



STATE OF MINNESOTA

DISTRICT COURT

COUNTY OF SHERBURNE

MAY 21 2014

TENTH JUDICIAL DISTRICT

Case Type: Property Damage

PATRICIA A. KUKA  
COURT ADMINISTRATOR

NORTHERN STATES POWER COMPANY, )  
SOUTHERN MINNESOTA MUNICIPAL )  
POWER AGENCY; AEGIS INSURANCE )  
SERVICES, LTD. and other Interested )  
Insurers as subrogees of Northern States Power )  
Company, )

Plaintiffs, )

v. )

GENERAL ELECTRIC COMPANY; )  
GENERAL ELECTRIC INTERNATIONAL, )  
INC.; GE ENERGY SERVICES, INC.; and )  
GE ENERGY CONTROL SOLUTIONS, INC., )

Defendants. )

Court File No. 71-CV-13-1472

Judge: Hon. Sheridan Hawley

**JOINT AND SEPARATE  
ANSWER AND AFFIRMATIVE  
DEFENSES OF DEFENDANTS**

Defendants General Electric Company, General Electric International, Inc., GE Energy Services, Inc. and GE Energy Control Solutions, Inc. (“Defendants”) for their Joint and Separate Answer to Plaintiffs’ Amended Complaint herein:

1. Deny each and every allegation, matter, statement and thing contained in said Amended Complaint, and each and every part and portion thereof except as hereinafter specifically admitted, qualified or alleged.

**“NATURE OF THE ACTION”**

2. Answering paragraph 1 of Plaintiffs’ Amended Complaint, admit and allege this lawsuit involves a G3 tandem compound steam turbine train (T170X819; G180X819), known as Unit #3, which was designed and manufactured by General Electric Company, sold to Northern States Power (“NSP”) and shipped to NSP in 1979. Admit that there was a failure in the low

pressure B turbine (“LP-B”) section of T170X819 on November 19, 2011, at the Sherburne County Generating Station (“Sherco”) in Becker, Minnesota. Admit and allege that in 1999 General Electric International, Inc. provided labor and materials for the L-1 bucket upgrade and non-destructive rotor examination of the low pressure turbines in T170X819, pursuant to the terms of written contracts. Deny all remaining allegations contained in said paragraph.

3. Answering paragraph 2 of Plaintiffs’ Amended Complaint, admit the November 19, 2011 failure caused damage to the G3 tandem compound steam turbine train, including the LP-B turbine section. Are without knowledge or information sufficient to form a belief as to the truth of the allegations regarding damage to other property at Sherco contained in said paragraph.

4. Deny the Defendants’ acts or omissions, if any, caused or contributed to the November 19, 2011 failure of the LP-B turbine section of Turbine 170X819, and/or Plaintiffs’ claimed damages, as alleged in paragraphs 3 and 4 of Plaintiffs’ Amended Complaint. Allege the November 19, 2011 failure was caused solely by the negligence and carelessness of NSP in its operation and maintenance of Unit #3. Deny all remaining allegations contained in said paragraphs.

#### **“PARTIES”**

5. Admit the allegations of paragraph 5 of Plaintiffs’ Amended Complaint. Further allege NSP is an operating company of Xcel Energy, Inc. and NSP does business as “Xcel Energy.” Xcel Energy, Inc. is a major U.S. electric and natural gas company based in Minneapolis, Minnesota with regulated operations in eight Midwestern and Western States. Allege Xcel Energy, Inc. acted as agent for NSP with respect to certain contracts with General Electric International, Inc., relating to Unit #3.

6. Are without knowledge or information sufficient to form a belief as to the truth of the allegations contained in paragraphs 6, 7 and 8 of Plaintiffs' Amended Complaint.

7. Admit the allegations of paragraphs 9, 10, 11 and 12 of Plaintiffs' Amended Complaint.

8. Answering paragraph 13 of Plaintiffs' Amended Complaint, admit General Electric Company designed and manufactured a G3 tandem compound steam turbine train (T170X819; G180X819), which was shipped to NSP in 1979. Admit and allege the G3 tandem compound steam turbine train was designated as Unit #3 at Sherco, and is an improvement to real property at the Sherco facility, under Minn. Stat. § 541.051. Specifically deny that Unit #3 constitutes "equipment or machinery" under Minn. Stat. § 541.051, subd. 1(e). Admit and allege that in 1999 General Electric International, Inc. provided labor and materials for the L-1 bucket upgrade and non-destructive rotor examination of the low pressure turbines in T170X819, pursuant to the terms of written contracts. Deny all remaining allegations contained in said paragraph.

#### **"JURISDICTION"**

9. Admit this Court has personal jurisdiction and subject matter jurisdiction over this action and admit venue is proper in Sherburne County, as alleged in paragraphs 14, 15 and 16 of Plaintiffs' Amended Complaint. Deny any allegations contained in said paragraphs that Defendants' acts or omissions, if any, caused or contributed to the Plaintiffs' alleged damages.

#### **"FACTUAL ALLEGATIONS"**

10. Are without knowledge or information sufficient to form a belief as to the truth of the allegations contained in paragraphs 17 and 18 of Plaintiffs' Amended Complaint.

11. Answering paragraph 19 of Plaintiffs' Amended Complaint, admit General Electric Company designed and manufactured a G3 tandem compound steam turbine train (T170X819; G180X819), which was shipped to NSP in 1979. Admit and allege the G3 tandem compound steam train was designated as Unit #3 at Sherco, and is an improvement to real property at the Sherco facility, under Minn. Stat. § 541.051. Specifically deny that Unit #3 constitutes "equipment or machinery" under Minn. Stat. § 541.051, subd. 1(e). Deny all remaining allegations contained in said paragraph.

12. Answering paragraph 20 of Plaintiffs' Amended Complaint, admit and allege the LP-B turbine that failed was a component of the G3 tandem compound steam turbine train (170X189); specifically deny that Unit #3 constitutes "equipment or machinery" under Minn. Stat. § 541.051, subd. 1(e).

13. Are without knowledge or information sufficient to form a belief as to the truth of the allegations contained in paragraphs 21 and 22 of Plaintiffs' Amended Complaint. Specifically deny that Unit #3 constitutes "equipment or machinery" under Minn. Stat. § 541.051, subd. 1(e).

14. Answering paragraph 23 of Plaintiffs' Amended Complaint, admit the G3 tandem compound steam turbine train as manufactured by General Electric Company included a high pressure turbine, a double-flow intermediate pressure turbine, two double-flow LP turbines, a generator and an exciter. Deny all remaining allegations contained in said paragraph.

