



November 10, 2014

—Via Electronic Filing—

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

RE: REPLY COMMENTS

2012-2013 Annual Automatic Adjustment of Charges Report

DOCKET NO. E999/AA-13-599

Dear Dr. Haar:

Northern States Power Company, doing business as Xcel Energy, submits these Reply Comments to the Review of our Annual Automatic Adjustment of Charges (AAA) Report for 2012-2013 (FYE13) filed by the Minnesota Department of Commerce - Division of Energy Resources on September 16, 2014.

Portions of this Reply contain information marked as trade secret pursuant to Minnesota Statute § 13.37, subd. 1(b). In particular, the information designated as Trade Secret derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use.

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 paul.lehman@xcelenergy.com or (612) 330-7529 if you have any questions regarding this filing.

Sincerely,

/s/

PAUL J LEHMAN
MANAGER, REGULATORY COMPLIANCE AND FILINGS

Enclosures c: Service List

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

Beverly Jones Heydinger Chair
David C. Boyd Commissioner
Nancy Lange Commissioner
Dan Lipschultz Commissioner
Betsy Wergin Commissioner

IN THE MATTER OF NORTHERN STATES POWER COMPANY, REVIEW OF 2012-2013 ANNUAL AUTOMATIC ADJUSTMENT REPORT FOR ITS ELECTRIC OPERATION DOCKET NO. E999/AA-13-599

**REPLY COMMENTS** 

#### **OVERVIEW**

Northern States Power Company, doing business as Xcel Energy, submits this Reply to the Minnesota Department of Commerce - Division of Energy Resources' September 16, 2014 review of our Annual Automatic Adjustment of Charges (AAA) Report for 2012-2013 (FYE13). In addition, we respond to the Comments submitted in this docket by the Office of the Attorney General – Antitrust and Utilities Division (OAG) on September 26, 2014.

We appreciate the Department's review of our AAA report. In this Reply, we respond to the Department's requests to provide additional data about MISO Day 2 Markets and Plant Forced Outages.

The Department also recommended the Commission require the continuation of several reporting items to which we do not object. We agree with the Department's recommendations to continue the following reporting items:

- continue to work hard to mitigate costs or the effects of changes by MISO or FERC that could negatively impact Minnesota retail customers;
- continue to provide in the initial filing of all future electric AAA reports the Minnesota jurisdictional Schedule 10 costs together with the allocation factor used and support for why the allocator is reasonable; and

• continue to provide information to support MISO Schedule 10 cost increases of five percent or higher over the prior year costs, including explanation of benefits received by customers for these added costs.

In addition, we respond to the OAG's comments on the treatment of Sherco 3 replacement power costs.

We believe this Reply is fully responsive to the Department's requests for additional information, and we respectfully request that the Commission accept our FYE13 AAA Report as supplemented by this Reply.

#### REPLY

#### A. MISO Day 2 and ASM Markets

The MISO Day 2 Market began operation on April 1, 2005, pursuant to MISO's Energy Market Tariff (TEMT). MISO's Ancillary Service Market (ASM) began operation on January 6, 2009. The Commission has determined only certain MISO costs should be recovered through utilities' FCA mechanism. In addition, the Commission established accounting procedures and several reporting requirements in monthly FCA reports and the annual AAA filings for the Department to review. Below the Company provides the additional explanation requested by the Department in its review and audit of MISO charges in the FYE13 AAA report.

1. Increase in Total System Congestion and Financial Transmission Rights (FTR)
Charges and Increase in Percentage of Congestion and FTR Charges Assigned to
Retail

In its Review, the Department noted that total system Congestion and FTR Charges increased from \$5,571,845 in FYE12 to \$26,704,075 in FYE13. The Department requested the Company explain in Reply Comments the reason for an increase in total system Congestion and FTR Charges. The State of the Market Reports for MISO Electricity Markets, which is the Independent Market Monitor (IMM) for MISO prepared by Potomac Economics, provided the following explanations for the increase in congestion costs between these periods. According to the 2012 report:

Day-ahead congestion costs rose nearly 55 percent from \$503 million in 2011 to \$778 million in 2012. The sharp increase in day-ahead congestion was due in part to increased congestion on mid-to-low voltage constraints and

continued enhancements to day-ahead processes to fully model potential transmission constraints in the day-ahead market.<sup>1</sup>

#### According to the 2013 report:

The increase in day-ahead congestion coincided with increases in fuel prices that generally increase the cost of redispatching generation to manage network power flows. Much of the increase occurred on internal constraints in the West Region, many of which are affected by the increasing output from wind resources. MISO has continued to enhance its day-ahead processes to fully model potential transmission constraints in the day-ahead market.<sup>2</sup>

Attachment A provides monthly summaries of gas and electric prices for the reporting periods. The LMPs are for the NSP.NSP node. The gas price is the index price for Ventura gas.

The Department also noted that the percentage of Congestion and FTR Charges assigned to retail increased from 79.5 percent in FYE12 to 91.6 percent in FYE13 and requested we provide an explanation in our Reply. As discussed above, congestion costs increased, and the largest sources of congestion costs are the low fuel cost baseload generators and renewable resources. One hundred percent of nuclear generation and at least seventy-five percent of coal generation are assigned to native customers. Wind cost assignment to retail customers is similarly large. These facilities are assigned the largest share of congestion costs.

As explained above congestion and FTR charges are driven by the market conditions in a given reporting period. The market volatility influenced our decision to mitigate congestion and how we exercise our allocated FTRs. Therefore we believe charges incurred in one reporting period do not necessarily imply they should stay the same from past or future periods. For example, FYE13 congestion and FTR charges increased substantially from FYE12; however, the FYE12 amount was much lower than FYE1:

<sup>&</sup>lt;sup>1</sup> Page 46, 2012 State of the Market for MISO Electricity Markets <a href="https://www.misoenergy.org/Library/Repository/Report/IMM/2012%20State%20of%20the%20Market%2">https://www.misoenergy.org/Library/Repository/Report/IMM/2012%20State%20of%20the%20Market%2</a> OReport.pdf

<sup>&</sup>lt;sup>2</sup> Page 51, 2013 State of the Market for MISO Electricity Markets <a href="https://www.misoenergy.org/Library/Repository/Report/IMM/2013%20State%20of%20the%20Market%2">https://www.misoenergy.org/Library/Repository/Report/IMM/2013%20State%20of%20the%20Market%2 0Report.pdf</a>

Congestion &	FYE 2013	FYE 2012	FYE 2011	FYE 2010
FTR Charges				
System	\$26,704,075	\$5,571,845	\$16,298,907	\$5,166,298
Retail	\$24,474,234	\$4,428,773	\$14,758,702	\$4,222,980
Retail %	91.6%	79.5%	90.6%	81.7%

#### 2. Increase in Total System MISO Revenue Sufficiency Guarantee (RSG) Charges

The Department asked the Company to explain in our Reply why the total system MISO RSG Charges (revenues) more than tripled from (\$946,446) in FYE12 to (\$2,912,229) in FYE13. In August 2012, FERC accepted MISO's cost allocation of Voltage and Local Relief (VLR) Mitigation filings. MISO changed the allocation method to direct charge the load zones where the VLR occurs. Typically highly variable resources such as wind are assigned a higher proportion of these costs as MISO needs to re-dispatch around the variability. The IMM provided further insight in the 2013 State of the Market for MISO Electricity Markets:

RSG payments are made in both the day-ahead and real-time markets in order to ensure suppliers' offered costs are recovered when a unit is dispatched. Real-time RSG payments rose 54 percent from 2012 to \$81 million, nearly half of which was due to the significant rise in fuel prices. Lower day-ahead purchases, particularly in the first half of the year, resulted in MISO making more resource commitments after the day-ahead market and increasing the capacity-related RSG payments. Day-ahead RSG payments increased by nearly 25 percent because of higher fuel prices and more VLR commitments, which are most often made day-ahead.

FERC recently approved changes we recommended to the allocation of RSG costs to make it substantially more consistent with their causes. These changes provide more efficient incentives to market participants.<sup>3</sup>

As explained above, due to the timing of market events of late, the Company's RSG revenues might have exerted higher than normal fluctuation for FYE13 over FYE12. However the Company believes the report period for the AAA (12-months ending June 30) has coincidentally skewed the year to year deviation higher. When the RSG data is presented on a 2013 calendar month basis (January – December) the

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<sup>&</sup>lt;sup>3</sup> Page VII: 2013 State of the Market for MISO Electricity Markets – Executive Summary <a href="https://www.misoenergy.org/Library/Repository/Report/IMM/2013%20State%20of%20the%20Market%2">https://www.misoenergy.org/Library/Repository/Report/IMM/2013%20State%20of%20the%20Market%20Report.pdf</a>

magnitude of annual fluctuation is less volatile, and the impact on RSG payments as a result of rising fuel prices was less drastic. The Company also notes the net RSG amounts in question were payments to the Company that helped offset other MISO charges. The FYE13 increase was a positive outcome to ratepayers.

Net MISO RSG	Calendar Year 2013	Calendar Year 2012	Calendar 2011
Charges/(Revenues)			
Amounts	(\$ 1,437,446)	(\$ 1,960,815)	(\$2,282,387)
% Change Over last	-26.7%	-14.1%	
Year			

Due to the fact the higher FYE13 ARR amounts are revenues, they are a beneficial offset to higher congestion and FTR charges.

3. Increase in Total System MISO Auction Revenue Rights (ARR) Revenues

The Department's Review noted that total system MISO ARR revenues also nearly tripled from (\$2,782,494) in FYE12 to (\$7,774,930) in FYE13. The higher FTR congestion costs discussed above also produced an increase in ARR revenues:

MISO Charges	FYE 2013	FYE 2012	FYE 2011	FYE 2010
Congestion & FTR Charges	\$26,704,075	\$5,571,845	\$16,298,907	\$5,166,298
Auction Revenue Rights (ARR)	(\$7,774,930)	(\$2,782,494)	(\$4,474,633)	(\$4,844,525)

# 4. Increase in Total System Ancillary Services Market (ASM) Costs

The Department asked the Company to explain in our Reply why total system ASM costs increased from \$10,665,160 in FYE12 to \$22,631,901 in FYE13. The primary contributor to this increase was the changes implemented by MISO to comply with FERC order 755, frequency response. As stated in the 2012 State of the Market Report for MISO Electricity Markets, "MISO introduced a two-part offer and compensation structure for regulation on December 17. Under this structure, MISO pays participants separately for regulation capacity and for 'mileage' (the amount of a unit's actual movement)."

The "mileage" payment was only partially present through FYE12 but was present for the whole term of FYE13. Thus, both the increase in the number of months affected

<sup>&</sup>lt;sup>4</sup> Page 31: 2012 State of the Market for MISO Electricity Markets <a href="https://www.misoenergy.org/Library/Repository/Report/IMM/2012%20State%20of%20the%20Market%20Report.pdf">https://www.misoenergy.org/Library/Repository/Report/IMM/2012%20State%20of%20the%20Market%20Report.pdf</a>

and the increase in prices across the footprint contributed to the increase between FYE12 and FYE13. The follow table compares FYE12 and FYE13 MISO ASM charges by quarters and clearly demonstrates the above described impact on the first six months of 2013.

MISO ASM	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	1st Quarter	2 <sup>nd</sup> Quarter
FYE 2013	\$ 1,832,931	\$ 5,350,441	\$ 6,130,749	\$ 9,317,780
FYE 2012	\$ 23,035	\$ 5,701,278	\$ 2,058,215	\$ 2,882,631
	\$ 1,809,896	(\$ 350,837)	\$ 4,072,534	\$ 6,435,148

#### 5. EDEDC Amounts Assigned to Sherco Units 1 and 2

The Department recommended that the Company explain in our Reply whether we have reached any conclusions regarding the root cause for the large Excessive/Deficient Energy Deployment Charges (EDEDC) amounts assigned to Sherco units 1 and 2 given the year-over-year increase and the relatively large amounts assigned to those units.

We concluded that the EDEDC amounts assigned to Sherco units 1 and 2 could be attributed to the bidirectional ramp rate which is at times challenging for the plants. For example, if the plants are being ramped up and then in the next 5-minutes set of instructions from MISO the plants are ordered to immediately start ramping down, performance to that set of instructions is difficult. The plants are mostly successful in making such transitions; however, occasionally temporary and minor unsteady-state operations result and the plant is unable to meet the MISO set point. When a plant is unable to follow the rapidly changing set points, MISO claws back regulation revenues thus making the costs appear higher while the revenues were also higher.

NSP considered the cost/benefit to determine if it would be beneficial to reduce such flexibility offered to MISO by NSP and found that in FYE13, Sherco 1 generated \$315,058 in revenues at a cost of \$207,302 resulting in an overall benefit of \$107,756. At this time NSP believes the right bidirectional ramp rate is being offered because a net benefit continues to result.

In addition, the Department recommended that the Company continue to work with MISO to mitigate these costs in the future. We will continue to monitor these costs and corresponding plant performance.

#### 6. Allocation Method

The Department requested that we clarify if any of our allocation methods have changed during the 2012-2013 reporting period and if so, explain the nature of these changes.

We confirm that our allocation methods of MISO Day 2 charges across our retail, asset based wholesale/intersystem and non-asset based wholesale/intersystem have not changed during the 2012-2013 AAA reporting period.

# B. Forced Outages

#### 1. Sharing Best Practices

The Department requested that utilities discuss how Minnesota and other utilities can share best practices across utilities in a timely manner to ensure that as many generation plants as possible maximize the days of operation and minimize the number of forced outages.

The Company shares and learns information through many different outlets, including industry forums, associations, and conferences. With respect to our nuclear plants, we participate in many forums to share information with applicable utilities nationally and internationally and discuss those further below. Related to our non-nuclear fleet, we worked with the other Minnesota electric utilities to compile a list of the many settings through which we have the opportunity to share information about our plant performance. Attachment B shows how much overlap there is between the forums used by the various Minnesota utilities.

In fact, the Company has worked with several Minnesota utilities to share plant information and to learn from their operations practices in recent years. For example, we have conducted on-going networking with Great River Energies (GRE) regarding best practices with burning RDF as it relates to the Elk River RDF station. In 2012, Xcel Energy personnel toured the plant and discussed best practices. Xcel Energy personnel also visited GRE's Coal Creek station in 2008 to learn more about non-destructive techniques for sizing thermal fatigue cracking in water walls. We have plans to reconnect with this plant's staff during the 2015 Energy conference to conduct best practice boiler benchmarking.

We have also networked with plant personnel at Minnesota Power (MP). We visited their Tac Harbor station and Boswell station regarding their Pratt Whitney Shock Wave cleaning system in 2006. In 2010 and 2011, we visited their Boswell station

twice regarding their combustion optimization work. Furthermore, engineers from MP visited Xcel Energy's Sherco plant in 2009-2010 to benchmark best practices. MP engineers also participated in our Company-wide Xcel Energy Boiler conference in Denver in July 2013, and they presented a power point on their combustion optimization work. This month we have plans to visit Boswell station again to discuss best boiler combustion practices.

In addition, we met with Otter Tail Power (OTP) staff at the July 2014 Boiler conference regarding best cyclone boiler practices. Also this year, we met with OTP consultants regarding details of the company's 2015 outage work at the Big Stone plant. Last month we conducted a site visit scheduled at Big Stone to discuss best boiler outage/reliability/combustion practices.

The Company takes advantage of many opportunities to network with our neighboring Minnesota utilities where appropriate, and we also network at a national level among utilities with similar fleets when that approach makes more sense. We believe that we utilize these opportunities where available.

The Department also requested that utilities discuss any electronic databases that have been developed to share best practices in plant maintenance and repair. We have our own internal systems and networks for tracking and sharing information across our utility's plants. We also submit required plant information to MicroGADS as required by NERC. We do not believe that any additional centralized systems are necessary for sharing best practices.

On the nuclear side, the Nuclear Organization at Xcel Energy has an extensive Operating Experience program that results in the sharing of operating experiences between nuclear power plants in the United States and around the world. Sharing of operating experience is required by the Nuclear Regulatory Commission and facilitated by Xcel Energy's membership in the Institute of Nuclear Power Operations (INPO) and the United Services Alliance (USA) peer groups.

The creation of the nuclear industry's Operating Experience Program stems from the Three Mile Island accident and a recommendation by the Kemeny Commission for nuclear power plants to establish a means to systematically gather, review, and analyze operating experience at all nuclear power plants. In response, the US nuclear utilities industry established the INPO. The initial operating experience program was called the Significant Event Evaluation and Information Network (SEE-IN) Program. It was developed jointly by INPO and the Nuclear Safety Analysis Center at the Electric Power Research Institute (EPRI) in early 1980. The program objective was to

provide a systematic means of sharing operating experience information among nuclear power plants.

Following the reactor accident at Chernobyl Nuclear Power Plant in April 1986, utilities operating nuclear power plants worldwide formed the World Association of Nuclear Operators (WANO). The INPO Operating Experience Program interfaces with the WANO Operating Experience Program to ensure that INPO members benefit from international experience and to share U.S. nuclear industry experiences internationally.

The objective of the Nuclear Operating Experience Program is to improve operating nuclear power plant safety and reliability by allowing each plant to learn from the operating experience of the world community of nuclear plants.

#### 2. Business Interruption Insurance

The Department requested utilities should discuss their efforts to obtain Business Interruption Insurance due to any factor that causes an unplanned outage or longer-than-expected planned outages. If utilities have not obtained business interruption insurance, the Department requested that we provide a full explanation as to why not.

Xcel Energy carries business interruption insurance for our two nuclear plants, Prairie Island and Monticello, but not for any of our other plants. In our pending electric rate case, Docket No. E002/GR-13-868, we discussed why we believe business interruption insurance makes sense for our nuclear fleet but also why it is cost prohibitive for our non-nuclear fleet. The Direct Testimony of Company witness Mr. Michael Anderson states on pages 44 - 45:

We carry business interruption insurance for our nuclear fleet for several reasons. As I have explained, all of our Insurance Program seeks to identify risks and insure them at a reasonable price. With respect to business interruption insurance, our nuclear fleet presents a different risk profile than our non-nuclear generation fleet and we obtain very cost-effective pricing for this product.

First, the marginal cost of energy from our nuclear plants is extremely low. Because of this, any replacement costs of energy are likely to be higher than the energy produced by our nuclear plants. This supports insuring against replacement energy costs for our nuclear sites but not for our non-nuclear fleet.

Second, given the complexity of our nuclear operations, a forced outage of a nuclear plant is likely to last significantly longer than a normal forced outage of our non-nuclear fleet. I note that our nuclear business interruption insurance does not start providing coverage until an outage lasts at least 12 weeks.

Third, our nuclear business interruption insurance is very cost-effective. **[TRADE SECRET BEGINS** 

# TRADE SECRET ENDS for our non-nuclear

fleet.

As Mr. Anderson testifies, the nuclear business interruption insurance does not start providing coverage until the outage has lasted at least 12 weeks. Since we began reporting outages in our Fuel Cost Adjustment filings and corresponding AAA filings in 2007, only three non-nuclear outages have reached that 12 week threshold. For one of these outages, the 2011 outage event at Sherco 3, we have the ability to seek restitution through litigation because of faulty equipment. Assuming our litigation is successful, business interruption insurance coverage was not necessary to recoup those replacement power costs and in fact, [TRADE SECRET BEGINS

**TRADE SECRET ENDS]**. Similarly, a longer outage at Key City was due to aging plant infrastructure, and while it may be possible this could be considered a covered event with properly maintained equipment, the cost of such insurance for our non-nuclear fleet is cost prohibitive and even if arranged, it would likely not be feasible to include peaking plants in a BII program.

In summary, we do not believe that business interruption insurance for our non-nuclear fleet is cost effective or in the best interest of our customers.

# 3. Contractor Accountability

The Department requested that utilities discuss in Reply Comments any revisions of language in contracts with contractors working on plants to increase the contractor's accountability in minimizing the length of the outage and ensuring that the plant runs smoothly.

With respect to specific contract language, the Company's General Conditions for Major Supply Agreement (General Conditions Agreement 9386) contain industry-accepted clauses regarding damages and indemnity, which provide standard contractual protections for the Company (and indirectly ratepayers). The selected provisions are provided as Attachment C.

Xcel Energy has put into practice the use of quality assurance and quality control protocols for major supply, maintenance and repair services, and construction service contracts. These protocols contain specific quality requirements and company expectations that legally bind contractors as well as suppliers to specific performance criteria outlined in the Company Special Conditions for Quality Management Attachment 2.0, included as Attachment D. These Special Conditions for Quality Management are introduced to the supplier/contractor during the contract bid evaluation process stages to ensure the supplier/contractor understands their obligations to achieve full quality compliance. These quality contract requirements are also integrated into the Company's initiative for the development of Master Service Agreements with our suppliers and contractors for repetitive and frequently used services.

The Company's Special Conditions for Quality Management Attachment 2.0 have been in place and exercised over the past two years. It has shown very positive results in the Company's ability to capture rework costs and identify and document opportunities to address avoided costs that are the supplier/contractor's responsibility.

We have also closely managed our contracts to ensure the best relationship with the contractors to receive the highest quality of service. We reported on our efforts to ensure a high level of contractor performance in Part K, Section 3 of our most recent AAA Report in Docket No. E999/AA-14-579 (FYE14) as follows:

Contractor and Supplier performance has improved over the last couple of years. Xcel Energy attributes this quality improvement to three areas of focus.

First, Xcel Energy has put in to practice the use of a quality assurance and control protocol for the majority of our contracts. This proactive approach is designed to draw attention to the required quality steps Xcel Energy expects each contractor to follow.

Second, Xcel Energy has awarded several alliance-like agreements with companies that consistently exceed others in technology; quality and contract management (including following the Scope of Work). As Xcel Energy increases the percentage of spend with these select companies, the possibility of contractor service or supplier product failure decreases.

Third, Xcel Energy has invested time and resources in developing a better scope of work. Scope of work is measured by completion of the total work scope defined in the bid Technical Specification that is part of the Purchase

Order and/or contract. By writing scopes of work with greater level of details and expectations, Xcel Energy gets a better quality project in the end.

In the event problems arise with services, equipment, and/or materials provided by the vendor/supplier, the remedy is found in the Terms and Conditions of the Purchase Order and/or contract. Remedies for problems that adversely affect generating plant performance (such as de-rates or unplanned outages) include the direct costs of re-work, including labor and/or materials, depending on the nature of the problem.

The Company strives to always contract for generation plant repair and maintenance services with parties who have a history of performing work safely, reliably, and in a timely manner. Therefore, we will continue to identify and work with these types of contractor issues on a going forward basis.

Furthermore, we provided specific examples of improvements in 2013 and 2014 in Part K, Section 4 of our FYE14 AAA Report:

Improvements in contractor and vendor/supplier performance continue through the implementation of the Energy Supply Quality Management Program. In the last half of 2013, we experienced a significant decrease in the number and types of events that contributed to fleet plant unplanned loss of capacity in the areas of external service and material quality, and equipment design issues directly related to poor performance by contractors and suppliers.

We have focused the 2014 QA/QC program oversight efforts on contractor/supplier performance during plant overhauls. Comprehensive overhaul quality plans are developed for each plant overhaul which includes aggressive oversight for supplier repairs of plant equipment as well as independent inspection of the contractors performing the plant equipment/component installation activities. The results of contractor/supplier performance for plant overhauls in the NSP region for the first half of 2014 have improved. Plant overhaul schedules were met, with plant startups commencing on or before the scheduled startup/return to service dates. Post overhaul equipment failures and rework has been significantly reduced, and in most cases eliminated. The Minnesota region Unplanned Outage Rate performance metric as a key performance indicator (KPI) is projecting top quartile performance of our industry peers.

The NSPM Nuclear function uses procurement management practices for contracts and contractors similar to Fossil plants, as described above, to the extent industry regulatory requirements allow.

#### 4. Replacement Power Costs

The Department requested that utilities discuss in Reply Comments any efforts to recoup replacement power costs from contractors that worked on plants that subsequently had outages or any other source of reimbursement for replacement power costs. The Department also requested we provide a full explanation as to why utilities did not pursue any reimbursement for replacement power costs if they had not.

As discussed above, we believe contractor performance has generally seen improvements over the past several years, and therefore there have not been many events for which replacement power costs could be recouped from contractors who had worked on our plants. We discussed one such example, however, in our response to Information Request (IR) No. DOC-002 submitted in Docket No. E999/AA-12-757 (FYE12 AAA).

We identified one instance where contractor performance resulted in increased costs during this AAA reporting period. The Allen S. King Unit 1 experienced an extension of a planned outage from June 3-7, 2012 due to an issue with Gas Recirculation Fan Seals. The planned outage was scheduled for the period May 5 to June 3, 2012, and was extended a few additional days.

During the King plant Major Boiler Overhaul outage, it was discovered that a vendor did not perform adequate quality control when fabricating the gas recirculation fan seal plates. The fabrication discrepancy was identified by the vendor's field installation advisor (as part of original contract) near the end of the outage since installing the seal plates is one of the last activities to occur prior to completion. The vendor's field advisor informed the Company that the seal plate was fabricated with a 9 inch outside diameter instead of an 8 inch outside diameter and that the plate would need to be replaced. The outage extension was the time it took to build and install the correctly sized seal plates.

We have calculated the net replacement energy cost for the additional days of the planned King outage to be approximately \$645,000. Net Replacement Cost is based on estimated average replacement cost less unit incremental cost. The cost impact reflected the cost of the identified outage event, which may or may not be consequences of the identified contractor's performance related issue.

The replacement energy cost is an NSP System number before allocation to NSPW via the Interchange Agreement and the allocation to other retail jurisdictions.

When we derive outage costs we calculate replacement energy costs and net that against estimated production costs and do not distinguish what could have been delivered to native load or Asset Based sales. If the King unit had been online during the four day extension period, it is difficult to say for certain whether dispatch from the unit would have occurred; we would expect King generation would have added to the overall supply and potentially reduced LMP prices, which may or may not have resulted in unit dispatch. There were some asset based sales during the extended outage period, which implies the NSP System had unused generation, and having King in service would have added to that available generation, possibly increasing the volume of sales.

#### We agreed to [TRADE SECRET BEGINS TRADE SECRET

**ENDS**] deduction from the final costs due to the vendor for the project as settlement of the performance and quality issues experienced during installation of the gas recirculating fan assembly. The deduction was reflected as an offset to the capital cost of the project, benefitting customers through a reduction in plant in service.

Generally the indemnity or penalty payments from contractors related to plant maintenance projects are credited back to the applicable O&M or capital expense of the project and are outside of fuel and energy accounting.

In the same IR response, we also discuss the specific issue of nuclear contractor work:

While extended nuclear outage durations are most often caused by unanticipated issues discovered during the outage and requiring attention, and not by contractor performance, the Company seeks to mitigate the risk of unnecessary outage delays caused by nuclear plant contractors via the following mechanisms:

- All major contracts include a performance bonus and scorecard which allow significant dollar reductions for poor performance. Components of the scorecard are usually safety, schedule adherence, and radiological based.
- If a contractor performs poorly, dollar adjustments are made accordingly. Reductions could range from 10% to 20% of their otherwise billable amount. Should a performance issue result that

creates quantifiable dollar impact, negotiations normally occur that result in a fair settlement, or else future work would most likely be awarded to a competitor.

 All contractor performance is recorded daily and quantified during the daily outage cost tracking meetings with actions to the Supply Chain contract coordinator to initiate charge backs against contractor billings when appropriate.

The Company believes it has made reasonable efforts to recoup replacement power costs from contractors when appropriate to the situation, and we continually monitor contractor performance in order to ensure the highest level of quality and value.

#### 5. Historical Scheduled and Forced Outages by Plant

The Department requested utilities to provide in Reply Comments the dates and duration of their scheduled and forced outages by plant since 2001. Please see Attachment E for a listing of scheduled and forced outages by plant for the period from July 2007 through September 2014. The outage list is excerpted from outage data we have been providing to the Commission in our monthly FCA reports since October 2007<sup>5</sup> and a preceding information request by the Department. This data includes outages that lasted longer than 24 hours or were greater than 500 MWh. We note that the Department initially proposed the plant outage summary reporting requirement in its March 16, 2007 Quarterly Report on Investor Utilities' Electric Fuel Costs (Docket No. E999/DI-07-301). The reporting requirements to provide outage data as part of the FCA and AAA reports were adopted by the Commission's February 6, 2008 Order.<sup>6</sup> Attachment F contains a compilation of outage data from to January 2001 through June 2007. This data series conforms to the NERC Generation Availability Data System (GADS) for plants currently in operation. We note that the implementation of MISO Day 1 and ASM markets have altered how we utilize and dispatch our available plants over time thereby also impacting plant maintenance and outages. However, this impact is difficult to be quantitatively identified on a plant-by-plant basis.

<sup>&</sup>lt;sup>5</sup> Monthly FCA Report Filed October 1, 2007 in Docket No. E002/AA-07-1290

<sup>&</sup>lt;sup>6</sup> ORDER ACTING ON ELECTRIC UTILITIES' ANNUAL REPORTS, REQUIRING FURTHER FILINGS, AND AMENDING ORDER OF DECEMBER 20, 2006 ON PASSING MISO DAY 2 COSTS THROUGH FUEL CLAUSE (Docket No. E,G999/AA-06-1208) dated February 6, 2008.

#### 6. Scheduling Planned Outages

The Department requested that utilities discuss in Reply Comments the general factors utilities consider in scheduling planned outages. The following is a summary of factors generally contemplated.

Xcel Energy has formally implemented policies and processes related to how planned overhauls are coordinated and scheduled and for overhaul strategy planning for each individual scheduled outage. All of our planned outage overhauls are scheduled with consensus from our Energy Supply Operations, Transmission Systems and Commercial Operations areas to ensure the integrity and reliability of the electric system are maintained. Each of the areas has specific coordination responsibility to work together in developing and maintaining a plan for scheduled plant outages for as much as five years in advance. Further detailed planning for each planned overhaul begins as early as two years in advance.

As these business areas have key responsibility in operating and maintaining a reliable system capable of serving customer loads at all times, each business area must approve planned plant outage schedules. Inspection and maintenance work on major equipment in generation plants must be performed on particular, specific intervals and because of this, careful coordination fleet-wide must occur. General factors considered when scheduling outages are maintenance needs of other generating facilities, other local and regional network outage activity and preparations for reliable plant operations for times of summer and winter peaks. For NSP, this generally directs planned outages to occur during the shoulder periods of spring and fall, avoiding planned outages during summer and winter months, where possible.

We provide copies of our Plant Overhaul policies as Attachments G and H.

#### C. Sherco 3

On November 19, 2011, a catastrophic event at the Sherco 3 generating unit prevented the unit from producing power until repair was completed and the unit was released for MISO operations on October 28, 2013. During this period, it was necessary to replace the power no longer supplied by Sherco 3 either through dispatch of our other generating plants or purchase through the MISO market. As was recommended by the Department's comments in our 2011-2012 AAA docket<sup>7</sup> and as

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<sup>&</sup>lt;sup>7</sup> Department's June 5, 2013 Comments in the 2011-2012 AAA Docket No. E002/M-12-757.

discussed in the Commission's September 3, 2013 rate case order<sup>8</sup>, Sherco 3 replacement power costs are being reviewed in this current 2012-2013 AAA docket.

The OAG's comments of September 26, 2014 request the Commission defer or delay action or approval of Sherco 3 replacement power costs because of incomplete information, referencing a hearing scheduled for June 2015 in the GE litigation case. According to the OAG, the Commission should know the full outcome of the GE lawsuit before taking action in the AAA docket. At a case management conference on October 2, 2014, the GE litigation trial date has now been revised to September 2016. Holding the entire AAA docket open for approximately 2 years or more pending this one issue seems too long.

The intent of the fuel clause adjustment mechanism is for timely recovery of eligible costs, all subject to subsequent Commission review and approval. We fully understand and accept the Commission's authority for this review and approval. The plant has been returned to service and the full amount of replacement power cost for the event is known and details of its calculation are available and have been submitted for review. We disagree any deferral or delay is warranted because not enough information is available or information is incomplete.

Contrary to the OAG's suggestion, it is not necessary to direct the Company to provide continuous information for review—we have been and will continue to provide information relating to the Sherco 3 event and insurance recovery in the rate case and AAA dockets on a regular basis. We do not believe additional reporting requirements are needed at this time and will update the Commission as developments occur.

The OAG has raised an issue about the difference in calculation methodologies between the AAA and the GE litigation. It is important to recognize the calculation methodology used for the AAA is consistent with how the cost of replacement power has been calculated for all other plant outage situations. The distinction is for the AAA we compare to the market using the LMP at the NSP load node whereas for the litigation, the whole portfolio is considered as a hedge against losses at the Sherco node. A full description of the differences along with the calculation results was provided to the OAG in our response to IR No. OAG-001 in this docket. The response and a subsequent updated response are included here as Attachment I.

The OAG has additionally recommended consideration of opening a separate docket in which to monitor the GE litigation. We do not believe further procedural steps

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<sup>8</sup> MPUC Order in Docket No. E002/GR-12-961 dated September 3, 2013 at page 23.

such as a docket to monitor another docket is necessary and certainly interested parties can monitor the litigation by following Docket Nos. E002/GR-13-868 and E002/GR-12-961, where we last filed an update on September 30, 2014.

The Department noted in its Review that "during the legal process, additional facts may be developed through either briefs or discovery that are not available to date," and recommended that "the Commission may want to retain the right to revisit this issue if additional facts developed during the legal process contradict the record to date." The Commission has available the information necessary to review and make a determination on the prudency of replacement power costs for the Sherco 3 Event and can do so at this time, but we agree with the Department that it may be necessary to reconsider the issue if additional information emerges through the litigation procedure. To the extent there are further future developments leading to the specific award of our claim for replacement power costs in the GE litigation, the Commission can authorize such amounts can be dealt with at that time.

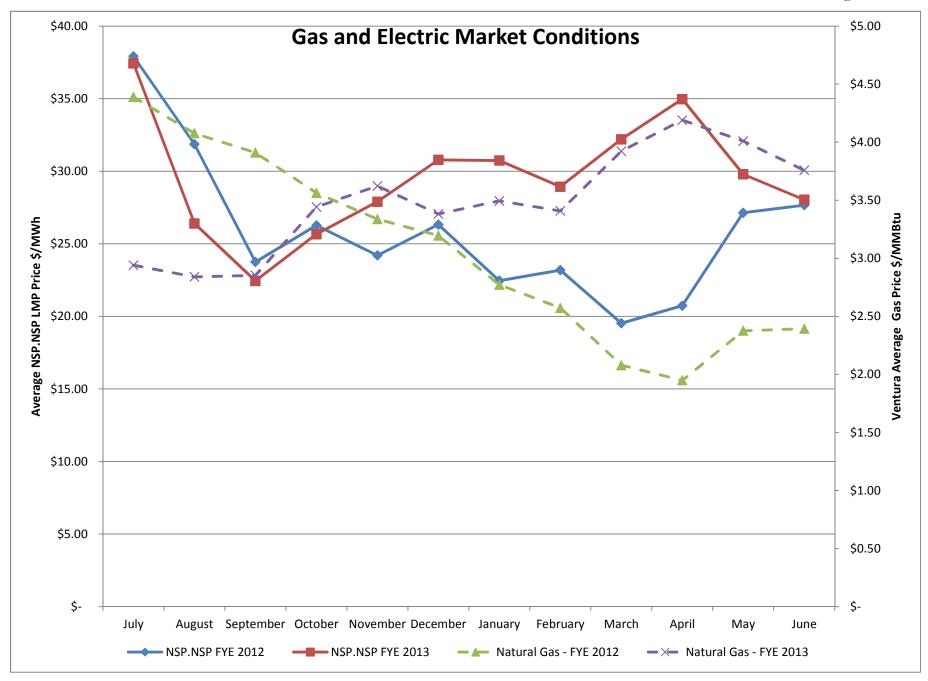
#### **CONCLUSION**

Xcel Energy appreciates this opportunity to submit its Reply to the Department's Report. Through this Reply we have worked to provide additional information as requested by the Department. Changes in MISO Day 2 costs are a function of being part of a larger market. Like other Minnesota utilities, we strive to improve and learn from plant operating best practices in as many forums as possible from power plant operators with similar equipment rather than within the geographic confines of our neighbors. Finally, the Commission has the information needed to take action on review of the Sherco 3 replacement power costs and can adopt the Department's recommendations and need not defer or delay action as suggested by the OAG.

We respectfully request that the Commission accept our FYE13 AAA Report as supplemented by this Reply.

Dated: November 10, 2014

Northern States Power Company



	NSP.NSP \$/MWh				Ventura Gas \$/MMBtu			
	FY	E 2012	F۱	/E 2013	FYE 2012		FY	'E 2013
July	\$	37.92	\$	37.43	\$	4.39	\$	2.94
August	\$	31.86	\$	26.40	\$	4.08	\$	2.84
September	\$	23.75	\$	22.44	\$	3.91	\$	2.85
October	\$	26.27	\$	25.66	\$	3.56	\$	3.44
November	\$	24.20	\$	27.90	\$	3.34	\$	3.62
December	\$	26.32	\$	30.78	\$	3.20	\$	3.38
January	\$	22.46	\$	30.74	\$	2.77	\$	3.49
February	\$	23.19	\$	28.94	\$	2.57	\$	3.41
March	\$	19.53	\$	32.20	\$	2.08	\$	3.92
April	\$	20.73	\$	34.96	\$	1.95	\$	4.19
May	\$	27.14	\$	29.79	\$	2.38	\$	4.01
June	\$	27.66	\$	28.04	\$	2.39	\$	3.76
Average	\$	25.92	\$	29.61	\$	3.05	\$	3.49

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		MP	OTP	
	Xcel Energy			
CONFERENCES				
B&W Cyclone Users Group	X		X	
Bentley-Nevada Vibration Monitoring training	X		X	X
CEMs User Conference (EPRI)	X		X	
Electric Power Conference	X			X
Energy Generation Conference, Bismarck, ND	X		X	
Energy, Utility & Environment Conference (EUEC)		X		X
ESC Users Conference (CEMS Software)	X		X	
GADS Data Reporting Workshop	X	X	X	
Honeywell Control System Users Group			X	
HydroVision		X		
Hydrovision Internaional		X		
InterTek (AWARE) Users Group			ļ	X
Lignite Energy Council			X	
National Coal Trnasportation Association (NTCA)			X	X
Ovation Control System Users	X		X	X
Power Gen Conference (Orlando, FL)	X		X	X
Power Plant Managers Summit	X		X	
Siemens Steam Turbine Users Group	X		X	
Tripartite Meetings (Union Labor for outages)			X	
Turbine Generator Inspection Training			X	X
Xcel Energy Boiler Conference	X			X
TRADE ORGANIZATIONS				
		v	V	
American Wind Energy Association (AWEA)		X X	X	
Assoc. of Edison Illuminating Companies (AEIC)		Λ		V
American Coal Council				X
Boiler and Turbine Steam and Cycle Chemistry (EPRI)				X
Boiler Life and Availability Improvement Program (EPRI)				X
Combined Cycle HRSG and Balance of Plant (EPRI)				X
Combined Cycle Turbomachinery (EPRI)				X
Combandia Tabia Oceania a Tabaia I Faran	v			X
Combustion Turbine Operations Technical Forum	X			not a member - has access
Contractor Safety Summit	X			access
				X
Dry Scrubber Users Association (DSUA)	X	X		not a member - has
				access
Edison Electric Institute (EEI)		X	X	X
Electric Power Research Institute (EPRI)		X		X
, ,	X			X
Fossil Operations and Maintenance Info Service (FOMIS)	not a member - has	X		not a member - has
	access			access
GE7FA User's Group	X			X
Generation Maintenance Applications Center (EPRI)				X
Heat Recovery Steam Generator User Group (HRSG)	X			
Maximo Utility Working Group (MUWG)		X		periodically
Midwest Hydro Users Group (MHUG)		X	ļ	
Mitsubishi Combustion Turbine Group	X		<u> </u>	

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MN Resource Recovery Assoc (MRRA, Refuse Derived Fuel	***			
Plants)	X			
MN Safety Council	X			
National Hydropower Association (NHA)		X		
National Safety Council	X			
Power-Gen International		X		
Power Plant Director & Manager Group (EPRI)	X			
Predictive Maintenance	X			
PRB Coal Users' Group (Power River Basin)	X	X		X
Selective Catalytic Reduction (SCR) User Group	X			
Steam Turbines-Generators and Auxiliary Systems (EPRI)				X
Utility Variable Integration Group (UVIG)		X		
Western Coal Traffic League (WCTL)		X		
Western Turbine User's Group			X	
Mid-western Turbine User's Group			X	
and the second of the second o				
CONSULTANTS / VENDORS / CONTRACTORS				
AAB Group	X	X		
Acuren	X	X		
Alstom	X	X	X	X
Babcock Power	X	X	X	X
BARR Engineering		X	X	
BHA Claror		X	X	
Black & Veatch	X	X	X	
Burns & McDonnell	X	X	X	X
Cylde Bergemann Power Group	X	X	X	
FB Global		X		
GE	X	X		
Hamon Corporation		X	X	
Honeywell	X	X	X	
Hunt Electric	X	X		
Invensys-Foxboro	X	X		
Lakehead Constructors		X		
Leidos Engineering		X		
Mitsubishi Hitachi Power Systems	X	X		
Moorhead Machinery & Boiler Co.	X	X	X	
Reliability Solutions		X		
Sheppart T. Power Associates		X		
Siemens Power Generation	X	X	X	X
Sargent & Lundy			X	X
The Boldt Company	X	X	X	
The Jamar Company	X	X	X	X
Thielsch Engineering	X	X	X	X
United Dynamics Corporation (UDC)				X
Wisconsin School of Business (Project Management Process)				X
PUBLICATIONS				
Chemical Engineering				X

	Xcel Energy	MP	OTP	IPL
Energy & Mining		X		
Energy Technology		X		
OEM Technical Bulletins	X		X	
Power Engineering	X	X	X	X
Power Magazine	X	X	X	X
Underground Focus		X		
Wind Systems		X		
Windpower Monthly		X		

# GENERAL CONDITIONS FOR

# **MAJOR SUPPLY AGREEMENT**

# (General Conditions Agreement 9386)

# Between

Northern States Power Company, a Minnesota Corporation, d/b/a Xcel Energy, Northern States Power Company, a Wisconsin Corporation, d/b/a Xcel Energy, Public Service Company of Colorado, a Colorado Corporation, d/b/a Xcel Energy and Southwestern Public Service Company, a New Mexico Corporation, d/b/a Xcel Energy

And

(July 21, 2011)

- 15.4 Upon receipt of notice to resume suspended Work, Supplier shall immediately resume performance of the suspended Work to the extent required in the notice. Supplier hereby expressly waives any claim it may have for additional time or extra compensation because of any suspension of the Work unless such claim along with a revised Project Schedule (with respect to the Work suspended) is presented to Company in writing within ten (10) calendar days after Supplier's receipt of notice to resume the Work. No compensation or extension of time shall be granted if the suspension results from Supplier's noncompliance with the requirements of the Agreement or from any cause other than Company's suspension order pursuant to this Article 15 of these General Conditions.
- 15.5 If Company suspension of a Purchase Order/Work Order exceeds a consecutive ninety (90) day periods, the Parties shall in good faith jointly determine whether the affected Purchase Order/Work Order should be subject to the terms of Article 24 (Termination for Convenience).

#### 16. SUPPLIER WARRANTIES.

- All Goods incorporated into the Work shall be new and of the most suitable grade given the specification requirements provided to the Supplier by Company.
- 16.2 Supplier warrants that all Work, including without limitation, the Goods, will conform to the kind, quality and capability designated or described by the Agreement. Supplier shall perform the Work with due care, skill and diligence, in accordance with Applicable Law and applicable professional standards, industry procedures and construction practices. Unless a greater period of time is specified in the Agreement, Supplier shall warrant the Goods, including parts, equipment, and materials furnished under the Agreement to be as specified herein and free from defects in design, material, workmanship, and title for the period of twelve (12) months after first operation/use of the Work or Goods or eighteen (18) months after delivery at the Company Site, whichever occurs/ends first, and for Services, for a period of ninety (90) days from completion of services ("Warranty Period"). To the extent possible, any and all manufacturer warranties shall be and hereby are transferred to Company pursuant to the provisions and operation of the Agreement, provided that any manufacturer's warranties and remedies for breach of those warranties shall not be greater than the warranties made and remedies for breach of warranty provided by Supplier in this Article 16.
- 16.3 Upon receipt of notice from Company of any failure to comply with the terms of the Agreement including these General Conditions, without limitation, any defect with respect to the Work, either prior to or during the term of the Warranty Period, Supplier shall without additional compensation re-perform, repair or replace such defective Work within a reasonable time acceptable to Company and reimburse Company for Company's reasonable costs and expenses resulting from Company's cure of defective Work, (the cost of removal and reinstallation are not reimbursable by Contractor unless mutually agreed to on the Purchase Order/Work Order or if installation is part of Contractor's initial scope of Work) including any transportation costs incurred by Company, subject to the limitations and exclusions in Sections 30.2 and 30.3 below. If Supplier fails to timely reperform, repair or replace any such defective Work, Company may cause such defective Work to be replaced by another and the reasonable expense thereof shall be the responsibility of Supplier. Company shall be entitled to deduct this expense (subject to the limitations and exclusions in Sections 30.2 and 30.3 below) from amounts otherwise due to Supplier.
- The warranties and obligations contained in this Article 16 are Supplier's sole warranties and obligations and Company's exclusive remedy with respect to the warranty of the Work; provided, however, the foregoing shall not in any manner impair Company's rights of indemnification or recovery of damages pursuant to these General Conditions. SUPPLIER'S WARRANTIES DO NOT COVER ANY GOODS THAT HAVE BEEN ALTERED OR SUBJECTED TO MISUSE OR ACCIDENT, OR IMPROPER STORAGE.

INSTALLATION, ASSEMBLY, COMMISSIONING, MAINTENANCE, OR APPLICATION OR DAMAGES RESULTING THEREFROM. SUPPLIER DOES NOT WARRANT THAT THE GOODS, OR ANY PART OF THE GOODS, WILL RESIST THE ACTION OF EROSIVE OR CORROSIVE GASES, LIQUIDS, OR SOLIDS (SUBJECT TO SUPPLIER'S WARRANTY TO COMPLY WITH SPECIFICATIONS), OR PRODUCE RESULTS IN COMPLIANCE WITH ANY LAWS, DECREES, OR OTHER LEGAL STANDARDS. No failure on the part of Company in the exercise of any right or remedy shall operate as a waiver of or by Company of its right to exercise any other right or remedy.

#### 17. <u>INSURANCE.</u>

- 17.1 Supplier shall maintain the following insurances and shall provide evidence of all such insurance at the request of Company. Such insurance shall be as specified below unless additional insurance is required by the Purchase Order/Work Order, and, except for worker's compensation, all insurance policies shall name Company as an additional insured with insurance companies rated B+ or better by A.M. Best rating services in amounts not less than:
  - 17.1.1 Worker's Compensation at statutory limits.
  - 17.1.2 Employer's Liability in the amount of one million dollars (\$1,000,000);
  - 17.1.3 Commercial General Liability, occurrence form, providing bodily injury, and property damage liability coverage with limits of not less than two million dollars (\$2,000,000) per occurrence and five million dollars (\$5,000,000) in the annual aggregate which can be achieved with a combination of General Liability and Umbrella Limits;
  - 17.1.4 Comprehensive Automobile Liability for owned (if applicable) and non-owned autos with combined single limits of not less than one million dollars (\$1,000,000).

All dollar amounts of coverage set forth above shall be per occurrence and in the aggregate. The policies described herein shall (i) to the extent such liability is assumed by Supplier under the Agreement, be endorsed to show that the insurers waive subrogation against Company, its affiliates, directors, officers and employees, and (ii) not expire, terminate or otherwise discontinue coverage except upon not less than thirty (30) days prior written notice to Company.

17.2 Certificates of insurance acceptable to Company shall be filed with Company prior to commencement of the Work, and each renewal period for the Work. These certificates shall contain a provision that coverages afforded under the policies shall not be canceled until thirty (30) days prior written notice has been given to Company. Notwithstanding the foregoing, Supplier has a continuing obligation to provide the insurance coverage described in this Article 17 and none of the insurance required herein shall be canceled, changed or allowed to lapse until the period of Supplier's obligations under the Agreement has been completed or until such later date or time specified in the Purchase Order/Work Order. Such notices shall be sent to:

Xcel Energy Services Inc. Attn: Supply Chain 414 Nicollet Mall PM 7<sup>th</sup> Floor Minneapolis, MN 55401

17.3 The liability of Supplier is not limited to available insurance coverage.

#### 28. <u>INDEMNITY</u>.

28.1 Supplier agrees to defend, indemnify, save and hold harmless Company, its officers, directors, employees, representatives and agents, against all third party claims for property damage and personal injury (including death) to the fullest extent allowed by Applicable Law, including but not limited to reasonable attorneys' fees, settlement fees, costs of investigation and defense to the extent arising out of Supplier's (and all of its Subcontractors') negligent performance, wrongful act(s) or omission(s) under and pursuant to the Agreement or any Purchase Order/Work Order(s), whether or not materials, equipment or property were or are owned by Company. Supplier's indemnification obligations shall include, without limitation, claims, damages, penalties, forfeitures, suits, losses, and/or demands arising from (i) claims by third parties for loss or damage to property or personal injuries, including death; and (ii) claims for remediation of natural resources damage or other environmental response costs of any kind; and (iii) claims for any violation of Applicable Law, to the extent arising out of Supplier's (and all of its Subcontractors') negligent performance, wrongful act(s) or omission(s) or breach of performance under and pursuant to the Agreement or any Purchase Order/Work Order(s). Without limiting the generality of the foregoing, claims for which Supplier may be or is alleged to be liable shall apply to the indemnity provisions hereof. Liability caused by the negligent or intentional acts of Company, its officers, employees or agents shall be the responsibility of Company but only to the extent of that liability. The indemnification obligations hereunder are not limited by Supplier's insurance coverage.

Company (i) must provide reasonably prompt written notification of all claims to Supplier but failure to do so shall not relieve Supplier of its obligations hereunder, except to the extent that the defense of the claim is prejudiced by such delay; and (ii) tender to Supplier sole control of the defense of such claim and all related settlement negotiations except where such tendering results in a conflict of interest to the Company.

#### 29. INFRINGEMENT.

- 29.1 Royalties and fees for patents, trademarks, copyrights or trade secrets related to designs, materials, articles, apparatus, devices, equipment or processes and the like ("Design(s)") used in or created pursuant to the Agreement, are included in the Agreement price. Supplier shall, at its own expense, hold harmless and defend Company against any claim, suit or proceeding brought against Company which is based upon any claim that manufacture, sale or use of any such Design, material, article, apparatus, device, equipment or process, or any part thereof, constitutes an infringement of any patent, trademark, copyright, trade secret or any other proprietary right of a third party, and Supplier shall pay all defense cost and damages and costs awarded against Company, including attorneys' fees resulting therefrom.
- 29.2 If any Design(s), or any part thereof, is found to constitute infringement and/or its use is enjoined, Supplier shall, at its own expense, subject to the following provisions, either: (i) procure for Company an irrevocable, royalty-free license to continue Company's use of the Design(s), (ii) with Company's prior written approval, replace the same with equal but noninfringing Design(s), or (iii) with Company's prior written approval modify the Design(s) so it becomes noninfringing, provided that no such replacement or modification shall in any way amend or relieve Supplier of its obligations set forth in the Agreement, including these General Conditions.
- 29.3 Notwithstanding any proprietary legends or claims of copyright, Company may copy or reproduce documents and information furnished by Supplier and distribute such copies or reproduction to others in connection with the Work. Supplier is responsible for obtaining necessary permission and releases from any Third Parties and shall at its own expense, hold harmless and defend Company against any and all claims, suits or proceedings based upon any claim that a proprietary right or copyright has been infringed.

Docket No. E999/AA-13-599 Reply Comments Attachment D - Page 1 of 7

# ATTACHMENT 2.0 Special Conditions for Quality Management

**Quality Management, including Quality Assurance /Quality Control** 

#### **Quality Management**

#### 101. PURPOSE AND SCOPE OF QUALITY MANAGEMENT PROGRAM

- 101.1 Contractor shall establish and implement at its own cost a quality management program that meets or exceeds the requirements herein (referred to herein as "Quality Management Program"). The Quality Management Program shall comply with all Applicable Laws and other quality management requirements contained in the Agreement, and shall include provisions for both quality assurance and quality control.
- 101.2 The Quality Management Program shall provide control over activities affecting the quality of any Goods, and Work, and their structures, systems, and components, to an extent consistent with their importance to reliability for power plant generation. Activities affecting quality shall be performed under suitably controlled conditions. Controlled conditions may include, but are not limited to, the use of appropriate equipment; suitable environmental conditions for accomplishing the activity, such as adequate cleanness; and assurance that all prerequisites for the given activity have been satisfied. The Quality Management Program shall take into account the need for special controls, processes, test equipment, tools, and skills to attain the required quality, and the need for verification of quality by inspection and test.
- 101.3 The Quality Management Program shall clearly establish the authority and responsibility of those Personnel responsible for the Quality Management Program and related inspection activities. Personnel performing quality functions shall have sufficient and well-defined responsibility and authority: to enforce quality requirements; to identify, initiate, recommend, and provide solutions to quality problems; and to verify the effectiveness of the solutions. The Quality Management Program shall provide for adequate training, as necessary, of Personnel performing activities affecting quality, to assure that suitable proficiency by such Personnel is consistently achieved and maintained.
- 101.4 As part of Contractor's Quality Management Program, Contractor shall have an inspection, testing and documentation program that complies with the inspection requirements herein. Inspection and testing services are required to verify quality requirements, compliance with design and construction specifications, and for production of standard Goods, and Work, and their structures, systems, and components.
- 101.5 Contractor's Quality Management Program shall also include, at a minimum, control procedures or methods to assure the following:
  - Design documents, drawings or Drawings, specifications, quality assurance procedures, records, inspection procedures, and purchase documents are current, accurate and maintained in accordance with revision and effective date controls:
  - b. All Goods, and Work, and their structures, systems, and components conform to the quality requirements in the Agreement;
  - c. Receipt inspection, in-process inspection, examination, testing, and checkout;
  - d. Adequate inspection of subcontracted Work;
  - e. Quality of special processes, such as welding, heat treating, hot forming and nondestructive testing; and
  - f. Proper methods are employed for the qualification of Personnel who are performing welding and nondestructive examinations.
- 101.6 For purposes of giving any notice relating to the subject matter of this Attachment only, the notices and receipt of any such notices may be given by email.

#### 102. DEFINITIONS

The following terms shall have the following definitions for purposes of this Attachment only:

- a. "deviation" means any departure from or non-compliance with quality requirements in the Agreement.
- b. "inspection" means the process of a critical appraisal involving examination, measurement, testing, gauging, and comparison of materials or items that comprise or are used in Goods, and Work, and their structures, systems, and components. An inspection is designed to determine if such material or item is in proper quantity and condition, and if it conforms to Applicable Laws and any other quality requirements contained in the Agreement. Inspections are typically conducted in connection with witness points.
- c. "**repair**" means the process of restoring a nonconforming characteristic to a condition such that the capability of an item to function reliably and safely is unimpaired, even though that item still does not conform to the original requirement.
- d. "**rework**" means the process of completion or correction by which Contractor makes an item is conform to its original requirements through re-inspection.
- e. "subcontractor" or "Subcontractor" means, as used in this Attachment and <u>for purposes of these Special Conditions for Quality Management only</u>, any Person of any contracting tier that performs Work or provides labor, material, equipment, suppliers or goods (including but not limited to Goods and Work and their structures, systems and components) to Contractor or to any of Contractor's subcontractors, sub-consultants, or sub-contractors, in connection with Contractor's obligations under the Agreement.
- f. "surveillance" means ongoing monitoring and verification of the status of conditions, methods, procedures, Goods, and Work and their structures, systems and components, and analysis of associated records to assess Contractor's and its Subcontractors' compliance with the quality requirements in the Agreement, based on the gathering of objective evidence. Surveillance may include Company's evaluation of Contractor's inspection activities.
- g. "use-as-is" means a disposition chosen by Contractor for a nonconforming item when it can be established to Company's reasonable satisfaction that the item is satisfactory for its intended use.
- h. "witness points" means those steps in the construction, fabrication, manufacturing, and/or installation process when such procedures or activities may be inspected or witnessed by Company for compliance with Applicable Laws and any other quality requirements in the Agreement.

#### 103. SUBMITTALS

- 103.1 If requested by Company, Contractor shall promptly provide a current and Contractor-approved copy of its quality assurance manual to Company.
- a. If requested by Company, Contractor shall promptly submit copies to Company of any implementing procedures and/or instructions associated with Contractor's Quality Management Program.

#### 104. INSPECTIONS, SURVEILLANCE AND TESTING

104.1 Inspections and Surveillance

- a. The Goods, and Work, and their structures, systems, and components shall be designed, fabricated, manufactured, and/or installed, and shall perform to meet, the service, performance, and minimum level of quality requirements in the Agreement. All Goods, and Work, and their structures, systems, and components furnished and delivered in compliance with this Agreement shall be subject to inspection by Company.
- b. Company reserves the right to inspect or conduct surveillance for adherence to the Quality Management Program. Company representatives shall have full access to Contractor's and its Subcontractors' facilities and records for (i) reviewing conformance to Contractor's Quality Management Program, (ii) conducting inspections, and (iii) witnessing of other inspections and tests.
- c. Contractor and Company shall hold a kick-off briefing or meeting to discuss the details of fabrication schedule activities, in order to ensure that the schedule for witness points and surveillance activities and the inspection and test plan are established by Contractor and the Company representative, to the reasonable satisfaction of Company. The kick-off briefing or meeting shall be held prior to the start of fabrication, manufacturing, and/or construction of any Goods, and Work, and their structures, systems, and components.
- d. During the kick-off briefing or meeting, Contractor shall notify Company, in writing, of any conflicts or discrepancies between the Agreement and Contractor's installation plans and schedules. Contractor's installation plan will include, but not be limited to, witness points, testing and inspection schedules. Contractor shall have an ongoing obligation to notify Company in writing of any conflicts, discrepancies or changes in Contractor's installation plan that were not already disclosed during the kick-off briefing or meeting.

#### 104.2 Witness Points and Testing

- a. Company may establish witness points to ensure compliance with the Quality
  Management Program and to ensure resolution of any non-conformances or deviations.
- b. As part of its Quality Management Program, Contractor shall develop and supply an inspection point program. The inspection point program shall include the witness points scheduled by the parties in the kickoff briefing described in Section 104.1 above.
- c. Contractor shall give Company's representative at least fifteen (15) business days' notice prior to the start of the witness points. Contractor shall provide Company representative a second notice at least seventy-two (72) hours (excluding weekends) prior to the start of the witness points. Notification of witness points shall not be considered to have been given until Company has acknowledged receipt of such notification.
- d. Contractor shall permit Company's representatives the opportunity to discuss testing and inspection issues with Contractor's quality assurance Personnel regarding Goods, and Work, and their structures, systems, and components.
- e. Contractor shall develop and implement an inspection and test plan as part of its Quality Management Program. The inspection and test plan, provided to Company by Contractor, shall describe all inspections and tests to be performed and shall identify the equipment with which such inspections and tests will be performed. The inspection and test plan shall refer to the applicable inspection and test instruction, whether for source, incoming, intermediary, or final inspections and tests at Contractor's or its Subcontractors' facilities. Contractor's inspection and test requirements shall fulfill the minimum inspection and test requirements set forth in the Agreement. Company and any licensing or inspection authorities, as well as their representatives, shall have the right to witness all tests and inspections carried out in compliance with Contractor's inspection and test plan, and shall be permitted access to Contractor's and its Subcontractors' facilities where and while all tests or inspections are being performed. Contractor shall provide Company with sufficient notice in order to permit Company to attend such tests and inspections, in accordance with the time periods described in Section 104.1.c herein.

- f. Tests and Inspections at Contractor and its Subcontractors' facilities: The tests and inspections of the Goods, and Work, and their structures, systems, and components shall be carried out in accordance with the inspection and test plan developed and agreed upon during the kick-off briefing described in Section 104.1.c herein.
- g. Tests and Inspections at Company's Site: Tests and inspections of the Goods, and Work, and their structures, systems, and components shall be carried out at Company's Site in accordance with Contractor's site inspection and test plan (which is a separate and different inspection test plan from that referred to in Sections 104.1.c).
- 104.3 Before offering a lot for inspection, Contractor shall, by its own inspection, eliminate any Goods, and Work, and their structures, systems, and components, which, in its opinion, are defective or do not meet the Agreement requirements. If Company finds that any Goods, and Work, and their structures, systems, and components do not meet the requirements of the Agreement, then the lot, or any portion of the lot, may be rejected by Company. The fact that the Goods, and Work, and their structures, systems, and components, have been successfully inspected, tested and accepted shall not relieve Contractor of its obligations under the Agreement and of its responsibility in the case of later discovery of flaws, defects, non-conformances or deviations.
- 104.4 All manufacturing, processing, testing and inspection operations affecting the Goods, and Work, and their structures, systems, and components, may be subject to surveillance by Company's representatives. Contractor shall permit Company and its representatives access to Contractor's facilities at any time, in Company's reasonable discretion, to permit Company:
  - a. to observe the operation of such facilities during the performance of manufacturing and fabrication and related Work;
  - b. to inspect Contractor's materials records;
  - c. to witness testing and inspection operations of the Goods, and Work, and their structures, systems, and components, conducted by Contractor in performing the Work;
  - d. to inspect Goods, and Work, and their structures, systems, and components documentation and specifications, design drawings or Drawings, calculations, and material specifications related to fabrication of components;
  - e. to evaluate Contractor's Quality Management Program,
  - f. to enable Company to adequately discharge its responsibilities and exercise its rights under the Agreement.
- 104.5 Nondestructive Examinations: Persons performing or evaluating nondestructive examinations, except visual weld examination, shall conduct such performances or evaluations in accordance with Applicable Laws, including but not limited to compliance with applicable codes and standards.
- 104.6 Company may direct Contractor to schedule an audit or inspection of a particular Subcontractor, with respect to the Subcontractor's quality management program, and Contractor shall make all such arrangements and shall have the right to accompany the Company's representatives on all such audits and inspections. Upon such audit or inspection, if Company should find any deficiency therein, Contractor shall be responsible for assuring that the deficiency is promptly corrected and compliance is achieved.

#### 105. NON-CONFORMANCES OR DEVIATIONS

105.1 Any (a) condition that may have a potential adverse effect on the safety, operability, reliability, integrity, operational life, or maintenance of the material or component, or (b) any failure to comply with any quality assurance or quality control requirement in the Agreement, shall be a

non-conformance or deviation. Examples include (i) physical defects in equipment, structures, systems, or components, (ii) test failures, (iii) any equipment out-of-tolerance, or (iv) any failure to comply with specifications, inspection or test procedures. No deviation or non-conformance from the Agreement requirements shall be acceptable unless approved in writing by Company and only upon prior full disclosure by Contractor to Company of all relevant facts and circumstances. Such written approval by Company shall not be unreasonably withheld. All notifications and approvals related to any such non-conformances shall be in written form and shall be retained by Contractor.

- 105.2 Contractor shall document all non-conformances and deviations in detail and promptly submit such documentation to the Company's representative for review, acceptance, and resolution. Contractor shall promptly (but in any event within twenty-four (24) hours) notify Company of all non-conformances of material and components dispositioned as use-as-is or repair and shall provide Company with copies of all non-conformance reports relating thereto within ten (10) days of Contractor's discovery of any such non-conformance.
- 105.3 Contractor shall promptly (but in any event within twenty-four (24) hours) notify Company of all non-conformances in material or components that Contractor intends to remediate through rework and shall provide Company with copies of all non-conformance reports relating thereto.
- 105.4 All notifications and approvals related to any non-conformances shall be in written form and shall be retained by Contractor.
- 105.5 Contractor shall make an initial response within thirty (30) days of receipt of all inspection/source verification deficiency reports and surveillance finding reports initiated by Company.
- 105.6 Company reserves the right to charge to Contractor any additional cost of inspection when material or workmanship is not ready at the time specified by Contractor for inspection, or when re-inspection is necessitated by prior rejection. If required by Company, Work must be uncovered for observation and/or inspection purposes and replaced at Contractor's expense.
- 105.7 In the event Company places conditions or restrictions on Contractor as a result of non-conformances or sub-standard implementation of the Quality Management Program requirements, Contractor shall allow Company to perform additional surveillance and inspection activities to ensure corrective actions are satisfactory to Company for the identified conditions or restrictions, at no additional cost to Company.

#### 106 WRITTEN CERTIFICATE AND ATTESTATION

- 106.1 Contractor shall provide Company with a written certificate for each component or material used in Goods, and Work, and all their structures, systems, and components, certifying that the component or material has been manufactured to comply with the requirements of the Quality Management Program. In addition, each such certificate shall include the following:
  - a. Identification of this Agreement and the applicable Purchase Order, Work Order or Release;
  - b. Identification of the Applicable Laws and specifications to which the material or component conforms;
  - Identification of any Applicable Laws that were not met at any point in the particular material or component manufacturing process, together with an explanation of corrective actions that were taken to resolve any such deficiency, non-conformance or deviation; and
  - d. Written attestation by a person responsible for the quality assurance of each material or component of the Goods, and Work, and their structures and systems.

#### 107 NOTICE PRIOR TO DESTRUCTION OF RECORDS

107.1 If Contractor desires to destroy any of the Quality Management Program records and documents required to be maintained under this Agreement, upon expiration of the required time period for audit purposes in this Agreement, Contractor shall first inform Company of its intent to do so. If requested by Company, Contractor shall deliver to Company such records, standards, procedures, films, samples, archival media, and other items, at no more than reasonable time and materials charges.

