |
| Response To: | Department of Commerce | Information Request No. | 88 |
| Requestor: | Nancy Campbell, Chris Shaw | | |
| Date Received: | April 25, 2014 | | |

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Question:

Reference: Xcel's response to DOC IR 1 in Docket No. E002/CI-13-754

(a) Please update Attachment A to Xcel's response to DOC IR 1, by including all actual costs (both CWIP and AFUDC) through March 30, 2014 for Monticello. Please add a separate column for Xcel's estimate of any remaining costs after March 30, 2014 with brief explanation of what remaining costs there are, if any. Please add a separate row for all Xcel removal costs (RWIP) related to Monticello by year.

(b) Please indicate if costs on Attachment A are Total Company, and if yes, what would be the appropriate Minnesota Jurisdictional allocator.

Response:

(a) Attachment A to this response includes the requested update to DOC Information Request No. 1 Attachment A, including actual costs for Monticello LCM/EPU through March 31, 2014, and a separate column added for estimated remaining costs to complete the project after that date. Attachment A to this response also includes a separate row showing RWIP costs by year. Highlighting has been added to the attachment to show how certain numbers tie back to the roll forwards provided in DOC-84 Attachment A.

The estimated remaining costs to complete the project after March 31, 2014 are described in the table on the following page.

Estimated Costs for Monticello LCM/EPU Project After 3/31/14 ($ in millions)

| ***Description*** | ***Amount*** |
|---|---|
| Anticipated invoice credits from vendor settlement | $ (8.6) |
| Engineering contractor support for licensing closeout | 1.3 |
| Xcel labor costs for licensing closeout activities | 0.4 |
| NRC costs for licensing closeout activities | 0.4 |
| Contingency – licensing activities and vendor credits | 2.0 |
| Total estimated costs after 3/31/14 to complete project | $ (4.5) |

Please note that we finalizing negotiations with vendors for credits related to the Project, and are in the process of determining the specific subprojects such credits should be applied. Note also that we have provided a contingency in our estimate of remaining work, due to some uncertainty in the precise of amounts of final vendor credits to be applied to this project, and to the extent and scope of NRC license compliance analysis work that remains to be done. Both the estimated vendor credits and the contingency are included on Attachment A in the 2014 forecast column on the PASSPORT – AP/CM line.

(b) Yes, the costs on both DOC-1 Attachment A, and Attachment A to this response are NSP-Minnesota Total Company amounts. The appropriate Minnesota electric jurisdictional allocators are as follows:

| | Interchange Demand Allocator | Jurisdictional Demand Allocator |
|---|---|---|
| 2004 | 84.7975% | 88.1144% |
| 2005 | 84.2527% | 87.7581% |
| 2006 | 84.0611% | 87.6279% |
| 2007 | 84.2864% | 86.6512% |
| 2008 | 84.4224% | 86.7317% |
| 2009 | 83.8829% | 87.0761% |
| 2010 | 83.6422% | 87.9815% |
| 2011 | 83.8019% | 88.3621% |
| 2012 | 83.9899% | 88.1030% |
| 2013 | 84.8812% | 87.7158% |

| | |
|---|---|
| Preparer: | Linda Erickson / Pat Burke / Michael Bliss |
| Title: | Nuclear Controller / VP Capital Projects / Rate Analyst |
| Department: | Nuclear Finance / Nuclear Projects / Revenue Requirements |
| Telephone: | 612-330-7862 / 612-330-7621 / 612-330-6216 |
| Date: | May 7, 2014 |

**Monticello Extended Power Uprate Project Costs by Transaction Source - CWIP, AFUDC, & RWIP by Year**
**March 31, 2014**

| | Records | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | Actual 2014 to 3/31 | Actual Through 3/31/2014 | Forecast Remaining 2014 | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CWIP | | | | | | | | | | | | | | | |
| **JE** | | | | | | | | | | | | | | | |
| | 4,635 | | | (13) | (234,896) | 973,546 | 306,465 | 791,233 | (196,370) | (755,006) | 657,666 | 43,318 | 1,585,943 | | 1,585,943 |
| Accruals | 9,383 | | | | 7,400 | 952,025 | 9,565,491 | (5,096,121) | 4,011,039 | -1,711,544 | (7,332,672) | (66,753) | 328,865 | | 328,865 |
| Accruals - Final | 88 | | | | | | | | | | 5,139,851 | 338,135 | 5,477,986 | | 5,477,986 |
| Allocations | 2,899 | | | | | | | | | | (109,644) | | (109,644) | | (109,644) |
| NMC Entries | 185 | 795,026 | 13,756 | 821,121 | 2,942,032 | | | | | | | | 4,571,935 | | 4,571,935 |
| O&M to Cap Xfers | 952 | | | | | 175,120 | 1,494,393 | 272,117 | 2,080,464 | 55,157 | 3,855,427 | 9,069 | 7,941,747 | | 7,941,747 |
| Prepay | 7 | | | | | | | (10,000,000) | 8,500,000 | 1,500,000 | | | - | | - |
| Sales Tax Refund | 147 | | | | | (3,920) | (4,749,556) | (1,811,688) | (1,194,266) | (127,893) | (219,144) | | (8,106,467) | | (8,106,467) |
| Transfer | 38 | | | | | | | | | | | | - | | - |
| Transfer - FWH | 419 | | | | | | | | | | | | - | | - |
| Transfer - GE | 13 | | | | | | | | | | | | - | | - |
| Transfer - License | 138 | | | | | | | | | | | | - | | - |
| Transfer - Non-EPU | 129 | | | | | | | | (863,001) | (2,601,804) | | | (3,464,805) | | (3,464,805) |
| Transfer - RWIP | 9 | | | | | | | | (18,589,890) | | | | (18,589,890) | | (18,589,890) |
| JE | 19,042 | 795,026 | 13,756 | 821,108 | 2,714,536 | 2,096,771 | 6,616,793 | (15,844,459) | (6,252,024) | (3,641,090) | 1,991,484 | 323,769 | (10,364,330) | - | (10,364,330) |
| **OVERHEAD** | | | | | | | | | | | | | | | |
| E&S | 15,057 | | | | | 263,303 | 5,727,164 | 1,330,939 | 3,677,596 | 833,376 | 963,816 | | 12,796,194 | | 12,796,194 |
| PwrPlant | 1,236 | 1,268 | 2 | 2,219 | 16,595 | 69,955 | 176,820 | 1,196,838 | 1,820,137 | 576,629 | 254,074 | 8,319 | 4,122,856 | (51,600) | 4,071,256 |
| **PASSPORT** | | | | | | | | | | | | | | | |
| AP / CM | 52,199 | | | 6,135,498 | 12,832,250 | 68,121,980 | 91,812,771 | 84,447,462 | 142,165,841 | 43,897,543 | 123,893,407 | 798,634 | 574,105,386 | (4,878,253) | 569,227,133 |
| IM / PO | 29,631 | | | | | 124,515 | 2,145,712 | 864,885 | 2,639,469 | 909,480 | 4,806,592 | 468 | 11,491,121 | | 11,491,121 |
| **PAYROLL** | | | | | | | | | | | | | | | |
| Non Prod JE | 3,145 | | | | | (6,155) | (3,089) | 7,371 | (510) | 1,269 | 3,026 | | 1,912 | | 1,912 |
| TIME | 19,217 | | | 27,987 | 141,561 | 2,410,203 | 9,909,031 | 3,260,217 | 10,330,297 | 2,459,142 | 16,181,431 | 226,726 | 44,946,595 | 419,170 | 45,365,765 |
| TIME Non Prod | 3,176 | | | | | 298,654 | 326,864 | 301,083 | 347,473 | 242,817 | 323,864 | 27,830 | 1,868,585 | 51,350 | 1,919,935 |
| **EXPENSES** | | | | | | | | | | | | | | | |
| Expense Reports | 3,087 | | | | | 175,377 | 138,302 | 196,552 | 212,682 | 58,345 | 46,697 | 3,369 | 831,324 | | 831,324 |
| **Totals -CWIP Only** | 145,790 | 796,294 | 13,758 | 6,986,812 | 15,704,942 | 73,554,603 | 116,850,368 | 75,760,888 | 154,940,961 | 45,337,511 | 148,464,391 | 1,389,115 | 639,799,643 | (4,459,333) | 635,340,310 |
| AFUDC | | | | | | | | | | | | | | | |
| AFUDC Debt | | 11,976 | 25,858 | 101,363 | 679,464 | 2,610,821 | 4,712,644 | 6,129,323 | 6,607,715 | 5,589,732 | 3,852,203 | | 30,321,099 | | 30,321,099 |
| AFUDC Equity | | 18,468 | 28,224 | 149,048 | 841,710 | 4,014,317 | 7,513,550 | 10,824,826 | 12,088,145 | 10,339,588 | 8,612,255 | | 54,430,131 | | 54,430,131 |
| **Totals With AFUDC** | | 826,738 | 67,840 | 7,237,223 | 17,226,116 | 80,179,741 | 129,076,562 | 92,715,037 | 173,636,821 | 61,266,831 | 160,928,849 | 1,389,115 | 724,550,873 | (4,459,333) | 720,091,540 |
| RWIP | | | | | | 5,191 | 1,858,946 | 317,977 | 18,945,890 | 1,703,928 | 5,258,007 | (50,924) | 28,039,015 | | 28,039,015 |
| **Grand Total with AFUDC** | | 826,738 | 67,840 | 7,237,223 | 17,226,116 | 80,184,932 | 130,935,508 | 93,033,014 | 192,582,711 | 62,970,759 | 166,186,856 | 1,338,191 | 752,589,888 | (4,459,333) | 748,130,555 |
| | | | | | | | | Expenditure Total - CWIP and RWIP Only (without AFUDC) | | | | | 667,838,658 | (4,459,333) | 663,379,325 |

Note: The highlighting can be used to cross reference the same numbers in DOC-84 Attachment A.