15. Admit the allegations of paragraphs 24, 25, 26 and 27 of Plaintiffs' Amended Complaint.

16. Answering paragraph 28 of Plaintiffs' Amended Complaint, are without knowledge or information sufficient to form a belief as to Plaintiffs' meaning of the phrase

“normal steam contaminants.” Allege General Electric Company provided recommendations regarding steam purity monitoring and normal operating limits in GEK-63430, which was originally provided with Turbine 170X819’s operation and maintenance manual (O&M manual) and in GEK-72281, which superseded GEK-63430. Further allege NSP failed to follow General Electric Company’s steam purity recommendations in operating Unit #3 at Sherco.

Further answering paragraph 28, admit moisture can penetrate the area of the L-1 dovetail. The operating stresses are normally acceptable. However, in steam turbines having contaminated steam, stress corrosion cracks can initiate and if left undetected may grow to a depth that could cause failure of the wheel fingers. Deny all remaining allegations contained in said paragraph.

17. Answering paragraph 29 of Plaintiffs’ Amended Complaint, are without knowledge or information sufficient to form a belief as to the truth of the allegations contained in said paragraph. It is unknown what designs Plaintiffs are referencing as “turbine manufacturer designs.” Allege that NSP operates many generating plants and stations in Minnesota, Wisconsin, North Dakota and South Dakota, providing it with significant expertise in the design, operation, service and maintenance of steam turbines made by several manufacturers. Moreover, the time period encompassed by the allegations in said paragraph is not specified, nor is the meaning of the phrase “dramatically intensifies” quantified in any manner.

18. Answering paragraph 30 of Plaintiffs’ Amended Complaint, admit General Electric Company was aware of Stress Corrosion Cracking, which is addressed in GEK-63430, TIL 630 and other materials provided to NSP. Admit and allege SCC in steam turbines was an industry wide issue identified by the 1980s, which is demonstrated by the references in the report prepared for NSP by Thielsch Engineering, Report No. 14439, dated May 29, 2013. Allege NSP

was aware of the issue of SCC in LP turbine dovetails prior to the November 19, 2011 failure.

Deny all remaining allegations contained in said paragraph.

19. Answering paragraph 31 of Plaintiffs Amended Complaint, admit General Electric Company and General Electric International, Inc. had knowledge about Stress Corrosion Cracking of dovetails in LP steam turbines prior to November 19, 2011, and allege NSP also had knowledge about Stress Corrosion Cracking of dovetails in LP steam turbines prior to November 19, 2011. Allege General Electric Company did provide NSP with access to Technical Information Letters, and/or NSP had access from other sources, prior to November 19, 2011, including TIL 630 (periodic inspections of last stage buckets ), TIL 956 (recommendations for nondestructive testing and evaluation of steam turbine rotors and generator fields), TIL 1121 (inspection of steam turbine rotor wheel finger dovetails) and TIL 1277 (inspection of low pressure rotor wheel dovetails on steam turbine with fossil fueled once-through boilers). Further allege that none of the Defendants performed any service on the LP turbine sections of T170X819 after 1999. Deny all remaining allegations contained in said paragraph.

20. Deny the allegations of paragraph 32 of Plaintiffs' Amended Complaint. Allege the only work performed relating to the LP turbines was completed by General Electric International, Inc. in 1999. Allege NSP and/or other third parties conducted all other LP turbine inspections.

21. Answering paragraph 33 of Plaintiffs' Amended Complaint, admit that all work performed by any Defendant was subject to the General Agreement for Equipment, Parts and/or Services between NSP and General Electric Company dated December 21, 1993, as well as the terms of the individual contracts.

- a. Answering paragraph 33a. of Plaintiffs' Amended Complaint, admit and allege the 1999 generator rewind and the 1999 L-1 bucket upgrade and non-destructive rotor inspection was performed pursuant to written contracts, consisting of proposals by General Electric International, Inc., Purchase Orders from NSP, Acknowledgement of Order for Services from GE International, Inc. and the General Conditions Agreement. Specifically deny that GE Energy Services, Inc. was a party to these contracts.
- b. Answering paragraph 33b. of Plaintiffs' Amended Complaint, allege the work performed in 2002, 2005 and 2008 by General Electric Company was limited to work on G180X819, and did not involve the low pressure turbines in T170X819. On information and belief, other third parties, over whom Defendants had no control, performed the work for the 2002 Minor Inspection Outage, 2005 Major Inspection Outage (including inspections of both low pressure turbines) and the 2008 Minor Outage. On information and belief, the work scope for each of these outages was determined by NSP.
- c. Answering paragraph 33c. of Plaintiffs' Amended Complaint, admit General Electric International, Inc. entered a contract with Xcel Energy Services, Inc., as agent for NSP, to perform generator uprate design work for Unit #3, pursuant to a written Contract Agreement for Services dated December 22, 2009. Allege this work had nothing to do with the low pressure turbine section in T170X819.

d. Answering paragraph 33d. of Plaintiffs' Amended Complaint, admit General Electric International, Inc. entered a contract with Xcel Energy Services, Inc., as agent for NSP, to rewind the stator for the alternator – exciter section of Sherco Unit #3. This work was performed pursuant to the terms of a written Agreement and Purchase Order M513956 dated June 3, 2011. Admit GE Control Solutions, Inc. entered into two contracts to provide replacement parts for the generator in 2011. Allege none of this work involved the low pressure turbine section of T170X819. On information and belief, other third parties over whom General Electric International, Inc. had no control, and/or NSP, inspected or maintained the low pressure turbines during the 2011 Major Outage. On information and belief, the scope of work for the low pressure turbines during the 2011 Major Outage was determined by NSP.

Deny all remaining allegations contained in said paragraph and its subparts.

22. Answering paragraph 34 of Plaintiffs' Amended Complaint, are without knowledge or information sufficient to form a belief as to the truth of the allegations relating to "other outages," because the allegation is too vague to enable Defendants to form a meaningful response. Further answering paragraph 34, admit that General Electric Company issued Technical Information Letters ("TILs") that were available to NSP; specifically deny that Defendants formulated scopes-of-work for jobs Defendants did not ultimately perform.

23. Answering paragraph 35 of Plaintiffs' Amended Complaint, deny that Defendants performed any work, service or made any inspections of the LP turbines that were a part of the G3 tandem compound steam turbine train after 1999. Allege NSP relied on its own special



knowledge, as a sophisticated utility with its own Engineering and Non-Destructive Examination (“NDE”) business areas, to determine that periodic and proper inspections of the LP turbine rotor wheels were conducted. Further allege General Electric Company and General Electric International, Inc. did provide NSP with information about the need for periodic and proper inspections of the rotor wheel dovetails. Deny all remaining allegations contained in said paragraph.