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**END OF ATTACHMENT** 

#### June 2013

	Type of	Outage			Duration
Unit	Plant	Category	Reason for outage	Date	(Days)
Allen.S.King.1	Steam	Forced	High Pressure Heater Tube Leaks	06/25/2013 - 06/28/2013	4
Sherburne.1	Steam	Forced	Other Switchyard Equipment-external	06/05/2013 - 06/19/2013	14
Sherburne.2	Steam	Forced	High Pressure Heater Tube Leaks	06/04/2013 - 06/10/2013	6
Allen.S.King.1	Steam	Forced	High Pressure Heater Tube Leaks	06/28/2013 - 06/30/2013	2
BD25.CC	Steam	Forced	Pilot fuel nozzles/vanes	06/11/2013 - 06/12/2013	1
BD25.CC	Steam	Forced	Turbine Governing System	06/22/2013 - 06/30/2013	8
Sherburne.1	Steam	Forced	Switchyard circuit breakers - external	06/19/2013 - 06/24/2013	5
Sherburne.2	Steam	Forced	Waterwall (Furnace Wall)	06/11/2013 - 06/14/2013	3
Willmarth.1	Peaking	Forced	Turbine Control Valves	06/09/2013 - 06/15/2013	5
Forced Outages	- Totals				48
Allen.S.King.1	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	06/14/2013 - 06/15/2013	1
Prairie.Island.2	Nuclear	Scheduled	Generator Vibration	06/06/2013 - 06/30/2013	24
Allen.S.King.1	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	06/01/2013 - 06/13/2013	13
Allen.S.King.1	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	06/15/2013 - 06/18/2013	3
Monticello.1	Nuclear	Scheduled	Normal Refueling	06/01/2013 - 06/30/2013	30
Red.Wing.1	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	06/17/2013 - 06/20/2013	3
Red.Wing.2	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	06/17/2013 - 06/22/2013	4
Sherburne.3	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	06/01/2013 - 06/30/2013	30
Willmarth.1	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	06/02/2013 - 06/09/2013	7
Willmarth.2	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	06/03/2013 - 06/07/2013	4
Scheduled Outa	ges - Totals			·	119
Total					167

#### May 2013

	Type of	Outage					Duration
Unit	Plant	Category	Reason for outage	Date			(Days)
Black.Dog.3	Steam	Forced	Exciter Commutator And Brushes	05/07/2013	-	05/16/2013	9
Black.Dog.4	Steam	Forced	Second Superheater Leaks	05/01/2013	-	05/24/2013	24
Sherburne.1	Steam	Forced	Plant Superheater Leaks	05/15/2013	-	05/20/2013	5
Forced Outages -	Totals	•		•			38
Prairie.Island.1	Nuclear	Scheduled	Turbine Control Valve Testing	05/03/2013	-	05/05/2013	2
Prairie.Island.1	Nuclear	Scheduled	Auxiliary Feedwater Pumps	05/30/2013	-	05/31/2013	2
Prairie.Island.2	Nuclear	Scheduled	Turbine Control Valve Testing	05/17/2013	-	05/19/2013	3
Allen.S.King.1	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	05/01/2013	-	05/31/2013	31
Black.Dog.3	Steam	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	05/01/2013	-	05/07/2013	7
HBR CC 1x1	CC	Scheduled	Gas Turbine - Boroscope Inspection	05/03/2013	-	05/19/2013	16
HBR CC 2x1	CC	Scheduled	Gas Turbine - Boroscope Inspection	05/03/2013	-	05/19/2013	16
Monticello.1	Nuclear	Scheduled	Normal Refueling	05/01/2013	-	05/31/2013	31
Sherburne.3	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	05/01/2013	-	05/31/2013	31
Scheduled Outages - Totals							139
Total	•						177

#### April 2013

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage		Date	(Days)
Black.Dog.3	Steam	Forced	Operator Error	04/10/2013	- 04/17/2013	7
Black.Dog.4	Steam	Forced	Second Superheater Leaks	04/02/2013	- 04/09/2013	7
Black.Dog.4	Steam	Forced	Second Superheater Leaks	04/09/2013	- 04/30/2013	22
BD25.CC	Steam	Forced	Other Low Pressure Turbine Problems	04/03/2013	- 04/05/2013	2
BD25.CC	Steam	Forced	Other Miscellaneous External Problems	04/05/2013	- 04/25/2013	20
Forced Outages -	Totals					58
Angus.Anson.4	Peaking	Scheduled	General Gas Turbine Unit Inspection	04/11/2013	- 04/30/2013	19
Allen.S.King.1	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	04/01/2013	- 04/30/2013	30
Black.Dog.3	Steam	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	04/20/2013	- 04/30/2013	10
Monticello.1	Nuclear	Scheduled	Normal Refueling	04/01/2013	- 04/30/2013	30

Total						211
Scheduled Out	ages - Totals	s				153
Sherburne.3	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	04/01/2013 -	04/30/2013	30
Sherburne.2	Steam	Scheduled	Condensing System Air Leakage	04/01/2013 -	04/08/2013	7
RIV CC 2x1	CC	Scheduled	General Gas Turbine Unit Inspection	04/11/2013 -	04/25/2013	14
RIV CC 1x1	CC	Scheduled	General Gas Turbine Unit Inspection	04/11/2013 -	04/25/2013	13

## March 2013

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	[	Date	(Days)
Prairie.Island.1	Nuclear	Forced	Heater Level Control	03/19/2013	- 03/28/2013	Ç
Black.Dog.4	Steam	Forced	Turbine Control Valves	03/01/2013	- 03/28/2013	27
Black.Dog.4	Steam	Forced	Second Superheater Leaks	03/28/2013	- 03/31/2013	4
BD25.CC	Steam	Forced	Operator Error	03/01/2013	- 03/10/2013	10
BD25.CC	Steam	Forced	Other Miscellaneous External Problems	03/10/2013	- 03/21/2013	11
BD25.CC	Steam	Forced	Turbine Gland Seal System	03/22/2013	- 03/23/2013	1
BD25.CC	Steam	Forced	Turbine Control Valves	03/24/2013	- 03/31/2013	7
Forced Outages - Totals						
Allen.S.King.1	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	03/01/2013	- 03/31/2013	31
Monticello.1	Nuclear	Scheduled	Normal Refueling	03/02/2013	- 03/31/2013	30
Sherburne.2	Steam	Scheduled	Condensing System Air Leakage	03/30/2013	- 03/31/2013	2
Sherburne.3	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	03/01/2013	- 03/31/2013	31
Red.Wing.1	RDF	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	03/01/2013	- 03/10/2013	9
Red.Wing.2	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	03/01/2013	- 03/09/2013	ç
Scheduled Outages - Totals						
Total		-				181

## February 2013

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage		Date	(Days)
Black.Dog.4	Steam	Forced	Turbine Control Valves	02/10/2013	- 02/28/2013	19
BD25.CC	Steam	Forced	Operator Error	02/01/2013	- 02/28/2013	28
Forced Outages - Totals						
Allen.S.King.1	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	02/22/2013	- 02/28/2013	6
Sherburne.3	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	02/01/2013	- 02/28/2013	28
Scheduled Outag	es - Totals					34
Total						81

### January 2013

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	D	Date	
Sherburne.1	Steam	Forced	Extraction Steam Piping	01/01/2013 -	01/03/2013	3
Sherburne.2	Steam	Forced	Bottom Ash Hoppers (including Gates)	01/04/2013 -	01/07/2013	3
Forced Outages	- Totals					6
Monticello.1	Nuclear	Scheduled	Turbine Moisture Separator/reheater	01/11/2013 -	01/14/2013	2
Prairie.Island.1	Nuclear	Scheduled	Normal Refueling	01/01/2013 -	01/02/2013	1
Sherburne.3	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	01/01/2013 -	01/31/2013	31
Scheduled Outa	ges - Totals					34
Total						40

### December 2012

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	D	ate	(Days)
Forced Outages	- Totals					0
Prairie.Island.1	Nuclear	Scheduled	Normal Refueling	12/01/2012 -	12/31/2012	31
Sherburne.3	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	12/01/2012 -	12/31/2012	31
Scheduled Outa	ges - Totals					62
Total						62

### November 2012

	Type of	Outage		_		Duration
Unit	Plant	Category	Reason for outage	Da	ate	(Days)
Forced Outages	- Totals					0
Black.Dog.3	Steam	Scheduled	Other Miscellaneous Steam Turbine Problems	11/01/2012 -	11/14/2012	13
Black.Dog.3	Steam	Scheduled	Hydrogen Coolers	11/14/2012 -	11/21/2012	6
Black.Dog.4	Steam	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	11/01/2012 -	11/19/2012	18
Monticello.1	Nuclear	Derate	Turbine Control Valve Testing	11/17/2012 -	11/19/2012	1
Prairie.Island.1	Nuclear	Scheduled	Normal Refueling	11/01/2012 -	11/30/2012	30
Sherburne.1	Steam	Derate	Induced Draft Fan Fouling	11/06/2012 -	11/07/2012	1
Sherburne.3	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	11/01/2012 -	11/30/2012	30
Scheduled Outages - Totals						
Total				•	·	99

### October 2012

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	D	Date	(Days)
Allen.S.King.1	Steam	Forced	Slag-tap (cyclone Furnace)	10/12/2012 -	10/16/2012	3
Angus.Anson.4	Peaking	Maintenance	Gas Turbine - Gas Fuel System	10/20/2012 -	10/31/2012	11
Black.Dog.3	Steam	Forced	Thermal Discharge Limits	10/01/2012 -	10/02/2012	1
Blue.Lake.8	Peaking	Forced	Generator Synchronization Equipment	10/23/2012 -	10/31/2012	8
Sherburne.1	Steam	Derate	Induced Draft Fan Fouling	10/23/2012 -	10/24/2012	1
Sherburne.2	Steam	Derate	High Pressure Heater Tube Leaks	10/01/2012 -	10/10/2012	9
Sherburne.2	Steam	Derate	Main Steam Relief/safety Valves	10/19/2012 -	10/27/2012	7
Forced Outages -	Totals					40
BD25.CC	Steam	Scheduled	Service Water Piping	10/24/2012 -	10/31/2012	6
Black.Dog.3	Steam	Scheduled	Other Miscellaneous Steam Turbine Problems	10/25/2012 -	10/31/2012	7
Black.Dog.4	Steam	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	10/19/2012 -	10/31/2012	12
HighBridge.8	CC	Scheduled	Major Gas Turbine Overhaul	10/01/2012 -	10/04/2012	3
HighBridge.9	CC	Scheduled	Major Gas Turbine Overhaul	10/02/2012 -	10/04/2012	1
Prairie.Island.1	Nuclear	Scheduled	Normal Refueling	10/23/2012 -	10/31/2012	8
Prairie.Island.2	Nuclear	Scheduled	Turbine Control Valves	10/11/2012 -	10/14/2012	2
Riverside.10	CC	Scheduled	General Gas Turbine Unit Inspection	10/06/2012 -	10/28/2012	22
Riverside.10	CC	Scheduled	Turbine Performance Testing	10/29/2012 -	10/31/2012	2
Riverside.7	CC	Scheduled	General Gas Turbine Unit Inspection	10/06/2012 -	10/28/2012	22
Riverside.7	CC	Scheduled	General Gas Turbine Unit Inspection	10/29/2012 -	10/30/2012	1
Riverside.9	CC	Scheduled	General Gas Turbine Unit Inspection	10/06/2012 -	10/28/2012	22
Riverside.9	CC	Extension	General Gas Turbine Unit Inspection	10/28/2012 -	10/30/2012	1
Sherburne.1	Steam	Scheduled	Turbine - Other Lube Oil System Problems	10/01/2012 -	10/04/2012	3
Sherburne.2	Steam	Scheduled	Main Steam Relief/safety Valves	10/27/2012 -	10/29/2012	2
Sherburne.2	Steam	Scheduled	4000-6000-volt Conductors And Buses	10/29/2012 -	10/31/2012	2
Sherburne.3	Steam	Extension	Major Boiler Overhaul (720 Hours Or Longer)	10/01/2012 -	10/31/2012	31
Scheduled Outages - Totals						
Total						187

September 2012 Type of Outage Duration

Unit	Plant	Category	Reason for outage	D	ate	(Days)	
BD25.CC	Steam	Maintenance	Gas Turbine - Hot End Inspection	09/03/2012 -	09/07/2012	4	
BD25.CC	Steam	Forced	Inverters	09/18/2012 -	09/26/2012	8	
Black.Dog.4	Steam	Derate	Other Miscellaneous Condensing System Problems	09/01/2012 -	09/13/2012	12	
Black.Dog.4	Steam	Forced	Desuperheater/attemperator Piping	09/13/2012 -	09/15/2012	1	
Black.Dog.4	Steam	Forced	Inverters	09/16/2012 -	09/17/2012	1	
Monticello.1	Nuclear	Forced	Maintenance Error	09/25/2012 -	09/28/2012	2	
Forced Outages - Totals							
Allen.S.King.1	Steam	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	09/18/2012 -	09/27/2012	8	
HighBridge.7	CC	Scheduled	Major Gas Turbine Overhaul	09/14/2012 -	09/30/2012	16	
HighBridge.8	CC	Scheduled	Major Gas Turbine Overhaul	09/14/2012 -	09/30/2012	16	
HighBridge.9	CC	Scheduled	Major Gas Turbine Overhaul	09/14/2012 -	09/30/2012	16	
Sherburne.1	Steam	Scheduled	Turbine - Other Lube Oil System Problems	09/28/2012 -	09/30/2012	2	
Sherburne.3	Steam	Extension	Major Boiler Overhaul (720 Hours Or Longer)	09/01/2012 -	09/30/2012	30	
Willmarth.1	Peaking	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	09/13/2012 -	09/22/2012	8	
Willmarth.2	Peaking	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	09/14/2012 -	09/23/2012	8	
Scheduled Outages - Totals							
Total		•		_		132	

## August 2012

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	ate	(Days)
Allen.S.King.1	Steam	Forced	Slag-tap (cyclone Furnace)	08/11/2012 -	08/12/2012	1
Black.Dog.4	Steam	Derate	Condenser Loss Of Vacuum	08/01/2012 -	08/03/2012	2
Black.Dog.4	Steam	Forced	Second Superheater Leaks	08/25/2012 -	08/30/2012	5
Black.Dog.4	Steam	Derate	Other Miscellaneous Condensing System Problems	08/30/2012 -	08/31/2012	1
Blue.Lake.7	Peaking	Maintenance	Gas Turbine - Fuel Piping And Valves	08/09/2012 -	08/10/2012	1
Blue.Lake.8	Peaking	Maintenance	Gas Turbine - Hydraulic Oil System	08/10/2012 -	08/14/2012	4
French.ls.1	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	08/10/2012 -	08/14/2012	3
Granite.City.1	Peaking	Forced	Other Switchyard Equipment-external	08/01/2012 -	08/11/2012	10
Granite.City.2	Peaking	Forced	Other Switchyard Equipment-external	08/01/2012 -	08/11/2012	10
HighBridge.7	CC	Forced	Differential Expansion	08/16/2012 -	08/17/2012	1
HighBridge.8	CC	Forced	Differential Expansion	08/16/2012 -	08/17/2012	1
HighBridge.9	CC	Forced	Differential Expansion	08/16/2012 -	08/17/2012	1
Monticello.1	Nuclear	Forced	Reactor Coolant System Piping	08/11/2012 -	08/18/2012	7
Prairie.Island.1	Nuclear	Forced	Auxiliary Generators (except Nuclear Emergency Gen	08/14/2012 -	08/20/2012	5
Red.Wing.2	RDF	Forced	Lack Of Fuel (outside management control)	08/20/2012 -	08/24/2012	3
Sherburne.2	Steam	Forced	Waterwall (Furnace Wall)	08/07/2012 -	08/10/2012	2
Wheaton.4G	Peaking	Forced	High Pressure Compressor - Bleed Valves	08/30/2012 -	08/31/2012	1
Willmarth.2	Peaking	Derate	Lack Of Fuel (outside management control)	08/02/2012 -	08/07/2012	4
Willmarth.2	Peaking	Derate	Lack Of Fuel (outside management control)	08/12/2012 -	08/20/2012	7
Forced Outages -	Totals					69
BD25.CC	Steam	Extension	Other Safety Problems	08/01/2012 -	08/11/2012	10
Sherburne.3	Steam	Extension	Major Boiler Overhaul (720 Hours Or Longer)	08/01/2012 -	08/31/2012	31
Scheduled Outages - Totals						41
Total						110

July 2012

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	Date	
BD25.CC	Steam	Extension	Other Safety Problems	07/01/2012 -	07/31/2012	31
Black.Dog.4	Steam	Derate	Flood	07/01/2012 -	07/12/2012	11
Black.Dog.4	Steam	Maintenance	Condenser Tube Fouling Tube Side	07/12/2012 -	07/15/2012	2
Black.Dog.4	Steam	Derate	Condenser Loss Of Vacuum	07/19/2012 -	07/31/2012	12
Blue.Lake.1	Peaking	Forced	Gas Turbine - Gas Fuel System	07/06/2012 -	07/11/2012	4
French.ls.2	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	07/27/2012 -	07/31/2012	4
French.ls.4	Peaking	Forced	Emergency Generator Trip Devices	07/05/2012 -	07/09/2012	3
Granite.City.1	Peaking	Forced	Gas Turbine - Lube Oil System - General	07/02/2012 -	07/05/2012	2

Granite.City.1	Peaking	Forced	Other Switchyard Equipment-external	07/17/2012 -	07/31/2012	14
Granite.City.2	Peaking	Forced	Other Switchyard Equipment-external	07/17/2012 -	07/31/2012	14
Key.City.3	Peaking	Forced	Gas Turbine - Lube Oil System - General	07/05/2012 -	07/12/2012	6
Key.City.3	Peaking	Forced	Gas Turbine - Lube Oil System - General	07/16/2012 -	07/18/2012	2
Key.City.4	Peaking	Forced	Gas Turbine - Turning Gear And Motor	07/24/2012 -	07/27/2012	2
Riverside.10	CC	Maintenance	Transmission equipment at the 1st substation	07/21/2012 -	07/22/2012	1
Riverside.7	CC	Maintenance	Transmission equipment at the 1st substation	07/21/2012 -	07/22/2012	1
Riverside.9	CC	Maintenance	Transmission equipment at the 1st substation	07/21/2012 -	07/22/2012	1
Sherburne.1	Steam	Maintenance	Waterwall (Furnace Wall)	07/07/2012 -	07/09/2012	2
Sherburne.3	Steam	Extension	Major Boiler Overhaul (720 Hours Or Longer)	07/01/2012 -	07/31/2012	31
Wheaton.5	Peaking	Forced	Generator Inspection	07/05/2012 -	07/08/2012	3
Willmarth.2	Peaking	Forced	Thermal Discharge Limits	07/05/2012 -	07/09/2012	4
Forced Outages	- Totals					150
Red.Wing.1	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	07/08/2012 -	07/15/2012	6
Red.Wing.2	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	07/08/2012 -	07/15/2012	6
Sherburne.1	Steam	Scheduled	Induced Draft Fan Motors And Drives	07/01/2012 -	07/02/2012	1
Scheduled Outages - Totals						
Total						

June 2012

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	te	(Days)
Allen.S.King.1	Steam	Extension	Major Boiler Overhaul (720 Hours Or Longer)	06/03/2012 -	06/07/2012	3
Allen.S.King.1	Steam	Forced	Slag-tap (cyclone Furnace)	06/20/2012 -	06/22/2012	1
BD25.CC	Steam	Extension	Other Safety Problems	06/01/2012 -	06/30/2012	30
Black.Dog.3	Steam	Extension	Boiler Inspections - Scheduled or Routine	06/03/2012 -	06/19/2012	15
Black.Dog.4	Steam	Derate	Flood	06/20/2012 -	06/29/2012	9
French.ls.2	RDF	Forced	Conductors And Buses	06/06/2012 -	06/14/2012	8
French.ls.2	RDF	Maintenance	Refractory (fbc Only)	06/15/2012 -	06/21/2012	6
HighBridge.7	СС	Derate	Other Gas Turbine Combustor Problems	06/04/2012 -	06/13/2012	9
HighBridge.9	CC	Derate	Other Gas Turbine Combustor Problems	06/04/2012 -	06/13/2012	9
Inver.Hills.3G	Peaking	Forced	Gas Turbine - Hydraulic Oil System	06/04/2012 -	06/09/2012	4
Inver.Hills.4G	Peaking	Forced	Gas Turbine - Fire Detection And Extinguishing Sys	06/04/2012 -	06/06/2012	1
Inver.Hills.6G	Peaking	Forced	Generator Synchronization Equipment	06/08/2012 -	06/11/2012	3
Riverside.10	СС	Extension	Other Hydrogen System Problems	06/16/2012 -	06/19/2012	3
Riverside.7	CC	Derate	Other Hydrogen System Problems	06/16/2012 -	06/19/2012	3
Sherburne.1	Steam	Forced	Waterwall (Furnace Wall)	06/25/2012 -	06/27/2012	2
Sherburne.2	Steam	Derate	Condensate Makeup And Return (inc. Storage Tanks)	06/01/2012 -	06/02/2012	1
Sherburne.2	Steam	Derate	First Reheater Leaks	06/02/2012 -	06/10/2012	8
Sherburne.2	Steam	Derate	Induced Draft Fan Fouling	06/10/2012 -	06/14/2012	4
Sherburne.2	Steam	Maintenance	First Reheater Leaks	06/14/2012 -	06/21/2012	6
Sherburne.3	Steam	Extension	Major Boiler Overhaul (720 Hours Or Longer)	06/01/2012 -	06/30/2012	30
Wheaton.2G	Peaking	Forced	Generator Output Breaker	06/06/2012 -	06/15/2012	8
Wheaton.4G	Peaking	Maintenance	Other Fire Protection System Problems	06/04/2012 -	06/08/2012	4
Wheaton.4G	Peaking	Forced	Generator Output Breaker	06/11/2012 -	06/13/2012	2
Wheaton.4G	Peaking	Forced	Generator Output Breaker	06/15/2012 -	06/19/2012	3
Willmarth.1	Peaking	Forced	Generator Vibration	06/06/2012 -	06/10/2012	3
Forced Outages	- Totals					175
Allen.S.King.1	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	06/01/2012 -	06/03/2012	2
Black.Dog.3	Steam	Scheduled	Boiler Inspections - Scheduled or Routine	06/01/2012 -	06/03/2012	2
Riverside.10	CC	Scheduled	Gas Turbine - Boroscope Inspection	06/09/2012 -	06/16/2012	7
Riverside.7	CC	Scheduled	Gas Turbine - Boroscope Inspection	06/09/2012 -	06/16/2012	7
Riverside.9	CC	Scheduled	Gas Turbine - Boroscope Inspection	06/09/2012 -	06/16/2012	7
Sherburne.1	Steam	Scheduled	Chemical Cleaning/steam Blows	06/01/2012 -	06/08/2012	7
Sherburne.1	Steam	Scheduled	Induced Draft Fan Motors And Drives	06/09/2012 -	06/25/2012	16
Sherburne.1	Steam	Scheduled	Induced Draft Fan Motors And Drives	06/28/2012 -	06/30/2012	2
Willmarth.1	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	06/10/2012 -	06/20/2012	10
Willmarth.2	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	06/10/2012 -	06/16/2012	5

Scheduled Outages - Totals	65
Total	240

# May 2012

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	D	ate	(Days)
BD25.CC	Steam	Extension	Other Safety Problems	05/01/2012 -	05/31/2012	31
French.ls.1	RDF	Maintenance	Service Water Piping	05/25/2012 -	05/31/2012	5
French.ls.2	RDF	Maintenance	Circulating Water Pumps	05/01/2012 -	05/17/2012	16
French.ls.2	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	05/18/2012 -	05/22/2012	3
French.ls.4	Peaking	Forced	Gas Turbine Compressor - High Pressure Bearings	05/09/2012 -	05/17/2012	8
HighBridge.7	CC	Extension	Major Gas Turbine Overhaul	05/27/2012 -	05/31/2012	3
HighBridge.9	CC	Extension	Major Gas Turbine Overhaul	05/27/2012 -	05/31/2012	3
Inver.Hills.1G	Peaking	Maintenance	Gas Turbine - Lube Oil System - General	05/15/2012 -	05/17/2012	2
Inver.Hills.1G	Peaking	Forced	Generator Output Breaker	05/18/2012 -	05/21/2012	2
Sherburne.2	Steam	Derate	High Pressure Heater Tube Leaks	05/14/2012 -	05/17/2012	3
Sherburne.2	Steam	Derate	Condensate Makeup And Return (inc. Storage Tanks)	05/27/2012 -	05/31/2012	4
Sherburne.3	Steam	Extension	Major Boiler Overhaul (720 Hours Or Longer)	05/01/2012 -	05/31/2012	31
Wheaton.1G	Peaking	Forced	Fire protection system instrumentation and control	05/01/2012 -	05/11/2012	10
Wheaton.3G	Peaking	Maintenance	Gas Turbine - Fire Detection And Extinguishing Sys	05/17/2012 -	05/18/2012	1
Wheaton.4G	Peaking	Maintenance	Gas Turbine - Fire Detection And Extinguishing Sys	05/17/2012 -	05/18/2012	1
Forced Outages -	Totals					123
Allen.S.King.1	Steam	Scheduled	Other Tube Slagging Or Fouling	05/04/2012 -	05/31/2012	27
Black.Dog.3	Steam	Scheduled	Boiler Inspections - Scheduled or Routine	05/11/2012 -	05/31/2012	20
HighBridge.7	CC	Scheduled	Major Gas Turbine Overhaul	05/05/2012 -	05/23/2012	18
HighBridge.7	CC	Scheduled	Major Gas Turbine Overhaul	05/23/2012 -	05/24/2012	1
HighBridge.7	CC	Scheduled	Major Gas Turbine Overhaul	05/25/2012 -	05/27/2012	1
HighBridge.8	CC	Scheduled	Major Gas Turbine Overhaul	05/05/2012 -	05/20/2012	15
HighBridge.9	CC	Scheduled	Major Gas Turbine Overhaul	05/05/2012 -	05/20/2012	15
HighBridge.9	CC	Scheduled	Major Gas Turbine Overhaul	05/21/2012 -	05/23/2012	1
HighBridge.9	CC	Scheduled	Major Gas Turbine Overhaul	05/23/2012 -	05/24/2012	1
HighBridge.9	CC	Scheduled	Major Gas Turbine Overhaul	05/25/2012 -	05/27/2012	1
Prairie.Island.2	Nuclear	Scheduled	Normal Refueling	05/01/2012 -	05/29/2012	28
Prairie.Island.2	Nuclear	Scheduled	Fuel Preconditioning	05/29/2012 -	05/31/2012	2
Sherburne.1	Steam	Scheduled	Induced Draft Fan Motors And Drives	05/01/2012 -	05/02/2012	1
Sherburne.1	Steam	Scheduled	Main Steam Relief/safety Valves	05/02/2012 -	05/04/2012	1
Sherburne.1	Steam	Scheduled	Induced Draft Fan Motors And Drives	05/04/2012 -	05/30/2012	25
Sherburne.1	Steam	Scheduled	Chemical Cleaning/steam Blows	05/30/2012 -	05/31/2012	1
Sherburne.2	Steam	Scheduled	Miscellaneous Regulatory	05/17/2012 -	05/24/2012	6
Scheduled Outage	s - Totals					164
Total						287

# **April 2012**

	Type of	Outage				Duration
Unit F	Plant	Category	Reason for outage	Da	Date	
Allen.S.King.1	Steam	Forced	First Reheater Leaks	04/01/2012 -	04/02/2012	1
Angus.Anson.4	Peaking	Maintenance	Gas Turbine - Boroscope Inspection	04/02/2012 -	04/05/2012	3
BD25.CC	Steam	Extension	Other Safety Problems	04/01/2012 -	04/30/2012	30
Black.Dog.3	Steam	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	04/21/2012 -	04/26/2012	4
Black.Dog.4	Steam	Forced	Cold reheat steam piping up to boiler	04/09/2012 -	04/10/2012	1
Blue.Lake.7	Peaking	Maintenance	Gas Turbine - Boroscope Inspection	04/22/2012 -	04/28/2012	6
Blue.Lake.8	Peaking	Maintenance	Gas Turbine - Boroscope Inspection	04/22/2012 -	04/28/2012	6
French.ls.1	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	04/06/2012 -	04/10/2012	3
French.ls.1	RDF	Forced	Turbine - Miscellaneous Turbine Piping	04/20/2012 -	04/23/2012	3
French.Is.2	RDF	Maintenance	Circulating Water Pumps	04/27/2012 -	04/30/2012	3
Inver.Hills.1G	Peaking	Forced	Gas Turbine - Ignition System	04/03/2012 -	04/05/2012	2
Inver.Hills.3G	Peaking	Forced	Other Controls And Instrumentation Problems	04/03/2012 -	04/04/2012	1
Riverside.7	CC	Derate	Exciter transformer	04/10/2012 -	04/11/2012	1
Riverside.9	CC	Forced	Exciter transformer	04/10/2012 -	04/11/2012	1

Total						185
Scheduled Outa	ges - Totals					87
Sherburne.1	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	04/01/2012 -	04/30/2012	30
Prairie.Island.2	Nuclear	Scheduled	Normal Refueling	04/01/2012 -	04/30/2012	30
Inver.Hills.6G	Peaking	Scheduled	Major Gas Turbine Overhaul	04/01/2012 -	04/23/2012	22
Black.Dog.4	Steam	Scheduled	Boiler Inspections - Scheduled or Routine	04/01/2012 -	04/06/2012	5
Forced Outages	- Totals					98
Wheaton.2G	Peaking	Forced	Gas Turbine - Cooling Water System	04/25/2012 -	04/26/2012	1
Wheaton.1G	Peaking	Forced	Fire protection system instrumentation and control	04/24/2012 -	04/26/2012	2
Sherburne.3	Steam	Extension	Major Boiler Overhaul (720 Hours Or Longer)	04/01/2012 -	04/30/2012	30

### March 2012

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Г	Date	(Days)
Allen.S.King.1	Steam	Forced	First Reheater Leaks	03/30/2012	- 03/31/2012	1
BD25.CC	Steam	Extension	Other Safety Problems	03/01/2012	- 03/31/2012	31
Black.Dog.3	Steam	Forced	DCS - data highway	03/12/2012	- 03/17/2012	4
Black.Dog.3	Steam	Forced	Other Boiler Instrumentation and Control Problems	03/17/2012	- 03/18/2012	1
Black.Dog.4	Steam	Maintenance	Circulating Water Pumps	03/10/2012	- 03/11/2012	1
Black.Dog.4	Steam	Forced	DCS - data highway	03/12/2012	- 03/20/2012	7
Blue.Lake.4	Peaking	Maintenance	Gas Turbine - Lube Oil Pumps	03/01/2012	- 03/21/2012	20
Blue.Lake.7	Peaking	Maintenance	Gas Turbine - Gas Fuel System	03/01/2012	- 03/09/2012	8
Blue.Lake.7	Peaking	Extension	Gas Turbine - Gas Fuel System	03/09/2012	- 03/19/2012	9
French.ls.2	RDF	Maintenance	Refractory (fbc Only)	03/02/2012	- 03/09/2012	6
Inver.Hills.4G	Peaking	Forced	Circuit Breakers	03/20/2012	- 03/27/2012	7
Riverside.10	CC	Derate	Circulating Water Pump Motors	03/14/2012	- 03/28/2012	14
Riverside.7	CC	Derate	Circulating Water Pump Motors	03/14/2012	- 03/28/2012	14
Riverside.9	CC	Forced	Unit Auxiliaries Transformer	03/12/2012	- 03/14/2012	2
Riverside.9	CC	Derate	Circulating Water Pump Motors	03/14/2012	- 03/28/2012	14
Sherburne.3	Steam	Extension	Major Boiler Overhaul (720 Hours Or Longer)	03/01/2012	- 03/31/2012	31
Forced Outages -	Totals					170
Black.Dog.4	Steam	Scheduled	Boiler Inspections - Scheduled or Routine	03/31/2012	- 03/31/2012	1
Blue.Lake.1	Peaking	Scheduled	Gas Turbine - Hydraulic Oil System	03/01/2012	- 03/05/2012	4
Inver.Hills.6G	Peaking	Scheduled	Major Gas Turbine Overhaul	03/01/2012	- 03/31/2012	31
Prairie.Island.2	Nuclear	Scheduled	Normal Refueling	03/01/2012	- 03/31/2012	31
Red.Wing.1	RDF	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	03/01/2012	- 03/04/2012	3
Sherburne.1	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	03/01/2012	- 03/31/2012	30
Scheduled Outage	s - Totals					100
Total						270

# February 2012

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	ate	(Days)
BD25.CC	Steam	Extension	Other Safety Problems	02/01/2012 -	02/29/2012	29
Black.Dog.4	Steam	Forced	Second Superheater Leaks	02/01/2012 -	02/03/2012	2
Black.Dog.4	Steam	Forced	Turbine Main Stop Valves	02/04/2012 -	02/24/2012	19
Blue.Lake.4	Peaking	Maintenance	Gas Turbine - Lube Oil Pumps	02/27/2012 -	02/29/2012	2
French.ls.1	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	02/03/2012 -	02/08/2012	4
French.Is.2	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	02/17/2012 -	02/22/2012	4
HighBridge.7	CC	Forced	Other HP Steam valves (including vent and drain	02/02/2012 -	02/06/2012	4
HighBridge.8	CC	Forced	HP Superheater	02/02/2012 -	02/09/2012	7
HighBridge.9	CC	Forced	HP Superheater	02/02/2012 -	02/06/2012	4
HighBridge.9	CC	Derate	HP Superheater	02/06/2012 -	02/09/2012	3
Key.City.1	Peaking	Forced	Generator Rotor Windings	02/01/2012 -	02/29/2012	29
Sherburne.3	Steam	Extension	Major Boiler Overhaul (720 Hours Or Longer)	02/01/2012 -	02/29/2012	29
Wheaton.2G	Peaking	Forced	Other PLC problems	02/08/2012 -	02/09/2012	1
Wheaton.5	Peaking	Maintenance	Fire protection system instrumentation and control	02/06/2012 -	02/17/2012	11
Wheaton.6	Peaking	Maintenance	Fire protection system instrumentation and control	02/01/2012 -	02/03/2012	2

Wheaton.6	Peaking	Maintenance	Service Air Compressors	02/09/2012 -	02/10/2012	1
Forced Outages	- Totals					151
Blue.Lake.1	Peaking	Scheduled	Gas Turbine - Hydraulic Oil System	02/23/2012 -	02/29/2012	6
Blue.Lake.2	Peaking	Scheduled	Gas Turbine - Hydraulic Oil System	02/09/2012 -	02/17/2012	8
Inver.Hills.6G	Peaking	Scheduled	Major Gas Turbine Overhaul	02/01/2012 -	02/29/2012	29
Key.City.3	Peaking	Scheduled	Powerhouse Switchyard (non-generating unit equip)	02/01/2012 -	02/27/2012	26
Prairie.Island.2	Nuclear	Scheduled	Normal Refueling	02/13/2012 -	02/19/2012	6
Prairie.Island.2	Nuclear	Scheduled	Normal Refueling	02/19/2012 -	02/21/2012	2
Prairie.Island.2	Nuclear	Scheduled	Normal Refueling	02/22/2012 -	02/29/2012	7
Red.Wing.1	RDF	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	02/12/2012 -	02/29/2012	17
Red.Wing.2	RDF	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	02/15/2012 -	02/29/2012	14
Willmarth.1	Peaking	Scheduled	Switchyard circuit breakers - external	02/03/2012 -	02/06/2012	3
Willmarth.2	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	02/01/2012 -	02/06/2012	5
Scheduled Outa	ges - Totals					123
Total		·	·	·		274

## January 2012

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	te	(Days)
BD25.CC	Steam	Extension	Other Safety Problems	01/01/2012 -	01/31/2012	31
Black.Dog.3	Steam	Forced	First Reheater Leaks	01/03/2012 -	01/10/2012	7
Blue.Lake.2	Peaking	Maintenance	Gas Turbine - Fuel Piping And Valves	01/01/2012 -	01/10/2012	9
Blue.Lake.3	Peaking	Maintenance	Gas Turbine - Fuel Piping And Valves	01/09/2012 -	01/13/2012	3
French.ls.2	RDF	Maintenance	Bed Agglomeration (fbc Only)	01/06/2012 -	01/09/2012	3
French.ls.2	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	01/13/2012 -	01/17/2012	3
French.ls.4	Peaking	Maintenance	Generator Voltage Control	01/03/2012 -	01/13/2012	10
French.ls.4	Peaking	Extension	Generator Voltage Control	01/13/2012 -	01/17/2012	4
Key.City.1	Peaking	Forced	Generator Rotor Windings	01/01/2012 -	01/31/2012	31
Red.Wing.2	RDF	Forced	Induced Draft Fan Motors - Variable Speed	01/01/2012 -	01/04/2012	3
Riverside.7	CC	Derate	Gas Turbine - Gas Fuel System	01/09/2012 -	01/10/2012	1
Riverside.9	CC	Maintenance	Gas Turbine - Gas Fuel System	01/09/2012 -	01/10/2012	1
Sherburne.3	Steam	Extension	Major Boiler Overhaul (720 Hours Or Longer)	01/01/2012 -	01/31/2012	31
Wheaton.2G	Peaking	Maintenance	Fire protection system instrumentation and control	01/09/2012 -	01/17/2012	8
Wheaton.3G	Peaking	Maintenance	Fire protection system instrumentation and control	01/03/2012 -	01/06/2012	3
Wheaton.6	Peaking	Maintenance	Fire protection system instrumentation and control	01/23/2012 -	01/31/2012	8
Forced Outages	- Totals					156
Inver.Hills.6G	Peaking	Scheduled	Major Gas Turbine Overhaul	01/09/2012 -	01/31/2012	22
Key.City.3	Peaking	Scheduled	Powerhouse Switchyard (non-generating unit equip)	01/14/2012 -	01/31/2012	17
Willmarth.1	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	01/13/2012 -	01/31/2012	18
Willmarth.2	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	01/13/2012 -	01/31/2012	18
Scheduled Outag	jes - Totals					75
Total		·				231

### December 2011

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Dat	te	(Days)
Allen.S.King.1	Steam	Forced	High Pressure Heater Tube Leaks	12/09/2011 -	12/12/2011	2
BD25.CC	Steam	Extension	Other Safety Problems	12/01/2011 -	12/31/2011	30
Black.Dog.4	Steam	Forced	Second Superheater Leaks	12/05/2011 -	12/09/2011	4
Blue.Lake.1	Peaking	Maintenance	Gas Turbine Liquid Fuel Oil Transfer/forward Pump	12/08/2011 -	12/12/2011	3
Blue.Lake.2	Peaking	Maintenance	Gas Turbine Liquid Fuel Oil Transfer/forward Pump	12/08/2011 -	12/12/2011	3
Blue.Lake.2	Peaking	Maintenance	Gas Turbine - Fuel Piping And Valves	12/27/2011 -	12/31/2011	4
Blue.Lake.3	Peaking	Maintenance	Gas Turbine - Fuel Piping And Valves	12/12/2011 -	12/14/2011	2
Blue.Lake.3	Peaking	Maintenance	Gas Turbine - Fuel Piping And Valves	12/27/2011 -	12/28/2011	1
Blue.Lake.4	Peaking	Maintenance	Other Controls And Instrumentation Problems	12/14/2011 -	12/19/2011	5
French.ls.1	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	12/02/2011 -	12/06/2011	4
Inver.Hills.1G	Peaking	Maintenance	Protection Devices	12/05/2011 -	12/06/2011	1
Inver.Hills.2G	Peaking	Maintenance	Protection Devices	12/05/2011 -	12/06/2011	1
Inver.Hills.3G	Peaking	Maintenance	Protection Devices	12/07/2011 -	12/09/2011	2
Inver.Hills.4G	Peaking	Maintenance	Protection Devices	12/07/2011 -	12/09/2011	2
Inver.Hills.4G	Peaking	Forced	Inverters	12/09/2011 -	12/12/2011	2
Inver.Hills.5G	Peaking	Maintenance	Protection Devices	12/12/2011 -	12/13/2011	1
Inver.Hills.6G	Peaking	Maintenance	Protection Devices	12/12/2011 -	12/13/2011	1
Key.City.1	Peaking	Forced	Generator Rotor Windings	12/01/2011 -	12/31/2011	30
Monticello.1	Nuclear	Forced	Turbine Trip Devices (including Instruments)	12/01/2011 -	12/10/2011	9
Riverside.7	CC	Extension	Gen. Stator Windings, Bushings, And Terminals	12/06/2011 -	12/08/2011	1
Riverside.9	CC	Extension	Gen. Stator Windings, Bushings, And Terminals	12/06/2011 -	12/08/2011	1
Sherburne.3	Steam	Extension	Major Boiler Overhaul (720 Hours Or Longer)	12/01/2011 -	12/31/2011	30
Wheaton.1G	Peaking	Forced	Fire protection system instrumentation and control	12/02/2011 -	12/15/2011	12
Wheaton.4G	Peaking	Maintenance	Fire protection system instrumentation and control	12/05/2011 -	12/21/2011	16
Wheaton.4G	Peaking	Forced	Circuit Breakers	12/21/2011 -	12/27/2011	5
Forced Outages	- Totals					172
Prairie.lsland.1	Nuclear	Scheduled	Turbine Control Valve Testing	12/02/2011 -	12/03/2011	1
Riverside.10	CC	Scheduled	Gen. Stator Windings, Bushings, And Terminals	12/02/2011 -	12/03/2011	12
Riverside 0	CC	Scheduled	Gen. Stator Windings, Bushings, And Terminals	12/01/2011 -	12/06/2011	5
Riverside.9	CC	Scheduled	Gen. Stator Windings, Bushings, And Terminals	12/01/2011 -	12/06/2011	<u>5</u> 23
Scheduled Outag	jes - rotais					23
Total						195
IUIAI						195

### November 2011

	Type of	Outage			Duration
Unit	Plant	Category	Reason for outage	Date	(Days)
Angus.Anson.2G	Peaking	Maintenance	4000-6000-volt Transformers	11/15/2011 - 11/16/2011	1
Angus.Anson.2G	Peaking	Forced	Circuit Breakers	11/16/2011 - 11/18/2011	1
Angus.Anson.3G	Peaking	Maintenance	Unit Auxiliaries Transformer	11/15/2011 - 11/17/2011	2
BD25.CC	Steam	Extension	Other Safety Problems	11/01/2011 - 11/30/2011	30
Black.Dog.3	Steam	Extension	Debris in Circulating water from outside sources	11/01/2011 - 11/03/2011	2
Black.Dog.4	Steam	Extension	Debris in Circulating water from outside sources	11/01/2011 - 11/02/2011	1
Blue.Lake.1	Peaking	Maintenance	Gas Turbine - Fuel Piping And Valves	11/10/2011 - 11/11/2011	1
French.ls.2	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	11/11/2011 - 11/17/2011	6
Key.City.1	Peaking	Forced	Gas Turbine - Load Shaft And Bearings	11/01/2011 - 11/30/2011	30
Monticello.1	Nuclear	Forced	Turbine Trip Devices (including Instruments)	11/19/2011 - 11/28/2011	8
Monticello.1	Nuclear	Forced	Turbine Trip Devices (including Instruments)	11/28/2011 - 11/30/2011	2
Red.Wing.1	RDF	Forced	Lack Of Fuel (outside management control)	11/19/2011 - 11/24/2011	4
Riverside.10	CC	Maintenance	Gen. Stator Windings, Bushings, And Terminals	11/01/2011 - 11/05/2011	4
Sherburne.2	Steam	Derate	High Pressure Heater Tube Leaks	11/03/2011 - 11/11/2011	8
Sherburne.3	Steam	Extension	Major Boiler Overhaul (720 Hours Or Longer)	11/06/2011 - 11/18/2011	11
Sherburne.3	Steam	Extension	Major Boiler Overhaul (720 Hours Or Longer)	11/19/2011 - 11/30/2011	11
Wheaton.1G	Peaking	Maintenance	Fire protection system instrumentation and control	11/18/2011 - 11/30/2011	12
Wheaton.2G	Peaking	Forced	Programmable Logic Controller (PLC)	11/01/2011 - 11/17/2011	16
Wheaton.3G	Peaking	Forced	Other Generator Controls And Metering Problems	11/01/2011 - 11/29/2011	28
Forced Outages -	Totals				178
Angus.Anson.2G	Peaking	Scheduled	Gas Turbine Vibration	11/26/2011 - 11/30/2011	4

Angus.Anson.3G	Peaking	Scheduled	Gas Turbine Vibration	11/17/2011	11/23/2011	6
HighBridge.7	CC	Scheduled	Gas Turbine - Boroscope Inspection	11/04/2011	11/20/2011	15
HighBridge.8	CC	Scheduled	Gas Turbine - Boroscope Inspection	11/04/2011	11/20/2011	15
HighBridge.9	CC	Scheduled	Condenser Tube And Water Box Cleaning	11/04/2011	11/20/2011	15
Riverside.10	CC	Scheduled	Gen. Stator Windings, Bushings, And Terminals	11/10/2011	11/30/2011	20
Riverside.7	CC	Scheduled	Gen. Stator Windings, Bushings, And Terminals	11/01/2011	11/05/2011	4
Riverside.7	CC	Scheduled	Gen. Stator Windings, Bushings, And Terminals	11/05/2011	11/10/2011	4
Riverside.7	CC	Scheduled	Gen. Stator Windings, Bushings, And Terminals	11/10/2011	11/30/2011	20
Riverside.9	CC	Scheduled	Gen. Stator Windings, Bushings, And Terminals	11/01/2011	11/30/2011	30
Sherburne.3	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	11/01/2011	11/06/2011	5
Scheduled Outag	jes - Totals					138
Total						316

### October 2011

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	te	(Days)
BD25.CC	Steam	Extension	Other Safety Problems	10/04/2011 -	10/31/2011	28
Black.Dog.3	Steam	Extension	Other Safety Problems	10/04/2011 -	10/08/2011	4
Black.Dog.3	Steam	Forced	Second Reheater Leaks	10/12/2011 -	10/13/2011	1
Black.Dog.3	Steam	Extension	Debris in Circulating water from outside sources	10/31/2011 -	10/31/2011	1
Black.Dog.4	Steam	Extension	Other Safety Problems	10/04/2011 -	10/10/2011	6
Black.Dog.4	Steam	Extension	Debris in Circulating water from outside sources	10/31/2011 -	10/31/2011	1
French.ls.1	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	10/07/2011 -	10/11/2011	4
French.ls.1	RDF	Maintenance	Stacks	10/27/2011 -	10/31/2011	3
French.ls.2	RDF	Maintenance	Stacks	10/20/2011 -	10/24/2011	3
French.ls.4	Peaking	Maintenance	4000-6000-volt Transformers	10/17/2011 -	10/31/2011	14
Inver.Hills.1G	Peaking	Maintenance	Gas Turbine - Exhaust System Vanes/Nozzles	10/19/2011 -	10/21/2011	2
Inver.Hills.2G	Peaking	Maintenance	Gas Turbine - Exhaust System Vanes/Nozzles	10/13/2011 -	10/14/2011	1
Inver.Hills.3G	Peaking	Maintenance	Gas Turbine - Exhaust System Vanes/Nozzles	10/18/2011 -	10/20/2011	2
Inver.Hills.4G	Peaking	Maintenance	Gas Turbine - Exhaust System Vanes/Nozzles	10/17/2011 -	10/19/2011	2
Inver.Hills.5G	Peaking	Maintenance	Gas Turbine - Exhaust System Vanes/Nozzles	10/10/2011 -	10/11/2011	1
Key.City.1	Peaking	Forced	Gas Turbine - Load Shaft And Bearings	10/01/2011 -	10/31/2011	31
Monticello.1	Nuclear	Derate	Power Limited By Rod Pattern.	10/05/2011 -	10/06/2011	1
Monticello.1	Nuclear	Forced	Safeguard Buses And Assoc. Equipment (transfrmr,	10/21/2011 -	10/28/2011	6
Prairie.Island.1	Nuclear	Derate	Heater Level Control	10/03/2011 -	10/04/2011	1
Prairie.Island.2	Nuclear	Forced	Reactor Coolant/recirculating Pumps	10/04/2011 -	10/20/2011	15
Wheaton.1G	Peaking	Forced	Other Dc Power Problems	10/04/2011 -	10/05/2011	1
Wheaton.2G	Peaking	Forced	Programmable Logic Controller (PLC)	10/06/2011 -	10/31/2011	25
Wheaton.3G	Peaking	Forced	Other Generator Controls And Metering Problems	10/11/2011 -	10/31/2011	20
Wheaton.5	Peaking	Maintenance	General Gas Turbine Unit Inspection	10/13/2011 -	10/21/2011	8
Wheaton.6	Peaking	Maintenance	General Gas Turbine Unit Inspection	10/26/2011 -	10/27/2011	1
Forced Outages -			·	!		182
ı .						
Allen.S.King.1	Steam	Scheduled	Boiler Tube Fireside Cleaning	10/23/2011 -	10/29/2011	5
BD25.CC	Steam	Scheduled	Other Safety Problems	10/01/2011 -	10/04/2011	3
Black.Dog.3	Steam	Scheduled	Other Safety Problems	10/01/2011 -	10/04/2011	3
Black.Dog.3	Steam	Scheduled	Debris in Circulating water from outside sources	10/22/2011 -	10/31/2011	8
Black.Dog.4	Steam	Scheduled	Other Safety Problems	10/01/2011 -	10/04/2011	3
Black.Dog.4	Steam	Scheduled	Debris in Circulating water from outside sources	10/23/2011 -	10/31/2011	7
Blue.Lake.7	Peaking	Scheduled	Gas Turbine - Gas Fuel System	10/01/2011 -	10/24/2011	23
Blue.Lake.8	Peaking	Scheduled	Gas Turbine - Gas Fuel System	10/01/2011 -	10/10/2011	9
Blue.Lake.8	Peaking	Scheduled	Gas Turbine - Gas Fuel System	10/13/2011 -	10/24/2011	10
Prairie.Island.1	Nuclear	Scheduled	Circulating water biological conditions (ie, zebra mussels		10/14/2011	8
Riverside.7	СС	Scheduled	Gen. Stator Windings, Bushings, And Terminals	10/29/2011 -	10/31/2011	2
Riverside.9	СС	Scheduled	Gen. Stator Windings, Bushings, And Terminals	10/29/2011 -	10/31/2011	2
Sherburne.3	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	10/01/2011 -	10/31/2011	31
Scheduled Outage			,	·		114
Total						296

September 2011 Type of Outage Duration

Unit	Plant	Category	Reason for outage	Da	te	(Days)
BD25.CC	Steam	Maintenance	Condenser Tube Sheet Fouling	09/08/2011 -	09/09/2011	1
Blue.Lake.3	Peaking	Maintenance	Gas Turbine - Fuel Piping And Valves	09/12/2011 -	09/14/2011	2
HighBridge.7	CC	Maintenance	Other Miscellaneous External Problems	09/21/2011 -	09/22/2011	1
HighBridge.9	CC	Maintenance	Other Miscellaneous External Problems	09/21/2011 -	09/22/2011	1
Key.City.1	Peaking	Forced	Gas Turbine - Load Shaft And Bearings	09/01/2011 -	09/30/2011	30
Riverside.10	CC	Maintenance	Gas Turbine Cleaning	09/13/2011 -	09/15/2011	1
Riverside.7	CC	Maintenance	Gas Turbine Cleaning	09/13/2011 -	09/14/2011	1
Riverside.9	CC	Maintenance	Gas Turbine Cleaning	09/13/2011 -	09/14/2011	1
Wheaton.1G	Peaking	Forced	Dc Circuit Breakers	09/16/2011 -	09/19/2011	2
Wheaton.1G	Peaking	Forced	Dc Circuit Breakers	09/23/2011 -	09/26/2011	2
Wheaton.2G	Peaking	Forced	Other Dc Power Problems	09/29/2011 -	09/30/2011	1
Wheaton.6	Peaking	Forced	Other PLC problems	09/01/2011 -	09/14/2011	13
Forced Outages -	Totals					56
BD25.CC	Steam	Scheduled	Other Safety Problems	09/23/2011 -	09/30/2011	7
Black.Dog.3	Steam	Scheduled	Other Safety Problems	09/21/2011 -	09/30/2011	9
Black.Dog.4	Steam	Scheduled	Other Safety Problems	09/24/2011 -	09/30/2011	6
Blue.Lake.7	Peaking	Scheduled	Gas Turbine - Gas Fuel System	09/19/2011 -	09/30/2011	12
Blue.Lake.8	Peaking	Scheduled	Gas Turbine - Gas Fuel System	09/19/2011 -	09/30/2011	11
Red.Wing.1	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	09/24/2011 -	09/30/2011	5
Red.Wing.2	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	09/25/2011 -	09/30/2011	5
Sherburne.3	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	09/15/2011 -	09/30/2011	15
Willmarth.1	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	09/18/2011 -	09/24/2011	6
Willmarth.2	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	09/19/2011 -	09/25/2011	6
Scheduled Outages - Totals						82
Total		<del></del>				138

# August 2011

	Type of	Outage				Duration	
Unit	Plant	Category	Reason for outage	Da	te	(Days)	
BD25.CC	Steam	Forced	Pilot fuel nozzles/vanes	08/24/2011 -	08/25/2011	1	
Black.Dog.3	Steam	Forced	Second Reheater Leaks	08/16/2011 -	08/23/2011	7	
Black.Dog.4	Steam	Derate	Flood	08/01/2011 -	08/06/2011	5	
Black.Dog.4	Steam	Derate	Flood	08/06/2011 -	08/14/2011	7	
Black.Dog.4	Steam	Forced	Emergency Generator Trip Devices	08/14/2011 -	08/15/2011	1	
Black.Dog.4	Steam	Derate	Flood	08/15/2011 -	08/27/2011	11	
Blue.Lake.1	Peaking	Maintenance	Gas Turbine - Hydraulic Oil System	08/08/2011 -	08/10/2011	2	
Blue.Lake.7	Peaking	Forced	Gas Turbine - Starting System (including Motor)	08/24/2011 -	08/26/2011	1	
Blue.Lake.8	Peaking	Maintenance	Gas Turbine - Gas Fuel System	08/09/2011 -	08/11/2011	1	
Blue.Lake.8	Peaking	Forced	Gas Turbine - Starting System (including Motor)	08/24/2011 -	08/26/2011	1	
French.ls.1	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	08/05/2011 -	08/09/2011	3	
French.ls.2	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	08/19/2011 -	08/25/2011	5	
HighBridge.7	CC	Maintenance	HP Startup bypass system valves	08/05/2011 -	08/07/2011	2	
HighBridge.8	CC	Maintenance	HP Startup bypass system valves	08/05/2011 -	08/07/2011	2	
HighBridge.9	CC	Maintenance	HP Startup bypass system valves	08/05/2011 -	08/07/2011	2	
Inver.Hills.3G	Peaking	Forced	4000-6000-volt Circuit Breakers	08/10/2011 -	08/12/2011	1	
Inver.Hills.4G	Peaking	Forced	4000-6000-volt Circuit Breakers	08/10/2011 -	08/12/2011	1	
Key.City.1	Peaking	Forced	Gas Turbine - Load Shaft And Bearings	08/01/2011 -	08/31/2011	31	
Monticello.1	Nuclear	Derate	Condensate/hotwell Pump Motor	08/06/2011 -	08/07/2011	1	
Monticello.1	Nuclear	Derate	Condensate/hotwell Pump Motor	08/27/2011 -	08/29/2011	2	
Red.Wing.2	RDF	Forced	Coal Conveyor Scales-storage Coal Pile	08/05/2011 -	08/08/2011	3	
Sherburne.1	Steam	Forced	Other Boiler Tube Leaks	08/16/2011 -	08/17/2011	1	
Sherburne.3	Steam	Derate	Dry Scrubber - Spray Machine/atomizer	08/04/2011 -	08/06/2011	1	
Wheaton.6	Peaking	Forced	Other PLC problems	08/16/2011 -	08/31/2011	15	
Forced Outages	- Totals					107	
Angus.Anson.4	Peaking	Scheduled	Switchyard system protection devices - external	08/26/2011 -	08/31/2011	5	
Black.Dog.4	Steam	Scheduled	Condenser Tube And Water Box Cleaning	08/27/2011 -	08/29/2011	2	
Monticello.1	Nuclear	Scheduled	Control Rod Pattern Changes & Control Rod Repatch	08/29/2011 -	08/31/2011	1	

Scheduled Outages - Totals	8
Total	115

# July 2011

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	te	(Days)
Allen S King 1	Steam	Forced	First Reheater Leaks	07/07/2011 -	07/10/2011	2
BD25 CC	Steam	Maintenance	Gas Turbine - Boroscope Inspection	07/23/2011 -	07/27/2011	4
BD25 CC	Steam	Forced	Inverters	07/28/2011 -	07/30/2011	1
Black Dog 4	Steam	Derate	Flood	07/05/2011 -	07/20/2011	15
Black Dog 4	Steam	Derate	Flood	07/20/2011 -	07/31/2011	11
French Is 1	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	07/01/2011 -	07/05/2011	4
Granite City 3	Peaking	Forced	Protection Devices	07/01/2011 -	07/19/2011	18
Granite City 4	Peaking	Forced	Protection Devices	07/01/2011 -	07/19/2011	18
HighBridge 7	CC	Forced	HP Startup bypass system valves	07/20/2011 -	07/25/2011	4
HighBridge 8	CC	Maintenance	HP Startup bypass system valves	07/23/2011 -	07/24/2011	1
HighBridge 9	CC	Derate	HP Startup bypass system valves	07/20/2011 -	07/23/2011	2
HighBridge 9	CC	Maintenance	HP Startup bypass system valves	07/23/2011 -	07/24/2011	1
HighBridge 9	CC	Derate	HP Startup bypass system valves	07/24/2011 -	07/25/2011	1
Inver Hills 5G	Peaking	Forced	4000-6000-volt Circuit Breakers	07/08/2011 -	07/18/2011	10
Inver Hills 6G	Peaking	Maintenance	4000-6000-volt Transformers	07/14/2011 -	07/18/2011	4
Key City 1	Peaking	Maintenance	Gas Turbine - Load Shaft And Bearings	07/01/2011 -	07/31/2011	31
Key City 3	Peaking	Forced	Gas Turbine - Turning Gear And Motor	07/22/2011 -	07/31/2011	9
Prairie Is 1	Nuclear	Forced	Turbine Main Stop Valves	07/01/2011 -	07/02/2011	1
Red Wing 2	RDF	Forced	Cems - Opacity Monitor Problems	07/09/2011 -	07/13/2011	3
Riverside 10	CC	Maintenance	Condenser Tube And Water Box Cleaning	07/13/2011 -	07/14/2011	1
Riverside 7	CC	Maintenance	Condenser Tube And Water Box Cleaning	07/13/2011 -	07/14/2011	1
Riverside 9	CC	Maintenance	Condenser Tube And Water Box Cleaning	07/13/2011 -	07/14/2011	1
Sherburne 1	Steam	Forced	Waterwall (Furnace Wall)	07/08/2011 -	07/10/2011	2
Wheaton 1G	Peaking	Forced	Emergency Generator Trip Devices	07/01/2011 -	07/05/2011	3
Wheaton 1G	Peaking	Forced	Emergency Generator Trip Devices	07/05/2011 -	07/13/2011	7
Forced Outages - 1	Γotals					155
Drainia la 2	Nueleen	Cabadulad	Cucana Niveleou Instrumentation	07/00/2044	07/07/2011	
	Nuclear	Scheduled	Excore Nuclear Instrumentation	07/06/2011 -	07/07/2011	1
	Peaking	Scheduled	Ac Instrument Power Transformers	07/01/2011 -	07/25/2011	24
Scheduled Outage	s - Totals					25
Tatal						400
Total						180

#### June 2011

	Type of	Outage					Duration
Unit	Plant	Category	Reason for outage	D	ate	е	(Days)
Allen S King 1	Steam	Derate	Turbine Control Valves	06/22/2011	-	06/23/2011	1
Angus Anson 3G	Peaking	Forced	Gas Turbine - Load Shaft And Bearings	06/07/2011	-	06/29/2011	22
Black Dog 4	Steam	Forced	Second Reheater Leaks	06/06/2011	-	06/10/2011	4
French Is 1	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	06/03/2011	-	06/08/2011	4
French Is 2	RDF	Maintenance	Waterwall (Furnace wall)	06/10/2011	-	06/14/2011	3
Granite City 1	Peaking	Forced	Switchyard transformers and associated cooling systems	06/10/2011	-	06/13/2011	2
Granite City 2	Peaking	Forced	Switchyard transformers and associated cooling systems	06/10/2011	-	06/13/2011	2
Granite City 3	Peaking	Forced	Protection Devices	06/16/2011	-	06/30/2011	14
Granite City 4	Peaking	Forced	Protection Devices	06/16/2011	-	06/30/2011	14
HighBridge 7	CC	Forced	Boiler Doors	06/16/2011	-	06/21/2011	5
HighBridge 8	CC	Forced	Boiler Doors	06/17/2011	-	06/21/2011	4
HighBridge 9	CC	Forced	Other Miscellaneous Steam Turbine Problems	06/17/2011	-	06/21/2011	4
Inver Hills 1G	Peaking	Forced	Gas Turbine - Gas Fuel System	06/06/2011	-	06/08/2011	1
Inver Hills 1G	Peaking	Forced	Gas Turbine - Load Shaft And Bearings	06/09/2011	-	06/16/2011	6
Inver Hills 2G	Peaking	Forced	400-700-volt Conductors And Buses	06/18/2011	-	06/20/2011	1
Key City 1	Peaking	Maintenance	Gas Turbine - Load Shaft And Bearings	06/08/2011	-	06/30/2011	22
Monticello 1	Nuclear	Derate	Process Computer	06/21/2011	-	06/23/2011	2
Monticello 1	Nuclear	Forced	Main Steam Isolation Valves (bwr And Pwr)	06/24/2011	-	06/28/2011	4
Riverside 10	CC	Forced	Emergency Generator Trip Devices	06/27/2011	-	06/28/2011	1

Riverside 7	CC	Forced	Emergency Generator Trip Devices	06/27/2011 -	06/28/2011	1
Riverside 9	CC	Forced	Emergency Generator Trip Devices	06/27/2011 -	06/28/2011	1
Wheaton 1G	Peaking	Forced	Other DCS Problems	06/18/2011 -	06/21/2011	2
Wheaton 2G	Peaking	Forced	Dc Protection Devices	06/18/2011 -	06/21/2011	2
Forced Outages - Totals						
Monticello 1	Nuclear	Scheduled	Fuel Preconditioning	06/01/2011 -	06/03/2011	2
Prairie Is 1	Nuclear	Scheduled	Normal Refueling	06/01/2011 -	06/11/2011	10
Wheaton 5	Peaking	Scheduled	Ac Instrument Power Transformers	06/01/2011 -	06/30/2011	30
Scheduled Out	ages - Totals					42
Total	•	•				164

## May 2011

l I	Type of				Duration
Unit	Plant	Outage Category	Reason for outage	Date	(Days)
Allen S King 1	Steam	Derate	First Reheater Leaks	05/09/2011 - 05/10/2011	1
Allen S King 1	Steam	Forced	First Reheater Leaks	05/10/2011 - 05/13/2011	2
BD25 CC	Steam	Extension	Cems - Opacity Monitor Problems	05/16/2011 - 05/18/2011	2
Blue Lake 3	Peaking	Maintenance	Gas Turbine - Fuel Nozzles/Vanes	05/16/2011 - 05/18/2011	2
Blue Lake 7	Peaking	Maintenance	Gas Turbine - Boroscope Inspection	05/02/2011 - 05/06/2011	4
Blue Lake 8	Peaking	Maintenance	Gas Turbine - Boroscope Inspection	05/03/2011 - 05/09/2011	6
French Is 1	RDF	Maintenance	4000-6000-volt Circuit Breakers	05/06/2011 - 05/15/2011	9
French Is 2	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	05/01/2011 - 05/21/2011	20
French Is 2	RDF	Extension	Condensate/hotwell Pumps	05/21/2011 - 05/31/2011	10
HighBridge 7	СС	Extension	Gas Turbine - Boroscope Inspection	05/22/2011 - 05/28/2011	5
HighBridge 8	СС	Extension	Gas Turbine - Boroscope Inspection	05/22/2011 - 05/28/2011	6
HighBridge 9	СС	Extension	Turbine Intercept Valves	05/22/2011 - 05/28/2011	5
Inver Hills 1G	Peaking	Maintenance	Generator Output Breaker	05/26/2011 - 05/27/2011	1
Inver Hills 2G	Peaking	Maintenance	Generator Output Breaker	05/26/2011 - 05/27/2011	1
Inver Hills 5G	Peaking	Maintenance	Generator Output Breaker	05/23/2011 - 05/25/2011	2
Inver Hills 6G	Peaking	Maintenance	Generator Output Breaker	05/23/2011 - 05/25/2011	2
Monticello 1	Nuclear	Extension	Normal Refueling	05/21/2011 - 05/25/2011	4
Monticello 1	Nuclear	Derate	Feedwater Pump Drive - Motor	05/29/2011 - 05/30/2011	1
Prairie Is 2	Nuclear	Forced	Lightning	05/09/2011 - 05/10/2011	1
Riverside 10	CC	Forced	Circulating Water Piping Fouling	05/01/2011 - 05/05/2011	4
Riverside 10	CC	Forced	Generator Synchronization Equipment	05/08/2011 - 05/10/2011	2
Riverside 7	СС	Forced	Circulating Water Piping Fouling	05/01/2011 - 05/05/2011	4
Riverside 7	CC	Forced	Generator Synchronization Equipment	05/08/2011 - 05/10/2011	1
Riverside 9	CC	Forced	Circulating Water Piping Fouling	05/01/2011 - 05/05/2011	4
Riverside 9	СС	Forced	Generator Synchronization Equipment	05/08/2011 - 05/09/2011	1
Wheaton 2G	Peaking	Maintenance	General Gas Turbine Unit Inspection	05/02/2011 - 05/05/2011	3
Wheaton 3G	Peaking	Maintenance	General Gas Turbine Unit Inspection	05/16/2011 - 05/17/2011	1
Wheaton 4G	Peaking	Maintenance	General Gas Turbine Unit Inspection	05/09/2011 - 05/12/2011	3
Forced Outages -	Totals				107
BD25 CC	Steam	Scheduled	Cems - Opacity Monitor Problems	05/01/2011 - 05/16/2011	15
HighBridge 7	CC	Scheduled	Gas Turbine - Boroscope Inspection	05/06/2011 - 05/22/2011	16
HighBridge 8	CC	Scheduled	Gas Turbine - Boroscope Inspection	05/06/2011 - 05/22/2011	16
HighBridge 9	CC	Scheduled	Turbine Intercept Valves	05/06/2011 - 05/22/2011	16
Inver Hills 2G	Peaking	Scheduled	Major Gas Turbine Overhaul	05/01/2011 - 05/05/2011	4
Monticello 1	Nuclear	Scheduled	Normal Refueling	05/01/2011 - 05/21/2011	20
Monticello 1	Nuclear	Scheduled	Core Physics Tests	05/25/2011 - 05/29/2011	3
Monticello 1	Nuclear	Scheduled	Fuel Preconditioning	05/30/2011 - 05/31/2011	1
Prairie Is 1	Nuclear	Scheduled	Normal Refueling	05/01/2011 - 05/31/2011	31
Red Wing 1	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	05/22/2011 - 05/27/2011	4
Red Wing 2	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	05/23/2011 - 05/28/2011	4
Wheaton 5	Peaking	Scheduled	Ac Instrument Power Transformers	05/01/2011 - 05/31/2011	31
Scheduled Outage				1 2 3 2 3 2 2 7 1   00/0 1/2011	161
Total					268

## **April 2011**

	Type of	Outage				Duration	
Unit	Plant	Category	Reason for outage	D	ate	(Days)	
Allen S King 1	Steam	Forced	Other Main Steam Valves	04/24/2011	- 04/27/2011	2	
BD25 CC	Steam	Forced	Gas Turbine - Oil Vapor Extractor	04/07/2011	- 04/08/2011	1	
Black Dog 3	Steam	Extension	Minor Boiler Overhaul (less Than 720 Hours)	04/06/2011	- 04/11/2011	4	
Black Dog 4	Steam	Extension	Minor Boiler Overhaul (less Than 720 Hours)	04/18/2011	- 04/25/2011	7	
Blue Lake 7	Peaking	Forced	Other Controls And Instrumentation Problems	04/13/2011	- 04/18/2011	4	
Blue Lake 8	Peaking	Forced	Other Controls And Instrumentation Problems	04/13/2011	- 04/18/2011	4	
French Is 2	RDF	Maintenance	Turbine Lube Oil Conditioners	04/01/2011	- 04/04/2011	3	
French Is 2	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	04/27/2011	- 04/30/2011	3	
Riverside 10	CC	Forced	Circulating Water Piping Fouling	04/18/2011	- 04/30/2011	12	
Riverside 7	CC	Forced	Circulating Water Piping Fouling	04/18/2011	- 04/30/2011	12	
Riverside 9	CC	Forced	Circulating Water Piping Fouling	04/18/2011	- 04/30/2011	12	
Wheaton 1G	Peaking	Maintenance	General Gas Turbine Unit Inspection	04/25/2011	- 04/28/2011	3	
Forced Outages -	Totals					67	
Allen S King 1	Steam	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	04/01/2011	- 04/24/2011	22	
Angus Anson 3G	Peaking	Scheduled	Gas Turbine - Exhaust System Chamber	04/01/2011	- 04/02/2011	1	
Black Dog 3	Steam	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	04/02/2011	- 04/06/2011	4	
Black Dog 4	Steam	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	04/01/2011	- 04/18/2011	17	
Inver Hills 2G	Peaking	Scheduled	Major Gas Turbine Overhaul	04/01/2011	- 04/30/2011	30	
Monticello 1	Nuclear	Scheduled	Normal Refueling	04/01/2011	- 04/30/2011	30	
Prairie Is 1	Nuclear	Scheduled	Normal Refueling	04/29/2011	- 04/30/2011	1	
Sherburne 3	Steam	Scheduled	Chemical Cleaning/steam Blows	04/17/2011	- 04/30/2011	13	
Wheaton 3G	Peaking	Scheduled	Major Gas Turbine Overhaul	04/01/2011	- 04/14/2011	13	
Wheaton 5	Peaking	Scheduled	Ac Instrument Power Transformers	04/01/2011	- 04/30/2011	30	
Scheduled Outage	Scheduled Outages - Totals						
Total						228	