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| | | | |
|---|---|---|---|
| Xcel Energy | | | |
| Docket No.: | E002/CI-13-754 | | |
| Response To: | Department of Commerce | Information Request No. | 89 |
| Requestor: | Nancy Campbell, Chris Shaw | | |
| Date Received: | April 25, 2014 | | |

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Question:

Reference: Above DOC information request

DOC notes we are trying to determine a final total cost for Monticello, which we believe should include CWIP, AFUDC and RWIP. If the Company does not agree that all costs will be captured in the above information request, please explain what costs have not been identified and please provide these costs by year.

Response:

We assume that by "Above DOC information request" the DOC is referring to the immediately preceding DOC Information Request No. 88. The Company agrees that Attachment A to DOC Information Request No. 88 captures an estimate of final total cost of the Monticello LCM/EPU Project, including CWIP, AFUDC and RWIP. We note that the final total cost will include actual costs incurred after March 31, 2014, while DOC-88 Attachment A includes an estimate of those amounts.

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| | |
|---|---|
| Preparer: | Scott L. Weatherby |
| Title: | Vice President, Nuclear Finance & Business Planning |
| Department: | Nuclear Finance & Planning |
| Telephone: | 612-330-7643 |
| Date: | May 7, 2014 |

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|---|---|---|---|
| Xcel Energy | | | |
| Docket No.: | E002/CI-13-754 | | |
| Response To: | Department of Commerce | Information Request No. | 85 |
| Requestor: | Nancy Campbell, Chris Shaw | | |
| Date Received: | April 25, 2014 | | |

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Question:

Reference: Xcel's response to DOC IR 30 in Docket No. E002/CI-13-754

Xcel's response to DOC information request 30 indicates that the Monticello final costs of removal were $28.3 million and estimated costs in the Company's 2010 electric rate case (2011 test year) was $55.3 million. However, based on the Company's response to DOC information request 1175 (in Docket No. E002/GR-10-971) which the Department has attached to this information request, it appears that the Company sought rate recovery of two removal numbers $55.3 million and $28.5 million related to Monticello, for a total of $85.8 million in total cost of removal. Please reconcile and explain the differences in the Company's responses to DOC IR 1175 (Docket No. E002/GR-10-971) and DOC IR 30 (Docket No. E002/CI-13-754).

Response:

In the Company's rate case with test year 2011 (Docket No. E002/GR-10-971), our response to DOC Information Request No. 1175 discussed the following amounts of removal accumulated in RWIP for the Monticello LCM/EPU project:

| | |
|---|---|
| Actual removal costs incurred prior to 2011 | $ 1,980,000 |
| Estimated removal for May 2011 outage | 55,340,000 |
| Estimated removal for December 2011 outage | 28,509,001 |
| Total removal cost estimate | $85,829,001 |

In the Company's response to DOC Information Request No. 30 (and DOC IR 1 Attachment A) in this proceeding, we noted actual RWIP costs for the LCM/EPU project through August 31, 2013 of $28,227,759. This number excluded an RWIP expenditure inadvertently of $7,088 in 2012 and this amount was reported as a CWIP expenditure. The actual number is $28,234,847. The year by year summary of RWIP expenditures is shown in the following table:

| Year | RWIP Expenditures |
|---|---|
| 2008 | 5,191 |
| 2009 | 1,858,946 |
| 2010 | 317,977 |
| 2011 | 18,945,890 |
| 2012 | 1,703,928 |
| Aug-13 | 5,402,916 |
| Actual Expenditures to Date | 28,234,847 |
| RWIP Expenditure shown as CWIP | (7,088) |
| As shown in DOC-001 and DOC-030 | 28,227,759 |

In the response to DOC-30, we erroneously referred to only the May 2011 outage estimate of $55.3 million rather than the entire estimate detailed in DOC-1175 from the 2011 test year case.

Removal costs are accumulated in RWIP work orders as the dollars are spent. RWIP is a sub account of accumulated depreciation. The balance for RWIP reduces the overall accumulated depreciation balance, thus increasing rate base as removal is spent. The discussion of the rate recovery for RWIP/removal costs in DOC-30 is still valid. No over-recovery of project costs has occurred from the 2011 or 2013 test year rate cases because the actual total costs for the project (CWIP and RWIP) have exceeded the estimated/budgeted test year amounts used to establish revenue requirements for the 2011 and 2013 test year. In those years, we experienced actual RWIP/removal costs lower than earlier estimates, but we also experienced actual CWIP amounts higher than earlier estimates. The net impact of those two variations is that rates were set at a level resulted in under-recovery of costs incurred.

Please see DOC-84 Attachment A for the CWIP and RWIP roll forwards for the two cases referenced in this question. DOC-84 Attachment B shows the test year plant related expense items and the related revenue requirement calculations.

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| | |
|---|---|
| Xcel Energy | |
| Docket No.: | E002/CI-13-754 |
| Response To: | Department of Commerce Information Request No. 87 |
| Requestor: | Nancy Campbell, Chris Shaw |
| Date Received: | April 25, 2014 |

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Question:

Reference: Monticello actual removal costs compared to Monticello removal costs in rate cases

Please prepare a spreadsheet showing the Monticello costs of removal included in the following Xcel test years: 2009, 2011, 2013, 2014 and 2015 step. Please also include the Monticello actual costs of removal costs by year and the over or under recovery of removal costs, including impacts on rate base, income statement and revenue requirements by comparing actual removal costs to estimates included in the test years.

Response:

Please see DOC-84 Attachment A for the RWIP roll forward for 2009, 2011, 2013, and 2014 test years. The Monticello EPU was not included in the 2015 Step. This attachment also has the actual RWIP roll forward. The following table shows the annual amounts for each test year.

| Year | Test Year RWIP (Beg/End Avg) | Actual RWIP (Beg/End Avg) | Difference |
|---|---|---|---|
| 2009 | 3,656 | 827,788 | 824,133 |
| 2011 | 1,277,649 | 10,211,634 | 8,933,985 |
| 2013 | 9,617,074 | 4,867,764 | (4,749,310) |
| 2014 | 3,820,316 | 3,748,384 | (71,932) |
| 2015 | - | - | - |

The revenue requirement calculation for RWIP, CWIP, and plant in-service is shown in DOC-84 Attachment B. To have a complete picture, the revenue requirement is for the entire asset with all pieces shown in one calculation. The following table shows the annual amounts for each test year as compared to the actual revenue requirement. 2014 is shown for test year only as we have actual information only through March 31, 2014.

| Year | Test Year MN Jurisdiction Revenue Requirement ($ in 000s) | Actual MN Jurisdiction Revenue Requirement ($ in 000s) | Difference |
|---|---|---|---|
| 2009 | 309 | 1,909 | 1,600 |
| 2011 | 17,374 | 19,361 | 1,987 |
| 2013 | 45,170 | 51,684 | 6,514 |
| 2014 | 79,615 | | |

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Preparer: Lisa Perkett
Title: Director
Department: Capital Asset Accounting
Telephone: 612-330-6950
Date: May 7, 2014

Docket No. E002/CI-13-754
DOC Ex. ____ NAC-12

**Department Adjustment for Monticello Extended Power Uprate (EPU)**
**Monticello EPU Prudency Adjustment $ (000s)**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | Total | | 2014 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total EPU/LCM Costs | 100% | $796 | $ 14 | $ 6,987 | $ 15,705 | $ 73,560 | $ 118,709 | $ 76,079 | $ 173,887 | $ 47,041 | $ 152,140 | $ 664,918 | 1/ | $ 663,379 | 4/ |
| EPU Cost-Effective Amount | 73% 2/ | $ 581 | $ 10 | $ 5,101 | $ 11,465 | $ 53,699 | $ 86,658 | $ 55,538 | $ 126,938 | $ 34,340 | $ 111,062 | $ 485,390 | | | |
| Percent EPU | 85.7% 3/ | $ 682 | $ 12 | $ 5,988 | $ 13,459 | $ 63,041 | $ 101,734 | $ 65,200 | $ 149,021 | $ 40,314 | $ 130,384 | $ 569,836 | | | |
| **Not Cost Effective EPU-TC** | | **$ 101** | **$ 2** | **$ 887** | **$ 1,995** | **$ 9,342** | **$ 15,076** | **$ 9,662** | **$ 22,084** | **$ 5,974** | **$ 19,322** | **$ 84,445** | | **$ 82,906** | |
| Interchange and MN Juris. Allocator | | 74.7188% | 73.9386% | 73.6610% | 73.0352% | 73.2210% | 73.0420% | 73.5897% | 74.0491% | 73.9976% | 74.4542% | | 4/ | 74.34% | 5/ |
| **Not Cost Eff EPU-MN Juris. w/o AFUDC** | | **$ 76** | **$ 1** | **$ 654** | **$ 1,457** | **$ 6,840** | **$ 11,012** | **$ 7,110** | **$ 16,353** | **$ 4,421** | **$ 14,386** | **$ 62,234** | | **$ 63,378** | |
| Est. Revenue Requirement Calc. | | | | | | | | | | | | | | 15% | 6/ |
| **Est. Rev. Req. Calc. for 2014 w/o AFUDC** | | | | | | | | | | | | | | **$ 9,507** | |
| AFUDC Debt | | $ 12 | $ 26 | $ 101 | $ 679 | $ 2,611 | $ 4,713 | $ 6,129 | $ 6,608 | $ 5,590 | $ 3,852 | $ 30,321 | | | |
| AFUDC Equity | | $ 18 | $ 28 | $ 149 | $ 842 | $ 4,014 | $ 7,514 | $ 10,825 | $ 12,088 | $ 10,340 | $ 8,612 | $ 54,430 | | | |
| Total AFUDC | | $ 30 | $ 54 | $ 250 | $ 1,521 | $ 6,625 | $ 12,226 | $ 16,954 | $ 18,696 | $ 15,929 | $ 12,464 | $ 84,751 | | | |
| EPU Portion of AFUDC | | $ 26 | $ 46 | $ 215 | $ 1,304 | $ 5,678 | $ 10,478 | $ 14,530 | $ 16,022 | $ 13,651 | $ 10,682 | $ 72,632 | 7/ | | |
| Percent Not Cost Effective | | 14.8% | 14.8% | 14.8% | 14.8% | 14.8% | 14.8% | 14.8% | 14.8% | 14.8% | 14.8% | 14.8% | 8/ | | |
| AFUDC Not Cost Effective TC | | $ 4 | $ 7 | $ 32 | $ 193 | $ 841 | $ 1,553 | $ 2,153 | $ 2,374 | $ 2,023 | $ 1,583 | **$ 10,763** | | **$ 93,669** | |
| AFUDC Not Cost Effective MN Juris. | | $ 3 | $ 5 | $ 24 | $ 144 | $ 629 | $ 1,160 | $ 1,609 | $ 1,774 | $ 1,512 | $ 1,183 | **$ 8,042** | | | |
| Not Cost Eff. EPU MN Juris w AFUDC | | | | | | | | | | | | | | **$ 71,420** | |
| Est. Revenue Requirement Calc. | | | | | | | | | | | | | | 15% | 6/ |
| **Est. Rev. Req. Adj. for 2014 w AFUDC** | | | | | | | | | | | | | | **$ 10,713** | |

