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Xcel Energy
Docket No.: EL12-046
Response To: South Dakota Public Utilities Commission
Data Request No.
Requestor: 2-4
Date Received: July 30, 2012

Question:

Referring to the Prairie Island ZE Pipe adjustment:

a) Please provide copies of work order authorizations.
b) Please provide revised PF19 work papers to reflect actual costs incurred.
c) Please provide the work paper that supports the property tax rate used on PF19-11.
d) Does NSP anticipate any reductions in test year expenses as a result of less maintenance or operational efficiencies? Please explain.
e) Was the piping replacement project part of the life cycle management project at Prairie Island? Please explain.

Response:

a) The Nuclear Project Authorizations for this project are included as Attachments A and B to this response.
b) Please see Attachment C for updated work papers PF19-1 through PF19-11 which reflect actual project costs through June, 2012.
c) Please see Attachment D for a copy of the Actual Property Tax Rates work sheet that was used in the development of the revenue requirement for the Prairie Island ZE Pipe adjustment PF19. The work sheet was based upon the 2010 property tax information which was the most current available at the time.
d) NSP does not anticipate any reductions in test year expenses as a result of less maintenance or operational efficiencies. Maintenance costs had not increased as a result of the degraded performance of the system. The system is being returned to its intended operational efficiency to ensure cooling of new equipment in the area and prevent degradation of that equipment.

e) No, the ZE pipe replacement project was not part of the larger "Prairie Island life cycle management project". In general, there are numerous projects for replacing equipment over the life of a plant due to normal wear and tear and performance degradation. The XE pipe replacement project was necessary due to non-repairable damage due to river silt.

Preparer:	Terry A. Pickens \ Thomas E. Kramer
Title:	Director, Regulatory Policy \ Principal Rate Analyst
Department:	Nuclear Policy & Planning \ Revenue Requirements – North
Telephone:	612-330-1906 \ 612-330-5866
Date:	August 15, 2012

NUCLEAR PROJECT AUTHORIZATION (NPA)

The NPA is a request for O&M and Capital Study, Design, and Implementation Phase authorization. In addition, updated NPAs are required to request additional project authorizations due to project overruns, and/or changes in scope, schedule, and cost in accordance with FP-BUS-PRG-01, Project Review and Approval Process. The NPA records the historical project information after initial funding authorization. The NPA is signed by the Project Manager and Project Sponsor to document their agreement at each project phase and/or changes in scope, schedule, and cost. The Site VP signature and VP Nuclear Projects signatures are required for Capital project authorization. The Site VP Signature is required for O&M project authorization. For additional instructions on how to fill out the NPA form reference FP-BUS-PRG-01.

Budget Year(s):	2007-2011	Plant:	Prairie Island	Log #:	
Classification:	Capital: 100%	O&M:		Date:	02/16/2011

Project Title: ZE Piping Replacement Project

CAP: 1249417

Project Prioritization

(Use FP-BUS-IPP-01 Integrated Planning Process)

Urgency:	3	*Important those activities which are important for longer-term operation that are generally described as "preventing, improving, maintaining or reducing" the probability of a consequence.*
Risk:	3e	*Equipment ReliabilityDecreases performance or reliability of equipment required for power generation.*

Phase:	**Study**	**Design**	**Implementation**	**Close-out**
New /Additional Funding Requested:			$48,000	
New /Additional Funding Requested:			$2,139,869	
New /Additional Funding Requested (Total):			$2,187,869	
Current Authorization:			$186,000	
YTD Phase Actual:			$17,039	
Project to Date:			$6,726,983	
Original Project Phase Cost: (identify contingency separate)				
Revised Project Phase Cost:			$8,482,549	$570,303

YTD Actual Cost:	$ 17,039
Revised Total Project Cost:	$ 9,100,852
Original Total Project Cost:	$ 9,052,852

- ☐ Study Phase
- ▒ Design Phase
- ☒ Implementation Phase
- ▒ *Project Overrun
- ▒ *Scope Change
- ☒ *Cash Flow Change
- ☒ *Schedule Change

NUCLEAR PROJECT AUTHORIZATION (NPA)

***Provide a clear explanation of why this funding or change is being requested:**
This request is for full implementation of the rest of the 695' ZE Piping field work. The work remaining to be completed is as follows:

- CAPITAL:
  - Mobilze tools to Unit 1 B Train
  - Provide temp power
  - walk down ECO
  - 11 & 12 CS PMP Cooler replacement
  - ZE Resources used for GL-08-01 PREFABRICATION
  - 1R27 REFUELING OUTAGE NO WORK
  - Mobilze after 1R27
  - Complete Work suspended
  - Mobilze tools to Unit 1 A Train
  - 12 CP Work
  - 11 CC Work
  - 21 CC Work
  - Mobilize tooling to Unit 2 B Train
  - 12 CC Work
  - 22 CC Work
  - 21 CP Work
  - 23 CP Work
  - 22 SI Work
  - Unit 2 Piping Work
  - Supply Supports Work
  - Return Supports Work
  - Unit 2 B Train Field Welds
  - New Supports
  - Mobilize tooling to Unit 2 A Train
  - 22 CP Work
  - Unit 2 A Train
  - Demob / tooling
- ***O&M:***

  CAP-01249417 identified that many pipe supports in the ZH system have the wrong ID on drawings. PassPort has one ID and the drawings have another. This is a legacy issue that resulted from Fluor putting IDs on drawings and PINGP changing the IDs in the component database without updating the drawings. Information is included in PassPort Notes for equipment description that details the information on the drawings. For example, Support 1-EHRH-599 in PassPort has a Note that states the drawing has it depicted as 2-RHRH-599.

  Approximately 1,000 drawings need updating by the drafting department. The estimate for the drafting contractors to do this work is:

  0.75 hr/drawing * 1,000 Drawings = 750 hours
  750 hrs * $60/hr = $45,000

  Once the drawings are updated, the Site's Data Stewards will remove the Notes in PassPort that describe the discrepancy. The drawing updates will be completed by

NUCLEAR PROJECT AUTHORIZATION (NPA)

07/01/2011.

A corrective action (CA-01249417-01) was initiated to pursue project funding to address this backlog. The funding is needed to maintain design control and configuration of the plant.

Labels -

The labels on the supports will need to be walked down and new labels may need to be created. Estimated that ~500 supports will need new tags. The cost estimate to create the new tags is $3,000.

Financial Analysis (NPV):
A net present value was run on this project. With the exception of some saved maintenance on control valves and solenoid valves, a "no maintenance cost savings" assumption was made, because the site is currently not maintaining the system. Please note, however, that this is not an acceptable long term strategy.. Corrective maintenance will be required to restore cooling on an O&M basis. Replacing piping, coolers, valves, etc. on a corrective basis would be an O&M cost, which would significantly change the NPV.

The NPV, based on end of plant life in 2014 is:

($5,700,298)

The NPV, based on end of plant life in 2034 is:

($6,497,501)

The reason that the 2034 NPV is higher is because if the end of the useful life is in 2014, the site can depreciate the new equipment faster.
No credit has been taken for extended equipment life.

Project Manager:	Mike Goggin	**Project Sponsor:**	Mike Milly

Concise Problem Statement: (Provide the problem description or the new requirement or function the project will meet).
The ZE system is not effective in removal of heat generated in the Auxiliary Building. The piping from the supply header to the pump motor unit coolers and from the pump motor unit coolers back to the return header, as well as the pump motor unit coolers appear to be blocked with silt resulting in significant reduction or total loss of water flow. In addition, it appears that MIC has damaged pipe and has resulted in leaks. Unit coolers appear to have eroded due to silt entrainment also resulting in leakage that is not repairable due to leak location within the coil bundle.

Project Scope: (Provide what the project will and will not deliver, and what functionality is and is not included in the final product. Identify affected equipment, associated equipment, and similar equipment commodities that are included. If project includes O&M and Capital scope, separate scopes below in alignment with the calculated cash-flows documented toward the end of the NPA. See Financial Manager for assistance.)

NUCLEAR PROJECT AUTHORIZATION (NPA)

Capital Scope:

TRAIN B
The entire 695' level of the Train B Piping, Supports, and Coolers will be seismically qualified. This includes the following:
11, 13, 21, and 23 VC Coolers / Piping / Supports (2008)
12 and 22 CC Coolers / Piping / Supports (2008)
12 and 22 SI Coolers / Piping / Supports (2008)
12 and 22 CS Coolers / Piping / Supports (2008)

The entire 695' level of the Train B Piping, Coolers (coil replacements as needed), and Supports (new hangers as needed and modified hangers as needed) will be replaced:
11, 13, 21, and 23 VC Coolers / Piping / Supports (2008)
12 and 22 CC Coolers / Piping / Supports (2008)
12 and 22 SI Coolers / Piping / Supports (2009)
12 and 22 CS Coolers / Piping / Supports (2009)

TRAIN A
The following 695' level of the Train A Piping, Supports, and Coolers will be seismically qualified:
12 and 22 VC Coolers / Piping / Supports (2009)
11 and 21 CC Coolers / Piping / Supports (2009)

The following 695' level of the Train A Piping, Coolers (coil replacements as needed), and Supports (new hangers as needed and modified hangers as needed) will be replaced:
12 and 22 VC Coolers / Piping / Supports (2009)
11 and 21 CC Coolers / Piping / Supports (2009)

The following 695' level of the Train A Piping, Supports, and Coolers will be removed from the plant:
11 and 21 SI Coolers / Piping / Supports (2009)
11 and 21 CS Coolers / Piping / Supports (2009)

Project Description: (For the recommended alternative being considered, provide the specific tasks that will be completed in sufficient detail to describe how the project will be implemented. Include any key assumptions use for the project).
The following 695' Aux Bldg ZE System equipment is in scope – Engineering complete in 2009, Construction to follow in 2009-2010.

TRAIN B
The entire 695' level of the Train B Piping, Supports, and Coolers will be seismically qualified. This includes the following:
11, 13, 21, and 23 VC Coolers / Piping / Supports
12 and 22 CC Coolers / Piping / Supports
12 and 22 SI Coolers / Piping / Supports
12 and 22 CS Coolers / Piping / Supports

The entire 695' level of the Train B Piping, Coolers (coil replacements as needed), and Supports (new hangers as needed and modified hangers as needed) will be replaced:
11, 13, 21, and 23 VC Coolers / Piping / Supports
12 and 22 CC Coolers / Piping / Supports
12 and 22 SI Coolers / Piping / Supports
12 and 22 CS Coolers / Piping / Supports

TRAIN A
The following 695' level of the Train A Piping, Supports, and Coolers will be seismically qualified:
12 and 22 VC Coolers / Piping / Supports
11 and 21 CC Coolers / Piping / Supports

NUCLEAR PROJECT AUTHORIZATION (NPA)

The following 695' level of the Train A Piping, Coolers (coil replacements as needed), and Supports (new hangers as needed and modified hangers as needed) will be replaced:
12 and 22 VC Coolers / Piping / Supports
11 and 21 CC Coolers / Piping / Supports

The following 695' level of the Train A Piping, Supports, and Coolers will be removed from the plant:
11 and 21 SI Coolers / Piping / Supports
11 and 21 CS Coolers / Piping / Supports
11A, 21A, 21B, and 21C ZX Unit Coolers

Justification / Benefits: (What is the justification for selecting the recommended alternative and what are the expected benefits).
This project is required because there is inadequate cooling to our critical equipment in the Auxiliary Building. The ZE System equipment on the 695' level of the Aux Bldg is especially important, because there is essentially no cooling in the six Charging Pump rooms right now, and the site is replacing the variable speed pump drives with new frequency drives in 2008. It is important that this new equipment is protected – a $3,000,000 investment.

