AMENDED COMPLAINT

Northern States Power Company (NSP) and Southern Minnesota Municipal Power Agency (SMMPA), joint owners of Unit 3 at the Sherburne County Generating Station; and AEGIS Insurance Services, Ltd., Energy Insurance Mutual Limited, ACE American Insurance Company, American Alternative Insurance Corporation, AEGIS London Group, and other London and Lloyd’s Market Insurers, all insurers of the Sherburne County Generating Station (collectively the Interested Insurers) complain against General Electric Company, General Electric International, Inc., GE Energy Services, Inc., and GE Energy Control Solutions, Inc. as follows:
NATURE OF THE ACTION

1. This lawsuit involves the Low Pressure (LP) turbine of a G3 tandem compound steam turbine (Unit 3) that catastrophically failed on November 19, 2011, at the Sherburne County Generating Station (Sherco) in Becker, Minnesota. General Electric Company and General Electric-related entities designed, marketed, manufactured, and sold the LP turbine and at various times serviced the LP turbine.

2. The LP turbine’s catastrophic failure caused substantial damage to Unit 3’s other turbines, the generator, the exciter, and other property at Sherco.

3. Plaintiffs’ investigations concluded that defendants’ acts and omissions, as detailed in this Amended Complaint, caused the LP turbine to fail catastrophically.

4. Plaintiffs seek damages arising from and proximately caused by defendants’ grossly negligent, willful, wanton, reckless, and fraudulent conduct, malpractice and other acts and omissions.

PARTIES

5. NSP is a Minnesota corporation with a principal place of business in Minneapolis, Minnesota.

6. SMMPA is a Minn. Stat. Ch. 453 Minnesota municipal power agency that generates and supplies electricity and power to supply eighteen non-profit, municipally-owned member utilities located throughout Minnesota. SMMPA’s principal place of business is Rochester, Minnesota.
7. An ownership and operating agreement between NSP and SMMPA designates NSP as project manager of Unit 3 and defines the parties’ respective Unit 3 rights and obligations.

8. The following Interested Insurers are also plaintiffs in this action by reason of providing property insurance for the benefit of the Sherco facility, including Unit 3. The Interested Insurers’ respective policies insured the Sherco facility against risk of loss, and the Interested Insurers are subrogated to the interests of their insureds by having made payments as required by their respective contracts of insurance as follows:

   a. AEGIS Insurance Services, Ltd. (AEGIS, Ltd.), a foreign corporation domiciled in Bermuda, provided insurance coverage for Sherco under policy no. L0969A1A11.

      (1) As a result of the November 19, 2011 failure, AEGIS, Ltd. has made payments to restore damaged property.

      (2) AEGIS, Ltd. is subrogated to the extent of payments made to its insureds.

   b. Energy Insurance Mutual Limited (EIM), a foreign corporation domiciled in Bridgetown, Barbados with a principal place of business in Tampa, Florida, provided insurance coverage for Sherco under policy no. 310565-11GP.

      (1) As a result of the November 19, 2011 failure, EIM made payments to restore damaged property.
(2) EIM is subrogated to the extent of payments made to its insureds.

c. ACE American Insurance Company, a Pennsylvania corporation with a principal place of business in Philadelphia, Pennsylvania, provided insurance coverage for Sherco under policy no. EUTN05105602.

(1) As a result of the November 19, 2011 failure, ACE made payments to restore damaged property.

(2) ACE is subrogated to the extent of payments made to its insureds.

d. American Alternative Insurance Corporation (AAIC), a Delaware corporation with principal place of business in New Jersey, provided insurance coverage for Sherco under policy no. 58A2PP000001302.

(1) As a result of the November 19, 2011 failure, AAIC made payments to restore damaged property.

(2) AAIC is subrogated to the extent of payments made to its insureds.

(1) As a result of the November 19, 2011 failure, the subscribing London and Lloyd's Market Insurers made payments to restore damaged property.

(2) The subscribing London and Lloyd's Market Insurers are subrogated to the extent of payments made to their insureds.


11. GE Energy Services, Inc. is a Delaware corporation with a principal place of business in Atlanta, Georgia.

12. GE Energy Control Solutions, Inc. is a Delaware corporation with a principal place of business in Longmont, Colorado.