1/ Weatherby Schedule 3 Appendix A-1 and O'Connor Schedule 7.
2/ Chris Shaw Direct Testimony.
3/ Bill Jacobs Direct Testimony.
4/ Xcel's response to DOC IR 88.
5/ Robinson's Direct Schedule 3 (Docket No. E002/GR-13-868).
6/ DOC used 15% to convert our capital adjustment to an estimated revenue requirement.
7/ Line 20 (AFUDC) * 85.7%.
8/ Line 8 divided by Line 7.

Docket No. E002/CI-13-754
DOC Ex. ____ NAC-13

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

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION
121 7th Place East, Suite 350
St Paul MN 55101-2147

IN THE MATTER OF THE APPLICATION OF NORTHERN STATES POWER COMPANY, D/B/A XCEL ENERGY, FOR AUTHORITY TO INCREASE RATES FOR ELECTRIC SERVICE IN MINNESOTA

MPUC Docket No. E002/GR-13-868
OAH Docket No. 68-2500-31182

DIRECT TESTIMONY OF NANCY A. CAMPBELL

ON BEHALF OF

THE DIVISION OF ENERGY RESOURCES OF THE MINNESOTA DEPARTMENT OF COMMERCE

JUNE 5, 2014

# PUBLIC DOCUMENT

A. Given Xcel's insufficient showing of the reasonableness of its proposal, I recommend the following related to Pleasant Valley and Border Winds, based on my review of the capital costs include in the 2015 step:

- a downward capital cost adjustment for the 2015 step of $5,672,482 to account for both Pleasant Valley and Border Winds;
- an increase of $11,093,000 in PTC revenue to be included in the 2015 step to account for both Border Winds and Pleasant Valley. DOC Ex. ___ at NAC-7 (Campbell Direct); and
- a continued true-up of all wind projects PTCs in the RES Rider.

## VI. MONTICELLO LIFE CYCLE MANAGEMENT (LCM) AND EXTENDED POWER UPRATE (EPU) FOR 2014 AND 2015 WITH COMMISSION INVESTIGATION (CI) PLACEHOLDER

**Q. What do you address in your Direct Testimony below regarding the Monticello LCM and EPU projects?**

A. My focus at this time is to summarize some of the background included by the Company witnesses in this rate case, and address the total costs and in-service dates of Monticello LCM and EPU, and their effect on this rate case for purposes of the 2014 test year.

The Department notes it is not our intention for matters at issue in the Monticello CI docket to be litigated or decided in this rate case, however, because the Monticello CI docket is addressing the prudency of costs, and not necessarily the in-service of Monticello the Department is raising these issues regarding in-service date below. Additionally, because Xcel has witnesses discussing Monticello issues in this rate case, the Department also felt the need to address these Monticello issues in this rate case as discussed below. If parties agree, the Department would not oppose a directive that all Monticello-related adjustments be addressed in the Monticello CI docket, to avoid arguing the same concerns and recommendations in both this rate case and the Monticello CI docket.

**Q. How will the Monticello Commission Investigation Docket No. E002/CI-13-754 (Monticello CI docket), be incorporated into the rate case?**

A. The Department will file its Direct Testimony on July 2, 2014 in that proceeding. In Rebuttal Testimony of this rate case, due July 7, 2014, the Department intends to bring forward our recommendations regarding the prudency of Monticello LCM and EPU projects as filed in our Direct Testimony in the Monticello CI docket. Based on this information the Department intends to recommend in our Rebuttal Testimony of this rate case any resulting adjustments for rate recovery for Monticello LCM and EPU. The Department plans to have four witnesses in the Monticello CI docket who will address the following areas related to the Monticello LCM and EPU projects:

1. Overall final costs of Monticello LCM and EPU projects (including construction costs, allowance for funds used during construction, and costs of removal).
2. Allocation of Monticello capital costs between the LCM and EPU projects.
3. Overall Prudency and Cost-Effectiveness.
4. Review of Xcel's integrated resource planning (IRP) model.
5. Other relevant information on: costs incurred, IRP and certificate of need proceedings, rate case recovery, etc.

**Q. What Company witness discussed the Monticello LCM and EPU projects?**

A. Timothy J. O'Connor discussed the Monticello LCM and EPU projects on pages 15 to 32 of his Direct Testimony. NSP Ex. ___ at 15-32 (O'Connor Direct).

**Q. What did Mr. O'Connor provide in terms of description of the overall Monticello LCM and EPU projects?**

A. On pages 15 and 16 of his Direct Testimony, Mr. O'Conner provided the following description of the Monticello LCM and EPU projects:

> The Monticello LCM/EPU Program was a complex project undertaken to prepare Monticello for its 20-year extended operating life at increased capacity of 671 MW. The Program spanned roughly eight years and involved the replacement of hundreds of pieces of equipment inside the plant. We replaced nearly all of the components that support the reactor and power generation equipment. Because this Program was implemented in an operating nuclear facility, I believe that from a design and implementation perspective, it was even more challenging than the original construction of the plant.
> NSP Ex. ___ at 15-16 (O'Connor Direct).

**Q. What amount of the total 671 MW size is related to the Monticello EPU?**

A. The Monticello LCM extends the availability of the 600 MW base plant, anticipated for 20 years (due to delays this NRC license life and resulting depreciation life was only 16.8 years as of January 1, 2014 as discussed further below). The remaining 71 MW is related to the Monticello EPU, which is intended to increase the capacity of the existing plant by 71 MW anticipated for 20 years (again, this NRC license life and resulting depreciation life was only 16.8 years as of January 1, 2014, with the life continuing to get shorter at this time).

**Q. According to Mr. O'Connor, were there significant changes to the Monticello LCM and EPU projects from the time of the initial planning until the final implementation?**

A. Yes. Mr. O'Connor on pages 17-19 provided the following description of significant changes to the Monticello LCM and EPU projects for the time of initial planning until final implementation:

> Projects of this magnitude and complexity often encounter difficulties and challenges related to the final scope, and nuclear projects face evolving regulatory requirements. The LCM/EPU Program took longer and cost significantly more than we originally anticipated. We incurred approximately $665 million, roughly double our initial estimates, to complete the Program.[1]
>
> The nuclear industry experienced a number of significant events between the initiation of the Program in 2006 and the final implementation of the Program in 2013. Consequently, our federal licensing requirements have increased and we attempted to respond to these evolving concerns in our decision-making.
>
> Primarily, we decided to expand the initial Program scope and accelerate other work to ensure adequate safety and operating margin to meet the regulatory requirements that will be in place through 2030. To accomplish the necessary scope additions, we required significant design modifications to our high-level conceptual designs used in our Certificate of Need proceeding. In the end, four major modifications caused the bulk of the cost increase. Our costs for these modifications and their initial estimates are summarized in Table 1 below.

[1] Xcel included approximately $655 million in the test year rate base for the LCM/EPU Program, based on the Company's assessment that "this was the final estimated total as of the time the rate case budget closed in May, prior to the completion of the 2013 outage. Given that there is potential for some movement in the total due to final accruals and resolution of outstanding issues, [Xcel] did not update the budget for the test year." Xcel currently forecasts approximately another $5 million to obtain the final license approvals and implement the EPU to deliver higher generating capacity once the license is granted. Xcel states that they will provide updated figures as the case proceeds.

**Table 1**
**LCM/EPU– Major Scope Additions**

| MODIFICATION | MILLION $ | |
|---|---|---|
| | 2008 ESTIMATE | ACTUAL COST |
| 13.8 kV System Addition | $20.9 | $119.5 |
| Condensate Demineralizer System Replacement | $18.0 | $79.8 |
| Feedwater Heater Replacement | $37.0 | $114.9 |
| Reactor Feed Pump Replacement | $27.8 | $92.2 |
| Total | $103.7 | $406.4 |

> Each of these four upgrades was needed to restore or improve safety and operational margins that had eroded after 40 years and to operate the facility at uprated conditions. While we incurred more costs than our original estimates for these major modifications, several other modifications went smoothly. The steam dryer, turbine, and power range neutron monitor modifications were examples of major modifications implemented within or near our originally estimated costs.
> NSP Ex. ___ at 17-19 (O'Connor Direct).