This entire ZE Piping Replacement project was cut from the scope of the ZX Piping Replacement Project (01ZX01). There is approximately $600,000 worth of left over materials from this project that is being carried in the warehouse, the majority of which would be used up during this project.

The current configuration of the Unit 1 and Unit 2 Charging Pump area coolers and associated piping is that they are completely blocked with silt, and have little or no water flow. They are isolated on cooling water for the cooling medium – this was done to protect the ZX piping that was recently replaced. The problem has not been addressed adequately, and a new strategy is required to restore cooling, either by a large scale capital replacement or an O&M corrective maintenance replacement.

The feasibility of this project is being pursued to ensure proper cooling is provided for worker safety and to prolong the life of plant equipment. The ZE system has been down graded to a Non-safety related per EC 12992.

In addition to replacing the plugged-up piping, this project will also address the following Aux Bldg ZE System issues:

1.Provide resolution to a Top 10 Equipment List Item.
2.Provide additional cooling to the Aux Bldg as a whole, thus providing safer work environments for personnel, as well as longer life for electrical equipment.
3.Correct seismic II / I status for ZE piping and unit coolers (SI & CC pump) – CAP 024724.
4.Replace problematic CL to ZE and ZX to ZE control valves.
5.Engineering has requested that solenoid valves for these control valves also be removed.
6.Use the $650,000 of materials from ZX System piping replacement project (AL6XN piping, SST valves, unit coolers, and insulation).
7.Resurrect the flushing procedures for the times the system is run on cooling water.
8.The unit cooler's manual control valves that regulate chilled water flow through the coils will be removed. The purpose of doing this is to provide continuous flow in the lines to prevent MIC and silting in replaced components.
9.The AB ZE piping insulation will be upgraded from CCF to F-VBC, which is in inventory from the ZX project.
10.Finally, we intend to use the AL6XN material to replace all of the piping, with the possible exception of vent and drain valves. The purpose of this is for more manageable configuration control.

Project Risk Assessment: (Provide the key assumptions and risks which could impact the success of the project).
Risks which could impact the success of the project:

1. Securing project funding – was decreased twice in 2007 and twice already in 2008.
2. Project ranking – the ZE Piping Project currently ranks #14 on the 2008 Routine Capital Project Budget below Regulatory Projects and Safety Projects, and below far more important projects like DEHC, R11/R12, Charging Pumps, and Air Compressors. This is concerning, because if there are any overruns, one of the first places the PRG has looked for money is in lower-ranking projects, such as this one.
3. Project staffing – emergent projects such as the recent Security Modifications and Outage Projects (Feedwater Line

NUCLEAR PROJECT AUTHORIZATION (NPA)

Drop, Turbine Generator Work, DEHC assistance, IA assistance,etc) continue to take key project members from this project to address higher priority tasks.

Alternatives: (List and briefly describe other alternatives, including non-authorization, that were considered).
1.Do Nothing (and scrap the inventoried material)

•Engineering Study Report S-05ZE01 dated 11/8/05: Aux Building ZE Unit Cooler and Piping Degradation Study by Charles Agan and Richard K. Cooper, provides recommendations for actions to be taken to ascertain the actual condition of the ZE System. This information will help determine the most cost efficient plant strategy.
•Per C18.1, none of Aux Bldg Unit Coolers are required to maintain operability of Engineered Safeguard Equipment.
•Eliminate the holding costs taxes on the $650,000 of material in the warehouse.
•There are several engineering issues with the ZE System that need to be resolved (see Justification / Benefits section).
•The motor life of the critical motors in the will be reduced without restored cooling. (Lowering the temperature by 10 °C will increase pump motor life by a factor of 2 – motor insulation lifetime is halved for each 10 °C rise in operating temperature).
•The stay times in several areas of the Aux Bldg will remain low, require more time to complete maintenance and perform plant operations.

2.Replace Safety Related Coolers/Pipe with Safety Related (carbon steel pipe) as a Project

•Does NOT require modification.
•Can proceed without Q-List results.
•Completed in approximately 3 years (fall winter spring only) from time of funding approval. Phase 1 would be completed in 2010.
•Would NOT use the SS pipe already on site.
•Engineering is still required to address other ZE System issues.
•There will still be the II/I issue to deal with, which will require engineering / design work – this would not be a strictly maintenance activity.
•Would have to buy new safety-related material and scrap about half of the $650,000 material in the warehouse.

3.Replace Safety Related Coolers/Pipe with Safety Related (carbon steel pipe) as Maintenance Strategy

•Does NOT require modification or any design work.
•Does NOT require a project.
•Can proceed without Q-List results.
•Completed in 5 – 7 years depending on how aggressive system budget allows and management of replacement
•Would NOT use the SS pipe already on site($650,000 scrap).
•Engineering is still required to address other ZE System issues.
•There will still be the II/I issue to deal with, which will require engineering / design work – this would not be a strictly maintenance activity.

4.Replace Coolers and Pipe with Standard Quality Components (use AL6XN SS pipe already on site)

•Eliminate plugged pipes / components.
•Fix II/I seismic problems.
•Restore beneficial cooling in the Auxiliary Building.
•Will set us up for operation to 2034.
•Most of the material needed is already on site, and it has been requested by the asset owner that we use this material.
•5SST piping is more resistant to MIC.
•Completed in approximately 3 – 4 years from time of funding approval.
•Requires modification and hiring of contract engineering support (we may be able to use some or all of the piping analysis that was completed TES in Design Change # 82Y23D, which will reduce A./E analysis cost (Film rolls 1882 / 1887).
•Requires completion of Q-List downgrade (nearly complete).

Recommendation: Replace Coolers and Pipe with Standard Quality Components (use 5SST pipe already on site).

NUCLEAR PROJECT AUTHORIZATION (NPA)

Material Management: (Identify how this project may create obsolete parts, require additional parts, or require the disposition of removed items).

Are there any spare parts or material (regular inventory or capitalized) that will no longer be usable as a result of implementing this project? Identify and determine the value of each.
None. All materials orlginally purchased for this project (in the 01ZX01 Project) were journaled to the ZE Project, and will be used or scrapped.

Are there any additional spare parts or material (regular inventory or capitalized) that will be needed as a result of implementing this project? Identify and determine the value of each.
None. No additional spare piping, valves, or coolers will be stocked above what is currently in stores.

Are there any parts or material that will need to be retired or refurbished as a result of implementing this project? Identify and determine the value of each.
Yes. A few hundred feet of piping and several valves will be scrapped.

Cash Flow

Capital

Year	2007	2008	2009	2010	2011		
Phase					Implementation & Closeout		
Jan		$41,200	$89,036	$489,860	$17,039		
Feb		$31,362	$265,533	$724,940	$75,771		
Mar		$181,631	$157,019	$231,047	$210,000		
Apr		$113,956	$357,464	$307,099	$228,709		
May		$154,072	$203,061	$25,716	$0		
Jun	$599,615	$152,757	$221,884	-$44,663	$275,000		
Jul	$17,042	$154,356	$192,942	$664	$275,000		
Aug	$40,892	$97,264	$262,155	$0	$275,000		
Sep	$21,907	$109,642	$62,949	-$27,836	$275,000		
Oct	$10,022	$58,939	$117,046	$739	$275,000		
Nov	$6,997	$41,306	$380,600	$0	$225,000		
Dec	$7,016	$138,565	$700,537	$13,612	$211,388		
TOTAL	$703,491	$1,275,050	$3,010,226	$1,721,178	$2,342,907		$9,052,852

(The above table is an inserted Excel worksheet. Double click on table to enter data. Ensure when finished all data is shown before printing)
For carryover projects, enter the cash flow in the previous years' months.
Outage Related: ☐ Yes ☒ No Year/Outage Number(s):

NUCLEAR PROJECT AUTHORIZATION (NPA)

Cash Flow

O&M

Year	2007	2008	2009	2010	2011		
Phase							
Jan							
Feb							
Mar					$15,000		
Apr					$15,000		
May							
Jun					$15,000		
Jul					$3,000		
Aug							
Sep							
Oct							
Nov							
Dec							
TOTAL	$0	$0	$0	$0	$48,000		$48,000

Project Estimate and Project Milestones: (An estimate of Total Project cost and Project Milestones must be included for Design and Implementation phases).

Note: This high level schedule has not been verified with the project team. This schedule wil likely need to be modified based on input from the project team.
PRG Presentation:
Phase 1 (2007 - 2008): Unit 1 and Unit 2 Charging Pump area coolers and associated piping - a total of six coolers and piping,
Engineering: March - July, 2007
Planning: July, 2007
Walk downs: August - September, 2007
Construction: November 2007 - April, 2008
Phase 2 (2008 - 2009): Unit 1 and Unit 2 Safety Injection Pump area coolers and associated piping, and Unit 1 and Unit 2 Containment Spray Pump area coolers and associated piping - a total of eight coolers and piping.
Engineering: March - June, 2008
Planning: July, 2008
Walk downs: August - September, 2008
Construction: October 2008 - March, 2009
Phase 3 (2009 - 2010): Unit 1 and Unit 2 Component Cooling Pump area coolers and associated piping, Unit 1 and Unit 2 Main Steam Corridor coolers and associated piping, and Unit 1 and Unit 2 Auxiliary Building Floor area coolers and associated piping - a total of ten coolers and piping.
Engineering: March - June, 2009
Planning: July, 2009
Walk downs: August - September, 2009
Construction: October 2009 - September 2011
Turnover October 2011
Closeout December 2011

NUCLEAR PROJECT AUTHORIZATION (NPA)

ESTIMATE

2011 Estimate

DZ	
In-Processing	$75,771.00
DZ Elec	
Unit 1 A Train	$11,908.00
Unit 1 B Train	$27,251.00
Unit 2 A Train	$16,030.00
Unit 2 B Train	$42,823.00
DZ PF	
Unit 1 A Train	$39,553.00
Unit 1 B Train	$41,153.00
Unit 2 A Train	$111,038.00
Unit 2 B Train	$194,031.00
DZ Supv/Project Staffing	$239,414.00
Engineering	
PE Engr	$141,750.00
AES	$150,000.00
Planning	$359,100.00
Project Manager/Project Controls	$283,500.00
Xcel Spec Construction	$411,600.00
API - Insulators	$140,000.00
Materials	$57,986.00
Total Estimate	**$2,342,907.00**

Resources	Phase 1 (Charging Pump Rooms)	Total (Phase 1, 2, and 3)	Notes on estimates
A/E	$347,500	$850,000	Phase 1 estimate based on proposal from Sargent & Lundy, LLC. Total is double this amount -- not three times this amount -- because they bid some items that we do not need.
Project Engineer	$60,000	$180,000	Estimate from Cooper Engineering, Inc. -- (500 hours per phase)($120 per hour)
Construction	$877,289	$2,900,000	Phase 1 estimate provided by Atlantic (Turney Hazlet / Doug Loberg). Total estimate is approximately three times this amount, and this should be conservative since the charging pump rooms are the hardest areas to work in and around.
Carpenters, Laborers, Fire watches	$356,090	$1,308,000	Phase 1 estimate provided by Bill Pasch. Total estimate is approximately three times this amount, and this should be conservative since the charging pump rooms are the hardest areas to work in and around.