### March 2011

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	te	(Days)
Allen S King 1	Steam	Derate	Other Flue Gas Problems	03/02/2011 -	03/04/2011	1
Allen S King 1	Steam	Derate	Other Flue Gas Problems	03/10/2011 -	03/11/2011	1
Allen S King 1	Steam	Derate	Other Flue Gas Problems	03/11/2011 -	03/13/2011	1
Allen S King 1	Steam	Derate	Other Flue Gas Problems	03/13/2011 -	03/16/2011	3
Allen S King 1	Steam	Derate	Other Flue Gas Problems	03/17/2011 -	03/18/2011	1
Allen S King 1	Steam	Derate	Other Flue Gas Problems	03/18/2011 -	03/24/2011	5
Allen S King 1	Steam	Derate	Other Flue Gas Problems	03/25/2011 -	03/28/2011	2
Allen S King 1	Steam	Derate	Other Flue Gas Problems	03/30/2011 -	03/31/2011	1
Angus Anson 2G	Peaking	Forced	Gas Turbine - Combustor Liner	03/01/2011 -	03/04/2011	3
Angus Anson 2G	Peaking	Maintenance	Gas Turbine - Combustor Liner	03/28/2011 -	03/30/2011	2
French Is 1	RDF	Maintenance	Ash Handling System And Hoppers	03/04/2011 -	03/07/2011	3
French Is 1	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	03/25/2011 -	03/29/2011	4
French Is 2	RDF	Maintenance	Turbine Lube Oil Conditioners	03/18/2011 -	03/21/2011	3
HighBridge 7	CC	Forced	Intake Grating Fouling	03/01/2011 -	03/03/2011	2
HighBridge 8	CC	Forced	Intake Grating Fouling	03/01/2011 -	03/03/2011	2
HighBridge 9	CC	Forced	Intake Grating Fouling	03/01/2011 -	03/03/2011	2
Inver Hills 1G	Peaking	Maintenance	Gas Turbine - Inlet Air Ducts	03/17/2011 -	03/18/2011	1
Inver Hills 5G	Peaking	Forced	Gas Turbine - Exhaust System Chamber	03/07/2011 -	03/16/2011	9
Red Wing 1	RDF	Forced	Bottom ash rotary (drag chain type) conveyor and motor	03/20/2011 -	03/26/2011	5
Riverside 10	CC	Extension	Gas Turbine - Boroscope Inspection	03/13/2011 -	03/24/2011	10
Riverside 7	CC	Extension	Gas Turbine - Boroscope Inspection	03/13/2011 -	03/25/2011	11
Riverside 9	CC	Extension	Gas Turbine - Boroscope Inspection	03/13/2011 -	03/25/2011	11
Sherburne 1	Steam	Forced	Waterwall (Furnace Wall)	03/10/2011 -	03/13/2011	3
Sherburne 1	Steam	Derate	Transmission System Problems Other Than Catastroph	03/28/2011 -	03/30/2011	2
Sherburne 3	Steam	Forced	Second Reheater Leaks	03/01/2011 -	03/04/2011	2
Forced Outages -	Totals	<u> </u>	<u> </u>			90

Angus Anson 3G	Peaking	Scheduled	Gas Turbine - Boroscope Inspection	03/23/2011 -	03/31/2011	8
Black Dog 4	Steam	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	03/26/2011 -	03/31/2011	5
Inver Hills 2G	Peaking	Scheduled	Major Gas Turbine Overhaul	03/01/2011 -	03/31/2011	31
Monticello 1	Nuclear	Scheduled	Normal Refueling	03/05/2011 -	03/31/2011	26
Red Wing 1	RDF	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	03/01/2011 -	03/12/2011	11
Riverside 10	СС	Scheduled	Gas Turbine - Boroscope Inspection	03/02/2011 -	03/13/2011	11
Riverside 7	СС	Scheduled	Gas Turbine - Boroscope Inspection	03/02/2011 -	03/13/2011	11
Riverside 9	CC	Scheduled	Gas Turbine - Boroscope Inspection	03/02/2011 -	03/13/2011	11
Wheaton 3G	Peaking	Scheduled	Major Gas Turbine Overhaul	03/01/2011 -	03/31/2011	31
Wheaton 5	Peaking	Scheduled	Ac Instrument Power Transformers	03/01/2011 -	03/31/2011	30
Scheduled Outages - Totals						175
Total						265

### February 2011

	Type of	Outage					Duration
Unit	Plant	Category	Reason for outage	D	ate	е	(Days)
Allen S King 1	Steam	Derate	Other Flue Gas Problems	02/05/2011	-	02/07/2011	2
Allen S King 1	Steam	Derate	Other Flue Gas Problems	02/15/2011	-	02/18/2011	3
Allen S King 1	Steam	Forced	First Reheater Leaks	02/22/2011	-	02/28/2011	6
Angus Anson 2G	Peaking	Forced	Gas Turbine - Combustor Liner	02/14/2011	-	02/28/2011	14
BD25 CC	Steam	Derate	Other Gas Turbine Auxiliary System Problems	02/02/2011	-	02/03/2011	1
Black Dog 3	Steam	Forced	Stator, General	02/01/2011	-	02/05/2011	4
Black Dog 3	Steam	Derate	Other Economic Problems	02/16/2011	-	02/17/2011	1
Black Dog 4	Steam	Maintenance	Feedwater Controls	02/01/2011	-	02/03/2011	2
Black Dog 4	Steam	Forced	Other Economic Problems	02/16/2011	-	02/17/2011	1
French Is 2	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	02/11/2011	-	02/15/2011	4
Inver Hills 3G	Peaking	Maintenance	Gas Turbine - Boroscope Inspection	02/07/2011	-	02/09/2011	2
Inver Hills 6G	Peaking	Maintenance	Gas Turbine - Liquid Fuel Oil Pump	02/10/2011	-	02/11/2011	1
Riverside 10	CC	Maintenance	Gas Turbine - Turning Gear And Motor	02/08/2011	-	02/12/2011	4
Riverside 7	CC	Derate	Gas Turbine - Turning Gear And Motor	02/01/2011	-	02/12/2011	11
Riverside 9	CC	Forced	Gas Turbine - Turning Gear And Motor	02/01/2011	-	02/11/2011	10
Sherburne 2	Steam	Derate	High Pressure Heater Tube Leaks	02/01/2011	-	02/14/2011	13
Forced Outages -	Totals						79
Inver Hills 2G	Peaking	Scheduled	Major Gas Turbine Overhaul	02/01/2011	-	02/28/2011	28
Red Wing 1	RDF	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	02/06/2011	-	02/28/2011	22
Red Wing 2	RDF	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	02/07/2011	-	02/25/2011	18
Wheaton 3G	Peaking	Scheduled	Major Gas Turbine Overhaul	02/01/2011	-	02/28/2011	28
Scheduled Outages - Totals							96
Total		-		· · · · · · · · · · · · · · · · · · ·			175

# January 2011

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Dat	te	(Days)
Allen S King 1	Steam	Derate	Other Flue Gas Problems	01/09/2011 -	01/10/2011	1
Allen S King 1	Steam	Forced	Other Exciter Problems	01/10/2011 -	01/12/2011	1
Allen S King 1	Steam	Derate	Forced Draft Fans	01/12/2011 -	01/16/2011	3
BD25 CC	Steam	Forced	Circulating Water Pumps	01/11/2011 -	01/12/2011	1
BD25 CC	Steam	Forced	Other Miscellaneous Generator Problems	01/14/2011 -	01/17/2011	2
Black Dog 3	Steam	Forced	Stator, General	01/01/2011 -	01/31/2011	31
Black Dog 4	Steam	Maintenance	Boiler inspections - problem identification/investigation	01/26/2011 -	01/30/2011	3
Black Dog 4	Steam	Maintenance	Feedwater Controls	01/30/2011 -	01/31/2011	1
French Is 1	RDF	Forced	Generating Tube Leaks	01/21/2011 -	01/24/2011	3
French Is 1	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	01/28/2011 -	01/31/2011	3
HighBridge 9	CC	Derate	Blade Path Temperature spread	01/22/2011 -	01/24/2011	1
Riverside 7	CC	Derate	Gas Turbine - Fuel Piping And Valves	01/01/2011 -	01/09/2011	7
Riverside 7	cc	Derate	Gas Turbine - Turning Gear And Motor	01/27/2011 -	01/31/2011	4
Riverside 9	cc	Forced	Gas Turbine - Fuel Piping And Valves	01/01/2011 -	01/09/2011	7
Riverside 9	CC	Forced	Gas Turbine - Turning Gear And Motor	01/27/2011 -	01/31/2011	4
Sherburne 1	Steam	Derate	High Pressure Heater Tube Leaks	01/10/2011 -	01/15/2011	4

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Sherburne 2	Steam	Derate	High Pressure Heater Tube Leaks	01/01/2011	- 01/31/2011	31
Wheaton 5	Peaking	Forced	Service Air Valves	01/17/2011	- 01/19/2011	1
Forced Outages	s - Totals					108
Inver Hills 2G	Peaking	Scheduled	Major Gas Turbine Overhaul	01/07/2011	- 01/31/2011	24
Wheaton 3G	Peaking	Scheduled	Major Gas Turbine Overhaul	01/10/2011	- 01/31/2011	21
Scheduled Outa	ages - Totals					45
Total						153

### December 2010

	Type of	Outage				Duration	
Unit	Plant	Category	Reason for outage	Date		(Days)	
Allen S King 1	Steam	Derate	Other Flue Gas Problems	12/01/2010 -	12/02/2010	1	
Angus Anson 2G	Peaking	Forced	Other Controls And Instrumentation Problems	12/08/2010 -	12/09/2010	1	
Black Dog 3	Steam	Forced	Gen. Stator Windings, Bushings, And Terminals	12/01/2010 -	12/31/2010	30	
Flambeau 1	Peaking	Forced	Gas Turbine - Turning Gear And Motor	12/01/2010 -	12/14/2010	13	
French Is 1	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	12/03/2010 -	12/13/2010	10	
HighBridge 7	CC	Forced	Intake Grating Fouling	12/01/2010 -	12/04/2010	2	
HighBridge 7	CC	Maintenance	HP Steam piping up to turbine stop valves-great	12/04/2010 -	12/07/2010	3	
HighBridge 8	CC	Forced	Intake Grating Fouling	12/01/2010 -	12/04/2010	2	
HighBridge 8	CC	Maintenance	HP Steam piping up to turbine stop valves-great	12/04/2010 -	12/07/2010	3	
HighBridge 9	CC	Forced	Intake Grating Fouling	12/01/2010 -	12/04/2010	2	
HighBridge 9	CC	Maintenance	HP Steam piping up to turbine stop valves-great	12/04/2010 -	12/07/2010	3	
Monticello 1	Nuclear	Derate	Bwr Pressure Controls	12/01/2010 -	12/03/2010	2	
Red Wing 1	RDF	Maintenance	Boiler Tube Fireside Cleaning	12/05/2010 -	12/10/2010	4	
Riverside 10	CC	Maintenance	Station Service Power Distribution System, General	12/15/2010 -	12/17/2010	2	
Riverside 7	CC	Maintenance	Station Service Power Distribution System, General	12/15/2010 -	12/17/2010	2	
Riverside 9	CC	Maintenance	Station Service Power Distribution System, General	12/15/2010 -	12/17/2010	2	
Sherburne 2	Steam	Derate	High Pressure Heater Tube Leaks	12/16/2010 -	12/31/2010	15	
Wheaton 4G	Peaking	Maintenance	Gas Turbine - Liquid Fuel Oil Pump	12/20/2010 -	12/22/2010	2	
Wheaton 5	Peaking	Forced	Pilot fuel piping and valves	12/06/2010 -	12/09/2010	2	
Wheaton 5	Peaking	Forced	Pilot fuel piping and valves	12/21/2010 -	12/22/2010	1	
Forced Outages	- Totals					102	
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	12/01/2010 -	12/31/2010	30	
Scheduled Outages - Totals							
Total						132	

### November 2010

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Date		(Days)
Angus Anson 2G	Peaking	Maintenance	Protection Devices	11/08/2010 -	11/19/2010	10
Angus Anson 3G	Peaking	Maintenance	Protection Devices	11/08/2010 -	11/12/2010	4
Angus Anson 3G	Peaking	Maintenance	Protection Devices	11/22/2010 -	11/30/2010	8
Black Dog 3	Steam	Forced	Bunker Fires	11/01/2010 -	11/30/2010	30
Black Dog 4	Steam	Forced	Second Superheater Leaks	11/23/2010 -	11/25/2010	1
Blue Lake 2	Peaking	Maintenance	Gas Turbine - Hydraulic Oil System	11/01/2010 -	11/05/2010	4
Flambeau 1	Peaking	Forced	Gas Turbine - Turning Gear And Motor	11/01/2010 -	11/30/2010	30
French Is 1	RDF	Forced	Forced Draft Fan Motors	11/05/2010 -	11/15/2010	9
HighBridge 7	CC	Extension	HP Startup bypass system piping (including drain	11/14/2010 -	11/16/2010	1
HighBridge 7	CC	Forced	Intake Grating Fouling	11/26/2010 -	11/27/2010	1
HighBridge 8	CC	Extension	HP Startup bypass system piping (including drain	11/14/2010 -	11/16/2010	1
HighBridge 8	CC	Forced	Intake Grating Fouling	11/26/2010 -	11/27/2010	1
HighBridge 9	CC	Extension	HP Startup bypass system piping (including drain	11/14/2010 -	11/16/2010	1
HighBridge 9	CC	Forced	Intake Grating Fouling	11/26/2010 -	11/27/2010	1
Key City 1	Peaking	Forced	Gas Turbine - Turning Gear And Motor	11/01/2010 -	11/20/2010	19
Key City 3	Peaking	Forced	Gas Turbine - Turning Gear And Motor	11/01/2010 -	11/19/2010	18
Monticello 1	Nuclear	Derate	Condenser Tube Leaks	11/25/2010 -	11/26/2010	1
Monticello 1	Nuclear	Derate	Bwr Pressure Controls	11/29/2010 -	11/30/2010	1
Prairie Is 1	Nuclear	Derate	Heater Drain Pumps	11/06/2010 -	11/16/2010	9
Riverside 10	CC	Forced	Cems - Co Analyzer Problems	11/24/2010 -	11/26/2010	2
Riverside 7	CC	Derate	Cems - Co Analyzer Problems	11/24/2010 -	11/26/2010	2
Sherburne 3	Steam	Forced	Second Superheater Leaks	11/01/2010 -	11/19/2010	18
Forced Outages	- Totals					172
		_				
Angus Anson 4	Peaking	Scheduled	Gas Turbine Compressor - Hp Blades/buckets	11/01/2010 -	11/15/2010	14
BD25 CC	Steam	Scheduled	Major Turbine Overhaul (720 Hours Or Longer)	11/01/2010 -	11/14/2010	13
BD25 CC	Steam	Scheduled	Major Turbine Overhaul (720 Hours Or Longer)	11/14/2010 -	11/16/2010	2
BD25 CC	Steam	Scheduled	Differential Expansion	11/16/2010 -	11/17/2010	1
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	11/01/2010 -	11/30/2010	30

Total						338
Scheduled Out	ages - Total	s		·		16
Wheaton 4G	Peaking	Scheduled	Gas Turbine Control System - internal and termi	11/01/2010 -	11/19/2010	18
Wheaton 3G	Peaking	Scheduled	Gas Turbine Control System - internal and termi	11/01/2010 -	11/18/2010	1
Sherburne 1	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	11/01/2010 -	11/08/2010	7
Prairie Is 1	Nuclear	Scheduled	Turbine Control Valves	11/04/2010 -	11/06/2010	•
Monticello 1	Nuclear	Scheduled	Core Physics Tests	11/26/2010 -	11/28/2010	•
Monticello 1	Nuclear	Scheduled	High Pressure Heater Tube Leaks	11/14/2010 -	11/24/2010	10
Monticello 1	Nuclear	Scheduled	High Pressure Heater Tube Leaks	11/01/2010 -	11/14/2010	13
HighBridge 9	CC	Scheduled	IP Startup bypass system piping (including drain	11/01/2010 -	11/14/2010	13
HighBridge 8	CC	Scheduled	General Gas Turbine Unit Inspection	11/01/2010 -	11/14/2010	13
HighBridge 7	CC	Scheduled	General Gas Turbine Unit Inspection	11/01/2010 -	11/14/2010	13

#### October 2010

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Date	•	(Days)
Angus Anson 2G	Peaking	Forced	Generator Voltage Control	10/15/2010 -	10/18/2010	3
Black Dog 3	Steam	Forced	Bunker Fires	10/01/2010 -	10/31/2010	30
Blue Lake 2	Peaking	Maintenance	Gas Turbine - Hydraulic Oil System	10/25/2010 -	10/31/2010	6
Blue Lake 8	Peaking	Maintenance	Gas Turbine Compressor - Hp Blades/buckets	10/01/2010 -	10/14/2010	13
Flambeau 1	Peaking	Forced	Gas Turbine - Turning Gear And Motor	10/01/2010 -	10/31/2010	31
French Is 1	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	10/15/2010 -	10/20/2010	5
Granite City 3	Peaking	Forced	Gas Turbine - Gas Fuel System	10/01/2010 -	10/21/2010	20
HighBridge 7	CC	Forced	Generator Output Breaker	10/21/2010 -	10/22/2010	1
HighBridge 9	CC	Derate	Generator Output Breaker	10/21/2010 -	10/22/2010	1
Key City 1	Peaking	Forced	Gas Turbine - Turning Gear And Motor	10/13/2010 -	10/31/2010	18
Key City 3	Peaking	Forced	Gas Turbine - Turning Gear And Motor	10/28/2010 -	10/31/2010	3
Riverside 10	СС	Forced	Turbine Gland Seal System	10/21/2010 -	10/29/2010	7
Riverside 7	СС	Derate	LP Economizer	10/04/2010 -	10/06/2010	2
Riverside 7	СС	Forced	Turbine Gland Seal System	10/21/2010 -	10/29/2010	7
Riverside 9	СС	Maintenance	LP Economizer	10/04/2010 -	10/06/2010	2
Riverside 9	СС	Forced	Turbine Gland Seal System	10/21/2010 -	10/28/2010	7
Sherburne 3	Steam	Forced	Second Superheater Leaks	10/01/2010 -	10/05/2010	4
Sherburne 3	Steam	Forced	Second Superheater Leaks	10/06/2010 -	10/18/2010	11
Sherburne 3	Steam	Forced	Second Superheater Leaks	10/19/2010 -	10/28/2010	9
Sherburne 3	Steam	Forced	Second Superheater Leaks	10/29/2010 -	10/31/2010	2
Forced Outages	- Totals					182
Angus Anson 4	Peaking	Scheduled	Gas Turbine Compressor - Hp Blades/buckets	10/15/2010 -	10/31/2010	16
BD25 CC	Steam	Scheduled	Major Turbine Overhaul (720 Hours Or Longer)	10/01/2010 -	10/31/2010	31
Black Dog 3	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	10/31/2010 -	10/31/2010	1
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	10/01/2010 -	10/31/2010	31
HighBridge 7	CC	Scheduled	General Gas Turbine Unit Inspection	10/29/2010 -	10/31/2010	2
HighBridge 8	CC	Scheduled	General Gas Turbine Unit Inspection	10/29/2010 -	10/31/2010	2
HighBridge 9	CC	Scheduled	IP Startup bypass system piping (including drain	10/29/2010 -	10/31/2010	2
Monticello 1	Nuclear	Scheduled	High Pressure Heater Tube Leaks	10/01/2010 -	10/31/2010	31
Prairie Is 1	Nuclear	Scheduled	Turbine Control Valves	10/29/2010 -	10/31/2010	1
Red Wing 2	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	10/03/2010 -	10/09/2010	6
Sherburne 1	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	10/09/2010 -	10/31/2010	22
Wheaton 3G	Peaking	Scheduled	Gas Turbine Control System - internal and termi	10/01/2010 -	10/31/2010	31
Wheaton 4G	Peaking	Scheduled	Gas Turbine Control System - internal and termi	10/01/2010 -	10/31/2010	31
Scheduled Outag	ges - Totals	;				207
Total						389
l .						

## September 2010

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Date		(Days)
Black Dog 3	Steam	Forced	Coal Conveyors And Feeders	09/21/2010	- 09/30/2010	9
Black Dog 4	Steam	Forced	Coal Conveyors And Feeders	09/21/2010	- 09/30/2010	9
Flambeau 1	Peaking	Forced	Gas Turbine - Turning Gear And Motor	09/01/2010	- 09/30/2010	30

1	1	1	1		1	ı
French Is 2	RDF	Maintenance	Solid Fuel Feeder Conveyors (fbc Only)	09/16/2010 -	09/20/2010	3
Granite City 1	Peaking	Forced	Gas Turbine - Gas Fuel System	09/02/2010 -	09/07/2010	5
Granite City 2	Peaking	Forced	Gas Turbine - Gas Fuel System	09/02/2010 -	09/07/2010	5
Inver Hills 2G	Peaking	Maintenance	Gas Turbine - Exhaust System Chamber	09/09/2010 -	09/10/2010	1
Inver Hills 3G	Peaking	Maintenance	Gas Turbine - Exhaust System Chamber	09/07/2010 -	09/08/2010	1
Inver Hills 4G	Peaking	Maintenance	Gas Turbine - Exhaust System Chamber	09/13/2010 -	09/14/2010	1
Inver Hills 5G	Peaking	Maintenance	Gas Turbine - Exhaust System Chamber	09/15/2010 -	09/16/2010	1
Inver Hills 6G	Peaking	Maintenance	Gas Turbine - Exhaust System Chamber	09/01/2010 -	09/02/2010	1
Sherburne 3	Steam	Forced	Air Heater (regenerative)	09/11/2010 -	09/17/2010	5
Sherburne 3	Steam	Forced	Auxiliary Steam Valves	09/17/2010 -	09/26/2010	9
Sherburne 3	Steam	Forced	Platen Superheater Leaks	09/26/2010 -	09/30/2010	4
Wheaton 4G	Peaking	Maintenance	Gas Turbine Control System - upgrades	09/13/2010 -	09/14/2010	1
Willmarth 1	Peaking	Forced	Generator Brushes And Brush Rigging	09/25/2010 -	09/28/2010	3
Willmarth 2	Peaking	Derate	First Superheater Leaks	09/09/2010 -	09/13/2010	4
Forced Outages	- Totals					92
BD25 CC	Steam	Scheduled	Major Turbine Overhaul (720 Hours Or Longer)	09/17/2010 -	09/30/2010	13
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	09/01/2010 -	09/30/2010	30
Monticello 1	Nuclear	Scheduled	High Pressure Heater Tube Leaks	09/01/2010 -	09/30/2010	30
Riverside 10	СС	Scheduled	Gas Turbine Cleaning	09/17/2010 -	09/24/2010	7
Riverside 7	СС	Scheduled	Gas Turbine Cleaning	09/17/2010 -	09/24/2010	7
Riverside 9	СС	Scheduled	Gas Turbine Cleaning	09/17/2010 -	09/24/2010	7
Wheaton 3G	Peaking	Scheduled	Gas Turbine Control System - internal and termi	09/15/2010 -	09/30/2010	15
Wheaton 4G	Peaking	Scheduled	Gas Turbine Control System - internal and termi	09/15/2010 -	09/30/2010	15
Willmarth 1	Peaking	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	09/20/2010 -	09/24/2010	4
Willmarth 2	Peaking	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	09/19/2010 -	09/25/2010	5
Scheduled Outag	ges - Total:	s	·			133
Total						225

## August 2010

	Type of	Outage				Duration	
Unit	Plant	Category	Reason for outage	Date	•	(Days)	
Angus Anson 2G	Peaking	Forced	Expander Turbine - Blades	08/10/2010 -	08/14/2010	3	
Black Dog 3	Steam	Forced	Second Reheater Leaks	08/27/2010 -	08/31/2010	3	
Black Dog 4	Steam	Forced	First Superheater Leaks	08/01/2010 -	08/02/2010	1	
Blue Lake 3	Peaking	Maintenance	Switchyard system protection devices - external	08/01/2010 -	08/04/2010	3	
Blue Lake 4	Peaking	Maintenance	Switchyard system protection devices - external	08/01/2010 -	08/04/2010	3	
Blue Lake 8	Peaking	Forced	Other Fire Protection System Problems	08/21/2010 -	08/25/2010	4	
Flambeau 1	Peaking	Forced	Gas Turbine - Turning Gear And Motor	08/23/2010 -	08/31/2010	8	
HighBridge 8	CC	Forced	Other Reheat Steam Problems	08/15/2010 -	08/19/2010	4	
HighBridge 9	CC	Derate	Other Reheat Steam Problems	08/15/2010 -	08/19/2010	4	
Inver Hills 1G	Peaking	Forced	Gas Turbine - Exhaust System Silencer	08/25/2010 -	08/31/2010	6	
Key City 4	Peaking	Forced	Gas Turbine - Gas Fuel System	08/03/2010 -	08/17/2010	14	
Sherburne 1	Steam	Derate	Other Turbine Instrument And Control Problems	08/24/2010 -	08/26/2010	1	
Wheaton 2G	Peaking	Forced	Fire protection system instrumentation and control	08/18/2010 -	08/23/2010	4	
Forced Outages -	- Totals					58	
Allen S King 1	Steam	Scheduled	Scr Catalyst	08/01/2010 -	08/07/2010	6	
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	08/01/2010 -	08/31/2010	31	
Monticello 1	Nuclear	Scheduled	High Pressure Heater Tube Leaks	08/10/2010 -	08/21/2010	10	
Monticello 1	Nuclear	Scheduled	High Pressure Heater Tube Leaks	08/21/2010 -	08/31/2010	10	
Wheaton 1G	Peaking	Scheduled	Other Ac Instrument Power Problems	08/01/2010 -	08/02/2010	1	
Wheaton 1G	Peaking	Scheduled	Other Ac Instrument Power Problems	08/03/2010 -	08/05/2010	1	
Wheaton 2G	Peaking	Scheduled	Other Ac Instrument Power Problems	08/01/2010 -	08/04/2010	3	
Wheaton 2G	Peaking	Scheduled	Other Ac Instrument Power Problems	08/04/2010 -	08/10/2010	5	
Scheduled Outages - Totals							
Total		·				125	

July 2010 Type of Outage Duration

Unit	Plant	Category	Reason for outage	Dat	e	(Days)
Allen S King 1	Steam	Derate	Other Flue Gas Problems	07/03/2010 -	07/06/2010	2
Allen S King 1	Steam	Derate	Circulating Water Pumps	07/08/2010 -	07/09/2010	1
Allen S King 1	Steam	Derate	Other Flue Gas Problems	07/18/2010 -	07/22/2010	3
Angus Anson 3G	Peaking	Forced	Gas Turbine - Gas Fuel System	07/07/2010 -	07/12/2010	4
BD25 CC	Steam	Forced	Generator Output Breaker	07/26/2010 -	07/28/2010	2
Black Dog 4	Steam	Forced	First Superheater Leaks	07/30/2010 -	07/31/2010	1
Blue Lake 1	Peaking	Maintenance	Switchyard system protection devices - external	07/19/2010 -	07/28/2010	8
Blue Lake 2	Peaking	Maintenance	Switchyard system protection devices - external	07/19/2010 -	07/28/2010	8
Blue Lake 3	Peaking	Maintenance	Switchyard system protection devices - external	07/28/2010 -	07/31/2010	3
Blue Lake 4	Peaking	Maintenance	Switchyard system protection devices - external	07/28/2010 -	07/31/2010	3
Flambeau 1	Peaking	Forced	Gas Turbine Control System - Hardware Problems	07/27/2010 -	07/30/2010	3
Granite City 3	Peaking	Maintenance	Gas Turbine - Lube Oil System - General	07/27/2010 -	07/30/2010	3
Key City 3	Peaking	Forced	Gas Turbine - Lube Oil System - General	07/01/2010 -	07/07/2010	6
Riverside 10	CC	Forced	Gas Turbine - Fuel Piping And Valves	07/07/2010 -	07/09/2010	1
Riverside 7	CC	Derate	Gas Turbine - Fuel Piping And Valves	07/07/2010 -	07/09/2010	2
Riverside 7	CC	Derate	LP Economizer	07/30/2010 -	07/31/2010	2
Riverside 9	CC	Maintenance	LP Evaportator Tubes	07/30/2010 -	07/31/2010	2
Sherburne 1	Steam	Derate	Circulating Water Pumps	07/16/2010 -	07/17/2010	1
Willmarth 1	Peaking	Forced	Other Main Steam System Problems	07/09/2010 -	07/12/2010	3
Forced Outages	- Totals					58
Allen S King 1	Steam	Scheduled	Scr Catalyst	07/23/2010 -	07/31/2010	8
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	07/01/2010 -	07/31/2010	31
Wheaton 1G	Peaking	Scheduled	Other Ac Instrument Power Problems	07/01/2010 -	07/31/2010	31
Wheaton 2G	Peaking	Scheduled	Other Ac Instrument Power Problems	07/01/2010 -	07/31/2010	31
Scheduled Outag	jes - Totals	s				101
Total						159

June 2010

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Date	е	(Days)
Allen S King 1	Steam	Derate	Other Coal Fuel Supply Problems Up Through Bunkers	06/16/2010 -	06/17/2010	1
Angus Anson 2G	Peaking	Maintenance	Gas Turbine - Fuel Piping And Valves	06/15/2010 -	06/20/2010	5
Angus Anson 3G	Peaking	Maintenance	Gas Turbine - Fuel Piping And Valves	06/15/2010 -	06/29/2010	14
Angus Anson 4	Peaking	Forced	Gas Turbine - Gas Fuel System	06/01/2010 -	06/30/2010	30
BD25 CC	Steam	Maintenance	Gas Turbine - Boroscope Inspection	06/14/2010 -	06/21/2010	7
Blue Lake 1	Peaking	Forced	Process Computer	06/22/2010 -	06/29/2010	7
Blue Lake 3	Peaking	Forced	Process Computer	06/22/2010 -	06/29/2010	7
Blue Lake 4	Peaking	Forced	Process Computer	06/22/2010 -	06/29/2010	7
Blue Lake 8	Peaking	Maintenance	Gas Turbine - Hydraulic Oil System	06/01/2010 -	06/07/2010	6
HighBridge 7	CC	Forced	Other HP Steam valves (including vent and drain	06/04/2010 -	06/10/2010	6
HighBridge 8	CC	Forced	Other HP Steam valves (including vent and drain	06/04/2010 -	06/10/2010	6
HighBridge 9	CC	Forced	Other HP Steam valves (including vent and drain	06/04/2010 -	06/10/2010	6
Key City 3	Peaking	Forced	Gas Turbine - Lube Oil System - General	06/01/2010 -	06/30/2010	30
Riverside 10	CC	Forced	Cems - Data Acquisition System Problems	06/01/2010 -	06/02/2010	1
Riverside 10	CC	Maintenance	Gas Turbine - Fuel Piping And Valves	06/08/2010 -	06/09/2010	1
Riverside 10	CC	Maintenance	Gas Turbine - Fuel Piping And Valves	06/23/2010 -	06/25/2010	2
Riverside 7	CC	Derate	Cems - Data Acquisition System Problems	06/01/2010 -	06/02/2010	1
Riverside 7	CC	Derate	Gas Turbine - Fuel Piping And Valves	06/08/2010 -	06/09/2010	1
Riverside 7	CC	Derate	Gas Turbine - Fuel Piping And Valves	06/23/2010 -	06/25/2010	2
Riverside 7	CC	Derate	Gas Turbine - Fuel Piping And Valves	06/25/2010 -	06/27/2010	2
Riverside 9	CC	Maintenance	Gas Turbine - Fuel Piping And Valves	06/25/2010 -	06/27/2010	2
Sherburne 1	Steam	Forced	Waterwall (Furnace Wall)	06/23/2010 -	06/25/2010	1
Sherburne 2	Steam	Derate	High Pressure Heater Tube Leaks	06/21/2010 -	06/27/2010	6
Forced Outages	Forced Outages - Totals					
Allen S King 1	Steam	Scheduled	Other Tube Slagging Or Fouling	06/29/2010 -	06/30/2010	1
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	06/01/2010 -	06/30/2010	30
Red Wing 1	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	06/14/2010 -	06/18/2010	3

Total						
Scheduled Out	tages - Total	s				111
Willmarth 2	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	06/06/2010 -	06/12/2010	6
Willmarth 1	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	06/07/2010 -	06/11/2010	4
Wheaton 2G	Peaking	Scheduled	Other Ac Instrument Power Problems	06/01/2010 -	06/30/2010	30
Wheaton 1G	Peaking	Scheduled	Other Ac Instrument Power Problems	06/01/2010 -	06/30/2010	30
Sherburne 2	Steam	Scheduled	Cems - Certification And Recertification	06/07/2010 -	06/08/2010	1
Sherburne 1	Steam	Scheduled	Cems - Certification And Recertification	06/07/2010 -	06/08/2010	1
Red Wing 2	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	06/13/2010 -	06/19/2010	5

# May 2010

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Date		(Days)
Allen S King 1	Steam	Forced	Second Superheater Leaks	05/03/2010 -	05/06/2010	2
Angus Anson 2G	Peaking	Forced	Gas Turbine - Gas Fuel System	05/01/2010 -	05/17/2010	16
Angus Anson 3G	Peaking	Forced	Gas Turbine - Gas Fuel System	05/01/2010 -	05/17/2010	16
Angus Anson 4	Peaking	Forced	Gas Turbine - Gas Fuel System	05/01/2010 -	05/31/2010	31
BD25 CC	Steam	Forced	Gas Turbine - Battery And Charger System	05/17/2010 -	05/18/2010	1
BD25 CC	Steam	Forced	Flood	05/18/2010 -	05/21/2010	2
Black Dog 3	Steam	Forced	Exciter Commutator And Brushes	05/06/2010 -	05/08/2010	1
Black Dog 3	Steam	Extension	Minor Boiler Overhaul (less Than 720 Hours)	05/18/2010 -	05/19/2010	1
Black Dog 3	Steam	Derate	Flood	05/23/2010 -	05/25/2010	1
Black Dog 4	Steam	Derate	Flood	05/17/2010 -	05/20/2010	2
Black Dog 4	Steam	Derate	Flood	05/20/2010 -	05/23/2010	3
Black Dog 4	Steam	Derate	Flood	05/23/2010 -	05/25/2010	1
Blue Lake 8	Peaking	Maintenance	Gas Turbine - Hydraulic Oil System	05/17/2010 -	05/31/2010	14
French Is 4	Peaking	Forced	Generator Synchronization Equipment	05/17/2010 -	05/21/2010	4
Inver Hills 1G	Peaking	Forced	Gas Turbine - Hydraulic Oil System	05/25/2010 -	05/26/2010	1
Key City 3	Peaking	Forced	Gas Turbine - Lube Oil System - General	05/27/2010 -	05/31/2010	4
Prairie Is 2	Nuclear	Extension	Normal Refueling	05/21/2010 -	05/24/2010	2
Prairie Is 2	Nuclear	Forced	Feedwater Pump Local Controls	05/25/2010 -	05/26/2010	1
Red Wing 1	RDF	Maintenance	Coal Conveyors And Feeders	05/25/2010 -	05/31/2010	6
Sherburne 1	Steam	Forced	•	05/25/2010 -	05/31/2010	1
			Air Heater (regenerative)			
Sherburne 2	Steam	Forced	First Reheater Leaks	05/01/2010 -	05/02/2010	1
Sherburne 2	Steam	Derate	Feedwater Pump	05/10/2010 -	05/20/2010	9
Forced Outages -	· Iotais					120
Black Dog 3	Steam	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	05/08/2010 -	05/18/2010	9
Black Dog 3	Steam	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	05/19/2010 -	05/20/2010	1
Black Dog 3	Steam	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	05/22/2010 -	05/23/2010	
Blue Lake 7	Peaking	Scheduled	Gas Turbine - Boroscope Inspection	05/01/2010 -	05/05/2010	4
Blue Lake 8	Peaking	Scheduled	Gas Turbine - Boroscope Inspection	05/03/2010 -	05/07/2010	4
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	05/01/2010 -	05/31/2010	31
HighBridge 7	CC	Scheduled	Gas Turbine - Hot End Inspection	05/01/2010 -	05/18/2010	17
HighBridge 8	CC	Scheduled	Gas Turbine - Boroscope Inspection	05/01/2010 -	05/17/2010	16
HighBridge 9	CC	Scheduled	Gas Turbine - Boroscope Inspection	05/01/2010 -	05/17/2010	16
Prairie Is 2	Nuclear	Scheduled	Normal Refueling	05/01/2010 -	05/21/2010	20
Riverside 10	CC	Scheduled	-	05/01/2010 -		11
	CC	Scheduled	DCS - Upgrades DCS - Upgrades	05/01/2010 -	05/12/2010	10
Riverside 7	CC	Scheduled	. •	05/01/2010 -	05/11/2010	
Riverside 9			DCS - Upgrades		05/11/2010	10
Sherburne 2	Steam	Scheduled	Chemical Cleaning/steam Blows	05/20/2010 -	05/26/2010	6
Wheaton 1G	Peaking	Scheduled	Major Gas Turbine Overhaul	05/01/2010 -	05/10/2010	9
Wheaton 1G	Peaking	Scheduled	Other Ac Instrument Power Problems	05/10/2010 -	05/31/2010	21
Wheaton 2G	Peaking	Scheduled	Other Ac Instrument Power Problems	05/01/2010 -	05/31/2010	31
Scheduled Outag	jes - i otals	·				217
Total						227
Total						337

	Type of	Outage			Duration
Unit	Plant	Category	Reason for outage	Date	(Days)

Allen S King 1	Steam	Extension	Minor Boiler Overhaul (less Than 720 Hours)	04/10/2010 -	04/18/2010	7	
Allen S King 1	Steam	Forced	Startup Bypass Tanks Or Flash Tanks	04/18/2010 -	04/20/2010	2	
Angus Anson 2G	Peaking	Forced	Gas Turbine - Fuel Filters	04/07/2010 -	04/15/2010	8	
Angus Anson 2G	Peaking	Forced	Gas Turbine - Gas Fuel System	04/15/2010 -	04/19/2010	4	
Angus Anson 2G	Peaking	Forced	Gas Turbine - Gas Fuel System	04/21/2010 -	04/30/2010	9	
Angus Anson 3G	Peaking	Forced	Gas Turbine - Fuel Filters	04/07/2010 -	04/15/2010	8	
Angus Anson 3G	Peaking	Forced	Gas Turbine - Gas Fuel System	04/15/2010 -	04/19/2010	4	
Angus Anson 3G	Peaking	Forced	Gas Turbine - Gas Fuel System	04/21/2010 -	04/30/2010	9	
Angus Anson 4	Peaking	Forced	Gas Turbine - Fuel Filters	04/07/2010 -	04/15/2010	8	
Angus Anson 4	Peaking	Forced	Gas Turbine - Gas Fuel System	04/15/2010 -	04/19/2010	4	
Angus Anson 4	Peaking	Forced	Gas Turbine - Gas Fuel System	04/21/2010 -	04/30/2010	9	
Black Dog 3	Steam	Forced	Second Reheater Leaks	04/23/2010 -	04/26/2010	2	
Black Dog 4	Steam	Forced	Second Superheater Leaks	04/04/2010 -	04/07/2010	2	
French Is 1	RDF	Forced	Generating Tube Leaks	04/15/2010 -	04/21/2010	6	
French Is 2	RDF	Forced	Economizer Leaks	04/09/2010 -	04/12/2010	3	
Red Wing 1	RDF	Maintenance	Dry Scrubber - Ducting	04/15/2010 -	04/19/2010	3	
Red Wing 2	RDF	Maintenance	Dry Scrubber - Ducting	04/27/2010 -	04/30/2010	3	
Sherburne 2	Steam	Extension	Major Boiler Overhaul (720 Hours Or Longer)	04/18/2010 -	04/20/2010	1	
Sherburne 2	Steam	Forced	First Reheater Leaks	04/28/2010 -	04/30/2010	2	
Forced Outages	- Totals					94	
Allen S King 1	Steam	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	04/01/2010 -	04/10/2010	9	
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	04/01/2010 -	04/30/2010	30	
HighBridge 7	CC	Scheduled	Gas Turbine - Boroscope Inspection	04/30/2010 -	04/30/2010	1	
HighBridge 9	CC	Scheduled	Gas Turbine - Boroscope Inspection	04/30/2010 -	04/30/2010	1	
Prairie Is 2	Nuclear	Scheduled	Normal Refueling	04/11/2010 -	04/16/2010	4	
Prairie Is 2	Nuclear	Scheduled	Normal Refueling	04/17/2010 -	04/30/2010	14	
Riverside 10	CC	Scheduled	DCS - Upgrades	04/14/2010 -	04/30/2010	16	
Riverside 7	CC	Scheduled	DCS - Upgrades	04/14/2010 -	04/30/2010	16	
Riverside 9	CC	Scheduled	DCS - Upgrades	04/14/2010 -	04/30/2010	16	
Sherburne 2	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	04/01/2010 -	04/18/2010	17	
Wheaton 1G	Peaking	Scheduled	Major Gas Turbine Overhaul	04/01/2010 -	04/30/2010	30	
Wheaton 2G	Peaking	Scheduled	Replace UG cables	04/01/2010 -	04/30/2010	30	
Scheduled Outag	ges - Totals	S				184	
Total						278	

### March 2010

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Date		(Days)
Allen S King 1	Steam	Derate	Other Flue Gas Problems	03/02/2010 -	03/03/2010	1
Allen S King 1	Steam	Derate	Other Flue Gas Problems	03/09/2010 -	03/10/2010	1
Allen S King 1	Steam	Derate	Other Flue Gas Problems	03/11/2010 -	03/15/2010	3
Allen S King 1	Steam	Derate	Other Flue Gas Problems	03/15/2010 -	03/19/2010	4
Angus Anson 2G	Peaking	Maintenance	Cems - Data Acquisition System Problems	03/22/2010 -	03/30/2010	8
Black Dog 3	Steam	Forced	Second Reheater Leaks	03/02/2010 -	03/04/2010	2
Black Dog 3	Steam	Forced	Waterwall (Furnace Wall)	03/24/2010 -	03/27/2010	3
Black Dog 4	Steam	Forced	Turbine Main Stop Valves	03/01/2010 -	03/06/2010	5
Black Dog 4	Steam	Extension	Boiler Inspections - Scheduled or Routine	03/16/2010 -	03/20/2010	4
Blue Lake 3	Peaking	Forced	Gas Turbine Vibration	03/01/2010 -	03/24/2010	23
French Is 2	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	03/19/2010 -	03/30/2010	10
French Is 4	Peaking	Forced	Protection Devices	03/05/2010 -	03/09/2010	4
Inver Hills 3G	Peaking	Forced	Other Switchyard, High Voltage System Problems-ext	03/17/2010 -	03/25/2010	7
Inver Hills 4G	Peaking	Forced	Other Switchyard, High Voltage System Problems-ext	03/17/2010 -	03/25/2010	7
Riverside 10	CC	Forced	Economizer Piping	03/09/2010 -	03/12/2010	2
Riverside 7	CC	Forced	Economizer Piping	03/09/2010 -	03/12/2010	2
Riverside 7	CC	Derate	Gas Turbine - Fuel Piping And Valves	03/12/2010 -	03/26/2010	13
Riverside 9	CC	Derate	Economizer Piping	03/09/2010 -	03/12/2010	2
Riverside 9	CC	Maintenance	Gas Turbine - Fuel Piping And Valves	03/12/2010 -	03/26/2010	13
Sherburne 1	Steam	Derate	Wet Scrubber - Gas Discharge Reheater - General	03/07/2010 -	03/18/2010	10
Sherburne 1	Steam	Derate	Wet Scrubber - Gas Discharge Reheater - General	03/18/2010 -	03/31/2010	13

Wheaton 6	Peaking	Maintenance	Other Controls And Instrumentation Problems	03/29/2010 -	03/31/2010	2
Forced Outage	s - Totals					139
Allen S King 1	Steam	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	03/19/2010 -	03/31/2010	12
BD25 CC	Steam	Scheduled	Other Gas Turbine Combustor Problems	03/06/2010 -	03/12/2010	6
Black Dog 4	Steam	Scheduled	Boiler Inspections - Scheduled or Routine	03/06/2010 -	03/16/2010	10
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	03/01/2010 -	03/31/2010	31
Red Wing 1	RDF	Scheduled	Induced Draft Fan Motors - Variable Speed	03/14/2010 -	03/24/2010	9
Sherburne 2	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	03/01/2010 -	03/31/2010	31
Wheaton 1G	Peaking	Scheduled	Major Gas Turbine Overhaul	03/01/2010 -	03/31/2010	31
Scheduled Out	ages - Total	s				130
Total						269

# February 2010

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	te	(Days)
Allen S King 1	Steam	Derate	Other Flue Gas Problems	02/19/2010 -	02/22/2010	2
BD25 CC	Steam	Forced	Pilot fuel nozzles/vanes	02/24/2010 -	02/25/2010	1
Black Dog 4	Steam	Forced	Generator Brushes And Brush Rigging	02/20/2010 -	02/21/2010	1
Black Dog 4	Steam	Forced	Turbine Main Stop Valves	02/27/2010 -	02/28/2010	1
Blue Lake 3	Peaking	Forced	Gas Turbine Vibration	02/24/2010 -	02/28/2010	4
HighBridge 7	CC	Forced	Turbine Hydraulic System Pumps	02/02/2010 -	02/07/2010	4
HighBridge 8	CC	Forced	Turbine Hydraulic System Pumps	02/03/2010 -	02/05/2010	2
HighBridge 9	CC	Forced	Turbine Hydraulic System Pumps	02/02/2010 -	02/05/2010	2
Inver Hills 3G	Peaking	Maintenance	Gas Turbine - Fuel Nozzles/Vanes	02/04/2010 -	02/05/2010	1
Riverside 10	CC	Forced	Gas Turbine - Fuel Piping And Valves	02/01/2010 -	02/03/2010	2
Riverside 10	CC	Forced	Other HP Steam system problems	02/05/2010 -	02/10/2010	5
Riverside 10	CC	Forced	Other Feedwater Valves	02/10/2010 -	02/11/2010	1
Riverside 10	CC	Maintenance	Other Feedwater Valves	02/11/2010 -	02/16/2010	4
Riverside 7	CC	Derate	Gas Turbine - Fuel Piping And Valves	02/01/2010 -	02/04/2010	3
Riverside 7	CC	Forced	Other HP Steam system problems	02/05/2010 -	02/07/2010	2
Riverside 7	CC	Derate	Gas Turbine - Gas Fuel System	02/10/2010 -	02/11/2010	1
Riverside 7	CC	Derate	Other Feedwater Valves	02/11/2010 -	02/16/2010	2
Riverside 9	CC	Forced	Other HP Steam system problems	02/05/2010 -	02/06/2010	1
Sherburne 1	Steam	Maintenance	Air Heater (regenerative)	02/20/2010 -	02/22/2010	2
Sherburne 3	Steam	Derate	Condenser Tube Leaks	02/17/2010 -	02/18/2010	1
Forced Outages	s - Totals					44
			<u> </u>			
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	02/01/2010 -	02/28/2010	28
Red Wing 1	RDF	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	02/03/2010 -	02/19/2010	15
Red Wing 2	RDF	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	02/01/2010 -	02/26/2010	25
Sherburne 2	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	02/18/2010 -	02/28/2010	10
Wheaton 1G	Peaking	Scheduled	Major Gas Turbine Overhaul	02/01/2010 -	02/28/2010	28
Scheduled Outa	ages - Totals	S				106
Total						150

### January 2010

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Dat	Date	
Allen S King 1	Steam	Derate	Other Feedwater Prob. Downstrm Of Feedwtr Reg. VIv	01/12/2010 -	01/14/2010	1
Allen S King 1	Steam	Forced	Other Boiler Tube Leaks	01/15/2010 -	01/18/2010	3
Black Dog 3	Steam	Forced	Waterwall (Furnace Wall)	01/25/2010 -	01/28/2010	3
French Is 1	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	01/10/2010 -	01/14/2010	3
Granite City 1	Peaking	Maintenance	Main Transformer	01/01/2010 -	01/28/2010	27
Granite City 2	Peaking	Maintenance	Main Transformer	01/01/2010 -	01/28/2010	27
HighBridge 7	CC	Forced	Other Gas Turbine Combustor Problems	01/01/2010 -	01/06/2010	5
HighBridge 7	СС	Maintenance	Other Gas Turbine Problems	01/12/2010 -	01/13/2010	1
HighBridge 8	СС	Forced	Other Gas Turbine Combustor Problems	01/01/2010 -	01/04/2010	3
HighBridge 9	СС	Forced	Other Gas Turbine Combustor Problems	01/01/2010 -	01/05/2010	4
HighBridge 9	CC	Derate	Other Gas Turbine Combustor Problems	01/05/2010 -	01/06/2010	1

HighBridge 9	CC	Derate	Other Gas Turbine Problems	01/12/2010 -	01/13/2010	1
Inver Hills 1G	Peaking	Forced	Other Generator Controls And Metering Problems	01/02/2010 -	01/26/2010	23
Inver Hills 6G	Peaking	Forced	Other Controls And Instrumentation Problems	01/01/2010 -	01/12/2010	11
Red Wing 2	RDF	Forced	Boiler Tube External Fins/membranes	01/03/2010 -	01/06/2010	3
Riverside 10	CC	Maintenance	Condensate Makeup And Return (inc. Storage Tanks)	01/12/2010 -	01/13/2010	1
Riverside 10	CC	Forced	Gas Turbine - Fuel Piping And Valves	01/25/2010 -	01/31/2010	6
Riverside 7	СС	Maintenance	Condensate Makeup And Return (inc. Storage Tanks)	01/12/2010 -	01/13/2010	1
Riverside 7	СС	Derate	Gas Turbine - Fuel Piping And Valves	01/21/2010 -	01/22/2010	1
Riverside 7	СС	Derate	Gas Turbine - Fuel Piping And Valves	01/25/2010 -	01/31/2010	6
Riverside 9	СС	Maintenance	Condensate Makeup And Return (inc. Storage Tanks)	01/12/2010 -	01/13/2010	1
Riverside 9	СС	Maintenance	Gas Turbine - Fuel Piping And Valves	01/21/2010 -	01/22/2010	1
Sherburne 3	Steam	Forced	First Reheater Leaks	01/16/2010 -	01/21/2010	5
Wheaton 3G	Peaking	Forced	Gas Turbine - Gas Fuel System	01/08/2010 -	01/11/2010	2
Wheaton 3G	Peaking	Forced	Gas Turbine - Gas Fuel System	01/12/2010 -	01/18/2010	5
Wheaton 6	Peaking	Forced	Gas Turbine - Atomizing Air System	01/01/2010 -	01/06/2010	5
Forced Outage	s - Totals					150
Allen S King 1	Steam	Scheduled	Thrust bearings	01/01/2010 -	01/05/2010	3
Prairie Is 2	Nuclear	Scheduled	Heater Drain Pumps	01/23/2010 -	01/24/2010	1
Wheaton 1G	Peaking	Scheduled	Major Gas Turbine Overhaul	01/11/2010 -	01/31/2010	20
Willmarth 1	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	01/09/2010 -	01/24/2010	14
Willmarth 2	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	01/11/2010 -	01/31/2010	19
Scheduled Out	ages - Total	s				57
Total						207

### December 2009

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	te	(Days)
Allen S King 1	Steam	Derate	Thrust bearings	12/01/2009 -	12/05/2009	4
Allen S King 1	Steam	Derate	Thrust bearings	12/05/2009 -	12/26/2009	21
Allen S King 1	Steam	Maintenance	Thrust bearings	12/26/2009 -	12/31/2009	5
Angus Anson 2G	Peaking	Maintenance	Plant Modific. Strictly For Compliance W/ Reg. Req	12/01/2009 -	12/21/2009	20
Angus Anson 3G	Peaking	Maintenance	Plant Modific. Strictly For Compliance W/ Reg. Req	12/01/2009 -	12/21/2009	20
Angus Anson 4	Peaking	Maintenance	Plant Modific. Strictly For Compliance W/ Reg. Req	12/01/2009 -	12/21/2009	20
BD25 CC	Steam	Maintenance	Gas Turbine - Boroscope Inspection	12/02/2009 -	12/03/2009	1
Black Dog 3	Steam	Forced	Second Reheater Leaks	12/03/2009 -	12/06/2009	3
Black Dog 3	Steam	Forced	Second Superheater Leaks	12/12/2009 -	12/15/2009	2
Black Dog 3	Steam	Derate	Feedwater Pump Drive - Motor	12/23/2009 -	12/26/2009	2
Black Dog 4	Steam	Maintenance	Electrostatic Precipitator Fouling	12/11/2009 -	12/14/2009	3
French Is 2	RDF	Maintenance	Tube Modifications (including Addition And Removal	12/27/2009 -	12/31/2009	3
Granite City 1	Peaking	Maintenance	Main Transformer	12/01/2009 -	12/23/2009	22
Granite City 2	Peaking	Maintenance	Main Transformer	12/01/2009 -	12/23/2009	22
Inver Hills 6G	Peaking	Forced	Other Controls And Instrumentation Problems	12/14/2009 -	12/31/2009	17
Red Wing 1	RDF	Derate	Bottom ash rotary (drag chain type) conveyor and motor	12/21/2009 -	12/28/2009	7
Riverside 7	CC	Derate	Gas Turbine - Gas Fuel System	12/10/2009 -	12/15/2009	4
Riverside 7	CC	Derate	Gas Turbine - Gas Fuel System	12/18/2009 -	12/21/2009	2
Riverside 9	CC	Forced	Gas Turbine - Gas Fuel System	12/10/2009 -	12/15/2009	4
Riverside 9	CC	Forced	Gas Turbine - Gas Fuel System	12/16/2009 -	12/17/2009	1
Riverside 9	CC	Forced	Gas Turbine - Gas Fuel System	12/18/2009 -	12/21/2009	2
Sherburne 1	Steam	Forced	Circulating Water Piping	12/10/2009 -	12/12/2009	1
Sherburne 2	Steam	Maintenance	Miscellaneous Regulatory	12/04/2009 -	12/06/2009	2
Sherburne 2	Steam	Forced	Waterwall (Furnace Wall)	12/29/2009 -	12/31/2009	2
Wheaton 6	Peaking	Forced	Gas Turbine - Atomizing Air System	12/15/2009 -	12/16/2009	1
Wheaton 6	Peaking	Forced	Gas Turbine - Atomizing Air System	12/29/2009 -	12/31/2009	2
Willmarth 1	Peaking	Derate	Lack Of Fuel (outside management control)	12/21/2009 -	12/27/2009	6
Willmarth 2	Peaking	Derate	Lack Of Fuel (outside management control)	12/08/2009 -	12/14/2009	5
Willmarth 2	Peaking	Derate	Lack Of Fuel (outside management control)	12/21/2009 -	12/28/2009	6
Forced Outages - Totals						
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	12/01/2009 -	12/31/2009	30
Scheduled Outag	es - Totals					30
Total						240

## November 2009

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Date		(Days)
Allen S King 1	Steam	Derate	Other Cyclone Problems	11/01/2009 -	11/02/2009	1
Allen S King 1	Steam	Derate	Other Cyclone Problems	11/04/2009 -	11/05/2009	1
Allen S King 1	Steam	Derate	Thrust bearings	11/21/2009 -	11/30/2009	9
Angus Anson 4	Peaking	Maintenance	Plant Modific. Strictly For Compliance W/ Reg. Req	11/16/2009 -	11/30/2009	14
Black Dog 3	Steam	Extension	Boiler Tube Water Side Cleaning (acid Cleaning)	11/13/2009 -	11/17/2009	4
Black Dog 4	Steam	Forced	Desuperheater/attemperator Piping	11/19/2009 -	11/24/2009	4
Blue Lake 7	Peaking	Maintenance	Gas Turbine - Turning Gear And Motor	11/09/2009 -	11/13/2009	4
French Is 1	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	11/01/2009 -	11/09/2009	8
Granite City 1	Peaking	Maintenance	Main Transformer	11/03/2009 -	11/30/2009	27
Granite City 2	Peaking	Maintenance	Main Transformer	11/03/2009 -	11/30/2009	27
Inver Hills 5G	Peaking	Maintenance	Other Exciter Problems	11/16/2009 -	11/18/2009	2
Inver Hills 6G	Peaking	Maintenance	Gas Turbine - Liquid Fuel Oil Pump	11/03/2009 -	11/04/2009	1
Sherburne 1	Steam	Maintenance	Burner Wind Boxes And Dampers	11/13/2009 -	11/22/2009	9
Sherburne 1	Steam	Derate	Boiler Water Condition (not Feedwtr Water Qaulity)	11/23/2009 -	11/24/2009	1
Sherburne 2	Steam	Derate	High Pressure Heater Tube Leaks	11/17/2009 -	11/22/2009	5
Willmarth 2	Peaking	Derate	Lack Of Fuel (outside management control)	11/12/2009 -	11/16/2009	3
Willmarth 2	Peaking	Derate	Lack Of Fuel (outside management control)	11/25/2009 -	11/30/2009	5
Forced Outages	- Totals		· ·			125
Black Dog 3	Steam	Scheduled	Boiler Tube Water Side Cleaning (acid Cleaning)	11/07/2009 -	11/13/2009	5

French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	11/01/2009 -	11/30/2009	30
HighBridge 7	СС	Scheduled	Other Gas Turbine Inlet Air Problems	11/01/2009 -	11/15/2009	14
HighBridge 8	СС	Scheduled	Other Gas Turbine Inlet Air Problems	11/01/2009 -	11/08/2009	7
HighBridge 9	СС	Scheduled	Other Gas Turbine Inlet Air Problems	11/01/2009 -	11/08/2009	7
HighBridge 9	CC	Scheduled	Other Gas Turbine Inlet Air Problems	11/08/2009 -	11/15/2009	6
Prairie Is 1	Nuclear	Scheduled	Normal Refueling	11/01/2009 -	11/23/2009	22
Scheduled Out	tages - Total	s				91
Total						

## October 2009

	Type of	Outage				Duration	
Unit	Plant	Category	Reason for outage	Date		(Days)	
Allen S King 1	Steam	Forced	First Reheater Leaks	10/25/2009 -	10/31/2009	5	
Angus Anson 2G	Peaking	Maintenance	Fire Protection System Valves	10/06/2009 -	10/10/2009	4	
BD25 CC	Steam	Extension	Gas Turbine - Boroscope Inspection	10/26/2009 -	10/30/2009	4	
Black Dog 3	Steam	Forced	Waterwall (Furnace Wall)	10/27/2009 -	10/30/2009	3	
Black Dog 4	Steam	Forced	Generator neutral grounding equipment	10/08/2009 -	10/17/2009	8	
French Is 1	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	10/08/2009 -	10/31/2009	23	
HighBridge 7	CC	Maintenance	Other Circulating Water System Problems	10/02/2009 -	10/05/2009	2	
HighBridge 7	CC	Maintenance	Other Circulating Water System Problems	10/05/2009 -	10/06/2009	1	
HighBridge 7	CC	Maintenance	Other Circulating Water System Problems	10/09/2009 -	10/12/2009	2	
HighBridge 7	CC	Maintenance	HP Reheater	10/13/2009 -	10/15/2009	1	
HighBridge 7	CC	Maintenance	Other Circulating Water System Problems	10/16/2009 -	10/19/2009	2	
HighBridge 8	CC	Maintenance	Other Circulating Water System Problems	10/02/2009 -	10/05/2009	2	
HighBridge 8	CC	Maintenance	Other Circulating Water System Problems	10/05/2009 -	10/07/2009	2	
HighBridge 8	CC	Maintenance	Other Circulating Water System Problems	10/09/2009 -	10/12/2009	2	
HighBridge 8	CC	Maintenance	Other Circulating Water System Problems	10/16/2009 -	10/19/2009	2	
HighBridge 9	CC	Maintenance	Other Circulating Water System Problems	10/02/2009 -	10/05/2009	2	
HighBridge 9	CC	Maintenance	Other Circulating Water System Problems	10/05/2009 -	10/06/2009	1	
HighBridge 9	CC	Maintenance	Other Circulating Water System Problems	10/09/2009 -	10/12/2009	2	
HighBridge 9	CC	Derate	HP Reheater	10/13/2009 -	10/15/2009	2	
HighBridge 9	CC	Maintenance	Other Circulating Water System Problems	10/16/2009 -	10/19/2009	2	
Inver Hills 4G	Peaking	Forced	Gas Turbine - Computer	10/08/2009 -	10/20/2009	11	
Riverside 10	CC	Maintenance	Gas Turbine Performance Testing - Individ. Engines	10/11/2009 -	10/14/2009	2	
Riverside 7	CC	Maintenance	Turbine Performance Testing	10/11/2009 -	10/14/2009	2	
Riverside 9	CC	Maintenance	Gas Turbine - Gas Fuel System	10/11/2009 -	10/13/2009	2	
Sherburne 3	Steam	Maintenance	Waste water (zero discharge) piping	10/24/2009 -	10/30/2009	6	
Sherburne 3	Steam	Forced	Condensate Valves	10/30/2009 -	10/31/2009	1	
Wheaton 3G	Peaking	Forced	4000-6000-volt Circuit Breakers	10/10/2009 -	10/12/2009	1	
Wheaton 5	Peaking	Maintenance	General Gas Turbine Unit Inspection	10/21/2009 -	10/23/2009	2	
Wheaton 6	Peaking	Maintenance	General Gas Turbine Unit Inspection	10/27/2009 -	10/28/2009	1	
Forced Outages -	- Totals					100	
BD25 CC	Steam	Scheduled	Gas Turbine - Boroscope Inspection	10/19/2009 -	10/26/2009	7	
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	10/01/2009 -	10/31/2009	31	
HighBridge 7	CC	Scheduled	Other Gas Turbine Inlet Air Problems	10/30/2009 -	10/31/2009	1	
HighBridge 8	CC	Scheduled	Other Gas Turbine Inlet Air Problems	10/30/2009 -	10/31/2009	1	
HighBridge 9	CC	Scheduled	Other Gas Turbine Inlet Air Problems	10/30/2009 -	10/31/2009	1	
Inver Hills 6G	Peaking	Scheduled	Gas Turbine - Liquid Fuel Oil Pump	10/05/2009 -	10/09/2009	4	
Monticello 1	Nuclear	Scheduled	Heater Drain Valves	10/01/2009 -	10/04/2009	2	
Prairie Is 1	Nuclear	Scheduled	Normal Refueling	10/01/2009 -	10/31/2009	31	
Red Wing 2	RDF	Scheduled	Lack Of Fuel (outside management control)	10/16/2009 -	10/20/2009	3	
Scheduled Outages - Totals							
Total						181	

#### September 2009

	Type of	Outage		_		Duration
Unit	Plant	Category	Reason for outage	Da	ite	(Days)
Angus Anson 3G	Peaking	Derate	Other Gas Turbine Combustor Problems	09/01/2009 -	09/14/2009	13
Angus Anson 3G	Peaking	Maintenance	Gas Turbine - Fuel Nozzles/Vanes	09/14/2009 -	09/16/2009	2

Total						279
Scheduled Outag	ges - Totals	<u> </u>				74
Willmarth 2	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	09/20/2009 -	09/25/2009	4
Willmarth 1	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	09/20/2009 -	09/26/2009	5
Red Wing 1	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	09/27/2009 -	09/30/2009	3
Prairie Is 1	Nuclear	Scheduled	Normal Refueling	09/11/2009 -	09/30/2009	19
Prairie Is 1	Nuclear	Scheduled	Core Coastdown (nuclear)	09/07/2009 -	09/11/2009	2
Inver Hills 6G	Peaking	Scheduled	Gas Turbine - Exhaust System Chamber	09/14/2009 -	09/16/2009	2
Inver Hills 5G	Peaking	Scheduled	Gas Turbine - Exhaust System Chamber	09/17/2009 -	09/23/2009	6
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	09/01/2009 -	09/30/2009	30
Black Dog 4	Steam	Scheduled	Thermal Discharge Limits	09/19/2009 -	09/20/2009	1
Forced Outages	- Totals					205
Willmarth 2	Peaking	Derate	Waterwall (Furnace Wall)	09/17/2009 -	09/20/2009	3
Willmarth 2	Peaking	Forced	Lack Of Fuel (outside management control)	09/05/2009 -	09/09/2009	3
Willmarth 1	Peaking	Derate	Lack Of Fuel (outside management control)	09/11/2009 -	09/20/2009	Ç
Wheaton 6	Peaking	Maintenance	Switchyard system protection devices - external	09/14/2009 -	09/23/2009	9
Wheaton 5	Peaking	Maintenance	Switchyard system protection devices - external	09/14/2009 -	09/22/2009	8
Riverside 9	CC	Maintenance	Other 4000-6000-volt Problems	09/02/2009 -	09/08/2009	6
Riverside 7	CC	Derate	Other Gas Turbine Exhaust Problems	09/11/2009 -	09/14/2009	2
Riverside 7	CC	Maintenance	Other 4000-6000-volt Problems	09/02/2009 -	09/08/2009	6
Riverside 7	CC	Derate	Other Hydrogen System Problems	09/01/2009 -	09/02/2009	1
Riverside 10	CC	Forced	Other Gas Turbine Exhaust Problems	09/11/2009 -	09/14/2009	2
Riverside 10	CC	Maintenance	Other 4000-6000-volt Problems	09/02/2009 -	09/08/2009	(
HighBridge 9	CC	Maintenance	Other Circulating Water System Problems	09/25/2009 -	09/28/2009	2
HighBridge 9	CC	Forced	Other hot reheat steam valves (not incl. turbine stop)	09/22/2009 -	09/24/2009	2
HighBridge 9	CC	Maintenance	Other Circulating Water System Problems	09/18/2009 -	09/21/2009	2
HighBridge 9	CC	Derate	HP Reheater	09/16/2009 -	09/22/2009	(
HighBridge 9	CC	Maintenance	Other Circulating Water System Problems	09/11/2009 -	09/14/2009	2
HighBridge 8	CC	Maintenance	Other Circulating Water System Problems	09/25/2009 -	09/28/2009	2
HighBridge 8	CC	Maintenance	Other hot reheat steam valves (not incl. turbine stop)	09/22/2009 -	09/24/2009	2
HighBridge 8	CC	Maintenance	Other Circulating Water System Problems	09/18/2009 -	09/21/2009	2
HighBridge 8	CC	Maintenance	Other Gas Turbine Combustor Problems	09/14/2009 -	09/17/2009	2
HighBridge 8	CC	Maintenance	Other Circulating Water System Problems	09/11/2009 -	09/14/2009	2
HighBridge 7	CC	Maintenance	Other Circulating Water System Problems	09/25/2009 -	09/28/2009	2
HighBridge 7	CC	Maintenance	HP Reheater	09/16/2009 -	09/25/2009	Ç
HighBridge 7	CC	Maintenance	Other Circulating Water System Problems	09/11/2009 -	09/14/2009	2
HighBridge 7	CC	Derate	Inlet air evaporative coolers	09/03/2009 -	09/21/2009	18
Granite City 4	Peaking	Maintenance	Protection Devices	09/09/2009 -	09/18/2009	9
Granite City 3	Peaking	Maintenance	Protection Devices	09/09/2009 -	09/18/2009	9
Granite City 2	Peaking	Forced	Other Switchyard Equipment-external	09/09/2009 -	09/21/2009	12
Granite City 2	Peaking	Maintenance	Protection Devices	09/01/2009 -	09/09/2009	8
Granite City 1	Peaking	Forced	Other Switchyard Equipment-external	09/09/2009 -	09/21/2009	12
Granite City 1	Peaking	Maintenance	Protection Devices	09/01/2009 -	09/09/2009	8
Flambeau 1	Peaking	Forced	Gas Turbine - Turning Gear And Motor	09/01/2009 -	09/03/2009	:
Black Dog 4	Steam	Derate	Induced Draft Fan Motors And Drives	09/14/2009 -	09/15/2009	
Black Dog 4	Steam	Forced	Thermal Discharge Limits	09/10/2009 -	09/11/2009	
Black Dog 3	Steam	Derate	Induced Draft Fans	09/15/2009 -	09/20/2009	;
Black Dog 3	Steam	Forced	Generator Rotor Collector Rings	09/01/2009 -	09/04/2009	;
BD25 CC	Steam	Forced	Thermal Discharge Limits - Gas Turbine Units	09/19/2009 -	09/20/2009	,
BD25 CC	Steam	Forced	Gas Turbine - Gas Fuel System	09/10/2009 -	09/12/2009	:
BD25 CC	Steam	Derate	Circulating Water Pump Motors	09/05/2009 -	09/07/2009	•
BD25 CC	Steam	Forced	Hot Well Level Controls	09/01/2009 -	09/04/2009	;
-	Peaking	Forced	Circuit Breakers	09/17/2009 -	09/21/2009	;