**Q. According to Mr. O'Connor, at the time of his Direct Testimony, what was the status of the NRC licenses needed to operate at uprate conditions?**

A. Mr. O'Connor stated the following on page 20 of his Direct Testimony regarding the status of the NRC licenses need to operate at update conditions:

> The NRC's review of our license application has taken approximately four times longer and has cost approximately twice as much as we originally expected. The NRC's review is necessary to assure the safety of our operations, and we fully support the NRC's mission in this regard. In certain instances we were on the cutting-edge of the industry by developing new analytical

> techniques to support the NRC's approval. As a result of our substantial efforts, we received approval from both the subcommittee and full Advisory Committee on Reactor Safeguards (ACRS) on July 25-26, 2013 and September 5, 2013, respectively, and we anticipate receiving the NRC's final uprate approval by the end of 2013.
>
> Once we receive the EPU license amendment, we will begin ascending to the higher power levels authorized by the amended license. Until we receive the second license amendment for the fuel configuration (MELLLA+), however, we will only be able to ascend to approximately 640 MW.[2] We expect to receive NRC approval to operate using the MELLLA+ procedures in March 2014 and, at that time, will be able to ascend to the full 671 MW of uprate capacity. NSP Ex. ___ at 20 (O'Connor Direct).

**Q. According to Mr. O'Connor, what outcomes did the Company achieve for Monticello LCM and EPU projects?**

A. Mr. O'Connor provided the following response on page 32 of his Direct Testimony:

> Despite the costs, delays, and all of the challenges we faced, we are pleased that our work will provide clean, reliable, and cost-effective energy to our customers through 2030 and possibly beyond. The Monticello plant is safer and more reliable than it was prior to this effort, and we have restored additional margin to position ourselves well for operations into the future.
> NSP Ex. ___ at 32 (O'Connor Direct).

**Q. According to Ms. Heuer what adjustments are needed in the current rate case for the Monticello EPU project?**

A. Ms. Heuer provided the following response on pages 83 and 84 of her Direct Testimony:

---

[2] This fuel configuration is called the MELLLA+ amendment request, which stands for "Maximum Extended Load Line Limit Analysis." MELLLA+ is an engineering analysis that provides for greater operational flexibility, permits more efficient reactor startup, maximizes how fuel is used, and improves fuel cycle economics.

> As explained by Ms. Perkett in her Direct Testimony, several adjustments to the 2014 budget are necessary to reflect the ratemaking decisions made by the Commission in our last rate case.
>
> The Total Company amount placed in CWIP pursuant to the Commission Order in our last rate case for the 2013 addition of $247.1 million is approximately $102.8 million. The license costs also remain in CWIP until January 2014. Lastly, 41.6 percent of any addition over and above the last rate case addition in 2013 was to remain in CWIP. In total, $161.0 million is to remain in CWIP until the license for the uprate is received and the uprate is in use, which we believe will be in January 2014. Leaving these assets in CWIP increased the AFUDC associated with the asset by $6.4 million. Additional detail on these changes is provided in Ms. Perkett's Direct Testimony and Exhibit___(LHP-1), Schedule 5.
> NSP Ex. ___ at 83-84 (Heuer Direct).

**Q. What change related to Monticello LCM and EPU projects is expected to occur in 2014?**

A. According to Ms. Heuer on page 84 of her Direct Testimony, the following change related to Monticello LCM and EPU projects will occur in 2014:

> A Total Company addition of $167.4 million will be placed in service as of January 2014 related to the Commission's Order from our last rate case. Depreciation will begin in January 2014 for this asset, with an increase to State of Minnesota Electric Jurisdiction 2014 depreciation expense of $0.290 million (IA) compared to the depreciation expense that would have been recorded absent the Commission's Order. NSP Ex. ___ at 84 (Heuer Direct).

**Q. What are the rate base and revenue impacts of these changes?**

A. According to Ms. Heuer on page 84 of her Direct Testimony, the following are the rate base and revenue impacts of these changes:

> These adjustments are reflected on Exhibit___(AEH-1), Schedule 10, 2014 Rate Base Adjustment Schedule, page 2, column 15 and increases test year rate base by $9.8 million (IA); and Schedule 11, 2014 Income Statement Adjustment Schedule, page 2, column 27 and increases the revenue requirement by $0.900 million (IA). Support for this adjustment can be found in Volume 4 Test Year Workpapers, Section VIII Adjustments, Tab A26.
> NSP Ex. ___ at 84 (Heuer Direct).

**Q. What is the total 2014 test year revenue requirement for the Monticello LCM and EPU projects and what is the increase compared to the revenue requirement included in present rates?**

A. Ms. Heuer provided the following response on pages 84 and 85 of her Direct Testimony:

> The total 2014 test year revenue requirement (net of Interchange Agreement billings to NSPW) for the Monticello LCM/EPU is $74.152 million, an increase of $41.358 million when compared to the revenue requirement approved by the Commission in the Company's last rate case. Please see Exhibit___(AEH-1), Schedule 7, Detailed Case Drivers, page 4 of 7 for the revenue requirement calculation. NSP Ex. ___ at 84-85 (Heuer Direct).

**Q. According to Ms. Perkett, what are the 2014 changes that result from the Commission's Order in the 2013 rate case for the Monticello LCM and EPU project?**

A. Ms. Perkett provided the following response on pages 20 and 21 of her Direct Testimony:

> In our 2013 Review of Remaining Lives filed on October 1, 2013, the Company presented the placement of $34.8 million into CWIP, which decreased the 2013 depreciation expense. The amount shown moving back to CWIP in this filing was limited to the changes to the 2013 beginning balance. The Commission also ordered

> that 41.6 percent of the 2013 addition remain in CWIP until the uprate can be used, which is expected to be in January 2014. This amount did not include $15.0 million of expenditures, which were reclassified from removal costs to CWIP in the 2011 test year in Docket No. E002/GR-10-971. The reclassification to CWIP in that case reduced the difference between actual plant additions and amounts forecasted in 2011. Thus, we subtracted 41.6 percent of the $15.0 million of removal costs from the $34.8 million, resulting in a total amount of $28.5 million related to the Monticello LCM/EPU project placed in CWIP in this case.
>
> The amount placed in CWIP pursuant to the Commission's Order in our 2013 rate case for the 2013 addition of $247.1 million is approximately $102.8 million. The license costs also remain in CWIP until January 2014. Lastly, 41.6 percent of any addition over and above the last rate case addition in 2013 was to remain in CWIP. In total, $161.0 million is to remain in CWIP until the license for the uprate is received and the uprate is in use. Leaving these assets in CWIP increased the AFUDC associated with the asset by $6.4 million.

NSP Ex. ___ at 20-21 (Perkett Direct).

**Q. According to Ms. Perkett, what change related to Monticello LCM/EPU project will be included in the 2014 review of remaining lives?**

A. Ms. Perkett provided the following response on pages 21 and 22 of her Direct Testimony:

> Our 2014 Review of Remaining Lives will reflect an addition of $167.4 million placed in service as of January 2014 related to the Commission's order from the 2013 rate case. Depreciation will begin in January 2014 for this asset, with an increase to 2014 depreciation expense of $0.3 million compared to the depreciation expense that would have been recorded absent the Commission's Order. NSP Ex. ___ at 21-22 (Perkett Direct).

**Q. According to Ms. Perkett, was the plant addition of $167.4 million for Monticello LCM/EPU placed in service in January 2014 reflected in the 2014 revenue requirements?**

A. Ms. Perkett provided the following response on page 22 of her Direct Testimony:

> Yes. This change was not included in the 2014 budget and, therefore, Ms. Heuer, in her Direct Testimony, includes an adjustment to reflect this change to the 2014 test year revenue requirement. A schedule showing the total Company calculation is provided as Exhibit___(LHP-1), Schedule 5.
> NSP Ex. ___ at 22 (Perkett Direct).

**Q. In the above questions and answers the Company estimated in-service date of January 2014; however, is the Monticello LCM/EPU project operating at its full 671 MW level (specifically the 71 MW related to the EPU) at this time?**

A. No. As a result, the Department asked Xcel in the Monticello CI docket to identify the steps that are necessary before Monticello operates at its full 671 MW level and to indicate the expected dates for each step. The Company provided the following response to DOC information request no. 115 in Docket No. E002/CI-13-754:

> Monticello has specific license requirements that must be met and verified during power ascension testing. The testing will take the station from its previous licensed output of 1775 MWt (approximately 609 MWe) to our new approved output of 2004 MWt (approximately 671 MWe).
>
> The process is such that the Company increases power in small increments and collects data for verification against licensed parameters. When the station reaches predefined power levels the data is collected and sent to the NRC for review. The station will not move up in power without NRC concurrence. NRC review times vary based on the data being evaluated and how close it correlates to the values submitted during the licensing process.

Testing to Date:
After receiving the EPU license on December 9, 2013, the Company began its ascension plan. Power was increased in December and testing began. We moved through the first two power ascension set points in December and January. Then on March 11, 2014, the unit reached the first required data collection plateau, which was 1864 MWt (approximately 640 MWe). The data collection is required as part of the Power Uprate License and is intended to provide verification that the steam dryer is not reasonably likely to be damaged as a result of uprated conditions as occurred at Quad Cities. The data was collected and sent to the vendor for review and their concurrence. During that review, the vendor discovered that the stresses were running lower than expected, consistently across the entire data collection range, by a factor of 2. As a result, to comply with our license, we returned the plant to the previously known safe power level of 1775MWt (approximately 609 MWe).

The vendor reviewed the data and determined that a programming error was made during the initial setup for data collection. The program was initially changed to accommodate reactor vessel pressure testing, which is required by technical specifications to restart the reactor, but was not reset properly to capture steam loads; thus, creating the error. This data anomaly was easily reconciled and the offset was dispositioned by the vendor. However, as part of the normal process of conducting additional extent of condition review of the entire data provided, we discovered a configuration issue associated with the wiring to the strain gauges on one of the main steam lines (located in the Drywell). The upper and lower wires were mislabeled and thus lead us to connect them incorrectly at the data Collection Panel located outside of the Drywell. The physical distances are different between the upper and lower collection points and this requires the vendor to re-run their stress model with the correct configurations. Following the completion of their data set runs, Xcel Energy will review the results and submit them to the NRC as required by the license. Once the NRC completes their review we will resume power ascension testing.