NUCLEAR PROJECT AUTHORIZATION (NPA)

Resources	Phase 1 (Charging Pump Rooms)	Total (Phase 1, 2, and 3)	Notes on estimates
Existing Materials on Site	$216,667	$650,000	Existing materials in the warehouse value $650,000. Phase 1 will use approximately one-third of this material.
Additional Materials	$33,333	$100,000	This estimate is based on the fact that the inventory of materials we have has been picked through over the last two years, and known material that is missing. We estimated that the additional material will likely be less than $100,000 for the total project. Phase 1 estimate is one-third of this estimate.
Scrap Material costs	$33,333	$100,000	This estimate is for the cost of removing the old equipment from the plant -- $100,000 for the entire project -- Phase 1 is one-third this amount.
Supply Chain	$280	$840	Help with ordering missing materials: (4 hours per phase)($70 per hour)
Project Manager	$69,333	$208,000	Estimate based on one-third FTE per year for 3 years at $100 per hour
Planner / Field Engineer	$182,000	$546,000	Estimate based on full time planner for 3 years at 50 hours per week at $70 per hour. Note: This number will likely be less, as we will use this planner's services on other projects. This planner will also provide field engineer services.
Operations	$11,200	$33,600	Operations support for isolation, drain, restoration, fill, system line-ups, and testing. Estimate is 12 man-weeks for the entire project at 40 hours per week at $70 per hour. Phase 1 estimate is one-third this amount. This estimate is based on analogous estimating using data from the ZX piping replacement project.
Rad Protection	$5,600	$16,800	Rad Protection support for RP services and decon. Estimate is 6 man-weeks for the entire project at 40 hours per week at $70 per hour. Phase 1 estimate is one-third this amount. This estimate is based on analogous estimating using data from the ZX piping replacement project.
QA / QC / NOS	$25,000	$75,000	QA / QC support for weld inspections. Estimate is $75,000 for the entire project. Phase 1 estimate is one-third this amount. This estimate is based on analogous estimating using data from the ZX piping replacement project.

NUCLEAR PROJECT AUTHORIZATION (NPA)

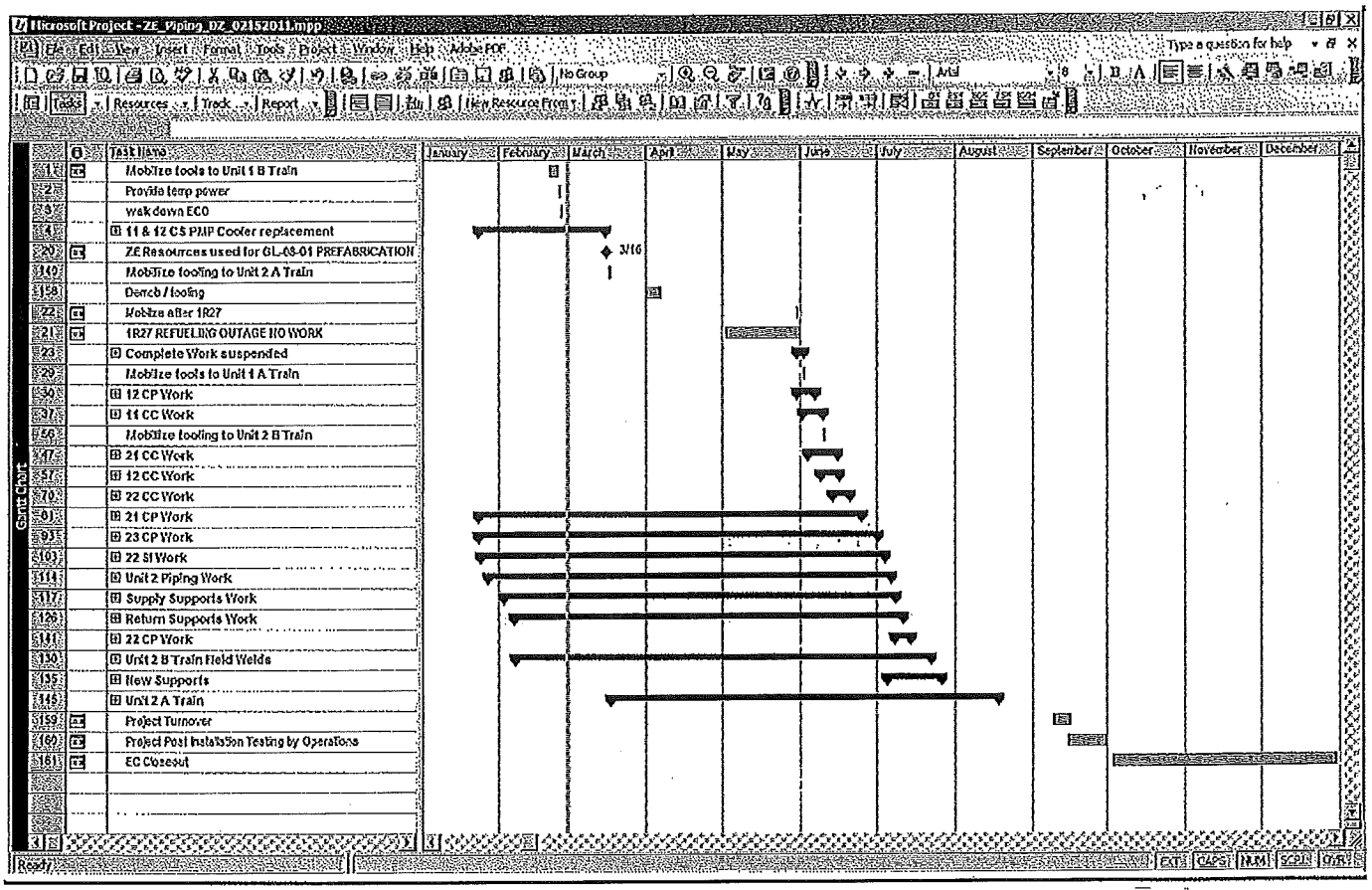
Resources	Phase 1 (Charging Pump Rooms)	Total (Phase 1, 2, and 3)	Notes on estimates
System Engineering	$3,640	$10,920	System Engineering time for weekly project meeting -- 1 hour per week for 3 years at $70 per hour. (Note: construction estimate includes weekly meeting time)
Project Sponsor	$5,200	$15,600	Project Sponsor time for weekly project meeting -- 1 hour per week for 3 years at $100 per hour. (Note: construction estimate includes weekly meeting time)
Design Review Boards / Engineering Document Reviews	$17,467	$26,200	Design Engineering Design Review Boards: (3 review boards)(8 hours)(10 people)($80 per hour average). Also, site engineering document reviews: (100 hours)($70 per hour) -- these estimates are for the entire project, two-thirds of which will come during Phase 1.
Project Controls	$20,800	$62,400	This estimate is for the Project Department Staff for financial tracking and scheduling: (8 hours per week)(52 weeks)($50 per hour) for Phase 1. Total project is three times this.
Admin Support	$8,320	$24,960	This cost is primarily for configuration control: (4 hours per week)(52 weeks)($50 per hour) for Phase 1. Total project cost is three times this. (Note: construction estimate includes admin costs)
In-Processing	$12,000	$24,000	In-processing cost for three additional people: ($100 per hour)(1 week)(6 people) for total project, all of which will be spent during Phase 1 of the project. (Note: construction estimate includes mobilization / de-mobilization costs.)
Scheduling / Production Planning	$5,600	$16,800	Integrate the project schedule into the on-line 13-week schedule. Estimate is 2 weeks per phase at $70 per hour.
Safety Department	$560	$3,360	Estimate is 16 hours per phase at $70 per hour.
Iron Workers	$22,400	$22,400	Estimate to install a new ladder for access to the top of 11 & 12 Charging Pump Rooms. (2 Iron Workers)(160 hours)($70 per hour), which will be installed during Phase 1.

NUCLEAR PROJECT AUTHORIZATION (NPA)

Resources	Phase 1 (Charging Pump Rooms)	Total (Phase 1, 2, and 3)	Notes on estimates
API	$120,000	$360,000	Estimate for Phase 1: $40,000 for insulation removal, $80,000 for insulation installation. Total project will be three times this. This estimate is based on analogous estimating using data from the ZX piping replacement project.
Additional Electrical Work	$560	$1,680	Electricians included in construction estimate for term / deter fans and light only. Also needed for 24 control valves / solenoid valves at 1 hour per valve at $70 per hour for the entire project. Phase 1 is one-third this amount.
Drafting costs	$50,000	$150,000	Estimate for entire project: $150,000. Phase 1 will be one-third this amount. This estimate is based on analogous estimating using data from the ZX piping replacement project. This number was confirmed with Chuck Rizzo.
Close out costs	$2,800	$8,400	Most of this will be covered by the Project Engineer as part of the mod process, but this is accounting for John Geisler's time for mod close-out. (1 week per phase)($70 per hour)
Study Money	$10,000	$10,000	Journal in the $10,000 study money that we spent developing the estimate and NPA
Subtotal	**$2,496,973**	**$7,704,960**	**SUBTOTAL (No Contingency, A&G, and VP Account Included)**
Contingency	$249,697	$1,155,268	Per Project Estimate Template, 15% of project total
Site A&G	$249,697	$192,624	Per Project Estimate Template, 2.5% of project total
Total	$3,258,549	$9,052,852	TOTAL

NUCLEAR PROJECT AUTHORIZATION (NPA)

Project Schedule (02/2111 - 12/31/2011)



Project Agreement

Project Manager: Michael P. Goggin MPGoggin	Date: 3/4/11
Project Sponsor: Mike Milly Michael R. Milly	Date: 4 MAR 11

NUCLEAR PROJECT AUTHORIZATION (NPA)

PRG Sub-Committee Disposition

☐ Accept ☐ Reject Date:

Recommendation:

N/R

Validate Urgency: ☐ 1 ☐ 2 ☐ 3 (Check one)

Risk: (Refer to FP-BUS-IPP-01)

PRG Disposition

☐ Approve ☐ Reject Date: 3/1/2011

Recommendation:

Savings and Use Guidance (See FG-BUS-FIN-01)

Form QF-2134 Required (AFCR)? ☐ Yes ☒ No

Budget Offset Recommendation:

O&M and CAPITAL	CAPITAL
Site Vice President: [signature] Date: 3.4.2011	For VP Nuclear Projects: [signature] Date: 3/21/11

(Note: If Form QF-2134 (AFCR) is required, Authorization for funding can not be finalized until approved Form QF-2134 is signed by CNO and attached to NPA)

Site Finance Manager

Accounting Charge Number:

Site Finance Manager:

NUCLEAR PROJECT AUTHORIZATION (NPA)

Date:

NUCLEAR PROJECT AUTHORIZATION (NPA)

The NPA is a request for O&M and Capital Study, Design, and Implementation Phase authorization. In addition, updated NPAs are required to request additional project authorizations due to project overruns, and/or changes in scope, schedule, and cost in accordance with FP-BUS-PRG-01, Project Review and Approval Process. The NPA records the historical project information after initial funding authorization. The NPA is signed by the Project Manager and Project Sponsor to document their agreement at each project phase and/or changes in scope, schedule, and cost. The Site VP signature and VP Nuclear Projects signatures are required for Capital project authorization. The Site VP Signature is required for O&M project authorization. For additional instructions on how to fill out the NPA form reference FP-BUS-PRG-01.

Budget Year(s):	2009-2011	Plant: PI	____	Log #:	
Classification:	Capital: 100%	O&M:0%		Date:	9NOV11

Project Title: ZE Cooling Piping replacement (695' elev)

CAP: ____

Project Prioritization

(Use FP-BUS-IPP-01 Integrated Planning Process)

Urgency:	3	*Important: those activities which are important for longer-term operation that are generally described as "preventing, improving, maintaining or reducing" the probability of a consequence.*
Risk:	3E	*Equipment Reliability: Decreases performance or reliability of equipment required for power generation.*

Phase:	**Study**	**Design**	**Implementation**	**Close-out**
New /Additional Funding Requested:	$	$	$ 301100	$ 111048
Current Authorization:	$	$	$ 9027852	$ 25000
YTD Phase Actual:	$	$	$ 1955715	$ 0
Project to Date:	$	$	$8665657	$ 0

YTD Actual Cost:	$ 1,955,715
Revised Total Project Cost:	$ 9,465,000
Original Total Project Cost:	$ 4,037,662

- ☐ Study Phase
- ☒ Design Phase
- ☒ Implementation Phase
- ☒ *Project Overrun
- ☒ *Scope Change
- ☒ *Cash Flow Change
- ☒ *Schedule Change

NUCLEAR PROJECT AUTHORIZATION (NPA)

***Provide a clear explanation of why this funding or change is being requested:**

The additional cost is attributed to:

Estimating Uncertainty

- The project was re-estimated for completion to utilize Bechtel as the project management organization. This NPA request includes increased funding required to implement the directive.
- The project in the last week of August was the first project to be transitioned to Bechtel management control with a new estimate to completion at that time. The turnover to Bechtel was complete 01SEP11
- The prior NPA funding execution (approved 3/11) estimating the cost did not allow for Bechtel management. The new Bechtel Estimate (inserted below) used to prepare this revised NPA was received by the PM 17AUG11.

Changes during Implementation

- This project has been suspended for various reasons several times over the past 10 years. During the periods that it has been in implementation phase it has accumulated over 90 unique Construction Change Notices made necessary by discovery of configuration conflicts and errors.
- In late August a management decision to suspend work on ZE Piping and reassign the resources to Cold Chem was implemented. The impact was a 1 month push to the schedule.

Financial Analysis (NPV):

Concise Problem Statement: (Provide the problem description or the new requirement or function the project will meet).

Concise Problem Statement: (Provide the problem description or the new requirement or function the project will meet).
The ZE system is not effective in removal of heat generated in the Auxiliary Building. The piping from the supply header to the pump motor unit coolers and from the pump motor unit coolers back to the return header, as well as the pump motor unit coolers appear to be blocked with silt resulting in significant reduction or total loss of water flow. In addition, it appears that MIC has damaged pipe and has resulted in leaks. Unit coolers appear to have eroded due to silt entrainment also resulting in leakage that is not repairable due to leak location within the coil bundle.

NUCLEAR PROJECT AUTHORIZATION (NPA)

Project Manager:	Karl Conley	Project Sponsor:	Mike Milly

Project Scope: (Provide what the project will and will not deliver, and what functionality is and is not included in the final product. Identify affected equipment, associated equipment, and similar equipment commodities that are included. If project includes O&M and Capital scope, separate scopes below in alignment with the calculated cash-flows documented toward the end of the NPA. See Financial Manager for assistance.)

Justification / Benefits: (What is the justification for selecting the recommended alternative and what are the expected benefits).
This project is required because there is inadequate cooling to our critical equipment in the Auxiliary Building. The ZE System equipment on the 695' level of the Aux Bldg is especially important, because there is essentially no cooling in the six Charging Pump rooms right now, and the site is replacing the variable speed pump drives with new frequency drives in 2008. It is important that this new equipment is protected – a $3,000,000 investment.

This entire ZE Piping Replacement project was cut from the scope of the ZX Piping Replacement Project (01ZX01). There is approximately $600,000 worth of left over materials from this project that is being carried in the warehouse, the majority of which would be used up during this project.

The current configuration of the Unit 1 and Unit 2 Charging Pump area coolers and associated piping is that they are completely blocked with silt, and have little or no water flow. They are isolated on cooling water for the cooling medium – this was done to protect the ZX piping that was recently replaced. The problem has not been addressed adequately, and a new strategy is required to restore cooling, either by a large scale capital replacement or an O&M corrective maintenance replacement.

The feasibility of this project is being pursued to ensure proper cooling is provided for worker safety and to prolong the life of plant equipment. The ZE system has been down graded to a Non-safety related per EC 12992.

In addition to replacing the plugged-up piping, this project will also address the following Aux Bldg ZE System issues:

1.Provide resolution to a Top 10 Equipment List Item.
2.Provide additional cooling to the Aux Bldg as a whole, thus providing safer work environments for personnel, as well as longer life for electrical equipment.
3.Correct seismic II / I status for ZE piping and unit coolers (SI & CC pump) – CAP 024724.
4.Replace problematic CL to ZE and ZX to ZE control valves.
5.Engineering has requested that solenoid valves for these control valves also be removed.
6.Use the $650,000 of materials from ZX System piping replacement project (AL6XN piping, SST valves, unit coolers, and insulation).
7.Resurrect the flushing procedures for the times the system is run on cooling water.
8.The unit cooler's manual control valves that regulate chilled water flow through the coils will be removed. The purpose of doing this is to provide continuous flow in the lines to prevent MIC and silting in replaced components.
9.The AB ZE piping insulation will be upgraded from CCF to F-VBC, which is in inventory from the ZX project.
10.Finally, we intend to use the AL6XN material to replace all of the piping, with the possible exception of vent and drain valves. The purpose of this is for more manageable configuration control.

Project Risk Assessment: (Provide the key assumptions and risks which could impact the success of the project).
The primary risk to this project at this point is to the schedule in the form of :

- Reassignment of resources to higher priority projects
- Discovery-revealed design and documentation changes
- Funding shortfall if this NPA is not approved

NUCLEAR PROJECT AUTHORIZATION (NPA)

Alternatives: (List and briefly describe other alternatives, including non-authorization, that were considered).
1.Do Nothing (and scrap the inventoried material)

•Engineering Study Report S-06ZE01 dated 11/8/06: Aux Building ZE Unit Cooler and Piping Degradation Study by Charles Agan and Richard K. Cooper, provides recommendations for actions to be taken to ascertain the actual condition of the ZE System. This information will help determine the most cost efficient plant strategy.
•Per C18.1, none of Aux Bldg Unit Coolers are required to maintain operability of Engineered Safeguard Equipment.
•Eliminate the holding costs taxes on the $650,000 of material in the warehouse.
•There are several engineering issues with the ZE System that need to be resolved (see Justification / Benefits section).
•The motor life of the critical motors in the will be reduced without restored cooling. (Lowering the temperature by 10 °C will increase pump motor life by a factor of 2 – motor insulation lifetime is halved for each 10 °C rise in operating temperature).
•The stay times in several areas of the Aux Bldg will remain low, require more time to complete maintenance and perform plant operations.

2.Replace Safety Related Coolers/Pipe with Safety Related (carbon steel pipe) as a Project

•Does NOT require modification.
•Can proceed without Q-List results.
•Completed in approximately 3 years (fall winter spring only) from time of funding approval. Phase 1 would be completed in 2010.
•Would NOT use the SS pipe already on site.
•Engineering is still required to address other ZE System issues.
•There will still be the II/I issue to deal with, which will require engineering / design work – this would not be a strictly maintenance activity.
•Would have to buy new safety-related material and scrap about half of the $650,000 material in the warehouse.

3.Replace Safety Related Coolers/Pipe with Safety Related (carbon steel pipe) as Maintenance Strategy

•Does NOT require modification or any design work.
•Does NOT require a project.
•Can proceed without Q-List results.
•Completed in 5 – 7 years depending on how aggressive system budget allows and management of replacement
•Would NOT use the SS pipe already on site($650,000 scrap).
•Engineering is still required to address other ZE System issues.
•There will still be the II/I issue to deal with, which will require engineering / design work – this would not be a strictly maintenance activity.

4.Replace Coolers and Pipe with Standard Quality Components (use AL6XN SS pipe already on site)

•Eliminate plugged pipes / components.
•Fix II/I seismic problems.
•Restore beneficial cooling in the Auxiliary Building.
•Will set us up for operation to 2034.
•Most of the material needed is already on site, and it has been requested by the asset owner that we use this material.
•5SST piping is more resistant to MIC.
•Completed in approximately 3 – 4 years from time of funding approval.
•Requires modification and hiring of contract engineering support (we may be able to use some or all of the piping analysis that was completed TES in Design Change # 82Y23D, which will reduce A./E analysis cost (Film rolls 1882 / 1887).
•Requires completion of Q-List downgrade (nearly complete).

Recommendation: Replace Coolers and Pipe with Standard Quality Components (use 5SST pipe already on site).

NUCLEAR PROJECT AUTHORIZATION (NPA)

Material Management: (Identify how this project may create obsolete parts, require additional parts, or require the disposition of removed items).

Are there any spare parts or material (regular inventory or capitalized) that will no longer be usable as a result of implementing this project? Identify and determine the value of each.
None. All materials originally purchased for this project (in the 01ZX01 Project) were journaled to the ZE Project, and will be used or scrapped.