August 2009

Unit	Type of Plant	Outage Category	Reason for outage	Da	ito	Duration (Days)
Angus Anson 3G			Other Gas Turbine Combustor Problems	08/12/2009 -		· , , ,
Angus Anson 4	Peaking	Maintenance	Gas Turbine - Hydraulic Oil System	08/26/2009 -	08/28/2009	2

BD25 CC	Steam	Forced	Hot Well Level Controls	08/27/2009 -	08/31/2009	4
Black Dog 3	Steam	Forced	Waterwall (Furnace Wall)	08/20/2009 -	08/21/2009	1
Black Dog 3	Steam	Forced	Generator Rotor Collector Rings	08/28/2009 -	08/31/2009	3
Black Dog 4	Steam	Derate	Condenser Tube Fouling Tube Side	08/14/2009 -	08/20/2009	5
Black Dog 4	Steam	Maintenance	Condenser Tube Fouling Tube Side	08/20/2009 -	08/21/2009	1
Flambeau 1	Peaking	Forced	Gas Turbine - Turning Gear And Motor	08/04/2009 -	08/31/2009	27
Granite City 3	Peaking	Forced	Other Controls And Instrumentation Problems	08/23/2009 -	08/25/2009	2
HighBridge 8	CC	Forced	Other Gas Turbine Combustor Problems	08/04/2009 -	08/06/2009	1
HighBridge 8	CC	Derate	Other Gas Turbine Combustor Problems	08/10/2009 -	08/19/2009	9
HighBridge 8	CC	Maintenance	Pilot fuel nozzles/vanes	08/17/2009 -	08/18/2009	1
Red Wing 1	RDF	Forced	Turbine Lube Oil Pumps	08/08/2009 -	08/11/2009	3
Riverside 10	CC	Forced	Gas Turbine - Fuel Piping And Valves	08/01/2009 -	08/13/2009	12
Riverside 10	CC	Forced	Boiler Water Condition (not Feedwtr Water Qaulity)	08/14/2009 -	08/18/2009	3
Riverside 10	CC	Forced	Other Hydrogen System Problems	08/24/2009 -	08/31/2009	7
Riverside 7	CC	Derate	Gas Turbine - Fuel Piping And Valves	08/01/2009 -	08/13/2009	12
Riverside 7	CC	Forced	Boiler Water Condition (not Feedwtr Water Qaulity)	08/14/2009 -	08/18/2009	3
Riverside 7	CC	Derate	Other Hydrogen System Problems	08/24/2009 -	08/31/2009	7
Riverside 7	CC	Forced	Boiler Water Condition (not Feedwtr Water Qaulity)	08/25/2009 -	08/31/2009	5
Riverside 9	CC	Forced	Boiler Water Condition (not Feedwtr Water Qaulity)	08/14/2009 -	08/18/2009	3
Riverside 9	CC	Forced	Boiler Water Condition (not Feedwtr Water Qaulity)	08/25/2009 -	08/31/2009	5
Sherburne 1	Steam	Derate	Induced Draft Fans	08/14/2009 -	08/27/2009	12
Wheaton 5	Peaking	Forced	Unit Auxiliaries Transformer	08/17/2009 -	08/19/2009	2
Wheaton 5	Peaking	Forced	Main Transformer	08/20/2009 -	08/24/2009	3
Wheaton 6	Peaking	Forced	Main Transformer	08/20/2009 -	08/24/2009	3
Willmarth 2	Peaking	Forced	First Superheater Leaks	08/05/2009 -	08/11/2009	5
Willmarth 2	Peaking	Derate	Waterwall (Furnace Wall)	08/29/2009 -	08/31/2009	3
Forced Outages	- Totals					163
Black Dog 4	Steam	Scheduled	Boiler Tube Fireside Cleaning	08/21/2009 -	08/27/2009	5
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	08/01/2009 -	08/31/2009	31 36
Scheduled Outages - Totals						
Total						199

July 2009

	Type of	Outage				Duration		
Unit	Plant	Category	Reason for outage	Date		(Days)		
Black Dog 4	Steam	Maintenance	Condenser Tube Fouling Tube Side	07/11/2009	- 07/12/2009	1		
Black Dog 4	Steam	Maintenance	Condenser Tube Fouling Tube Side	07/29/2009	- 07/31/2009	2		
Inver Hills 5G	Peaking	Forced	Other Miscellaneous Generator Problems	07/24/2009	- 07/27/2009	2		
Red Wing 2	RDF	Forced	Generating Tube Leaks	07/24/2009	- 07/28/2009	3		
Riverside 10	CC	Maintenance	Lp Turbine Bearings	07/01/2009	- 07/07/2009	6		
Riverside 10	CC	Forced	Blowdown System Controls/Instrumentation	07/23/2009	- 07/31/2009	8		
Riverside 7	CC	Maintenance	Lp Turbine Bearings	07/01/2009	- 07/07/2009	6		
Riverside 7	CC	Derate	Gas Turbine - Fuel Piping And Valves	07/23/2009	- 07/31/2009	8		
Riverside 9	CC	Forced	Lp Turbine Bearings	07/01/2009	- 07/07/2009	6		
Wheaton 1G	Peaking	Forced	Main Transformer	07/01/2009	- 07/02/2009	1		
Wheaton 2G	Peaking	Forced	Main Transformer	07/01/2009	- 07/02/2009	1		
Willmarth 1	Peaking	Derate	Lack Of Fuel (outside management control)	07/23/2009	- 07/27/2009	3		
Willmarth 2	Peaking	Derate	Coal Conveyors And Feeders	07/09/2009	- 07/14/2009	4		
Forced Outages -	Totals					51		
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	07/01/2009	- 07/31/2009	31		
Scheduled Outages - Totals								
Total	Total							

June 2009

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Date		(Days)
Angus Anson 2G	Peaking	Forced	Gas Turbine - Inlet Air Vanes/Nozzles	06/23/2009 -	06/24/2009	1
Angus Anson 4	Peaking	Maintenance	12-15kv Protection Devices	06/29/2009 -	06/30/2009	1

Black Dog 4	Steam	Forced	First Reheater Leaks	06/21/2009 -	06/25/2009	4
Black Dog 4	Steam	Maintenance	Induced Draft Fans	06/28/2009 -	06/29/2009	1
HighBridge 7	CC	Maintenance	Intake System Problems Other Than Traveling Screen	06/01/2009 -	06/03/2009	2
HighBridge 7	CC	Maintenance	Intake System Problems Other Than Traveling Screen	06/04/2009 -	06/06/2009	2
HighBridge 7	CC	Maintenance	Intake System Problems Other Than Traveling Screen	06/06/2009 -	06/14/2009	8
HighBridge 8	CC	Maintenance	Intake System Problems Other Than Traveling Screen	06/03/2009 -	06/04/2009	1
HighBridge 8	CC	Maintenance	Intake System Problems Other Than Traveling Screen	06/06/2009 -	06/14/2009	8
HighBridge 9	CC	Derate	Intake System Problems Other Than Traveling Screen	06/01/2009 -	06/06/2009	5
HighBridge 9	CC	Maintenance	Intake System Problems Other Than Traveling Screen	06/06/2009 -	06/14/2009	8
Sherburne 2	Steam	Maintenance	Other Tube Slagging Or Fouling	06/01/2009 -	06/05/2009	4
Sherburne 2	Steam	Forced	Other Voltage Protection Devices	06/05/2009 -	06/19/2009	13
Wheaton 1G	Peaking	Forced	Main Transformer	06/25/2009 -	06/30/2009	5
Wheaton 2G	Peaking	Forced	Main Transformer	06/25/2009 -	06/30/2009	5
Willmarth 2	Peaking	Forced	Lack Of Fuel (outside management control)	06/26/2009 -	06/29/2009	3
Forced Outage	s - Totals					71
		_				
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	06/01/2009 -	06/30/2009	30
Red Wing 1	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	06/07/2009 -	06/12/2009	4
Red Wing 2	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	06/08/2009 -	06/13/2009	4
Willmarth 1	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	06/01/2009 -	06/06/2009	5
Willmarth 2	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	06/01/2009 -	06/06/2009	5
Scheduled Outages - Totals						48
Total						

May 2009

	Type of	Outage				Duration	
Unit	Plant	Category	Reason for outage	Date	•	(Days)	
HighBridge 7	CC	Maintenance	Intake System Problems Other Than Traveling Screen	05/29/2009 -	05/31/2009	2	
HighBridge 8	CC	Maintenance	Intake System Problems Other Than Traveling Screen	05/18/2009 -	05/25/2009	7	
HighBridge 8	CC	Maintenance	Intake System Problems Other Than Traveling Screen	05/27/2009 -	05/29/2009	2	
HighBridge 9	CC	Maintenance	Intake System Problems Other Than Traveling Screen	05/18/2009 -	05/25/2009	7	
HighBridge 9	CC	Derate	Intake System Problems Other Than Traveling Screen	05/27/2009 -	05/31/2009	4	
Monticello 1	Nuclear	Forced	Normal Refueling	05/01/2009 -	05/08/2009	7	
Prairie Is 1	Nuclear	Forced	4000-6000-volt Conductors And Buses	05/18/2009 -	05/22/2009	3	
Prairie Is 1	Nuclear	Derate	4000-6000-volt Conductors And Buses	05/22/2009 -	05/26/2009	3	
Wheaton 1G	Peaking	Maintenance	Fire Protection System Piping	05/04/2009 -	05/08/2009	4	
Wheaton 1G	Peaking	Maintenance	Other Gas Turbine Problems	05/27/2009 -	05/29/2009	2	
Wheaton 2G	Peaking	Maintenance	Fire Protection System Piping	05/04/2009 -	05/08/2009	4	
Wheaton 3G	Peaking	Maintenance	Fire Protection System Piping	05/04/2009 -	05/08/2009	4	
Wheaton 4G	Peaking	Maintenance	Fire Protection System Piping	05/04/2009 -	05/08/2009	4	
Forced Outages - Totals							
Allen S King 1	Steam	Scheduled	Coal Crushers Including Motors	05/01/2009 -	05/17/2009	16	
Black Dog 3	Steam	Scheduled	Boiler Tube Fireside Cleaning	05/17/2009 -	05/23/2009	5	
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	05/01/2009 -	05/31/2009	31	
HighBridge 7	CC	Scheduled	Major Gas Turbine Overhaul	05/01/2009 -	05/28/2009	27	
HighBridge 8	CC	Scheduled	Major Gas Turbine Overhaul	05/01/2009 -	05/12/2009	11	
HighBridge 9	CC	Scheduled	Major Gas Turbine Overhaul	05/01/2009 -	05/12/2009	11	
HighBridge 9	CC	Scheduled	Major Gas Turbine Overhaul	05/12/2009 -	05/13/2009	1	
Inver Hills 1G	Peaking	Scheduled	Other Generator Controls And Metering Problems	05/04/2009 -	05/18/2009	14	
Inver Hills 2G	Peaking	Scheduled	Other Generator Controls And Metering Problems	05/04/2009 -	05/18/2009	14	
Inver Hills 3G	Peaking	Scheduled	Gas Turbine - Fire Detection And Extinguishing Sys	05/11/2009 -	05/14/2009	3	
Inver Hills 4G	Peaking	Scheduled	Gas Turbine - Hot End Inspection	05/01/2009 -	05/04/2009	3	
Inver Hills 4G	Peaking	Scheduled	Gas Turbine - Fire Detection And Extinguishing Sys	05/11/2009 -	05/14/2009	3	
Inver Hills 5G	Peaking	Scheduled	Gas Turbine - Fire Detection And Extinguishing Sys	05/11/2009 -	05/14/2009	3	
Inver Hills 6G	Peaking	Scheduled	Gas Turbine - Fire Detection And Extinguishing Sys	05/11/2009 -	05/14/2009	3	
Wheaton 5	Peaking	Scheduled	Switchyard system protection devices - external	05/11/2009 -	05/15/2009	4	
Wheaton 6	Peaking	Scheduled	Unit Auxiliaries Transformer	05/11/2009 -	05/15/2009	4	
Scheduled Outag	ges - Totals	<u> </u>				153	

Total 206

## April 2009

	Type of	Outage				Duration	
Unit	Plant	Category	Reason for outage	Date		(Days)	
Allen S King 1	Steam	Forced	Coal Conveyors And Feeders	04/18/2009 -	04/24/2009	6	
Key City 1	Peaking	Maintenance	400-700-volt Circuit Breakers	04/20/2009 -	04/24/2009	3	
Key City 3	Peaking	Maintenance	400-700-volt Circuit Breakers	04/20/2009 -	04/24/2009	3	
Key City 4	Peaking	Maintenance	400-700-volt Circuit Breakers	04/20/2009 -	04/24/2009	3	
Monticello 1	Nuclear	Forced	Normal Refueling	04/25/2009 -	04/30/2009	5	
Wheaton 2G	Peaking	Maintenance	General Gas Turbine Unit Inspection	04/29/2009 -	04/30/2009	1	
Wheaton 3G	Peaking	Maintenance	General Gas Turbine Unit Inspection	04/20/2009 -	04/24/2009	4	
Wheaton 3G	Peaking	Forced	Generator Output Breaker	04/24/2009 -	04/28/2009	4	
Wheaton 4G	Peaking	Maintenance	Diverter Dampers	04/13/2009 -	04/16/2009	3	
Wheaton 5	Peaking	Maintenance	Diverter Dampers	04/06/2009 -	04/09/2009	3	
Willmarth 1	Peaking	Derate	Lack Of Fuel (outside management control)	04/10/2009 -	04/16/2009	5	
Forced Outages - Totals							
Allen S King 1	Steam	Scheduled	Coal Crushers Including Motors	04/24/2009 -	04/30/2009	6	
Angus Anson 3G	Peaking	Scheduled	Gas Turbine - Hot End Inspection	04/01/2009 -	04/16/2009	15	
Black Dog 4	Steam	Scheduled	Ip Turbine Shaft Seals	04/01/2009 -	04/27/2009	26	
French Is 2	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	04/12/2009 -	04/17/2009	4	
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	04/01/2009 -	04/30/2009	30	
HighBridge 7	CC	Scheduled	Major Gas Turbine Overhaul	04/23/2009 -	04/30/2009	7	
HighBridge 8	CC	Scheduled	Major Gas Turbine Overhaul	04/17/2009 -	04/30/2009	13	
HighBridge 9	CC	Scheduled	Major Gas Turbine Overhaul	04/23/2009 -	04/30/2009	7	
Inver Hills 3G	Peaking	Scheduled	Other Generator Controls And Metering Problems	04/06/2009 -	04/20/2009	14	
Inver Hills 4G	Peaking	Scheduled	Gas Turbine - Hot End Inspection	04/01/2009 -	04/30/2009	29	
Inver Hills 5G	Peaking	Scheduled	Other Generator Controls And Metering Problems	04/20/2009 -	04/30/2009	10	
Inver Hills 6G	Peaking	Scheduled	Other Generator Controls And Metering Problems	04/20/2009 -	04/30/2009	10	
Monticello 1	Nuclear	Scheduled	Normal Refueling	04/01/2009 -	04/25/2009	24	
Scheduled Outag	Scheduled Outages - Totals						
Total						235	

### March 2009

	Type of	Outage				Duration	
Unit	Plant	Category	Reason for outage	Date		(Days)	
Angus Anson 4	Peaking	Maintenance	Gas Turbine - Boroscope Inspection	03/17/2009 -	03/19/2009	2	
BD25 CC	Steam	Derate	Feedwater Pump	03/27/2009 -	03/31/2009	4	
Black Dog 3	Steam	Maintenance	Electrostatic Precipitator Fouling	03/11/2009 -	03/13/2009	2	
Black Dog 3	Steam	Forced	First Superheater Leaks	03/21/2009 -	03/22/2009	1	
HighBridge 7	CC	Forced	Miscellaneous Cems Problems	03/13/2009 -	03/15/2009	1	
HighBridge 7	CC	Maintenance	Desuperheater/attemperator Controls	03/28/2009 -	03/29/2009	1	
HighBridge 8	CC	Maintenance	Desuperheater/attemperator Controls	03/28/2009 -	03/29/2009	1	
HighBridge 9	CC	Maintenance	Desuperheater/attemperator Controls	03/28/2009 -	03/29/2009	1	
Red Wing 1	RDF	Maintenance	Major Boiler Overhaul (720 Hours Or Longer)	03/01/2009 -	03/07/2009	6	
Red Wing 1	RDF	Forced	Lack Of Fuel (outside management control)	03/14/2009 -	03/18/2009	4	
Sherburne 1	Steam	Forced	Waterwall (Furnace Wall)	03/18/2009 -	03/22/2009	3	
Sherburne 3	Steam	Derate	Other High Pressure Heater Problems	03/27/2009 -	03/30/2009	2	
Wheaton 6	Peaking	Forced	Gas Turbine - Atomizing Air System	03/01/2009 -	03/04/2009	3	
Willmarth 2	Peaking	Derate	Lack Of Fuel (outside management control)	03/27/2009 -	03/31/2009	4	
Forced Outages -	- Totals					35	
Angus Anson 3G	Peaking	Scheduled	Gas Turbine - Hot End Inspection	03/01/2009 -	03/31/2009	31	
Black Dog 4	Steam	Scheduled	Lp Turbine Buckets Or Blades	03/14/2009 -	03/31/2009	17	
French Is 1	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	03/26/2009 -	03/31/2009	4	
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	03/01/2009 -	03/31/2009	31	
Inver Hills 4G	Peaking	Scheduled	Gas Turbine - Hot End Inspection	03/01/2009 -	03/31/2009	30	
Monticello 1	Nuclear	Scheduled	Normal Refueling	03/14/2009 -	03/31/2009	17	
Scheduled Outages - Totals							

Total 165

## February 2009

	Type of	Outage				Duration	
Unit	Plant	Category	Reason for outage	Date		(Days)	
Allen S King 1	Steam	Derate	Feedwater Pump	02/01/2009 -	02/02/2009	1	
Allen S King 1	Steam	Derate	Other Flue Gas Problems	02/02/2009 -	02/05/2009	2	
Allen S King 1	Steam	Derate	Other Flue Gas Problems	02/11/2009 -	02/28/2009	17	
Angus Anson 4	Peaking	Maintenance	Nox Stack Emissions - Gas Turbine Units	02/05/2009 -	02/19/2009	14	
Black Dog 3	Steam	Forced	Waterwall (Furnace Wall)	02/13/2009 -	02/16/2009	3	
HighBridge 7	CC	Maintenance	Boiler Tube Supports/attachments	02/18/2009 -	02/20/2009	1	
HighBridge 8	CC	Forced	Boiler Tube Supports/attachments	02/18/2009 -	02/20/2009	1	
HighBridge 9	CC	Forced	Boiler Tube Supports/attachments	02/18/2009 -	02/20/2009	1	
Red Wing 1	RDF	Maintenance	Major Boiler Overhaul (720 Hours Or Longer)	02/14/2009 -	02/28/2009	14	
Red Wing 2	RDF	Maintenance	Major Boiler Overhaul (720 Hours Or Longer)	02/08/2009 -	02/28/2009	20	
Wheaton 6	Peaking	Forced	Gas Turbine - Atomizing Air System	02/27/2009 -	02/28/2009	1	
Forced Outages -	Totals					75	
Angus Anson 3G	Peaking	Scheduled	Gas Turbine - Hot End Inspection	02/01/2009 -	02/28/2009	28	
BD25 CC	Steam	Scheduled	Boiler Inspections - Scheduled or Routine	02/14/2009 -	02/23/2009	9	
French Is 1	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	02/22/2009 -	02/27/2009	4	
French Is 2	RDF	Scheduled	Boiler Refractory And Insulation	02/08/2009 -	02/17/2009	8	
French Is 3	Peaking	Scheduled	Gas Turbine - Hot End Inspection	02/11/2009 -	02/28/2009	18	
Inver Hills 4G	Peaking	Scheduled	Gas Turbine - Hot End Inspection	02/01/2009 -	02/28/2009	27	
Willmarth 1	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	02/01/2009 -	02/15/2009	14	
Willmarth 2	Peaking	Scheduled	Vibration Of The Turbine Generator Unit	02/11/2009 -	02/28/2009	17	
Scheduled Outages - Totals							
Total						200	

## January 2009

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Dat	Date	
Allen S King 1	Steam	Derate	Other Flue Gas Problems	01/01/2009 -	01/12/2009	11
Allen S King 1	Steam	Derate	Cyclone Feeders	01/12/2009 -	01/20/2009	7
Allen S King 1	Steam	Derate	Other Flue Gas Problems	01/20/2009 -	01/26/2009	5
Allen S King 1	Steam	Maintenance	Second Reheater Slagging Or Fouling	01/27/2009 -	01/31/2009	4
Angus Anson 2G	Peaking	Maintenance	Generator Bearings And Lube Oil System	01/21/2009 -	01/22/2009	1
Angus Anson 3G	Peaking	Maintenance	Gas Turbine - Hot End Inspection	01/29/2009 -	01/31/2009	2
BD25 CC	Steam	Forced	Turbine Governing System	01/01/2009 -	01/13/2009	12
Black Dog 3	Steam	Derate	Inducted draft fan coupling	01/04/2009 -	01/17/2009	12
Black Dog 3	Steam	Derate	Induced Draft Fan Motors And Drives	01/17/2009 -	01/23/2009	5
Black Dog 4	Steam	Forced	First Superheater Leaks	01/13/2009 -	01/16/2009	2
HighBridge 7	CC	Forced	Turbine Reheat Stop Valves	01/23/2009 -	01/25/2009	1
HighBridge 8	CC	Forced	Turbine Reheat Stop Valves	01/23/2009 -	01/31/2009	7
HighBridge 9	CC	Derate	Other Gas Turbine Problems	01/15/2009 -	01/16/2009	1
HighBridge 9	CC	Forced	Turbine Reheat Stop Valves	01/23/2009 -	01/25/2009	1
Inver Hills 3G	Peaking	Forced	Other Gas Turbine Auxiliary System Problems	01/15/2009 -	01/30/2009	15
Monticello 1	Nuclear	Derate	Other Feedwater System Problems	01/01/2009 -	01/05/2009	3
Sherburne 2	Steam	Derate	Boiler Recirculation Pumps - Motors	01/01/2009 -	01/05/2009	4
Sherburne 3	Steam	Derate	Other High Pressure Heater Problems	01/14/2009 -	01/17/2009	2
Sherburne 3	Steam	Derate	Main Steam Relief/safety Valves	01/18/2009 -	01/20/2009	1
Sherburne 3	Steam	Forced	Main Steam Relief/safety Valves	01/20/2009 -	01/21/2009	1
Forced Outages	- Totals					97
Willmarth 1	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	01/01/2009 -	01/31/2009	30
Willmarth 2	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	01/08/2009 -	01/24/2009	15
Scheduled Outag	ges - Totals	;				45
Total						142

### December 2008

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	D	ate	(Days)
Allen S King 1	Steam	Forced	Turbine Trip Devices (including Instruments)	12/22/2008	12/24/2008	2
Allen S King 1	Steam	Derate	Other Flue Gas Problems	12/25/2008	- 12/31/2008	5
BD25 CC	Steam	Forced	Turbine Governing System	12/09/2008	- 12/16/2008	7
BD25 CC	Steam	Forced	Turbine Control Valves	12/17/2008	- 12/18/2008	1
BD25 CC	Steam	Forced	Turbine Governing System	12/22/2008	12/31/2008	8
Black Dog 3	Steam	Derate	Hp Turbine Outer Casing	12/15/2008	- 12/17/2008	1
Black Dog 3	Steam	Forced	Hp Turbine Outer Casing	12/17/2008	- 12/18/2008	1
Black Dog 3	Steam	Forced	Waterwall (Furnace Wall)	12/30/2008	12/31/2008	1
Black Dog 4	Steam	Forced	First Reheater Leaks	12/03/2008	12/07/2008	3
HighBridge 7	CC	Forced	Gas Turbine - Inlet Air Vanes/Nozzles	12/05/2008	12/07/2008	2
HighBridge 9	CC	Derate	Gas Turbine - Inlet Air Vanes/Nozzles	12/05/2008	12/07/2008	2
HighBridge 9	CC	Derate	Other Gas Turbine Combustor Problems	12/09/2008	- 12/10/2008	1
HighBridge 9	CC	Derate	Gas Turbine - Inlet Air Ducts	12/15/2008	- 12/31/2008	16
Inver Hills 3G	Peaking	Forced	400-700-volt Circuit Breakers	12/23/2008	12/26/2008	2
Inver Hills 5G	Peaking	Forced	Gas Turbine - Ignition System	12/04/2008	12/06/2008	2
Red Wing 1	RDF	Derate	Lack Of Fuel (outside management control)	12/24/2008	- 12/31/2008	7
Red Wing 2	RDF	Forced	Lack Of Fuel (outside management control)	12/16/2008	- 12/20/2008	3
Sherburne 1	Steam	Forced	Waterwall (Furnace Wall)	12/27/2008	- 12/30/2008	2
Sherburne 2	Steam	Derate	Boiler Recirculation Pumps - Motors	12/21/2008	- 12/31/2008	10
Sherburne 3	Steam	Forced	Second Superheater Leaks	12/06/2008	- 12/11/2008	4
Wheaton 6	Peaking	Forced	Gas Turbine - Atomizing Air System	12/16/2008	- 12/19/2008	2
Forced Outages	- Totals					82
	_					
Black Dog 3	Steam	Scheduled	Major Turbine Overhaul (720 Hours Or Longer)	12/01/2008	12/14/2008	13
Wheaton 5	Peaking	Scheduled	Other Gas Turbine Fuel System Problems	12/04/2008	12/22/2008	18
Willmarth 1	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	12/16/2008	12/31/2008	15
Scheduled Outages - Totals						46
Total						128

# November 2008

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	te	(Days)
Allen S King 1	Steam	Derate	Other Flue Gas Problems	11/06/2008 -	11/21/2008	14
Allen S King 1	Steam	Derate	Other Flue Gas Problems	11/21/2008 -	11/30/2008	9
Black Dog 4	Steam	Forced	First Superheater Leaks	11/11/2008 -	11/12/2008	1
HighBridge 7	CC	Derate	Other Gas Turbine Combustor Problems	11/17/2008 -	11/27/2008	9
HighBridge 7	CC	Forced	Gas Turbine - Inlet Air Vanes/Nozzles	11/27/2008 -	11/30/2008	3
HighBridge 8	CC	Derate	Other Gas Turbine Combustor Problems	11/17/2008 -	11/30/2008	13
HighBridge 9	CC	Derate	Other Gas Turbine Combustor Problems	11/17/2008 -	11/30/2008	13
Riverside 8	Steam	Derate	Opacity - Fossil Steam Units	11/01/2008 -	11/04/2008	3
Riverside 8	Steam	Derate	Opacity - Fossil Steam Units	11/05/2008 -	11/08/2008	3
Riverside 8	Steam	Derate	Opacity - Fossil Steam Units	11/09/2008 -	11/18/2008	9
Riverside 8	Steam	Derate	Opacity - Fossil Steam Units	11/19/2008 -	11/21/2008	2
Riverside 8	Steam	Derate	Opacity - Fossil Steam Units	11/21/2008 -	11/24/2008	3
Sherburne 2	Steam	Maintenance	Generator Rotor Collector Rings	11/01/2008 -	11/03/2008	2
Sherburne 3	Steam	Derate	Dry Scrubber Instruments and Controls	11/26/2008 -	11/30/2008	4
Wheaton 1G	Peaking	Forced	Gas Turbine - Lube Oil System - General	11/05/2008 -	11/18/2008	12
Wheaton 3G	Peaking	Maintenance	Gas Turbine - Liquid Fuel Oil Pump	11/19/2008 -	11/20/2008	1
Wheaton 4G	Peaking	Maintenance	Gas Turbine - Liquid Fuel Oil Pump	11/12/2008 -	11/14/2008	2
Forced Outage	s - Totals					103
Black Dog 3	Steam	Scheduled	Major Turbine Overhaul (720 Hours Or Longer)	11/01/2008 -	11/30/2008	30
Sherburne 3	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	11/01/2008 -	11/23/2008	22
Wheaton 2G	Peaking	Scheduled	Gas Turbine - High Pressure Nozzles/Vanes	11/01/2008 -	11/04/2008	3
Scheduled Outages - Totals						55
Total						158

### October 2008

	Type of	Outage			Duration
Unit	Plant	Category	Reason for outage	Date	(Days)
Allen S King 1	Steam	Derate	Other Flue Gas Problems	10/14/2008 - 10/22/2008	7
Allen S King 1	Steam	Forced	Second Superheater Leaks	10/26/2008 - 10/30/2008	4
BD25 CC	Steam	Maintenance	Gas Turbine - Fuel Piping And Valves	10/06/2008 - 10/08/2008	2
HighBridge 7	CC	Maintenance	Closed Cooling Water Valves	10/26/2008 - 10/30/2008	3
HighBridge 8	CC	Maintenance	Closed Cooling Water Valves	10/26/2008 - 10/30/2008	3
HighBridge 9	CC	Maintenance	Closed Cooling Water Valves	10/26/2008 - 10/30/2008	3
Prairie Is 1	Nuclear	Derate	Heater Drain Pumps	10/30/2008 - 10/31/2008	1
Riverside 8	Steam	Forced	Other Slag And Ash Removal Problems	10/10/2008 - 10/20/2008	10
Riverside 8	Steam	Derate	Opacity - Fossil Steam Units	10/23/2008 - 10/28/2008	4
Riverside 8	Steam	Derate	Opacity - Fossil Steam Units	10/28/2008 - 10/31/2008	3
Forced Outage	s - Totals				40
Black Dog 3	Steam	Scheduled	Major Turbine Overhaul (720 Hours Or Longer)	10/25/2008 - 10/31/2008	6
Prairie Is 2	Nuclear	Scheduled	Normal Refueling	10/01/2008 - 10/31/2008	31
Sherburne 3	Steam	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	10/02/2008 - 10/31/2008	29
Willmarth 1	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	10/12/2008 - 10/17/2008	4
Willmarth 2	Peaking	Scheduled	Major Boiler Overhaul (720 Hours Or Longer)	10/13/2008 - 10/18/2008	4
Scheduled Out	ages - Totals		-	<u></u>	74
Total					114

## September 2008

	Type of	Outage				Duration	
Unit	Plant	Category	Reason for outage	Da	te	(Days)	
Allen S King 1	Steam	Derate	Other Tube Slagging Or Fouling	09/12/2008 -	09/15/2008	3	
Allen S King 1	Steam	Derate	Other Tube Slagging Or Fouling	09/16/2008 -	09/27/2008	10	
Allen S King 1	Steam	Derate	Other Tube Slagging Or Fouling	09/27/2008 -	09/30/2008	3	
Angus Anson 3G	Peaking	Maintenance	Gas Turbine - Fuel Nozzles/Vanes	09/08/2008 -	09/12/2008	4	
BD25 CC	Steam	Forced	Thermal Discharge Limits	09/17/2008 -	09/20/2008	2	
Black Dog 3	Steam	Forced	First Reheater Leaks	09/26/2008 -	09/28/2008	2	
Inver Hills 3G	Peaking	Forced	Gas Turbine - Cooling Water System	09/18/2008 -	09/30/2008	12	
Monticello 1	Nuclear	Forced	Other Switchyard, High Voltage System Problems-ext	09/11/2008 -	09/25/2008	13	
Monticello 1	Nuclear	Forced	Main Steam Isolation Valves (bwr And Pwr)	09/25/2008 -	09/26/2008	1	
Monticello 1	Nuclear	Forced	Other Switchyard, High Voltage System Problems-ext	09/26/2008 -	09/28/2008	1	
Monticello 1	Nuclear	Derate	Core Physics Tests	09/28/2008 -	09/29/2008	1	
Red Wing 2	RDF	Maintenance	Boiler, Miscellaneous	09/15/2008 -	09/19/2008	3	
Riverside 8	Steam	Forced	Controls And Instrumentation	09/08/2008 -	09/15/2008	7	
Riverside 8	Steam	Derate	Opacity - Fossil Steam Units	09/19/2008 -	09/22/2008	3	
Riverside 8	Steam	Derate	Opacity - Fossil Steam Units	09/25/2008 -	09/30/2008	5	
Sherburne 1	Steam	Forced	Waterwall (Furnace Wall)	09/05/2008 -	09/06/2008	1	
Sherburne 1	Steam	Maintenance	Generator Rotor Collector Rings	09/06/2008 -	09/08/2008	2	
Sherburne 3	Steam	Forced	Deaerator (including Level Control)	09/17/2008 -	09/18/2008	1	
Forced Outages -	- Totals					74	
Black Dog 4	Steam	Scheduled	Boiler Inspections - Scheduled or Routine	09/20/2008 -	09/25/2008	5	
Prairie Is 2	Nuclear	Scheduled	Normal Refueling	09/19/2008 -	09/30/2008	11	
Red Wing 1	RDF	Scheduled	Boiler, Miscellaneous	09/16/2008 -	09/20/2008	4	
Wheaton 2G	Peaking	Scheduled	Gas Turbine - High Pressure Nozzles/Vanes	09/22/2008 -	09/30/2008	8	
Scheduled Outag	Scheduled Outages - Totals						
Total						102	

## August 2008

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	Date	
Allen S King 1	Steam	Derate	Other Tube Slagging Or Fouling	08/02/2008 -	08/28/2008	25
Allen S King 1	Steam	Forced	Other Boiler Tube Leaks	08/28/2008 -	08/31/2008	3
Angus Anson 4	Peaking	Forced	Main Transformer	08/21/2008 -	08/25/2008	4
Black Dog 3	Steam	Maintenance	First Reheater Leaks	08/05/2008 -	08/07/2008	1
Black Dog 4	Steam	Forced	Second Superheater Leaks	08/20/2008 -	08/21/2008	1

Total						93	
Scheduled Outages - Totals							
French Is 1	RDF	Scheduled	Minor Boiler Overhaul (less Than 720 Hours)	08/10/2008 -	08/15/2008	5	
Forced Outage	es - Totals					88	
Wheaton 5	Peaking	Forced	Lightning	08/07/2008 -	08/19/2008	11	
Sherburne 2	Steam	Derate	Induced Draft Fan Motors And Drives	08/10/2008 -	08/13/2008	3	
Sherburne 2	Steam	Forced	Waterwall (Furnace Wall)	08/03/2008 -	08/09/2008	5	
Riverside 8	Steam	Derate	Opacity - Fossil Steam Units	08/21/2008 -	08/31/2008	10	
Riverside 8	Steam	Derate	Opacity - Fossil Steam Units	08/06/2008 -	08/14/2008	8	
Riverside 7	Steam	Forced	Bottom Ash Systems (wet Or Dry)	08/25/2008 -	08/30/2008	4	
HighBridge 8	CC	Forced	Pipe Hangers, Brackets, Supports (general)	08/03/2008 -	08/04/2008	1	
HighBridge 7	CC	Derate	Other Gas Turbine Combustor Problems	08/21/2008 -	08/31/2008	10	
Blue Lake 7	Peaking	Forced	Gas Turbine - Turning Gear And Motor	08/05/2008 -	08/07/2008	2	

July 2008

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	te	(Days)
Allen S King 1	Steam	Forced	Startup Bypass System Piping	07/02/2008 -	07/07/2008	4
Allen S King 1	Steam	Derate	Other Tube Slagging Or Fouling	07/15/2008 -	07/24/2008	8
Allen S King 1	Steam	Derate	Cyclone Dampers	07/19/2008 -	07/31/2008	12
Angus Anson 4	Peaking	Forced	Conductors And Buses	07/02/2008 -	07/08/2008	5
BD25 CC	Steam	Forced	Turbine Turning Gear And Motor	07/09/2008 -	07/16/2008	6
Black Dog 3	Steam	Maintenance	First Reheater Leaks	07/08/2008 -	07/10/2008	2
Black Dog 4	Steam	Derate	Condenser Tube Fouling Shell Side	07/29/2008 -	07/31/2008	2
Blue Lake 7	Peaking	Maintenance	Other Generator Controls And Metering Problems	07/07/2008 -	07/14/2008	7
Blue Lake 7	Peaking	Forced	Gas Turbine - Flame Scanners	07/15/2008 -	07/17/2008	1
Blue Lake 7	Peaking	Forced	Other Controls And Instrumentation Problems	07/23/2008 -	07/24/2008	1
HighBridge 7	CC	Derate	Other Gas Turbine Combustor Problems	07/03/2008 -	07/14/2008	11
HighBridge 7	CC	Forced	Circulating Water Pumps	07/07/2008 -	07/14/2008	7
HighBridge 7	CC	Maintenance	Circulating Water Pumps	07/19/2008 -	07/20/2008	1
HighBridge 7	CC	Forced	Pipe Hangers, Brackets, Supports (general)	07/22/2008 -	07/24/2008	2
HighBridge 8	CC	Derate	Circulating Water Pumps	07/07/2008 -	07/14/2008	7
HighBridge 8	CC	Maintenance	Circulating Water Pumps	07/19/2008 -	07/20/2008	1
HighBridge 8	CC	Forced	Pipe Hangers, Brackets, Supports (general)	07/22/2008 -	07/24/2008	2
HighBridge 9	CC	Maintenance	Circulating Water Pumps	07/19/2008 -	07/20/2008	1
HighBridge 9	CC	Forced	Pipe Hangers, Brackets, Supports (general)	07/22/2008 -	07/24/2008	2
Red Wing 1	RDF	Forced	Condenser Tube Fouling Shell Side	07/06/2008 -	07/16/2008	g
Riverside 7	Steam	Forced	Pulverizer Exhauster Fan Drive	07/03/2008 -	07/06/2008	3
Riverside 7	Steam	Derate	Other Coal Fuel Supply Problems Up Through Bunkers	07/15/2008 -	07/18/2008	3
Riverside 7	Steam	Forced	Waterwall (Furnace wall)	07/19/2008 -	07/22/2008	2
Riverside 7	Steam	Derate	Waterwall (Furnace wall)	07/24/2008 -	07/28/2008	4
Riverside 7	Steam	Derate	Waterwall (Furnace wall)	07/30/2008 -	07/31/2008	1
Riverside 8	Steam	Derate	High Pressure Heater Head Leaks	07/09/2008 -	07/21/2008	12
Riverside 8	Steam	Forced	High Pressure Heater Head Leaks	07/21/2008 -	07/27/2008	5
Wheaton 2G	Peaking	Forced	Gas Turbine - Gas Fuel System	07/14/2008 -	07/28/2008	13
Wheaton 4G	Peaking	Forced	Other Controls And Instrumentation Problems	07/11/2008 -	07/16/2008	5
Wheaton 5	Peaking	Forced	Other Controls And Instrumentation Problems	07/11/2008 -	07/31/2008	20
Wheaton 6	Peaking	Forced	Other Controls And Instrumentation Problems	07/07/2008 -	07/09/2008	2
Wheaton 6	Peaking	Forced	Other Controls And Instrumentation Problems	07/22/2008 -	07/31/2008	9
Willmarth 2	Peaking	Forced	Other Miscellaneous Steam Turbine Problems	07/01/2008 -	07/31/2008	30
Forced Outages -	Totals					200
Wheaton 1G	Peaking	Scheduled	Gas Turbine - Starting System (including Motor)	07/08/2008 -	07/09/2008	1
Scheduled Outag	es - Totals					1
Total						201

	Type of	Outage			Duration
Unit	Plant	Category	Reason for outage	Date	(Days)

Allen S King 1	Steam	Derate	Dry Scrubber - Reagent Unavailability	06/01/2008 -	06/08/2008	6
Allen S King 1	Steam	Derate	Other Flue Gas Problems	06/10/2008 -	06/12/2008	1
Allen S King 1	Steam	Derate	Other Feedwater Pump Problems	06/19/2008 -	06/21/2008	1
Angus Anson 3G	Peaking	Maintenance	Protection Devices	06/19/2008 -	06/24/2008	4
Black Dog 3	Steam	Forced	Pulverizer fuel and air piping	06/17/2008 -	06/20/2008	2
Black Dog 4	Steam	Forced	Feedwater Pump Drive - Motor	06/23/2008 -	06/26/2008	3
French Is 1	RDF	Maintenance	Minor Boiler Overhaul (less Than 720 Hours)	06/10/2008 -	06/13/2008	3
French Is 2	RDF	Forced	Turbine Lube Oil Pumps	06/15/2008 -	06/25/2008	9
Prairie Is 1	Nuclear	Derate	Heater Drain Pumps	06/04/2008 -	06/07/2008	2
Red Wing 2	RDF	Forced	Dry Scrubber - Ducting	06/06/2008 -	06/10/2008	3
Riverside 7	Steam	Maintenance	Other LP Heater - General	06/07/2008 -	06/14/2008	7
Riverside 7	Steam	Derate	Coal Crushers Including Motors	06/27/2008 -	06/29/2008	2
Riverside 7	Steam	Derate	Turbine Control Valves	06/29/2008 -	06/30/2008	1
Riverside 8	Steam	Derate	Opacity - Fossil Steam Units	06/07/2008 -	06/09/2008	2
Riverside 8	Steam	Forced	Other Slag And Ash Removal Problems	06/12/2008 -	06/23/2008	11
Willmarth 2	Peaking	Forced	Other Miscellaneous Steam Turbine Problems	06/01/2008 -	06/30/2008	29
Forced Outages	- Totals					86
Allen S King 1	Steam	Scheduled	Other Boiler Inspections	06/27/2008 -	06/30/2008	3
HighBridge 7	CC	Scheduled	Hp Turbine Inner Casing	06/18/2008 -	06/19/2008	1
HighBridge 8	CC	Scheduled	Hp Turbine Inner Casing	06/18/2008 -	06/19/2008	1
HighBridge 9	CC	Scheduled	Hp Turbine Inner Casing	06/18/2008 -	06/19/2008	1
Wheaton 5	Peaking	Scheduled	Generator - Other Cooling System Problems	06/13/2008 -	06/16/2008	3
Wheaton 6	Peaking	Scheduled	Major Gas Turbine Overhaul	06/26/2008 -	06/30/2008	4
Willmarth 1	Peaking	Scheduled	Coal Conveyors And Feeders	06/02/2008 -	06/07/2008	5
Scheduled Outa	ges - Totals	S				18
Total						104

May 2008

	Type of	Outage			Duration
Unit	Plant	Category	Reason for outage	Date	(Days)
Allen S King 1	Steam	Derate	Coal Crushers Including Motors	05/14/2008 - 05/17/2008	2
Allen S King 1	Steam	Derate	Other Flue Gas Problems	05/27/2008 - 05/30/2008	3
Angus Anson 2G	Peaking	Maintenance	Gas Turbine - Lube Oil Pumps	05/08/2008 - 05/09/2008	1
BD25 CC	Steam	Maintenance	Fire Protection System Fouling	05/05/2008 - 05/07/2008	1
Blue Lake 1	Peaking	Maintenance	Other Switchyard Equipment-external	05/01/2008 - 05/02/2008	1
Blue Lake 2	Peaking	Maintenance	Other Switchyard Equipment-external	05/01/2008 - 05/02/2008	1
Blue Lake 3	Peaking	Maintenance	Other Switchyard Equipment-external	05/01/2008 - 05/02/2008	1
Blue Lake 4	Peaking	Maintenance	Other Switchyard Equipment-external	05/01/2008 - 05/02/2008	1
Riverside 7	Steam	Derate	Forced Draft Fan Motors - Variable Speed	05/17/2008 - 05/26/2008	8
Riverside 8	Steam	Forced	Start-up Feedwater Pump Drives - All Types	05/03/2008 - 05/06/2008	3
Riverside 8	Steam	Derate	High Pressure Heater Head Leaks	05/06/2008 - 05/13/2008	6
Riverside 8	Steam	Forced	Other Slag And Ash Removal Problems	05/13/2008 - 05/27/2008	14
Sherburne 1	Steam	Forced	Waterwall (Furnace Wall)	05/23/2008 - 05/25/2008	2
Wheaton 1G	Peaking	Forced	Gas Turbine - Lube Oil System - General	05/02/2008 - 05/05/2008	3
Willmarth 2	Peaking	Forced	Other Miscellaneous Steam Turbine Problems	05/01/2008 - 05/31/2008	30
Forced Outages -	- Totals				77
BD25 CC	Steam	Scheduled	Gas Turbine - Fuel Nozzles/Vanes	05/22/2008 - 05/31/2008	9
Inver Hills 2G	Peaking	Scheduled	Other Gas Turbine Auxiliary System Problems	05/05/2008 - 05/06/2008	1
Wheaton 2G	Peaking	Scheduled	Other Gas Turbine Exhaust Problems	05/13/2008 - 05/15/2008	2
Wheaton 3G	Peaking	Scheduled	General Gas Turbine Unit Inspection	05/05/2008 - 05/09/2008	4
Scheduled Outag	jes - Totals			<u></u>	16
Total					93

April 2008

Unit	Type of Plant	Outage Category	Reason for outage	Da	te	Duration (Days)
Angus Anson 2G	Peaking	Maintenance	Motors	04/04/2008 -	04/09/2008	5
Angus Anson 2G	Peaking	Maintenance	Boroscope & Crawl Thru Inspection	04/21/2008 -	04/23/2008	1

Angus Anson 3G	Peaking	Maintenance	CT #3 Boroscope & crawl Thru Inspection	04/22/2008 -	04/24/2008	1
Angus Anson 4	Peaking	Maintenance	CT #4 Boroscope Inspection	04/21/2008 -	04/23/2008	2
Black Dog 3	Steam	Derate	U3 derate due to boiler plugging.	04/10/2008 -	04/17/2008	6
Black Dog 3	Steam	Forced	U3 out due to secondary superheat boiler tube leak	04/17/2008 -	04/24/2008	7
Black Dog 3	Steam	Forced	U3 out due to oil leak in #1 bearing lift oil pipe.	04/24/2008 -	04/28/2008	4
Black Dog 4	Steam	Forced	U4 out due to primary superheat tube leak.	04/25/2008 -	04/28/2008	3
Inver Hills 4G	Peaking	Maintenance	RELAY TESTING	04/02/2008 -	04/05/2008	2
Riverside 7	Steam	Derate	UPS trouble.	04/01/2008 -	04/07/2008	6
Riverside 7	Steam	Forced	Low service line tie-in.	04/07/2008 -	04/08/2008	1
Riverside 7	Steam	Derate	Governor valve problems.	04/08/2008 -	04/18/2008	g
Riverside 7	Steam	Forced	Seal oil system failure.	04/19/2008 -	04/27/2008	7
Riverside 8	Steam	Forced	Slag tap problems.	04/12/2008 -	04/16/2008	4
Riverside 8	Steam	Forced	Coal feeder tripped.	04/20/2008 -	04/22/2008	2
Riverside 8	Steam	Forced	Coal feeder tripped.	04/23/2008 -	04/25/2008	2
Sherburne 1	Steam	Derate	operation	04/24/2008 -	04/27/2008	3
Sherburne 2	Steam	Derate	23 ID fan motor - stator replacement	04/01/2008 -	04/07/2008	6
Willmarth 2	Peaking	Forced	Turbine Failure	04/19/2008 -	04/30/2008	11
Forced Outages -	Totals	-				82
		0		0.4/0.4/0.000	0.4/0.0/0.000	
Allen S King 1	Steam	Scheduled	Scheduled Spring Outage	04/04/2008 -	04/26/2008	22
Black Dog 4	Steam	Scheduled	U4 out for Spring prep.	04/14/2008 -	04/22/2008	7
Blue Lake 7	Peaking	Scheduled	BORESCOPE	04/23/2008 -	04/25/2008	2
French Is 2	RDF	Scheduled	Major Turbine Overhaul	04/01/2008 -	04/30/2008	30
French Is 4	Peaking	Scheduled	Major Overhaul and Generator Re-wind	04/01/2008 -	04/30/2008	30
Inver Hills 1G	Peaking	Scheduled	OUTAGE - RELAY TESTING WO # 2793929	04/07/2008 -	04/08/2008	1
Inver Hills 2G	Peaking	Scheduled	OUTAGE - RELAY TESTING	04/07/2008 -	04/08/2008	1
Inver Hills 2G	Peaking	Scheduled	OUTAGE - OIL SEPERATOR	04/16/2008 -	04/17/2008	1
Inver Hills 3G	Peaking	Scheduled	OVERHAUL	04/01/2008 -	04/30/2008	30
Inver Hills 5G	Peaking	Scheduled	RELAY TESTING WO# 2781269	04/01/2008 -	04/03/2008	2
Inver Hills 6G	Peaking	Scheduled	RELAY TESTING - WO# 2781269	04/01/2008 -	04/03/2008	2
Riverside 7	Steam	Scheduled	Planned outage.	04/29/2008 -	04/30/2008	1
Riverside 8	Steam	Scheduled	Scheduled outage.	04/01/2008 -	04/11/2008	10
Wheaton 1G	Peaking	Scheduled	P.M. OUTAGE	04/21/2008 -	04/25/2008	4
Wheaton 2G	Peaking	Scheduled	PM OUTAGE	04/28/2008 -	04/30/2008	2
Scheduled Outag	jes - Totals	<u> </u>				145
Total						227

March 2008

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	te	(Days)
Allen S King 1	Steam	Forced	coal crusher building explosion and fire	03/10/2008 -	03/21/2008	11
Allen S King 1	Steam	Derate	other.	03/21/2008 -	03/26/2008	4
BD25 CC	CC	Maintenance	Repairs to the static start excitation switch.	03/01/2008 -	03/03/2008	2
BD25 CC	CC	Forced	Environmental Constraints	03/20/2008 -	03/21/2008	1
Black Dog 3	Steam	Derate	U3 derate due to 32 ID fan - reduced to min	03/22/2008 -	03/23/2008	1
Inver Hills 4G	Peaking	Forced	2274042	03/19/2008 -	03/26/2008	7
Prairie Is 1	Nuclear	Forced	the outage.	03/19/2008 -	03/23/2008	4
Prairie Is 1	Nuclear	Derate	preventing full power assention.	03/26/2008 -	03/28/2008	2
Riverside 7	Steam	Forced	Econ tube leak.	03/18/2008 -	03/22/2008	4
Riverside 8	Steam	Derate	Opacity problems.	03/01/2008 -	03/31/2008	31
Sherburne 1	Steam	Forced	severe waterwall tube leak	03/12/2008 -	03/15/2008	2
Sherburne 2	Steam	Derate	only 2 ld fans available	03/22/2008 -	03/23/2008	1
Sherburne 2	Steam	Derate	23 ID fan motor - stator replacement	03/23/2008 -	03/31/2008	8
Forced Outages	- Totals					78
French Is 2	RDF	Scheduled	Major Turbine Overhaul	03/19/2008 -	03/31/2008	12
French Is 4	Peaking	Scheduled	Major Overhaul and Generator Re-wind	03/01/2008 -	03/31/2008	31
Inver Hills 3G	Peaking	Scheduled	OVERHAUL	03/01/2008 -	03/31/2008	31
Inver Hills 4G	Peaking	Scheduled	OUTAGE - HYDRAULIC LEAK WO # 2744313	03/03/2008 -	03/04/2008	1
Prairie Is 1	Nuclear	Scheduled	Unit 1 1R25 Planned refueling Outage	03/01/2008 -	03/19/2008	18

Red Wing 2	RDF	Scheduled	side walls & front wall	03/01/2008 - 03/18/2008	17
Riverside 8	Steam	Scheduled	Scheduled outage.	03/21/2008 - 03/31/2008	10
Sherburne 2	Steam	Scheduled	LP turbine inspection	03/07/2008 - 03/22/2008	14
Wheaton 1G	Peaking	Scheduled	thermol couple in wheel	03/24/2008 - 03/26/2008	2
Scheduled Outages - Totals					
Total					214

## February 2008

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Date		(Days)
AS King	Steam	Derate	NOX Permit limitations	02/11/2008 -	02/22/2008	11
AS King	Steam	Derate	Bag house ash conveying system plugged	02/28/2008 -	02/29/2008	2
Blue Lake 4	Peaking	Forced	REGULATOR FO	02/07/2008 -	02/20/2008	13
Riverside 7	Steam	Forced	Hotwell inspection.	02/23/2008 -	02/25/2008	2
Riverside 8	Steam	Derate	Opacity problems.	02/01/2008 -	02/29/2008	29
Sherco 1	Steam	Derate	relief valve HV RV 1005 lifting prematurely	02/25/2008 -	02/26/2008	1
Forced Outages	Forced Outages					
Inver Hills 3	Peaking	Scheduled	OVERHAUL	02/01/2008 -	02/29/2008	29
Prairie Island 1	Nuclear	Scheduled	Unit 1 1R25 Planned refueling Outage	02/13/2008 -	02/29/2008	16
Red Wing 1	RDF	Scheduled	removal	02/05/2008 -	02/25/2008	19
Red Wing 2	RDF	Scheduled	side walls & front wall	02/17/2008 -	02/29/2008	12
Scheduled Outages						76
Total				_		134

## January 2008

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Date	(Days)	
AS King	Steam	Forced	Slag tap holes froze shut - both plugged solid	01/01/2008 - 0	01/06/2008	4
AS King	Steam	Derate	crusher only available for operation.	01/07/2008 - 0	01/09/2008	2
AS King	Steam	Forced	Slag tank plugged - cannot remove slag.	01/10/2008 - 0	01/15/2008	4
AS King	Steam	Forced	and trip.	01/21/2008 - 0	01/22/2008	1
AS King	Steam	Derate	material ingestion.	01/24/2008 - 0	01/31/2008	7
Black Dog 3	Steam	Maintenance	U3 out for precipitator cleaning	01/22/2008 - 0	01/25/2008	2
Black Dog 3	Steam	Maintenance	U3 out for turning gear tuning	01/25/2008 - 0	01/26/2008	1
Black Dog 4	Steam	Maintenance	U4 out for precipitator cleaning	01/27/2008 - 0	01/30/2008	3
Red Wing 2	RDF	Forced	#21 Traveling grate locked up.	01/19/2008 - 0	01/22/2008	3
Riverside 7	Steam	Derate	Repairs to 72 exhauster.	01/01/2008 - 0	01/02/2008	1
Riverside 7	Steam	Derate	Opacity problems.	01/06/2008 - 0	01/08/2008	2
Riverside 7	Steam	Forced	Reverse air fan repair.	01/08/2008 - 0	01/13/2008	4
Riverside 8	Steam	Forced	81 BFP - 6 pulse.	01/02/2008 - 0	01/07/2008	4
Riverside 8	Steam	Derate	Opaciy problems.	01/17/2008 - 0	01/19/2008	1
Riverside 8	Steam	Derate	Opacity problems.	01/20/2008 - 0	01/31/2008	11
Sherco 1	Steam	Forced	waterwall tube leak repair	01/11/2008 - 0	01/13/2008	1
Forced Outages	,					51
French Island 2	RDF	Scheduled	Condensate Pump Modifications for EPA 316B	01/01/2008 - 0	01/21/2008	20

French Island 2	RDF	Scheduled	Condensate Pump Modifications for EPA 316B	01/01/2008 -	01/21/2008	20
Inver Hills 3	Peaking	Scheduled	OVERHAUL	01/07/2008 -	01/31/2008	24
Inver Hills 6	Peaking	Scheduled	OUT FOR STACK REPAIR	01/01/2008 -	01/03/2008	2
Wilmarth 1	Peaking	Scheduled	Annual Overhaul	01/06/2008 -	01/27/2008	21
Wilmarth 2	Peaking	Scheduled	Annual Overhaul	01/13/2008 -	01/28/2008	14
Scheduled Outages					81	
Total						132

#### December 2007

	Type of	Outage				Duration	
Unit	Plant	Category	Reason for outage	Da	te	(Days)	
AS King	Steam	Forced	Both slag necks and slag tank plugged	12/01/2007 -	12/04/2007	3	
AS King	Steam	Derate	Lack of fuel coal conservation	12/04/2007 -	12/11/2007	7	
AS King	Steam	Derate	Coal conservation	12/11/2007 -	12/15/2007	4	
AS King	Steam	Derate	Coal Conservation	12/15/2007 -	12/18/2007	3	
AS King	Steam	Forced	Coal silo explosion	12/18/2007 -	12/23/2007	4	
AS King	Steam	Derate	Coal COnservation	12/23/2007 -	12/31/2007	8	
Black Dog 3	Steam	Forced	U3 Water wall tube leak	12/01/2007 -	12/02/2007	1	
Blue Lake 4	Peaking	Forced	PRESSURE REGULATOR F.0	12/04/2007 -	12/20/2007	15	
French Island 4	Peaking	Forced	Flow divider turns hard and will not allow full fuel flow	12/01/2007 -	12/11/2007	10	
French Island 4	Peaking	Forced	Flow Divider Not Working Properly.	12/11/2007 -	12/13/2007	1	
Inver Hills 5	Peaking	Forced	FORCED OUTAGE - STACK DAMAGE	12/18/2007 -	12/28/2007	10	
Prairie Island 1	Nuclear	Forced	D2 out of service.	12/21/2007 -	12/24/2007	3	
Red Wing 2	RDF	Forced	needed explosive cleaning.	12/15/2007 -	12/21/2007	5	
Riverside 7	Steam	Derate	Repairs to 72 exhauster.	12/29/2007 -	12/31/2007	2	
Riverside 8	Steam	Forced	Drop 21 power supply failure.	12/01/2007 -	12/05/2007	4	
Riverside 8	Steam	Derate	83 coal feeder plugged.	12/05/2007 -	12/17/2007	11	
Riverside 8	Steam	Forced	82 BFP trip.	12/17/2007 -	12/20/2007	3	
Riverside 8	Steam	Forced	Clean slag tanks.	12/25/2007 -	12/28/2007	3	
Sherco 1	Steam	Forced	Waterwall tube leak repair	12/10/2007 -	12/13/2007	2	
Sherco 2	Steam	Forced	Pendent Platen tube leak repair	12/14/2007 -	12/17/2007	3	
Forced Outages						102	
French Island 2	RDF	Scheduled	316b	12/01/2007 -	12/31/2007	31	
Inver Hills 1	Peaking	Scheduled	PLANNED OUTAGE - STACK	12/10/2007 -	12/13/2007	3	
Inver Hills 2	Peaking	Scheduled	STACK	12/13/2007 -	12/17/2007	4	
Inver Hills 4	Peaking	Scheduled	PLANNED OUTAGE - STACK REPAIR	12/18/2007 -	12/19/2007	1	
Sherco 1	Steam	Extension	LP turbine rotor crack repair	12/01/2007 -	12/05/2007	4	
Scheduled Outag	Scheduled Outages					43	
Total	Total						

## November 2007

				•		
	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Date		(Days)
Anson 2	Peaking	Maintenance	Transformer & Relay Maintenance & Doble testing	11/01/2007 - 1	1/09/2007	8
Anson 2	Peaking	Maintenance	Combustor Air Leak on # 13 Nozzle	11/26/2007 - 1	1/28/2007	2
Anson 3	Peaking	Maintenance	Transformer & Relay Maintenance & Doble testing	11/01/2007 - 1	1/02/2007	1
Anson 3	Peaking	Maintenance	Relay maintenance	11/12/2007 - 1	1/16/2007	4
AS King	Steam	Forced	Slag tap holes both plugged	11/13/2007 - 1	1/16/2007	2
AS King	Steam	Forced	Both slag necks and slag tank plugged	11/27/2007 - 1	1/30/2007	3
Black Dog 4	Steam	Forced	U4 Reheat Tube Leak	11/25/2007 - 1	1/27/2007	2
French Island 4	Peaking	Forced	Flow divider turns hard and will not allow full fuel flow	11/09/2007 - 1	1/30/2007	21
Inver Hills 1	Peaking	Forced	TRANSFORMER TROUBLE	11/21/2007 - 1	1/30/2007	8
Inver Hills 2	Peaking	Forced	TRANSFORMER TROUBLE	11/21/2007 - 1	1/30/2007	8
Inver Hills 4	Peaking	Forced	Forced Out	11/09/2007 - 1	1/13/2007	4
Monticello	Nuclear	Derate	Power Suppression testing	11/09/2007 - 1	1/12/2007	2
Red Wing 2	RDF	Forced	Superheat tube leak follwed by BFP problems.	11/09/2007 - 1	1/14/2007	4
Riverside 8	Steam	Maintenance	River dredging.	11/01/2007 - 1	1/03/2007	2
Riverside 8	Steam	Forced	Drop 21 power supply failure.	11/29/2007 - 1	1/30/2007	1
Sherco 2	Steam	Forced	Tube leak repair and ventilator valve repair	11/24/2007 - 1	1/27/2007	2
Forced Outages						74
AS King	Steam	Scheduled	Turbine supervisory controls integration testing	11/16/2007 - 1	1/23/2007	7
Blue Lake 7	Peaking	Scheduled	PLANNED OUTAGE	11/01/2007 - 1	1/02/2007	1
French Island 2	RDF	Scheduled	316b	11/01/2007 - 1	1/30/2007	29
Riverside 7	Steam	Scheduled	Scheduled boiler outage.	11/01/2007 - 1	1/10/2007	9
Sherco 1	Steam	Scheduled	Major Unit Outage	11/01/2007 - 1	1/09/2007	8
Wheaton 4	Peaking	Scheduled	Rewire gas control	11/13/2007 - 1	1/16/2007	3
Scheduled Outages						
Total						

#### October 2007

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	te	(Days)
Anson 2	Peaking	Forced	next week.	10/26/2007 -	10/29/2007	2
Anson 2	Peaking	Maintenance	Transformer Maintenance & Doble testing	10/29/2007 -	10/31/2007	2
Anson 3	Peaking	Maintenance	Transformer Maintenance & Doble testing	10/29/2007 -	10/31/2007	2
AS King	Steam	Forced	boiler controls issues	10/17/2007 -	10/22/2007	4
French Island 1	RDF	Maintenance	Balance Unit 1 Turbine-Generator	10/01/2007 -	10/05/2007	3
French Island 3	Peaking	Maintenance	Replace Inlet Stacks	10/18/2007 -	10/25/2007	7
French Island 4	Peaking	Maintenance	Replace inlet stack	10/25/2007 -	10/30/2007	5
Inver Hills 1	Peaking	Forced	FAILED TO LIGHT	10/14/2007 -	10/17/2007	2
Prairie Island 1	Nuclear	Derate	condenser cleaning	10/13/2007 -	10/14/2007	1
Riverside 8	Steam	Forced	Ash sluice pump failure.	10/08/2007 -	10/11/2007	2
Riverside 8	Steam	Maintenance	River dredging.	10/27/2007 -	10/31/2007	4
Wheaton 1	Peaking	Forced	Vibration Monitors	10/30/2007 -	10/31/2007	1
Wilmarth 1	Peaking	Forced	Scren Tube Leak	10/13/2007 -	10/17/2007	3
Wilmarth 2	Peaking	Forced	Screen Tube Leak	10/23/2007 -	10/27/2007	3
Forced Outages						41
AS King	Steam	Scheduled	Startup Valve Failure	10/01/2007 -	10/15/2007	14
AS King	Steam	Scheduled	tuning of furnace	10/26/2007 -	10/31/2007	5
Black Dog 3	Steam	Scheduled	prep	10/02/2007 -	10/11/2007	8
Black Dog 4	Steam	Scheduled	prep	10/03/2007 -	10/12/2007	9
Black Dog 5/2	CC	Scheduled	prep	10/03/2007 -	10/11/2007	8
Blue Lake 7	Peaking	Scheduled	PLANNED OUTAGE	10/06/2007 -	10/31/2007	25
French Island 2	RDF	Scheduled	316b	10/05/2007 -	10/31/2007	26
Inver Hills 1	Peaking	Scheduled	PLANNED OUTAGE - PUVGOE VALVE W.O. 2587593	10/25/2007 -	10/26/2007	1
Riverside 7	Steam	Scheduled	Scheduled boiler outage.	10/27/2007 -	10/31/2007	4
Sherco 1	Steam	Scheduled	Major Unit Outage	10/01/2007 -	10/31/2007	31
Scheduled Outages						
Total				·		172

## September 2007

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	te	(Days)
Anson 2	Peaking	Forced	Crawl Thru Inspection & Replace # 13 Basket	09/20/2007 -	09/21/2007	1
Anson 3	Peaking	Forced	Loss of Water Injection Pump	09/03/2007 -	09/05/2007	1
Inver Hills 1	Peaking	Forced	FORCED OUTAGE~EXHAUST PANEL	09/26/2007 -	09/30/2007	4
Inver Hills 4	Peaking	Forced	NO TRIP~CAME OFFLINE & SHUTDOWN	09/04/2007 -	09/14/2007	9
Inver Hills 4	Peaking	Forced	CAME OFFLINE~NO TRIP	09/21/2007 -	09/27/2007	6
Prairie Island 2	Nuclear	Maintenance	adjustment	09/29/2007 -	09/30/2007	1
Prairie Island 2	Nuclear	Maintenance	tubesheet fouling normal wear-cleaned tubesheet	09/29/2007 -	09/30/2007	1
Riverside 8	Steam	Forced	Boiler tube leak.	09/09/2007 -	09/16/2007	6
Wheaton 4	Peaking	Forced	Loss of flame	09/01/2007 -	09/05/2007	4
Wheaton 4	Peaking	Forced	Oil pump calibrations	09/05/2007 -	09/17/2007	11
Forced Outages						44
AS King	Steam	Scheduled	Startup valve failure	09/06/2007 -	09/10/2007	4
AS King	Steam	Scheduled	Slag Tap Holes plugged	09/17/2007 -	09/21/2007	4
AS King	Steam	Scheduled	Startup Valve Failure	09/22/2007 -	09/30/2007	8
Granite City 3	Peaking	Scheduled	Generator Neutral Grounding	09/10/2007 -	09/13/2007	3
Granite City 4	Peaking	Scheduled	Generator Neutral Grounding	09/10/2007 -	09/13/2007	3
Sherco 1	Steam	Scheduled	Major Unit Outage	09/21/2007 -	09/30/2007	9
Wheaton 1	Peaking	Scheduled	Turning gear leak	09/04/2007 -	09/06/2007	2
Wilmarth 1	Peaking	Scheduled	Outage	09/09/2007 -	09/15/2007	5
Wilmarth 2	Peaking	Scheduled	Outage	09/03/2007 -	09/13/2007	10
Scheduled Outages						
Total						92

## August 2007

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage	Da	te	(Days)
AS King	Steam	Forced	Boiler controls issues	08/16/2007 -	08/24/2007	8
Black Dog 3	Steam	Forced	U3 Generator Rotor Ground	08/01/2007 -	08/29/2007	28

Total						110
Concadied Out	1900					_
High Bridge 6 Scheduled Outa	Steam	Scheduled	# 6 Unit Permanently Retured from Service.	08/30/2007 -	08/31/2007	1
Blue Lake 4	Peaking	Scheduled	FUEL OIL REGULATOR	08/27/2007 -	08/28/2007	1
AS King	Steam	Scheduled	Both Slag tap holes froze shut	08/01/2007 -	08/03/2007	2
Forced Outages						106
Wheaton 4	Peaking	Forced	Loss of flame	08/29/2007 -	08/31/2007	1
Riverside 8	Steam	Forced	Leak in 10th stage extraction line.	08/29/2007 -	08/31/2007	2
Riverside 8	Steam	Maintenance	81 econ ash hopper plugged.	08/03/2007 -	08/06/2007	2
Riverside 7	Steam	Forced	Boiler tube leak.	08/07/2007 -	08/10/2007	3
Red Wing 2	RDF	Forced	Superheat tube leak.	08/20/2007 -	08/24/2007	3
Inver Hills 4	Peaking	Forced	TRIP FIRE ON GEN.BASE TRIP	08/14/2007 -	08/15/2007	1
Inver Hills 2	Peaking	Forced	COMPT.	08/25/2007 -	08/31/2007	6
Inver Hills 1	Peaking	Forced	PANEL CAME LOOSE, INSULATION BLOWING OUT	08/03/2007 -	08/07/2007	4
High Bridge 6	Steam	Derate	Only # 63 BFP Available (#62 Out and # 61 Failed)	08/22/2007 -	08/30/2007	7
High Bridge 6	Steam	Derate	Only # 63 BFP Availabel (#62 Out # 61 Failed)	08/20/2007 -	08/22/2007	2
High Bridge 6	Steam	Forced	# 6 Unit Off-Line, High River Temp. & Low Flow	08/08/2007 -	08/20/2007	11
High Bridge 6	Steam	Maintenance	# 6 Condenser Tube Leak Repairs	08/05/2007 -	08/08/2007	3
High Bridge 5	Steam	Maintenance	# 5 Attemperator Header Valve Leak	08/18/2007 -	08/23/2007	5
High Bridge 5	Steam	Derate	# 5 Unit Load Limited for Reliability	08/06/2007 -	08/18/2007	12
High Bridge 5	Steam	Forced	# 5 Unit Off-Line, High River Temp. and Low Flow	08/01/2007 -	08/06/2007	5
Black Dog 4	Steam	Derate	U4 derate due to high ID fan vibration.	08/13/2007 -	08/17/2007	3