Steps Going Forward:
We expect our reanalysis and re-verification of the model and the inputs and outputs to be completed by the end

of June and we expect NRC review will take approximately one month, so we expect to re-enter power ascension in August, assuming no additional licensing activities are required. The Company believes that we will be able to achieve full power of 2004 MWt (approximately 671 MWe) by the end of 2014 based on the following ascension plan, which contains the same steps as our pre-data issue plan but with different dates:

- August- Raise power to 1819 MWt (approximately 624 MWe) for Steam Dryer Data only.
- Early September- Raise power to 1864 MWt (105% or approximately 640 MWe) for Steam Dryer only (This is the power level that we need to submit Dryer Data to NRC)
    - Submit the data to the NRC for their review and concurrence.
- Late September- Raise Power to 1908 MWt (approximately 658 MWe) and commence Dynamic Testing.
- October- Transition to M+ Operating Domain, as required by the license. This transition will result in a power reduction to 1686 MWt (approximately 580 MWe), which is the starting verification point on the operators Power to Flow Map.
- October- Raise power to M+ 1775 MWt (approximately 609 MWe)
- Mid-November- Raise power to M+ 1864 MWt (105% or approximately 640 MWe)
- Mid-November- Raise power to M+ 1908 MWt (approximately 658 MWe).
- End of November- Raise Power to EPU 1953 MWt (approximately 664 MWe)
    - Submit the data to the NRC for their review and concurrence.
- December- Raise Power to EPU 2004 MWt (approximately 671 MWe) output. The 2004 MWt power level correlates to the new power level of 671MWe and will end the testing window pending NRC concurrence. The time line provided is based on timely reviews by the vendors and the NRC. Should the data render unexpected results, the review times could be impacted.

  DOC Ex. ___ at NAC-8 (Campbell Direct).

**Q. What does this response mean as to when the Company now believes the EPU will be in service?**

A. The Company's response above means that the Company is now estimating that the plant will be operating at 640 MW in August 2014, meaning 40 MW of the EPU will be in service by that time. Then, in December 2014 the Company estimates that the full Monticello EPU with approximately 671 MW will be available to serve ratepayers.

**Q. Does the Company's response suggest there may be uncertainties in this timeline?**

A. Yes, there are a number of assumptions in the Company's response that may or may not actually happen in the manner or estimated timeline that could affect how much of the EPU is available to serve customers at which times. Of course, safety and compliance with NRC standards are important factors. Thus, it is hoped that 40 MW will be available by the time of the evidentiary hearing in this matter and that the remaining 31 MW would be available by the end of 2014, but those dates are not guaranteed at this time.

**Q. Do you have concerns about this delay regarding the remaining life of the Monticello LCM/EPU project for ratemaking purposes?**

A. Yes. For non-nuclear generation plants the in-service date is determined and the useful life of 20 or 30 years (whatever is appropriate) then begins, so delays of in-service won't likely shorten the life of the plant. However, the lives of nuclear generation plants are tied to an NRC operational license of 20 years. So delays of getting the EPU portion of the Monticello plant up and running are shortening the useful life of the EPU since the remaining life of the NRC license was at 16.8 years as of January 1, 2014, as shown in the Company's 2014 remaining life depreciation study dated February 28, 2014 in Docket No. G,E002/D-14-181, Attachment A page 3 of 9, DOC Ex. ___ at NAC-9 (Campbell Direct).

What that means for ratemaking purposes is that, if the in-service on the Monticello EPU doesn't happen until January 2015, then the remaining useful life (due to NRC license) will be reduced to only 15.8 years that this plant will be able to serve ratepayers.

Q. **Although the Department will be discussing the total costs of Monticello LCM/EPU in the Monticello CI docket, is there any preliminary information about the expected final cost of the Monticello LCM/EPU?**

A. Yes. In response to DOC information request no. 88 Attachment A in Docket No. E002/CI-13-754, the Company provided its expected final cost of the Monticello LCM/EPU project (actual costs through March 31, 2014 and remaining forecasted cost and vendor credits) as follows:

- Construction Work in Progress (CWIP) only $635,340,310
- Allowance for Funds Used During Construction (AFUDC) $ 84,751,230
- Retirement Work In Progress (Removal Costs/RWIP) $ 28,039,015

Total Costs of Monticello LCM/EPU $748,130,555

DOC Ex. ___ at NAC-10 (Campbell Direct).

**Q. Is there preliminary information about the costs Xcel estimated in their petitions for certificates of need?**

A. Yes. In response to DOC information request no. 94 in Docket No. E002/CI-13-754, the Company provided the following information (as summarized by the Department) regarding its CN estimated for Monticello LCM/EPU Docket No. E002/CN-08-185:

- Monticello LCM was estimated at $135 million (in 2004 $);
- Monticello EPU was estimated at $104, which increases $29 million to $133 million (in 2004 $) when the steam generator is included;
- Monticello LCM/EPU total estimated cost is $320 to $346 million when escalated to current (2014) dollars. DOC Ex. ___ at NAC-11 (Campbell Direct).

**Q. While the Department will address these issues further in the concurrent investigation proceeding, what do you note at this time about the costs, in response to Mr. O'Connor's testimony about the cost overruns?**

A. I note that the final costs of the Monticello LCM/EPU project are more than double the costs of the initial CN estimate, even when inflation is included. More importantly for this rate proceeding, I note that Xcel has indicated that the full amount (71 MW) of the EPU will not be available to serve ratepayers for most if not all of 2014.

**Q. Based on your review of the Monticello LCM/EPU projects for the 2014 test year, (subject to further review in the Monticello CI docket) what do you recommend at this time?**

A. Since the Monticello EPU project (71 additional MW) will not be available for most if not all of the 2014 test year, it is necessary to adjust Xcel's revenue requirement since their assumption that the EPU would have been in-service as of January 1, 2014 clearly did not occur. Since the EPU is not in place, it is not reasonable for ratepayers to pay for the Monticello EPU in 2014 rates. Thus, for 2014, I recommend that the Commission deny recovery of depreciation expense and return for the 2014 test year for the Monticello EPU project (estimated as 41.6% of the Monticello LCM/EPU project and subject to review in the Monticello CI docket). However, if the EPU is partially in service by the time of the evidentiary hearing, I may be willing to consider amending this adjustment.

Nonetheless, I have concerns about significant costs overruns and the delays that continue to reduce the useful life of the Monticello EPU project, which will likely only be available to ratepayers for 15.8 years (assuming a January 2015 in-service date) instead of 20 years initial planned via the NRC license. These issues will be addressed further in the investigation docket.

As noted earlier, the Department in its Rebuttal Testimony of this rate case will bring forward the Department's recommendations regarding the prudency of Monticello LCM and EPU projects, using the Department's recommendations in our Direct Testimony in Monticello CI docket. Based on this information the Department intends to recommend in our Rebuttal Testimony of this rate case any resulting adjustments for rate recovery for the Monticello LCM & EPU. Additionally, in light of the concerns regarding the Monticello actual in-service date, it may be appropriate to require some compliance filing prior to including the Monticello EPU in 2015 rates, to ensure that the Monticello EPU actual goes in-service.

**Q. What is your adjustment for the Monticello EPU project based on your recommendation above?**

A. My adjustment for the 2014 test year for Monticello EPU is a $12.577 million reduction to depreciation expense and a $164.824 million reduction to nuclear plant rate base, both on a Minnesota jurisdictional basis. The Department notes that the exclusion of both depreciation expense and return on rate based for the Monticello EPU project, results in a net revenue requirement reduction of approximately $30 million. The detailed calculations and support for this adjustment are provided by DOC witness Dale Lusti in his Direct Testimony. DOC Ex. ___ at DVL-11 (Lusti Direct).

## VII. Nuclear Operating and Maintenance (O&M) Expenses

### *A. BACKGROUND ON NUCLEAR PLANTS AND NUCLEAR O&M EXPENSES*

**Q. Has the Company provided some brief background on its two nuclear plants Monticello and Prairie Island (PI)?**

A. Yes. Xcel's witness for Nuclear Operations, Timothy J. O'Connor, provided the following brief background on its two nuclear plants Monticello and PI on page 5 of his Direct Testimony:

> Monticello is a single-unit 600-megawatt (MW) boiling water reactor and was originally licensed by the Nuclear Regulatory Commission (NRC) in 1970. The NRC approved a renewed license for the facility in 2006, allowing the plant to operate through 2030. In the summer of 2013, the Company completed the Life Cycle Management/Extended Power Uprate Project at Monticello, which adds 71 MW of capacity and supports continued operations through the extended license period.
>
> Prairie Island is a two-unit pressurized water reactor, with each unit rated at 550 MW. The NRC licensed

Pleasant Valley and Border Winds Projects for 2015:

- Given Xcel's insufficient showing of the reasonableness of its proposal for capital costs that exceeded the Commission-approved amounts for Pleasant Valley Wind and Border Winds projects in Docket Nos. E002/M-13-603 and E002/M-13-716, I recommended a downward capital cost adjustment for the 2015 step of $5,672,482 to account for both Pleasant Valley and Borders Wind.
- While the Company did include all estimated capital costs of both Pleasant Valley and Border Winds projects in their 2015 step, Xcel did not include any offsetting revenues for expected PTCs in 2015. Thus, the Company's proposal is not balanced or reasonable for ratepayers. As a result, I recommended an increase of $11,093,000 in PTC revenue to be included in the 2015 step to account for both Border Winds and Pleasant Valley. DOC Ex. ___ at NAC-7 (Campbell Direct).
- Given lack of historical data for PTCs for Pleasant Valley and Border Winds projects, and the materiality of the PTC amounts, I support a continued true-up of all wind projects PTCs in the RES Rider.