Are there any additional spare parts or material (regular inventory or capitalized) that will be needed as a result of implementing this project? Identify and determine the value of each.
None. No additional spare piping, valves, or coolers will be stocked above what is currently in stores.

Are there any parts or material that will need to be retired or refurbished as a result of implementing this project? Identify and determine the value of each.
Yes. A few hundred feet of piping and several valves will be scrapped.

Cash Flow (Original)

Note: Cash flows shown include design, implementation, and closeout costs for ZE phase 1, 695' elev

Year	2007	2008	2009	2010	2011		
Phase					Implementation & Closeout		
Jan		$41,200	$89,036	$489,860	$17,039		
Feb		$31,362	$265,533	$724,940	$75,771		
Mar		$181,631	$157,019	$231,047	$210,000		
Apr		$113,956	$357,464	$307,099	$228,709		
May		$154,072	$203,061	$25,716	$0		
Jun	$599,615	$152,757	$221,884	-$44,663	$275,000		
Jul	$17,042	$154,356	$192,942	$664	$275,000		
Aug	$40,892	$97,264	$262,155	$0	$276,000		
Sep	$21,907	$109,642	$62,949	-$27,836	$275,000		
Oct	$10,022	$58,939	$117,046	$739	$275,000		
Nov	$6,997	$41,306	$380,600	$0	$225,000		
Dec	$7,016	$138,565	$700,637	$13,612	$211,388		
TOTAL	$703,491	$1,275,050	$3,010,226	$1,721,178	$2,342,907		$9,052,852

NUCLEAR PROJECT AUTHORIZATION (NPA)

New Cash Flow Forecast				
Total Project Spent DEC2010	2011		2012	
$6,709,945	JAN	$17,039	JAN	$55,048
	FEB	$9,694	FEB	$56,000
	MAR	$152,064	MAR	
	APR	$78,417	APR	
	MAY	$35,329	MAY	
	JUN	$68,651	JUN	
	JUL	$289,043	JUL	
	AUG	$221,711	AUG	
	SEP	$584,509	SEP	
	OCT	$499,257	OCT	
	NOV	$455,000	NOV	
	DEC	$233,293	DEC	
	Total2011	$2,644,007	Total2012	$111,048

For carryover projects, enter the cash flow in the previous years' months.
Outage Related: ☐ Yes ☒ No Year/Outage Number(s):

Project Estimate and Project Milestones: (An estimate of Total Project cost and Project Milestones must be included for Design and Implementation phases).

Milestones from previous NPA:

Project Estimate and Project Milestones: (An estimate of Total Project cost and Project Milestones must be included for Design and Implementation phases).

Note: This high level schedule has not been verified with the project team. This schedule wil likely need to be modified based on input from the project team.
PRG Presentation:
Phase 1 (2007 - 2008): Unit 1 and Unit 2 Charging Pump area coolers and associated piping - a total of six coolers and piping,
Engineering: March - July, 2007
Planning: July, 2007
Walk downs: August - September, 2007
Construction: November 2007 - April, 2008
Phase 2 (2008 - 2009): Unit 1 and Unit 2 Safety Injection Pump area coolers and associated piping, and Unit 1 and Unit 2 Containment Spray Pump area coolers and associated piping - a total of eight coolers and piping.
Engineering: March - June, 2008
Planning: July, 2008
Walk downs: August - September, 2008
Construction: October 2008 - March, 2009
Phase 3 (2009 - 2010): Unit 1 and Unit 2 Component Cooling Pump area coolers and associated piping, Unit 1 and Unit 2 Main Steam Corridor coolers and associated piping, and Unit 1 and Unit 2 Auxiliary Building Floor area coolers and associated piping - a total of ten coolers and piping.
Engineering: March - June, 2009
Planning: July, 2009
Walk downs: August - September, 2009
Construction: October 2009 - September 2011
Turnover October 2011
Closeout December 2011

NUCLEAR PROJECT AUTHORIZATION (NPA)

PRG Sub-Committee Disposition

☐ Accept ☐ Reject Date:_____

Recommendation:

Project Manager:	Date: 16 NOV 2011
Project Sponsor: Michael R. Miller	Date: 16 NOV 11

Validate
Urgency: ☒ 1 ☐ 2 ☐ 3 (Check one)

Risk: (Refer to FP-BUS-IPP-01)

PRG Disposition

☒ Approve ☐ Reject Date: Approved @ PRG 11/22/2011 KBS

Recommendation:

Savings and Use Guidance (See FG-BUS-FIN-01)

Form QF-2134 Required (AFCR)? ☒ Yes ☐ No

Budget Offset Recommendation: C 2011-52 attached

O&M and CAPITAL **CAPITAL**

Site Vice President: M. Schimmel Date: 12/13/11	~~VP Nuclear Projects:~~ Sr. Director, Projects, Policy and Nuclear Services Date: 12/14/11

NUCLEAR PROJECT AUTHORIZATION (NPA)

(Note: If Form QF-2134 (AFCR) is required, Authorization for funding can not be finalized until approved Form QF-2134 is signed by CNO and attached to NPA)

Site Finance Manager

Accounting Charge Number:

Site Finance Manager:

Date:

Bechtel Estimate below:

AUTHORIZED FORECAST CHANGE REQUEST FORM (AFCR) # C2011 -52

Detailed Description of Change Request
The total probable cost of the Prairie Island ZE Piping Project has increased. Contributing factors include configuration conflicts and errors which resulted in over 90 Construction Change Notices and the additional cost of the transition of the project to Bechtel.

Reason(s) for Change:

- ☐ Real Savings per FG-BUS-FIN-01
- ☐ Emergent Work – Regulatory
- ☐ Emergency Work – Non-Regulatory
- ☐ Capital Contingency Request
- ☐ Increased Cost due to Scope Change
- ☐ Increased Cost due to Schedule Change
- ☒ Increased Cost due to Reforecast
- ☐ Other (Explain)

☒ Capital ☐ O&M

Contract/PO/Req #: multiple
Vendor Name: multiple
Budget Year: 2011

- ☐ Decreased Cost due to Scope Change
- ☐ Decreased Cost due to Schedule Change
- ☐ Decreased Cost due to Reforecast

Existing Base Line Item or Project Forecast (put "none" in the description if there is no existing budget or forecast)

Bus Unit	BU Description	Object	Descr. (include project # if it exists	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
257430	Projects		ZE Piping System Project (previous NPA Authorization)													$2,342,907

Use (Emergent Request or Increased Cost Forecast)

Bus Unit	BU Description	Object	Descr. (include project # if it exists	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
257430	Projects		ZE Piping System Project													$301,000

Savings (Identify in the Description whether the request is from Real Savings, Capital Contingency, Offsets, or Decreased Costs) ☐ Real Savings ☑ Apparent Savings (affects other years(s))

Bus Unit	BU Description	Object	Descr. (include project # if it exists	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
257430	Projects		NFPA 805 Fire Model Project													$301,000

Difference Between Use and Savings $0

Prepared by: Karl D. Conley	Line Budget Manager or Project Manager or Designee	Signature	Date: 05DEC2011
Reviewed by: MARK E AELING	Site Finance Manager	Signature	Date: 12/6/11
Reviewed by: [illegible] FRED WARNER [FOR PETE ADAMS]	Manager of Projects (for Capital Projects only)	Signature	Date: 12/5/11
Approved by: [illegible]	~~Vice President of Projects (for Capital Projects only; not required to Real Savings)~~ Dir. Projects, Power & Nuclear Services	Signature	Date: 12/14/11
Approved by: MARK SCHIMMEL	Site Vice President or PRG Chairperson (not required for Real Savings)	Signature	Date: 12/6/11
Authorized by: DENNIS L. KOEHL	Vice President and Chief Nuclear Office (not required for Real Savings)	Signature	Date: 12/14/11

Return completed form to Manager – Nuclear Operations Reporting; copy to Site Finance Manager and Site PRG Administrator.

Use of this form as a procedural aid does not require retention as a quality record.

ACTUAL PROPERTY TAX RATES FOR PAY 2010

RATIO OF TAX TO TAXABLE INVESTMENT

BY GEN PLT	MINNESOTA COUNTY/CITY		RATE
	(based on Real Estate)		
Black Dog	Dakota/Burnsville	E	1.088
Blue Lake	Scott/Shakopee	E	1.114
Granite City	Benton/St Cloud	E	1.441
High Bridge	Ramsey/St Paul	E	1.245
Inver Hills	Dakota/Inv Gr Hghts	E	1.043
King	Wash/Oak Pk Hghts	E	0.972
Maplewood Prop	Ramsey/Maplewood	G	1.615
Minnesota Val	Chippewa/Granite Falls	E	1.512
Monticello	Wright/Monticello	E	1.094
Prairie Island	Goodhue/Red Wing	E	1.150
Riverside	Hennepin/Mpls	E	1.248
Sherco	Sherburne/Becker	E	0.963
Sibley Propane	Dakota/MendotaHghts	G	1.362
Wescott Prop	Dakota/Inv Gr Hghts	G	1.544
West Faribault	Rice/Warsaw Twp	E	0.814
Wilmarth	Blue Earth/Mankato	E	1.128
Minnesota	*Electric*		*1.214*
Minnesota	*Gas*		*2.089*

MINNESOTA COUNTIES	ELEC RATE	GAS RATE	TOT RATE
	(based on Personal Property)		
Anoka	1.442	1.347	1.422
Becker	0.971	0.000	0.971
Beltrami	1.224	0.000	1.224
Benton	1.507	1.718	1.579
Blue Earth	1.264	2.784	1.268
Brown	1.102	0.000	1.102
Carver	1.381	1.594	1.387
Cass	0.000	0.996	0.996
Chippewa	1.417	0.000	1.417
Chisago	1.448	1.554	1.485
Clay	1.334	1.018	1.111
Crow Wing	0.000	1.062	1.062
Dakota	1.358	1.474	1.388
Dodge	1.385	0.000	1.385
Douglas	1.250	0.000	1.250
Faribault	1.152	0.000	1.152
Freeborn	1.415	0.000	1.415
Goodhue	1.379	1.586	1.417
Hennepin	1.434	1.543	1.434
Houston	1.505	0.000	1.505
[illegible]d	0.728	0.000	0.728