24. Answering paragraph 36 of Plaintiffs’ Amended Complaint, admit General Electric Company filed a patent for an improved design of the dovetail system. Allege the patent provides the following background for the invention:

In many steam turbine applications, the finger dovetails operate in an environment that is conducive to stress corrosion cracking (SCC). SCC is accelerated by the stress levels that are present in the wheel transition fillets and slot bottoms. These stresses are normally acceptable. However, in steam turbines having contaminated steam, cracks can initiate and if left undetected, may grow to a depth that will cause failure of the wheel fingers. (emphasis added.)

Deny all remaining allegations contained in said paragraph.

25. Answering paragraph 37 of Plaintiffs’ Amended Complaint, admit patent No. 7,387,494 was issued on or about June 17, 2008 and admit certain language from the patent is quoted in said paragraph. Deny the quoted language, or anything else in the patent, constitutes an acknowledgement the prior design is defective.

26. Answering paragraph 38 of Plaintiffs’ Amended Complaint, admit language from the patent is quoted in said paragraph but is incomplete. The reasons for the design improvement are set forth in the patent. Deny all remaining allegations contained in said paragraph.

27. Deny the original design of the LP rotor wheels on the LP turbines was defective or hazardous at the time the G3 tandem compound steam turbine train (170X819) left the control

of General Electric Company in 1979, as alleged in paragraph 39 of Plaintiffs' Amended Complaint. Allege that Defendants had no duty to offer "the revised design as a replacement option" under Minnesota law, and further allege patent No. 7,387,494 is a matter of public record. Deny all remaining allegations contained in said paragraph.

28. Answering paragraph 40 of Plaintiffs' Amended Complaint, admit the L-1 rotor was repaired using the new design geometry described in patent No. 7,387,494. Deny all remaining allegations contained in said paragraph.

29. Answering paragraph 41 of Plaintiffs' Amended Complaint, admit and allege TILs are issued by General Electric Company and admit NSP was provided access to a portal that contained TILs for steam turbines. Deny all remaining allegations contained in said paragraph.

30. Answering paragraph 42 of Plaintiffs' Amended Complaint, admit General Electric Company issued TIL 1886 in October, 2013. Allege that NSP was aware of the requirements of TIL 1277 prior to November 19, 2011 and NSP was told in February 2008 that General Electric Company was recommending customers with drum boilers follow the recommendations in TIL 1277. Deny all remaining allegations contained in said paragraph.

31. Answering paragraph 43 of Plaintiffs' Amended Complaint, deny that Plaintiffs' characterization of the contents of TIL 1886 is accurate.

32. Admit the selected quoted portions of TIL 1886 exist as alleged in paragraph 44 of Plaintiffs' Amended Complaint, but allege the quoted sections are incomplete and not in the order presented in TIL 1886.

33. Answering paragraph 45 of Plaintiffs' Amended Complaint, specifically deny the G3 tandem compound steam turbine train was defective or unreasonably dangerous at the time it

left the possession and control of General Electric Company in 1979. Deny all remaining allegations contained in said paragraph.

34. Deny that the characterization of TIL 1121 as alleged in paragraph 46 of Plaintiffs' Amended Complaint is accurate. Are without knowledge or information sufficient to form a belief as to the truth of the allegations regarding abnormal events or operational anomalies experienced by NSP with Sherco, Unit #3.

35. Admit the allegations of paragraph 47 of Plaintiffs' Amended Complaint.

36. Specifically deny the first sentence of paragraph 48 of Plaintiffs' Amended Complaint. Are without knowledge or information sufficient to form a belief as to the truth of the allegations contained in the second sentence of said paragraph.

37. Are without knowledge or information sufficient to form a belief as to the truth of the allegations contained in paragraphs 49, 50, 51 and 52 of Plaintiffs' Amended Complaint.

38. Answering paragraph 53 of Plaintiffs' Amended Complaint, allege Unit #3 utilized a water cooled generator and there is no reason to have hydrogen present. Allege, on information and belief, the automatic fire protection system performed as designed and extinguished the fire. Are without knowledge or information sufficient to form a belief as to the truth of any remaining allegations contained in said paragraph.

39. Specifically deny the incident was caused or contributed to by any acts or omissions of the Defendants as alleged in paragraph 54 of Plaintiffs' Amended Complaint. Deny all remaining allegations contained in said paragraph.

40. Answering paragraph 55 of Plaintiffs' Amended Complaint, admit the November 19, 2011 incident damaged the G3 tandem compound steam turbine train, including its LP-B

turbine section. Are without knowledge or information sufficient to form a belief as to the truth of the allegations regarding damage to property other than Unit #3, as alleged in said paragraph.

41. Are without knowledge or information sufficient to form a belief as to the truth of the allegations contained in paragraphs 56, 57, 58 and 59 of Plaintiffs' Amended Complaint.

42. Deny the allegations contained in paragraph 60 of Plaintiffs' Amended Complaint.

43. Are without knowledge or information sufficient to form a belief as to the truth of the allegations contained in paragraph 61 of Plaintiffs' Amended Complaint.

44. Answering paragraph 62 of Plaintiffs' Amended Complaint, allege General Electric Company and/or General Electric International, Inc. did provide NSP with information about Stress Corrosion Cracking ("SCC") and proper inspections of the LP dovetails, prior to November 19, 2011, including but not limited to:

- a. General Electric International, Inc. in April 1999 advised NSP to re-inspect the LP-A rotor and LP-B rotor in Turbine 170X819 after not more than ten (10) additional years of service. General Electric International, Inc. further warned NSP "The probability of failure from other degradation such as periphery or dovetail cracking is also reduced by early detection and appropriate action." On information and belief, NSP never performed the recommended re-inspection of the LP rotors prior to November 19, 2011.
- b. General Electric Company issued Technical Information Letters ("TILs"), including: TIL 630 (periodic inspections of last stage buckets); TIL 956 (recommendations for nondestructive testing and evaluation of steam

turbine rotors and generator fields); TIL 1121 (inspection of steam turbine rotor wheel finger dovetails); and TIL 1277 (inspection of low pressure rotor wheel dovetails on steam turbines with fossil fueled once-through boilers).

- c. General Electric Company issued GEK 11680 (creating an effective steam turbine maintenance program) and GEK 63430 (turbine steam purity).
- d. General Electric International, Inc. recommended to NSP in February 2008 that customers with drum boilers follow the recommendations in TIL 1277.

On information and belief, NSP had additional information from its considerable experience as owner and operator of a number of steam turbines from a number of manufacturers and as a member of the power generation industry, regarding proper maintenance and inspection of steam turbines. Further allege NSP could have prevented the November 19, 2011 event had it properly monitored and maintained the steam purity for the turbine and performed recommended inspections. Deny all remaining allegations contained in said paragraph.