Monticello EPU and CI Placeholder (13-754):

- Since the Monticello EPU project (71 additional MW) will not be available for most if not all of the 2014 test year, it is necessary to adjust Xcel's revenue requirement since their assumption that the EPU would have been in service as of January 1, 2014 clearly did not occur. Since the EPU is not in place, it is not reasonable for ratepayers to pay for the Monticello EPU in 2014 rates. Thus, for 2014, I recommend that the Commission deny recovery of depreciation expense and return for the 2014 test year for the Monticello EPU project (estimated as

41.6% of the Monticello LCM/EPU project and subject to review in the Monticello CI docket). However, if the EPU is partially in service by the time of the evidentiary hearing, I may be willing to consider amending this adjustment.

- Nonetheless, I have concerns about significant costs overruns and the delays that continue to reduce the useful life of the Monticello EPU project, which will likely only be available to ratepayers for 15.8 years (assuming a January 2015 in-service date) instead of 20 years initial planned via the NRC license. These issues will be addressed further in the investigation docket.
- As noted earlier, the Department in its Rebuttal Testimony of this rate case will bring forward the Department's recommendations regarding the prudency of Monticello LCM and EPU projects, using the Department's recommendations in our Direct Testimony in Monticello CI docket. Based on this information the Department intends to recommend in our Rebuttal Testimony of this rate case any resulting adjustments for rate recovery for the Monticello LCM and EPU. Additionally, in light of the concerns regarding the Monticello actual in-service date, it may be appropriate to require some compliance filing prior to including the Monticello EPU in 2015 rates, to ensure that the Monticello EPU actual goes in-service.
- My adjustment for the 2014 test year for Monticello EPU is a $12.577 million reduction to depreciation expense and a $164.824 million reduction to nuclear plant rate base, both on a Minnesota jurisdictional basis. The Department notes that the exclusion of both depreciation expense and return on rate based for the Monticello EPU project, results in a net revenue requirement reduction of approximately $30 million. The detailed calculations and support for this

adjustment are provided by DOC witness Dale Lusti in his Direct Testimony. DOC Ex. ___ at DVL-11 (Lusti Direct).

<u>Nuclear Outage Amortization Expense for 2015:</u>

- The Department disagrees that reflecting the proposed decrease in outage amortization expense in 2015 is unreasonable. The Department notes that the Commission's MYRP Orders in ordering point 1 A and B and 15 A allow the Department's adjustment to reduce nuclear outage amortization expense from 2014 to 2105.
- The Department considers nuclear amortization to be the same as updating for depreciation expense for the passage of time, as both costs stem from rate base items for capital projects.
- The Company will not incur the higher 2014 amortization outage expense in 2015, so it is unreasonable for ratepayers to pay for this higher 2014 amount in 2015.
- Since the Company proposes to update 36 capital projects in the 2015 step, a $68.865 million increase in revenue requirements, which appears to be one-side and not equitable if material known and measurable decreases in expense (or increases in revenue) are not also included. The $7.5 million (NSPM basis) reduction in the amortization outage expense is a reasonable offset to the higher costs.
- For all the reasons discussed above, I recommend that the Commission approve the nuclear outage amortization expense reduction from 2014 to 2015 of $7.5 million (NSPM basis) for purposes of the Company's 2015 step, using the 74.0

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

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION
121 7th Place East, Suite 350
St Paul MN 55101-2147

| | |
|---|---|
| IN THE MATTER OF THE APPLICATION OF NORTHERN STATES POWER COMPANY, D/B/A XCEL ENERGY, FOR AUTHORITY TO INCREASE RATES FOR ELECTRIC SERVICE IN MINNESOTA | MPUC Docket No. E002/GR-13-868<br>OAH Docket No. 68-2500-31182 |

**DIRECT ATTACHMENTS OF NANCY A. CAMPBELL**

**ON BEHALF OF**

**THE DIVISION OF ENERGY RESOURCES OF THE MINNESOTA DEPARTMENT OF COMMERCE**

**JUNE 5, 2014**

# PUBLIC DOCUMENT

**SUMMARY OF ATTACHMENTS TO THE**
**DIRECT TESTIMONY OF NANCY A. CAMPBELL**
**MPUC Docket No. E002/GR-13-868**
**OAH Docket No. 68-2500-31182**

| <u>Description</u> | <u>Reference</u> |
|---|---|
| Xcel's response to DOC IR 170 (2014 Emission Chemical Costs) | NAC-1 |
| DOC Adjustment for Emission Chemical Costs 2014 & 2015 | NAC-2 |
| Xcel's response to DOC IR 177 (2015 Emission Chemical Costs) | NAC-3 |
| Xcel's response to DOC IR 180 & 181 (Sherco 1 & 2 Enviro. Projects) | NAC-4 |
| Xcel's response to DOC IR 183 (Pleasant Valley & Border Winds Costs) | NAC-5 |
| Xcel's res. to DOC IR 184 (Pleasant Valley & Border Winds In-Service Dates) | NAC-6 |
| Xcel's response to DOC IR 160 & 161 (Production Tax Credits for Pleasant Valley and Border Winds | NAC-7 |
| Xcel's response to DOC IR 115 (CI-13-754) Monticello EPU In-Service Date | NAC-8 |
| Xcel's Remaining Life (RL) Depreciation Study – Monticello Remaining Life | NAC-9 |
| Xcel's response to DOC IR 88 (CI-13-754) Costs of Monticello EPU | NAC-10 |
| Xcel's response to DOC IR 94 (CI-13-754) CN Estimates - Monticello EPU | NAC-11 |
| Xcel's response to DOC IR 1167 (Nuclear Outage Amort. for 2015) | NAC-12 |
| Xcel's response to DOC IR 1163 (Nuclear Fees and Dues) | NAC-13 |
| Xcel's response to OAG 114 (MN Depreciation Rules) | NAC-14 |
| Xcel's response to DOC IR 1180 (DOE Refund Amounts) | NAC-15 |
| Xcel's response to DOC IR 2136 (Amort. of Theoretical Depreciation) | NAC-16 |

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| | | | |
|---|---|---|---|
| Xcel Energy | | | |
| Docket No.: | E002/CI-13-754 | | |
| Response To: | Department of Commerce | Information Request No. | 115 |
| Requestor: | Nancy Campbell/Chris Shaw | | |
| Date Received: | May 5, 2014 | | |

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Question:

Please identify the steps that are necessary before Monticello operates at its full 671 MW level and indicate the expected dates for each step.

Response:

Monticello has specific license requirements that must be met and verified during power ascension testing. The testing will take the station from its previous licensed output of 1775 MWt (approximately 609 MWe) to our new approved output of 2004 MWt (approximately 671 MWe).

The process is such that the Company increases power in small increments and collects data for verification against licensed parameters. When the station reaches predefined power levels the data is collected and sent to the NRC for review. The station will not move up in power without NRC concurrence. NRC review times vary based on the data being evaluated and how close it correlates to the values submitted during the licensing process.

**Testing to Date:**
After receiving the EPU license on December 9, 2013, the Company began its ascension plan. Power was increased in December and testing began. We moved through the first two power ascension set points in December and January. Then on March 11, 2014, the unit reached the first required data collection plateau, which was 1864 MWt (approximately 640 MWe). The data collection is required as part of the Power Uprate License and is intended to provide verification that the steam dryer is not reasonably likely to be damaged as a result of uprated conditions as occurred at Quad Cities. The data was collected and sent to the vendor for review and their concurrence. During that review, the vendor discovered that the stresses were

running lower than expected, consistently across the entire data collection range, by a factor of 2. As a result, to comply with our license, we returned the plant to the previously known safe power level of 1775MWt (approximately 609 MWe).

The vendor reviewed the data and determined that a programming error was made during the initial setup for data collection. The program was initially changed to accommodate reactor vessel pressure testing, which is required by technical specifications to restart the reactor, but was not reset properly to capture steam loads; thus, creating the error. This data anomaly was easily reconciled and the offset was dispositioned by the vendor. However, as part of the normal process of conducting additional extent of condition review of the entire data provided, we discovered a configuration issue associated with the wiring to the strain gauges on one of the main steam lines (located in the Drywell). The upper and lower wires were mislabeled and thus lead us to connect them incorrectly at the data Collection Panel located outside of the Drywell. The physical distances are different between the upper and lower collection points and this requires the vendor to re-run their stress model with the correct configurations. Following the completion of their data set runs, Xcel Energy will review the results and submit them to the NRC as required by the license. Once the NRC completes their review we will resume power ascension testing.

**Steps Going Forward:**
We expect our reanalysis and re-verification of the model and the inputs and outputs to be completed by the end of June and we expect NRC review will take approximately one month, so we expect to re-enter power ascension in August, assuming no additional licensing activities are required. The Company believes that we will be able to achieve full power of 2004 MWt (approximately 671 MWe) by the end of 2014 based on the following ascension plan, which contains the same steps as our pre-data issue plan but with different dates:

- **August**- Raise power to 1819 MWt (approximately 624 MWe) for Steam Dryer Data only.

- **Early September**- Raise power to 1864 MWt (105% or approximately 640 MWe) for Steam Dryer only (This is the power level that we need to submit Dryer Data to NRC)
    - Submit the data to the NRC for their review and concurrence.

- **Late September**- Raise Power to 1908 MWt (approximately 658 MWe) and commence Dynamic Testing.

- **October**- Transition to M+ Operating Domain, as required by the license. This transition will result in a power reduction to 1686 MWt (approximately 580 MWe), which is the starting verification point on the operators Power to Flow Map.

- **October**- Raise power to M+ 1775 MWt (approximately 609 MWe)

- **Mid-November**- Raise power to M+ 1864 MWt (105% or approximately 640 MWe)
- **Mid-November**- Raise power to M+ 1908 MWt (approximately 658 MWe).