13. The General Electric corporate entities named in this lawsuit at various times provided machinery and equipment for the Sherco facility, including Unit 3, and worked in concert to provide technical information for, monitoring of, and service to Unit 3.

**JURISDICTION AND VENUE**

14. This Court has personal jurisdiction over defendants because defendants conducted business in Minnesota, specifically at the Sherco facility in Sherburne County.

15. This Court has subject matter jurisdiction over this action because this lawsuit involves tort, gross negligence, willful and wanton negligence, malpractice, and
intentional wrongdoing, as well as fraudulent concealment that inflicted damages of more than $50,000.

16. Venue is proper because a substantial portion of the events, acts, and omissions that give rise to the lawsuit took place in Sherburne County and because defendants conducted business with NSP and SMMPA in Sherburne County.

FACTUAL ALLEGATIONS

1. The purchase and installation of Unit 3

17. The Sherco facility is one of the nation’s largest electric generating plants—in terms of square feet, steam production, and power generation. The three Sherco units generate enough energy to power about two million households.

18. NSP built the Sherco facility in the 1970s to meet the growing demand for electricity and to reduce energy supply reliance on older, less efficient plants. NSP constructed the plant, originally consisting of two electrical generating units—each with production capability of 750 megawatts—on a 4,500-acre site.

19. In the late 1970s, NSP determined that Sherco generating capacity should be increased. Accordingly, NSP contracted with General Electric Company to design and build an additional generating unit. General Electric Company thereafter manufactured and sold the equipment and machinery that became Unit 3. When installed that equipment and machinery would enable NSP to increase the electric energy generating capacity at Sherco.

20. The Unit 3 equipment and machinery that the General Electric Company sold to NSP included the LP turbine that failed.
21. In 1983, SMMPA, United Minnesota Municipal Power Agency (UMMPA), and NSP contracted to be joint owners of Unit 3. In 1984 UMMPA assigned all Unit 3 rights, title, and interest to SMMPA, and SMMPA assumed all of UMMPA’s Unit 3 obligations. As a result SMMPA ultimately took title to 41% of Unit 3, and to serve member cities SMMPA is entitled to take that percentage of the electric power and energy generated by Unit 3. By agreement between SMMPA and NSP, even though SMMPA owns 41% of Unit 3 and is entitled to take 41% of the power and energy produced from Unit 3, NSP operates Unit 3, as the project manager, for both owners.

22. In 1984, by a separate contract, a non-GE entity assembled and installed the equipment and machinery that became Unit 3. The purchase and installation of Unit 3 equipment and machinery cost NSP and SMMPA approximately $1 billion, which at the time made the project the largest of its kind in Minnesota.

23. As built, Unit 3 includes a high-pressure (HP) turbine, a double flow intermediate pressure (IP) turbine, two double-flow low-pressure (LP) turbines, and a two-pole 60 cycle generator.

II. Wilson Line failures

24. Steam rotates the separate Unit 3 turbines. After leaving a recirculating drum in the boiler, superheated steam passes through the HP turbine. Expanding steam acquires high velocity and exerts force on the turbine blades (called “buckets” in GE documents).

25. After leaving the HP turbine, the steam is reheated and thereafter passes through the IP turbine and then through the two LP turbines. From the LP turbines,
steam enters the condensers to be condensed back into water, which is then re-circulated through the boiler.

26. In the LP turbines, the steam passes through a series of blade rows, designated L-5 through L-0. The designation “L-,” or “Last-Minus” denotes the location of the blade row in relation to the exhaust end of the rotor.

27. While expanding through the LP turbines, the steam crosses the saturation line, where the water transitions from dry (gas) to wet (liquid). The region in which steam begins to condense is called the phase transition zone (PTZ) or the Wilson Line. Depending upon turbine configuration, this zone can be at or around the L-1 stage.

28. When steam becomes wet, moisture penetrates the areas where turbine blades are inserted into the rotor wheel (called the “dovetail” in GE documents). This condensation concentrates normal steam contaminants, which in combination with operating stress and susceptible rotor wheel materials, can cause stress corrosion cracking (SCC). If undetected and unabated, SCC will lead to catastrophic rotor wheel failure.