MINNESOTA MINN CNTY	ELEC RATE	GAS RATE	TOT RATE
Isanti	0.000	1.293	1.293
Itasca	1.093	0.000	1.093
Jackson	1.099	0.000	1.099
Kandiyohi	1.338	1.439	1.367
Koochiching	1.103	0.000	1.103
Lac Qui Parle	0.856	0.000	0.856
Lake/Woods	1.573	0.000	1.573
Le Sueur	1.075	1.067	1.073
Lincoln	1.124	0.000	1.124
Lyon	1.391	0.000	1.391
McLeod	1.417	0.895	1.414
Martin	0.890	0.000	0.890
Meeker	1.450	1.383	1.436
Morrison	1.284	1.183	1.184
Mower	1.153	0.000	1.153
Murray	1.227	0.000	1.227
Nicollet	1.276	0.000	1.276
Nobles	1.133	0.000	1.133
Norman	0.892	0.000	0.892
Olmsted	1.453	0.000	1.453
Pine	1.098	0.000	1.098
Pipestone	1.318	0.000	1.318
Polk	1.085	1.085	1.085
Pope	1.277	0.000	1.277
Ramsey	1.507	1.507	1.507
Redwood	1.479	0.000	1.479
Renville	1.272	0.000	1.272
Rice	1.273	1.353	1.239
Rock	0.906	0.000	0.906
Roseau	1.559	0.000	1.559
Scott	1.203	1.682	1.328
Sherburne	1.623	1.013	1.332
Sibley	1.506	0.970	1.476
St Louis	1.251	0.000	1.251
Stearns	1.375	1.375	1.375
Steele	1.348	0.000	1.348
Todd	1.255	0.000	1.255
Wabasha	1.362	1.362	1.362
Waseca	1.225	0.000	1.225
Washington	1.355	1.355	1.355
Watonwan	1.207	0.000	1.207
Wilkin	1.048	0.000	1.048
Winona	1.305	1.305	1.305
Wright	1.323	1.457	1.334
Yellow Med	1.350	0.000	1.350
Minn State	*1.377*	*1.411*	*1.384*

NO DAK COUNTIES	ELEC RATE	GAS RATE	TOT RATE
Barnes-SP	0.000	0.744	0.744
Cass-SP	1.103	1.099	1.101
Cass-RE	1.567	0.000	1.567
Grand Forks-S	1.184	1.147	1.172
McHenry-SP	0.682	0.000	0.682
Pembina-SP	0.840	0.000	0.840
Pierce-SP	1.276	0.000	1.276
Richland-SP	1.261	0.000	1.261
Rolette-SP	1.592	0.000	1.592
Traill-SP	1.087	0.000	1.087
Ward-SP	0.931	0.000	0.931
No Dak-RE	*1.567*	*0.000*	*1.567*
No Dak-SP	*1.110*	*1.114*	*1.111*

SO DAK COUNTIES	ELEC RATE	GAS RATE	TOT RATE
Brookings SP	0.789	0.000	0.789
Davison-SP	0.000	0.000	0.000
Hanson-SP	1.010	0.000	1.010
Hutchinson-SP	0.919	0.000	0.919
Lake-SP	0.901	0.000	0.901
Lincoln-SP	0.879	0.000	0.879
McCook-SP	0.951	0.000	0.951
Miner-SP	0.986	0.000	0.986
Minnehaha-SP	0.784	0.000	0.784
Minnehaha-RE	1.518	0.000	1.518
Moody-SP	0.814	0.000	0.814
Sanborn-SP	0.835	0.000	0.835
Turner-SP	1.201	0.000	1.201
So Dak-RE	*1.518*	*0.000*	*1.518*
So Dak-SP	*0.800*	*0.000*	*0.800*

SP = State Property
RE = Real Estate

Personal Property includes transmission lines and distribution system. When estimating taxes in North and South Dakota, use the State Property for the appropriate county. THESE RATES ARE SUBJECT TO CHANGE.

Property Tax Assumption 2010

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

Xcel Energy
Docket No.: EL12-046
Response To: SDPUC
Requestor: South Dakota Public Utilities Commission
Date Received: August 16, 2012

Data Request No. 5-11

Question:

Please refer to "SDPUC-2-004-Att C.xls" provided by the Company in response to DR 2-4 (b).

a. DR 2-4 (b) requested the following, "Please provide revised PF19 work papers to reflect actual costs incurred." The Company provided SDPUC-2-4-Att C.xls which contained actual costs through June 2012, and projected costs for the remainder of 2012. As originally requested, please provide revised PF19 work papers to reflect actual costs incurred, removing all projected expenditures.

b. On a going forward basis, if additional costs are incurred related to this project, please resubmit PF19 work papers to reflect the most recent actual costs.

Response:

a) Please see Attachment A for the updated PF19 work papers that reflect actual costs incurred through June 2012. As requested by South Dakota Commission Staff, all projected expenditures have been excluded. Exclusion of the projected expenditures could result in an understatement of the total revenue requirements associated with this project in the test year.

b) The Company will monitor the activity for this project and recommend we update again after the August month end financial close in order to minimize multiple version of the work papers.

Response By: Thomas E. Kramer
Title: Principal Rate Analyst
Department: Revenue Requirements – North
Telephone: 612-330-5866
Date: September 5, 2012

10386260 PI-ZE Piping System Replacement - With Actual Costs Thru June 2012 Only		Mn Co Electric				Jur Electric			
Template V1.2		Production							
	Period	MN	ND	SD	Whls	MN	ND	SD	Whls
Rate Base									
Plant Investment	BOY			8,563				494	
Plant Investment	EOY			8,563				494	
Depreciation Reserve	BOY			495				29	
Depreciation Reserve	EOY			495				29	
C.W.I.P.	BOY								
C.W.I.P.	EOY								
Accumulated Deferred Taxes	BOY			1,173				68	
Accumulated Deferred Taxes	EOY			1,173				68	
Materials & Supplies	BOY								
Materials & Supplies	EOY								
Fuel Inventory	BOY								
Fuel Inventory	EOY								
Non-Plant Assets & Liab	BOY								
Non-Plant Assets & Liab	EOY								
Prepaids & Other	BOY								
Prepaids & Other	EOY								
Statement of Income									
Total Operating Expenses:	Annual	0	0	0	0	0	0	0	0
Depreciation	Annual			396				23	
Amortization	Annual								
Taxes:									
Property	Annual			106				6	
Gross Earnings Tax	Annual								
Deferred Income Tax & ITC	Annual			(2,135)				(123)	
Payroll & other	Annual								
Total Taxes:	Annual	0	0	(2,029)	0	0	0	(117)	0
AFUDC	Annual								
Juris Income Tax									
Tax Additions:									
Nuclear Fuel Burn (ex D&D)	Annual								
Nuclear Outage Accounting	Annual								
Avoided Tax Interest	Annual			(345)				(20)	
Open	Annual								
Open	Annual								
Open	Annual								
Open	Annual								
Open	Annual								
Other Book Additions	Annual								
Total Tax Additions	Annual	0	0	(345)	0	0	0	(20)	0
Tax Deductions:									
Tax Depreciation & Removal	Annual			(5,030)				(290)	
Manufacture Production Deduction	Annual								
Open	Annual								
Open	Annual								
Open	Annual								
Other Tax/Book Timing Differences	Annual								
Total Tax Deductions	Annual	0	0	(5,030)	0	0	0	(290)	0
Tax Credits:									
State R&E Credits									
Other State Credits									
Federal Production Tax Credit (PTC)									
Other Federal Tax Credits									
Total Tax Credits	Annual	0	0	0	0	0	0	0	0

Northern States Power, a Minnesota corporation
Annual Revenue Requirement
10386260 PI-ZE Piping System Replacement - With Actual Costs Thru June 2012 Only
2011 Test Year South Dakota Electric Rate Case - 2011 Rev Requirement
(000's)

Rate Analysis	Total Company	SD Jurisdiction	
Plant Investment	789	38	
Depreciation Reserve	(247)	(12)	
CWIP	-	-	
Accumulated Deferred Taxes	1,284	62	
	(248)	(12)	
Average Rate Base	(248)	(12)	
Tax Preferenced Items:			
Tax Depreciation & Removal Expense	6,432	311	
Avoided Tax Interest	412	20	
Debt Return	(7)	(0)	Ave RB * Weighted Cost of St & LT Debt
Equity Return	(12)	(1)	Ave RB * Weighted Cost of Equity
Current Income Tax Requirement	(1,870)	(90)	(Eq Ret+Bk Depre+Def Tx+ITC-Tax Depre-ADUDC+Avoid Tax)* T/(1-T)
Book Depreciation	19	1	
Annual Deferred Tax	2,541	123	
ITC Flow Thru	-	-	
AFUDC Expenditure	-	-	
Property Taxes	-	-	
Total Revenue Requirements	671	33	Dt Ret+Eq Ret+Cur Tax+Bk Depre+Def Tax+ITC+ADUDC+Prop Tax

Last Authorized

Capital Structure	**Rate**	**Ratio**	**Weighted Cost**
Long Term Debt	**6.1300%**	**46.9600%**	**2.8800%**
Short Term Debt	**0.0000%**	**0.0000%**	**0.0000%**
Preferred Stock	**0.0000%**	**0.0000%**	**0.0000%**
Common Equity	**9.2500%**	**53.0400%**	**4.9100%**
Required Rate of Return			**7.7900%**

Tax Rate (SD) **35.0000%**

Northern States Power, a Minnesota corporation
2011 Test-Year Actual
10386260 PI-ZE Piping System Replacement - With Actual Costs Thru June 2012 Only

Property Tax Rate	**0.0000%**
Demand Prod SD Jur %	**5.7712%**
Demand MN Co %	**83.8019%**
South Dakota Post I/A	**4.8364%**

CWIP (Not Allowed in SD)

	Total Company BOY	Total Company EOY	Total Company after IA BOY	Total Company after IA EOY	SD Jurisdiction BOY	SD Jurisdiction EOY	
Production	-	-	-	-	-	-	
COSS Adj (000's)	-	-	-	-	-	-	-

Plant

	Total Company BOY	Total Company EOY	Total Company after IA BOY	Total Company after IA EOY	SD Jurisdiction BOY	SD Jurisdiction EOY	
Production	788,676.00	788,676.00	660,925.47	660,925.47	38,143.33	38,143.33	
COSS Adj (000's)	789	789	661	661	38	38	38

Reserve

	Total Company BOY	Total Company EOY	Total Company after IA BOY	Total Company after IA EOY	SD Jurisdiction BOY	SD Jurisdiction EOY	
Production	(246,818.00)	(246,818.00)	(206,838.17)	(206,838.17)	(11,937.04)	(11,937.04)	
COSS Adj (000's)	(247)	(247)	(207)	(207)	(12)	(12)	(12)

Accumulated Deferred

	Total Company BOY	Total Company EOY	Total Company after IA BOY	Total Company after IA EOY	SD Jurisdiction BOY	SD Jurisdiction EOY	
Production	1,284,459.00	1,284,459.00	1,076,401.05	1,076,401.05	62,121.26	62,121.26	
COSS Adj (000's)	1,284	1,284	1,076	1,076	62	62	62

Book Depreciation

	Total Company Annual	Total Company after IA Annual	SD Jurisdiction Annual	
Production	19,057.22	15,970.31	-	921.68
COSS Adj (000's)	- 19	- 16	-	1