July 2007

	Type of	Outage	<u> </u>			Duration
Unit	Plant		Pencen for outage	Da	<b>t</b> o	(Days)
	Steam	Category Derate	Reason for outage U3 derate to 67MW due to condensor fouling	07/16/2007 -	07/23/2007	· • •
Black Dog 3		Derate		07/16/2007 -	07/23/2007	6
Black Dog 3	Steam	Forced	U3 derate to 72MW due to condensor fouling U3 Generator Rotor Ground	07/30/2007 -	07/30/2007	7
Black Dog 3	Steam	Derate		07/16/2007 -	07/31/2007	1
Black Dog 4	Steam	Maintenance	U4 derate to 145MW due to condensor fouling. Cleanout and shoot U4 condensor.	07/16/2007 -	07/29/2007	11
Black Dog 4	Steam	Forced	EXCITER	07/25/2007 -	07/29/2007	1
Blue Lake 7	Peaking RDF	Forced	Forced Draft Fan 4160 V Breaker Failure.	07/19/2007 -	07/30/2007	4
French Is 2				07/18/2007 -	07/31/2007	11
Granite City 2	Peaking	Forced	AC Lube oil pump motor # 5 Condenser Tube Leak			2
HighBridge 5	Steam	Forced		07/04/2007 -	07/05/2007	1
HighBridge 5	Steam	Derate	# 5 Unit Load Limited for Reliability	07/05/2007 -	07/24/2007	18
HighBridge 5	Steam	Forced	# 5 Unit Off-Line, High River Temp. and Low Flow	07/24/2007 -	07/31/2007	7
HighBridge 6	Steam	Forced	# 6 Boiler Waterwall Tube Leak	07/17/2007 -	07/20/2007	3
HighBridge 6	Steam	Forced	# 6 Unit Off-Line, High River Temp. and Low Flow	07/27/2007 -	07/31/2007	4
Inver Hills 4G	Peaking	Forced	FORCED OUT COLLECTOR RING	07/25/2007 -	07/30/2007	4
Inver Hills 5G	Peaking	Forced	FORCED OUT EXHAUST PANELS	07/19/2007 -	07/20/2007	1
Red Wing 1	RDF	Maintenance	Hotwell pump failure.	07/08/2007 -	07/14/2007	6
Red Wing 2	RDF	Forced	Turbine aux oil pump stopped working.	07/23/2007 -	07/26/2007	3
Riverside 7	Steam	Forced	EH fluid leak - unit trip.	07/01/2007 -	07/02/2007	1
Riverside 7	Steam	Derate	River temp.s	07/07/2007 -	07/10/2007	2
Riverside 7	Steam	Derate	River temps.	07/20/2007 -	07/21/2007	1
Riverside 7	Steam	Forced	Attemperator leak.	07/21/2007 -	07/23/2007	1
Riverside 8	Steam	Forced	River temps.	07/09/2007 -	07/15/2007	5
Riverside 8	Steam	Derate	River temps.	07/19/2007 -	07/20/2007	1
Sherburne 1	Steam	Forced	Waterwall tube leak repair	07/03/2007 -	07/04/2007	1
Wheaton 2G	Peaking	Forced	Fuel oil problem	07/03/2007 -	07/20/2007	17
Wheaton 2G	Peaking	Forced	Fuel oil problem	07/24/2007 -	07/27/2007	3
Wheaton 2G	Peaking	Forced	Fuel oil problem	07/27/2007 -	07/30/2007	2
Forced Outages -	· Totals					124
		1			1	
Allen S King 1	Steam	Scheduled	Startup valve failure	07/01/2007 -	07/03/2007	2
Allen S King 1	Steam	Scheduled	Startup valve failure	07/03/2007 -	07/05/2007	1
Allen S King 1	Steam	Scheduled	Unit trip from Low Control Oil Pressure	07/06/2007 -	07/09/2007	2
Allen S King 1	Steam	Scheduled	startup valve failure	07/17/2007 -	07/23/2007	6
Allen S King 1	Steam	Scheduled	startup valve failure	07/23/2007 -	07/25/2007	1
Allen S King 1	Steam	Scheduled	Both Slag tap holes froze shut	07/30/2007 -	07/31/2007	1

Norhtern States Power Company, a Minnesota corporation Monthly Outage Data - 2007 Docket No. E999/AA-13-599 Reply Comments Attachment E - 41 of 41

Scheduled Outages - Totals	13
Total	137

	Type of	Outage				Duration
Unit	Plant	Category	Reason for outage		Date	(Days)
Red.Wing.1	RDF	Forced	SUPER HEAT TUBE LEAK.	6/25/2007 22:00	- 6/27/2007 5:00	1
Red.Wing.1	RDF	Forced	SUPER HEAT TUBE LEAK.	6/13/2007 6:00	- 6/15/2007 2:00	2
Willmarth.2	Peaking	Forced	SH TUBE LEAK	6/10/2007 13:32	- 6/13/2007 1:12	2
Red.Wing.2	RDF	Forced	WATERWALL TUBE LEAK	6/5/2007 19:00	- 6/7/2007 3:00	1
Sherburne.3	Steam	Forced	POSSIBLE TUBE LEAK - NONE FOUND	5/24/2007 3:14	- 5/26/2007 18:04	3
Granite.City.4	Peaking	Forced	GLYCOL SYSTEM LEAK	5/17/2007 7:00	- 5/24/2007 16:00	7
Prairie.Island.1	· ·	Forced	FORCED OUTAGE EXTENSION-11 TURBINE OIL LIFT PUMP FAILURE.	5/17/2007 2:00	- 5/19/2007 15:15	3
Black.Dog.3	Steam	Forced	UNIT 3 SECONDARY SUPERHEATER TUBE LEAK REPAIRS	5/16/2007 16:32	- 5/22/2007 6:04	6
Sherburne.1	Steam	Forced	TUBE LEAK REPAIR	5/14/2007 10:37	- 5/16/2007 21:47	2
Black.Dog.4	Steam	Forced	UNIT 4 SUPERHEATER LEAK REPAIRS.	5/13/2007 11:00	- 5/15/2007 2:47	2
Red.Wing.1	RDF	Forced	SUPERHEAT TUBE LEAK	5/12/2007 7:35	- 5/14/2007 7:00	2
Prairie.Island.1		Forced	UNIT 1 OFF LINE FOR REPAIRS TO12 FEEDWATER PUMP.	5/11/2007 3:43	- 5/17/2007 2:00	6
Angus.Anson.4	J	Forced	FOUND GAS LEAK ON LINE AND STRAINER	5/9/2007 18:00	- 5/10/2007 13:05	1
Angus.Anson.4	Peaking	Forced	SEMI-ANNUAL FIRE INSPECTION	5/9/2007 6:00	- 5/9/2007 18:00	1
Red.Wing.1	RDF	Forced	SCREEN TUBE LEAK	5/8/2007 12:30	- 5/11/2007 3:00	3
Blue.Lake.2	Peaking	Forced	OIL VAPOR MOTOR	5/8/2007 7:32	- 6/4/2007 7:00	27
Black.Dog.3	Steam	Forced	UNIT 3 REHEAT TUBE LEAK REPAIR	5/7/2007 20:53	- 5/9/2007 13:38	2
Inver.Hills.4G	Peaking	Forced	FORCED OUT-NO ALARMS OR TRIPS	5/7/2007 12:52	- 5/9/2007 16:00	2
Sherburne.1	Steam	Forced	BOILER ASH BRIDGE REMOVAL	5/4/2007 1:40	- 5/8/2007 6:45	4
Willmarth.2	Peaking	Forced	REPLACE O.F. FAN BEARING	5/2/2007 18:17	- 5/4/2007 1:00	1
Black.Dog.4	Steam	Forced	UNIT 4 OUT FOR U3 GSU REPLACEMENT	5/2/2007 1:55	- 5/3/2007 16:32	2
Sherburne.3	Steam	Forced	ISOPHASE BUS REPAIRS	4/26/2007 16:14	- 5/1/2007 14:15	5
Red.Wing.1	RDF	Forced	WATERWALL TUBE LEAK	4/18/2007 23:02	- 4/20/2007 9:00	1
Monticello.1	Nuclear	Forced	UNPLANNED EXTENSION TO RFO23	4/17/2007 0:06	- 4/28/2007 18:37	12
Red.Wing.1	RDF	Forced	SUPERHEAT TUBE LEAK	4/16/2007 8:30	- 4/18/2007 2:00	2
Black.Dog.4	Steam	Forced	U4 OFFLINE FOR REQUIRED ELECTRICAL SWITCHING	4/13/2007 0:40	- 4/15/2007 12:20	2
Red.Wing.2 BD25.CC	RDF Steam	Forced Forced	HIGH PRESSURE TURBINE BEARING FAILURE.  U2 ROTOR GROUND ALARM < 4 MEGAHOMS GROUND -	4/11/2007 11:00 4/9/2007 5:10	- 6/1/2007 17:00 - 6/4/2007 17:38	51 57
Prairie.Island.2		Forced	REPAIR AUTOMATIC REACTOR TRIP. PERFORMTROUBLE SHOOTING AND REPAIRS.	4/5/2007 9:08	- 4/8/2007 7:45	37
Red.Wing.1	RDF	Forced	SUPERHEAT TUBE LEAK.	3/30/2007 13:00	- 4/1/2007 3:00	2
Angus.Anson.4		Forced	BUSHING WORK	3/26/2007 6:00	- 3/28/2007 17:00	2
Inver.Hills.5G	Peaking	Forced	FORCED OUT-EXHAUST PLENUM FAILURE	3/22/2007 8:55	- 3/27/2007 9:00	5
Black.Dog.3	Steam	Forced	WATERWALL TUBE LEAK ON UNIT 3,MAINTENANCE REPAIRED.	3/19/2007 12:40	- 3/21/2007 22:20	2
Inver.Hills.4G	Peaking	Forced	CAME OFFLINE AGAIN-FORCED OUT	3/16/2007 7:11	- 3/18/2007 5:38	2
Sherburne.1	Steam	Forced	MULTIPLE TUBE LEAK REPAIRS	3/16/2007 0:03	- 3/20/2007 5:33	4
Willmarth.1	Peaking	Forced	SH TUBE LEAK	3/13/2007 11:55	- 3/15/2007 1:06	2
Red.Wing.1	RDF	Forced	WATERWALL TUBE LEAK.	3/6/2007 15:12	- 3/8/2007 7:00	2
Angus.Anson.2	Peaking	Forced	GAS LEAK IN TURBINE ENCLOSURE	3/5/2007 11:10	- 3/6/2007 18:00	1
Red.Wing.1	RDF	Forced	WATERWALL TUBE LEAK.	3/4/2007 16:00	- 3/6/2007 11:00	2
BD25.CC	Steam	Forced	UNIT STARTED ON 4TH ATTEMPT DUETO HIGH BLADE PATH SPREAD DIFF TEMPS.	2/26/2007 2:27	- 2/27/2007 20:30	2
Inver.Hills.2G	Peaking	Forced	OTHER GAS TURBINE COMBUSTOR PROBLEMS	2/25/2007 12:59	- 2/26/2007 12:59	1
Angus.Anson.3	Peaking	Forced	LOSS OF JACKING OIL PUMP MOTORBEARING. CANNOT OPERATE TURNING GEAR WITHOUT IT.	2/24/2007 22:00	- 3/2/2007 14:00	6
Angus.Anson.4	Peaking	Forced	NOX ANALYZER EXPERIENCING TECHNICAL DIFFICULTIES	2/23/2007 19:00	- 2/26/2007 16:30	3
Blue.Lake.8	Peaking	Forced	OTHER AC INSTRUMENT POWER PROBLEMS	2/23/2007 16:20	- 2/26/2007 18:50	3
Red.Wing.2	RDF	Forced	WATERWALL TUBE LEAK.	2/20/2007 7:30	- 2/21/2007 14:00	1
Inver.Hills.5G	Peaking	Forced	GAS TURBINE - EXHAUST SYSTEM CHAMBER	2/19/2007 11:30	- 2/21/2007 10:40	2
Inver.Hills.3G	Peaking	Forced	GAS TURBINE - ATOMIZING AIR SYSTEM	2/19/2007 7:58	- 2/20/2007 9:30	1
Inver.Hills.6G	Peaking	Forced	GAS TURBINE - EXHAUST SYSTEM CHAMBER	2/15/2007 10:30	- 2/20/2007 9:00	5
Inver.Hills.4G	Peaking	Forced	GAS TURBINE - OIL VAPOR EXTRACTOR	2/14/2007 16:50	- 2/16/2007 16:00	2

		Fd	THERMOSTAT STK/EXH.FAN COLD AIROVR WATR INJ.	0/44/0007 00:50	0/40/0007 4:00	
Angus.Anson.3		Forced	RING ICE IN FLEX LNS TO UNIT-WATR RING	2/11/2007 23:50	- 2/13/2007 4:00	1
Key.City.1	Peaking	Forced		2/6/2007 21:25	- 3/7/2007 10:07	29
Red.Wing.2	RDF	Forced	SUPERHEAT TUBE LEAK	2/5/2007 15:00	- 2/7/2007 6:30	2
Sherburne.1	Steam	Forced	WATERWALL TUBE LEAK REPAIR	2/4/2007 0:06	- 2/7/2007 2:57	3
Blue.Lake.3	Peaking	Forced		2/3/2007 17:35	- 2/11/2007 19:00	8
Inver.Hills.1G	Peaking	Forced	GAS TURBINE LIQUID FUEL OIL PUMP	1/29/2007 10:30	- 2/1/2007 0:00	3
Black.Dog.3	Steam	Forced	REHEAT TUBE LEAK IN REHEAT SECTION	1/27/2007 0:01	- 1/30/2007 16:20	4
Willmarth.1	Peaking	Forced	TUBE LEAK MEMBRANE WALL	1/26/2007 22:10	- 1/28/2007 0:03	1
Black.Dog.4	Steam	Forced	MAINTENANCE OUTAGE TO REPAIR REHEAT TUBE LEAK.	1/24/2007 0:01	- 1/27/2007 4:14	3
BD25.CC	Steam	Forced	OUTAGE TO REPAIR SEVERAL MAINTENANCE ITEMS AND REPLACE AIR INTAKE FILTERS.	1/20/2007 0:40	- 1/22/2007 1:32	2
Inver.Hills.1G	Peaking	Forced	GAS TUBINE - LIQUID FUEL OILS PUMP	1/17/2007 20:17	- 1/21/2007 16:10	4
Monticello.1	Nuclear	Forced	UNPLANNED SHUTDOWN	1/10/2007 15:28	- 1/24/2007 12:52	14
Red.Wing.2	RDF	Forced	DUCT SCRUBBER ASH PLUG	1/4/2007 22:00	- 1/6/2007 11:00	2
Willmarth.2	Peaking	Forced	TUBE LEAK MEMBRANE WALL	1/3/2007 22:40	- 1/5/2007 1:05	1
Sherburne.1	Steam	Forced	WATERWALL TUBE LEAK REPAIR		- 12/24/2006 6:13	1
Red.Wing.1	RDF	Forced	WATERWALL TUBE LEAK.		- 12/23/2006 15:00	2
Willmarth.1	Peaking	Forced			- 12/17/2006 12:30	1
Sherburne.2	Steam	Forced			- 11/26/2006 1:18	1
Red.Wing.1	RDF	Forced		11/19/2006 8:00	- 11/20/2006 15:00	1
Red.Wing.2	RDF	Forced			- 11/19/2006 12:00	3
Willmarth.1	Peaking	Forced			- 11/23/2006 0:23	12
Willmarth.2	Peaking	Forced	CLEAN CONDENSER		- 11/23/2006 0:24	12
Willmarth.2	Peaking	Forced	RIVER DIVERSION DIKE REPAIR	11/7/2006 22:32	- 11/9/2006 14:00	2
Willmarth.1	Peaking	Forced		11/7/2006 20:05	- 11/9/2006 14:00	2
Black.Dog.4	Steam	Forced	#4 TAKEN OUT OF SERVICE DUE TOLOW RIVER FLOW = INCREASED TEMPS.	11/6/2006 15:30	- 11/10/2006 13:00	4
Willmarth.1	Peaking	Forced	SCREEN TUBE BLOW	11/4/2006 1:15	- 11/5/2006 16:10	2
Willmarth.1	Peaking	Forced	GRATE 11 JAM	10/28/2006 17:30	- 10/29/2006 19:01	1
Red.Wing.2	RDF	Forced	AUGER STUB SHAFT BROKEN	10/23/2006 23:50	- 10/25/2006 2:00	1
Granite.City.4	Peaking	Forced	LUBE OIL HEATER FAILURE	10/12/2006 9:00	- 10/13/2006 16:00	1
Granite.City.1	Peaking	Forced	GENERATOR HEATER FAILURE	10/5/2006 14:00	- 10/13/2006 18:00	8
Red.Wing.2	RDF	Forced	SUPERHEAT TUBE LEAK.	10/2/2006 7:30	- 10/4/2006 21:00	3
Angus.Anson.3	Peaking	Forced	REPLACE FAILED GENERATOR HEATERIN #3.	10/1/2006 6:00	- 10/7/2006 17:00	6
Black.Dog.3	Steam	Forced	#3 BLEW A SUPERHEATER TUBE LEAK- REPAIRED.	9/28/2006 9:40	- 10/1/2006 3:58	3
Red.Wing.2	RDF	Forced	SUPERHEAT TUBE LEAK.	9/24/2006 8:08	- 9/25/2006 21:00	2
Red.Wing.1	RDF	Forced	WATERWALL TUBE LEAK.	9/22/2006 15:50	- 11/5/2006 11:30	44
Red.Wing.2	RDF	Forced	WATERWALL TUBE LEAK.	9/20/2006 23:23	- 9/23/2006 7:00	2
Red.Wing.2	RDF	Forced	WATERWALL TUBE LEAK.	9/18/2006 18:30	- 9/20/2006 2:00	1
Red.Wing.1	RDF	Forced	ASH BED GRATES JAMMED.	9/18/2006 7:00	- 9/19/2006 21:00	2
Red.Wing.1	RDF	Forced	WATERWALL TUBE LEAK.	9/12/2006 11:40	- 9/14/2006 4:00	2
Red.Wing.2	RDF	Forced	SUPERHEATER TUBE LEAK.	9/7/2006 0:30	- 9/9/2006 14:00	3
Red.Wing.1	RDF	Forced	SUPERHEATER TUBE LEAK.	9/2/2006 22:00	- 9/4/2006 21:00	2
Red.Wing.2	RDF	Forced	SUPERHEATER TUBE LEAK.	9/2/2006 11:12	- 9/4/2006 7:00	2
Red.Wing.1	RDF	Forced	SUPER HEAT TUBE LEAK.	9/1/2006 5:30	- 9/2/2006 20:00	2
Sherburne.3	Steam	Forced	TUBE LEAK REPAIRS	8/27/2006 6:00	- 8/30/2006 19:50	4
Allen.S.King.1	Steam	Forced	WET COAL MERP START	8/25/2006 2:12	- 9/1/2006 0:00	7
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	8/24/2006 20:05	- 8/26/2006 1:00	1
Sherburne.3	Steam	Forced	SSG RV 3017 REPAIRS	8/24/2006 3:14	- 8/27/2006 6:00	3
Sherburne.1	Steam	Forced	SUPERHEAT TUBE LEAK REPAIR	8/19/2006 16:25	- 8/21/2006 9:45	2
Black.Dog.3	Steam	Forced	MAINTENANCE OUTAGE TO REPAIR REHEAT TUBE LEAK.	8/19/2006 1:09	- 8/25/2006 3:43	6
Angus.Anson.3	Peaking	Forced	HELD #3 TO WORK ON #2	8/17/2006 6:00	- 8/17/2006 18:27	1
Angus.Anson.2		Forced	GEN. BUSHING ON # 2 GENERATOR BREAKER OVERHEATING,FAILED INFRARED TEST.	8/16/2006 14:27	- 8/28/2006 8:00	12
Granite.City.3	Peaking	Forced	GENERATOR PROTECTION RELAY	8/16/2006 10:00	- 8/18/2006 12:00	2
Sherburne.1	Steam	Forced	SUPERHEAT TUBE LEAK REPAIR	8/16/2006 0:55	- 8/19/2006 7:58	3
Willmarth.1	Peaking	Forced	OFA BEARING REPLACE AND VIB ANALYSIS	8/15/2006 9:25	- 8/17/2006 1:30	2
Allen.S.King.1	Steam	Forced	BOTH SLAG TAP HOLE PLUGGED	8/11/2006 17:25	- 8/16/2006 13:33	5

			MAINTENANCE OUTAGE TO REPAIR #41 PRIMARY AIR			
Black.Dog.4	Steam	Forced	FAN.	8/11/2006 1:19	- 8/14/2006 0:59	3
Willmarth.1	Peaking	Forced	C9 WEARPLATE BROKE LOOSE	8/8/2006 21:20	- 8/10/2006 1:00	1
Willmarth.2	Peaking	Forced	C9 WEARPLATE BROKE LOOSE	8/8/2006 21:20	- 8/10/2006 1:00	1
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	8/3/2006 18:05	- 8/5/2006 1:08	1
Red.Wing.2	RDF	Forced	CONDENSOR PLUGGING FROM LOW RIVER WATER LEVEL.	8/2/2006 21:00	- 8/3/2006 22:00	1
Granite.City.2	Peaking	Forced	CURRENT TRANSFORMER GROUND	7/31/2006 9:45	- 8/15/2006 12:00	15
Willmarth.1	Peaking	Forced	HIGH RIVER TEMPS	7/29/2006 15:40	- 7/31/2006 15:15	2
Willmarth.2	Peaking	Forced	HIGH RIVER TEMPS	7/29/2006 15:40	- 7/31/2006 15:15	2
Red.Wing.1	RDF	Forced	WATER WALL TUBE LEAK.	7/28/2006 4:00	- 7/30/2006 4:00	2
Red.Wing.1	RDF	Forced	WATER WALL TUBE LEAK.	7/23/2006 21:13	- 7/27/2006 2:00	3
Willmarth.1	Peaking	Forced	CLEAN CONDENSER	7/21/2006 22:45	- 7/23/2006 1:00	1
Allen.S.King.1	Steam	Forced	HIGH FEEDWATER MAKEUP	7/18/2006 14:03	- 7/23/2006 7:59	5
Red.Wing.1	RDF	Forced	WATER WALL TUBE LEAK	7/16/2006 15:15	- 7/18/2006 2:00	1
Angus.Anson.4		Forced	CLOSED COOLING LOOP FANS 1 & 2APPEAR TO HAVE HAD THE BELTS COME OFF THE PULLEY	7/10/2006 6:00	- 7/10/2006 19:30	1
Red.Wing.1	RDF	Forced	TRAVELING GRATES NOT TRACKING CORRECTLY.	6/24/2006 10:00	- 6/26/2006 2:00	2
Willmarth.2	Peaking	Forced	TUBE LEAK SCREEN AND DRUM CROSSOVERS UNDER W STEAM DRUM	6/23/2006 5:00	- 6/25/2006 16:40	2
Sherburne.1	Steam	Forced	WATERWALL TUBE LEAK REPAIR	6/22/2006 0:29	- 6/23/2006 18:57	2
Angus.Anson.2		Forced	WATER INJECTION FLOW TRANSMITTER APPEARS TO BE GIVING AN INACCURATE READING.	6/21/2006 6:00	- 6/22/2006 6:00	1
	Steam	Forced	REHEAT SUPERHEAT TUBE LEAKS	6/17/2006 22:54	- 6/24/2006 19:56	7
Willmarth.2	Peaking	Forced	TUBE LEAK MEMBRANE WALL	6/14/2006 21:20	- 6/16/2006 1:00	1
Red.Wing.1	RDF	Forced	HOT WELL PUMP MECHANICAL SEAL PROBLEM.	6/12/2006 0:05	- 6/15/2006 5:00	3
· ·	RDF	Forced	TUBE LEAK RUPTURE.	6/7/2006 17:15	- 6/10/2006 2:00	2
Red.Wing.2 Sherburne.1		Forced			- 6/8/2006 14:45	2
Silerburne.1	Steam		WATERWALL TUBE LEAK REPAIR REACTOR TRIP-FAILED CABLE/CONNECTOR TO	6/6/2006 22:00		2
Prairie.Island.1		Forced	NUCLEAR INSTRUMENT 1N36.	6/3/2006 19:45	- 6/6/2006 13:46	3
Sherburne.1	Steam	Forced	WATERWALL TUBE LEAK REPAIR	6/2/2006 16:45	- 6/5/2006 20:02	3
Allen.S.King.1	Steam	Forced	CYCLONE TUBE LEAKS - HIGH BOILER MAKEUP	5/31/2006 15:47	- 6/6/2006 3:43	5
Angus.Anson.4	Peaking	Forced	LCI PROBLEM (NOT ABLE TO SYNC ON LINE)	5/31/2006 10:00	- 6/2/2006 16:27	2
Angus.Anson.2	Peaking	Forced	BOROSCOPE GENERATOR INSPECTION	5/31/2006 6:00	- 6/1/2006 10:31	1
Black.Dog.4	Steam	Forced	FORCED OUTAGE TO REPAIR STICKING THROTTLE ON TURBINE.	5/22/2006 16:48	- 5/23/2006 23:48	1
Angus.Anson.2	Peaking	Forced	REPITCH LUBE OIL COOLER FAN BLADES	5/18/2006 7:00	- 5/19/2006 7:00	1
BD25.CC	Steam	Forced	FORCED OUTAGE DUE TO CT FLASHBACK IN COMBUSTER AND THERMOCOUPLE RUNBACK.	5/17/2006 12:41	- 5/18/2006 19:01	1
Angus.Anson.3	Peaking	Forced	REPITCH LUBE COOLER FAN BLADES	5/17/2006 7:00	- 5/18/2006 7:00	1
Allen.S.King.1	Steam	Forced	CYCLONE TUBE LEAKS - HIGH MAKEUP	5/17/2006 2:29	- 5/21/2006 1:35	4
Black.Dog.3	Steam	Forced	FORCED OUTAGE TO REPAIR REHEATSECTION TUBE LEAK AND MAIN STEAM TRAP.	5/10/2006 10:25	- 5/17/2006 11:12	7
Red.Wing.1	RDF	Forced	WATER WALL TUBE LEAK.	5/7/2006 0:01	- 5/9/2006 2:00	2
Allen.S.King.1	Steam	Forced	CYCLONE TUBE LEAK, HIGH BOILERMAKEUP	5/5/2006 11:07	- 5/8/2006 13:37	3
Sherburne.1	Steam	Forced	WATERWALL TUBE LEAK REPAIR.	5/4/2006 1:02	- 5/5/2006 11:55	1
Red.Wing.2	RDF	Forced	WATER WALL TUBE LEAK.	5/3/2006 5:45	- 5/4/2006 19:00	2
Willmarth.1	Peaking	Forced	GRATE JAMB	4/30/2006 5:10	- 5/2/2006 1:03	2
Red.Wing.1	RDF	Forced	TUBE LEAK.	4/27/2006 15:45	- 5/1/2006 2:00	3
Allen.S.King.1	Steam	Forced	210 STARTUP VALVE PACKING FAILURE	4/25/2006 16:39	- 4/28/2006 3:38	2
Allen.S.King.1	Steam	Forced	PRECIPITATOR REPAIR	4/20/2006 23:45	- 4/25/2006 12:48	5
Red.Wing.1	RDF	Forced	REPAIR PANT LEG.	4/19/2006 20:00	- 4/21/2006 2:00	1
Willmarth.1	Peaking	Forced	MEMBRANE WALL TUBE LEAK	4/18/2006 22:13	- 4/20/2006 1:44	1
Prairie.Island.1	Nuclear	Forced	MOTOR TRIPPED DUE TO GROUND SHORT. MANUAL REACTOR TRIP.	4/14/2006 14:25	- 4/16/2006 10:49	2
Sherburne.2	Steam	Forced	WATERWALL TUBE LEAK REPAIR	4/12/2006 3:20	- 4/13/2006 16:17	2
Red.Wing.2	RDF	Forced	SHORT TO GROUND IN ID FAN REGUTRON TRIPPED ID FANS.	4/10/2006 14:30	- 4/12/2006 1:00	1
Red.Wing.1	RDF	Forced	WATER WALL TUBE LEAK.	3/29/2006 14:20	- 3/31/2006 1:00	1
Allen.S.King.1	Steam	Forced	210 STARTUP VALVE PACKING FAILURE	3/26/2006 21:32	- 3/29/2006 11:12	3
Red.Wing.2	RDF	Forced	ASH/MOISTURE IN CEMS SAMPLE LINES.	3/26/2006 20:30	- 3/28/2006 4:00	1
Willmarth.1	Peaking	Forced	MEMBRANE WALL TUBE LEAK	3/20/2006 20:50	- 3/22/2006 2:35	1
Sherburne.2	Steam	Forced	WATERWALL TUBE LEAK REPAIR	3/13/2006 22:06	- 3/15/2006 23:08	2
BD25.CC	Steam	Forced	NOT AVAILABLE DUE TO HIGH LAKETEMPS.	3/10/2006 18:00	- 3/12/2006 10:17	2
Sherburne.2	Steam	Forced	WATERWALL TUBE LEAK REPAIR	2/22/2006 1:28	- 2/23/2006 19:16	2

Red.Wing.2	RDF	Forced	GENERATING TUBE BANK PLUGGED.	2/8/2006 19:00	- 2/9/2006 19:00	1
Prairie.Island.2	Nuclear	Forced	HIGH CRANKCASE PRESSURE REPLACED CYLINDER LINERS, PISTONS AND RINGS IN ENGINE 1 &2.	2/5/2006 23:30	- 2/21/2006 3:01	15
Black.Dog.4	Steam	Forced	CLEAN ID FANS, PRECIPITATORS, REPAIR BOILER LEAKS AND MISC MAINTENANCE.	2/1/2006 0:01	- 2/4/2006 18:56	4
Willmarth.1	Peaking	Forced	MOVE #3 BFP TO #1 POSITION	1/30/2006 23:08	- 2/1/2006 0:02	1
Sherburne.3	Steam	Forced	HIGH TEMPERATURES ON #5 TURBINEBEARING.	1/26/2006 2:58	- 2/1/2006 4:30	6
Willmarth.1	Peaking	Forced	LOST TURBINE OIL - BROKEN LINE	1/22/2006 10:27	- 1/25/2006 4:50	3
Red.Wing.2	RDF	Forced	FIRE BOX TUBE LEAK.	1/19/2006 11:00	- 1/20/2006 16:00	1
Sherburne.1	Steam	Forced	WATERWALL TUBE LEAK REPAIR.	1/18/2006 23:52	- 1/23/2006 8:33	4
Black.Dog.3	Steam	Forced	REHEAT LEAK FOUND ON #3 BOILERREHEAT SECTION.		- 1/19/2006 4:57	3
					- 1/17/2006 4:37 - 1/17/2006 13:00	2
Red.Wing.2	RDF	Forced	FURNACE TEMP PROBE MALFUNCTION.	1/15/2006 18:00		
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	12/30/2005 20:36	- 1/1/2006 0:00	1
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL		- 12/20/2005 1:30	1
Sherburne.2	Steam	Forced	WATERWALL TUBE LEAK REPAIR	12/16/2005 21:25	- 12/18/2005 7:42	1
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	12/12/2005 16:23	- 12/14/2005 0:15	1
Red.Wing.1	RDF	Forced	WATER WALL TUBE LEAK.	12/7/2005 21:20	- 12/10/2005 1:05	2
Angus.Anson.4	Peaking	Forced	UNABLE TO SYNCRONIZE GENERATORON LINE	12/6/2005 16:54	- 12/21/2005 14:47	15
BD25.CC	Steam	Forced	REPAIRS TO HRSG EXPANSION JOINT.	12/5/2005 15:09	- 12/12/2005 11:51	7
Granite.City.2	Peaking	Forced	CONTROLS DC POWER SUPPLY FAILURE	12/2/2005 15:15	- 12/13/2005 14:50	11
Sherburne.2	Steam	Forced	WATERWALL TUBE LEAK REPAIRS	11/25/2005 1:09	- 11/27/2005 22:00	3
Red.Wing.2	RDF	Forced	WATERWALL TUBE LEAK	11/24/2005 0:00	- 11/26/2005 3:26	2
· ·		Forced	TURNING GEAR WIRE SHORTED.	11/21/2005 9:01	- 11/22/2005 9:00	
Angus.Anson.2						1
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE	11/15/2005 21:30	- 11/17/2005 3:15	1
Angus.Anson.2	Peaking	Forced	JACKING OIL PUMP FAILURE	11/11/2005 20:01	- 11/16/2005 8:00	4
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE	11/7/2005 13:57	- 11/9/2005 1:10	1
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE	11/5/2005 6:30	- 11/6/2005 9:05	1
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE	11/2/2005 13:00	- 11/4/2005 0:20	1
Red.Wing.2	RDF	Forced	REPAIR/REPLACE MISSING AND DAMAGED TUBE SHIELDS IN SUPERHEATER	11/1/2005 19:00	- 11/3/2005 2:00	1
Black.Dog.3	Steam	Forced	UNPLANNED MAINTENANCE TO REPAIRHYDROGEN	10/31/2005 22:30	- 11/2/2005 3:34	1
· ·		F	SEAL LEAKS ON GENERATOR.	40/07/0005 40:55	40/00/0005 4:05	2
Willmarth.2 Allen.S.King.1	Peaking Steam	Forced Forced	TUBE LEAK MEMBRANE WALL REENTRANT THROAT TUBE FAILURES& BOILER TUBE FLOOR FAILURES	10/24/2005 10:55	- 10/29/2005 1:05 - 11/3/2005 3:04	9
Black.Dog.4	Steam	Forced	U4 WINTER PREP, CLEAN BACKPASS, PRECIPS, ETC	10/12/2005 22:09	- 10/16/2005 15:30	4
						4
Red.Wing.2	RDF	Forced	BOILER CLEANING	10/4/2005 12:25	- 10/8/2005 3:00	
Red.Wing.1	RDF	Forced	BOILER CLEANING	10/2/2005 12:00	- 10/6/2005 4:13	4
Sherburne.1	Steam	Forced	WATER WALL TUBE LEAK REPAIR	9/30/2005 23:10	- 10/2/2005 14:37	2
Granite.City.3	Peaking	Forced	FUEL OIL PIPING	9/25/2005 10:00	- 10/13/2005 9:30	18
Black.Dog.3	Steam	Forced	WATERWALL TUBE LEAK	9/18/2005 8:54	- 9/20/2005 18:00	2
Sherburne.1	Steam	Forced	WATER WALL TUBE LEAK REPAIRS.	9/14/2005 2:32	- 9/16/2005 8:31	2
Willmarth.2	Peaking	Forced	TRANSFER BELT 1 REPLACEMENT	9/13/2005 17:00	- 9/15/2005 13:18	2
Inver.Hills.4G	Peaking	Forced	REPAIR OIL LEAKS	9/12/2005 7:41	- 9/19/2005 14:35	7
Blue.Lake.7	Peaking	Forced	IGNITION SYSTEM	9/12/2005 6:00	- 9/13/2005 12:48	1
BD25.CC	Steam	Forced	STARTUP FEEDWATER VALVE REPAIR	9/1/2005 7:00	- 9/2/2005 15:00	1
Angus.Anson.4		Forced	INSPECT & REPLACE FUEL NOZZLES	9/1/2005 0:01	- 9/15/2005 13:57	15
Sherburne.2	Steam	Forced	WATER WALL TUBE LEAK REPAIR.	8/31/2005 11:28	- 9/6/2005 7:22	6
Angus.Anson.4		Forced	PLUGGED FUEL NOZZLES	8/16/2005 14:00	- 9/1/2005 0:00	15
		Forced	SUPERHEAT TUBE LEAK	8/16/2005 4:48	- 8/19/2005 11:00	3
Black.Dog.3	Steam					
Willmarth.1	Peaking	Forced	CIRC PUMP 3 SHAFT SEPERATION	8/14/2005 8:02	- 8/15/2005 19:30	1
Red.Wing.1	RDF	Forced	NUMEROUS LEAKS IN WATER WALLS	8/8/2005 12:59	- 8/11/2005 2:09	3
Willmarth.1	Peaking	Forced	CLEAN CONDENSOR	8/7/2005 17:45	- 8/13/2005 1:07	5
Willmarth.2	Peaking	Forced	CLEAN CONDENSOR	8/7/2005 14:00	- 8/13/2005 1:40	5
Red.Wing.1	RDF	Forced	PRIMARY SUPERHEATER TUBE LEAK (SOOTBLOWER EROSION)	7/29/2005 3:00	- 7/30/2005 4:34	1
Allen.S.King.1	Steam	Forced	PRECIPITATORS, 2 CYCLONES OUT OF SERVICE AND CONTROLS PROBLEMS	7/27/2005 3:35	- 8/1/2005 4:49	5
Red.Wing.2	RDF	Forced	#22 TRAVELLING GRATE LOCKED UP	7/26/2005 23:20	- 7/28/2005 1:33	1
Red.Wing.2	RDF	Forced	TUBE LEAK IN PRIMARY SUPERHEATER (SOOTBLOWER EROSION)	7/20/2005 2:46	- 7/23/2005 0:23	3
Willmarth.1	Peaking	Forced	DUSTMASTER HYDRAULIC PACK COUPLING	7/17/2005 14:12	- 7/18/2005 14:15	1
Willmarth.2	Peaking	Forced	DUSTMASTER HYDRAULIC PACK COUPLING FAILURE	7/17/2005 14:12	- 7/18/2005 16:15	1
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Willmarth.1	Peaking	Forced	GRATE BED JAMB	7/9/2005 22:40	- 7/11/2005 0:06	1
Willmarth.1	Peaking	Forced	WALKING FLOOR JAMB	7/8/2005 16:30	- 7/9/2005 20:00	1
Willmarth.2	Peaking	Forced	WALKING FLOOR JAMB	7/8/2005 16:30	- 7/9/2005 20:00	1
Red.Wing.1	RDF	Forced	FRONT WATERWALL TUBE RUPTURE, WITH DAMAGE TO REFRACTORY, FIREBRICK, AND CASING	7/3/2005 14:30	- 7/17/2005 9:09	14
Inver.Hills.5G	Peaking	Forced	EXHAUST STACK REPAIR	6/29/2005 15:30	- 7/1/2005 0:00	1
Red.Wing.2	RDF	Forced	WATER WALL TUBE LEAK	6/21/2005 22:37	- 6/23/2005 2:35	1
Allen.S.King.1	Steam	Forced	108 CYCLONE REENTRANT THROAT TUBE FAILURE	6/12/2005 5:58	- 6/17/2005 5:15	5
Black.Dog.4	Steam	Forced	SUMMER PREP - CLEAN BACKPASS	6/10/2005 19:08	- 6/15/2005 2:53	4
Angus.Anson.4	Peaking	Forced	AUTO SHUTDOWN ON AUTO-UNLOAD DUE TO LOSS OF AIR PRESSURE	6/8/2005 18:32	- 6/9/2005 10:26	1
Sherburne.2	Steam	Forced	MAIN STEAM RELIEF VALVE FAILEDOPEN #12 TRAVELING GRATE GEAR REDUCER DRIVE IS	6/7/2005 16:55	- 6/9/2005 3:10	1
Red.Wing.1	RDF	Forced	BROKEN. NEEDS TO BE REPLACED.	6/3/2005 14:30	- 6/5/2005 3:40	2
Willmarth.2	Peaking	Forced	ECONOMIZER DISCHARGE FLANGE LEAK.	5/29/2005 23:00	- 6/1/2005 3:25	2
Sherburne.3	Steam	Forced	WATER WALL TUBE LEAK REPAIR	5/26/2005 18:30	- 5/31/2005 13:48	5
Red.Wing.1	RDF	Forced	BOILER TUBE LEAK - FRONT AND LEFT WATERWALLS.	5/24/2005 14:39	- 5/26/2005 4:12	2
Red.Wing.2	RDF	Forced	UNIT TAKEN OFF LINE TO CLEAN SLAGGING BUILDUP ON WATERWALLS AND TRAVELING GRATES.	5/23/2005 22:56	- 5/25/2005 1:40	1
Red.Wing.1	RDF	Forced	TRAVELING GRATE IS BOUND-UP, PROBABLY DUE TO ALUMINUM ACCUMUATION.	5/21/2005 21:35	- 5/24/2005 6:54	2
Black.Dog.3	Steam	Forced	REPAIR COLLECTOR RINGS	5/21/2005 0:04	- 5/24/2005 5:35	3
Willmarth.1	Peaking	Forced	C9 WEARPLATE JAMB	5/15/2005 19:00	- 5/17/2005 17:15	2
Willmarth.2	Peaking	Forced	C9 WEARPLATE JAMB	5/15/2005 19:00	- 5/17/2005 17:15	2
Black.Dog.4	Steam	Forced	REHEAT TUBE LEAKS	5/8/2005 17:00	- 5/12/2005 2:45	3
Black.Dog.4	Steam	Forced	CLEAN ID FANS	5/7/2005 0:00	- 5/8/2005 17:00	2
Allen.S.King.1	Steam	Forced	SLAG TAP HOLES FORZE SHUT	5/6/2005 3:15	- 5/11/2005 8:07	5
Prairie.Island.2	Nuclear	Forced	REPAIR LEAKS, MV 32180 & MV-32178.	5/2/2005 6:00	- 5/6/2005 20:00	5
Inver.Hills.1G	Peaking	Forced	ROTOR WINDINGS	5/1/2005 0:00	- 5/2/2005 13:23	2
Red.Wing.1	RDF	Forced	WATER WALL TUBE LEAK.	4/25/2005 7:28	- 4/26/2005 19:58	2
Sherburne.3	Steam	Forced	BOILER CHEMICAL CLEANING	4/24/2005 7:00	- 5/2/2005 3:56	8
Sherburne.3	Steam	Forced	GENERATOR GROUND	4/17/2005 4:30	- 4/24/2005 7:00	7
Prairie.Island.2	Nuclear	Forced	REBUILD CYLINDERS/PISTONS-ENGINE #2.	4/16/2005 0:27	- 5/2/2005 6:00	16
Sherburne.3	Steam	Forced	TUBE LEAK REPAIR	4/13/2005 4:00	- 4/17/2005 4:30	4
BD25.CC	Steam	Forced	VENT VALVES	4/9/2005 3:55	- 4/15/2005 16:00	7
Sherburne.2	Steam	Forced	WATER WALL TUBE LEAK REPAIR	4/7/2005 2:57	- 4/9/2005 3:27	2
Inver.Hills.1G	Peaking	Forced	ROTOR REWINDING	4/1/2005 0:00	- 5/1/2005 0:00	30
Prairie.Island.2	Nuclear	Forced	FORCED OUTAGE-21,22,23 CONTAINMENT FAN COIL UNITS	3/30/2005 10:28	- 4/3/2005 22:03	4
Allen.S.King.1	Steam	Forced	210A VALVE (TURBINE BYPASS) BREECH PACKING	3/25/2005 19:53	- 3/27/2005 4:04	1
Allen.S.King.1	Steam	Forced	SLAG FALL SEVERED SEVERAL TUBESON 112 CYCLONE	3/20/2005 8:21	- 3/25/2005 15:37	5
Willmarth.2	Peaking	Forced	REENTRANT THROAT TUBE LEAK DRUM CROSSOVER TUBE	3/12/2005 22:48	- 3/15/2005 0:30	2
BD25.CC	_		FAILED CT TURNING GEAR MOTOR BRUSHES			
Red.Wing.1	Steam RDF	Forced Forced	GENERATING BANK TUBE LEAK.	3/11/2005 12:30 3/11/2005 2:00	- 3/14/2005 14:50 - 3/13/2005 4:00	3 2
Prairie.Island.1		Forced	REPAIRUNIT 1 TURBINE STOP VALVE.	3/3/2005 0:12	- 3/4/2005 13:31	2
Willmarth.2	Peaking	Forced	TUBE LEAK MEMBRANE WALL	3/1/2005 21:00	- 3/3/2005 0:15	1
Inver.Hills.1G	Peaking	Forced	GENERATOR ROTOR REWIND	3/1/2005 21:00	- 4/1/2005 0:00	31
Sherburne.3	Steam	Forced	REMOVE SLAG BUILDUP FROM BOILER	2/12/2005 3:35	- 2/16/2005 1:57	4
Red.Wing.2	RDF	Forced	WATER WALL TUBE LEAK	2/11/2005 15:00	- 2/13/2005 5:30	2
Inver.Hills.1G	Peaking	Forced	GENERATOR ROTOR REWIND	2/11/2005 8:58	- 3/1/2005 0:00	18
Willmarth.1	Peaking	Forced	TUBE LEAK MEMBRANE WALL	2/9/2005 20:00	- 2/11/2005 14:30	2
Willmarth.2	Peaking	Forced	TURBINE MECH OVERSPEED FAILURE	2/9/2005 15:50	- 2/12/2005 0:03	2
Allen.S.King.1	Steam	Forced	210A STARTUP VALVE FAILED TO CLOSE.	2/9/2005 14:13	- 2/13/2005 4:40	4
		Forced	REHEAT PENDENT TUBE FOULING - HIGH	1/31/2005 22:46	- 2/9/2005 8:50	
Allen.S.King.1	Steam		DIFFERENTIAL PRESSURE			8
Red.Wing.1	RDF	Forced	WATER WALL TUBE LEAK.	1/30/2005 9:00	- 2/1/2005 7:00	2
Inver.Hills.6G	Peaking	Forced	REPLACE VOLTAGE REGULATOR	1/20/2005 11:44	- 1/31/2005 12:49	11
Sherburne.3	Steam	Forced	TUBE LEAK REPAIR	1/7/2005 3:28	- 1/10/2005 10:31	3
Black.Dog.4	Steam	Forced	WINTER PREP	1/6/2005 22:23	- 1/11/2005 7:15	4
Red.Wing.2	RDF	Forced	SUPERHEAT TUBE LEAK. BENT FLIGHTS FELL THROUGH AND TRIPPED C1 ASH	1/6/2005 16:26	- 1/8/2005 11:00	2
Red.Wing.1	RDF	Forced	CONVEYOR	1/2/2005 11:55	- 1/5/2005 21:15	3

Inver.Hills.1G	Peaking	Forced	RELALY TESTING	1/1/2005 0:00	- 1/3/2005 16:23	3
Red.Wing.2	RDF	Forced	GENERATING BANK	12/27/2004 10:11		3
Black.Dog.4	Steam	Forced	SUPERHEAT TUBE LEAK		- 12/28/2004 18:48	3
Red.Wing.2	RDF	Forced	WALL EAST SIDE BOILER TUBE LEAK	12/22/2004 14:30	- 12/23/2004 6:00	1
	Steam	Forced	FEEDWATER VALVE OPERATOR FAILURE		- 12/23/2004 0:00 - 12/22/2004 15:30	2
Allen.S.King.1	RDF		C-14 CONVEYOR RPR		- 12/22/2004 15:30 - 12/22/2004 2:00	2
Red.Wing.2		Forced		12/20/2004 6:00		
Allen.S.King.1	Steam	Forced	REHEATER TUBE LEAK REPAIR		- 12/20/2004 6:00	4
Sherburne.2	Steam	Forced	REPAIR #210 SCRUBBER MODULE OUTLET DUCTWORK		- 12/22/2004 9:07	6
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL		- 12/14/2004 2:30	1
BD25.CC	Steam	Forced	RELACE ROWS 1-6 VANS IN #5 COMPRESSOR		- 12/27/2004 8:07	16
Inver.Hills.1G	Peaking	Forced	BUS EXPLOSION	12/1/2004 0:00	- 1/1/2005 0:00	31
Willmarth.2	Peaking	Forced	TUBE LEAK - UPPER WALL, BACK SIDE STUD ATTACHMENT	11/27/2004 3:45	- 11/28/2004 13:00	1
Black.Dog.3	Steam	Forced	CLEAN BACK PASS	11/24/2004 23:49	- 11/27/2004 14:24	3
Willmarth.1	Peaking	Forced	CLEAN ECONOMIZER	11/21/2004 5:00	- 11/23/2004 1:30	2
Prairie.Island.2	Nuclear	Forced	REACTOR TO MODE 1.	11/18/2004 15:30	- 11/19/2004 22:08	1
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	11/18/2004 14:00	- 11/20/2004 0:01	1
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	11/15/2004 18:00	- 11/17/2004 0:01	1
Black.Dog.3	Steam	Forced	SUPERHEAT TUBE LEAK 6TH FLOOR SOUTH SIDE OF BOILER	11/14/2004 8:28	- 11/16/2004 8:04	2
Sherburne.2	Steam	Forced	BOILER CHEMICAL CLEANING	11/13/2004 1:37	- 11/21/2004 8:32	8
Allen.S.King.1	Steam	Forced	ASH REMOVAL PROBLEMS BELOW PRECIPITATORS	11/9/2004 22:22	- 11/14/2004 10:07	4
Sherburne.1	Steam	Forced	TUBE LEAK REPAIR	11/6/2004 9:45	- 11/7/2004 22:31	2
Willmarth.1	Peaking	Forced	BROKEN SCALPER LINK	11/1/2004 11:30	- 11/2/2004 13:40	1
Willmarth.2	Peaking	Forced	BROKEN SCALPER LINK	11/1/2004 11:30	- 11/2/2004 13:40	1
vviiiiilai (ii.2	reaking		GENERATOR OUTPUT BREAKER HAD TO BE SENT			1
Blue.Lake.3	Peaking	Forced	BACK DID NOT FIT	11/1/2004 8:00	- 12/1/2004 0:00	30
Inver.Hills.1G	Peaking	Forced	BUS EXPLOSION	11/1/2004 0:00	- 12/1/2004 0:00	30
Inver.Hills.4G	Peaking	Forced	VOLTAGE REGULATOR REPLACEMENT	11/1/2004 0:00	- 11/3/2004 13:28	3
Inver.Hills.1G	Peaking	Forced	BUSS EXPLOSION OUTAGE	10/29/2004 8:30	- 11/1/2004 0:00	3
BD25.CC	Steam	Forced	#2 GENERATOR 13.8KV LINES HAVE ARCING ACROSS PHASES BELOW GENERATOR DUE TO DIRT ACCUMU	10/29/2004 0:30	- 10/31/2004 22:00	3
Inver.Hills.4G	Peaking	Forced	VOLTAGE REGULATOR REPLACMENT	10/25/2004 11:00	- 11/1/2004 0:00	7
Willmarth.1	Peaking	Forced	TUBE LEAK - WATER WALL	10/25/2004 7:40	- 10/28/2004 9:10	3
Willmarth.1	Peaking	Forced	TUBE LEAK - ECONOMIZER	10/23/2004 21:00	- 10/25/2004 7:40	1
Inver.Hills.3G	Peaking	Forced	REPLACE VOLTAGE REGULATORS	10/17/2004 11:00	- 10/22/2004 14:47	5
Sherburne.1	Steam	Forced	BOILER CHEMICAL CLEANING		- 10/23/2004 3:22	7
BD25.CC	Steam	Forced	AIRTEST REVEALED LEAKS AROUND A UNIT		- 10/20/2004 11:05	7
Sherburne.2	Steam	Forced	GENERATOR MAIN PHASE BUSHING TUBE LEAK REPAIR	10/12/2004 1:24	- 10/13/2004 9:30	1
BD25.CC	Steam	Forced	BOROSCOPE OF CT-HRSG MAINT AND REPAIR	10/1/2004 22:00	- 10/13/2004 6:45	11
Red.Wing.1	RDF	Forced	CNVR DRAG CHAIN CAME OFF RETURN IDLER	9/30/2004 18:30	- 10/3/2004 2:00	2
Red.Wing.2	RDF	Forced	CNVR DRAG CHAIN CAME OFF RETURN IDLER	9/30/2004 18:30	- 10/3/2004 2:00	2
Red.Wing.2	RDF	Forced	BOILER SUPER HEAT TUBE LEAK REPAIR	9/26/2004 15:57	- 9/29/2004 11:00	3
Allen.S.King.1	Steam	Forced	MAIN TRANSMISSION DISCONNECT FAILURE	9/25/2004 19:07	- 9/29/2004 2:38	3
Willmarth.1	Peaking	Forced	SCALPER PAN FELL OUT AND MOVE TAIL SHAFT	9/23/2004 11:30	- 9/27/2004 1:30	4
Willmarth.2	Peaking	Forced	SCALPER PAN FELL OUT AND MOVE TAIL SHAFT	9/23/2004 11:30	- 9/27/2004 1:30	4
Allen.S.King.1	Steam	Forced	HIGH MAKEUP, 107 CYCLONE REENTRANT THROAT TUBE LEAKS	9/22/2004 1:05	- 9/25/2004 13:38	4
Sherburne.2	Steam	Forced	TESTING BACKUP SPEED AMPLIFIER CIRCUIT ON EHC SYSTEM	9/16/2004 14:04	- 9/18/2004 7:12	2
Sherburne.1	Steam	Forced	TUBE LEAK REPAIR	9/14/2004 2:41	- 9/16/2004 2:23	2
BD25.CC	Steam	Forced	U5 115 KV BREAKER FAILED TO OPEN DURING SHUT DOWN	9/12/2004 22:38	- 9/14/2004 18:00	2
Red.Wing.1	RDF	Forced	TUBE FAILURE-GENERATOTR BANK	9/9/2004 8:17	- 9/11/2004 4:45	2
Black.Dog.4	Steam	Forced	WATERWALL LEAK	9/4/2004 23:35	- 9/6/2004 20:19	2
Red.Wing.2	RDF	Forced	SUPER HEAT TUBE FAILURE	9/4/2004 19:15	- 9/6/2004 10:09	2
Allen.S.King.1	Steam	Forced	HIGH BOILER MAKEUP, 112 CYCLONE TUBE FAILURE	9/3/2004 13:24	- 9/7/2004 11:05	4
Black.Dog.3	Steam	Forced	REHEAT TUBE LEAK	9/2/2004 13:00	- 9/4/2004 12:00	2
Red.Wing.2	RDF	Forced	SUPER HEAT TUBE FAILURE	9/1/2004 8:43	- 9/3/2004 6:53	2
Sherburne.1	Steam	Forced	TUBE LEAK REPAIR	8/30/2004 14:20	- 9/1/2004 0:34	1
Red.Wing.1	RDF	Forced	TRAVELING GRATE LOCKED UP	8/30/2004 0:58	- 8/31/2004 1:50	1
Black.Dog.4	Steam	Forced	REHEAT TUBE LEAK	8/14/2004 18:25	- 8/16/2004 13:45	2
2.000.006.7			-		====00	_

Red.Wing.1	RDF	Forced	BOILER TUBE LEAK WATER WALL	8/8/2004 23:35	- 8/11/2004 23:35	3
Sherburne.3	Steam	Forced	TUBE LEAK REPAIR	8/6/2004 1:52	- 8/8/2004 23:23	3
Red.Wing.1	RDF	Forced	BOILER TUBE LEAK - WATER WALL	8/5/2004 19:26	- 8/7/2004 3:30	1
Blue.Lake.3	Peaking	Forced	LOSS OF TORQUE CONVERTER	8/1/2004 0:00	- 8/10/2004 11:00	9
Willmarth.1	Peaking	Forced	TUBE LEAK - ECONOMIZER	7/30/2004 20:48	- 8/1/2004 4:15	1
Sherburne.2	Steam	Forced	TUBE LEAK REPAIR	7/30/2004 11:45	- 8/1/2004 1:08	2
Allen.S.King.1	Steam	Forced	HIGH BOILER MAKEUP FROM TUBE LEAKS	7/22/2004 22:30	- 7/28/2004 16:55	6
Red.Wing.2	RDF	Forced	BOILER TUBE LEAK SUPER HEAT	7/13/2004 21:25	- 7/15/2004 18:40	2
BD25.CC	Steam	Forced	52 AUX COOLING WATER PUMP FAILED	7/13/2004 16:38	- 7/14/2004 23:00	1
Black.Dog.3	Steam	Forced	WATERWALL TUBE FAILURE	7/13/2004 9:18	- 7/19/2004 19:00	6
		Corood	LOSS OF TURNING GEAR TO FAILURE OF	7/11/2001 10:00	7/42/2004 0:05	
Angus.Anson.2	Peaking	Forced	WESTINGHOUSE COIL IN CONTACTOR FOR TURNING GEAR MTR	7/11/2004 10:00	- 7/13/2004 9:05	2
Sherburne.2	Steam	Forced	WATER WALL TUBE LEAK REPAIR	7/9/2004 23:35	- 7/13/2004 13:39	4
Black.Dog.4	Steam	Forced	REHEAT TUBE LEAK	6/18/2004 20:30	- 6/20/2004 19:42	2
		Forced	PLANNED OUTAGE FOR #12 RECIRC PUMP SEAL	6/18/2004 4:11	- 6/21/2004 19:21	
Monticello.1	Nuclear		REPAIR			4
Red.Wing.2	RDF	Forced	BOILER TUBE LEAK	6/15/2004 6:06	- 6/17/2004 1:12	2
Granite.City.4	Peaking	Forced	EXHAUST DIFFUSER	6/9/2004 14:28	- 11/4/2004 6:30	148
Black.Dog.4	Steam	Forced	REHEAT TUBE LEAK DEDAIR	6/4/2004 22:26	- 6/6/2004 19:14	2
Sherburne.3	Steam	Forced	REHEATER TUBE LEAK REPAIR	5/29/2004 3:12	- 6/2/2004 9:17	4
Black.Dog.3	Steam	Forced	GSU OVERHEATED	5/29/2004 1:42	- 6/23/2004 9:55	25
Red.Wing.2	RDF	Forced	TUBE LEAK	5/28/2004 20:57	- 5/30/2004 1:20	1
Red.Wing.1	RDF	Forced	TRAVELING GRATE REPAIR	5/26/2004 14:55	- 5/27/2004 18:10	1
Black.Dog.3	Steam	Forced	FOULING OF SECONDARY REHEATER CLEAN BOILER DUE TO SOOTBLOWERS OUT OF	5/24/2004 16:00	- 5/26/2004 22:29	2
Willmarth.2	Peaking	Forced	SERVICE	5/23/2004 16:00	- 5/25/2004 0:01	1
Black.Dog.3	Steam	Forced	REHEAT TUBE LEAK	5/21/2004 13:00	- 5/24/2004 16:00	3
Sherburne.1	Steam	Forced	TUBE LEAK REPAIR	5/15/2004 1:48	- 5/16/2004 5:05	1
A A 2	Darabia -	Forced	REPAIR INSULATION IN TEARDROP, REPAIR CRACKS IN	5/13/2004 15:00	- 5/19/2004 8:00	•
Angus.Anson.2	-		EXHAUST, POSSIBLE REPLACE DRAIN TANK			6
Red.Wing.2	RDF	Forced	BOILER TUBE LEAK	5/9/2004 16:16	- 5/11/2004 1:05	1
Black.Dog.3	Steam	Forced	REPAIR 31 AIR HEATER	5/7/2004 22:59	- 5/9/2004 8:30	1
Red.Wing.1	RDF	Forced	BOILER TUBE LEAK	4/21/2004 9:52	- 4/23/2004 20:10	2 1
Granite.City.1	Peaking	Forced	GENERATOR BREAKER FAILED TO OPEN	4/17/2004 21:50	- 4/19/2004 0:00	
Sherburne.3	Steam	Forced	ADDITIONAL MAINTENANCE WORK	4/16/2004 18:29 4/14/2004 23:41	- 4/18/2004 15:02 - 4/16/2004 18:29	2
Sherburne.3	Steam	Forced	REHEAT TUBE LEAK REPAIR			2
Red.Wing.2	RDF	Forced	BOILER TUBE LEAK	4/12/2004 6:30	- 4/13/2004 12:33	1
Red.Wing.1	RDF	Forced	GAS BURNER TROUBLE	4/11/2004 0:15	- 4/12/2004 12:02	1
Red.Wing.1	RDF	Forced	TRAVELING GRATE REPAIR	4/9/2004 1:49	- 4/10/2004 20:24	2
Key.City.4	Peaking	Forced	FIRE PROTECTION PROBLEMS #12 AH VIBRATION PROBLEMS	4/8/2004 13:45	- 5/1/2004 0:00	22
Sherburne.1	Steam	Forced		4/8/2004 0:15	- 4/9/2004 22:32	2
Key.City.4	Peaking	Forced	FIRE PROTECTION	4/1/2004 0:00	- 4/8/2004 11:52	7
Black.Dog.3	Steam	Forced	BOILER TUBE LEAK - REHEAT SECTION	3/26/2004 12:13	- 3/28/2004 13:35	2
Key.City.4	Peaking	Forced	FIRE PROTECTION SYSTEM PROBLEMS	3/23/2004 13:09	- 4/1/2004 0:00	8
Sherburne.2	Steam	Forced	WATER WALL TUBE LEAK REPAIR	3/19/2004 0:54	- 3/21/2004 13:54	3
Inver.Hills.5G	Peaking	Forced	CLUTCH REPLACEMENT	3/15/2004 10:30	- 3/30/2004 10:15	15
Black.Dog.3	Steam	Forced	CONDENSER PRECIP SUMMER PREP CLEANING.	3/12/2004 23:05	- 3/17/2004 2:42	4
Granite.City.4	Peaking	Forced	ATOMIZING AIR COOLOER FAILURE/LEAK	2/26/2004 4:00	- 3/4/2004 16:27	8
Allen.S.King.1	Steam	Forced	ASH REMOVAL PROBLEMS	2/25/2004 12:37	- 3/1/2004 15:57	5
Black.Dog.4	Steam	Forced	42 ID FAN CLEAN AND BALANCE	2/6/2004 23:33	- 2/9/2004 19:40	3
Black.Dog.3	Steam	Forced	LEAK IN 33 BOILER SUPERHEAT SECTION	1/28/2004 13:30	- 1/29/2004 19:47	1
Red.Wing.1	RDF	Forced	BOILER TUBE LEAK BALANCE WEIGHT CAME LOOSE-DESTROYED SEAL	1/26/2004 14:00	- 1/28/2004 0:00	1
Black.Dog.3	Steam	Forced	BETWEEN EXC GEAR REDCR & END OF GEN SHAFT	1/26/2004 1:30	- 1/28/2004 13:30	3
Black.Dog.3	Steam	Forced	CLEAN BOILER BACK PASS	1/16/2004 21:54	- 1/23/2004 6:00	6
Red.Wing.2	RDF	Forced	BOILER TUBE LEAK	1/16/2004 3:16	- 1/17/2004 19:00	2
Red.Wing.1	RDF	Forced	BOILER TUBE LEAK	1/14/2004 8:22	- 1/16/2004 0:11	2
Red.Wing.2	RDF	Forced	BOILER TUBE LEAK	1/10/2004 20:22	- 1/13/2004 4:00	2
Black.Dog.4	Steam	Forced	TUBE LEAK	1/7/2004 22:05	- 1/14/2004 2:37	6
Allon C Vine 1	Stoom	Forced	NUVA ASH REMOVAL PRECIPITATOR AND SOOT	1/1/2004 0:00	- 1/6/2004 7:26	-
Allen.S.King.1	Steam	<del>-</del>	BLOWER FAILURES		· · · · · · · · · · · · · · · · · · ·	5

Black.Dog.4	Steam	Forced	REHEAT TUBE LEAK	1/1/2004 0:00	- 1/2/2004 3:10	1
BD25.CC	Steam	Forced	BUSHING LEAKAGE - HYDROGEN	1/1/2004 0:00	- 1/5/2004 12:10	5
	Steam	Forced	REHEAT TUBE LEAK	12/30/2003 21:58		1
Black.Dog.4 Willmarth.1		Forced	TUBE LEAK - SH LEADING EDGE TU	12/26/2003 21.36	- 12/30/2003 2:00	4
	Peaking					
BD25.CC	Steam	Forced	BUSHING LEAKAGE - HYDROGEN	12/23/2003 14:00		8
BD25.CC	Steam	Forced	BUSHING LEAKAGE - HYDROGEN		- 12/23/2003 13:30	2
Black.Dog.3	Steam	Forced	REHEAT TUBE LEAK		- 12/23/2003 0:03	3
Willmarth.2	Peaking	Forced	TUBE LEAK - UPPER WALL	12/19/2003 14:03	- 12/20/2003 16:00	1
Willmarth.1	Peaking	Forced	TUBE LEAK - SCREEN TUBE	12/15/2003 23:00	- 12/18/2003 11:02	3
Inver.Hills.2G	Peaking	Forced	FUEL CHECK VALVES	12/12/2003 8:22	- 12/24/2003 14:00	12
Willmarth.1	Peaking	Forced	TUBE LEAK - SH LEADING EDGE TU	12/10/2003 17:06	- 12/12/2003 0:05	1
BD25.CC	Steam	Forced	CONBUSTOR OVERHAUL OF CT	12/9/2003 10:40	- 12/20/2003 18:30	11
Willmarth.2	Peaking	Forced	BROKEN SCREW FEEDER	12/1/2003 14:00	- 12/2/2003 22:00	1
Angus.Anson.2	Peaking	Forced	PERFORMING MAIN TRANSFORMER RELAY AND BREAKER WORK	12/1/2003 0:00	- 12/4/2003 8:15	3
-	-	Forced	PERFORMING MAIN TRANSFORMER RELAY AND	12/1/2003 0:00	- 12/4/2003 8:15	3
Angus.Anson.3		Farrad	BREAKER WORK	44/00/0000 7:00	44/00/0000 40:00	
BD25.CC	Steam	Forced	CONDENSER CLEANING	11/20/2003 7:00	- 11/22/2003 18:00	2
Sherburne.2	Steam	Forced	TUBE LEAK REPAIR	11/20/2003 0:23	- 11/21/2003 5:25	1
Sherburne.3	Steam	Forced	UNIT TRIP, SBV RV3001 LIFTED		- 11/19/2003 0:35	2
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	11/8/2003 19:45	- 11/10/2003 6:30	1
Willmarth.2	Peaking	Forced	TUBE LEAK - SCREEN TUBE	11/4/2003 13:15	- 11/8/2003 6:00	4
Angus.Anson.3	Peaking	Forced	MAJOR OVERHAUL ON # 3	11/1/2003 0:00	- 11/18/2003 12:40	18
Sherburne.1	Steam	Forced	REHEATER TUBE LEAK REPAIR	10/30/2003 20:17	- 11/1/2003 2:20	1
Allen.S.King.1	Steam	Forced	CLEAN REHEAT BOILER SECTION TO REDUCE HIGHTEMPS AND DIFFERENTIAL PRESSURES	10/29/2003 18:16	- 11/3/2003 11:29	5
Sherburne.3	Steam	Forced	INSPECTION OF HRH PIPE WELD	10/25/2003 5:22	- 10/29/2003 9:52	4
Granite.City.1	Peaking	Forced	PROCESSOR FAILED	10/24/2003 16:00	- 10/26/2003 5:54	2
Black.Dog.3	Steam	Forced	WATERWALL TUBE LEAK NORTH WALL BY 13IR.	10/20/2003 22:37	- 10/22/2003 23:05	2
Red.Wing.1	RDF	Forced	FURNACE WALL LEAKS	10/18/2003 0:55	- 10/20/2003 4:45	2
Red.Wing.2	RDF	Forced	SECOND SUPERHEATER LEAKS		- 10/21/2003 2:46	7
Willmarth.2		Forced	TUBE LEAK - MEMBRANE WALL		- 10/14/2003 1:56	1
	Peaking					
Willmarth.1	Peaking	Forced Forced	BROKEN SCREW FEEDER AND STUB SHAFT REPAIR FLASH TANK BELLOWS STEAM LEAK "HOLEIN		- 10/13/2003 23:27 - 10/14/2003 12:09	1
Prairie.Island.2	Nuclear	roiccu	PIPE"	10/12/2003 13:20	10/14/2003 12:03	2
Black.Dog.4	Steam	Forced	HIGH TURBINE VIBRATION - THREW BLADE DUE TO CRACK.	10/12/2003 11:48	- 12/9/2003 19:26	58
		_	CAME ON/FOUND PREVIOUS OUTAGE NOT FIXED			
BD25.CC	Steam	Forced	SOWENT OUT FOR FURTHER REPAIR OF JOURNAL BEAR	10/10/2003 20:14	- 10/14/2003 10:54	4
Red.Wing.2	RDF	Forced	SECOND SUPERHEATER LEAKS	10/10/2003 1:00	- 10/12/2003 6:53	2
nea.wing.z	ND1	. 0.000	FIRE SYSTEM TRIP DUE TO COMBUSTION	10,10,2000 1100	10/12/2000 0.00	_
BD25.CC	Steam	Forced	TURBINEEXHAUST JOURNAL BEARING NOT BEING INSULATED	10/8/2003 5:22	- 10/10/2003 17:07	2
Black.Dog.4	Steam	Forced	LEAK IN SECONDARY SUPERHEAT PENDANTS.	10/8/2003 0:27	- 10/10/2003 2:33	2
Black.Dog.4	Steam	Forced	CRACK IN #4 AUX STEAM SUPPLY	10/3/2003 12:29	- 10/4/2003 18:29	1
· ·		Forced	FRACTURE IN HOTWELL PENETRATION FOR TURBINE	10/2/2003 8:32	- 10/5/2003 16:34	
BD25.CC	Steam		STEAM CHEST DRAIN.			3
Angus.Anson.3	· ·	Forced	MAJOR OVERHAUL ON # 3	10/1/2003 0:00	- 11/1/2003 0:00	31
BD25.CC	Steam	Forced	BOROSCOPE INSPECTION EXTENSION	9/24/2003 10:00	- 9/25/2003 21:52	1
Red.Wing.2	RDF	Forced	FIRST SUPERHEATER LEAKS	9/22/2003 11:16	- 9/24/2003 12:49	2
Allen.S.King.1	Steam	Forced	HIGH BOILER MAKEUP, TUBE LEAKS	9/17/2003 21:39	- 9/22/2003 19:40	5
Willmarth.2	Peaking	Forced	TUBE LEAK - SCREEN TUBE	9/13/2003 5:00	- 9/15/2003 17:58	3
Red.Wing.1	RDF	Forced	FIRST SUPERHEATER LEAKS	9/10/2003 20:53	- 9/14/2003 8:06	3
Black.Dog.3	Steam	Forced	EMISSION STACK TESTING ON #4.	9/10/2003 18:16	- 9/12/2003 16:00	2
Angus.Anson.3	Peaking	Forced	MAJOR OVERHAUL ON # 3	9/10/2003 6:00	- 10/1/2003 0:00	21
Black.Dog.4	Steam	Forced	EMISSION STACK TESTING ON UNIT 3	9/8/2003 21:11	- 9/11/2003 0:57	2
Sherburne.2	Steam	Forced	REHEATER TUBE LEAK REPAIR	9/6/2003 1:34	- 9/8/2003 21:45	3
Red.Wing.1	RDF	Forced	CONDENSER HOT WELL	9/3/2003 18:00	- 9/4/2003 19:40	1
Willmarth.1	Peaking	Forced	BENT FAN SHAFT	9/3/2003 12:15	- 9/13/2003 3:15	10
Red.Wing.1	RDF	Forced	BOILER SCREEN, WING WALL OR SLAG SCREEN LEAKS		- 9/3/2003 18:00	1
Sherburne.1	Steam	Forced	WATER WALL TUBE LEAK REPAIR	8/31/2003 12:55	- 9/2/2003 6:51	2
		Forced				
Sherburne.2	Steam	ı uıc <del>e</del> ü	WATER WALL TUBE LEAK REPAIR	8/30/2003 2:52	- 8/31/2003 7:19	1

Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	8/29/2003 1:20	- 8/30/2003 4:00	1
Willmarth.2	Peaking	Forced	BROKEN SCREW FEEDER	8/27/2003 16:30	- 8/29/2003 1:10	1
Inver.Hills.5G	Peaking	Forced	FORCED OUT - BREAKER PROBLEMS	8/25/2003 14:21	- 8/27/2003 12:41	2
Red.Wing.2	RDF	Forced	DUCT SCRUBBER CLEANING	8/22/2003 21:33	- 8/24/2003 2:59	1
BD25.CC	Steam	Forced	CLEAN CONDENSER	8/22/2003 21:05	- 8/24/2003 2:13	1
Sherburne.1	Steam	Forced	WATER WALL TUBE LEAK REPAIR	8/21/2003 3:25	- 8/22/2003 14:58	1
	Steam		WATER FROM FAILED HOSE FLOWED INTO			
Red.Wing.1	RDF	Forced	GENERATOR BUSS AND TRIPPED UNIT OFF LINE	8/20/2003 19:25	- 8/24/2003 1:00	3
Angus.Anson.3	Peaking	Forced	TRIP ON HIGH VIBRATION	8/19/2003 19:45	- 8/20/2003 10:58	1
Sherburne.1	Steam	Forced	WATER WALL TUBE LEAK REPAIR	8/13/2003 14:12	- 8/15/2003 8:07	2
Black.Dog.4	Steam	Forced	PROCESS 4 GEN STEP UP TRANSF OIL DIALECTRIC STR AT 13KV/RESTORE TO 26KV	8/8/2003 22:54	- 8/14/2003 14:34	6
Black.Dog.3	Steam	Forced	REHEAT TUBE LEAK.	8/6/2003 22:35	- 8/9/2003 12:10	3
Red.Wing.2	RDF	Forced	21 HOPPER FULL OF ASH, UNABLE TO CLEAR HOPPER	8/3/2003 7:37	- 8/4/2003 8:00	1
Willmarth.2	Peaking	Forced	TUBE LEAK - SH 2ND ROW TUBE	7/28/2003 21:30	- 7/30/2003 13:00	2
Black.Dog.3	Steam	Forced	CONDENSER CLEANING	7/25/2003 21:54	- 7/27/2003 21:47	2
Red.Wing.1	RDF	Forced	#11 FEEDER STUB SHAFT REPAIR	7/13/2003 1:54	- 7/14/2003 19:38	2
Granite.City.1	Peaking	Forced	BATTERY CHARGER DEAD	7/11/2003 1:34	- 7/14/2003 15:34	4
Granite.City.2	Peaking	Forced	BATTERY CHARGER DEAD	7/11/2003 3:30	- 7/14/2003 15:34	4
Granite.City.3	Peaking	Forced	BATTERY CHARGER DEAD	7/11/2003 3:30	- 7/14/2003 15:34 - 7/14/2003 15:34	4
Granite.City.4	Peaking	Forced	BATTERY CHARGER DEAD	7/11/2003 3:30	- 7/14/2003 15:34 - 7/14/2003 15:34	4
	· ·	Forced	RE-ENTRANT THROAT TUBE FAILURE	7/10/2003 3:40	- 7/14/2003 13:34 - 7/14/2003 5:21	
Allen.S.King.1	Steam				- 7/11/2003 7:34	4
Willmarth.1	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	7/8/2003 13:23		3 5
Black.Dog.3	Steam	Forced	WATERWALL TUBE LEAK TURBINE GEAR MOTOR TRIPPED OUT/CAN'T GET	6/30/2003 8:39	- 7/5/2003 11:20	5
BD25.CC	Steam	Forced	DISENGAGED FROM MOTOR	6/29/2003 7:30	- 7/1/2003 13:51	2
Allen.S.King.1	Steam	Forced	CYCLONE & BOILER TUBE LEAKS	6/26/2003 22:37	- 7/3/2003 15:00	7
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	6/26/2003 19:30	- 6/27/2003 22:30	1
Red.Wing.1	RDF	Forced	GENERATING BANK TUBE LEAK	6/18/2003 8:51	- 6/20/2003 8:58	2
Black.Dog.3	Steam	Forced	COOLING WATER TEMPS/LEVELS HIGH	6/15/2003 7:29	- 6/17/2003 14:45	2
Monticello.1	Nuclear	Forced	OUTAGE TO FIX LEAKING SRVS	6/14/2003 9:31	- 6/17/2003 1:07	3
BD25.CC	Steam	Forced	COOLING WATER TEMPS LEVELS HIGH	6/14/2003 6:00	- 6/16/2003 8:02	2
Sherburne.2	Steam	Forced	21 AIR HEATER DRIVE REPAIR	6/13/2003 21:56	- 6/15/2003 5:00	1
Red.Wing.1	RDF	Forced	GENERATING BANK TUBE LEAK	6/9/2003 12:06	- 6/12/2003 1:11	3
Red.Wing.1	RDF	Forced	#11 GRATE FAILURE	6/5/2003 3:54	- 6/7/2003 6:46	2
Red.Wing.2	RDF	Forced	SCREEN TUBE LEAK	6/1/2003 22:06	- 6/5/2003 2:23	3
Red.Wing.2	RDF	Forced	TUBE LEAK	5/31/2003 1:41	- 6/1/2003 5:15	1
Granite.City.1	Peaking	Forced	BREAKER NOT RAISING	5/30/2003 6:30	- 6/4/2003 6:30	5
Black.Dog.4	Steam	Forced	TUBE LEAK IN REHEAT SECTION	5/27/2003 7:00	- 5/28/2003 18:53	1
Black.Dog.4	Steam	Forced	WATER WALL TUBE LEAK	5/24/2003 22:26	- 5/27/2003 7:00	2
Red.Wing.2	RDF	Forced	TUBE LEAK	5/23/2003 1:15	- 5/24/2003 9:14	1
Granite.City.1		Forced	LEAKING ANTIFREEZE	5/21/2003 6:30	- 5/30/2003 6:30	9
Willmarth.1	Peaking	Forced	CLEAN BOILER GENERATING BANKS	5/19/2003 16:50	- 5/21/2003 1:30	1
Black.Dog.4	Steam	Forced	COOLING WATER TEMPS/LEVELS HIGH	5/18/2003 15:19	- 5/21/2003 4:39	3
Black.Dog.3	Steam	Forced	COOLING WATER TEMPS/LEVELS HIGH	5/18/2003 7:37	- 5/20/2003 3:35	2
Black.Dog.4	Steam	Forced	REPLACE CHEMICAL FEED ISOLATION VALVE	5/9/2003 22:10	- 5/11/2003 18:44	2
Allen.S.King.1	Steam	Forced	12 GAS RECIRCULATION FAN REPAIRS	5/8/2003 13:03	- 5/12/2003 5:25	4
Granite.City.2	Peaking	Forced	LEAKING ANITFREEZE	5/2/2003 6:30	- 5/13/2003 9:51	11
Black.Dog.3	Steam	Forced	CLEAN BOILER BACKPASS	5/1/2003 21:02	- 5/6/2003 4:32	4
Inver.Hills.2G	Peaking	Forced	HOT GAS INSPECTION	5/1/2003 0:00	- 5/7/2003 16:25	7
Sherburne.3	Steam	Forced	WATER WALL TUBE LEAK REPAIR	4/26/2003 1:37	- 4/27/2003 16:55	2
Red.Wing.2	RDF	Forced	CLEAN GAS BURNERS 21, 22, 23	4/20/2003 22:55	- 4/22/2003 1:36	1
Blue.Lake.4	Peaking	Forced	GENERATOR BREAKER FAILURE	4/16/2003 18:11	- 5/1/2003 0:00	14
Granite.City.3	Peaking	Forced	LEAKING ANTIFREEZE	4/16/2003 14:53	- 4/29/2003 10:44	13
Black.Dog.4	Steam	Forced	MAIN OCB WOULD NOT CLOSE	4/16/2003 14:53	- 4/29/2003 10:44 - 4/17/2003 13:45	15
· ·		Forced	WATER WALL TUBE LEAK REPAIR	4/15/2003 10:00	- 4/17/2003 13.45 - 4/18/2003 2:41	2
Sherburne.2	Steam					6
Blue.Lake.3	Peaking	Forced	GENERATOR BREAKER FAILURE	4/15/2003 11:27	- 4/21/2003 13:00	
Prairie.Island.1		Forced	1GT MAIN TRANSFORMER REPAIRS TO A COOLER	4/15/2003 1:51 4/5/2003 21:50	- 4/20/2003 22:13 - 4/16/2003 10:00	6 11
Black.Dog.4	Steam	Forced	BOILER CLEANING TUBE LEAK	4/5/2003 21:50 3/31/2003 8:31	- 4/16/2003 10:00 - 4/4/2003 8:08	11
Red.Wing.2	RDF	Forced	TUBE LEAK MEMBRANE WALL	3/31/2003 8:31	- 4/4/2003 8:08	4
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	3/30/2003 16:00	- 3/31/2003 20:00	1

Red.Wing.2	RDF	Forced	TUBE LEAK	3/18/2003 19:03	- 3/27/2003 0:27	8
Red.Wing.2	RDF	Forced	TUBE LEAK	3/16/2003 20:47	- 3/18/2003 6:01	1
BD25.CC	Steam	Forced	REPAIR DEAERATOR RELIEF VALVE	3/13/2003 11:08	- 3/27/2003 12:24	14
Red.Wing.2	RDF	Forced	TUBE LEAK	2/26/2003 3:55	- 2/27/2003 16:45	2
Black.Dog.3	Steam	Forced	6 REHEAT TUBE LEAKS	2/21/2003 22:08	- 2/24/2003 18:40	3
· ·		Forced	TUBE LEAK - MEMBRANE WALL, HEADER HANDHOLE,	2/18/2003 20:50	- 2/20/2003 1:08	
Willmarth.1	Peaking		REPAIR PANTLEG HOLE AND REPACK VALVE			1
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	2/11/2003 17:55	- 2/13/2003 2:00	1
Red.Wing.1	RDF	Forced	LOWER FURNACE WATER WALL TUBE LEAK	2/5/2003 7:32	- 2/8/2003 1:05	3
Red.Wing.1	RDF	Forced	JAMMED GRATE DUE TO ALUMINUM IN FUEL	1/27/2003 20:16	- 1/29/2003 8:22	2
Allen.S.King.1	Steam	Forced	UPPER PASSES BOILER CLEANING SURGING AT EXHAUST IN DUCT TO HRSG/HIGH	1/16/2003 21:58	- 1/20/2003 21:00	4
BD25.CC	Steam	Forced	VIB/TUNE INLET GUIDE VEINS/PILOT GAS VALVE	1/14/2003 6:37	- 1/20/2003 11:50	6
Sherburne.3	Steam	Forced	TUBE LEAK REPAIR	1/13/2003 16:00	- 1/15/2003 10:31	2
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	1/12/2003 8:30	- 1/13/2003 11:25	1
Sherburne.3	Steam	Forced	34 ID FAN REPAIRS	1/9/2003 23:45	- 1/13/2003 16:00	4
Sherburne.1	Steam	Forced	WATER WALL TUBE LEAK REPAIR	1/9/2003 21:03	- 1/16/2003 3:34	6
Red.Wing.1	RDF	Forced	ALUMINUM IN FUEL JAMMED GRATES	1/6/2003 15:07	- 1/7/2003 17:14	1
Willmarth.2	Peaking	Forced	TUBE LEAK - UPPER WALL	1/1/2003 18:30	- 1/5/2003 1:00	3
Inver.Hills.2G	Peaking	Forced	COMPUTER PROBLEMS	1/1/2003 0:00	- 1/14/2003 14:10	14
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	12/28/2002 9:30	- 12/29/2002 9:30	1
Black.Dog.4	Steam	Forced	CLEAN AND REPAIR PRECIPITATORS	12/28/2002 0:49	- 12/29/2002 22:10	2
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	12/27/2002 0:00	- 12/28/2002 6:30	1
Red.Wing.2	RDF	Forced	SCREEN TUBE REPAIRS	12/26/2002 5:03	- 12/31/2002 23:59	6
Red.Wing.2	RDF	Forced	SCREEN TUBE REPAIR	12/18/2002 8:08	- 12/20/2002 3:06	2
Red.Wing.2	RDF	Forced	SCREEN TUBE REPAIR	12/16/2002 10:50	- 12/18/2002 3:54	2
Willmarth.1	Peaking	Forced	TUBE LEAK - UPPER WALL	12/3/2002 20:04	- 12/5/2002 5:36	1
Inver.Hills.2G	Peaking	Forced	COMPUTER PROBLEMS	12/1/2002 0:00	- 1/1/2003 0:00	31
Allen.S.King.1	Steam	Forced	HIGH FEEDWATER MAKEUP, POSSIBLE TUBE LEAK	11/22/2002 13:15	- 11/26/2002 13:54	4
Red.Wing.1	RDF	Forced	CLEAN OUT DUCT SCRUBBER TURN AROUND SECTION	11/20/2002 18:39	- 11/22/2002 1:04	1
Red.Wing.2	RDF	Forced	TUBE LEAK		- 11/19/2002 12:31	4
Willmarth.2	Peaking	Forced	OFA FAN IB BEARING FAILURE		- 11/21/2002 10:00	6
BD25.CC	Steam	Forced	FORMALDAHYDE TESTING	11/8/2002 18:15	- 11/11/2002 7:33	3
Angus.Anson.2		Forced	REPLACED ONE, TWO, AND THREE BASKETS.	11/5/2002 11:20	- 11/15/2002 15:25	10
Inver.Hills.2G	Peaking	Forced	COMPUTER PROBLEMS	11/1/2002 0:00	- 12/1/2002 0:00	30
Sherburne.2	Steam	Forced	WATER WALL TUBE LEAK REPAIR		- 10/29/2002 23:43	1
Sherburne.3	Steam	Forced	WATER WALL TUBE LEAK REPAIR		- 10/28/2002 7:01	2
Black.Dog.4	Steam	Forced	WATERWALL TUBE LEAK		- 10/26/2002 14:53	1
Inver.Hills.2G	Peaking	Forced	COMPUTER PROBLEMS	10/25/2002 11:49		7
BD25.CC	Steam	Forced	FUEL NOZZLE MODIFICATION		- 11/8/2002 12:56	14
Sherburne.1	Steam	Forced	WATER WALL TUBE LEAK REPAIR		- 10/23/2002 10:57	1
Black.Dog.3	Steam	Forced	WATERWALL TUBE LEAK	10/21/2002 4:58	- 10/22/2002 21:02	2
Red.Wing.2	RDF	Forced	SUPERHEAT TUBE LEAK		- 10/20/2002 0:00	2
Black.Dog.4	Steam	Forced	CHEMICAL CLEAN		- 10/24/2002 17:20	13
Allen.S.King.1	Steam	Forced	SLAG TAP HOLES FROZE SHUT	10/11/2002 5:05	- 10/14/2002 17:46	4
Sherburne.2	Steam	Forced	REHEAT PENTHOUSE TUBE LEAK REPAIR	10/5/2002 12:08	- 10/7/2002 14:47	2
Red.Wing.1	RDF	Forced	GRATE REPAIR	10/1/2002 0:00	- 10/2/2002 6:34	1
Red.Wing.2	RDF	Forced	TUBE LEAK	9/26/2002 0:57	- 9/27/2002 13:25	2
Allen.S.King.1	Steam	Forced	BOILER SLAGGING CLEANING OUTAGE	9/25/2002 18:23	- 9/30/2002 6:21	4
Black.Dog.4	Steam	Forced	WATERWALL TUBE LEAK	9/15/2002 10:23	- 9/18/2002 18:53	4
Red.Wing.2	RDF	Forced	12 GRATE FAILURE	9/10/2002 0:27	- 9/11/2002 10.33 - 9/11/2002 2:06	1
Inver.Hills.2G		Forced	PLC PROBLEMS	9/6/2002 8:00	- 9/26/2002 10:05	20
Sherburne.2	Peaking Steam	Forced	REPAIR TUBE LEAK	9/5/2002 19:19	- 9/7/2002 10:05 - 9/7/2002 17:15	20
						3
Red.Wing.2	RDF	Forced	TUBE LEAK	9/1/2002 1:03	- 9/4/2002 8:44 - 8/31/2002 1:14	
Red.Wing.2	RDF	Forced	DUCT SCRUBBER CLEANING  POTOR GROUND CAUSED BY WATER INWINDINGS	8/29/2002 20:38	- 8/31/2002 1:14 - 9/4/2002 22:43	1
Black.Dog.4	Steam	Forced	ROTOR GROUND CAUSED BY WATER INWINDINGS REPAIR WATER WALL LEAK AND CLEAN BACKPASS	8/26/2002 7:30	- 9/4/2002 22:43	10
Black.Dog.4	Steam	Forced	AND PRECIPS	8/22/2002 21:37	- 8/25/2002 16:12	3
Black.Dog.3	Steam	Forced	GENERATOR TRIPPED DURING LIGHTENING STORM, INSULATOR CRACKED TO 31 MAIN STATION AUX	8/20/2002 18:52	- 8/22/2002 13:16	2
Red.Wing.1	RDF	Forced	TUBE LEAK	8/18/2002 1:11	- 8/20/2002 4:50	2
		. 0.000	· · · ·		3,20,2002 1.00	_

Willmarth.1	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	8/11/2002 16:45	- 8/13/2002 1:00	1
Inver.Hills.2G	Peaking	Forced	S[EED BOARD MODE TRIP - CONTROLS PROBLEMS	8/11/2002 12:00	- 8/12/2002 14:30	1
Allen.S.King.1	Steam	Forced	CYCLONE TUBE LEAK & PRECIPITATOR PROBLEMS	8/8/2002 23:21	- 8/12/2002 1:15	3
Sherburne.2	Steam	Forced	WATER WALL TUBE LEAK	8/7/2002 11:10	- 8/9/2002 4:40	2
Red.Wing.1	RDF	Forced	MOTOR REPLACEMENT	8/5/2002 16:23	- 8/7/2002 2:57	1
Red.Wing.2	RDF	Forced	TUBE LEAK	8/3/2002 1:34	- 8/5/2002 9:13	2
Red.Wing.1	RDF	Forced	DUCT SCRUBBER CLEANING	8/2/2002 1:06	- 8/3/2002 1:25	1
Sherburne.1	Steam	Forced	WATER WALL TUBE LEAK REPAIR	7/30/2002 5:06	- 7/31/2002 14:29	1
Sherburne.1	Steam	Forced	WATER WALL TUBE LEAK REPAIR	7/27/2002 12:19	- 7/30/2002 2:48	3
Black.Dog.4	Steam	Forced	CONDENSER FOULING	7/26/2002 22:21	- 7/28/2002 16:23	2
Black.Dog.3	Steam	Forced	ECONOMIZER LEAK	7/24/2002 11:07	- 7/26/2002 4:58	2
Inver.Hills.4G	Peaking	Forced	THERMOCOUPLES	7/18/2002 16:05	- 7/26/2002 8:35	8
Black.Dog.3	Steam	Forced	REHEAT TUBE LEAK	7/17/2002 14:43	- 7/19/2002 10:10	2
Inver.Hills.2G	Peaking	Forced	LOSS OF FLAME	7/16/2002 12:59	- 7/19/2002 13:57	3
		Forced	REPAIR LUBE OIL COOLER FAN ANDINSTALL NEW	7/11/2002 7:30	- 7/12/2002 15:20	
Angus.Anson.2	Peaking	roicca	SHAFT AND BEARINGS	7/11/2002 7:30	1/12/2002 13:20	1
BD25.CC	Steam	Forced	LOSS OF HYDRAULIC CONTROL DUE TO SYSTEM UNDER VOLTAGE	7/9/2002 12:10	- 7/10/2002 19:44	1
Black.Dog.3	Steam	Forced	TUBE LEAK	7/8/2002 14:00	- 7/10/2002 16:48	2
Willmarth.2	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	7/4/2002 22:30	- 7/6/2002 3:00	1
BD25.CC	Steam	Forced	BALANCE UNIT 5 TURBINE GENERATOR	7/3/2002 1:39	- 7/6/2002 20:58	4
Allen.S.King.1	Steam	Forced	15B & 13 HEATER TUBE LEAK REPAIRS	6/27/2002 21:58	- 7/1/2002 10:41	4
Willmarth.1	Peaking	Forced	TUBE LEAK - MEMBRANE WALL	6/27/2002 10:30	- 6/29/2002 1:00	2
Black.Dog.3	Steam	Forced	REHEAT TUBE LEAK	6/21/2002 10:25	- 6/23/2002 4:27	2
Black.Dog.4	Steam	Forced	CRANE REMOVAL	6/20/2002 20:49	- 6/22/2002 21:07	2
Red.Wing.1	RDF	Forced	TUBE LEAK REPAIR	6/19/2002 9:00	- 6/20/2002 17:05	1
Allen.S.King.1	Steam	Forced	REPAIR PRECIPITATOR FOULING	6/13/2002 22:20	- 6/18/2002 1:30	4
Sherburne.3	Steam	Forced	WATER TUBE LEAK REPAIR	6/7/2002 0:08	- 6/9/2002 18:56	3
Red.Wing.1	RDF	Forced	LOWER REAR FURNACE WALL TUBE LEAK	6/2/2002 12:27	- 6/5/2002 1:07	3
Inver.Hills.1G	Peaking	Forced	GENERATOR BREAKER PROBLEMS	6/1/2002 0:00	- 6/12/2002 11:00	11
Sherburne.2	Steam	Forced	REHEAT TUBE LEAK	5/25/2002 14:50	- 5/28/2002 3:02	3
Inver.Hills.1G	Peaking	Forced	GENERATOR BREAKER PROBLEMS	5/24/2002 11:38	- 6/1/2002 0:00	8
Sherburne.2	Steam	Forced	REHEATER PENTHOUSE TUBE LEAK	5/23/2002 0:50	- 5/25/2002 14:50	3
Inver.Hills.5G		Forced	PCU BAD	5/16/2002 6:30	- 5/28/2002 11:48	12
	Peaking RDF	Forced	BAGHOUSE BAG CLEANING	5/2/2002 11:03	- 5/4/2002 1:09	2
Red.Wing.1		Forced	WATERWALL TUBE LEAK	5/1/2002 11:03	- 5/8/2002 12:35	7
Black.Dog.4	Steam		OUTLET TRANSFORMER BUSING		- 5/3/2002 12:35 - 5/3/2002 16:40	8
Granite.City.1	Peaking	Forced Forced	OUTLET TRANSFORMER BUSHING	4/25/2002 6:00 4/25/2002 6:00	- 5/3/2002 16:40 - 5/3/2002 16:40	8
Granite.City.2	Peaking				- 4/27/2002 10:40	3
Red.Wing.2	RDF	Forced	22 LP HEATER TUBE LEAK COOLING WATER TEMPS HIGH	4/23/2002 22:51 4/15/2002 17:33		
Black.Dog.3	Steam	Forced		4/15/2002 17:33	- 4/18/2002 10:25	3 5
Willmarth.2	Peaking	Forced	ID FAN COUPLING BROKE APART, MOTOR LOOSE		- 4/20/2002 1:30	_
Black.Dog.4	Steam	Forced	COOLING LAKE TEMP AND LEVEL HIGH.	4/15/2002 4:09 4/5/2002 14:00	- 4/18/2002 10:25 - 4/10/2002 10:10	3
Black.Dog.3	Steam	Forced	SPRING CLEANING OUTAGE			5
Inver.Hills.5G	Peaking	Forced	FUEL NOZZLE INSPECTION	4/1/2002 0:00	- 4/19/2002 16:19	19 7
Allen.S.King.1	Steam	Forced	LARGE SLAG FALL PIERCED FLOOR TUBES 7 LEAKS BELOW IR SOOTBLOWER #23ON NORTH SIDE,	3/29/2002 4:43	- 4/5/2002 1:19	,
Black.Dog.4	Steam	Forced	2 LEAKS ON SOUTH	3/25/2002 22:30	- 3/30/2002 3:57	4
Black.Dog.3	Steam	Forced	WATERWALL TUBE LEAK	3/22/2002 11:07	- 3/25/2002 3:44	3
Red.Wing.2	RDF	Forced	#4 AUGER BULL GEAR REPLACEMENT	3/17/2002 23:53	- 3/19/2002 9:15	1
DII- D 2	C+	Forced	SECONDARY SUPERHEAT TUBE LEAK 6TH FLOOR	3/12/2002 15:45	- 3/14/2002 3:38	
Black.Dog.3	Steam		NORTH SIDE			1
Willmarth.2	Peaking	Forced	#2 OCB REPAIR WALKING FLOOR CYLINDER BROKE AND CONTROLS	3/11/2002 0:00	- 3/12/2002 18:30	2
Willmarth.2	Peaking	Forced	PROBLEMS	3/9/2002 16:00	- 3/10/2002 18:00	1
Sherburne.2	Steam	Forced	REPAIR 4 CONTROL VALVE	3/5/2002 2:57	- 3/8/2002 2:20	3
Angus.Anson.3	Peaking	Forced	STACK SAMPLE PROBE HEATER FAILED	3/3/2002 20:07	- 3/4/2002 10:12	1
Inver.Hills.5G	Peaking	Forced	FUEL NOZZLE INSPECTION	3/1/2002 0:00	- 4/1/2002 0:00	31
Red.Wing.1	RDF	Forced	SCREW FEEDER STUB SHAFT REPLACEMENT	2/25/2002 6:55	- 2/26/2002 9:11	1
Red.Wing.2	RDF	Forced	SCREW FEEDER DRIVE GEAR REPLACEMENT	2/22/2002 23:47	- 2/25/2002 0:11	2
Allen.S.King.1	Steam	Forced	BOILER CLEANING	2/22/2002 1:13	- 2/26/2002 6:00	4
Black.Dog.3	Steam	Forced	WATERWALL RUPTURE	2/10/2002 0:38	- 2/12/2002 16:25	3
Inver.Hills.5G	Peaking	Forced	FUEL NOZZLE INSPECTION	2/1/2002 0:00	- 3/1/2002 0:00	28
	3					

		F	WATERWALL TUBE LEAKS BETWEEN 3RD AND 4TH	4/00/0000 40:07	4/04/0000 00:00	
Black.Dog.4	Steam	Forced	FLOORS	1/28/2002 13:07	- 1/31/2002 23:06	3
Monticello.1	Nuclear	Forced	REPAIR OF MO-2076, RCIC STEAM LINE ISOLATION OUTBOARD.	1/25/2002 12:35	- 1/27/2002 4:30	2
Wioriticeno.1	Nuclear		SCRAM DUE TO MALFUNCTION OF THE PRESSURE			2
Monticello.1	Nuclear	Forced	CONTROL SYSTEM.	1/21/2002 17:35	- 1/25/2002 12:35	4
Granite.City.1	Peaking	Forced	COMPARTMENT HEATER OUT	1/17/2002 7:00	- 1/21/2002 17:00	4
Black.Dog.3	Steam	Forced	TUBE LEAK, SECONDARY SUPERHEAT.	1/3/2002 2:54	- 1/5/2002 12:51	2
Willmarth.1	Peaking	Forced	BOILER THROAT PLUGGED	1/1/2002 15:13	- 1/3/2002 0:00	1
Inver.Hills.5G	Peaking	Forced	FUEL NOZZLE INSPECTION	1/1/2002 0:00	- 2/1/2002 0:00	31
Sherburne.2	Steam	Forced	TUBE LEAK	12/28/2001 17:40	- 12/30/2001 16:35	2
Red.Wing.2	RDF	Forced	PRIMARY SUPERHEATER TUBE LEAK	12/18/2001 10:42	- 12/20/2001 17:04	2
		F	FLOOR TO SIDE WALL CASING SPLIT AND SOUTH SLAG			
Allen.S.King.1	Steam	Forced	NECK CASING LEAKS	12/17/2001 21:42	- 12/18/2001 23:11	1
		Forced	HIGH REHEAT TEMPERATURES INDICATED BACK PASSES FOULING WITH ASH, LEAKS IN TWO	12/13/2001 22:45	- 12/17/2001 16:36	
Allen.S.King.1	Steam	i oiceu	CYCLONES	12/13/2001 22.43	- 12/11/2001 10.30	4
Red.Wing.2	RDF	Forced	DUCT SCRUBBER CLEANING	12/13/2001 21:39	- 12/15/2001 0:07	1
		Forced	CIRCUIT BREAKERS-TURNING GEAR BREAKER AND	12/12/2001 10:44	- 12/20/2001 9:45	
Angus.Anson.3	· ·	i oiceu	MOTOR FAILED			8
Inver.Hills.5G	Peaking	Forced	FUEL NOZZLE INSPECTION	12/1/2001 0:00	- 1/1/2002 0:00	31
Red.Wing.1	RDF	Forced	SCREEN TUBE LEAK	11/23/2001 11:44	- 11/25/2001 4:10	2
Red.Wing.2	RDF	Forced	PRIMARY SUPERHEATER TUBE LEAK	11/21/2001 19:56	- 11/24/2001 1:11	2
Sherburne.1	Steam	Forced	WATER WALL TUBE REPAIR	11/17/2001 13:19	- 11/19/2001 12:42	2
Willmarth.2	Peaking	Forced	TUBE LEAK - SH LEADING EDGE TUBE	11/16/2001 16:39	- 11/18/2001 6:25	2
Willmarth.1	Peaking	Forced	TUBE LEAK - SH LEADING EDGE TUBE	11/14/2001 15:35	- 11/16/2001 4:45	2
Red.Wing.1	RDF	Forced	SCREEN TUBE LEAK	11/11/2001 9:06	- 11/14/2001 16:08	3
Granite.City.4	Peaking	Forced	FUEL OIL MOTOR LEAK	11/7/2001 7:16	- 11/8/2001 15:00	1
Granite.City.2	Peaking	Forced	REPAIR GENERATOR OUTLET BREAKER	11/1/2001 12:21	- 11/29/2001 6:30	28
Prairie.Island.2	· ·	Forced	REPAIR TO CV 31385	11/1/2001 0:00	- 11/3/2001 14:54	3
Red.Wing.1	RDF	Forced	#8 AUGER STUB SHAFT SHEARED	11/1/2001 0:00	- 11/2/2001 0:01	1
Red.Wing.2	RDF	Forced	DUCT SCRUBBER CLEANING	11/1/2001 0:00	- 11/2/2001 1:00	1
Black.Dog.3	Steam	Forced	INTERCEPT VALVE #31 STUCK	10/28/2001 14:00		11
Didek.Dog.5	Steam		CONVECTION PASS SAFETY VALVE FAILURE DURING			
Allen.S.King.1	Steam	Forced	TEST	10/23/2001 22:03	- 10/25/2001 19:06	2
Monticello.1	Nuclear	Forced	SCRAM WHEN WORKER BUMPED INSTRUMENTS,	10/23/2001 17:15	- 10/26/2001 1:57	2
Blue.Lake.1	Peaking	Forced	CAUSING GROUP I ISOLATION. CONTROLS AND INSTRUMENTATION	10/22/2001 9:00	- 11/1/2001 0:00	10
	· ·	Forced				2
Sherburne.3	Steam	roicea	SUPERHEAT HEADER DRAIN PIPE BREAKER REPLACEMENT WAS NOT COMPLETED ON	10/20/2001 5:08	- 10/22/2001 11:49	2
Willmarth.2	Peaking	Forced	TIME	10/12/2001 0:00	- 10/14/2001 12:20	3
Red.Wing.1	RDF	Forced	SHEARED DRIVE BOLTS ON SCREW FEEDER	10/8/2001 0:54	- 10/9/2001 1:01	1
Millon and 2	Dankin -	Forced	GENERATOR FIELD BREAKER WAS ACCIDENTALLY	10/5/2001 8:10	- 10/6/2001 10:00	4
Willmarth.2	Peaking		TRIPPED, EXCITER THEN FAILED			1
Black.Dog.4	Steam	Forced	86 GENERATOR LOCKOUT	10/1/2001 14:45	- 10/8/2001 19:57	7
Inver.Hills.5G	Peaking	Forced	FUEL NOZZLE INSPECTION	10/1/2001 0:00	- 11/1/2001 0:00	31
Sherburne.1	Steam	Forced	REPAIR TUBE LEAK	9/28/2001 20:04	- 10/4/2001 12:10	6
Black.Dog.3	Steam	Forced	LEAK IN REHEAT SECTION OF BOILER	9/24/2001 6:30	- 9/25/2001 8:34	1
Red.Wing.2	RDF	Forced	BOILER GRATES LOCKED UP	9/19/2001 11:52	- 9/21/2001 4:15	2
Willmarth.2	Peaking	Forced	CLEAN BOILER PASSES	9/9/2001 13:30	- 9/11/2001 2:00	2
Key.City.4	Peaking	Forced	CONTROLS/INSTRUMENTATION	9/6/2001 11:46	- 9/7/2001 14:00	1
Sherburne.1	Steam	Forced	FIND TUBE LEAK	9/5/2001 2:17	- 9/7/2001 8:08	2
Inver.Hills.5G	Peaking	Forced	FUEL NOZZLE INSPECTION	9/1/2001 0:00	- 10/1/2001 0:00	30
Prairie.Island.1	Nuclear	Forced	REACTOR TRIP, FAILURE OF BUS 12	9/1/2001 0:00	- 9/11/2001 5:07	10
Willmarth.1	Peaking	Forced	CLEANED GENERATING PASSES IN THE BOILER.	8/28/2001 14:37	- 8/30/2001 2:00	1
Red.Wing.1	RDF	Forced	LOWER BOILER WATER WALL TUBE LEAKS	8/26/2001 22:49	- 8/28/2001 16:04	2
Black.Dog.4	Steam	Forced	PRECIP CLEANING, REPAIR DOWN WIRES AND REPACK STEAM VALVES	8/24/2001 20:22	- 8/26/2001 22:17	2
Allen.S.King.1	Steam	Forced	BOILER PENTHOUSE SEAL AND COOLING FAN FAILURE	8/22/2001 23:23	- 8/27/2001 22:23	5
Inver.Hills.5G	Peaking	Forced	FUEL NOZZLE INSPECTION	8/20/2001 17:30	- 9/1/2001 0:00	11
Allen.S.King.1	Steam	Forced	CYCLONE BOILER LEAKS	8/17/2001 16:19	- 8/20/2001 8:37	3
Allen.S.King.1	Steam	Forced	PRECIPITATOR PROBLEMS	8/12/2001 10:19	- 8/13/2001 20:07	3 1
_		Forced	ATOMIZING AIR COOLER LEAK	8/7/2001 20:03	- 8/16/2001 15:00	9
Granite.City.4 Red.Wing.2	Peaking	Forced	UPPER WATER WALL TUBE RUPTURE	8/6/2001 15:21	- 8/10/2001 15:00 - 8/10/2001 2:09	3
neu.wille.z	RDF	i uic <del>c</del> u	OFFER WATER WALL TODE RUFTURE	0/0/2001 13.21	0/10/2001 2.03	5

			DEACTOR TRIP PUE TO EAULIDE OF DUC 40 DEACTOR			
Prairie.Island.1	. Nuclear	Forced	REACTOR TRIP DUE TO FAILURE OF BUS 12, REACTOR COOLANT PUMP BUS	8/3/2001 20:40	- 9/1/2001 0:00	28
Red.Wing.1	RDF	Forced	LOWER WATER WALL HEADER DRAIN LINE REPAIR	8/1/2001 10:44	- 8/3/2001 5:58	2
Prairie.Island.1	Nuclear	Forced	REACTOR TRIP, ROD CONTROL POWER CABINET,	8/1/2001 7:01	- 8/3/2001 17:30	2
Blue.Lake.4	Peaking	Forced	WATER DRIPPING ON IT COMB PROBLEMS	8/1/2001 0:00	- 8/3/2001 17:52	3
	r caking	Forced	REHEAT TUBE LEAK IN 5TH ROW FROM BOTTOM	7/31/2001 0:27	- 8/3/2001 11:27	
Black.Dog.3	Steam		ONSECOND BUNDLE.			3
Blue.Lake.4	Peaking	Forced	COMBUSTION PROBLEMS	7/30/2001 13:20	- 8/1/2001 0:00	1
Black.Dog.3	Steam	Forced	CONDENSER CLEANING	7/26/2001 20:04	- 7/28/2001 20:58	2
Red.Wing.2	RDF	Forced	DUCT SCRUBBER CLEANING	7/23/2001 22:50	- 7/25/2001 1:15	1
Black.Dog.4	Steam	Forced	WATERWALL TUBE LEAK NEXT TO IR SOOTBLOWER	7/20/2001 14:11	- 7/21/2001 21:08	1
Key.City.2	Peaking	Forced	FUEL PROBLEMS	7/18/2001 11:44	- 7/24/2001 14:50	6
Sherburne.2	Steam	Forced	PENTHOUSE TUBE LEAK	7/16/2001 1:02	- 7/18/2001 4:55	2
Red.Wing.1	RDF	Forced	LOWER FURNACE WATER WALL TUBE LEAK	7/10/2001 18:36	- 7/12/2001 1:11	1
Sherburne.2	Steam	Forced	PENTHOUSE TUBE LEAK ELECTRICAL CURTAILMENT AT FUEL PROCESSING	7/9/2001 11:05	- 7/15/2001 4:50	6
Red.Wing.1	RDF	Forced	FACILITY	7/5/2001 14:00	- 7/9/2001 7:00	4
Allen.S.King.1	Steam	Forced	CYCLONE LEAK	7/4/2001 1:17	- 7/9/2001 5:24	5
Red.Wing.1	RDF	Forced	LOWER FURNACE WATER WALL TUBE LEAK	7/1/2001 0:00	- 7/5/2001 14:00	5
Granite.City.4	Peaking	Forced	NO FIELD	6/28/2001 8:10	- 7/10/2001 15:00	12
Blue.Lake.1	Peaking	Forced	TURNING GEAR PROBLEMS	6/18/2001 16:30	- 6/25/2001 9:00	7
Sherburne.2	Steam	Forced	MAIN STEAM VALVE REPAIR	6/18/2001 6:38	- 6/20/2001 2:10	2
Sherburne.2	Steam	Forced	REHEATER TUBE LEAK	6/12/2001 20:15	- 6/16/2001 21:49	4
Red.Wing.1	RDF	Forced	DUCT SCRUBBER CLEANING	6/10/2001 23:41	- 6/12/2001 1:25	1
Granite.City.4	Peaking	Forced	MISC FLANGE LEAKS	6/6/2001 9:30	- 6/8/2001 11:00	2
Black.Dog.3	Steam	Forced	ATTEMPERATOR LEAK	6/6/2001 4:50	- 6/9/2001 19:00	4
Granite.City.1	Peaking	Forced	MISC FALNGE LEAKS	6/5/2001 8:00	- 6/6/2001 11:00	1
Prairie.Island.2	! Nuclear	Forced	D5/D6 FUEL OIL ISSUE	6/1/2001 0:00	- 6/6/2001 3:19	5
Allen.S.King.1	Steam	Forced	TURBINE CONTROL OIL SYSTEM REPAIR	5/30/2001 0:48	- 6/1/2001 0:00	2
Granite.City.3	Peaking	Forced	REPAIR STACK	5/22/2001 6:30	- 5/23/2001 9:40	1
Sherburne.3	Steam	Forced	REFACTORY COOLING HEADERS FAILED. 113 TUBES	5/18/2001 5:56	- 5/26/2001 13:36	8
Red.Wing.2	RDF	Forced	WELDED GENERATING BANK TUBE LEAK	5/15/2001 18:52	- 5/18/2001 11:00	3
Granite.City.3	Peaking	Forced	REPAIR FAN COUPLING	5/15/2001 11:57	- 5/18/2001 9:57	3
Willmarth.1	Peaking	Forced	REPAIRED TUBE LEAK ON FURNACE WALL	5/13/2001 11:37	- 5/15/2001 0:01	1
Sherburne.3	Steam	Forced	TUBE LEAK REPAIR	5/12/2001 6:38	- 5/15/2001 12:49	3
Sherburne.3	Steam	Forced	TUBE LEAK REPAIR	5/10/2001 2:08	- 5/11/2001 13:32	1
Prairie.Island.2		Forced	D5/D6 LUBE OIL ISSUE	5/9/2001 20:05	- 6/1/2001 0:00	22
Granite.City.1		Forced	REPAIR STACK	5/7/2001 15:15	- 6/4/2001 10:50	28
Sherburne.3	Steam	Forced	BOILER CLEANING	5/4/2001 3:01	- 5/7/2001 4:09	3
Red.Wing.1	RDF	Forced	DUCT SCRUBBER CLEANING	5/3/2001 20:53	- 5/5/2001 2:19	1
Sherburne.1	Steam	Forced	TURBINE VALVE SCREEN REMOVAL	4/27/2001 0:35	- 4/30/2001 6:23	3
Granite.City.3	Peaking	Forced	REPAIR STACK	4/18/2001 7:45	- 5/15/2001 11:22	27
Black.Dog.3	Steam	Forced	FURNACE WALL TUBE LEAK	4/13/2001 15:30	- 4/15/2001 6:40	2
Allen.S.King.1	Steam	Forced	CYCLONE TUBE LEAKS	4/8/2001 0:31	- 4/10/2001 21:57	3
Sherburne.2	Steam	Forced	TUBE LEAK REPAIR	3/28/2001 3:48	- 3/30/2001 17:50	3
Sherburne.2	Steam	Forced	TUBE LEAK REPAIR	3/24/2001 16:11	- 3/27/2001 11:07	3
Black.Dog.3	Steam	Forced	PRECIPITATOR CLEANING	3/16/2001 20:30	- 3/18/2001 20:42	2
Willmarth.1	Peaking	Forced	REPAIR JAMMED GRATES	3/8/2001 12:50	- 3/9/2001 14:00	1
Granite.City.4	Peaking	Forced	STACK REPAIR	3/5/2001 7:45	- 5/7/2001 9:20	63
Blue.Lake.4	Peaking	Forced	VOLTAGE REGULATOR	3/1/2001 0:00	- 3/7/2001 11:19	6
Allen.S.King.1	Steam	Forced	HIGH PRESSURE HEATER ACCESS HEAD LEAK.	2/26/2001 0:04	- 3/1/2001 0:00	3
_			TECH SPEC REQUIRED SHUTDOWN DUE TO SECT. XI	2/25/2001 5:50	- 4/4/2001 7:18	
Monticello.1	Nuclear	Forced	CONCERNS WITH HPCI AND LPCI.			38
Prairie.Island.1		Forced	REFUELING, UNPLANNED.	2/23/2001 21:30	- 2/25/2001 22:59	2
Sherburne.2	Steam	Forced	345 KV BROKEN INSULATOR	2/22/2001 22:14	- 2/24/2001 5:02	1
Willmarth.1	Peaking	Forced	REPAIR LEAKS ON TURBINE	2/19/2001 23:59	- 2/21/2001 3:00	1
Willmarth.1	Peaking	Forced	BALANCE TURBINE - X-FIRE #1 BOILER WITH #2TURBINE	2/13/2001 16:40	- 2/15/2001 0:00	1
Red.Wing.1	RDF	Forced	LACK OF FUEL	2/10/2001 23:36	- 3/1/2001 0:00	18
Blue.Lake.4	Peaking	Forced	VOLTAGE REGULATOR PROBLEMS	2/1/2001 0:00	- 3/1/2001 0:00	28
Key.City.2	Peaking	Forced	LUBE OIL PUMP	2/1/2001 0:00	- 2/16/2001 11:00	15
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Black.Dog.3	Steam	Forced	REHEAT TUBE LEAK	1/27/2001 20:56	- 1/30/2001 6:51	2
Red.Wing.1	RDF	Forced	#13 BAGHOUSE MODULE BAG FAILURE	1/25/2001 16:56	- 1/27/2001 4:00	1
Sherburne.1	Steam	Forced	REHEATER TUBE LEAK	1/15/2001 22:24	- 1/18/2001 10:05	2
Red.Wing.1	RDF	Forced	SIDE WATER WALL TUBE LEAK	1/14/2001 5:18	- 1/16/2001 8:10	2
Allen.S.King.1	Steam	Forced	CYCLONE TUBE LEAKS	1/11/2001 14:00	- 1/15/2001 1:04	3
Blue.Lake.4	Peaking	Forced	REPLACE VOLTAGE REGULATOR	1/10/2001 14:59	- 2/1/2001 0:00	21
Sherburne.2	Steam	Forced	WATER WALL TUBE LEAK REPAIR	1/9/2001 4:11	- 1/11/2001 8:09	2
	Peaking	Forced	COOLANT PUMP MECHANICAL SEAL	1/3/2001 10:28	- 1/5/2001 13:30	2
Black.Dog.4	Steam	Forced	STATOR GROUND	1/1/2001 0:00	- 6/18/2001 9:03	168
Blue.Lake.4	Peaking	Forced	VOLTAGE REGULATOR	1/1/2001 0:00	- 1/9/2001 14:08	9
	Peaking	Forced	ROTOR ROTOR & STATOR REWIND	1/1/2001 0:00	- 6/13/2001 13:18	164
Key.City.2	Peaking	Forced	LUBE OIL PUMPS OUT OF SERVICE	1/1/2001 0:00	- 2/1/2001 0:00	31
Red.Wing.2	RDF	Forced	BOILER GENERATING BANK TUBE LEAK	1/1/2001 0:00	- 1/3/2001 1:05	2
iteu.wiiig.z	NDI	i orceu	BOILER GENERATING BANK TOBE LEAK	1/1/2001 0:00	- 1/3/2001 1.03	2
Allon C Ving 1	Stoam	Scheduled	NEW STARTUP VALVE FAILURE	6/27/2007 23:08	- 6/30/2007 14:05	3
Allen S King 1	Steam					2
	Steam	Scheduled	ADJUSTMENTS TO NEW STARTUP VALVE	6/24/2007 23:00	- 6/27/2007 10:54	
Allen.S.King.1	Steam	Scheduled	ADJUSTMENTS TONEW STARTUP VALVE	6/21/2007 22:14	- 6/24/2007 17:00	3
Angus.Anson.4		Scheduled	BORESCOPE INSPECTION ON UNIT #4	6/11/2007 5:00	- 6/12/2007 19:07	2
Willmarth.2	Peaking	Scheduled	OUTAGE	6/4/2007 12:27	- 6/9/2007 4:30	5
Willmarth.1	Peaking	Scheduled	OUTAGE	6/3/2007 13:30	- 6/8/2007 10:47	5
Inver.Hills.5G	Peaking	Scheduled	MAIN TRANSFORMER	6/3/2007 6:00	- 6/4/2007 19:00	2
Inver.Hills.6G	Peaking	Scheduled	MAIN TRANSFORMER	6/3/2007 6:00	- 6/4/2007 19:00	2
Inver.Hills.6G	Peaking	Scheduled	GAS FUEL SYSTEM/FLOW METER	5/22/2007 7:30	- 5/23/2007 12:23	1
Inver.Hills.4G	Peaking	Scheduled	FLOW METER HYDRUALIC PUMP ETC.	5/16/2007 7:30	- 5/23/2007 15:35	7
Inver.Hills.3G	Peaking	Scheduled	COOLING WATER SYSTEM	5/14/2007 6:30	- 5/18/2007 16:40	4
Willmarth.1	Peaking	Scheduled	BOILER CLEANING	5/3/2007 17:47	- 5/5/2007 4:01	1
Inver.Hills.3G	Peaking	Scheduled	OUTAGE FOR STOCK PENETRATIONS &REPAIR	5/2/2007 7:14	- 5/5/2007 19:00	3
Angus.Anson.4	Peaking	Scheduled	BOROSCOPE INSPECTION ON UNIT 4	5/1/2007 6:00	- 5/4/2007 18:00	4
Blue.Lake.7	Peaking	Scheduled	PO-GAS TURBINE BOROSCOPE INSP.	4/26/2007 23:59	- 5/2/2007 14:30	6
Granite.City.4	Peaking	Scheduled	LUBE OIL COOLING CONTROL VALVE	4/18/2007 7:00	- 4/19/2007 16:00	1
,		Scheduled	PLANNED U3 MAINTENANCE OUTAGE -BOILER REPAIRS	4/11/2007 20:44	- 5/7/2007 8:42	
Black.Dog.3	Steam	Ocheduled		4/11/2007 20:44	3/1/2007 0.42	25
Inver.Hills.4G	Peaking	Scheduled	PLANNED OUTAGE/GAS TURBINE-EXHAUST SYS.VANES/NOZZLES	4/6/2007 14:00	- 4/12/2007 15:00	6
Monticello.1	Nuclear	Scheduled	CONTINUATION OF RFO23	4/1/2007 0:00	- 4/17/2007 0:06	16
Inver.Hills.5G	Peaking	Scheduled	DIFFUSER & TEST PORT OUTAGE	3/27/2007 9:00	- 4/5/2007 22:30	10
Monticello.1	Nuclear	Scheduled	SHUTDOWN FOR REFUELING OUTAGE.	3/14/2007 0:06	- 3/31/2007 23:59	18
Wionticeno.1	racical		21 RHR PMP FAILED SP 2371. REQUIRED RE-WRITE OF			10
Prairie.Island.2	Nuclear	Scheduled	SP AND RE-TEST 5 TIMES.	3/6/2007 2:00	- 3/8/2007 11:40	2
Prairie.Island.2	Nuclear	Scheduled	PLANNED OUTAGE UP TO SCHEDULEDBREAKER	3/1/2007 3:10	- 3/6/2007 2:00	5
		Sahadulad	CLOSE DATE. PLANNED BOILER OVERHAUL.	2/21/2007 20:00	2/14/2007 22:00	21
Red.Wing.2	RDF	Scheduled			- 3/14/2007 22:00	
Black.Dog.4	Steam	Scheduled	MINOR OUTAGE - BOILER OVERHAUL.	2/17/2007 0:01	- 3/11/2007 19:00	23
Inver.Hills.1G	Peaking	Scheduled	GAS TURBINE-HOT END INSPECTIONPLANNED OUTAGE		- 5/16/2007 11:02	102
Red.Wing.1	RDF	Scheduled	MAJOR BOILER OVERHAUL.	1/31/2007 19:56	- 3/4/2007 8:00	32
Willmarth.2	Peaking	Scheduled	OVERHAUL	1/7/2007 17:30	- 1/26/2007 12:05	19
Willmarth.1	Peaking	Scheduled	OVERHAUL	1/3/2007 12:00	- 1/22/2007 0:25	19
Allen.S.King.1	Steam	Scheduled	PLANT MERTO EMISSIONS REDUCTIONPROGRAM OVERHAUL.	1/1/2007 0:00	- 6/21/2007 16:27	172
Angus.Anson.3		Scheduled	GAS TURBINE BOROSCOPE INSPECTION	12/14/2006 6:00	- 12/18/2006 10:00	4
7 11 16 u 3 17 11 13 0 11 1.3	Caking		OUTAGE TO REPAIR REHEAT TUBE LEAK AND OTHER			•
Black.Dog.3	Steam	Scheduled	MISC REPAIRS.	12/9/2006 0:01	- 12/12/2006 2:22	3
BD25.CC	Steam	Scheduled	PLANNED OUTAGE TO REPAIR H2 LEAK AND SEVERAL	12/8/2006 21:51	- 12/11/2006 1:01	2
BD23.CC	Steam		MAINTENANCE ITEMS. REPAIR REHEAT TUBE LEAK AND PERFORM OTHER			2
Black.Dog.3	Steam	Scheduled	MAINTENANCE.	11/15/2006 0:26	- 11/17/2006 18:34	3
Prairie.Island.2	Nuclear	Scheduled	2R24 REFUELING OUTAGE	11/14/2006 15:04	- 12/17/2006 0:11	32
Angus.Anson.3	Peaking	Scheduled	REPLACE BUSHING ON CT 2 13.8KVBREAKER	10/31/2006 6:00	- 11/3/2006 17:00	3
Willmarth.2	Peaking	Scheduled	BOILER CLEANING	9/25/2006 11:00	- 9/28/2006 3:00	3
Willmarth.1	Peaking	Scheduled	BOILER CLEANING AND BH BAG CHANGEOUT	9/24/2006 11:33	- 9/30/2006 2:00	6
Sherburne.2	Steam	Scheduled	MAJOR OVERHAUL	9/15/2006 0:10	- 11/4/2006 10:07	50
			PLANT METRO EMISSIONS REDUCTIONPROJECT			
Allen.S.King.1		Scheduled	OVERHAUL	9/1/2006 0:00	- 1/1/2007 0:00	122
Angus.Anson.2	Peaking	Scheduled	MAJOR GAS TURBINE OVERHAUL ON UNIT # 2	8/28/2006 8:00	- 12/8/2006 12:05	102

			MAINTENANCE OUTAGE TO REPAIR #41 PRIMARY AIR			
Black.Dog.4	Steam	Scheduled	FAN.	8/26/2006 0:23	- 8/27/2006 20:29	2
Red.Wing.1	RDF	Scheduled	BOILER OVERHAUL.	6/18/2006 18:00	- 6/24/2006 6:00	6
Red.Wing.2	RDF	Scheduled	STACK REPAIR. REMOVAL AND REPLACEMENT OF GUNITE.	6/14/2006 18:00	- 7/10/2006 11:00	26
Willmarth.2	Peaking	Scheduled	BOILER CLEANING	6/5/2006 12:45	- 6/10/2006 7:45	5
Willmarth.1	Peaking	Scheduled	BOILER CLEANING	6/4/2006 9:40	- 6/9/2006 15:00	5
Prairie.Island.1	Nuclear	Scheduled	1R24 REFUELING OUTAGE.	4/28/2006 19:44	- 6/3/2006 19:45	36
Black.Dog.3	Steam	Scheduled	PLANNED SUMMER PREP MAINTENANCEOUTAGE ON	4/27/2006 1:06	- 5/1/2006 16:45	5
Allen.S.King.1	Steam	Scheduled	UNIT 3. ECOMONY	3/23/2006 18:00	- 3/26/2006 14:30	3
Black.Dog.4	Steam	Scheduled	SUMMER PREP OUTAGE	3/21/2006 0:45	- 3/27/2006 11:25	6
	Steam	Scheduled	SPRING 2006 OVERHAUL	3/4/2006 0:30	- 3/23/2006 18:00	20
Allen.S.King.1		Scheduled	MAINTENANCE OUTAGE TO FIX THE SUPERHEATER	2/25/2006 3:00	- 2/26/2006 3:00	
Black.Dog.3	Steam		BOILER TUBE LEAK			1
Red.Wing.2	RDF	Scheduled	MAJOR BOILER OVERHAUL (720 HOURS OR MORE).	2/18/2006 23:00	- 3/15/2006 13:00	25
Red.Wing.1	RDF	Scheduled	MAJOR BOILER OVERHAUL (720 HOURS OR MORE).	2/18/2006 19:00	- 3/8/2006 3:00	17
Allen.S.King.1	Steam	Scheduled	BOILER CLEANING OUTAGE	1/22/2006 23:30	- 1/31/2006 1:50	8
Willmarth.2	Peaking	Scheduled	OVERHAUL	1/9/2006 16:42	- 2/4/2006 8:35	26
BD25.CC	Steam	Scheduled	PERFORM COMBINED TURBINE OVERHAUL AND PERFORM MISC MAINTENANCE.	1/4/2006 19:00	- 1/25/2006 14:49	21
Willmarth.1	Peaking	Scheduled	OVERHAUL	1/4/2006 15:20	- 1/22/2006 7:30	18
Inver.Hills.5G	Peaking	Scheduled	CT INSPECTIONS	1/1/2006 0:00	- 2/28/2006 12:03	59
Granite.City.1	Peaking	Scheduled	STARTING MOTOR MAINTENANCE	12/20/2005 7:00	- 12/21/2005 10:00	1
Granite.City.2	Peaking	Scheduled	STARTING MOTOR MAINTENANCE	12/20/2005 7:00	- 12/21/2005 10:00	1
Granite.City.3	Peaking	Scheduled	STARTING MOTOR MAINTENANCE	12/20/2005 7:00	- 12/21/2005 10:00	1
Granite.City.4	Peaking	Scheduled	STARTING MOTOR MAINTENANCE	12/20/2005 7:00	- 12/21/2005 10:00	1
Sherburne.3	Steam	Scheduled	HOT REHEAT PIPE REPLACEMENT DELAYS	12/4/2005 19:00	- 12/8/2005 2:40	3
Inver.Hills.5G	Peaking	Scheduled	CT INSPECTIONS	12/1/2005 0:00	- 1/1/2006 0:00	31
Inver.Hills.5G	Peaking	Scheduled	CT INSPECTIONS	11/1/2005 0:00	- 12/1/2005 0:00	30
Sherburne.3	Steam	Scheduled	BOILER/TURBINE/REHEAT PIPING REPLACEMENT OUTAGE.	10/8/2005 0:17	- 12/4/2005 19:00	58
Inver.Hills.5G	Peaking	Scheduled	CT INSPECTIONS	10/6/2005 17:35	- 11/1/2005 0:00	25
Inver.Hills.3G	Peaking	Scheduled	BUSHING REPLACEMENT	10/1/2005 0:00	- 10/19/2005 14:20	19
Inver.Hills.4G	Peaking	Scheduled	BUSHING REPLACEMENT	10/1/2005 0:00	- 10/19/2005 14:20	19
Angus.Anson.3		Scheduled	REPLACED FUEL NOZZLES	9/24/2005 8:00	- 10/4/2005 8:00	10
Inver.Hills.3G	Peaking	Scheduled	BUSHING REPLACEMENTS	9/19/2005 14:35	- 10/1/2005 0:00	11
Inver.Hills.4G	Peaking	Scheduled	REPLACE BUSHINGS	9/19/2005 14:35	- 10/1/2005 0:00	11
Granite.City.1	Peaking	Scheduled	BOROSCOPE INSPECTION	9/19/2005 8:00	- 9/25/2005 10:00	6
Granite.City.1	Peaking	Scheduled	BOROSCOPE INSPECTION	9/19/2005 8:00	- 9/25/2005 10:00	6
Granite.City.2	Peaking	Scheduled	BOROSCOPE INSPECTION	9/19/2005 8:00	- 9/25/2005 10:00	6
Granite.City.4		Scheduled	BOROSCOPE INSPECTION	9/19/2005 8:00	- 9/25/2005 10:00 - 9/25/2005 10:00	6
Willmarth.2	Peaking	Scheduled	SCRUBBER REPAIR OUTAGE	9/18/2005 12:40	- 10/1/2005 14:00	13
	Peaking					_
Willmarth.1	Peaking	Scheduled	SCRUBBER REPAIR OUTAGE	9/7/2005 11:20	- 9/24/2005 4:05 - 10/23/2005 22:11	17
Allen.S.King.1	Steam	Scheduled	MERP PLANNED OVERHAUL GENERATOR RELAY MAINTENANCE	9/6/2005 1:10		48
Granite.City.3	Peaking	Scheduled		8/29/2005 9:00	- 9/9/2005 8:00	11
Granite.City.4	ŭ	Scheduled	GENERATOR RELAY MAINTENANCE	8/29/2005 9:00	- 9/9/2005 8:00	11
Granite.City.1		Scheduled	GENERATOR RELAY MAINTENANCE	8/22/2005 8:15	- 8/29/2005 8:00	7
Granite.City.2	Peaking	Scheduled	GENERATOR RELAY MAINTENANCE	8/22/2005 8:15	- 8/29/2005 8:00	7
BD25.CC	Steam	Scheduled	BOROSCOPE INSPECTION	8/15/2005 1:01	- 8/26/2005 13:57	12
Willmarth.2	Peaking	Scheduled	BOILER CLEANING OUTAGE	6/20/2005 12:15	- 6/25/2005 3:00	5
Willmarth.1	Peaking	Scheduled	BOILER CLEANING OUTAGE	6/19/2005 12:35	- 6/24/2005 2:15	5
Prairie.Island.2	2 Nuclear	Scheduled	COMPLETE PLANNED REFUELING OUTAGE.	5/6/2005 20:00	- 6/10/2005 20:00	35
Allen.S.King.1	Steam	Scheduled	SPRING PLANNED OVERHAUL	4/9/2005 2:58	- 5/1/2005 0:12	22
Monticello.1	Nuclear	Scheduled	UNPLANNED EXTENSION TO RFO	4/9/2005 0:00	- 4/12/2005 22:26	4
Monticello.1	Nuclear	Scheduled	CONTINUATION OF RFO	4/1/2005 0:00	- 4/9/2005 0:00	8
Monticello.1	Nuclear	Scheduled	RFO 22	3/5/2005 0:08	- 4/1/2005 0:00	27
Red.Wing.2	RDF	Scheduled	MAJOR PLANNED OVERHAUL.	2/19/2005 20:44	- 3/15/2005 5:00	23
Prairie.Island.1	Nuclear	Scheduled	MAINTENANCE REPAIRS-UNIT 1 GENERATOR.	2/19/2005 1:38	- 3/1/2005 1:51	10
Red.Wing.1	RDF	Scheduled	PLANNED OUTAGE.	2/5/2005 22:00	- 3/6/2005 19:00	29
Black.Dog.3	Steam	Scheduled	BOILER OVERHAUL.	2/4/2005 21:41	- 2/28/2005 8:33	23
Willmarth.1	Peaking	Scheduled	MAJOR OUTAGE	1/10/2005 15:07	- 2/3/2005 8:30	24