45. Answering paragraph 63 of Plaintiffs' Amended Complaint, deny said paragraph accurately describes the conclusion located at pp. 93-94 of the Thielsch Report No. 14439, and further deny all substantive allegations contained in said paragraph.

46. Deny the allegations contained in paragraph 64 of Plaintiffs' Amended Complaint.

## **“CAUSES OF ACTION”**

### **“Count I: Fraudulent Concealment”**

47. Answering paragraph 65 of Plaintiffs’ Amended Complaint, admit and allege that Stress Corrosion Cracking was a recognized metallurgical phenomenon and was discussed in GEK-63430, which was included in the O&M manual provided to NSP with the G3 tandem compound steam turbine train in 1979, and in other documents in the possession of NSP. On information and belief, NSP had access to, and as a prudent steam turbine owner should have availed itself of this access to, other industry information about Stress Corrosion Cracking as time progressed. Deny all remaining allegations contained in said paragraph.

48. Specifically deny the allegations contained in paragraphs 66 and 67 of Plaintiffs’ Amended Complaint.

49. Answering paragraph 68 of Plaintiffs’ Amended Complaint, allege that the actual language of TIL 1221 states in part:

“Many magnetic particle inspections (MPI) of rotor wheel finger dovetails have been performed by prudent steam turbine owners to detect stress corrosion and/or fatigue cracking.”

...

“The finger dovetail geometry is not conducive to inspection without removing buckets[.]”

...

### **RECOMMENDATIONS**

1. “Whenever buckets are removed, a detailed MPI should be performed on the rotor wheel finger dovetails . . .”
2. “Abnormal events or operational anomalies that cause concern for long term reliability of the unit may be reason to consider removal of buckets, before normal replacement, for MPI of the dovetail area. Abnormal events or operational anomalies are any out-of-the ordinary occurrences, during operation or maintenance, which may increase the risk of stress corrosion and/or fatigue cracking, such as but not limited to the following:

- a. caustic or chemical ingestion or contamination
- b. carryover from boiler
- c. leaking condenser heater tube
- d. overspeeds
- e. water ingestion”

Deny all remaining allegations contained in said paragraph.

50. Deny the allegations contained in Paragraph 69 of Plaintiffs’ Amended Complaint.

51. Deny the allegations of paragraph 70 of Plaintiffs’ Amended Complaint and allege, as a matter of law, one cannot “withhold” publicly available information and NSP cannot claim ignorance of publicly available information. Defendants further allege no duty existed to recall or retrofit the G3 tandem compound steam turbine train.

52. Deny the allegations of paragraphs 71, 72, 73 and 74 of Plaintiffs’ Amended Complaint.

**“Count II: Willful and Wanton Negligence”**

53. Answering paragraph 75 of Plaintiffs’ Amended Complaint, assert said paragraph contains a legal conclusion to which no affirmative response is required. To the extent said paragraph alleges any liability or responsibility on the part of Defendants for the November 19, 2011 event, or alleges the legal doctrine applies in this case, it is specifically denied.

54. Answering paragraph 76 of Plaintiffs’ Amended Complaint, allege Sherco Unit #3 utilized a drum boiler and had a radial entry Last Stage Bucket (LSB) that was 33.5” in length. Further allege General Electric Company was aware of three (3) prior incidents of SCC in the L-1 bucket dovetail in steam turbines utilizing a drum boiler with a LSB of 33.5”. Allege none of these three earlier incidents resulted in liberation of a bucket. Deny all remaining allegations contained in said paragraph.

55. Answering paragraph 77 of Plaintiffs' Amended Complaint, admit and allege that Stress Corrosion Cracking was a recognized metallurgical phenomenon and was discussed in GEK-63430, which was included in the O&M manual provided to NSP with the G3 tandem compound steam turbine train in 1979, and in other documents in the possession of NSP. On information and belief, NSP had access to, and as a prudent steam turbine owner should have availed itself of this access to, other industry information about Stress Corrosion Cracking as time progressed. Allege that NSP was aware of the requirements of TIL 1277 prior to November 19, 2011 and NSP was told in February 2008 that General Electric Company and General Electric International, Inc. was recommending customers with drum boilers follow the recommendations in TIL 1277. Deny all remaining allegations contained in said paragraph.

56. Answering paragraph 78 of Plaintiffs' Amended Complaint, Defendants have previously admitted the existence of patent No. 7,387,494. Deny all remaining allegations contained in said paragraph.

57. Deny the allegations contained in paragraphs 79, 80, 81 and 82 of Plaintiffs' Amended Complaint. Further deny the existence of any duty owed to NSP as alleged in said paragraphs.

**“Count III: Gross Negligence”**

58. Answering paragraphs 83 and 84 of Plaintiffs' Amended Complaint, assert said paragraphs contains legal conclusions to which no affirmative response is required. To the extent said paragraphs allege any liability or responsibility on the part of Defendants for the November 19, 2011 event, or allege the legal doctrine applies in this case, it is specifically denied.



59. Deny the allegations contained in paragraphs 85, 86 and 87 of Plaintiffs' Amended Complaint. Further deny the existence of any duty owed to NSP as alleged in said paragraphs.

**“Count IV: Professional Negligence”**

60. Are without knowledge or information sufficient to form a belief as to the truth of the allegations contained in paragraph 88 of Plaintiffs' Amended Complaint, because Plaintiffs fail to identify the contracts that allegedly create an engineer-client relationship. The only engineering services contract identified in Plaintiffs' Amended Complaint is the contract identified in paragraph 33c, between General Electric International, Inc. and Xcel Energy, Inc., as agent for NSP. Allege that contract has nothing to do with LP turbine inspections.

61. Answering paragraph 89 of Plaintiffs' Amended Complaint, assert said paragraph contains a legal conclusion to which no affirmative response is required. To the extent said paragraph alleges any liability or responsibility on the part of Defendants for the November 19, 2011 event, it is specifically denied.

62. Deny the allegations contained in paragraphs 90 and 91 of Plaintiffs' Amended Complaint. Further deny the existence of any duty owed to NSP as alleged in said paragraphs.

**“Count V: Post-Sale Failure to Warn”**

63. Answering paragraph 92 of Plaintiffs' Amended Complaint, assert said paragraph contains a legal conclusion to which no affirmative response is required. To the extent said paragraph alleges any liability or responsibility on the part of Defendants for the November 19, 2011 event, or alleges the legal doctrine applies in this case, it is specifically denied.

64. Deny the allegations contained in paragraphs 93, 94 and 95 of Plaintiffs' Amended Complaint. Further deny the existence of any duty owed to NSP as alleged in said paragraphs.