Annual Deferred

	Total Company Annual	Total Company after IA Annual	SD Jurisdiction Annual	
Production	2,541,478.65	2,129,807.40	-	122,915.44
COSS Adj (000's)	- 2,541	- 2,130	-	123

Tax Depreciation

	Total Company Annual	Total Company after IA Annual	SD Jurisdiction Annual	
Production	6,432,147.27	5,390,261.62	-	311,082.78
COSS Adj (000's)	- 6,432	- 5,390	-	311

AFUDC (Not allowed in SD)

	Total Company Annual	Total Company after IA Annual	SD Jurisdiction Annual	
Production	-	-	-	-
COSS Adj (000's)	-	-	-	-

Avoided Tax

	Total Company Annual	Total Company after IA Annual	SD Jurisdiction Annual	
Production	412,256.95	345,479.16	-	19,938.29
COSS Adj (000's)	- 412	- 345	-	20

Property Tax

	Total Company Annual	Total Company after IA Annual	SD Jurisdiction Annual	
Production	-	-	-	-
COSS Adj (000's)	-	-	-	-

Northern States Power, a Minnesota corporation
Annual Revenue Requirement
10386260 PI-ZE Piping System Replacement - With Actual Costs Thru June 2012 Only
2011 Test Year South Dakota Electric Rate Case - 2013 Rev Requirement
(000's)

Rate Analysis	Total Company	SD Jurisdiction	
Plant Investment	11,007	532	
Depreciation Reserve	343	17	
CWIP	-	-	
Accumulated Deferred Taxes	2,684	130	
	7,980	385	
Average Rate Base	7,980	385	
Tax Preferenced Items:			
Tax Depreciation & Removal Expense	430	21	
Avoided Tax Interest	-	-	
Debt Return	230	11	Ave RB * Weighted Cost of St & LT Debt
Equity Return	392	19	Ave RB * Weighted Cost of Equity
Current Income Tax Requirement	241	12	(Eq Ret+Bk Depre+Def Tx+ITC-Tax Depre-ADUDC+Avoid Tax)* T/(1-T)
Book Depreciation	492	24	Per 2012 Step tab
Annual Deferred Tax	(6)	-	Per 2012 Step tab
ITC Flow Thru	-	-	Per 2012 Step tab
AFUDC Expenditure	-	-	Per 2012 Step tab
Property Taxes	127	6	Per 2012 Step tab
Total Revenue Requirements	1,476	72	Dt Ret+Eq Ret+Cur Tax+Bk Depre+Def Tax+ITC+ADUDC+Prop Tax

Last Authorized

Capital Structure	**Rate**	**Ratio**	**Weighted Cost**
Long Term Debt	**6.1300%**	**46.9600%**	**2.8800%**
Short Term Debt	**0.0000%**	**0.0000%**	**0.0000%**
Preferred Stock	**0.0000%**	**0.0000%**	**0.0000%**
Common Equity	**9.2500%**	**53.0400%**	**4.9100%**
Required Rate of Return			**7.7900%**

Tax Rate (SD) **35.0000%**

Northern States Power, a Minnesota corporation
Annual Revenue Requirement
10386260 PI-ZE Piping System Replacement - With Actual Costs Thru June 2012 Only
2011 Test Year South Dakota Electric Rate Case - 2013 Step Rev Requirement
(000's)

Rate Analysis	Total Company	SD Jurisdiction	
Plant Investment	10,218	494	
Depreciation Reserve	590	29	
CWIP	-	-	
Accumulated Deferred Taxes	1,399	68	
	8,229	397	
Average Rate Base	8,229	397	
Tax Preferenced Items:			
Tax Depreciation & Removal Expense	(6,002)	(290)	
Avoided Tax Interest	(412)	(20)	
Debt Return	237	11	Ave RB * Weighted Cost of St & LT Debt
Equity Return	404	19	Ave RB * Weighted Cost of Equity
Current Income Tax Requirement	2,110	102	(Eq Ret+Bk Depre+Def Tx+ITC-Tax Depre-ADUDC+Avoid Tax)* T/(1-T)
Book Depreciation	473	23	Per 2012 Step tab
Annual Deferred Tax	(2,548)	(123)	Per 2012 Step tab
ITC Flow Thru	-	-	Per 2012 Step tab
AFUDC Expenditure	-	-	Per 2012 Step tab
Property Taxes	127	6	Per 2012 Step tab
Total Revenue Requirements	803	39	Dt Ret+Eq Ret+Cur Tax+Bk Depre+Def Tax+ITC+ADUDC+Prop Tax

Last Authorized

Capital Structure	**Rate**	**Ratio**	**Weighted Cost**
Long Term Debt	**6.1300%**	**46.9600%**	**2.8800%**
Short Term Debt	**0.0000%**	**0.0000%**	**0.0000%**
Preferred Stock	**0.0000%**	**0.0000%**	**0.0000%**
Common Equity	**9.2500%**	**53.0400%**	**4.9100%**
Required Rate of Return			**7.7900%**

Tax Rate (SD) **35.0000%**

Northern States Power, a Minnesota corporation
2013 Step Adjustment
10386260 PI-ZE Piping System Replacement - With Actual Costs Thru June 2012 Only

Demand Prod SD Jur %	**5.7712%**
Demand MN Co %	**83.8019%**
South Dakota Post I/A	**4.8364%**

CWIP (Not Allowed in SD)

	Total Company BOY	Total Company EOY	Total Company after IA BOY	Total Company after IA EOY	SD Jurisdiction BOY	SD Jurisdiction EOY	
Production	-	-	-	-	-	-	
COSS Adj (000's)	-	-	-	-	-	-	-

Plant

	Total Company BOY	Total Company EOY	Total Company after IA BOY	Total Company after IA EOY	SD Jurisdiction BOY	SD Jurisdiction EOY	
Production	10,218,178.00	10,218,178.00	8,563,027.31	8,563,027.31	494,189.43	494,189.43	
COSS Adj (000's)	10,218	10,218	8,563	8,563	494	494	494

Reserve

	Total Company BOY	Total Company EOY	Total Company after IA BOY	Total Company after IA EOY	SD Jurisdiction BOY	SD Jurisdiction EOY	
Production	590,298.00	590,298.00	494,680.94	494,680.94	28,549.03	28,549.03	
COSS Adj (000's)	590	590	495	495	29	29	29

Accumulated Deferred

	Total Company BOY	Total Company EOY	Total Company after IA BOY	Total Company after IA EOY	SD Jurisdiction BOY	SD Jurisdiction EOY	
Production	1,399,211.00	1,399,211.00	1,172,565.40	1,172,565.40	67,671.09	67,671.09	
COSS Adj (000's)	1,399	1,399	1,173	1,173	68	68	68

Book Depreciation

	Total Company Annual		Total Company after IA Annual		SD Jurisdiction Annual		
Production	473,106.45		396,472.19		-	22,881.20	
COSS Adj (000's)	-	473	-	396	-		23

Annual Deferred

	Total Company Annual		Total Company after IA Annual		SD Jurisdiction Annual		
Production	(2,547,925.35)		(2,135,209.85)		-	(123,227.23)	
COSS Adj (000's)	-	(2,548)	-	(2,135)	-		(123)

Tax Depreciation

	Total Company Annual		Total Company after IA Annual		SD Jurisdiction Annual		
Production	(6,002,005.92)		(5,029,795.00)		-	(290,279.53)	
COSS Adj (000's)	-	(6,002)	-	(5,030)	-		(290)

AFUDC

	Total Company Annual		Total Company after IA Annual		SD Jurisdiction Annual		
Production	-		-		-	-	
COSS Adj (000's)	-	-	-	-	-		-

Avoided Tax

	Total Company Annual		Total Company after IA Annual		SD Jurisdiction Annual		
Production	(412,256.95)		(345,479.16)			(19,938.29)	
COSS Adj (000's)	-	(412)	-	(345)	-		(20)

Property Tax

	Total Company Annual		Total Company after IA Annual		SD Jurisdiction Annual		
Production	126,578.82		106,075.46		-	6,121.83	
COSS Adj (000's)	-	127	-	106	-		6

Northern States Power, a Minnesota corporation
2011 Test-Year - Year 2013
10386260 PI-ZE Piping System Replacement - With Actual Costs Thru June 2012 Only

Property Tax Rate	**1.1500%**
Demand Prod SD Jur %	**5.7712%**
Demand MN Co %	**83.8019%**
South Dakota Post I/A	**4.8364%**

CWIP (Not Allowed in SD)

	Total Company BOY	Total Company EOY	Total Company after IA BOY	Total Company after IA EOY	SD Jurisdiction BOY	SD Jurisdiction EOY	
Production	-	-	-	-	-	-	
COSS Adj (000's)	-	-	-	-	-	-	-

Plant

	Total Company BOY	Total Company EOY	Total Company after IA BOY	Total Company after IA EOY	SD Jurisdiction BOY	SD Jurisdiction EOY	
Production	11,006,854.00	11,006,854.00	9,223,952.78	9,223,952.78	532,332.76	532,332.76	
COSS Adj (000's)	**11,007**	**11,007**	**9,224**	**9,224**	**532**	**532**	**532**

Reserve

	Total Company BOY	Total Company EOY	Total Company after IA BOY	Total Company after IA EOY	SD Jurisdiction BOY	SD Jurisdiction EOY	
Production	343,480.00	343,480.00	287,842.77	287,842.77	16,611.98	16,611.98	
COSS Adj (000's)	**343**	**343**	**288**	**288**	**17**	**17**	**17**

Accumulated Deferred

	Total Company BOY	Total Company EOY	Total Company after IA BOY	Total Company after IA EOY	SD Jurisdiction BOY	SD Jurisdiction EOY	
Production	2,683,670.00	2,683,670.00	2,248,966.45	2,248,966.45	129,792.35	129,792.35	
COSS Adj (000's)	**2,684**	**2,684**	**2,249**	**2,249**	**130**	**130**	**130**

Book Depreciation

	Total Company Annual	Total Company after IA Annual	SD Jurisdiction Annual	
Production	492,163.67	412,442.50	-	23,802.88
COSS Adj (000's)	- **492**	- **412**	-	**24**

Annual Deferred

	Total Company Annual	Total Company after IA Annual	SD Jurisdiction Annual	
Production	(6,446.70)	(5,402.46)	-	(311.79)
COSS Adj (000's)	- **(6)**	- **(5)**	-	-

Tax Depreciation

	Total Company Annual	Total Company after IA Annual	SD Jurisdiction Annual	
Production	430,141.34	360,466.62	-	20,803.25
COSS Adj (000's)	- **430**	- **360**	-	**21**

AFUDC (Not allowed in SD)

	Total Company Annual	Total Company after IA Annual	SD Jurisdiction Annual	
Production	-	-	-	-
COSS Adj (000's)	-	-	-	-

Avoided Tax

	Total Company Annual	Total Company after IA Annual	SD Jurisdiction Annual	
Production	-	-	-	-
COSS Adj (000's)	-	-	-	-