- **End of November**- Raise Power to EPU 1953 MWt (approximately 664 MWe)
    - o Submit the data to the NRC for their review and concurrence.

- **December**- Raise Power to EPU 2004 MWt (approximately 671 MWe) output.

The 2004 MWt power level correlates to the new power level of 671MWe and will end the testing window pending NRC concurrence. The time line provided is based on timely reviews by the vendors and the NRC. Should the data render unexpected results, the review times could be impacted.

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| | |
|---|---|
| Preparer: | Mark Schimmel |
| Title: | Vice President, Nuclear |
| Department: | Nuclear |
| Telephone: | 612-215-4613 |
| Date: | May 15, 2014 |

Docket No. E002/GR-13-868
DOC Ex. ____ NAC-9

Xcel Energy®

414 Nicollet Mall
Minneapolis, MN 55401

February 28, 2014

**—Via Electronic Filing—**

Burl W. Haar
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101

RE: PETITION
2014 ANNUAL REVIEW OF REMAINING LIVES
DOCKET NO. E,G002/D-14-____

Dear Dr. Haar:

Northern States Power Company, doing business as Xcel Energy, submits the enclosed 2014 Review of Remaining Lives Petition. This filing is submitted to satisfy the review of depreciation rates for electric and natural gas production facilities in accordance with the Commission's September 8, 1978 Order in Docket No. E002/D-77-1086A, Minn. Stat. § 216B.11, and Minnesota Rules 7825.0500 through 7825.0900.

We have electronically filed this document with the Minnesota Public Utilities Commission, and copies have been served on the parties on the attached service list. Please contact me at lisa.h.perkett@xcelenergy.com or (612) 330-6950 if you have any questions regarding this filing.

Sincerely,

/s/

LISA H. PERKETT
DIRECTOR
CAPITAL ASSET ACCOUNTING

Enclosures
c: Service List

Electric Utility
Nuclear Production

| Account | Description | Net Salvage (%) | Remaining Life 01/01/14 |
|---|---|---|---|
| **Monticello** | | | |
| E302 | Franchises & Consents | 0.0 | 16.8 yrs |
| E321 | Structures & Improvements | 0.0 | 16.8 |
| E322 | Reactor Plant Equipment | 0.0 | 16.8 |
| E323 | Turbogenerator Units | 0.0 | 16.8 |
| E324 | Accessory Electric Equipment | 0.0 | 16.8 |
| E325 | Miscellaneous Power Plant Equipment | 0.0 | 16.8 |
| **Monticello - Interim Storage Facility** | | | |
| E321 | Structures and Improvements | 0.0 | 16.8 yrs |
| E322 | Reactor Plant Equipment | 0.0 | 16.8 |
| **Prairie Island Unit 1 & 2** | | | |
| E321 | Structures & Improvements | 0.0 | 20.3 yrs |
| E322 | Reactor Plant Equipment | 0.0 | 20.3 |
| E323 | Turbogenerator Units | 0.0 | 20.3 |
| E324 | Accessory Electric Equipment | 0.0 | 20.3 |
| E325 | Miscellaneous Power Plant Equipment | 0.0 | 20.3 |
| **Prairie Island - Interim Storage Facility** | | | |
| E321 | Structures and Improvements | 0.0 | 20.3 yrs |
| E322 | Reactor Plant Equipment | 0.0 | 20.3 |

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|---|---|---|---|
| Xcel Energy | | | |
| Docket No.: | E002/CI-13-754 | | |
| Response To: | Department of Commerce | Information Request No. | 88 |
| Requestor: | Nancy Campbell, Chris Shaw | | |
| Date Received: | April 25, 2014 | | |

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<u>Question:</u>

Reference: Xcel's response to DOC IR 1 in Docket No. E002/CI-13-754

(a) Please update Attachment A to Xcel's response to DOC IR 1, by including all actual costs (both CWIP and AFUDC) through March 30, 2014 for Monticello. Please add a separate column for Xcel's estimate of any remaining costs after March 30, 2014 with brief explanation of what remaining costs there are, if any. Please add a separate row for all Xcel removal costs (RWIP) related to Monticello by year.

(b) Please indicate if costs on Attachment A are Total Company, and if yes, what would be the appropriate Minnesota Jurisdictional allocator.

<u>Response:</u>

(a) Attachment A to this response includes the requested update to DOC Information Request No. 1 Attachment A, including actual costs for Monticello LCM/EPU through March 31, 2014, and a separate column added for estimated remaining costs to complete the project after that date. Attachment A to this response also includes a separate row showing RWIP costs by year. Highlighting has been added to the attachment to show how certain numbers tie back to the roll forwards provided in DOC-84 Attachment A.

The estimated remaining costs to complete the project after March 31, 2014 are described in the table on the following page.

Estimated Costs for Monticello LCM/EPU Project After 3/31/14 ($ in millions)

| ***Description*** | ***Amount*** |
|---|---|
| Anticipated invoice credits from vendor settlement | $ (8.6) |
| Engineering contractor support for licensing closeout | 1.3 |
| Xcel labor costs for licensing closeout activities | 0.4 |
| NRC costs for licensing closeout activities | 0.4 |
| Contingency – licensing activities and vendor credits | 2.0 |
| Total estimated costs after 3/31/14 to complete project | $ (4.5) |

Please note that we finalizing negotiations with vendors for credits related to the Project, and are in the process of determining the specific subprojects such credits should be applied. Note also that we have provided a contingency in our estimate of remaining work, due to some uncertainty in the precise of amounts of final vendor credits to be applied to this project, and to the extent and scope of NRC license compliance analysis work that remains to be done. Both the estimated vendor credits and the contingency are included on Attachment A in the 2014 forecast column on the PASSPORT – AP/CM line.

(b) Yes, the costs on both DOC-1 Attachment A, and Attachment A to this response are NSP-Minnesota Total Company amounts. The appropriate Minnesota electric jurisdictional allocators are as follows:

| | Interchange Demand Allocator | Jurisdictional Demand Allocator |
|---|---|---|
| 2004 | 84.7975% | 88.1144% |
| 2005 | 84.2527% | 87.7581% |
| 2006 | 84.0611% | 87.6279% |
| 2007 | 84.2864% | 86.6512% |
| 2008 | 84.4224% | 86.7317% |
| 2009 | 83.8829% | 87.0761% |
| 2010 | 83.6422% | 87.9815% |
| 2011 | 83.8019% | 88.3621% |
| 2012 | 83.9899% | 88.1030% |
| 2013 | 84.8812% | 87.7158% |

| | |
|---|---|
| Preparer: | Linda Erickson / Pat Burke / Michael Bliss |
| Title: | Nuclear Controller / VP Capital Projects / Rate Analyst |
| Department: | Nuclear Finance / Nuclear Projects / Revenue Requirements |
| Telephone: | 612-330-7862 / 612-330-7621 / 612-330-6216 |
| Date: | May 7, 2014 |

**Monticello Extended Power Uprate Project Costs by Transaction Source - CWIP, AFUDC, & RWIP by Year**
**March 31, 2014**