29. The frequency of SCC failures has multiplied as turbine manufacturer designs have incorporated larger and heavier blades and increased blade loading; additional mass and loading dramatically intensifies stress on the rotor wheels at the dovetails.

30. The General Electric Company and other manufacturers have been aware of the problem of SCC in LP turbines since at least the 1960s. But information pertaining to SCC has been carefully guarded and controlled by General Electric Company and General Electric-related entities, and data relating to such failures have neither been
completely nor readily disseminated to NSP for itself and as Unit 3 project manager on SMMPA’s behalf or made publicly available.

III. The history of fraudulent concealment

31. Before 2011, General Electric Company and General Electric-related entities possessed a specialized knowledge about the risks of SCC-related failure associated with the finger dovetails in the LP turbine, and had the opportunity to warn NSP for itself and as Unit 3 project manager on SMMPA’s behalf about the need for periodic and proper inspection of the LP turbine rotor wheels. Because of the risks associated with SCC, General Electric Company developed an improved LP turbine rotor wheel design. Despite such knowledge and developments General Electric Company never properly warned NSP for itself and as project manager on SMMPA’s behalf about the threat of SCC or the proper means to detect SCC, even though General Electric Company and its affiliates had numerous opportunities to do so while servicing Unit 3 or by means of Technical Information Letters (TILs) provided to customers. Those TILs routinely advised customers of known risks and precautionary measures to mitigate such risks.

A. Servicing Unit 3

32. Throughout the life of Unit 3, various General Electric related entities performed maintenance and services on Unit 3 and the Unit 3 LP turbines, including LP turbine inspections. These undertakings took place during scheduled Unit 3 outages.

33. All work was performed under and governed by various individual contracts, all of which were subject to a broader General Conditions Agreement between
NSP and the General Electric Company. The work specified by these individual contracts included:

a. comprehensive inspection of the LP and other turbines in 1999 conducted by the General Electric Company, GE Energy Services, and General Electric International, Inc.;

b. participation in inspections and repairs of Unit #3 in 2002, 2005 and 2008 by the General Electric Company;

c. evaluation of Unit #3 performance in 2009 by General Electric International, Inc.

d. repairs of Unit #3 in 2011 by GE Control Solutions, Inc. and GE International, Inc.

34. Before these and other outages, NSP employees and individuals who identified themselves as representatives of “GE” would conduct pre-outage meetings, at which time the scope of work for the project would be determined. The information provided by these “GE” representatives during pre-outage meetings, as well as by the Technical Information Letters issued by General Electric Company and General Electric-related entities, significantly influenced the formulation of outage-scopes-of-work, even when a General Electric-related entity did not ultimately perform the jobs.

35. The General Electric related entities meeting and communicating with NSP and performing work on Unit 3 possessed special knowledge about the risks of SCC-related failure and had the opportunity to warn NSP for itself and as Unit 3 project manager on SMMPA’s behalf about the need for periodic and proper inspection of the LP
turbine rotor wheels (including magnetic particle testing, which General Electric Company describes as the "most reliable test" to detect internal SCC). No person or entity affiliated with General Electric ever gave such a warning.

B. General Electric's 494 Patent

36. While General Electric entities were servicing and providing technical information about Unit 3, General Electric Company was fully aware of design problems that caused dovetail integrity on the LP turbine rotor wheels, like the one at Unit 3, to be compromised by SCC. As a result General Electric Company developed a new design to make LP turbine rotor wheels less susceptible to SCC. In 2005, the General Electric Company sought to patent this improved design.

37. On June 17, 2008, the U.S. Patent office issued U.S. Patent No. 7,387,494 (the '494 Patent). The patent acknowledges prior rotor wheel design defects, explaining that "finger dovetails operate in an environment that is conducive to stress corrosion cracking (SCC)" and that rotor wheels were particularly susceptible "because the materials used for the rotors are much less resistant to SCC than are the materials used for the buckets."