Property Tax

	Total Company Annual	Total Company after IA Annual	SD Jurisdiction Annual	
Production	126,578.82	106,075.46	-	6,121.83
COSS Adj (000's)	- **127**	- **106**	-	**6**

Northern States Power, a Minnesota corporation
10386260 PI-ZE Piping System Replacement - With Actual Costs Thru June 2012 Only
Revenue Requirement Calculation Inputs

Project Identification Information			CWIP/RWIP						Plant In-service				Depreciation Reserve						Tax Depreciation					Deferred Taxes			RWIP			
Grandparent or Parent Work Order	Description	Functional Use	Beginning	(CWIP) Expenditures	AFUDC Debt	AFUDC Equity	Closings	Ending	Beginning	Additions	Retirements	Ending		Beginning	Provision	(RWIP) Salvage/ Removal	Retirements	Ending	Tax Composite (16)	Federal Tax Depreciation (5)	State Tax Depreciation (32)	Avoided Tax	Beginning	Annual	Ending	Beginning	Spend	Closing	Ending
NSP-MN																													
2012 SD Rate Case,																													
2011 Actual Costs																													
As Reported by Capital Asset Accounting																													
Related Items		**2010-2011**																											
10386260	PI-Pr Island-Equipment Reliability	Nuclear																											
	2010	December						7,448,899				-						-						13,720					234,830
	2011	January	7,448,899	17,039	16,899	30,217	-	7,513,054	-	-	-	-	280	-	-	-	-	-	521,437	585,763	126,178	27,312	13,720	211,790	225,509	234,830	-	-	234,830
		February	7,513,054	9,694	16,272	28,860	-	7,567,880	-	-	-	-	279	-	-	-	-	-	521,437	585,763	126,178	30,238	225,509	211,790	437,299	234,830	-	-	234,830
		March	7,567,880	152,064	19,312	35,934	-	7,775,189	-	-	-	-	278	-	-	-	-	-	521,437	585,763	126,178	31,793	437,299	211,790	649,089	234,830	-	-	234,830
		April	7,775,189	78,417	19,499	36,124	-	7,909,228	-	-	-	-	277	-	-	-	-	-	521,437	585,763	126,178	29,278	649,089	211,790	860,879	234,830	-	-	234,830
		May	7,909,228	35,329	19,446	35,841	-	7,999,844	-	-	-	-	276	-	-	-	-	-	521,437	585,763	126,178	35,053	860,879	211,790	1,072,669	234,830	-	-	234,830
		June	7,999,844	68,651	19,755	36,498	-	8,124,747	-	-	-	-	275	-	-	-	-	-	521,437	585,763	126,178	36,968	1,072,669	211,790	1,284,459	234,830	-	-	234,830
		July	8,124,747	289,043	19,745	36,282	-	8,469,818	-	-	-	-	274	-	-	-	-	-	521,437	585,763	126,178	37,950	1,284,459	211,790	1,496,249	234,830	-	-	234,830
		August	8,469,818	221,711	20,757	38,210	-	8,750,496	-	-	-	-	273	-	-	-	-	-	521,437	585,763	126,178	37,377	1,496,249	211,790	1,708,039	234,830	-	-	234,830
		September	8,750,496	584,510	20,482	37,329	-	9,392,817	-	-	-	-	272	-	-	-	-	-	521,437	585,763	126,178	39,764	1,708,039	211,790	1,919,829	234,830	-	-	234,830
		October	9,392,817	499,256	23,170	42,551	-	9,957,794	-	-	-	-	271	-	-	-	-	-	521,437	585,763	126,178	42,311	1,919,829	211,790	2,131,618	234,830	-	-	234,830
		November	9,957,794	160,764	23,941	43,947	-	10,186,446	-	-	-	-	270	-	-	-	-	-	521,437	585,763	126,178	42,728	2,131,618	211,790	2,343,408	234,830	-	-	234,830
	2011	December	10,186,446	31,838	12,166	22,333	(10,252,783)	-	-	10,252,783	-	10,252,783	269	-	19,057	-	-	19,057	521,437	585,763	126,178	21,487	2,343,408	211,790	2,555,198	234,830	174,902	-	409,732
		2011 Total		2,148,316	231,443	424,126	(10,252,783)			10,252,783	-				19,057	-	-	19,057	6,257,246	7,029,154	1,514,134	412,257		2,541,479			174,902	-	
		2011 Beg/End Avg						3,724,449				5,126,392						9,529							1,284,459				322,281
		2011 13 Mo Avg						7,776,632				788,676						1,466							1,284,459				248,284
																							Triangle Check	2,540,696	0				
	2011	December						-				10,252,783						19,057							2,555,198				409,732
	2012	January	-	168,939	-	-	(168,939)	-	10,252,783	168,939	-	10,421,723	268	19,057	38,501	-	-	57,558	63,773	54,426	121,207	-	2,555,198	10,975	2,566,173	409,732	233	-	409,965
		February	-	482,371	-	-	(482,371)	-	10,421,723	482,371	-	10,904,093	267	57,558	39,720	-	-	97,278	63,773	54,426	121,207	-	2,566,173	10,975	2,577,147	409,965	-	-	409,965
		March	-	173,626	-	-	(173,626)	-	10,904,093	173,626	-	11,077,719	266	97,278	40,953	-	-	138,232	63,773	54,426	121,207	-	2,577,147	10,975	2,588,122	409,965	-	-	409,965
		April	-	(74,581)	-	-	74,581	-	11,077,719	(74,581)	-	11,003,138	265	138,232	41,140	-	-	179,372	63,773	54,426	121,207	-	2,588,122	10,975	2,599,097	409,965	-	-	409,965
		May	-	(25,488)	-	-	25,488	-	11,003,138	(25,488)	-	10,977,650	264	179,372	40,951	-	-	220,323	63,773	54,426	121,207	-	2,599,097	10,975	2,610,071	409,965	-	-	409,965
		June	-	29,204	-	-	(29,204)	-	10,977,650	29,204	-	11,006,854	263	220,323	40,958	-	-	261,281	63,773	54,426	121,207	-	2,610,071	10,975	2,621,046	409,965	-	-	409,965
		July	-	-	-	-	-	-	11,006,854	-	-	11,006,854	262	261,281	41,014	-	-	302,295	63,773	54,426	121,207	-	2,621,046	10,975	2,632,020	409,965	-	-	409,965
		August	-	-	-	-	-	-	11,006,854	-	-	11,006,854	261	302,295	41,014	-	-	343,308	63,773	54,426	121,207	-	2,632,020	10,975	2,642,995	409,965	-	-	409,965
		September	-	-	-	-	-	-	11,006,854	-	-	11,006,854	260	343,308	41,014	-	-	384,322	63,773	54,426	121,207	-	2,642,995	10,975	2,653,970	409,965	-	-	409,965
		October	-	-	-	-	-	-	11,006,854	-	-	11,006,854	259	384,322	41,014	-	-	425,336	63,773	54,426	121,207	-	2,653,970	10,975	2,664,944	409,965	-	-	409,965
		November	-	-	-	-	-	-	11,006,854	-	-	11,006,854	258	425,336	41,014	-	-	466,349	63,773	54,426	121,207	-	2,664,944	10,975	2,675,919	409,965	-	-	409,965
	2012	December	-	-	-	-	-	-	11,006,854	-	-	11,006,854	257	466,349	41,014	-	-	507,363	63,773	54,426	121,207	-	2,675,919	10,975	2,686,893	409,965	-	-	409,965
		2012 Total		754,071	-	-	(754,071)			754,071	-				488,306	-	-	507,363	765,272	653,107	1,454,483	-		131,695			233	-	
		2012 Beg/End Avg						0				10,629,819						263,210							2,621,046				409,849
		2012 13 Mo Avg						0				10,898,853						261,698							2,621,046				409,947
																							Triangle Check	113,005	(0)				
	2012	December						-				11,006,854						507,363							2,686,893				409,965
	2013	January	-	-	-	-	-	-	11,006,854	-	-	11,006,854	256	507,363	41,014	-	-	548,376	35,845	22,276	119,220	-	2,686,893	(537)	2,686,356	409,965	-	-	409,965
		February	-	-	-	-	-	-	11,006,854	-	-	11,006,854	255	548,376	41,014	-	-	589,390	35,845	22,276	119,220	-	2,686,356	(537)	2,685,819	409,965	-	-	409,965
		March	-	-	-	-	-	-	11,006,854	-	-	11,006,854	254	589,390	41,014	-	-	630,404	35,845	22,276	119,220	-	2,685,819	(537)	2,685,282	409,965	-	-	409,965
		April	-	-	-	-	-	-	11,006,854	-	-	11,006,854	253	630,404	41,014	-	-	671,417	35,845	22,276	119,220	-	2,685,282	(537)	2,684,745	409,965	-	-	409,965
		May	-	-	-	-	-	-	11,006,854	-	-	11,006,854	252	671,417	41,014	-	-	712,431	35,845	22,276	119,220	-	2,684,745	(537)	2,684,207	409,965	-	-	409,965
		June	-	-	-	-	-	-	11,006,854	-	-	11,006,854	251	712,431	41,014	-	-	753,445	35,845	22,276	119,220	-	2,684,207	(537)	2,683,670	409,965	-	-	409,965
		July	-	-	-	-	-	-	11,006,854	-	-	11,006,854	250	753,445	41,014	-	-	794,458	35,845	22,276	119,220	-	2,683,670	(537)	2,683,133	409,965	-	-	409,965
		August	-	-	-	-	-	-	11,006,854	-	-	11,006,854	249	794,458	41,014	-	-	835,472	35,845	22,276	119,220	-	2,683,133	(537)	2,682,596	409,965	-	-	409,965
		September	-	-	-	-	-	-	11,006,854	-	-	11,006,854	248	835,472	41,014	-	-	876,486	35,845	22,276	119,220	-	2,682,596	(537)	2,682,058	409,965	-	-	409,965
		October	-	-	-	-	-	-	11,006,854	-	-	11,006,854	247	876,486	41,014	-	-	917,499	35,845	22,276	119,220	-	2,682,058	(537)	2,681,521	409,965	-	-	409,965
		November	-	-	-	-	-	-	11,006,854	-	-	11,006,854	246	917,499	41,014	-	-	958,513	35,845	22,276	119,220	-	2,681,521	(537)	2,680,984	409,965	-	-	409,965
	2013	December	-	-	-	-	-	-	11,006,854	-	-	11,006,854	245	958,513	41,014	-	-	999,526	35,845	22,276	119,220	-	2,680,984	(537)	2,680,447	409,965	-	-	409,965
		2013 Total	-	-	-	-	-		-	-					492,164	-	-		430,141	267,316	1,430,646	-		(6,447)			-	-	
		2013 Beg/End Avg						0				11,006,854						753,445							2,683,670				409,965
		2013 13 Mo Avg						0				11,006,854						753,445							2,683,670				409,965