| | Records | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | Actual 2014 to 3/31 | Actual Through 3/31/2014 | Forecast Remaining 2014 | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CWIP | | | | | | | | | | | | | | | |
| **JE** | | | | | | | | | | | | | | | |
| | 4,635 | | | (13) | (234,896) | 973,546 | 306,465 | 791,233 | (196,370) | (755,006) | 657,666 | 43,318 | 1,585,943 | | 1,585,943 |
| Accruals | 9,383 | | | | 7,400 | 952,025 | 9,565,491 | (5,096,121) | 4,011,039 | -1,711,544 | (7,332,672) | (66,753) | 328,865 | | 328,865 |
| Accruals - Final | 88 | | | | | | | | | | 5,139,851 | 338,135 | 5,477,986 | | 5,477,986 |
| Allocations | 2,899 | | | | | | | | | | (109,644) | | (109,644) | | (109,644) |
| NMC Entries | 185 | 795,026 | 13,756 | 821,121 | 2,942,032 | | | | | | | | 4,571,935 | | 4,571,935 |
| O&M to Cap Xfers | 952 | | | | | 175,120 | 1,494,393 | 272,117 | 2,080,464 | 55,157 | 3,855,427 | 9,069 | 7,941,747 | | 7,941,747 |
| Prepay | 7 | | | | | | | (10,000,000) | 8,500,000 | 1,500,000 | | | - | | - |
| Sales Tax Refund | 147 | | | | | (3,920) | (4,749,556) | (1,811,688) | (1,194,266) | (127,893) | (219,144) | | (8,106,467) | | (8,106,467) |
| Transfer | 38 | | | | | | | | | | | | - | | - |
| Transfer - FWH | 419 | | | | | | | | | | | | - | | - |
| Transfer - GE | 13 | | | | | | | | | | | | - | | - |
| Transfer - License | 138 | | | | | | | | | | | | - | | - |
| Transfer - Non-EPU | 129 | | | | | | | | (863,001) | (2,601,804) | | | (3,464,805) | | (3,464,805) |
| Transfer - RWIP | 9 | | | | | | | | (18,589,890) | | | | (18,589,890) | | (18,589,890) |
| JE | 19,042 | 795,026 | 13,756 | 821,108 | 2,714,536 | 2,096,771 | 6,616,793 | (15,844,459) | (6,252,024) | (3,641,090) | 1,991,484 | 323,769 | (10,364,330) | - | (10,364,330) |
| **OVERHEAD** | | | | | | | | | | | | | | | |
| E&S | 15,057 | | | | | 263,303 | 5,727,164 | 1,330,939 | 3,677,596 | 833,376 | 963,816 | | 12,796,194 | | 12,796,194 |
| PwrPlant | 1,236 | 1,268 | 2 | 2,219 | 16,595 | 69,955 | 176,820 | 1,196,838 | 1,820,137 | 576,629 | 254,074 | 8,319 | 4,122,856 | (51,600) | 4,071,256 |
| **PASSPORT** | | | | | | | | | | | | | | | |
| AP / CM | 52,199 | | | 6,135,498 | 12,832,250 | 68,121,980 | 91,812,771 | 84,447,462 | 142,165,841 | 43,897,543 | 123,893,407 | 798,634 | 574,105,386 | (4,878,253) | 569,227,133 |
| IM / PO | 29,631 | | | | | 124,515 | 2,145,712 | 864,885 | 2,639,469 | 909,480 | 4,806,592 | 468 | 11,491,121 | | 11,491,121 |
| **PAYROLL** | | | | | | | | | | | | | | | |
| Non Prod JE | 3,145 | | | | | (6,155) | (3,089) | 7,371 | (510) | 1,269 | 3,026 | | 1,912 | | 1,912 |
| TIME | 19,217 | | | 27,987 | 141,561 | 2,410,203 | 9,909,031 | 3,260,217 | 10,330,297 | 2,459,142 | 16,181,431 | 226,726 | 44,946,595 | 419,170 | 45,365,765 |
| TIME Non Prod | 3,176 | | | | | 298,654 | 326,864 | 301,083 | 347,473 | 242,817 | 323,864 | 27,830 | 1,868,585 | 51,350 | 1,919,935 |
| **EXPENSES** | | | | | | | | | | | | | | | |
| Expense Reports | 3,087 | | | | | 175,377 | 138,302 | 196,552 | 212,682 | 58,345 | 46,697 | 3,369 | 831,324 | | 831,324 |
| **Totals -CWIP Only** | 145,790 | 796,294 | 13,758 | 6,986,812 | 15,704,942 | 73,554,603 | 116,850,368 | 75,760,888 | 154,940,961 | 45,337,511 | 148,464,391 | 1,389,115 | 639,799,643 | (4,459,333) | 635,340,310 |
| AFUDC | | | | | | | | | | | | | | | |
| AFUDC Debt | | 11,976 | 25,858 | 101,363 | 679,464 | 2,610,821 | 4,712,644 | 6,129,323 | 6,607,715 | 5,589,732 | 3,852,203 | | 30,321,099 | | 30,321,099 |
| AFUDC Equity | | 18,468 | 28,224 | 149,048 | 841,710 | 4,014,317 | 7,513,550 | 10,824,826 | 12,088,145 | 10,339,588 | 8,612,255 | | 54,430,131 | | 54,430,131 |
| **Totals With AFUDC** | | 826,738 | 67,840 | 7,237,223 | 17,226,116 | 80,179,741 | 129,076,562 | 92,715,037 | 173,636,821 | 61,266,831 | 160,928,849 | 1,389,115 | 724,550,873 | (4,459,333) | 720,091,540 |
| RWIP | | | | | | [redacted] | [redacted] | [redacted] | [redacted] | [redacted] | [redacted] | [redacted] | 28,039,015 | | 28,039,015 |
| **Grand Total with AFUDC** | | 826,738 | 67,840 | 7,237,223 | 17,226,116 | 80,184,932 | 130,935,508 | 93,033,014 | 192,582,711 | 62,970,759 | 166,186,856 | 1,338,191 | 752,589,888 | (4,459,333) | 748,130,555 |
| | | | | | | | | | | | | Expenditure Total - CWIP and RWIP Only (without AFUDC) | 667,838,658 | [redacted] | 663,379,325 |

Note: The highlighting can be used to cross reference the same numbers in DOC-84 Attachment A.

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| | | | |
|---|---|---|---|
| Xcel Energy | | | |
| Docket No.: | E002/CI-13-754 | | |
| Response To: | Department of Commerce | Information Request No. | 94 |
| Requestor: | Nancy Campbell, Chris Shaw | | |
| Date Received: | April 25, 2014 | | |

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Question:

Reference: Docket Nos. E002/CN-05-123 and E002/CN-08-185

Based on DOC's review of the two above referenced certificate of need (CN) dockets, the Department considers the below numbers (including pages references to CN's) to be the breakout of costs for Monticello for CN purposes.

a) Please confirm if Xcel agrees with the numbers below, or if not please explain the Company's disagreement with the numbers.
b) Are the ISFSI costs included in the Company's final cost for the Monticello LCM/EPU of $664,918,471 (Scott Weatherby's Schedule 3, Appendix A-1) as of August 2013, excluding AFUDC and removal costs?
c) Are the ISFSI costs included in the Company's filing for the Monticello Cost Overrun (E002/CI-13-754)? If no, should these costs be included? Please explain your response.

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| Monticello Life Cycle Management (LCM) | $135 million |
| Monticello Extended Power Uprate (EPU) | $133 million |
| Independent Spent Fuel Storage Installation (ISFSI) | $ 55 million |

1. Xcel's Petition, dated February 14, 2008, in Docket No. E002/CN-08-185 (Monticello EPU), page 1-6:

   The total project cost for the power uprate will be approximately $104 million. The final cost will depend upon whether a new steam dryer is required.[2] If required, the new steam dryer will add $29 million to the project for a total project cost of $133 million.

[2] Equipment has been installed to assess the need for the new steam dryer. The decision will be made after analyzing data obtained following startup after the 2009 uprate modifications are complete.

2. Xcel's Petition, dated January 18, 2005, in Docket No. E002/CN-05-123 (Monticello LCM), states at page 1-12:

   Based on the plant assessment and industry experience in the relicensing process, Monticello identified and included approximately $135 million in investments above normal annual investments that may occur in the future as part of the cost benefit analysis associated with license renewal.

3. Xcel's Petition, dated January 18, 2005, in Docket No. E002/CN-05-123 (Monticello LCM), states at page 1-12:

   The estimated installed cost of the ISFSI in 2004 dollars is $55 million. The estimate includes the following component costs:

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| Regulatory Process | $2.0 M |
| Engineering and Design | $12.0 M |
| Plant Upgrades | $4.0 M |
| ISFSI construction | $3.5 M |
| 30 canisters and storage | $26.0 M |
| Canister Loading Campaigns | $7.5 M |

Response:

a) We agree that these are numbers that were presented in those two separate Certificate of Need proceedings.

   However, we note that the ISFSI Certificate of Need pertained to the on-site fuel storage facility itself, not life-cycle management activities that would be needed if Monticello's operating license was extended. In the 2005 ISFSI Certificate of Need filing, we requested authority to install the on-site fuel storage facility whether or not Monticello's operating license was extended because we identified a need for on-site storage even if Monticello were to have been shut down at the end of its initial operating license in 2010. The LCM activities described in the ISFSI Certificate of Need filing were representative of the types of activities we anticipated would be needed if the NRC extended our operating license and we anticipated the potential for additional items as new information became available. (*See* ISFSI CON Application, p. 5-13.)

We also note that in the 2008 EPU Certificate of Need filing, the Company provided economic inputs to the cost benefit analysis for the EPU project, that included an updated estimate of LCM capital spending (above normal annual investments) of approximately $170 million (including the addition of the Steam Dryer) along with the $133 million for the uprate. The remainder of the initial $320-346 million modeled in that docket was built through escalation of the costs over time. Those amounts were based on additional project design and scoping in 2007.

In the Company's 2011 test year rate case (E002/GR-10-971), we updated costs for the total LCM/EPU Project of about $361 million, including both uprate and life-cycle management costs, through 2011. (Koehl Direct, p. 31.) In rebuttal testimony, we further updated the estimate at $399.1 Million for the jointly-managed and implemented LCM/EPU Program. (Koehl Rebuttal, p. 15.) In November 2011, our prior Chief Nuclear Officer, Mr. Koehl, testified at hearing that the final cost of the Project was expected to be approximately $550-600 million. In our 2012 rate case (Docket E002/GR-12-961) the Company further updated the estimated cost to $587 million. The Company had spent approximately $494 million on the project as of August 31, 2012. (O'Connor Direct p. 17.) We further updated that estimate in our response to Information Request DOC-160, in the rate case to approximately $640 million. In the current rate case, we provided our latest estimate of the overall LCM/EPU Project costs as $655 million.

b) No. The direct ISFSI costs (for additional dry cask storage of spent nuclear fuel) has never been part of either the estimated or actual Monticello LCM/EPU Project costs, from the inception of the Project. The ISFSI work was its own separate project based on the Commission's granting of the Certificate of Need in Docket E002/CN-05-123. ISFSI additional dry cask storage of spent nuclear fuel construction work has always been planned, managed, and constructed separately from LCM/EPU Project work. The Company separately considered and approved the ISFSI work as part of the decision to seek an extended operating license. In addition, on page 5-15 of the ISFSI Certificate of Need Application, we note that $55 million for the ISFSI project is included as a cost in the Strategist Model that was constructed to compare the cost of Monticello to other alternatives. In addition, as a separate item, on pages 5-12 and 5-13 of the ISFSI Certificate of Need Application we also included $135 million for LCM upgrades as a separate amount.

c) No. While the ISFSI costs are referenced in the 2005 certificate of need, they have not been treated as part of either the LCM or EPU activities at the plant. The ISFSI was needed irrespective of whether Monticello's operating license was extended or whether the Company had increased the capacity of the plant. As noted on page 1-10 of the ISFSI Certificate of Need Application: "The need for dry on site storage is not eliminated if the plant does not operate beyond 2010. If a Certificate of Need were not granted, the Monticello plant would shut down by the end of 2010. In order to decommission the plant, spent fuel would have to be removed from the reactor and spent fuel pool. A dry storage facility utilizing 40 storage containers would be needed in order to decommission the plant." Thus, the ISFSI has never been considered a cost of continued operations. The costs of potential LCM upgrades necessary to support an extended operating license were treated separately from the costs of the ISFSI itself.

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