65. The remaining portion of Plaintiffs' Amended Complaint constitutes "Prayer for Relief" allegations to which no affirmative response is required. To the extent said allegations allege any liability or responsibility on the part of Defendants for the November 19, 2011 event, they are specifically denied.

### **AFFIRMATIVE DEFENSES**

Defendants General Electric Company, General Electric International, Inc., GE Energy Services, Inc. and GE Energy Control Solutions, Inc. ("Defendants") for their Affirmative Defenses to Plaintiffs' Amended Complaint herein:

66. Allege Plaintiffs' Amended Complaint, in whole or in part, fails to state a claim upon which relief can be granted as to one or more of the Defendants.

67. Allege this case arises from a commercial transaction involving damage to goods sold – the G3 tandem compound steam turbine train, Unit #3. Allege Plaintiffs' Amended Complaint is barred, in whole or in part, by the Economic Loss Doctrine Arising from the Sale of Goods, set forth in Minn. Stat. §604.10 and/or applicable case law.

68. Allege this case allegedly involves commercial transactions for service performed on components of the G3 tandem compound steam turbine train (Unit #3) and any claim relating to said services is governed by the terms and conditions of the parties' commercial agreements.

69. Allege Plaintiffs' Amended Complaint is barred, in whole or in part, by applicable statutes of limitation.

70. Allege Plaintiffs' Amended Complaint is barred by the statute of repose contained in Minn. Stat. § 541.051, subd. 1.

71. Allege the November 19, 2011 incident was contributed to and caused by the negligence and carelessness of NSP.

72. Allege the November 19, 2011 incident may have been contributed to and caused by the negligence and carelessness of third-parties over whom Defendants had no control, and whose conduct is not the responsibility of Defendants.

73. Allege Plaintiffs' Amended Complaint is barred by Minn. Stat. § 604.01.

74. Allege the November 19, 2011 event occurred following the expiration of the ordinary useful life of the LP-B turbine.

75. Allege Plaintiffs' Amended Complaint is barred, in whole or in part, by the terms and conditions of the commercial agreements signed by NSP, and by Xcel Energy, Inc. as agent for NSP, that govern the Parties' relationship, including but not limited to, provisions governing limitation of liability, exclusion of consequential damages and limitations on warranties.

76. Allege that the negligence and carelessness of NSP is attributable to Southern Minnesota Municipal Power Agency, for purposes of comparative fault under Minn. Stat. § 604.01.

WHEREFORE, Defendants General Electric Company, General Electric International, Inc., GE Energy Services, Inc. and GE Energy Control Solutions, Inc. respectfully request that Plaintiffs' Amended Complaint be dismissed in its entirety, on the merits and with prejudice, and that Defendants be awarded their reasonable costs and disbursements, and such further relief as this Court deems just and proper.

Dated: May 20, 2014

**GASKINS BENNETT BIRRELL SCHUPP, LLP**



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Timothy R. Schupp (MN #130837)  
Robert W. Vaccaro (MN #0313750)  
333 South Seventh Street, Suite 3000  
Minneapolis, MN 55402  
612-333-9500  
612-333-9579 Facsimile  
Email: [tschupp@gaskinsbennett.com](mailto:tschupp@gaskinsbennett.com)  
[rvaccaro@gaskinsbennett.com](mailto:rvaccaro@gaskinsbennett.com)

*Attorneys for Defendants*

**ACKNOWLEDGMENT**

The undersigned hereby acknowledges that sanctions may be imposed under  
Minn. Stat. § 549.211.

**GASKINS BENNETT BIRRELL SCHUPP, LLP**



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Timothy R. Schupp (MN #130837)  
Robert W. Vaccaro (MN #0313750)  
333 South Seventh Street, Suite 3000  
Minneapolis, MN 55402  
612-333-9500  
612-333-9579 Facsimile  
Email: [tschupp@gaskinsbennett.com](mailto:tschupp@gaskinsbennett.com)  
[rvaccaro@gaskinsbennett.com](mailto:rvaccaro@gaskinsbennett.com)

*Attorneys for Defendants*

9/26/2014

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## REGISTER OF ACTIONS

CASE No. 71-CV-13-1472

Northern States Power Company, Southern Minnesota Municipal Power Agency, Aegis Insurance Services, LTD., and other interested insurers as subrogees of Northern States Power Company vs General Electric Company, General Electric International, Inc., GE Energy Services, Inc., GE Energy Control Solutions, Inc. §  
§  
§  
§  
§

Case Type: **Property Damage**  
Date Filed: **11/15/2013**  
Location: **Sherburne**

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### PARTY INFORMATION

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<b>Defendant</b>	<b>GE Energy Control Solutions, Inc.</b>	<b>Lead Attorneys</b> <b>ROBERT WILLIAM VACCARO</b> <i>Retained</i> 612-333-9500(W)
<b>Defendant</b>	<b>GE Energy Services, Inc.</b>	<b>ROBERT WILLIAM VACCARO</b> <i>Retained</i> 612-333-9500(W)
<b>Defendant</b>	<b>General Electric Company</b>	<b>ROBERT WILLIAM VACCARO</b> <i>Retained</i> 612-333-9500(W)
<b>Defendant</b>	<b>General Electric International, Inc.</b>	<b>ROBERT WILLIAM VACCARO</b> <i>Retained</i> 612-333-9500(W)
<b>Plaintiff</b>	<b>Aegis Insurance Services, LTD.</b> and other interested insurers as subrogees of N	<b>DAVID S EVINGER</b> <i>Retained</i> 612-564-4883(W)
<b>Plaintiff</b>	<b>Northern States Power Company</b>	<b>TIMOTHY R THORNTON</b> <i>Retained</i> 612-977-8400(W)
<b>Plaintiff</b>	<b>Southern Minnesota Municipal Power Agency</b>	<b>WILLIAM E FLYNN</b> <i>Retained</i> 612-371-3926(W)

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### EVENTS & ORDERS OF THE COURT