Willmarth.2	Dooking	Scheduled	MAJOR OUTAGE	1/3/2005 7:00 - 1/25/2005 11:00	22
	Peaking	Scheduled		12/17/2004 12:45 - 12/28/2004 10:39	11
Blue.Lake.1	Peaking		BREAKER OUTAGE		
Blue.Lake.4	Peaking	Scheduled	BREAKER OUTAGE PLANNED FALL OVERHAUL RELATED TO PLANT	12/16/2004 11:00 - 12/28/2004 10:16	12
Allen.S.King.1	Steam	Scheduled	REFURBISHMENT	12/3/2004 23:29 - 12/13/2004 16:14	10
Blue.Lake.1	Peaking	Scheduled	TRANSMISSION OUTAGE	12/3/2004 7:30 - 12/9/2004 17:16	6
Blue.Lake.2	Peaking	Scheduled	TRANSMISSION OUTAGE	12/3/2004 7:30 - 12/9/2004 17:16	6
Blue.Lake.4	Peaking	Scheduled	TRANMISSION OUTAGE	12/3/2004 7:30 - 12/9/2004 17:16	6
Granite.City.1	Peaking	Scheduled	REPLACE EXHAUST SEALS	12/1/2004 10:00 - 12/9/2004 8:00	8
Blue.Lake.3	Peaking	Scheduled	BREAKER OUTAGE	12/1/2004 0:00 - 12/16/2004 10:18	15
Granite.City.2	Peaking	Scheduled	RESERVE SHUTDOWN	11/23/2004 8:00 - 11/30/2004 8:00	7
Granite.City.3	· ·	Scheduled	REPLACE EXHAUST SEALS	11/4/2004 8:00 - 11/10/2004 8:00	6
•	· ·	Scheduled	UNIT 1 OFF LINE-STEAM GENERATOR	11/1/2004 0:00 - 11/23/2004 5:07	
Prairie.Island.1			REPLACEMENT/REFUELING OUTAGE.		22
Red.Wing.2	RDF	Scheduled	SCHEDULED OUTAGE	10/31/2004 13:00 - 11/6/2004 0:00	5
Red.Wing.1	RDF	Scheduled	SCHEDULED OUTAGE	10/21/2004 20:00 - 11/13/2004 5:21	22
Willmarth.1	Peaking	Scheduled	BOILER MAINTENANCE OUTAGE	10/19/2004 23:00 - 10/22/2004 9:30	2
Willmarth.2	Peaking	Scheduled	BOILER MAINTENANCE OUTAGE - REPLACE BAGS	10/17/2004 13:00 - 10/24/2004 14:42	7
Prairie.Island.1	Nuclear	Scheduled	UNIT 1 OFF LINE-STEAM GENERATOR REPLACEMENT/REFUELING OUTAGE.	10/1/2004 0:00 - 10/31/2004 0:00	30
Inver.Hills.2G	Peaking	Scheduled	INSTALLED NEW VOLTAGE REGULATORS ON UNIT 2	9/15/2004 8:15 - 10/1/2004 0:00	16
	Ü	Scheduled	UNIT 1 OFF LINE-STEAM GENERATOR	9/10/2004 20:31 - 10/1/2004 0:00	
Prairie.Island.1		Scrieduled	REPLACEMENT/REFUELING OUTAGE		20
Red.Wing.2	RDF	Scheduled	SCHEDULED OUTAGE	7/18/2004 3:57 - 7/26/2004 12:16	8
Willmarth.2	Peaking	Scheduled	BOILER MAINTENANCE OUTAGE	6/7/2004 18:00 - 6/12/2004 12:00	5
Willmarth.1	Peaking	Scheduled	BOILER MAINTENANCE OUTAGE	6/6/2004 0:00 - 6/11/2004 4:30	5
Granite.City.4	Peaking	Scheduled	LUBE OIL LEAK REPAIR	5/26/2004 7:00 - 6/9/2004 9:15	14
Allen.S.King.1	Steam	Scheduled	GENERATOR INSPECTION NOT COMPLETED ON TIME	5/16/2004 17:00 - 5/21/2004 20:09	5
Inver.Hills.6G	Peaking	Scheduled	HOT GAS INSPECTION	5/1/2004 0:00 - 5/13/2004 17:00	13
Key.City.2	Peaking	Scheduled	ATOMIZING AIR SYSTEM	5/1/2004 0:00 - 5/19/2004 12:20	19
Granite.City.3	Peaking	Scheduled	LUBE OIL LEAK ON REDUCTIONGEAR	4/27/2004 6:30 - 4/30/2004 8:30	3
Black.Dog.4	Steam	Scheduled	BOILER OVERHAUL	4/16/2004 19:44 - 5/30/2004 15:38	44
Allen.S.King.1	Steam	Scheduled	SPRING PLANNING OVERHAUL, GENERATOR	4/9/2004 21:54 - 5/16/2004 17:00	37
Inver.Hills.6G	Peaking	Scheduled	INSPECTION HOT GAS INSPECTION	4/1/2004 0:00 - 5/1/2004 0:00	30
		Scheduled	ATOMIZING AIR SYSTEM PROBLEMS	4/1/2004 0:00 - 5/1/2004 0:00 4/1/2004 0:00 - 5/1/2004 0:00	30
Key.City.2	Peaking				
Key.City.2	Peaking	Scheduled Scheduled	ATOMIZING AIR SYSTEM	3/12/2004 7:00 - 4/1/2004 0:00	20 30
Sherburne.1	Steam		PLANNED OUTAGE	3/6/2004 4:43 - 4/4/2004 22:06	
Inver.Hills.6G	Peaking	Scheduled	HOT GAS INSPECTION	3/1/2004 0:00 - 4/1/2004 0:00	31
Red.Wing.2	RDF	Scheduled	PLANNED OVERHAUL	2/21/2004 21:00 - 3/1/2004 0:00	8
Inver.Hills.6G	Peaking	Scheduled	HOT GAS PATH OUTAGE	2/13/2004 8:10 - 3/1/2004 0:00	17
Red.Wing.1	RDF	Scheduled	PLANNED OVERHAUL	2/7/2004 23:00 - 3/1/2004 0:00	22
Black.Dog.3	Steam	Scheduled	GOVERNOR VALVES STICKING	1/23/2004 6:00 - 1/26/2004 1:09	3
Willmarth.1	Peaking	Scheduled	BOILER MAINTENANCE OUTAGE	1/4/2004 21:59 - 1/30/2004 12:52	26
Willmarth.2	Peaking	Scheduled	BOILER MAINTENANCE OUTAGE	1/1/2004 8:50 - 1/24/2004 18:00	23
Inver.Hills.3G	Peaking	Scheduled	COMBUSTION INSPECTION	10/5/2003 23:35 - 10/20/2003 10:30	14
Willmarth.2	Peaking	Scheduled	BOILER MAINTENANCE OUTAGE	10/5/2003 13:30 - 10/10/2003 4:30	5
Inver.Hills.1G	Peaking	Scheduled	COMBUSTION INSPECTION	10/1/2003 0:00 - 10/6/2003 11:02	5
Prairie.Island.2		Scheduled	REFUELING OUTAGE # 2R22	10/1/2003 0:00 - 10/10/2003 3:03	9
BD25.CC	Steam	Scheduled	BOROSCOPE INSPECTION	9/19/2003 16:34 - 9/24/2003 10:00	5
Inver.Hills.1G	Peaking	Scheduled	COMBUSTION INSPECTION	9/19/2003 14:30 - 10/1/2003 0:00	11
Prairie.Island.2	2 Nuclear	Scheduled	REFUELING OUTAGE # 2R22.	9/12/2003 20:31 - 10/1/2003 0:00	18
Red.Wing.2	RDF	Scheduled	ANNUAL BOILER OVERHAUL	7/5/2003 0:00 - 7/11/2003 11:12	6
Red.Wing.2	RDF	Scheduled	ANNUAL BOILER OVERHAUL	7/1/2003 0:00 - 7/5/2003 0:00	4
Red.Wing.1	RDF	Scheduled	BOILER OVERHAUL	6/22/2003 16:58 - 6/28/2003 5:34	6
Red.Wing.2	RDF	Scheduled	ANNUAL BOILER OVERHAUL	6/14/2003 13:55 - 7/1/2003 0:00	16
Willmarth.2	Peaking	Scheduled	BOILER MAINTENANCE OUTAGE	6/2/2003 13:30 - 6/7/2003 7:00	5
Willmarth.1	Peaking	Scheduled	BOILER MAINTENANCE OUTAGE	6/1/2003 14:32 - 6/6/2003 11:09	5
Monticello.1	Nuclear	Scheduled	UNPLANNED EXTENSION TO RFO21	5/21/2003 0:24 - 5/26/2003 5:11	5
Monticello.1	Nuclear	Scheduled	CONTINUATION OF RFO21	5/1/2003 0:00 - 5/21/2003 0:24	20
BD25.CC	Steam	Scheduled	SUBSTATION 115 KV BUS INCREASING CAPACITY	4/30/2003 6:30 - 5/20/2003 8:39	20
Monticello.1	Nuclear	Scheduled	PLANT IS SHUTDOWN FOR REFUELING	4/26/2003 0:24 - 5/1/2003 0:00	5

Inver.Hills.2G	Peaking	Scheduled	HOT END INSPECTION	4/1/2003 0:00	- 5/1/2003 0:00	30
Allen.S.King.1	Steam	Scheduled	SPRING OVERHAUL OUTAGE	3/28/2003 22:00	- 4/27/2003 18:53	30
Red.Wing.1	RDF	Scheduled	MAJOR BOILER OUTAGE	3/13/2003 0:00	- 3/15/2003 14:01	3
Red.Wing.2	RDF	Scheduled	MAJOR BOILER OUTAGE	3/2/2003 10:44	- 3/9/2003 11:21	7
Inver.Hills.2G	Peaking	Scheduled	HOT GAS INSPECTION	3/1/2003 0:00	- 4/1/2003 0:00	31
Red.Wing.1	RDF	Scheduled	MAJOR BOILER OUTAGE	3/1/2003 0:00	- 3/13/2003 0:00	12
Sherburne.2	Steam	Scheduled	PLANNED OUTAGE	2/28/2003 23:20	- 3/29/2003 14:30	29
Red.Wing.1	RDF	Scheduled	ANNUAL BOILER OVERHAUL	2/21/2003 20:13	- 3/1/2003 0:00	7
Inver.Hills.2G	Peaking	Scheduled	HOT GAS IINSPECTION	2/3/2003 10:30	- 3/1/2003 0:00	26
Allen.S.King.1	Steam	Scheduled	BOILER FEED PUMP DISCHARGE VALVE FAILURE	1/20/2003 21:00	- 1/26/2003 20:36	6
Willmarth.1	Peaking	Scheduled	BOILER MAINTENANCE OUTAGE	1/19/2003 18:00	- 2/9/2003 13:00	21
Willmarth.2	Peaking	Scheduled	BOILER MAINTENANCE OUTAGE	1/15/2003 15:30	- 1/30/2003 9:10	15
Prairie.Island.1	Nuclear	Scheduled	REFUELING OUTAGE	12/1/2002 0:00	- 12/6/2002 6:00	5
Prairie.Island.1	Nuclear	Scheduled	REFUELING OUTAGE	11/15/2002 20:21	- 12/1/2002 0:00	15
Sherburne.1	Steam	Scheduled	BOILER INSPECTION	10/23/2002 10:57	- 10/24/2002 16:54	1
Red.Wing.2	RDF	Scheduled	BOILER MINI-OUTAGE	10/20/2002 0:00	- 10/25/2002 2:22	5
Red.Wing.1	RDF	Scheduled	BOILER MINI-OUTAGE	10/13/2002 0:00	- 10/18/2002 1:35	5
Willmarth.1	Peaking	Scheduled	BOILER MAINTENANCE OUTAGE	10/7/2002 0:30	- 10/11/2002 3:00	4
Willmarth.2	Peaking	Scheduled	BOILER CLEANING OUTAGE	10/6/2002 5:50	- 10/10/2002 4:00	4
Black.Dog.3	Steam	Scheduled	BOILER OVERHAUL	8/30/2002 15:43	- 9/23/2002 13:48	24
Willmarth.2	Peaking	Scheduled	BOILER CLEANING OUTAGE	6/24/2002 0:00	- 6/28/2002 9:00	4
Willmarth.1	Peaking	Scheduled	BOILER CEANING OUTAGE	6/23/2002 8:16	- 6/27/2002 9:30	4
Red.Wing.2	RDF	Scheduled	PLANNED OUTAGE	6/9/2002 0:55	- 6/17/2002 15:01	9
Red.Wing.1	RDF	Scheduled	BOILER MAINTENANCE OUTAGE	6/8/2002 21:20	- 6/16/2002 2:02	7
Red.Wing.2	RDF	Scheduled	ANALYZER FAILURE	4/27/2002 10:40	- 4/30/2002 2:28	3
Neu.wing.z	NDI		COMBUSTOR INSPECTION FROM 4-22-02 THRU 4-27-02.			3
Angus.Anson.3	Peaking	Scheduled	ALSO UPGRADE WDPF TO NEW OVATION SYSTM	4/22/2002 8:00	- 4/30/2002 8:00	8
Black.Dog.4	Steam	Scheduled	SPRING CLEANING	4/18/2002 10:25	- 4/23/2002 22:10	5
Allen.S.King.1	Steam	Scheduled	SCHEDULED SPRING OUTAGE	4/12/2002 23:09	- 5/21/2002 10:09	38
Sherburne.3	Steam	Scheduled	BOILER OVERHAUL	3/8/2002 22:06	- 4/13/2002 14:50	36
Prairie.Island.2	Nuclear	Scheduled	REFUELING OUTAGE	3/1/2002 0:00	- 3/2/2002 2:21	1
Willmarth.1	Peaking	Scheduled	BOILER REPAIR, NEW CONTROLS	2/13/2002 23:59	- 3/12/2002 0:00	26
Willmarth.2	Peaking	Scheduled	BOILER REPAIR, CONTROLS UPGRADE	2/7/2002 17:45	- 3/5/2002 11:30	26
Prairie.Island.2	Nuclear	Scheduled	REFUELING OUTAGE	2/1/2002 21:13	- 3/1/2002 0:00	27
Red.Wing.2	RDF	Scheduled	BOILER MAINTENANCE OUTAGE	2/1/2002 0:00	- 2/5/2002 7:39	4
Red.Wing.2	RDF	Scheduled	BOILER MAINTENANCE OUTAGE	1/10/2002 14:51	- 2/1/2002 0:00	21
Black.Dog.4	Steam	Scheduled	RESTORE PRECIPITATORS	1/4/2002 21:52	- 1/6/2002 23:33	2
Red.Wing.1	RDF	Scheduled	BOILER MAINTENANCE OUTAGE	1/1/2002 0:00	- 1/21/2002 12:25	21
Red.Wing.1	RDF	Scheduled	BOILER MAINTENANCE OUTAGE	12/24/2001 18:54	- 1/1/2002 0:00	7
Black.Dog.3	Steam	Scheduled	SWITCHYARD UPGRADE	11/30/2001 19:54	- 12/9/2001 16:57	9
Monticello.1	Nuclear	Scheduled	RFO 2001.	11/3/2001 4:05	- 12/15/2001 10:14	42
Inver.Hills.5G	Peaking	Scheduled	FUEL NOZZLE INSPECTION	11/1/2001 0:00	- 12/1/2001 0:00	30
Black.Dog.4	Steam	Scheduled	SWITCHYARD UPGRADE	10/19/2001 18:59	- 11/4/2001 13:12	16
Black.Dog.3	Steam	Scheduled	SWITCHYARD UPGRADE	10/19/2001 14:03	- 10/28/2001 14:00	9
Allen.S.King.1	Steam	Scheduled	FALL SCHEDULED OUTAGE	10/13/2001 23:09	- 10/19/2001 0:34	5
\A/:II	Darabia -	Scheduled	BREAKER REPLACENTS HAD TO BE COMPLETED	10/13/2001 0:00	- 10/14/2001 8:50	4
Willmarth.1	Peaking		BEFORE BOTH UNITS WOULD COME ONLINE			1
Willmarth.1	Peaking	Scheduled	BOILER CLEANING AND MISC OUTAGE WORK	10/8/2001 0:00	- 10/13/2001 0:00	5
Willmarth.2	Peaking	Scheduled	BOILER CLEANING AND MISC OUTAGE WORK	10/6/2001 10:00	- 10/12/2001 0:00	6
Granite.City.3	Peaking	Scheduled	UPGRADE RELAYING	10/1/2001 10:43	- 10/19/2001 8:00	18
Granite.City.4	Peaking	Scheduled	UPGRADE RELAYING	10/1/2001 10:43	- 10/19/2001 8:00	18
Granite.City.1	Peaking	Scheduled	UPGRADE RELAYING	10/1/2001 7:30	- 10/18/2001 7:00	17
Granite.City.2	Peaking	Scheduled	UPGRADE RELAYING	10/1/2001 7:30	- 10/18/2001 7:00	17
Angus.Anson.3		Scheduled	COMBUSTOR INSPECTION	9/24/2001 7:30	- 9/25/2001 10:30	1
Granite.City.4	Peaking	Scheduled	COMBUSTION INSPECTION	9/13/2001 9:50	- 9/18/2001 7:30	5
Red.Wing.2	RDF	Scheduled	PLANNED BOILER MAINTENANCE OUTAGE	9/3/2001 0:47	- 9/16/2001 10:01	13
Red.Wing.1	RDF	Scheduled	PLANNED BOILER MAINTENANCE OUTAGE	9/2/2001 21:23	- 9/9/2001 4:08	6
Willmarth.1	Peaking	Scheduled	PLANNED QUARTERLY MAINTENANCE OUTAGE	6/4/2001 15:30	- 6/9/2001 13:00	5
Angus.Anson.2	Peaking	Scheduled	COMBUSTOR INSPECTION	6/4/2001 7:30	- 6/11/2001 9:13	7
Willmarth.2	Peaking	Scheduled	PLANNED QUARTERLY MAINTENANCE OUTAGE	6/3/2001 6:00	- 6/9/2001 1:00	6

Inver.Hills.4G	Peaking	Scheduled	MAJOR OVERHAUL	6/1/2001 0:00	- 6/6/2001 13:05	6
Allen.S.King.1	Steam	Scheduled	PLANNED SPRING OUTAGE	5/1/2001 0:00	- 5/25/2001 19:23	25
Inver.Hills.4G	Peaking	Scheduled	MAJOR OVERHAUL	5/1/2001 0:00	- 6/1/2001 0:00	31
Allen.S.King.1	Steam	Scheduled	SPRING PLANNED OUTAGE	4/20/2001 22:45	- 5/1/2001 0:00	10
Inver.Hills.4G	Peaking	Scheduled	MAJOR OVERHAUL	4/1/2001 0:00	- 5/1/2001 0:00	30
Red.Wing.2	RDF	Scheduled	PLANNED BOILER OUTAGE	4/1/2001 0:00	- 4/18/2001 1:14	17
Red.Wing.1	RDF	Scheduled	DISTRIBUTION CONVEYOR/C-9 CONVEYOR MALFUNCTIONS	3/25/2001 4:00	- 3/27/2001 11:14	2
Red.Wing.2	RDF	Scheduled	ANNUAL BOILER MAINTENANCE OUTAGE	3/10/2001 18:55	- 4/1/2001 0:00	21
Sherburne.1	Steam	Scheduled	PLANNED OUTAGE	3/3/2001 2:41	- 4/21/2001 5:08	49
Inver.Hills.4G	Peaking	Scheduled	MAJOR TURBINE OVERHAUL	3/1/2001 0:00	- 4/1/2001 0:00	31
Red.Wing.1	RDF	Scheduled	BOILER CLEANING, BOILER TUBE REPAIR, CONVEYOR WORK, MISC. MAINTENANCE WORK	3/1/2001 0:00	- 3/25/2001 4:00	24
Inver.Hills.4G	Peaking	Scheduled	MAJOR OVERHAUL	2/1/2001 0:00	- 3/1/2001 0:00	28
Prairie.Island.1	Nuclear	Scheduled	REFUELING, PLANNED	2/1/2001 0:00	- 2/23/2001 21:30	23
Prairie.Island.1	Nuclear	Scheduled	REFUELING, CYCLE 20 TO 21.	1/19/2001 21:36	- 2/1/2001 0:00	12
Inver.Hills.4G	Peaking	Scheduled	MAJOR OVERHAUL	1/5/2001 13:40	- 2/1/2001 0:00	26
Willmarth.2	Peaking	Scheduled	PLANNED BOILER OVERHAUL	1/1/2001 14:40	- 1/15/2001 2:00	13
Willmarth.1	Peaking	Scheduled	TURBINE OVERHAUL	1/1/2001 0:00	- 1/31/2001 2:00	30

Note: NSP-WI French Island Generation plant and retired generation facilities outage data not included.



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#### 1.0 PURPOSE

1.1 This policy addresses the planned overhaul scheduling process which SHALL be used when requesting a new planned overhaul or changing an existing planned overhaul schedule. Planned overhauls SHALL be scheduled with concurrence from Energy Supply Operations, Transmission Systems and Commercial Operations to ensure the integrity and reliability of the electric system.

## 2.0 APPLICABILITY

2.1 All Energy Supply organizations involved with planned unit overhauls.

#### 3.0 RESPONSIBILITIES

- 3.1 Plant Directors are responsible to:
  - 3.1.1 Request a planned overhaul through use of the Overhaul Request Form. See Appendix A.
  - 3.1.2 Review the planned overhaul schedule provided by Reliability Services and Overhaul Management.
  - 3.1.3 Provide Commercial Operations with a shutdown load schedule (release from dispatch to unit shutdown) and a startup load schedule (unit online to unit is returned to dispatch). This shall be provided 1 week prior to unit shutdown and 1 week prior to unit start-up.
  - 3.1.4 Submit a PCI report no later than 3 weeks prior to the start of the planned overhaul. Refer to Appendix C for initial and modification PCI Constraint notifications.
  - 3.1.5 Submit a completed PCI report when the unit is returned to dispatch.
- 3.2 Reliability Services and Overhaul Management (RSOM) is responsible to:
  - 3.2.1 Establish and maintain a 5 year planned overhaul schedule for all Energy Supply generating facilities (greater than 10 MW unit) for each of the NSP, PSCO, and SPS regions.
  - 3.2.2 Develop and draft a planned overhaul schedule with requested revisions with input from Energy Supply Operations, Engineering and Construction, Technical Services (Technical Resources & Compliance and Plant Engineering and

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Technical Support), Transmission System Operations and Commercial Operations.

- 3.2.3 Facilitate planned overhaul schedule revisions with Commercial Operations and Transmission System Operations and reach concurrence on the revised schedule.
- 3.2.4 Update and electronically publish the planned overhaul schedules as revisions are approved. E-mail distribution notifies the members of changes and schedule review cycles.
- 3.3 Commercial Operations is responsible to:
  - 3.3.1 Coordinate and communicate Xcel Energy overhaul plans to WECC, SPP, and MISO for approval and ensure Xcel is complying with NERC standards and ISO protocols regarding overhaul planning.
  - 3.3.2 Notify RSOM that Commercial Operations concurs with the overhaul schedule plan.
  - 3.3.3 Ensure replacement energy cost optimization analysis for schedule revisions is performed when necessary to evaluate economic impacts.
  - 3.3.4 Ensure the Monthly Generation & Fuel Forecast Production Budget is updated monthly providing a 12-month projection.
  - 3.3.5 Plan sufficient system capacity to cover most single severe contingency MSSC plus required operating reserves.
- 3.4 Transmission System Operations is responsible to:
  - 3.4.1 Review the Energy Supply Overhaul Schedule in order to coordinate Transmission Systems outages with plant outages.
  - 3.4.2 Provide direct approval (or denial) to RSOM requests if there is a revision to the existing overhaul schedule, and it will occur in less than one year.
  - 3.4.3 Notify RSOM that Transmission Operations concurs with the overhaul schedule plan.
  - 3.4.4 Notify RSOM if there is a revision to the existing overhaul schedule that is attributed to a transmission constraint and the schedule must be adjusted. When

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appropriate, Transmission System Operations should identify such revisions as subject to the No Conduit Rule of information back to Commercial Operations.

#### 4.0 REQUIREMENTS

- 4.1 Overhaul Scheduling
  - 4.1.1 Plants SHALL use the Overhaul Request Form, Appendix A, to submit their overhauls for review and approval.
  - 4.1.2 RSOM SHALL establish and maintain a 5 year planned overhaul schedule for NSP, PSCO, and SPS that is coordinated with Energy Supply Operations, Engineering and Construction, Technical Services along with Commercial Operations and Transmission Operations. Refer to attached Appendix B process map for the revision process which occurs as needed throughout the year. The planned overhaul dates listed on the schedule will be from breaker open (overhaul start) to breaker closed (overhaul end).
  - 4.1.3 The published overhaul schedule SHALL include approved and/or budgeted overhauls and should include planned dates, major overhaul scope of work, major capital projects planned, etc.
  - 4.1.4 The scheduling of regional overhauls should take into consideration labor resource usage and availability within the region (traveling maintenance, Special Construction and contractor support).
  - 4.1.5 The duration of overhauls and the intervals between overhauls (such as major turbine and boiler overhauls) should be established based on technical recommendations and actual overhaul work scope.
  - 4.1.6 RSOM should publish a planned overhaul schedule update before March 1 each year to ensure the latest overhaul plans will be incorporated into the energy supply Annual Production Budget analysis.
  - 4.1.7 RSOM SHALL administer e-mail distribution lists to inform users of a revision change and the schedule SHALL be published on a controlled access network server.

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#### 5.0 REQUIRED RECORDS

Category	Deliverable	Owner	Format	Distribution List
Scheduling	Overhaul Schedule	Regional RSOM Manager	Online System	Regional distribution list
Scheduling	Overhaul Request Form	Plant Director	PDF	RSOM for further distribution and retention
Scheduling	PCI submittal	Plant Operations	PCI Submittal	PCI distribution list

#### 6.0 DEFINTIONS & REFERENCES

## 6.1 Definitions

- 6.1.1 Annual Production Budget A financial analysis created by Generation Risk Services (Generation modeling) for NSP, PSCO and SPS station generation and fuel use for the next 5 years. It is used to forecast corporate earnings, buy fuel, energy trading and purchasing power. It is created in the spring of each year based on the best estimate in April of overhaul schedules, unit capacity factor, station fuel use and other marketing factors.
- 6.1.2 Maintenance Outage (MO) An outage that can be deferred beyond the end of the next weekend (Sunday at 2400 hours), but requires that the unit be removed from service, another outage state, or Reserve Shutdown state before the next Planned Outage (PO). Characteristically, a MO can occur any time during the year, has a flexible start date, may or may not have a predetermined duration, and is usually much shorter than a Planned Outage.
- 6.1.3 Monthly Generation & Fuel Forecast A financial spreadsheet created by Trading Analytics using the annual production budget as its baseline and updated monthly to provide a 12-month look ahead.
- 6.1.4 Overhaul A unit outage (unit not synchronized to the grid system and not in reserve shutdown) involving a turbine or boiler overhaul or inspection that is scheduled well in advance and is of a predetermined duration.

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- 6.1.5 Planned Overhaul (PO) An outage scheduled well in advance (90 days) and included in the Outage Schedule. GADS defines a planned overhaul extension as an extension of a Planned Overhaul (PO) beyond its estimated completion date. This means that at the start of the PO, the Overhaul had an estimated duration (time period) for the work and a date set for the unit to return to service. All work during the PO is scheduled (part of the original scope of work) and all repair times are determined before the overhaul started.
- 6.1.6 Unplanned Forced Outage (U1) An outage that requires immediate removal of a unit from service, another Outage State, or a Reserve Shutdown state. This type of outage usually results from immediate mechanical/electrical/hydraulic control systems trips and operator-initiated trips in response to unit alarms.

## 6.2 References

6.2.1 Overhaul Request Form

#### 7.0 REVISION HISTORY

Date	Revision	Change Description
08/20/2012	1.0	Initial Issue
03/27/2013	1.1	<ul> <li>Updated links to overhaul standards.</li> <li>Updated department name from Overhaul Management and Maintenance Support (OMMS) to Reliability Services and Overhaul Management (RSOM)</li> </ul>
8/1/2014	2	<ul> <li>Eliminated reference to overhaul planning which is addressed in EPR standards 5.501-5.508.</li> <li>Eliminated the responsibilities of ES Finance</li> <li>Eliminated the reference to Overhaul Management</li> <li>Impact of SPP market in SPS included</li> <li>Streamlined and consolidated sections as possible</li> </ul>

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# Energy Supply Technical Services Policy

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# Energy Supply Technical Services Policy

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## **APPENDIX A - OVERHAUL REQUEST FORM**

(Typical – Use Current Revision)

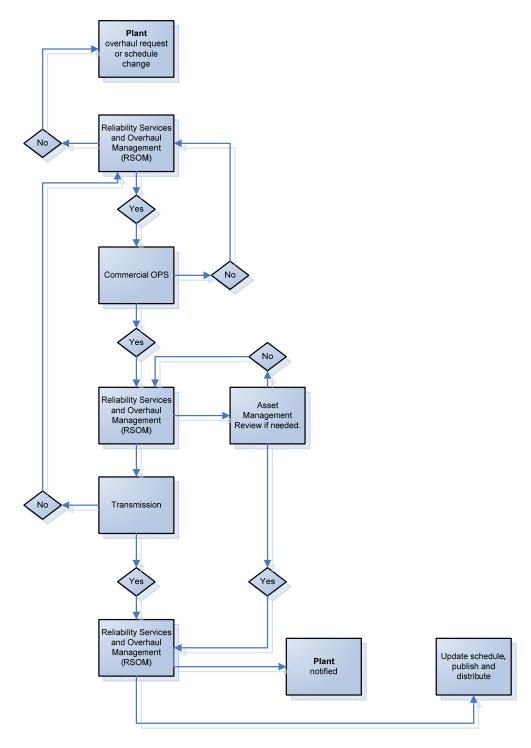
22080	Station:	WEG
PSCO	NSP	SPS
Request Form Date:	Requested by:	Total MW Unavailable:
Planned Overhaul New	Schedule Change UOR	Туре:
Request for:		
Requested Start	End	
Date:	Date:	
Overhaul Request Description	on:	
Overhaul Request Description	on:	
Overhaul Request Description	on:	35-24
Overhaul Request Description	on:	
Overhaul Request Description	on:	
ommercial Operations Tradi		
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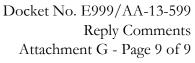


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## APPENDIX B - OVERHAUL SCHEDULING FLOWCHART



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## APPENDIX C - PCI CONSTRAINT OVERHAUL ENTRY FLOWCHART

Planned Outage				
Planned Outage 90 Days in Advance	Reliability Services and Overhaul Management will enter the overhaul into the Overhaul Schedule  Plant Operations enters the overhaul in PCI 3-4 weeks before the outage.			
Planned Outage changed more than 14 days prior to outage beginning (includes either a change in date or change in duration).	Reliability Services and Overhaul Management will enter the modified Overhaul Schedule  Plant Operations modifies the overhaul in PCI			
Planned Outage changed less than 14 days prior to the outage beginning.	Plant Operations modifies the overhaul in PCI			
Planned Overhaul Extension	Plant Operations modifies the overhaul in PCI			

Note: PCI (Power Cost Incorporated) vendor name of software used

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## 1.0 Purpose

1.1 This document describes the initiating processes to complete an overhaul. The overhaul strategy phase is intended to be completed two (2) years before the overhaul start.

## 2.0 Applicability

- 2.1 This applies to all Energy Supply personnel involved in the following overhauls on the following units:
  - 2.1.1 All planned major overhauls at the following coal fired sites:
    - 2.1.1.1 Comanche, Hayden, Pawnee, Sherco, King, Tolk, Harrington.
  - 2.1.2 Hot gas path, major combustion turbine, and major steam turbine overhauls at the following combined cycle sites:
    - 2.1.2.1 Rocky Mountain Energy Center, Ft. St. Vrain 1-4, Black Dog 5-2, High Bridge, and Riverside.
  - 2.1.3 All planned major overhauls on the following gas fired units:
    - 2.1.3.1 Nichols 3, Jones 1 & 2, Plant X 3 & 4, Cunningham 2, and Maddox 1.

## 3.0 Responsibilities

- 3.1 Plant Director or designee. During the overhaul strategy phase, the Plant Director or designee is responsible for assigning plant staff to the overhaul management team, review of proposed overhaul goals, and development of the overhaul milestone schedule.
- 3.2 Overhaul Leader. The Overhaul Leader is responsible to provide leadership and clear direction of all overhaul activities and personnel. They will work in close coordination and partnership with the Plant Director. They will support the scope development and startup phases while leading the scope breakdown, planning and scheduling, implementation, and closeout phases. The Overhaul Leader will achieve the overhaul goals by effective implementation of the Energy Supply overhaul management process. During each phase of the overhaul, the Overhaul Leader is responsible to provide clear communication of roles and responsibilities.

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- 3.3 Overhaul Management Team. A team of individuals who are responsible to directly assist the Overhaul Leader in the effective implementation of the Energy Supply overhaul management standards in order to successfully achieve overhaul performance objectives. The Overhaul Management Team members are expected to ensure that problem resolution of open issues are actively being resolved. Initial team members include the Plant Management Team (Plant Director, Maintenance Manager/Superintendent, and/or Operations Manager/Superintendent), and the Plant Engineering and Technical Support (PE&TS) Manager. During the overhaul strategy phase, the Overhaul Management Team is responsible for drafting proposed overhaul goals for the overhaul.
- 3.4 Regional Reliability Services and Overhaul Management (RSOM) Manager. During the overhaul strategy phase, the Regional RSOM Manager is responsible for review of proposed overhaul goals and development of the overhaul milestone schedule. The Regional RSOM Manager will work closely with the Plant Directors with applicable overhauls to ensure timelines required for compliance with these standards are understood.

## 4.0 Requirements

- 4.1 Process Requirements
  - 4.1.1 Overhauls led by RSOM. The Regional RSOM Manager SHALL initiate and obtain concurrence with the Regional General Manager regarding the overhauls that will be led by RSOM.
  - 4.1.2 Initiate Overhaul Strategy Meeting. The Regional RSOM Manager (for RSOM led overhauls) or the Plant Director should initiate the first strategic meeting with plant leadership to start the overhaul strategy process. One of the items for discussion is to ensure that the current published overhaul schedule is adequate for the planned scope of overhaul work.
  - 4.1.3 Assign Overhaul Leader. For those overhauls that are led by RSOM (as defined in section 4.1.1), the Regional RSOM Manager SHALL assign the Overhaul Leader from the RSOM staff. For those overhauls not led by RSOM, the Plant Director SHALL assign a member of their staff to be the Overhaul Leader. If the preferred Overhaul Leader is not a member of RSOM or Operations, the Plant Director should request assistance from the preferred individual's management.

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- 4.1.4 Identifying additional Overhaul Management Team members. The Plant Director and the Regional RSOM Manager should identify additional members to the Overhaul Management Team. If additional members in Technical Resources and Compliance (TR&C), RSOM, and Engineering and Construction (E&C) departments are desired at this time, the Regional RSOM Manager or Plant Director is responsible to solicit assistance from their respective managers. If support is not received from the respective managers, the Regional RSOM Manager or Plant Director should work with their management to ensure the right membership is achieved to successfully achieve overhaul performance objectives.
- 4.1.5 Develop Draft Overhaul Goals. The Overhaul Management Team should develop, document, and communicate to the Plant Director and Regional RSOM Manager (as applicable) the proposed overhaul goals. At a minimum, the overhaul goals should address the following:
  - 4.1.5.1 Safety
  - 4.1.5.2 Environmental
  - 4.1.5.3 Reliability/Quality
  - 4.1.5.4 Schedule
  - 4.1.5.5 Cost
  - 4.1.5.6 Contractor Performance
- 4.1.6 Develop Overhaul Milestone Timeline. The Regional RSOM Manager or Plant Director or designee SHALL ensure the development of and communication of the initial overhaul milestone timeline. The timeline should include estimated dates for the following milestones: scope development complete, scope breakdown complete, planning and scheduling complete, unit shutdown and unit start-up.

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## 5.0 Required Records

5.1 The deliverables of the overhaul strategy phase are listed below.

Deliverable	Responsible Party	Format	Distribution
Overhaul Leader	Plant Director, Regional	Email	Plant Management Team, RSOM
Identification	RSOM Manager		Manager, E&C Director, Regional
	-		Technical Services Managers
Milestone Timeline	Plant Director, Regional	Document,	Overhaul Management Team
	RSOM Manager	hyperlink	and Overhaul Participants

## 6.0 Definitions and References

- 6.1 Definitions
  - 6.1.1 Regional RSOM Manager: The Manager from RSOM in each respective region
- 6.2 References

## 7.0 Revision History

Date	Revision	Change Description
07/03/2012	1.0	Original Issue
09/03/2013	1.1	<ul> <li>Updated links.</li> <li>Updated department name from Overhaul Management and Maintenance Support (OMMS) to Reliability Services and Overhaul Management (RSOM)</li> <li>Removed references to Reliability Maintenance Services (RMS) since they have been incorporated into RSOM</li> </ul>
08/01/2014	2.0	<ul> <li>Simplified, consolidated steps and removed redundant content to reduce the length of the document.</li> <li>Updated for differentiation between overhauls led by RSOM and those led by plant personnel.</li> <li>Applicability of standard updated.</li> </ul>

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Energy S	Revision: 2.0	
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Non Public Document - Contains Trade Secret Data
Public Document - Trade Secret Data Excised
Public Document

Xcel Energy

Docket No.: E999/AA-13-599

Response To: Office of the Attorney General Information Request No. 1

Requestor: James Canaday
Date Received: February 7, 2014

#### Question:

Subject: Sherco 3 Fuel Replacement Costs

Reference: Part S of Xcel's Annual Automatic Adjustment Report, pages 2 and 3

- A. Please identify the **total** amount of fuel replacement costs for the entire time that Sherco 3 was out-of-service. Please note that the requested information is for the **entire time** that Sherco 3 was out-of-service and is not limited to the November, 2011 through July, 2013 time frame.
- B. For each month (or partial month) that Sherco 3 was out-of service, please identify the amount of fuel replacement costs. The sum of the monthly fuel replacement costs should equal the **total** amount of fuel replacement costs identified in Part A.
- C. For each day (or partial day) that Sherco 3 was out-of service, please identify the amount of fuel replacement costs. The sum of the daily fuel replacement costs should equal the monthly amount of fuel replacement costs identified in Part B.

### Response:

To provide context for our responses to parts A, B, and C, we first provide a discussion about what is included in our AAA report and how the outage costs included in the AAA report are calculated.

The Company's AAA report identifies, among other things, the actual cost of fuel and market purchases that the Company has made to serve our customers over the term covered by the report. Part S of our AAA report is intended to identify which portion

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of our actual costs were likely due to the outage at Sherco 3 caused by the event of November 19, 2011.

To understand the outage costs, it is important to note that due to the interaction of our system and the market as a whole, it is not possible to calculate with total precision the costs incurred as a result of a particular outage. Our outage cost calculations attempt to provide a reasonable approximation of which of our actual costs of fuel or purchased energy provided in our AAA report are related to a particular outage. Determining the exact costs associated with an outage would require that we calculate what our costs would have been had an outage not occurred, essentially recreating a history that never happened. Because many variables affect energy market prices – including the outage itself – we must make reasonable assumptions for our modeling efforts to recreate this "what if" scenario. To calculate the replacement energy costs, we must determine what our costs would have likely been had the outage not occurred. We rely on dispatch models and other tools to approximate what would have occurred without the outage at Sherco 3.

The data in Part S is derived from our monthly outage reports filed with the Commission. Our outage reports are intended to identify, on a monthly basis, the impacts of all outages on our fleet during a given month. We create the reports by running our models with and without the plant to determine the costs incurred under both scenarios. We use modeling inputs to reasonably capture the impacts of outages on a fleet-wide basis during the single month duration. To do so, we use MISO market pricing at the MISO CP node for our entire load, NSP.NSP; assume our plants would not have experienced any other outages during the given month; and use only the lesser of the day-ahead and time-of-day pricing as inputs for our model. We believe this general methodology provides a reasonable approximation of our incremental additional costs on a fleet wide, month-to-month basis.

For the period of November 2011 through October 2012, however, we used a simplified method to derive the estimated replacement costs provided in Part S. Specifically, for each hour we determined the lesser of day-ahead LMP or Time of Day (TOD) pricing at our load node of NSP.NSP to arrive at the market price of electricity applicable to our load. If the price was less than the cost of Sherco 3, we set the plant load at minimum; if the price was greater than the cost of Sherco 3, we set Sherco 3 at maximum load in our models. We then summed the hourly loads and multiplied this total by the difference between the simple average of market price (the sum of the all prices divided by all hours) and the simple average of Sherco 3 costs. In other words, our monthly outage calculations for this period were derived by identifying the simple average of LMP costs during the particular month and the simple average of Sherco 3 costs during the particular month, thereby creating a single, monthly \$/MWh value for estimated replacement energy costs.

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Starting in November 2012, we began using a production cost model to calculate our replacement energy costs as it better captures how MISO commits and dispatches units. We were able to move to this modeling methodology due to recent updates to our GenTrader modeling software that allowed this work to be performed without the previous scenario constraints on earlier versions. Under this methodology, Sherco 3 operating constraints and costs are introduced into the model along with the lesser of the day-ahead LMP at the NSP.NSP pricing node or TOD pricing as the market price. The GenTrader modeling software is able to optimize the run of Sherco 3 against these prices to determine a reasonable estimation of the incremental replacement costs. We used this methodology to calculate estimated replacement energy costs for Sherco 3 through its release to MISO for dispatch in October 2013.

We provide the following responses based on the methodologies described above to calculate costs from November 12, 2011, the day of the event, to October 28, 2103, the day Sherco 3 was released for dispatch to MISO and could therefore participate in the energy markets.

- A. Based on the methodologies described above, total monthly incremental costs due to the Sherco 3 outage are approximately \$57.1 million, when any negative values (*i.e.*, the outage produced economic benefits) are ignored.
- B. Based on the methodologies described above, our monthly costs are provided in Column L of the live Excel spreadsheet included as Attachment A, Pages 1 and 2. Page 1 summarizes the monthly values as reported in the AAA filing (*i.e.*, totaling \$57.1 million when months where economic benefits of the outage were ignored). Page 2 includes the impact of savings during January, February, and March 2012 when LMPs averaged below the cost of Sherco 3 (*i.e.*, the "true cost" of the outage), totaling approximately \$55 million.
- C. Because the analysis used to calculate our replacement costs from November 2011 through October 2012 provided a monthly replacement energy cost by calculating a simple average of the costs of a particular month, we are not able to calculate replacement costs on a daily basis during this period. For the replacement cost calculations we performed from November 2012 through October 2013 using the production cost models, we are able to calculate daily replacement cost values during this period.

To provide a complete response to this information request, we recalculated our daily outage costs for the period of November 2011 through October 2012, and we replaced the simple average method by recalculating the cost by hour to derive daily replacement cost values. We also included the daily values from our

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production cost model for the period of November 2012 through October 2013. The complete daily outage calculations from the production cost models are provided as Attachment B.

We note that because the calculations for November 2011 through October 2012 were performed using a different methodology than in our monthly outage reports (simple average versus production model), the daily values provided in Attachment B do not sum to the monthly or total values but instead sum to approximately \$60 million in replacement costs. In addition, the approximately \$60 million total replacement cost includes those daily values where there was an economic benefit from the outage (*i.e.*, replacement cost values were negative) thereby providing the "true cost" of the outage.

The methodology we used to calculate our replacement costs in this proceeding is not the only possible way to calculate replacement costs. As described in our response to Information Request No. OAG-110 in our current rate case (Docket No. E002/GR-13-868), as part of the lawsuit we filed on November 15, 2013 against the manufacturer of the turbines at Sherco 3, we are currently calculating potential damage amounts, which include the cost of replacement energy. For this damage calculation, we are using different modeling assumptions to reflect the long-term nature of the outage at Sherco 3. This damages calculation methodology differs from the way we calculate our outage costs for our AAA filing in four key ways.

First, for our damages calculation we are using the CP node NSP.Sherc3 to reflect the revenues we would have collected had the plant been dispatched into the market at its node price instead of at our load node, NSP.NSP. Utilizing NSP.Sherc3 better reflects the actual revenues attributable to Sherco Unit 3. In contrast, utilizing the NSP.NSP CP Node provides a more holistic view of our fleet-wide costs, which we believe is appropriate for our AAA report.

Second, we will perform additional modeling scenarios with other, shorter, unplanned outages that would likely have occurred over the period the plant was on extended outage. This is intended to produce an "average" scenario that would approximate the performance of the plant when viewed in isolation. In contrast, because our monthly outage reports are calculated monthly, no additional outages are assumed in that calculation.

Third, we will take into account both the day-ahead LMP and real-time LMP pricing and the impact that has on plant dispatch. This is instead of utilizing the lower of the day-ahead NSP.NSP LMP or time of day pricing which we use for our AAA filings. This will provide a better approximation of our lost market revenues instead of our cost to acquire other energy.

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Finally, we will use the expected heat rate improvement NSP expected to gain as a result of the work of the outage. The AAA estimates use historical actual heat rates.

While we are still completing our litigation damages calculations, we believe that replacement energy costs for litigation damages purposes will be closer to \$50 million (we note that this is still a preliminary number subject to change), compared to \$57.1 million we calculated using the methodology for our AAA filings. We believe this is a more appropriate methodology to calculate damages as opposed to our AAA methodology. While neither is 100 percent precise, they both provide a reasonable approximation of our replacement energy costs for different purposes: (1) our AAA methodology identifies costs embedded in our actual fuel and energy costs for a month-to-month fleet-wide view; and (2) the damages calculation identifies lost revenues in the MISO market.

Portions of the information provided in Attachments A and B are considered trade secret pursuant to Minn. Stat. § 13.37 and have been marked accordingly. We maintain the confidentiality of this data, which has independent economic value from not being generally known or accessibly by proper means by others who could obtain economic value from its disclosure.

Preparer: Nick Detmer

Title: Manager, Commercial Operations Projects and Compliance

Department: Power Operations
Telephone: (303) 571-7030
Date: April 28, 2014

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### PUBLIC DOCUMENT: TRADE SECRET DATA EXCISED

Northern States Power Company State of Minnesota - Electric Operations Sherco 3 Event Estimated Replacement Energy Costs Docket No. E999/AA-13-599 Information Request No. OAG-1

> Attachment A Page 1 of 2

				Total	Average	Unit	Change in
	Duration	Period		Outage	Replacement	Incremental	Energy Costs
Date	(Days)			MWh	Cost	Cost	Due to Outage
				[Trade Secret		[Trade Secret	[Trade Secret
44 /40 /2044 44 /20 /2044	40	<b>N</b> T 1 (		Begins	04.054.500	Begins	Begins
11/19/2011 - 11/30/2011	12	November 2			\$1,951,782		
12/01/2011 - 12/31/2011	31	December			\$7,701,441		
01/01/2012 - 01/31/2012	31	January			\$6,299,086		
02/01/2012 - 02/29/2012	29	February			\$6,067,854		
03/01/2012 - 03/31/2012	31	March			\$5,705,721		
04/01/2012 - 04/30/2012	30	April			\$6,140,351		
05/01/2012 - 05/31/2012	31	May			\$9,281,594		
06/01/2012 - 06/30/2012	30	June	2012		\$9,160,688		
07/01/2012 - 07/31/2012	31	July	2012		\$13,199,676		
08/01/2012 - 08/31/2012	31	August	2012		\$8,767,767		
09/01/2012 - 09/30/2012	30	September	2012		\$4,860,041		
10/01/2012 - 10/31/2012	31	October	2012		\$5,327,359		
11/01/2012 - 11/30/2012	30	November	2012		\$9,239,309		
12/01/2012 - 12/31/2012	31	December	2012		\$10,346,413		
01/01/2013 - 01/31/2013	31	January	2013		\$8,841,918		
02/01/2013 - 02/28/2013	28	February	2013		\$7,891,968		
03/01/2013 - 03/31/2013	31	March	2013		\$11,550,934		
04/01/2013 - 04/30/2013	30	April	2013		\$11,335,416		
05/01/2013 - 05/31/2013	31	May			\$9,924,366		
06/01/2013 - 06/30/2013	30	June			\$9,093,671		
07/01/2013 - 07/31/2013	31	July			\$11,232,840		
08/01/2013 - 08/31/2013	31	August			\$10,444,363		
09/01/2013 - 09/30/2013	30	September			\$9,205,283		
10/01/2013 - 10/31/2013	27 *	October			\$4,894,336		
1, 11, 2010				Trade Secret Ends]	, ,, ,, 0	Trade Secret Endsl	Trade Secret Ends]

Entire Event	709 *	Total	7,139,548	\$198,464,176	\$141,297,791	\$57,166,386

<sup>\*</sup> Based on all outages during October, 2013.

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### PUBLIC DOCUMENT: TRADE SECRET DATA EXCISED

Northern States Power Company State of Minnesota - Electric Operations Sherco 3 Event Estimated Replacement Energy Costs Docket No. E999/AA-13-599 Information Request No. OAG-1

> Attachment A Page 2 of 2

				Total	Average	Unit	Change in
	Duration	Period		Outage	Replacement	Incremental	Energy Costs
Date	(Days)			MWh	Cost	Cost	Due to Outage
				[Trade Secret		[Trade Secret	[Trade Secret
14 /40 /0044	40	N. 1		Begins	04.054.500	Begins	Begins
11/19/2011 - 11/30/2011	12	November 2			\$1,951,782		
12/01/2011 - 12/31/2011	31	December			\$7,701,441		
01/01/2012 - 01/31/2012	31	January			\$5,495,068		
02/01/2012 - 02/29/2012	29	February			\$5,810,124		
03/01/2012 - 03/31/2012	31	March			\$5,118,290		
04/01/2012 - 04/30/2012	30	April			\$6,140,351		
05/01/2012 - 05/31/2012	31	May			\$9,281,594		
06/01/2012 - 06/30/2012	30	June	2012		\$9,160,688		
07/01/2012 - 07/31/2012	31	July	2012		\$13,199,676		
08/01/2012 - 08/31/2012	31	August	2012		\$8,767,767		
09/01/2012 - 09/30/2012	30	September	2012		\$4,860,041		
10/01/2012 - 10/31/2012	31	October	2012		\$5,327,359		
11/01/2012 - 11/30/2012	30	November	2012		\$9,239,309		
12/01/2012 - 12/31/2012	31	December	2012		\$10,346,413		
01/01/2013 - 01/31/2013	31	January	2013		\$8,841,918		
02/01/2013 - 02/28/2013	28	February	2013		\$7,891,968		
03/01/2013 - 03/31/2013	31	March	2013		\$11,550,934		
04/01/2013 - 04/30/2013	30	April	2013		\$11,335,416		
05/01/2013 - 05/31/2013	31	May	2013		\$9,924,366		
06/01/2013 - 06/30/2013	30	June	2013		\$9,093,671		
07/01/2013 - 07/31/2013	31	July			\$11,232,840		
08/01/2013 - 08/31/2013	31	August			\$10,444,363		
09/01/2013 - 09/30/2013	30	September			\$9,205,283		
10/01/2013 - 10/31/2013	27 *	October			\$4,894,336		
, , , , , , , , , , , , , , , , , , , ,				Trade Secret Ends]		Trade Secret Endsl	Trade Secret Ends]

Entire Event	709 *	Total	7,139,548	\$196,814,997	\$141,297,791	\$55,517,206

<sup>\*</sup> Based on all outages during October, 2013.

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# PUBLIC DOCUMENT - TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret Begins	Averaç Replacen Cost	nent	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
11/19/2011	_ 355	\$ 14	4,565		_ 390
11/20/2011			0,484		
11/21/2011 11/22/2011			6,721 1,601		
11/23/2011			3,156		
11/24/2011			0,031		
11/25/2011			9,276		
11/26/2011		\$	9,270		
11/27/2011		\$	_		
11/28/2011		Ψ \$ 26	9,405		
11/29/2011		ψ 20 \$ 28	4,008		
11/30/2011			7,642		
12/1/2011			1,619		
12/1/2011			4,372		
12/3/2011			5,230		
12/4/2011			7,009		
12/5/2011			9,710		
12/6/2011			9,640		
12/7/2011			1,148		
12/7/2011			8,450		
12/9/2011			7,188		
12/10/2011			7,842		
12/11/2011			5,697		
12/11/2011			8,278		
12/13/2011			0,799		
12/14/2011			9,799		
12/15/2011			3,771		
12/16/2011			2,102		
12/17/2011			7,849		
12/18/2011			3,462		
12/19/2011			8,889		
12/20/2011			0,881		
12/21/2011			0,479		
12/22/2011			7,424		
12/23/2011			7,362		
12/24/2011			3,826		
12/25/2011			6,689		
12/26/2011			6,177		
12/27/2011			2,916		
12/28/2011			9,591		
12/29/2011		-	5,962		
12/30/2011			4,425		
12/31/2011			9,166		
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### PUBLIC DOCUMENT -TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret	Average Replacement Cost	Unit Incremental Cost [Trade Secret	Change in Energy Costs Due to Outage [Trade Secret
	Begins		Begins	Begins
1/1/2012		\$ 53,831		
1/2/2012		\$ 173,758		
1/3/2012		\$ 212,906		
1/4/2012		\$ 234,264		
1/5/2012		\$ 224,896		
1/6/2012		\$ 180,805		
1/7/2012		\$ 241,811		
1/8/2012		\$ 247,866		
1/9/2012		\$ 209,427		
1/10/2012		\$ 267,971		
1/11/2012		\$ 191,576		
1/11/2012		\$ 184,274		
1/12/2012		\$ 269,514		
1/13/2012				
1/14/2012		\$ 230,635		
		\$ 123,271		
1/16/2012		\$ 107,244		
1/17/2012		\$ 201,553		
1/18/2012		\$ 65,147		
1/19/2012		\$ 278,043		
1/20/2012		\$ 237,419		
1/21/2012		\$ 169,894		
1/22/2012		\$ 112,464		
1/23/2012		\$ 178,301		
1/24/2012		\$ 262,340		
1/25/2012		\$ 206,342		
1/26/2012		\$ 142,306		
1/27/2012		\$ 179,602		
1/28/2012		\$ 125,353		
1/29/2012		\$ 224,149		
1/30/2012		\$ 239,086		
1/31/2012		\$ 174,119		
2/1/2012		\$ 262,505		
2/2/2012		\$ 278,970		
2/3/2012		\$ 231,659		
2/4/2012		\$ 194,015		
2/5/2012		\$ 118,010		
2/6/2012		\$ 268,266		
2/7/2012		\$ 224,858		
2/8/2012		\$ 304,720		
2/9/2012		\$ 165,162		
2/10/2012				
2/11/2012				
2/12/2012	Trade Secret	\$ 190,343	Trade Secret	Trada Cases
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Spreadsheet method used from November 2011 through October 2012. GenTrader method used from November 2012 through October 2013.

Date	Total Outage MWh [Trade Secret Begins	F	Average Replacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
2/13/2012		\$	218,626		
2/14/2012		\$	216,919		
2/15/2012		\$	219,325		
2/16/2012		\$	185,637		
2/17/2012		\$ \$	173,476		
2/18/2012		\$	233,761		
2/19/2012		\$	173,391		
2/20/2012		\$	199,502		
2/21/2012		\$	198,637		
2/22/2012		\$	263,558		
2/23/2012		\$	243,046		
2/24/2012		\$	118,886		
2/25/2012		\$	248,914		
2/26/2012		\$	127,121		
2/27/2012		\$	277,353		
2/28/2012		\$	189,170		
2/29/2012		\$	191,653		
3/1/2012		\$	308,550		
3/2/2012		\$	246,140		
3/3/2012		\$	176,143		
3/4/2012		\$	282,638		
3/5/2012		\$	237,264		
3/6/2012		\$	179,208		
3/7/2012		\$	210,228		
3/8/2012		\$	191,364		
3/9/2012		\$	220,159		
3/10/2012		\$	130,917		
3/11/2012		\$	99,644		
3/12/2012		\$	217,342		
3/13/2012		\$	189,603		
3/14/2012		\$	189,876		
3/15/2012		\$	204,293		
3/16/2012		\$	148,718		
3/17/2012		\$	79,832		
3/18/2012		\$	67,323		
3/19/2012		\$	115,626		
3/20/2012		\$	219,082		
3/21/2012		\$	211,399		
3/22/2012		\$	217,142		
3/23/2012		\$	231,489		
3/24/2012		\$	148,459		
3/25/2012		\$	164,456		
3/26/2012		\$	99,130		
3/27/2012		\$	112,851		
	Trade Secret		•	Trade Secret	Trade Secret

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# PUBLIC DOCUMENT - TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret Begins	F	Average Replacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
2/20/2012	Degilis	Ф	101 102	Degins	Degins
3/28/2012		\$	181,403		
3/29/2012		\$	102,628		
3/30/2012		\$	209,712		
3/31/2012		\$	171,139		
4/1/2012		\$	195,682		
4/2/2012		\$	240,613		
4/3/2012		\$	205,068		
4/4/2012		\$	225,969		
4/5/2012		\$	234,900		
4/6/2012		\$	181,945		
4/7/2012		\$	124,501		
4/8/2012		\$	101,836		
4/9/2012		\$	247,824		
4/10/2012		\$	282,313		
4/11/2012		\$	304,770		
4/12/2012		\$	198,459		
4/13/2012		\$	182,781		
4/14/2012		\$	210,631		
4/15/2012		\$	146,404		
4/16/2012		\$	195,746		
4/17/2012		\$	250,889		
4/18/2012		\$	201,086		
4/19/2012		\$	175,863		
4/20/2012		\$	246,522		
4/21/2012		\$	162,123		
4/22/2012		\$	174,830		
4/23/2012		\$	333,775		
4/24/2012		\$	321,624		
4/25/2012		\$	199,319		
4/26/2012		\$	251,423		
4/27/2012		\$	188,339		
4/28/2012		\$	217,851		
4/29/2012		\$	222,711		
4/30/2012		\$	282,283		
5/1/2012		\$	202,366		
5/2/2012		\$	300,409		
5/3/2012		\$	338,906		
5/4/2012		\$	249,234		
5/5/2012		\$	252,841		
5/6/2012		\$	203,296		
5/7/2012		\$	215,845		
5/8/2012		\$	271,175		
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Date	Total Outage MWh [Trade Secret Begins	F	Average Replacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
5/0/2012	Degins	Ф	324 034	Degins	Dogins
5/9/2012		\$	324,034		
5/10/2012		\$	233,132		
5/11/2012		\$	189,994		
5/12/2012		\$	301,178		
5/13/2012		\$	264,918		
5/14/2012		\$	371,997		
5/15/2012		\$	319,732		
5/16/2012		\$	366,237		
5/17/2012		\$	275,163		
5/18/2012		\$	384,533		
5/19/2012		\$	356,355		
5/20/2012		\$	344,929		
5/21/2012		\$	404,616		
5/22/2012		\$	408,895		
5/23/2012		\$	388,377		
5/24/2012		\$	370,069		
5/25/2012		\$	428,172		
5/26/2012		\$	213,366		
5/27/2012		\$	373,048		
5/28/2012		\$	197,233		
5/29/2012		\$	310,744		
5/30/2012		\$	323,755		
5/31/2012		\$	342,250		
6/1/2012		\$	320,343		
6/2/2012		\$	265,394		
6/3/2012		\$	235,979		
6/4/2012		\$	322,584		
6/5/2012		\$	375,738		
6/6/2012		\$	408,236		
6/7/2012		\$	438,215		
6/8/2012		\$	428,831		
6/9/2012		\$	303,823		
6/10/2012		\$	291,796		
6/11/2012		\$	205,707		
6/12/2012		\$	241,802		
6/13/2012		\$	150,565		
6/14/2012		\$	211,853		
6/15/2012		\$	382,586		
6/16/2012		\$	263,704		
6/17/2012		\$	223,438		
6/18/2012		\$	318,014		
6/19/2012		\$	334,571		
0/13/2012	Trade Secret	Ψ	554,571	Trade Secret	t Trade Secret
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# PUBLIC DOCUMENT - TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret	F	Average Replacement Cost	Unit Incremental Cost [Trade Secret	Change in Energy Costs Due to Outage [Trade Secret
	Begins	_		Begins	Begins
6/20/2012		\$	276,472		
6/21/2012		\$	340,146		
6/22/2012		\$	329,034		
6/23/2012		\$	183,874		
6/24/2012		\$	239,330		
6/25/2012		\$	225,332		
6/26/2012		\$	280,019		
6/27/2012		\$	492,530		
6/28/2012		\$	536,300		
6/29/2012		\$	564,179		
6/30/2012		\$	404,875		
7/1/2012		\$	399,418		
7/2/2012		\$	469,416		
7/3/2012		\$	489,514		
7/4/2012		\$	419,916		
7/5/2012		\$	656,453		
7/6/2012		\$	481,956		
7/7/2012		\$	346,133		
7/8/2012		\$	369,707		
7/9/2012		\$	396,606		
7/10/2012		\$	392,162		
7/11/2012		\$	413,995		
7/12/2012		\$	409,132		
7/13/2012		\$	451,182		
7/14/2012		\$	414,985		
7/15/2012		\$	452,812		
7/16/2012		\$	569,706		
7/17/2012		\$	800,021		
7/18/2012		\$	566,549		
7/19/2012		\$	449,875		
7/20/2012		\$	291,598		
7/21/2012		\$	335,101		
7/22/2012		\$	368,670		
7/23/2012		\$	593,241		
7/24/2012		\$	443,863		
7/25/2012		\$	471,993		
		\$			
7/26/2012 7/27/2012		Ф \$	236,616 243,351		
		Ф \$			
7/28/2012			302,339		
7/29/2012		\$	298,188		
7/30/2012		\$	449,364		
7/31/2012	Trade Seerst	\$	469,224	Trada Sacra	Trada Carret
	Trade Secret Ends]			Trade Secre	

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Date	Total Outage MWh [Trade Secret Begins	Aver Replac Co	ement	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
8/1/2012		\$	481,635		
8/2/2012			479,561		
8/3/2012			428,551		
8/4/2012			292,937		
8/5/2012			238,591		
8/6/2012			315,640		
8/7/2012			345,773		
8/8/2012			350,735		
8/9/2012			287,493		
8/10/2012			260,159		
8/11/2012		\$	203,690		
8/12/2012			196,282		
8/13/2012			265,341		
8/14/2012			312,555		
8/15/2012			306,930		
8/16/2012			246,479		
8/17/2012			285,421		
8/18/2012			233,840		
8/19/2012			217,811		
8/20/2012			277,312		
8/21/2012			289,810		
8/22/2012			167,972		
8/23/2012			205,751		
8/24/2012			282,302		
8/25/2012			257,628		
8/26/2012			291,683		
8/27/2012			364,533		
8/28/2012			352,857		
8/29/2012			320,736		
8/30/2012			333,851		
8/31/2012			299,728		
9/1/2012			194,167		
9/2/2012			175,613		
9/3/2012			210,103		
9/4/2012			278,538		
9/5/2012			195,643		
9/6/2012			178,734		
9/7/2012			154,226		
9/8/2012			127,419		
9/9/2012			152,027		
9/10/2012			109,545		
9/11/2012			162,962		
9/12/2012			207,971		
9/13/2012			163,714		
9/14/2012			197,921		

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Spreadsheet method used from November 2011 through October 2012. GenTrader method used from November 2012 through October 2013.

Average Change in **Total Outage** Replacement **Energy Costs** Unit Incremental Due to Outage Date MWh Cost Cost [Trade Secret [Trade Secret [Trade Secret Begins **Begins Begins Trade Secret Trade Secret Trade Secret** Ends] Ends] Ends]

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		A	verage		Change in
	Total Outage		lacement	Unit Incremental	Energy Costs
Date	MWh		Cost	Cost	Due to Outage
	[Trade Secret			[Trade Secret	[Trade Secret
	Begins			Begins	Begins
9/15/2012	Ţ.	\$	136,454		
9/16/2012		\$	131,518		
9/17/2012		\$	145,029		
9/18/2012		\$	187,431		
9/19/2012		\$	133,754		
9/20/2012		\$	170,594		
9/21/2012		\$	172,788		
9/22/2012		\$	130,260		
9/23/2012		\$	172,473		
9/24/2012		\$	191,123		
9/25/2012		\$	193,293		
9/26/2012		\$	216,702		
9/27/2012		\$	207,040		
9/28/2012		\$	113,571		
9/29/2012		\$	191,351		
9/30/2012		\$	172,181		
10/1/2012		\$	205,686		
10/2/2012		\$	245,045		
10/3/2012		\$	196,273		
10/4/2012		\$	55,583		
10/5/2012		\$	119,369		
10/6/2012		\$	156,035		
10/7/2012		\$	149,220		
10/8/2012		\$	143,032		
10/9/2012		\$	119,084		
10/10/2012		\$	179,425		
10/11/2012		\$	168,388		
10/12/2012		\$	161,153		
10/13/2012		\$	171,666		
10/14/2012		\$	130,412		
10/15/2012		\$	252,180		
10/16/2012		\$	278,041		
10/17/2012		\$	102,577		
10/18/2012		\$	60,780		
10/19/2012		\$	125,901		
10/20/2012		\$	199,064		
10/21/2012		\$	131,625		
10/22/2012		\$	214,015		
10/23/2012		\$	249,604		
10/24/2012		\$	253,963		
10/25/2012		\$	225,647		
10/26/2012		\$	241,142		
10/27/2012		\$	232,597		
	Trade Secret			Trade Secret	
	Ends]			Ends	Ends]

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Date	Total Outage MWh [Trade Secret Begins	F	Average Replacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
10/28/2012		\$	231,515		
10/29/2012		\$	222,943		
10/30/2012		\$	251,925		
10/31/2012		\$	258,671		
11/1/2012		\$	320,293		
11/2/2012		\$	366,925		
11/3/2012		\$	352,487		
11/4/2012		\$	307,181		
11/5/2012		\$	391,886		
11/6/2012		\$	290,362		
11/7/2012		\$	341,622		
11/8/2012		\$	261,055		
11/9/2012		\$	334,593		
11/10/2012		\$	242,663		
11/11/2012		\$	255,140		
11/12/2012		\$	256,587		
11/13/2012		\$	380,157		
11/14/2012		\$	343,613		
11/15/2012		\$	370,734		
11/16/2012		\$	344,906		
11/17/2012		\$	240,956		
11/18/2012		\$	219,819		
11/19/2012		\$	310,881		
11/20/2012		\$	331,108		
11/21/2012		\$	243,218		
11/22/2012		\$	39,784		
11/23/2012		\$	235,605		
11/24/2012		\$	319,757		
11/25/2012		\$	317,361		
11/26/2012		\$	419,269		
11/27/2012		\$	330,747		
11/28/2012		\$	363,248		
11/29/2012		\$	361,386		
11/30/2012		\$	345,966		
12/1/2012		\$	301,796		
12/2/2012		\$	317,563		
12/3/2012		\$	272,712		
12/4/2012		\$	357,013		
12/5/2012		\$	144,594		
12/6/2012		\$	335,695		
12/7/2012		\$	406,534		
12/8/2012		\$	293,285		
12/9/2012		\$	339,284		
	Trade Secret			Trade Secret	
	Ends]			Ends	Ends]

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Date	Total Outage MWh [Trade Secret Begins	F	Average Replacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
12/10/2012		\$	438,226		
12/11/2012		\$	422,318		
12/12/2012		\$	226,142		
12/13/2012		\$	406,626		
12/14/2012		\$	294,526		
12/15/2012		\$	310,766		
12/16/2012		\$	288,113		
12/17/2012		\$	422,388		
12/18/2012		\$	408,442		
12/19/2012		\$	392,335		
12/20/2012		\$	150,586		
12/21/2012		\$	351,872		
12/22/2012		\$	305,471		
12/23/2012		\$	338,395		
12/24/2012		\$	295,562		
12/25/2012		\$	287,187		
12/26/2012		\$	388,643		
12/27/2012		\$	400,251		
12/28/2012		\$	409,666		
12/29/2012		\$	365,726		
12/30/2012		\$	315,058		
12/31/2012		\$	359,638		
1/1/2013		\$	304,096		
1/2/2013		\$	374,249		
1/3/2013		\$	306,446		
1/4/2013		\$	328,330		
1/5/2013		\$	292,166		
1/6/2013		\$	307,757		
1/7/2013		\$	277,963		
1/8/2013		\$	270,615		
1/9/2013		\$	206,001		
1/10/2013		\$	171,182		
1/11/2013		\$	269,928		
1/12/2013		\$	244,529		
1/13/2013		\$	322,332		
1/14/2013		\$	324,090		
1/15/2013		\$	107,195		
1/16/2013		\$	125,366		
1/17/2013		\$	478,135		
1/18/2013		\$	268,953		
1/19/2013		\$	169,076		
1/20/2013		\$	300,060		
1/21/2013		\$	196,784		
	Trade Secret			Trade Secret	t Trade Secret
	Ends]			Ends	Ends]

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Date	Total Outage MWh [Trade Secret Begins	F	Average Replacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
1/22/2013		\$	589,555		
1/23/2013		\$	335,669		
1/24/2013		\$	296,745		
1/25/2013		\$	134,318		
1/26/2013		\$	187,675		
1/20/2013		\$	222,685		
1/28/2013		\$			
		Φ	381,042		
1/29/2013		\$	323,703		
1/30/2013		\$	335,899		
1/31/2013		\$	389,375		
2/1/2013		\$	509,917		
2/2/2013		\$	256,183		
2/3/2013		\$	239,932		
2/4/2013		\$	340,319		
2/5/2013		\$	272,948		
2/6/2013		\$	305,081		
2/7/2013		\$	343,697		
2/8/2013		\$	240,959		
2/9/2013		\$	160,776		
2/10/2013		\$	147,954		
2/11/2013		\$	220,838		
2/12/2013		\$	304,376		
2/13/2013		\$	283,195		
2/14/2013		\$	169,165		
2/15/2013		\$	350,376		
2/16/2013		\$	322,818		
2/17/2013		\$	191,397		
2/18/2013		\$	78,304		
2/19/2013		\$	215,180		
2/20/2013		\$	462,180		
2/21/2013		\$	301,464		
2/22/2013		\$	326,939		
2/23/2013		\$	320,301		
2/24/2013		\$	300,331		
2/25/2013		\$	364,135		
2/26/2013		\$	290,692		
2/27/2013		\$	257,582		
2/28/2013		\$	314,929		
3/1/2013		\$	356,360		
3/2/2013		\$	381,356		
3/3/2013		\$	329,489		
3/4/2013		\$	379,044		
3/5/2013		\$	382,265		
	Trade Secret	*	- 5-,-30	Trade Secre	t Trade Secret
	Ends]			Ends	

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	T / 10 /	_	Average	11.51	Change in
Б. /	Total Outage	ŀ	Replacement	Unit Incremental	Energy Costs
Date	MWh		Cost	Cost	Due to Outage
	[Trade Secret			[Trade Secret	[Trade Secret
2/6/2012	Begins	φ	400 000	Begins	Begins
3/6/2013		\$	423,308		
3/7/2013		\$	357,633		
3/8/2013		\$	330,324		
3/9/2013		\$	230,518		
3/10/2013		\$	212,711		
3/11/2013		\$	321,397		
3/12/2013		\$	308,023		
3/13/2013		\$	371,269		
3/14/2013		\$	362,005		
3/15/2013		\$	381,885		
3/16/2013		\$	370,426		
3/17/2013		\$	324,717		
3/18/2013		\$	226,254		
3/19/2013		\$	420,697		
3/20/2013		\$	468,365		
3/21/2013		\$	526,585		
3/22/2013		\$ \$	545,912		
3/23/2013			429,120		
3/24/2013		\$	390,005		
3/25/2013		\$	391,950		
3/26/2013		\$	468,055		
3/27/2013		\$	460,280		
3/28/2013		\$	426,609		
3/29/2013		\$	379,573		
3/30/2013		\$	318,026		
3/31/2013		\$	276,774		
4/1/2013		\$	475,466		
4/2/2013		\$	463,828		
4/3/2013		\$	337,995		
4/4/2013		\$	445,376		
4/5/2013		\$	392,433		
4/6/2013		\$	280,067		
4/7/2013		\$	330,980		
4/8/2013		\$	405,082		
4/9/2013		\$	182,641		
4/10/2013		\$	449,727		
4/11/2013		\$	439,886		
4/12/2013		\$	440,110		
4/13/2013		\$	392,635		
4/14/2013		\$	178,463		
4/15/2013		\$	357,178		
4/16/2013		\$	511,367		
4/17/2013	Tuesda Ossania	\$	444,436	Tuesda Oassas	Tuesda Caracat
	Trade Secret			Trade Secret	
	Ends]			Ends	Ends]

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Date	Total Outage MWh [Trade Secret Begins	F	Average Replacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
4/18/2013		\$	464,007		
4/19/2013		\$	435,817		
4/20/2013		\$	498,946		
4/21/2013		\$	227,538		
4/22/2013		\$	341,899		
4/23/2013		\$	419,321		
4/24/2013		\$			
		Φ	360,233		
4/25/2013		\$	399,555		
4/26/2013		\$	290,886		
4/27/2013		\$	411,297		
4/28/2013		\$	263,462		
4/29/2013		\$	369,656		
4/30/2013		\$	325,126		
5/1/2013		\$	351,914		
5/2/2013		\$	181,496		
5/3/2013		\$	302,267		
5/4/2013		\$	384,245		
5/5/2013		\$	374,238		
5/6/2013		\$	460,286		
5/7/2013		\$	458,167		
5/8/2013		\$	442,919		
5/9/2013		\$	399,310		
5/10/2013		\$	347,569		
5/11/2013		\$	220,138		
5/12/2013		\$	317,128		
5/13/2013		\$	328,530		
5/14/2013		\$	416,669		
5/15/2013		\$	418,403		
5/16/2013		\$	444,284		
5/17/2013		\$	363,092		
5/18/2013		\$	310,658		
5/19/2013		\$	292,033		
5/20/2013		\$	340,198		
5/21/2013		\$	325,189		
5/22/2013		\$	302,139		
5/23/2013		\$	265,498		
5/24/2013		\$	213,685		
5/25/2013		\$	112,678		
5/26/2013		\$	77,462		
5/27/2013		\$	139,955		
5/28/2013		\$	332,447		
5/29/2013		\$	334,802		
5/30/2013		\$	338,032		
3,33,2010	Trade Secret	Ψ	330,002	Trade Secret	t Trade Secret
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Spreadsheet method used from November 2011 through October 2012. GenTrader method used from November 2012 through October 2013.