38. The '494 Patent changes the dovetail system design as follows: "[t]he fillets on the wheel fingers and slot bottoms have a blend of different radii with the larger radii outward of the smaller radii to reduce stress concentrations and to avoid stress corrosion cracking." The changed design redistributes and reduces the inherent stress on the LP rotor wheels at the dovetails.
39. Despite possessing special knowledge about the new dovetail design and the reasons why the design needed to be modified, no employee of General Electric Company or any General Electric-related entity providing equipment and services at Unit 3 ever informed NSP for itself and as Unit 3 project manager on SMMPA’s behalf about the design change, and neither General Electric Company nor any General Electric-related entity ever offered the revised design as a replacement option for the LP turbine rotor wheel that catastrophically failed. Despite securing a new rotor wheel patent in 2008, General Electric Company and General Electric-related entities also failed to advise NSP for itself and as project manager on SMMPA’s behalf about the design defects and potential hazards associated with the LP rotor wheel.

40. Ironically, the modified dovetail design for which General Electric Company received a patent in 2008 is the exact method General Electric Company employed to make the repairs to the damaged Unit 3 LP turbine L-1 rotor wheels in 2012-13.

C. Technical information letters

41. Each TIL issued by General Electric Company or a General Electric-related entity bears a designated number and addresses issues that may pertain to a particular unit or General Electric’s overall turbine fleet. General Electric Company determines which individual TIL is applicable to the various turbine models. General Electric Company then provides each customer with an online database of all TILs applicable to that customer’s turbines.
42. On October 2, 2013, two years after the Unit 3 catastrophically failed, the General Electric Company issued TIL 1886. TIL 1886 warns operators of recirculating boilers (such as Unit 3) about the same SCC-related concerns that General Electric Company and General Electric Services had restricted to “once through” boilers in TIL 1277-2, fourteen years earlier. TIL 1277-2 did not become part of Unit 3 data base because Unit 3 does not include a “once through” boiler.

43. TIL 1886 advises that SCC has been detected in LP turbine rotor wheels “over the past several years,” and that General Electric Company was aware of “over 60” incidents of similar SCC problems experienced by various customer’s LP turbines.

44. TIL 1886 recommends inspection of all LP rotor wheels “at the next scheduled exposure of the line pressure rotor” and acknowledges that failure to perform the recommended periodic and proper inspection of the LP turbine rotor wheels (which would include magnetic particle testing) could “result in substantial damage to adjacent equipment and in some circumstances, possibly serious injury to any nearby personnel.”

45. Despite General Electric Company and General Electric-related entities’ extensive knowledge of “over 60” SCC incidents in LP turbine rotor wheels, and despite the numerous opportunities to disclose the dangerously defective design of existing LP turbine rotor wheels before November 29, 2011, General Electric Company and General Electric-related entities failed to disclose such defects or the need to conduct proper inspection to NSP for itself and as project manager on SMMPA’s behalf.

46. In fact, an earlier TIL issued by the General Electric Company, TIL No. 1121-3AR1 issued to recirculating boiler operators, recommended against inspections to
detect SCC in rotor dovetails, which involve the difficult, expensive, and time consuming task of removing the blades for inspection, “unless abnormal events or operational anomalies occur.” Unit 3 never experienced an abnormal event or operational anomaly, as specified by General Electric Company’s TILs, before the November 19, 2011 catastrophic failure.

IV. Catastrophic failure of Unit 3

47. During the 2011 outage, NSP retained contractors to upgrade the Unit 3 HP and IP turbines.

48. NSP was led to believe that the LP turbines were not in need of significant servicing due to (1) the technical information provided by General Electric Company in TIL 1121-3AR1 and other TILs; (2) the recommendations provided by “GE” representatives during pre-outage meetings; and (3) the failure by all defendants to provide adequate warning about SCC risks and the need for periodic and proper inspections to detect SCC in the LP turbine rotor wheels. The scope-of-work to be performed during the 2011 outage, therefore, only called for visual inspection of the LP rotor.

49. After the contractors completed work on the HP and IP turbines and the exciter and uprated the generator, NSP re-fired Unit 3 for preliminary testing. During the first November 17, 2011 test, the unit attained running speed of 3,600 RPM. The operators noted no significant problems.
50. The next day, Unit 3 again rolled up to speed. Thereafter, NSP synchronized and loaded the unit to 240 MW for overnight heat soaking. Again, the operators detected no significant problems.

51. On Saturday, November 19, 2011, NSP took the unit off line for routine overspeed checking. Following the standard industry protocol the operators gradually accelerated the unit up to 3900 RPM.