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	<b>OTHER EVENTS AND HEARINGS</b>
11/15/2013	<b>Summons and Complaint</b>
11/15/2013	<b>Affidavit of Service</b>
	3
11/15/2013	<b>Affidavit-Other</b> <i>of expert review</i>
11/15/2013	<b>Civil Cover Sheet</b>
12/05/2013	<b>Notice of Motion and Motion</b> <i>and rule 12.05 motion for more definite statement</i>
12/05/2013	<b>Affidavit of Mailing</b>
12/05/2013	<b>Memorandum</b> <i>of law in support of Rule 12.05 motion for more definite statement</i>
12/11/2013	<b>Notice of Discrepancy</b> <i>returning originals previously filed by fax</i>
12/11/2013	<b>Motion</b> <i>Amended Notice of Rule 12.05 Motion for more definite statement</i>
12/11/2013	<b>Affidavit of Mailing</b>
12/20/2013	<b>Stipulation</b> <i>regarding Service and Filing of Amended Complaint and Answer or Other Response Thereto</i>
12/20/2013	<b>Proposed Order or Document</b> <i>ck f/Judge Hawley's sig</i>
12/27/2013	<b>Order-Other</b> (Judicial Officer: Hawley, Sheridan , ) <i>on Stipulation</i>
01/02/2014	<b>Notice of Filing of Order</b>
01/03/2014	<b>CANCELED Motion Hearing</b> (1:30 PM) (Judicial Officer Hawley, Sheridan , ) <i>Other</i>
01/08/2014	<b>Notice of Hearing</b> <i>SCF</i>
01/22/2014	<b>Discovery Plan</b> <i>Rule 26 Conference Report</i>

<https://mpa.courts.state.mn.us/CaseDetail.aspx?CaseID=1616537312>

1/3

9/26/2014 <https://mpa.courts.state.mn.us/CaseDetail.aspx?CaseID=1616537312>

01/22/2014 **Affidavit of Mailing**  
01/30/2014 **Summons and Complaint**  
*Amended*

02/05/2014 **Affidavit of Service**  
*upon GE Energy Services Inc*

02/05/2014 **Affidavit of Mailing**  
02/12/2014 **Scheduling Conference** (1:30 PM) (Judicial Officer Hawley,Sheridan , )  
Result: Held

02/12/2014 **Notice of Motion and Motion**  
*and Rule 12.02 Motion to Dismiss*

02/12/2014 **Affidavit of Mailing**  
02/12/2014 **Scheduling Order** (Judicial Officer: Hawley,Sheridan , )  
*with stipulation*

02/12/2014 **Court Clerk Minutes** (Judicial Officer: Hawley,Sheridan , )  
02/14/2014 **Notice of Motion and Motion**  
*Amended Notice of Motion and Rule 12.02 Motion to Dismiss*

02/14/2014 **Affidavit of Mailing**  
02/18/2014 **Notice of Filing of Order**  
03/10/2014 **Notice of Withdrawal of Counsel**  
*Meghan M. Elliot*

03/10/2014 **Affidavit of Mailing**  
03/18/2014 **Memorandum**  
*of Law in Support of Rule 12.02 Motion to Dismiss*

03/18/2014 **Affidavit-Other**  
*of Brett Hanson w/Exhibits 1-2*

03/18/2014 **Affidavit-Other**  
*in Support of Dfd's Rule 12.02 Motion to Dismiss*

03/18/2014 **Proposed Order or Document**  
03/18/2014 **Affidavit of Mailing**  
03/18/2014 **Affidavit-Other**  
*of Brett Hanson - Exhibits 3-6*

04/08/2014 **Proposed Order or Document**  
*Stip & Order - ck f/Judge Hawley's sig*

04/08/2014 **Memorandum**  
*of Law in Opposition to Dfds' Motion to Dismiss*

04/08/2014 **Affidavit-Other**  
*of Daniel W Berglund in Support of Pln's Memorandum of Law in Opposition to Dfds' Motion to Dismiss*

04/08/2014 **Affidavit-Other**  
*Supplemental Affidavit of Daniel W Berglund In Support of Pln's Memorandum of Law in Opposition to Dfd's Motion to Dismiss*

04/08/2014 **Affidavit of Service**  
04/15/2014 **Memorandum**  
*Reply Memorandum of Law in Support of Rule 12.02 Motion to Dismiss*

04/15/2014 **Affidavit-Other**  
*of Timothy R Schupp in Support of Dfd's Rule 12.02 Motion to Dismiss*

04/15/2014 **Affidavit of Service**  
04/16/2014 **Notice of Discrepancy**  
*returned originals/request for filing fee*

04/17/2014 **Motion Hearing** (1:30 PM) (Judicial Officer Hawley,Sheridan , )  
*03/28/2014 Continued to 04/17/2014 - Attorney Unavailable - GE Energy Control Solutions, Inc.*  
Result: Held

04/17/2014 **Court Clerk Minutes** (Judicial Officer: Hawley,Sheridan , )  
04/17/2014 **Taken Under Advisement** (Judicial Officer: Hawley,Sheridan , )  
04/23/2014 **Stipulation and Order**  
*for Protective Order*

04/24/2014 **Affidavit of Service**  
04/28/2014 **Notice of Filing of Order**

05/02/2014 **Stipulation**  
*Stipulated ESI Protocol*

05/02/2014 **Affidavit of Service**  
05/06/2014 **Order Denying Motion** (Judicial Officer: Hawley,Sheridan , )  
*to Dismiss Pursuant to Minn R Civ P 12.20 w/attached memorandum*

05/09/2014 **Notice of Filing of Order**  
05/14/2014 **Affidavit-Other**  
*of Daniel W Berglund*

05/14/2014 **Affidavit of Mailing**  
05/21/2014 **Answer**  
*Joint and Separate Answer and Affirmative Defenses of Defendants*

05/21/2014 **Affidavit of Mailing**  
06/04/2014 **Order-Other** (Judicial Officer: Hawley,Sheridan , )  
*Re: Stipulated ESI Protocol*

06/04/2014 **Notice of Filing of Order**  
06/05/2014 **Transcript**  
*April 17, 2014 Motion Hearing*

09/08/2014 **Correspondence Doc ID# 2**  
*F/Atty Schrupp - requesting matter be designated as a "complex case" and for case management conference be set*

09/09/2014 **Notice of Hearing Doc ID# 1**  
10/02/2014 **Scheduling Conference** (8:30 AM) (Judicial Officer Hawley,Sheridan , )  
06/19/2015 **Pre-trial** (8:30 AM) (Judicial Officer Hawley,Sheridan , )