Date	Total Outage MWh [Trade Secret	F	Average Replacement Cost	Unit Incremental Cost [Trade Secret	Change in Energy Costs Due to Outage [Trade Secret
	- Begins			- Begins	- Begins
5/31/2013		\$	328,934		
6/1/2013		\$	100,960		
6/2/2013		\$	219,155		
6/3/2013		\$	297,437		
6/4/2013		\$	203,148		
6/5/2013		\$	274,966		
6/6/2013		\$	321,952		
6/7/2013		\$	342,154		
6/8/2013		\$	175,651		
6/9/2013		\$	163,994		
6/10/2013		\$	340,951		
6/11/2013		\$	353,550		
6/12/2013		\$	362,556		
6/13/2013		\$ \$ \$	328,111		
6/14/2013		\$	299,496		
6/15/2013		\$	279,064		
6/16/2013		\$	293,531		
6/17/2013		\$	368,219		
6/18/2013		\$	354,021		
6/19/2013		\$	320,147		
6/20/2013		\$	308,235		
6/21/2013		\$	356,143		
6/22/2013		\$	344,517		
6/23/2013		\$	295,894		
6/24/2013		\$	419,340		
6/25/2013		\$ \$	405,176		
6/26/2013		\$	396,487		
6/27/2013		\$	429,105		
6/28/2013		\$	307,975		
6/29/2013		\$	196,880		
6/30/2013		\$	234,856		
7/1/2013		\$	358,332		
7/2/2013		\$	337,246		
7/3/2013		\$	355,196		
7/4/2013		\$	278,391		
7/5/2013		\$	290,989		
7/6/2013		\$	268,687		
7/7/2013		\$	322,542		
7/8/2013		\$	470,747		
7/9/2013		\$	411,850		
7/10/2013		\$	344,749		
7/11/2013		\$	337,066		
7/12/2013		\$	303,239		
	Trade Secret			Trade Secret	Trade Secret

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Date	Total Outage MWh [Trade Secret Begins	Re	Average eplacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
7/13/2013		\$	312,370		
7/14/2013		\$	372,517		
7/15/2013		\$	482,627		
7/16/2013		\$	548,220		
7/17/2013		\$	605,041		
7/17/2013		\$	557,309		
7/10/2013		\$			
		Φ	509,534		
7/20/2013		\$	395,504		
7/21/2013		\$	303,675		
7/22/2013		\$	413,884		
7/23/2013		\$	376,646		
7/24/2013		\$	338,347		
7/25/2013		\$	322,699		
7/26/2013		\$	254,971		
7/27/2013		\$	206,997		
7/28/2013		\$	211,702		
7/29/2013		\$	289,386		
7/30/2013		\$	318,815		
7/31/2013		\$	333,560		
8/1/2013		\$	349,718		
8/2/2013		\$	316,297		
8/3/2013		\$	258,522		
8/4/2013		\$	201,021		
8/5/2013		\$	302,990		
8/6/2013		\$	343,312		
8/7/2013		\$	248,915		
8/8/2013		\$	323,762		
8/9/2013		\$	290,127		
8/10/2013		\$	254,614		
8/11/2013		\$	234,976		
8/12/2013		\$	303,965		
8/13/2013		\$	291,212		
8/14/2013		\$	289,538		
8/15/2013		\$	267,001		
8/16/2013		\$	284,299		
8/17/2013		\$	258,903		
8/18/2013		\$	209,855		
8/19/2013		\$	344,378		
8/20/2013		\$	374,374		
8/21/2013		\$	409,728		
8/22/2013		\$	354,852		
		э \$	327,028		
8/23/2013		э \$			
8/24/2013	Trade Secret	φ	253,507	Trade Secret	t Trade Secret
	Ends]			Ends	

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Date	Total Outage MWh <b>[Trade Secret</b>	R	Average eplacement Cost	Unit Incremental Cost [Trade Secret	Change in Energy Costs Due to Outage [Trade Secret
	Begins			Begins	Begins
8/25/2013		\$	301,128		
8/26/2013		\$	508,617		
8/27/2013		\$	581,738		
8/28/2013		\$	560,625		
8/29/2013		\$	508,995		
8/30/2013		\$	523,633		
8/31/2013		\$	366,734		
		Φ			
9/1/2013		\$	256,312		
9/2/2013		\$	227,038		
9/3/2013		\$	294,369		
9/4/2013		\$	298,381		
9/5/2013		\$	287,211		
9/6/2013		\$	249,345		
9/7/2013		\$	338,258		
9/8/2013		\$	286,627		
9/9/2013		\$	386,427		
9/10/2013		\$	527,141		
9/11/2013		\$	411,551		
9/12/2013		\$	173,480		
9/13/2013		\$	302,980		
9/14/2013		\$	185,869		
9/15/2013		\$	188,340		
9/16/2013		\$	305,808		
9/17/2013		\$	142,173		
9/18/2013		\$	303,135		
9/19/2013		\$	329,943		
9/20/2013		\$	323,999		
9/21/2013		\$	293,082		
9/22/2013		\$	196,535		
9/23/2013		\$	355,671		
9/24/2013		\$	397,088		
9/25/2013		\$	383,291		
9/26/2013		\$	440,355		
9/27/2013		Φ	520,874		
9/28/2013		\$ \$	275,597		
9/29/2013		\$	275,397		
9/30/2013		\$	288,149		
10/1/2013		\$	390,158		
10/2/2013		\$	404,517		
10/3/2013		\$	392,748		
10/4/2013		\$	344,391		
10/5/2013		\$	218,477		
10/6/2013	Tuesda On and	\$	270,083	Tuo -1 - 0	Tue de Occasión
	Trade Secret			Trade Secret	
	Ends]			Ends	Ends]

Docket No. E999/AA-13-599 Reply Comments Attachment I - Page 25 of 49

Docket No. E999/AA-13-599 Information Request OAG-001 Attachment B

# PUBLIC DOCUMENT - TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret Begins	F	Average Replacement Cost	t Incremental Cost le Secret ns	D [Tr	Change in Energy Costs uue to Outage ade Secret gins
10/7/2013		\$	354,344			
10/8/2013		\$	294,417			
10/9/2013		\$	286,920			
10/10/2013		\$	280,600			
10/11/2013		\$	158,277			
10/12/2013		\$	99,542			
10/13/2013		\$	115,242			
10/14/2013		\$	96,225			
10/15/2013		\$	86,423			
10/16/2013		\$	87,832			
10/17/2013		\$	56,743			
10/18/2013		\$	51,651			
10/19/2013		\$	87,642			
10/20/2013		\$	53,377			
10/21/2013		\$	51,698			
10/22/2013		\$	23,192			
10/23/2013		\$	87,971			
10/24/2013		\$	180,110			
10/25/2013		\$	173,897			
10/26/2013		\$	145,395			
10/27/2013		\$	122,160			
	Trade Secret Ends]			Trade Secret Ends]		Trade Secret Ends]
Entire Event	7,139,949	\$	201,777,929	\$ 141,291,390	\$	60,486,539

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Docket No. E999/AA-13-599 Information Request OAG-001 Attachment B

# PUBLIC DOCUMENT - TRADE SECRET DATA EXCISED

Month	Year	Total Outage MWh [Trade Secret Begins	R	Average eplacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
11	2011		\$	2,486,889		
12	2011		\$	8,527,751		
1	2012		\$	5,950,166		
2	2012		\$	6,045,332		
3	2012		\$	5,563,759		
4	2012		\$	6,508,080		
5	2012		\$	9,526,799		
6	2012		\$	9,595,269		
7	2012		\$	13,453,086		
8	2012		\$	9,193,587		
9	2012		\$	5,174,144		
10	2012		\$	5,732,557		
11	2012		\$	9,239,309		
12	2012		\$	10,346,413		
1	2013		\$	8,841,918		
2	2013		\$	7,891,968		
3	2013		\$	11,550,934		
4	2013		\$	11,335,416		
5	2013		\$	9,924,366		
6	2013		\$	9,093,671		
7	2013		\$	11,232,840		
8	2013		\$	10,444,363		
9	2013		\$	9,205,283		
10	2013		\$	4,914,030		
		Trade Secret Ends]			Trade Secret Ends]	Trade Secret Ends]
I	Entire Event	7,139,949	\$	201,777,929	\$ 141,291,390	\$ 60,486,539

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Non Public Document - Contains Trade Secret Data
Public Document - Trade Secret Data Excised
Public Document

Xcel Energy

Docket No.: E999/AA-13-599

Response To: Office of the Attorney Information Request No. 5

General

Requestor: James Canaday

Date Received: September 26, 2014

Question:

Subject: Sherco 3 Power Replacement Costs

Reference: Xcel Energy's April 28, 2014 Non-Public Response to IR No. 1 from

the OAG and April 28, 2014 Public Response to IR No. 2 from the

OAG

Update your narrative response to IR No. 1, Attachments A and B to IR No. 1, and your narrative response to IR No. 2 to include information and data related to outages at Sherco 3 in November, 2013, and December, 2013.

This information is necessary to compare Xcel Energy's responses to the Minnesota Department of Commerce's analysis in its September 16, 2014 comments in this docket. See page 18 of the Department's comments, where it states:

The Department notes that Xcel Electric's FCA filings in December 2013 and January 2014 identified continued outages at Sherco 3 between November 15 and December 30, 2013.

### Response:

Attachments A and B to this response update Attachments A and B to OAG Information Request No. 1 to include data related to outages occurring at Sherco 3 in November 2013 and December 2013. The forced outages noted below, which took place after Sherco Unit 3 was released for dispatch to MISO and could therefore participate in the energy markets on October 28, 2013, are not included in our replacement power calculations as part of our pending litigation against GE. The Company does not consider these forced outages to be related to the November 2011 Event at Sherco Unit 3. Our total replacement power incremental costs due to the

Sherco 3 outage remain approximately \$57.1 million, when any negative values (*i.e.*, the outage produced economic benefits) are ignored.

In addition to the forced outages listed below, which were included in Part K, Section 4, Schedule 2 of our September 2, 2014 filing in Docket No. E999/AA-14-579, there was one planned outage from November 15 through December 5, 2013 to remove fine mesh screens from the turbine valves following the unit return to service. This is standard operating practice following a boiler lay-up period. The fine mesh screens prevent small particulate from the boiler from going through the turbine. After a short operating period the fine mesh screens are removed, requiring a planned outage to remove the screens.

Primary Reason for	Outage Dates		Equipment that resulted
outage	Start	End	in the forced outage
Waterwall (Furnace	12/05/2013	12/09/2013	Waterwall tube leak. Near 308
Wall)			burner.
Economizer Leaks	12/13/2013	12/16/2013	Upper economizer tube leak.
			Near door 80, about 20 feet from
			east wall.
Economizer Leaks	12/19/2013	12/23/2013	Upper economizer tube leak.
			Pendant 99 from west, 5th tube
			from the bottom.
Boiler Drum	12/27/2013	12/30/2013	Repair boiler relief valve SBV RV
Relief/safety Valves			3007. During off line time,
(single drum)			operators discovered an upper
			economizer tube leak discovered
			which was able to be repaired
			during this time.

Preparer: Nick Detmer

Title: Manager, Commercial Operations Projects and Compliance

Department: Power Operations Telephone: (303) 571-7030

Preparer: Ron Brevig
Title: Plant Director
Department: Sherco Plant
Telephone: (763) 261-3110

Date October 15, 2014

Northern States Power Company State of Minnesota - Electric Operations UPDATE OF OAG-1 TO INCLUDE NOV & DEC 2013 DATA

Docket No. E999/AA-13-599 Information Request No. OAG-5

Attachment A
Page 1 of 2

Sherco 3 Estimated Replacement Energy Costs (November 2011-December 2013)

						Page 1 of 2
			Total	Average	Unit	Change in
	Duration	Period	Outage	Replacement	Incremental	Energy Costs
Date	(Days)		MWh	Cost	Cost	Due to Outage
			[Trade Secret		[Trade Secret	[Trade Secret
			Begins		Begins	Begins
11/19/2011 - 11/30/2011	12	November 2011		\$1,951,782		
12/01/2011 - 12/31/2011	31	December 2011		\$7,701,441		
01/01/2012 - 01/31/2012	31	January 2012		\$6,299,086		
02/01/2012 - 02/29/2012	29	February 2012		\$6,067,854		
03/01/2012 - 03/31/2012	31	March 2012		\$5,705,721		
04/01/2012 - 04/30/2012	30	April 2012		\$6,140,351		
05/01/2012 - 05/31/2012	31	May 2012		\$9,281,594		
06/01/2012 - 06/30/2012	30	June 2012		\$9,160,688		
07/01/2012 - 07/31/2012	31	July 2012		\$13,199,676		
08/01/2012 - 08/31/2012	31	August 2012		\$8,767,767		
09/01/2012 - 09/30/2012	30	September 2012		\$4,860,041		
10/01/2012 - 10/31/2012	31	October 2012		\$5,327,359		
11/01/2012 - 11/30/2012	30	November 2012		\$9,239,309		
12/01/2012 - 12/31/2012	31	December 2012		\$10,346,413		
01/01/2013 - 01/31/2013	31	January 2013		\$8,841,918		
02/01/2013 - 02/28/2013	28	February 2013		\$7,891,968		
03/01/2013 - 03/31/2013	31	March 2013		\$11,550,934		
04/01/2013 - 04/30/2013	30	April 2013		\$11,335,416		
05/01/2013 - 05/31/2013	31	May 2013		\$9,924,366		
06/01/2013 - 06/30/2013	30	June 2013		\$9,093,671		
07/01/2013 - 07/31/2013	31	July 2013		\$11,232,840		
08/01/2013 - 08/31/2013	31	August 2013		\$10,444,363		
09/01/2013 - 09/30/2013	30	September 2013		\$9,205,283		
10/01/2013 - 10/31/2013	27 *	October 2013		\$4,894,336		
10,00,200			Trade Secret Ends]	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Trade Secret Ends]	Trade Secret Ends]
Nov. 2011 Outage Total	709	Total	7,139,548	\$198,464,176	\$141,297,791	\$57,166,386
8			, ,		, ,	
			[Trade Secret		[Trade Secret	[Trade Secret
			Begins		Begins	Begins
11/01/2013 - 11/30/2013	16 **	November 2013		\$5,103,050		
12/01/2013 - 12/05/2013	5 **	December 2013		\$1,751,002		
12/05/2013 - 12/09/2013	4	December 2013		\$1,937,233		
12/13/2013 - 12/16/2013	3	December 2013		\$1,253,757		
12/19/2013 - 12/23/2013	4	December 2013		\$1,701,882		
12/27/2013 - 12/30/2013	2	December 2013		\$763,882		
			Trade Secret Ends]		Trade Secret Ends]	Trade Secret Ends]
	1					

Based on all outages during October, 2013.

<sup>\*\*</sup> Planned outage

Northern States Power Company State of Minnesota - Electric Operations UPDATE OF OAG-1 TO INCLUDE NOV & DEC 2013 DATA

Docket No. E999/AA-13-599 Information Request No. OAG-5

Attachment A
Page 2 of 2

Sherco 3 Estimated Replacement Energy Costs (November 2011-December 2013)

Duration   Duration   Duration   Period   Dutage   Replacement   Duration   Duraticon   Duration   Duraticon   Duration	
Date   Date   Date   Days	
11/19/2011 - 11/30/2011   12   November 2011   \$1,951,782   \$7,701,441   \$10/01/2012 - 01/31/2012   31   January 2012   \$5,495,068   \$0/01/2012 - 02/29/2012   31   March 2012   \$5,118,290   \$0/01/2012 - 03/31/2012   31   May 2012   \$5,118,290   \$0/01/2012 - 03/31/2012   31   May 2012   \$5,118,290   \$0/01/2012 - 03/31/2012   31   May 2012   \$6,140,351   \$9,281,594   \$0/01/2012 - 06/30/2012   30   April 2012   \$9,281,594   \$9,160,688   \$0/01/2012 - 06/30/2012   31   May 2012   \$9,160,688   \$0/01/2012 - 07/31/2012   31   August 2012   \$9,160,688   \$0/01/2012 - 08/31/2012   31   August 2012   \$8,767,767   \$0/01/2012 - 09/30/2012   31   August 2012   \$8,767,767   \$0/01/2012 - 09/30/2012   30   September 2012   \$4,860,041   \$10/01/2012 - 10/31/2012   31   October 2012   \$9,239,309   \$11/01/2012 - 11/30/2012   31   December 2012   \$9,239,309   \$10,346,413   \$11,01/2013 - 01/31/2013   31   January 2013   \$8,841,918   \$0/2/01/2013 - 02/28/2013   28   February 2013   \$7,891,968   \$0/3/01/2013 - 04/30/2013   31   March 2013   \$11,355,416   \$11,335,416   \$1.00   \$	
11/19/2011 - 11/30/2011   12   November 2011   \$1,951,782   \$7,701,441   \$1,001/2012 - 01/31/2012   31   January 2012   \$5,495,068   \$02/01/2012 - 02/29/2012   29   February 2012   \$5,810,124   \$5,118,290   \$04/01/2012 - 04/30/2012   31   March 2012   \$5,118,290   \$04/01/2012 - 04/30/2012   30   April 2012   \$5,118,290   \$06/01/2012 - 06/30/2012   31   May 2012   \$9,281,594   \$06/01/2012 - 06/30/2012   30   June 2012   \$9,160,688   \$07/01/2012 - 06/30/2012   31   July 2012   \$9,160,688   \$07/01/2012 - 07/31/2012   31   July 2012   \$13,199,676   \$08/01/2012 - 08/31/2012   31   August 2012   \$8,767,767   \$09/01/2012 - 09/30/2012   30   September 2012   \$8,860,041   \$10/01/2012 - 10/31/2012   31   October 2012   \$5,327,359   \$11/01/2012 - 12/31/2012   31   December 2012   \$9,239,309   \$12/01/2012 - 12/31/2012   31   December 2012   \$10,346,413   \$01/01/2013 - 01/31/2013   31   January 2013   \$8,841,918   \$02/01/2013 - 02/28/2013   28   February 2013   \$7,891,968   \$03/01/2013 - 04/30/2013   30   April 2013   \$11,335,416   \$11,335,416   \$10.01   \$11,335,416   \$10.01   \$11,335,416   \$10.01   \$11,335,416   \$10.01	Date
11/19/2011 - 11/30/2011	
12/01/2011 - 12/31/2011	
01/01/2012 - 01/31/2012	
02/01/2012 - 02/29/2012         29         February 2012         \$5,810,124           03/01/2012 - 03/31/2012         31         March 2012         \$5,118,290           04/01/2012 - 04/30/2012         30         April 2012         \$6,140,351           05/01/2012 - 05/31/2012         31         May 2012         \$9,281,594           06/01/2012 - 06/30/2012         30         June 2012         \$9,160,688           07/01/2012 - 07/31/2012         31         July 2012         \$13,199,676           08/01/2012 - 08/31/2012         31         August 2012         \$8,767,767           09/01/2012 - 09/30/2012         30         September 2012         \$4,860,041           10/01/2012 - 10/31/2012         31         October 2012         \$5,327,359           11/01/2012 - 11/30/2012         30         November 2012         \$9,239,309           12/01/2012 - 12/31/2012         31         December 2012         \$10,346,413           01/01/2013 - 01/31/2013         31         January 2013         \$8,841,918           02/01/2013 - 02/28/2013         28         February 2013         \$7,891,968           03/01/2013 - 04/30/2013         31         March 2013         \$11,550,934           04/01/2013 - 04/30/2013         30         April 2013         \$11,335,41	
03/01/2012 - 03/31/2012       31       March 2012       \$5,118,290         04/01/2012 - 04/30/2012       30       April 2012       \$6,140,351         05/01/2012 - 05/31/2012       31       May 2012       \$9,281,594         06/01/2012 - 06/30/2012       30       June 2012       \$9,160,688         07/01/2012 - 07/31/2012       31       July 2012       \$13,199,676         08/01/2012 - 08/31/2012       31       August 2012       \$8,767,767         09/01/2012 - 09/30/2012       30       September 2012       \$4,860,041         10/01/2012 - 10/31/2012       31       October 2012       \$9,239,309         11/01/2012 - 11/30/2012       30       November 2012       \$9,239,309         12/01/2012 - 12/31/2012       31       December 2012       \$10,346,413         01/01/2013 - 01/31/2013       31       January 2013       \$8,841,918         02/01/2013 - 02/28/2013       28       February 2013       \$7,891,968         03/01/2013 - 04/30/2013       31       March 2013       \$11,550,934         04/01/2013 - 04/30/2013       30       April 2013       \$11,335,416	
04/01/2012 - 04/30/2012       30       April 2012       \$6,140,351         05/01/2012 - 05/31/2012       31       May 2012       \$9,281,594         06/01/2012 - 06/30/2012       30       June 2012       \$9,160,688         07/01/2012 - 07/31/2012       31       July 2012       \$13,199,676         08/01/2012 - 08/31/2012       31       August 2012       \$8,767,767         09/01/2012 - 09/30/2012       30       September 2012       \$4,860,041         10/01/2012 - 10/31/2012       31       October 2012       \$5,327,359         11/01/2012 - 11/30/2012       30       November 2012       \$9,239,309         12/01/2012 - 12/31/2012       31       December 2012       \$10,346,413         01/01/2013 - 01/31/2013       31       January 2013       \$8,841,918         02/01/2013 - 02/28/2013       28       February 2013       \$7,891,968         03/01/2013 - 03/31/2013       31       March 2013       \$11,550,934         04/01/2013 - 04/30/2013       30       April 2013       \$11,335,416	
05/01/2012 - 05/31/2012       31       May 2012       \$9,281,594         06/01/2012 - 06/30/2012       30       June 2012       \$9,160,688         07/01/2012 - 07/31/2012       31       July 2012       \$13,199,676         08/01/2012 - 08/31/2012       31       August 2012       \$8,767,767         09/01/2012 - 09/30/2012       30       September 2012       \$4,860,041         10/01/2012 - 10/31/2012       31       October 2012       \$5,327,359         11/01/2012 - 11/30/2012       30       November 2012       \$9,239,309         12/01/2012 - 12/31/2012       31       December 2012       \$10,346,413         01/01/2013 - 01/31/2013       31       January 2013       \$8,841,918         02/01/2013 - 02/28/2013       28       February 2013       \$7,891,968         03/01/2013 - 03/31/2013       31       March 2013       \$11,550,934         04/01/2013 - 04/30/2013       30       April 2013       \$11,335,416	
06/01/2012 - 06/30/2012       30       June 2012       \$9,160,688         07/01/2012 - 07/31/2012       31       July 2012       \$13,199,676         08/01/2012 - 08/31/2012       31       August 2012       \$8,767,767         09/01/2012 - 09/30/2012       30       September 2012       \$4,860,041         10/01/2012 - 10/31/2012       31       October 2012       \$5,327,359         11/01/2012 - 11/30/2012       30       November 2012       \$9,239,309         12/01/2012 - 12/31/2012       31       December 2012       \$10,346,413         01/01/2013 - 01/31/2013       31       January 2013       \$8,841,918         02/01/2013 - 02/28/2013       28       February 2013       \$7,891,968         03/01/2013 - 03/31/2013       31       March 2013       \$11,550,934         04/01/2013 - 04/30/2013       30       April 2013       \$11,335,416	
07/01/2012 - 07/31/2012       31       July 2012       \$13,199,676         08/01/2012 - 08/31/2012       31       August 2012       \$8,767,767         09/01/2012 - 09/30/2012       30       September 2012       \$4,860,041         10/01/2012 - 10/31/2012       31       October 2012       \$5,327,359         11/01/2012 - 11/30/2012       30       November 2012       \$9,239,309         12/01/2012 - 12/31/2012       31       December 2012       \$10,346,413         01/01/2013 - 01/31/2013       31       January 2013       \$8,841,918         02/01/2013 - 02/28/2013       28       February 2013       \$7,891,968         03/01/2013 - 03/31/2013       31       March 2013       \$11,550,934         04/01/2013 - 04/30/2013       30       April 2013       \$11,335,416	
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09/01/2012 - 09/30/2012       30       September 2012       \$4,860,041         10/01/2012 - 10/31/2012       31       October 2012       \$5,327,359         11/01/2012 - 11/30/2012       30       November 2012       \$9,239,309         12/01/2012 - 12/31/2012       31       December 2012       \$10,346,413         01/01/2013 - 01/31/2013       31       January 2013       \$8,841,918         02/01/2013 - 02/28/2013       28       February 2013       \$7,891,968         03/01/2013 - 03/31/2013       31       March 2013       \$11,550,934         04/01/2013 - 04/30/2013       30       April 2013       \$11,335,416	
10/01/2012 - 10/31/2012       31       October 2012       \$5,327,359         11/01/2012 - 11/30/2012       30       November 2012       \$9,239,309         12/01/2012 - 12/31/2012       31       December 2012       \$10,346,413         01/01/2013 - 01/31/2013       31       January 2013       \$8,841,918         02/01/2013 - 02/28/2013       28       February 2013       \$7,891,968         03/01/2013 - 03/31/2013       31       March 2013       \$11,550,934         04/01/2013 - 04/30/2013       30       April 2013       \$11,335,416	
11/01/2012 - 11/30/2012       30       November 2012       \$9,239,309         12/01/2012 - 12/31/2012       31       December 2012       \$10,346,413         01/01/2013 - 01/31/2013       31       January 2013       \$8,841,918         02/01/2013 - 02/28/2013       28       February 2013       \$7,891,968         03/01/2013 - 03/31/2013       31       March 2013       \$11,550,934         04/01/2013 - 04/30/2013       30       April 2013       \$11,335,416	
12/01/2012 - 12/31/2012       31       December 2012       \$10,346,413         01/01/2013 - 01/31/2013       31       January 2013       \$8,841,918         02/01/2013 - 02/28/2013       28       February 2013       \$7,891,968         03/01/2013 - 03/31/2013       31       March 2013       \$11,550,934         04/01/2013 - 04/30/2013       30       April 2013       \$11,335,416	
01/01/2013 - 01/31/2013       31       January 2013       \$8,841,918         02/01/2013 - 02/28/2013       28       February 2013       \$7,891,968         03/01/2013 - 03/31/2013       31       March 2013       \$11,550,934         04/01/2013 - 04/30/2013       30       April 2013       \$11,335,416	1/01/2012 - 11/30/2012
02/01/2013 - 02/28/2013     28     February 2013     \$7,891,968       03/01/2013 - 03/31/2013     31     March 2013     \$11,550,934       04/01/2013 - 04/30/2013     30     April 2013     \$11,335,416	2/01/2012 - 12/31/2012
03/01/2013 - 03/31/2013	01/01/2013 - 01/31/2013
04/01/2013 - 04/30/2013 <b>30 April 2013 \$11,335,416</b>	02/01/2013 - 02/28/2013
	03/01/2013 - 03/31/2013
05 /01 /2012 05 /21 /2012 21 M 2012 00 024 266	04/01/2013 - 04/30/2013
05/01/2013 - 05/31/2013   <b>31</b>   <b>May 2013</b>   <b>\$9,924,366</b>	05/01/2013 - 05/31/2013
06/01/2013 - 06/30/2013 <b>30 June 2013 \$9,093,671</b>	06/01/2013 - 06/30/2013
07/01/2013 - 07/31/2013 <b>31 July 2013 \$11,232,840</b>	07/01/2013 - 07/31/2013
08/01/2013 - 08/31/2013 31 August 2013 \$10,444,363	08/01/2013 - 08/31/2013
09/01/2013 - 09/30/2013 <b>30 September 2013 \$9,205,283</b>	9/01/2013 - 09/30/2013
10/01/2013 - 10/31/2013	0/01/2013 - 10/31/2013
Trade Secret Ends] Trade Secret Ends] Trade Secret Ends] Trade Secret Ends	
Event Total 7,139,548 \$196,814,997 \$141,297,791 \$55,517,207	vent Total
[Trade Secret   [Trade Secret   Trade Secret	
Begins Begins Begins	4 /04 /0042 44 /00 /0042
11/01/2013 - 11/30/2013	
12/01/2013 - 12/05/2013 5 ** December 2013	
12/05/2013 - 12/09/2013 4 December 2013	
12/13/2013 - 12/16/2013 3 December 2013	
12/19/2013 - 12/23/2013 4 December 2013	
12/27/2013 - 12/30/2013 <b>2 December 2013</b>	2/27/2013 - 12/30/2013
Based on all outsies during October 2013	

<sup>\*</sup> Based on all outages during October, 2013.

<sup>\*\*</sup> Planned outage

Docket No. E999/AA-13-599 Information Request No. OAG-005 Attachment B

## PUBLIC DOCUMENT - TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret Begins	ŀ	Average Replacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
11/19/2011	Ü	\$	144,565		
11/20/2011		\$	240,484		
11/21/2011		\$	336,721		
11/22/2011		\$	401,601		
11/23/2011		\$	283,156		
11/24/2011		\$	50,031		
11/25/2011		\$ \$ \$ \$ \$	169,276		
11/26/2011		\$	-		
11/27/2011		\$	-		
11/28/2011		\$	269,405		
11/29/2011		\$	284,008		
11/30/2011		\$	307,642		
12/1/2011		\$	331,619		
12/2/2011		\$	284,372		
12/3/2011		\$	335,230		
12/4/2011		\$	327,009		
12/5/2011		\$ \$ \$	389,710		
12/6/2011		\$	449,640		
12/7/2011		\$	431,148		
12/8/2011		\$	418,450		
12/9/2011		\$	437,188		
12/10/2011		\$	397,842		
12/11/2011		\$	265,697		
12/12/2011		\$	398,278		
12/13/2011		\$	300,799		
12/14/2011		\$ \$ \$	299,799		
12/15/2011		\$	283,771		
12/16/2011		\$	282,102		
12/17/2011		\$	247,849		
12/18/2011		\$	153,462		
12/19/2011		\$	278,889		
12/20/2011		\$	290,881		
12/21/2011		\$	280,479		
12/22/2011		\$	267,424		
12/23/2011		\$	177,362		
12/24/2011		\$	113,826		
12/25/2011		\$	96,689		
12/26/2011		\$	16,177		
12/27/2011		\$	222,916		
12/28/2011		\$ \$	249,591		
12/29/2011		\$	245,962		
12/30/2011		\$	194,425		
12/31/2011	Trade Coarst	\$	59,166	Trode Cosus	Trade Coars
	Trade Secret			Trade Secret	
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Date	Total Outage MWh [Trade Secret Begins	R	Average Replacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
1/1/2012		\$	53,831		
1/2/2012		\$ \$	173,758		
1/3/2012		\$	212,906		
1/4/2012		\$	234,264		
1/5/2012		\$	224,896		
1/6/2012		\$ \$	180,805		
1/7/2012		\$	241,811		
1/8/2012		\$	247,866		
1/9/2012		\$	209,427		
1/10/2012		\$	267,971		
1/11/2012		\$ \$ \$	191,576		
1/12/2012		\$	184,274		
1/13/2012		\$	269,514		
1/14/2012		\$	230,635		
1/15/2012		\$ \$	123,271		
1/16/2012		\$	107,244		
1/17/2012		\$ \$	201,553		
1/18/2012		\$	65,147		
1/19/2012		\$	278,043		
1/20/2012		\$ \$	237,419		
1/21/2012		\$	169,894		
1/22/2012		\$ \$	112,464		
1/23/2012		\$	178,301		
1/24/2012		\$	262,340		
1/25/2012		\$	206,342		
1/26/2012		\$	142,306		
1/27/2012		\$ \$	179,602		
1/28/2012		\$	125,353		
1/29/2012		\$	224,149		
1/30/2012		\$	239,086		
1/31/2012		\$	174,119		
2/1/2012		\$ \$	262,505		
2/2/2012		\$	278,970		
2/3/2012		\$	231,659		
2/4/2012		\$ \$	194,015		
2/5/2012		\$	118,010		
2/6/2012		\$	268,266		
2/7/2012		\$	224,858		
2/8/2012		\$	304,720		
2/9/2012		\$	165,162		
2/10/2012		\$	85,529		
2/11/2012		\$	242,321		
2/12/2012		\$	190,343		
	Trade Secret			Trade Secret	Trade Secret
	Ends]			Ends]	Ends]

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Date M	IWh <b>Secret</b>	Average Replacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
2/13/2012	\$	218,626		
2/14/2012	\$	216,919		
2/15/2012	\$	219,325		
2/16/2012	\$	185,637		
2/17/2012				
2/18/2012	\$ \$	233,761		
2/19/2012	\$	173,391		
2/20/2012	\$	199,502		
2/21/2012	\$	198,637		
2/22/2012	\$	263,558		
2/23/2012	\$	243,046		
2/24/2012	\$	118,886		
2/25/2012	\$	248,914		
2/26/2012	\$	127,121		
2/27/2012	\$	277,353		
2/28/2012	\$	189,170		
2/29/2012	\$	191,653		
3/1/2012	\$	308,550		
3/2/2012	\$	246,140		
3/3/2012	\$	176,143		
3/4/2012	\$	282,638		
3/5/2012	\$	237,264		
3/6/2012	\$	179,208		
3/7/2012	\$	210,228		
3/8/2012	\$	191,364		
3/9/2012	\$	220,159		
3/10/2012	\$	130,917		
3/11/2012	\$	99,644		
3/12/2012	\$	217,342		
3/13/2012	\$	189,603		
3/14/2012	\$	189,876		
3/15/2012	\$	204,293		
3/16/2012	\$	148,718		
3/17/2012	\$	79,832		
3/18/2012	\$	67,323		
3/19/2012	\$			
3/20/2012	\$			
3/21/2012	\$	211,399		
3/22/2012	\$	217,142		
3/23/2012	\$			
3/24/2012	\$			
3/25/2012	\$			
3/26/2012	\$	99,130		
3/27/2012	\$			
Trac	de Secret		Trade Secret	Trade Secret
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### PUBLIC DOCUMENT -TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret Begins	R	Average eplacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
3/28/2012		\$	181,403		
3/29/2012		\$	102,628		
3/30/2012		\$	209,712		
3/31/2012		\$	171,139		
4/1/2012		\$ \$	195,682		
4/2/2012		\$	240,613		
4/3/2012		\$	205,068		
4/4/2012		\$	225,969		
4/5/2012		\$	234,900		
4/6/2012		\$	181,945		
4/7/2012		\$	124,501		
4/8/2012		\$	101,836		
4/9/2012		\$	247,824		
4/10/2012		\$	282,313		
4/11/2012		\$	304,770		
4/12/2012		\$ \$ \$	198,459		
4/13/2012		\$	182,781		
4/14/2012		\$	210,631		
4/15/2012		\$	146,404		
4/16/2012		\$ \$ \$	195,746		
4/17/2012		\$	250,889		
4/18/2012		\$	201,086		
4/19/2012		\$	175,863		
4/20/2012		\$ \$	246,522		
4/21/2012		\$	162,123		
4/22/2012		\$ \$	174,830		
4/23/2012		\$	333,775		
4/24/2012		\$	321,624		
4/25/2012		\$	199,319		
4/26/2012		\$	251,423		
4/27/2012		\$ \$	188,339		
4/28/2012		\$	217,851		
4/29/2012		\$	222,711		
4/30/2012		\$	282,283		
5/1/2012		\$	202,366		
5/2/2012		\$	300,409		
5/3/2012		\$	338,906		
5/4/2012		\$	249,234		
5/5/2012		\$	252,841		
5/6/2012		\$	203,296		
5/7/2012		\$	215,845		
5/8/2012		\$	271,175		
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## PUBLIC DOCUMENT - TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret Begins		Average Replacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
5/9/2012		\$	324,034		
5/10/2012		\$	233,132		
5/11/2012		\$	189,994		
5/12/2012		\$	301,178		
5/13/2012		\$	264,918		
5/14/2012		\$	371,997		
5/15/2012		\$	319,732		
5/16/2012		\$ \$	366,237		
5/17/2012		\$	275,163		
5/18/2012		\$	384,533		
5/19/2012		\$	356,355		
5/20/2012		\$	344,929		
5/21/2012		\$	404,616		
5/22/2012		\$	408,895		
5/23/2012		\$	388,377		
5/24/2012		\$	370,069		
5/25/2012		\$	428,172		
5/26/2012		\$	213,366		
5/27/2012		\$	373,048		
5/28/2012		\$	197,233		
5/29/2012		\$	310,744		
5/30/2012		\$	323,755		
5/31/2012		\$	342,250		
6/1/2012		\$	320,343		
6/2/2012		\$ \$	265,394		
6/3/2012		\$	235,979		
6/4/2012		\$	322,584		
6/5/2012		\$	375,738		
6/6/2012		\$	408,236		
6/7/2012		\$ \$	438,215		
6/8/2012		\$	428,831		
6/9/2012		\$	303,823		
6/10/2012		\$	291,796		
6/11/2012		\$	205,707		
6/12/2012		\$	241,802		
6/13/2012		\$	150,565		
6/14/2012		\$	211,853		
6/15/2012		\$	382,586		
6/16/2012		\$	263,704		
6/17/2012		\$	223,438		
6/18/2012		\$	318,014		
6/19/2012		\$	334,571		
	Trade Secret			Trade Secret	
	Ends]			Ends	Ends]

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Date	Total Outage MWh [Trade Secret Begins	F	Average Replacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
6/20/2012		\$	276,472		
6/21/2012		\$	340,146		
6/22/2012		\$	329,034		
6/23/2012		\$	183,874		
6/24/2012		\$	239,330		
6/25/2012		\$	225,332		
6/26/2012		\$	280,019		
6/27/2012		\$	492,530		
6/28/2012		\$	536,300		
6/29/2012		\$	564,179		
6/30/2012		\$	404,875		
7/1/2012		\$	399,418		
7/2/2012		\$	469,416		
7/3/2012		\$	489,514		
7/4/2012		\$	419,916		
7/5/2012		\$	656,453		
7/6/2012		\$	481,956		
7/7/2012		\$	346,133		
7/8/2012		\$	369,707		
7/9/2012		\$	396,606		
7/10/2012		\$	392,162		
7/11/2012		\$	413,995		
7/12/2012		\$	409,132		
7/13/2012		\$	451,182		
7/14/2012		\$	414,985		
7/15/2012		\$	452,812		
7/16/2012		\$	569,706		
7/17/2012		\$	800,021		
7/18/2012		\$	566,549		
7/19/2012		\$	449,875		
7/20/2012		\$	291,598		
7/21/2012		\$	335,101		
7/22/2012		\$	368,670		
7/23/2012		\$	593,241		
7/24/2012		\$	443,863		
7/25/2012		\$	471,993		
7/26/2012		\$	236,616		
7/27/2012		\$	243,351		
7/28/2012		\$	302,339		
7/29/2012		\$	298,188		
7/30/2012		\$	449,364		
7/31/2012		\$	469,224		
	Trade Secret Ends]			Trade Secret Ends]	

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Date	Total Outage MWh [Trade Secret Begins	F	Average Replacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
8/1/2012		\$	481,635		
8/2/2012		\$ \$	479,561		
8/3/2012		\$	428,551		
8/4/2012		\$	292,937		
8/5/2012		\$	238,591		
8/6/2012		\$	315,640		
8/7/2012		\$ \$ \$	345,773		
8/8/2012		\$	350,735		
8/9/2012		\$	287,493		
8/10/2012		\$ \$	260,159		
8/11/2012		\$	203,690		
8/12/2012		\$ \$	196,282		
8/13/2012		\$	265,341		
8/14/2012		\$	312,555		
8/15/2012		\$	306,930		
8/16/2012		\$	246,479		
8/17/2012		\$ \$	285,421		
8/18/2012		\$	233,840		
8/19/2012		\$	217,811		
8/20/2012		\$	277,312		
8/21/2012		\$	289,810		
8/22/2012		\$	167,972		
8/23/2012		\$	205,751		
8/24/2012		\$	282,302		
8/25/2012		\$	257,628		
8/26/2012		\$	291,683		
8/27/2012		\$ \$	364,533		
8/28/2012		\$	352,857		
8/29/2012		\$	320,736		
8/30/2012		\$	333,851		
8/31/2012		\$	299,728		
9/1/2012		\$ \$ \$	194,167		
9/2/2012		\$	175,613		
9/3/2012		\$	210,103		
9/4/2012		\$	278,538		
9/5/2012		\$	195,643		
9/6/2012		\$	178,734		
9/7/2012		\$	154,226		
9/8/2012		\$	127,419		
9/9/2012		\$	152,027		
9/10/2012		\$	109,545		
9/11/2012		\$	162,962		
9/12/2012		\$	207,971		
9/13/2012		\$	163,714		
9/14/2012		\$	197,921		
	Trade Secret			Trade Secret	t Trade Secre
	Ends]			Ends	] Ends

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### PUBLIC DOCUMENT - TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret Begins	Repl	verage lacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
9/15/2012		\$	136,454		
9/16/2012		\$	131,518		
9/17/2012		\$	145,029		
9/18/2012		\$	187,431		
9/19/2012		\$	133,754		
9/20/2012		\$	170,594		
9/21/2012		\$ \$ \$	172,788		
9/22/2012		\$	130,260		
9/23/2012		\$	172,473		
9/24/2012		\$	191,123		
9/25/2012		\$	193,293		
9/26/2012		\$ \$ \$	216,702		
9/27/2012		\$	207,040		
9/28/2012		\$	113,571		
9/29/2012		\$	191,351		
9/30/2012		\$	172,181		
10/1/2012		\$ \$	205,686		
10/1/2012		\$	245,045		
10/2/2012		\$	196,273		
10/3/2012		\$	55,583		
10/4/2012		ψ ¢	119,369		
10/5/2012		\$ \$ \$	156,035		
10/0/2012		Φ Φ	•		
10/7/2012		\$ \$	149,220 143,032		
10/8/2012		\$ \$	119,084		
10/9/2012		Φ Φ	179,425		
10/10/2012		\$ \$ \$	168,388		
10/11/2012		ψ ¢	161,153		
10/12/2012		\$	171,666		
10/13/2012		\$	130,412		
10/14/2012		Ψ <b>¢</b>	252,180		
10/15/2012		Ψ <b>¢</b>	278,041		
10/10/2012		\$ \$ \$	102,577		
10/17/2012		\$ \$	60,780		
10/10/2012		э \$	125,901		
10/19/2012		\$ \$	199,064		
10/20/2012		\$ \$	131,625		
10/21/2012		\$ \$	214,015		
10/22/2012		\$	249,604		
10/23/2012		\$	253,963		
10/24/2012		\$ \$	235,963		
10/25/2012		\$ \$	241,142		
10/26/2012		э \$	232,597		
10/21/2012	Trade Secret	Ψ	202,001	Trade Secret	Trade Secret
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Date	Total Outage MWh [Trade Secret Begins	F	Average Replacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
10/28/2012		\$	231,515		
10/29/2012		\$	222,943		
10/30/2012		\$	251,925		
10/31/2012		\$	258,671		
11/1/2012		\$ \$	320,293		
11/2/2012		\$	366,925		
11/3/2012		\$	352,487		
11/4/2012		\$	307,181		
11/5/2012		\$	391,886		
11/6/2012		\$	290,362		
11/7/2012		\$	341,622		
11/8/2012		\$	261,055		
11/9/2012		\$	334,593		
11/10/2012		\$	242,663		
11/11/2012		\$	255,140		
11/12/2012		\$	256,587		
11/13/2012		\$	380,157		
11/14/2012		\$	343,613		
11/15/2012		\$	370,734		
11/16/2012		\$	344,906		
11/17/2012		\$	240,956		
11/18/2012		\$	219,819		
11/19/2012		\$	310,881		
11/20/2012		\$	331,108		
11/21/2012		\$	243,218		
11/22/2012		\$ \$	39,784		
11/23/2012		φ	235,605		
11/24/2012		\$	319,757		
11/25/2012		\$	317,361		
11/26/2012		\$	419,269		
11/27/2012 11/28/2012		\$ \$	330,747 363 248		
11/28/2012		ъ \$	363,248 361,386		
11/29/2012		\$	345,966		
12/1/2012		\$	301,796		
12/1/2012		\$	317,563		
12/3/2012		\$	272,712		
12/4/2012		\$	357,013		
12/5/2012		\$	144,594		
12/6/2012		\$	335,695		
12/7/2012		\$	406,534		
12/8/2012		\$ \$ \$	293,285		
12/9/2012		\$	339,284		
- , <i>3,</i> <b>- 0</b> . <b>-</b>	Trade Secret	7	- 50,-0	Trade Secret	Trade Secret
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### PUBLIC DOCUMENT - TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret Begins	R	Average eplacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
12/10/2012		\$	438,226		
12/11/2012		\$	422,318		
12/12/2012		\$	226,142		
12/13/2012		\$	406,626		
12/14/2012		\$ \$ \$	294,526		
12/15/2012		\$	310,766		
12/16/2012		\$	288,113		
12/17/2012		\$	422,388		
12/18/2012		\$	408,442		
12/19/2012		\$	392,335		
12/20/2012		\$	150,586		
12/21/2012		\$	351,872		
12/22/2012		\$	305,471		
12/23/2012		\$	338,395		
12/24/2012		\$	295,562		
12/25/2012		\$	287,187		
12/26/2012		\$	388,643		
12/27/2012		\$	400,251		
12/28/2012		\$	409,666		
12/29/2012		\$	365,726		
12/30/2012		\$	315,058		
12/31/2012		\$	359,638		
1/1/2013		\$	304,096		
1/2/2013		\$	374,249		
1/3/2013		\$	306,446		
1/4/2013		\$	328,330		
1/5/2013		\$	292,166		
1/6/2013		\$	307,757		
1/7/2013		\$	277,963		
1/8/2013		\$	270,615		
1/9/2013		\$ \$	206,001		
1/10/2013		\$	171,182		
1/11/2013		\$	269,928		
1/12/2013		\$	244,529		
1/13/2013		\$	322,332		
1/14/2013		\$	324,090		
1/15/2013		\$	107,195		
1/16/2013		\$	125,366		
1/17/2013		\$	478,135		
1/18/2013		\$	268,953		
1/19/2013		\$	169,076		
1/20/2013		\$	300,060		
1/21/2013		\$	196,784		
	Trade Secret			Trade Secret	Trade Secret
	Ends]			Ends]	Ends]

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### PUBLIC DOCUMENT - TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret	Avera Replace Cos	ment	Unit Incremental Cost [Trade Secret	Change in Energy Costs Due to Outage [Trade Secret
	Begins			Begins	Begins
1/22/2013			39,555		
1/23/2013		\$ 3	35,669		
1/24/2013		\$ 29	96,745		
1/25/2013			34,318		
1/26/2013		\$ 18	37,675		
1/27/2013		\$ 2	22,685		
1/28/2013			31,042		
1/29/2013		\$ 32	23,703		
1/30/2013			35,899		
1/31/2013			39,375		
2/1/2013		\$ 50	09,917		
2/2/2013			56,183		
2/3/2013		\$ 23	39,932		
2/4/2013		\$ 3	40,319		
2/5/2013			72,948		
2/6/2013			05,081		
2/7/2013		\$ 34	43,697		
2/8/2013		\$ 24	40,959		
2/9/2013			60,776		
2/10/2013			47,954		
2/11/2013			20,838		
2/12/2013		\$ 30	04,376		
2/13/2013		\$ 28	33,195		
2/14/2013			69,165		
2/15/2013		\$ 3	50,376		
2/16/2013			22,818		
2/17/2013			91,397		
2/18/2013		\$	78,304		
2/19/2013			15,180		
2/20/2013			52,180		
2/21/2013			01,464		
2/22/2013			26,939		
2/23/2013		\$ 32	20,301		
2/24/2013		\$ 30	00,331		
2/25/2013			34,135		
2/26/2013			90,692		
2/27/2013			57,582		
2/28/2013			14,929		
3/1/2013		\$ 3	56,360		
3/2/2013			31,356		
3/3/2013			29,489		
3/4/2013			79,044		
3/5/2013	Trade Secret	\$ 38	32,265	Trade Secret	Trade Secret
	Frade Secret				
	Endsj			Ends]	Ends]

Docket No. E999/AA-13-599 Information Request No. OAG-005 Attachment B

#### PUBLIC DOCUMENT -TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret Begins		Average eplacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
3/6/2013		\$	423,308		
3/7/2013		\$	357,633		
3/8/2013		\$	330,324		
3/9/2013		\$	230,518		
3/10/2013		\$ \$	212,711		
3/11/2013		\$	321,397		
3/12/2013		\$	308,023		
3/13/2013		\$	371,269		
3/14/2013		\$	362,005		
3/15/2013		\$	381,885		
3/16/2013		\$	370,426		
3/17/2013		\$ \$ \$	324,717		
3/18/2013		\$	226,254		
3/19/2013		\$	420,697		
3/20/2013		\$ \$	468,365		
3/21/2013		\$	526,585		
3/22/2013		\$ \$	545,912		
3/23/2013		\$	429,120		
3/24/2013		\$	390,005		
3/25/2013		\$ \$	391,950		
3/26/2013		\$	468,055		
3/27/2013		\$ \$	460,280		
3/28/2013		\$	426,609		
3/29/2013		\$	379,573		
3/30/2013		\$	318,026		
3/31/2013		\$	276,774		
4/1/2013		\$ \$	475,466		
4/2/2013		\$	463,828		
4/3/2013		\$	337,995		
4/4/2013		\$	445,376		
4/5/2013		\$	392,433		
4/6/2013		\$	280,067		
4/7/2013		\$	330,980		
4/8/2013		\$	405,082		
4/9/2013		\$ \$	182,641		
4/10/2013		\$	449,727		
4/11/2013		\$	439,886		
4/12/2013		\$	440,110		
4/13/2013		\$	392,635		
4/14/2013		\$	178,463		
4/15/2013		\$	357,178		
4/16/2013		\$	511,367		
4/17/2013		\$	444,436		
	Trade Secret	*	, . 30	Trade Secret	Trade Secret
	Ends]			Endsj	

Docket No. E999/AA-13-599 Information Request No. OAG-005 Attachment B

### PUBLIC DOCUMENT - TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret Begins	R	Average eplacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
4/18/2013		\$	464,007		
4/19/2013		\$	435,817		
4/20/2013		\$	498,946		
4/21/2013		\$	227,538		
4/22/2013		\$ \$ \$	341,899		
4/23/2013		\$	419,321		
4/24/2013		\$	360,233		
4/25/2013		\$	399,555		
4/26/2013		\$	290,886		
4/27/2013		\$	411,297		
4/28/2013		\$	263,462		
4/29/2013		\$	369,656		
4/30/2013		\$	325,126		
5/1/2013		\$	351,914		
5/2/2013		\$	181,496		
5/3/2013		\$ \$	302,267		
5/4/2013		\$	384,245		
5/5/2013		\$	374,238		
5/6/2013		\$	460,286		
5/7/2013		\$	458,167		
5/8/2013		\$	442,919		
5/9/2013		\$	399,310		
5/10/2013		\$	347,569		
5/11/2013		\$	220,138		
5/12/2013		\$	317,128		
5/13/2013		\$	328,530		
5/14/2013		\$ \$ \$	416,669		
5/15/2013		\$	418,403		
5/16/2013		\$	444,284		
5/17/2013		\$	363,092		
5/18/2013		\$	310,658		
5/19/2013		\$	292,033		
5/20/2013		\$	340,198		
5/21/2013		\$	325,189		
5/22/2013		\$	302,139		
5/23/2013		\$	265,498		
5/24/2013		\$	213,685		
5/25/2013		\$	112,678		
5/26/2013		\$	77,462		
5/27/2013		\$	139,955		
5/28/2013		\$	332,447		
5/29/2013		\$	334,802		
5/30/2013		\$	338,032		
	Trade Secret			Trade Secret	
	Ends]			Ends]	Ends]

Docket No. E999/AA-13-599 Information Request No. OAG-005 Attachment B

#### PUBLIC DOCUMENT -TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret Begins	Average Replaceme Cost	ent Unit Inc	cremental ost Secret	Change in Energy Costs Due to Outage [Trade Secret Begins
5/31/2013		\$ 328 \$ 100			
6/1/2013		\$ 100			
6/2/2013		\$ 219			
6/3/2013		\$ 297			
6/4/2013		\$ 203, \$ 274.			
6/5/2013 6/6/2013		Φ 2/4, ¢ 221			
6/7/2013		\$ 203 \$ 274 \$ 321 \$ 342			
6/8/2013		\$ 175			
6/9/2013		\$ 163			
6/10/2013		\$ 340			
6/11/2013		\$ 353			
6/12/2013		\$ 163 \$ 340 \$ 353 \$ 362			
6/13/2013		\$ 328			
6/14/2013		\$ 299			
6/15/2013		\$ 279			
6/16/2013		\$ 279 \$ 293 \$ 368	531		
6/17/2013		\$ 368	219		
6/18/2013		\$ 354	021		
6/19/2013		\$ 320	147		
6/20/2013		\$ 308 \$ 356 \$ 344 \$ 295	235		
6/21/2013		\$ 356	143		
6/22/2013		\$ 344	517		
6/23/2013		\$ 295			
6/24/2013		\$ 419			
6/25/2013		\$ 405			
6/26/2013		\$ 405 \$ 396 \$ 429 \$ 307			
6/27/2013		\$ 429			
6/28/2013 6/29/2013		\$ 307 \$ 196			
6/30/2013		\$ 234			
7/1/2013		\$ 358			
7/1/2013		\$ 234 \$ 358 \$ 337			
7/3/2013		\$ 355			
7/4/2013		\$ 278			
7/5/2013		\$ 290			
7/6/2013		\$ 268			
7/7/2013		\$ 322			
7/8/2013		\$ 470			
7/9/2013		\$ 411,			
7/10/2013		\$ 344 \$ 337	749		
7/11/2013			066		
7/12/2013		\$ 303.			
	Trade Secret		Tra	de Secret	Trade Secret
	Ends]			Ends]	Ends]

Docket No. E999/AA-13-599 Information Request No. OAG-005 Attachment B

### PUBLIC DOCUMENT - TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret Begins	R	Average eplacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
7/13/2013	<b>J</b> -	\$	312,370		
7/14/2013		\$	372,517		
7/15/2013		\$	482,627		
7/16/2013		\$	548,220		
7/17/2013		\$	605,041		
7/18/2013		\$	557,309		
7/19/2013		\$	509,534		
7/20/2013		\$ \$ \$ \$	395,504		
7/21/2013		\$	303,675		
7/22/2013		\$	413,884		
7/23/2013		\$	376,646		
7/24/2013		\$	338,347		
7/25/2013		\$	322,699		
7/26/2013		\$	254,971		
7/27/2013		\$	206,997		
7/28/2013		\$	211,702		
7/29/2013		\$	289,386		
7/30/2013		\$ \$ \$	318,815		
7/31/2013		\$	333,560		
8/1/2013		\$	349,718		
8/2/2013		\$	316,297		
8/3/2013		\$	258,522		
8/4/2013		Φ	201,021		
8/5/2013		\$ \$	302,990		
8/6/2013		\$	343,312		
8/7/2013		\$	248,915		
8/8/2013		φ	323,762		
8/9/2013		\$ \$ \$	290,127		
8/10/2013		\$	254,614		
8/11/2013		\$	234,976		
8/12/2013		\$	303,965		
8/13/2013		\$	291,212		
8/14/2013		\$	289,538		
8/15/2013		\$	267,001		
8/16/2013		φ \$	284,299		
8/17/2013		\$	258,903		
8/18/2013		\$	209,855		
8/19/2013		\$	344,378		
8/20/2013		\$	374,374		
8/21/2013		\$	409,728		
8/22/2013		\$	354,852		
8/23/2013		э \$	327,028		
8/24/2013		\$	253,507		
0/24/2013	Trade Secret	Ψ	200,007	Trade Secret	t Trade Secret
	Ends]			Ends]	

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#### PUBLIC DOCUMENT -TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret Begins		Average eplacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
8/25/2013		\$	301,128		
8/26/2013		\$	508,617		
8/27/2013		\$	581,738		
8/28/2013		\$	560,625		
8/29/2013		\$ \$	508,995		
8/30/2013		\$	523,633		
8/31/2013		\$	366,734		
9/1/2013		\$	256,312		
9/2/2013		\$	227,038		
9/3/2013		\$	294,369		
9/4/2013		\$	298,381		
9/5/2013		\$ \$ \$	287,211		
9/6/2013		\$	249,345		
9/7/2013		\$	338,258		
9/8/2013		\$ \$	286,627		
9/9/2013		\$	386,427		
9/10/2013		\$ \$	527,141		
9/11/2013		\$	411,551		
9/12/2013		\$	173,480		
9/13/2013		\$ \$	302,980		
9/14/2013		\$	185,869		
9/15/2013		\$ \$	188,340		
9/16/2013		\$	305,808		
9/17/2013		\$	142,173		
9/18/2013		\$	303,135		
9/19/2013		\$ \$	329,943		
9/20/2013		\$	323,999		
9/21/2013		\$	293,082		
9/22/2013		\$	196,535		
9/23/2013		\$	355,671		
9/24/2013		\$	397,088		
9/25/2013		\$	383,291		
9/26/2013		\$	440,355		
9/27/2013		\$ \$	520,874		
9/28/2013			275,597		
9/29/2013		\$	236,254		
9/30/2013		\$	288,149		
10/1/2013		\$	390,158		
10/2/2013		\$	404,517		
10/3/2013		\$	392,748		
10/4/2013		\$	344,391		
10/5/2013		\$	218,477		
10/6/2013		\$	270,083		
	Trade Secret			Trade Secret	
	Ends]			Ends]	Ends]

Docket No. E999/AA-13-599 Information Request No. OAG-005 Attachment B

## PUBLIC DOCUMENT - TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret Begins	F	Average Replacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
10/7/2013 10/8/2013		\$ \$	354,344 294,417		
10/9/2013		\$	286,920		
10/10/2013		\$	280,600		
10/11/2013		\$	158,277		
10/12/2013		\$ \$ \$	99,542		
10/13/2013		\$	115,242		
10/14/2013		\$	96,225		
10/15/2013		\$	86,423		
10/16/2013 10/17/2013		\$ \$ \$	87,832		
10/17/2013		Φ Φ	56,743 51,651		
10/19/2013		\$	87,642		
10/20/2013		\$	53,377		
10/21/2013		\$ \$ \$ \$	51,698		
10/22/2013		\$	23,192		
10/23/2013		\$	87,971		
10/24/2013		\$	180,110		
10/25/2013		\$	173,897		
10/26/2013 10/27/2013		\$ \$	145,395		
10/21/2013		Φ	122,160		
Event	7,139,949		201,777,929	141,291,390	60,486,539
10/28/2013		\$	-		
10/29/2013		\$	-		
10/30/2013 10/31/2013		\$	_		
11/1/2013		\$	_		
11/2/2013		\$	_		
11/3/2013		\$	-		
11/4/2013		\$	-		
11/5/2013		\$	-		
11/6/2013		\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	-		
11/7/2013 11/8/2013		φ Ψ	-		
11/8/2013		\$	-		
11/10/2013		\$	-		
11/11/2013		\$	-		
11/12/2013		\$ \$ \$ \$ \$ \$ \$ \$	-		
11/13/2013		\$	-		
11/14/2013		\$	<u>-</u>		
11/15/2013		\$	359,999		
11/16/2013		\$	233,447		
11/17/2013 11/18/2013		\$	234,824 358,965		
11/18/2013		\$	339,646		
11/20/2013		\$	338,218		
	Trade Secret		,	Trade Secret	Trade Secret
	Ends]			Ends]	Ends]

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### PUBLIC DOCUMENT - TRADE SECRET DATA EXCISED

Date	Total Outage MWh [Trade Secret Begins	Average Replaceme Cost		t Incremental Cost <b>le Secret</b> <b>ns</b>	Change in Energy Costs Due to Outage [Trade Secret Begins	
11/21/2013		\$ 271,				
11/22/2013		\$ 391,				
11/23/2013		\$ 446,				
11/24/2013		\$ 86.	693			
11/25/2013		\$ 291,				
11/26/2013		\$ 379,				
11/27/2013		\$ 86, \$ 291, \$ 379, \$ 411,				
11/28/2013		\$ 349,				
11/29/2013		\$ 255,				
11/30/2013		\$ 255, \$ 354,				
12/1/2013		\$ 371,				
12/1/2013		\$ 363,				
12/3/2013		\$ 373,				
12/4/2013		\$ 368,				
12/4/2013		\$ 300, \$ 471,				
12/6/2013		\$ 368, \$ 471, \$ 470, \$ 528,				
12/0/2013		φ 470, ¢ 528				
12/1/2013		\$ 528,				
		\$ 485,				
12/9/2013		\$ 254,	/15			
12/10/2013		\$ 485, \$ 254, \$	-			
12/11/2013		<b>\$</b>	-			
12/12/2013		\$	-			
12/13/2013		\$ 221,				
12/14/2013		\$ 429,				
12/15/2013		\$ 560, \$ 42, \$				
12/16/2013		\$ 42,	009			
12/17/2013		\$	-			
12/18/2013		\$	-			
12/19/2013		\$ 238,				
12/20/2013		\$ 494,				
12/21/2013		\$ 465,				
12/22/2013		\$ 423,				
12/23/2013			054			
12/24/2013		\$	-			
12/25/2013		\$	-			
12/26/2013		\$	-			
12/27/2013			033			
12/28/2013		\$ 297,				
12/29/2013		\$ 366,				
12/30/2013			729			
12/31/2013		\$	-			
	Trade Secret			Trade Secret		
	Ends]			Ends]	Ends]	

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UPDATE OF OAG-1 TO INCLUDE NOV & DEC 2013 DATA

Docket No. E999/AA-13-599 Information Request No. OAG-005 Attachment B

# PUBLIC DOCUMENT TRADE SECRET DATA EXCISED

Month		Total Outage MWh [Trade Secret Begins	Rep	Average lacement Cost	Unit Incremental Cost [Trade Secret Begins	Change in Energy Costs Due to Outage [Trade Secret Begins
11	2011		\$	2,486,889		
12	2011		\$	8,527,751		
1	2012		\$	5,950,166		
2	2012		\$	6,045,332		
3	2012		\$	5,563,759		
4	2012		\$	6,508,080		
5	2012		\$	9,526,799		
6	2012		\$	9,595,269		
7	2012		\$	13,453,086		
8	2012		\$	9,193,587		
9	2012		\$	5,174,144		
10	2012		\$	5,732,557		
11	2012		\$	9,239,309		
12	2012		\$	10,346,413		
1	2013		\$	8,841,918		
2	2013		\$	7,891,968		
3	2013		\$ \$	11,550,934		
4	2013		\$	11,335,416		
5	2013		\$	9,924,366		
6	2013		\$	9,093,671		
7	2013		\$	11,232,840		
8	2013		\$	10,444,363		
9	2013		\$	9,205,283		
10	2013	Tuesde Cesaust	\$	4,914,030	Tuesda Casuat	Tuesda Casuet
_		Trade Secret Ends]			Trade Secret Ends]	Trade Secret Ends]
	Event	7,139,949		201,777,929	141,291,390	60,486,539
		[Trade Secret Begins			[Trade Secret Begins	[Trade Secret Begins
11	2013		\$	5,103,050		
12	2013		\$	7,407,755		
		Trade Secret Ends]			Trade Secret Ends]	Trade Secret Ends]

#### **CERTIFICATE OF SERVICE**

- I, Tricia Carlsen, hereby certify that I have this day served copies of the foregoing document on the attached list of persons.
  - <u>xx</u> by depositing a true and correct copy thereof, properly enveloped
     with postage paid in the United States mail at Minneapolis, Minnesota
  - xx electronic filing

#### **DOCKET NO. E999/AA-13-599**

Dated this 10 <sup>th</sup> day of November 2014	-
's/	
 Γricia Carlsen	

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Christopher	Anderson	canderson@allete.com	Minnesota Power	30 W Superior St  Duluth, MN 558022191	Electronic Service	No	OFF_SL_13-599_13-599
Julia	Anderson	Julia.Anderson@ag.state.m n.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota St St. Paul, MN 551012134	Electronic Service	Yes	OFF_SL_13-599_13-599
Marie	Doyle	marie.doyle@centerpointen ergy.com	CenterPoint Energy	800 LaSalle Avenue P O Box 59038 Minneapolis, MN 554590038	Electronic Service	No	OFF_SL_13-599_13-599
Sharon	Ferguson	sharon.ferguson@state.mn .us	Department of Commerce	85 7th Place E Ste 500  Saint Paul,  MN  551012198	Electronic Service	No	OFF_SL_13-599_13-599
Bruce	Gerhardson	bgerhardson@otpco.com	Otter Tail Power Company	PO Box 496 215 S Cascade St Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_13-599_13-599
Michael	Greiveldinger	michaelgreiveldinger@allia ntenergy.com	Interstate Power and Light Company	4902 N. Biltmore Lane  Madison, WI 53718	Electronic Service	No	OFF_SL_13-599_13-599
Burl W.	Haar	burl.haar@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_13-599_13-599
Douglas	Larson	dlarson@dakotaelectric.co m	Dakota Electric Association	4300 220th St W  Farmington, MN 55024	Electronic Service	No	OFF_SL_13-599_13-599
John	Lindell	agorud.ecf@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	OFF_SL_13-599_13-599
Leann	Oehlerking Boes	lboes@mnpower.com	Minnesota Power	30 W Superior St  Duluth, MN 55802	Electronic Service	No	OFF_SL_13-599_13-599
SaGonna	Thompson	Regulatory.Records@xcele nergy.com	Xcel Energy	414 Nicollet Mall FL 7  Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_13-599_13-599

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Stuart	Tommerdahl	stommerdahl@otpco.com	Otter Tail Power Company	215 S Cascade St PO Box 496 Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_13-599_13-599
Gregory	Walters	gjwalters@minnesotaenerg yresources.com	Minnesota Energy Resources Corporation	3460 Technology Dr. NW  Rochester, MN 55901	Electronic Service	No	OFF_SL_13-599_13-599
Robyn	Woeste	robynwoeste@alliantenerg y.com	Interstate Power and Light Company	200 First St SE  Cedar Rapids, IA 52401	Electronic Service	No	OFF_SL_13-599_13-599