52. As the unit operated in an overspeed mode, an electrician on the turbine floor heard a loud bang in the LP-B section. Within seconds, the massive unit shook violently, debris flew through the air, and flames rose from the unit. Thereafter, Unit 3 ground to a halt.

53. The massiveness of the failure and seriousness of the incident are difficult to imagine, much less describe. The machinery and equipment that make up Unit 3 rumbled and shook, spewing material throughout the turbine area and into the control room. Fires raged, and but for the heroics of Unit 3 operators the hydrogen used in the Unit might have caused an even larger explosion. More critically, NSP and contractor workers in the vicinity of Unit 3 could have sustained serious personal injury or been killed.

54. This destruction and calamity could have been prevented if General Electric Company, the "GE" representatives attending pre-outage meetings, or any of the General Electric-related entities providing technical information to and performing service on Unit 3 had fully disclosed to NSP for itself and as Unit 3 project manager on SMMPA's behalf what General Electric and General Electric-related entities and personnel had
known for decades about SCC, the need for periodic and proper magnetic particle testing of the rotor wheel dovetails, and the potential for LP turbine catastrophic failure.

V. Damage to the Sherco facility

55. The catastrophic failure and resulting fire caused damage to the following property and equipment:

a. Unit 3 turbine and generator controls, instrumentation, and auxiliary systems;

b. the Unit 3 HP turbine;

c. the Unit 3 IP turbine;

d. the Unit 3 LP turbines;

e. the Unit 3 generator;

f. the Unit 3 exciter;

g. the Unit 3 condensers;

h. mechanical and electrical equipment, as well as ductwork and control wiring;

i. various portions of the roof;

j. the Unit 3 control room;

k. various tools and equipment located in the vicinity of Unit 3; and

l. smoke and soot throughout the Sherco facility.

56. The catastrophic failure and resulting damage took Unit 3 out of operation for nearly two years. As a result: (i) to serve customers NSP and SMMPA were forced to purchase power and energy on the open wholesale electricity market at additional
expense; (ii) NSP and SMMPA were forced to forego revenues from the sale of energy that would have been produced by Unit 3 into the same market; (iii) NSP and SMMPA have incurred and in the future may continue to incur the cost of acquiring replacement capacity to ensure that sufficient electrical power and energy is available to meet peak demand loads; (iv) likewise, in the future, NSP and SMMPA may be assigned a diminished capacity credit compared to Unit 3’s historical average, which could result in higher operational costs; and (v) NSP and SMMPA may incur additional costs necessary to manage changes in coal supply requirements, including expenses associated with idling and storing unit train sets.

57. The repair of Unit 3 and the Sherco facility, substantially funded by the Interested Insurers, and the costs incurred by NSP and SMMPA as a result of Unit 3 being out of operation, greatly exceed $50,000.

VI. **Investigation of the failure**

58. After the catastrophic failure, plaintiffs retained a number of consultants to investigate causation.

59. A metallurgical evaluation determined that SCC on the LP turbine rotor wheel caused the catastrophic failure. Specifically, testing revealed that SCC propagated on the L-1 rotor wheel where the dovetail fingers changed thickness and from the holes where locking pins attach the blades to the rotor wheel.

60. Careful scrutiny revealed that under normal operating conditions the design of the rotor wheel blade attachments was technically flawed – i.e. destined to fail.
61. The retained consultants also observed significant SCC not only at the L-1 stage rotor wheel that failed, but also in the three wheels that had not yet failed. Hence, if the LP-B, L-1 rotor wheel had not failed, another rotor wheel would inevitably have failed.

62. If General Electric Company, the “GE” representatives, or any of the General Electric-related entities performing service on or providing technical information regarding Unit 3 had recommended or performed proper and periodic inspections, NSP would have discovered the SCC before the rotor wheel failed, and such a discovery would have resulted in maintenance that would have prevented the catastrophic Unit 3 failure.