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FINANCIAL INFORMATION

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9/26/2014

<https://mpa.courts.state.mn.us/CaseDetail.aspx?CaseID=1616537312>

<b>Defendant</b> General Electric Company			
	Total Financial Assessment		678.00
	Total Payments and Credits		678.00
	<b>Balance Due as of 09/26/2014</b>		<b>0.00</b>
12/06/2013	Transaction Assessment		449.00
12/06/2013	Mail Payment	Receipt # 0071-2013-09618	(449.00)
02/12/2014	Transaction Assessment		102.00
02/12/2014	Mail Payment	Receipt # 0071-2014-01155	(102.00)
04/15/2014	Transaction Assessment		25.00
04/15/2014	Mail Payment	Receipt # 0071-2014-03011	(25.00)
05/27/2014	Transaction Assessment		102.00
05/27/2014	Mail Payment	Receipt # 0071-2014-04195	(102.00)
		GASKINS BENNETT BIRRELL SCHUPP	
		GASKINS, BENNETT, BIRRELL, SCHUPP LLP	
		Gaskins, Bennett, Birrell, Schupp LLP	
		Gaskins Bennett Birrell Schupp LLP	
<b>Plaintiff</b> Northern States Power Company			
	Total Financial Assessment		526.00
	Total Payments and Credits		526.00
	<b>Balance Due as of 09/26/2014</b>		<b>0.00</b>
11/18/2013	Transaction Assessment		322.00
11/18/2013	Counter Payment	Receipt # 0071-2013-09122	(322.00)
11/19/2013	Transaction Assessment		102.00
11/19/2013	Mail Payment	Receipt # 0071-2013-09180	(102.00)
04/09/2014	Transaction Assessment		102.00
04/09/2014	Mail Payment	Receipt # 0071-2014-02814	(102.00)
		METO LEGAL SERVICES	
		Northern States Power Company	
		Grotefeld Hoffmann, LLP	



414 Nicollet Mall  
Minneapolis, MN 55401

**PUBLIC DOCUMENT  
TRADE SECRET DATA EXCISED**

April 28, 2014

**--Via E-Mail--**

James W. Canaday  
Office of Attorney General  
445 Minnesota Street  
Suite 1400 Bremer Tower  
1400 BRM  
St. Paul, MN 55101

RE: RESPONSES TO OAG INFORMATION REQUEST NOS. 1 (PUBLIC) & 2  
2013 ANNUAL AUTOMATIC ADJUSTMENT OF CHARGES REPORT - ELECTRIC  
DOCKET No. E999/AA-13-599

Dear Mr. Canaday:

Enclosed please find our responses to the above-noted information requests. The Public version of our response to OAG-1 is being sent under separate cover.

Please note that portions of our response to OAG-1 have been designated as Trade Secret information 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.

Please contact me [rebecca.d.eilers@xcelenergy.com](mailto:rebecca.d.eilers@xcelenergy.com) or (612) 330-5570 if you have any questions regarding these responses.

Sincerely,

/s/

REBECCA D. EILERS  
REGULATORY CASE SPECIALIST

Enclosures



- 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

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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

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.

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

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.

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

**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

Date	Duration (Days)	Period	Total Outage MWh	Average Replacement Cost	Unit Incremental Cost	Change in Energy Costs Due to Outage
			<i>[Trade Secret Begins]</i>		<i>[Trade Secret Begins]</i>	<i>[Trade Secret Begins]</i>
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		
			<i>Trade Secret Ends]</i>		<i>Trade Secret Ends]</i>	<i>Trade Secret Ends]</i>

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

\* Based on all outages during October, 2013.

Source: Unit Outage Information, Monthly FCA Reports & AAA

**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

Date	Duration (Days)	Period	Total Outage MWh	Average Replacement Cost	Unit Incremental Cost	Change in Energy Costs Due to Outage
			<i>[Trade Secret Begins]</i>		<i>[Trade Secret Begins]</i>	<i>[Trade Secret Begins]</i>
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		\$5,495,068		
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 - 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		
			<i>Trade Secret Ends]</i>		<i>Trade Secret Ends]</i>	<i>Trade Secret Ends]</i>

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

\* Based on all outages during October, 2013.

Source: Unit Outage Information, Monthly FCA Reports & AAA

**PUBLIC DOCUMENT -  
 TRADE SECRET DATA EXCISED**

*Spreadsheet method used from November 2011 through October 2012.*

*GenTrader method used from November 2012 through October 2013.*

Date	Total Outage MWh	Average Replacement Cost	Unit Incremental Cost	Change in Energy Costs Due to Outage
	<b>[Trade Secret Begins</b>		<b>[Trade Secret Begins</b>	<b>[Trade Secret Begins</b>
11/19/2011		\$ 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		\$ 59,166		
	<b>Trade Secret Ends]</b>		<b>Trade Secret Ends]</b>	<b>Trade Secret Ends]</b>



**PUBLIC DOCUMENT -  
 TRADE SECRET DATA EXCISED**

*Spreadsheet method used from November 2011 through October 2012.*

*GenTrader method used from November 2012 through October 2013.*

Date	Total Outage MWh <i>[Trade Secret Begins]</i>	Average Replacement Cost	Unit Incremental Cost <i>[Trade Secret Begins]</i>	Change in Energy Costs Due to Outage <i>[Trade Secret Begins]</i>
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		
	<b>Trade Secret Ends]</b>		<b>Trade Secret Ends]</b>	<b>Trade Secret Ends]</b>

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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	Average Replacement Cost	Unit Incremental Cost	Change in Energy Costs Due to Outage
	<b>[Trade Secret Begins</b>		<b>[Trade Secret Begins</b>	<b>[Trade Secret Begins</b>
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		
	<b>Trade Secret Ends]</b>		<b>Trade Secret Ends]</b>	<b>Trade Secret Ends]</b>

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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 <i>[Trade Secret Begins</i>	Average Replacement Cost	Unit Incremental Cost <i>[Trade Secret Begins</i>	Change in Energy Costs Due to Outage <i>[Trade Secret Begins</i>
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		
	<i>Trade Secret Ends]</i>		<i>Trade Secret Ends]</i>	<i>Trade Secret Ends]</i>

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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	Average Replacement Cost	Unit Incremental Cost	Change in Energy Costs Due to Outage
	<b>[Trade Secret Begins</b>		<b>[Trade Secret Begins</b>	<b>[Trade Secret Begins</b>
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		
	<b>Trade Secret Ends]</b>		<b>Trade Secret Ends]</b>	<b>Trade Secret Ends]</b>

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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 <i>[Trade Secret Begins</i>	Average Replacement Cost	Unit Incremental Cost <i>[Trade Secret Begins</i>	Change in Energy Costs Due to Outage <i>[Trade Secret Begins</i>
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		
	<i>Trade Secret Ends]</i>		<i>Trade Secret Ends]</i>	<i>Trade Secret Ends]</i>

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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	Average Replacement Cost	Unit Incremental Cost	Change in Energy Costs Due to Outage
	<b>[Trade Secret Begins</b>		<b>[Trade Secret Begins</b>	<b>[Trade Secret Begins</b>
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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GenTrader method used from November 2012 through October 2013.*

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

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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	Average Replacement Cost	Unit Incremental Cost	Change in Energy Costs Due to Outage
	<b>[Trade Secret Begins</b>		<b>[Trade Secret Begins</b>	<b>[Trade Secret Begins</b>
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		
10/2/2012		\$ 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		
	<b>Trade Secret Ends]</b>		<b>Trade Secret Ends]</b>	<b>Trade Secret Ends]</b>



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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 <i>[Trade Secret Begins]</i>	Average Replacement Cost	Unit Incremental Cost <i>[Trade Secret Begins]</i>	Change in Energy Costs Due to Outage <i>[Trade Secret Begins]</i>
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		
	<b>Trade Secret Ends]</b>		<b>Trade Secret Ends]</b>	<b>Trade Secret Ends]</b>

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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	Average Replacement Cost	Unit Incremental Cost	Change in Energy Costs Due to Outage
	<b>[Trade Secret Begins</b>		<b>[Trade Secret Begins</b>	<b>[Trade Secret Begins</b>
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		
	<b>Trade Secret Ends]</b>		<b>Trade Secret Ends]</b>	<b>Trade Secret Ends]</b>

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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 <i>[Trade Secret Begins]</i>	Average Replacement Cost	Unit Incremental Cost <i>[Trade Secret Begins]</i>	Change in Energy Costs Due to Outage <i>[Trade Secret Begins]</i>
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		
1/27/2013		\$ 222,685		
1/28/2013		\$ 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		
	<b>Trade Secret Ends]</b>		<b>Trade Secret Ends]</b>	<b>Trade Secret Ends]</b>

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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	Average Replacement Cost	Unit Incremental Cost	Change in Energy Costs Due to Outage
	<b>[Trade Secret Begins</b>		<b>[Trade Secret Begins</b>	<b>[Trade Secret Begins</b>
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		
	<b>Trade Secret Ends]</b>		<b>Trade Secret Ends]</b>	<b>Trade Secret Ends]</b>

**PUBLIC DOCUMENT -  
 TRADE SECRET DATA EXCISED**

*Spreadsheet method used from November 2011 through October 2012.*

*GenTrader method used from November 2012 through October 2013.*

Date	Total Outage MWh <i>[Trade Secret Begins]</i>	Average Replacement Cost	Unit Incremental Cost <i>[Trade Secret Begins]</i>	Change in Energy Costs Due to Outage <i>[Trade Secret Begins]</i>
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		
	<b>Trade Secret Ends]</b>		<b>Trade Secret Ends]</b>	<b>Trade Secret Ends]</b>

**PUBLIC DOCUMENT -  
 TRADE SECRET DATA EXCISED**

*Spreadsheet method used from November 2011 through October 2012.*

*GenTrader method used from November 2012 through October 2013.*

Date	Total Outage MWh <i>[Trade Secret Begins</i>	Average Replacement Cost	Unit Incremental Cost <i>[Trade Secret Begins</i>	Change in Energy Costs Due to Outage <i>[Trade Secret Begins</i>
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		
	<b>Trade Secret Ends]</b>		<b>Trade Secret Ends]</b>	<b>Trade Secret Ends]</b>

**PUBLIC DOCUMENT -  
 TRADE SECRET DATA EXCISED**

*Spreadsheet method used from November 2011 through October 2012.*

*GenTrader method used from November 2012 through October 2013.*

Date	Total Outage MWh	Average Replacement Cost	Unit Incremental Cost	Change in Energy Costs Due to Outage
	<b>[Trade Secret Begins</b>		<b>[Trade Secret Begins</b>	<b>[Trade Secret Begins</b>
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		
7/18/2013		\$ 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		\$ 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		
8/23/2013		\$ 327,028		
8/24/2013		\$ 253,507		
	<b>Trade Secret Ends]</b>		<b>Trade Secret Ends]</b>	<b>Trade Secret Ends]</b>

**PUBLIC DOCUMENT -  
 TRADE SECRET DATA EXCISED**

*Spreadsheet method used from November 2011 through October 2012.*

*GenTrader method used from November 2012 through October 2013.*

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



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

**PUBLIC DOCUMENT -  
 TRADE SECRET DATA EXCISED**

*Spreadsheet method used from November 2011 through October 2012.*

*GenTrader method used from November 2012 through October 2013.*

Date	Total Outage MWh	Average Replacement Cost	Unit Incremental Cost	Change in Energy Costs Due to Outage
	<b>[Trade Secret Begins</b>		<b>[Trade Secret Begins</b>	<b>[Trade Secret Begins</b>
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		
	<b>Trade Secret Ends]</b>		<b>Trade Secret Ends]</b>	<b>Trade Secret Ends]</b>
Entire Event	7,139,949	\$ 201,777,929	\$ 141,291,390	\$ 60,486,539

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

**PUBLIC DOCUMENT -  
 TRADE SECRET DATA EXCISED**

*Spreadsheet method used from November 2011 through October 2012.*

*GenTrader method used from November 2012 through October 2013.*

Month	Year	Total Outage MWh	Average Replacement Cost	Unit Incremental Cost	Change in Energy Costs Due to Outage
		<b>[Trade Secret Begins</b>		<b>[Trade Secret Begins</b>	<b>[Trade Secret Begins</b>
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		
		<b>Trade Secret Ends]</b>		<b>Trade Secret Ends]</b>	<b>Trade Secret Ends]</b>
Entire Event		7,139,949	\$ 201,777,929	\$ 141,291,390	\$ 60,486,539

- 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. 2

Requestor: James Canaday

Date Received: February 7, 2014

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Question:

Subject: Sherco 3 Fuel Replacement Costs

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

The referenced report states:

Historically, hour by hour incremental outage costs were reported as zero in cases where our costs to run the specific unit would have exceed these LMP prices during these periods. In our August 26, 2013 Reply Comments in Docket No. E002/AA-12-757, we described a change in the calculation methodology for estimating replacement power resulting from an outage. We now recognize the hourly *cost credits* in these instances to calculate the *true* replacement power costs. While the overall dollar impact in energy cost due to the outage in a month may be negative (i.e. a benefit), for the purpose of this report we report any negative cost change as zero dollar. (Emphasis added.)

- A. Please identify the “true” **total** amount of fuel replacement costs for the entire time that Sherco 3 was out-of-service including all cost credits of the type referenced above.
- B. **For each month (or partial month) that Sherco 3 was out-of service**, please identify the “true” amount of fuel replacement costs. The sum of the “true” monthly fuel replacement costs should equal the “true” **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 “true” amount of fuel replacement costs. The sum of the “true” daily fuel replacement costs should equal the “true” **monthly** amount of fuel replacement costs identified in Part B.

Response:

Please see our response to Information Request No. OAG-1.

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Preparer: Nick Detmer  
Title: Manager, Commercial Operations Projects and Compliance  
Department: Power Operations  
Telephone: (303) 571-7030  
Date: April 28, 2014