63. In sum, the investigation concluded that two factors caused the LP turbine to fail: (1) improper design and manufacture of the rotor wheel; and (2) the failure by General Electric and the General Electric-related entities to provide technical information for and service to Unit 3 that would warn NSP for itself and as Unit 3 project manager on SMMPA’s behalf about SCC risks and the potential for catastrophic unit failure, that would provide adequate instruction about how to detect SCC, or that would inform NSP for itself and as project manager on SMMPA’s behalf about the availability of an alternative design to mitigate those risks.

64. Until the LP turbine failed and the cause of that failure was investigated, NSP and SMMPA did not know and without advice from General Electric or a General Electric-related entity providing technical information for and service to Unit 3 could not have known about the dangerously defective condition of the LP turbine rotor wheels or
of the periodic and proper inspection of the LP turbine rotor wheels (which would include magnetic particle testing) needed to detect SCC conditions.

CAUSES OF ACTION

Count I: Fraudulent concealment

65. Before the G3 equipment and machinery that would become Unit 3 were designed and manufactured, General Electric Company knew about the risks associated with SCC in G3 type LP turbines. As time progressed, General Electric Company learned even more about systemic SCC problems in General Electric LP turbines. This knowledge would certainly have been shared with the General Electric related entities that provide technical information to and services for operators of G3 type turbines and similar equipment (as evidenced in TIL 1277-2).

66. Despite that special knowledge, during the sale and thereafter General Electric Company, the “GE” representatives at pre-outage meetings, and the General Electric-related entities performing service on Unit 3 provided incomplete information and withheld information about SCC problems from NSP for itself and as Unit 3 project manager on SMMPA’s behalf.

67. Specifically, none of the defendants ever warned NSP for itself and as Unit 3 project manager on SMMPA’s behalf that Wilson-Line SCC plagued G3 type LP turbines, even as instances of such problems mounted. General Electric Company went so far as to reassure NSP for itself and as Unit 3 project manager on SMMPA’s behalf that proper LP rotor wheel inspections were not necessary “unless abnormal events or
operational anomalies occur.” This recommendation remained in effect for almost two years after the Unit 3 catastrophic failure.

68. Despite the continued recommendation to conduct magnetic particle testing only upon the occurrence of abnormal operations or “anomalies,” information available to General Electric Company, the “GE” representatives at pre-outage meetings, and the General Electric-related entities performing service on Unit 3 (but not to NSP for itself and as Unit 3 project manager on SMMPA’s behalf) made the defendants aware that the periodic and proper inspections of the LP rotor wheels, later recommended in TIL 1886, were critical to prevent catastrophic unit failure and worker safety hazards.

69. General Electric was aware of dozens of similar SCC problems that had occurred over several years, many of which certainly occurred before the Unit 3 LP-B rotor wheel failed in November 2011. Nevertheless, General Electric Company intentionally withheld any information related to such failures, intentionally failed to warn about SCC-related risks in LP turbines powered by recirculating boilers, and intentionally failed to inform NSP for itself and as Unit 3 project manager on SMMPA’s behalf about how to properly and timely detect SCC on LP turbine rotor wheels.

70. To make matters worse, General Electric Company and General Electric-related entities or personnel withheld information about the new patented rotor wheel dovetail design, which recognized prior design deficiencies and developed an alternative design that was less susceptible to SCC.

71. Despite being involved in planned Sherco outages, General Electric Company, the “GE” representatives at pre-outage meetings, and the General Electric-
related entities performing service on Unit 3 withheld information relating to the
defective design of the existing rotor wheels and the potential for catastrophic Unit 3
failure. Despite special knowledge about SCC problems in its LP-turbine the General
Electric and General Electric-related entities and personnel kept silent about the risk of
failure and the means for detecting SCC while attending pre-outage meetings and
submitting bids for work to be performed during Unit 3 outages.

72. Because the General Electric Company, the “GE” representatives at pre-
outage meetings, and the General Electric-related entities performing service on Unit 3
withheld information about the need for periodic and proper rotor wheel testing and the
potential for catastrophic Unit 3 failure and, in fact, advised NSP for itself and as Unit 3
project manager on SMMPA’s behalf (expressly and through conduct) that such testing
was unnecessary, NSP with reasonable diligence could not have discovered the design
and manufacturing defects before the failure and ensuing investigation.

73. The General Electric Company, the “GE” representatives at pre-outage
meetings, and the General Electric-related entities performing service on Unit 3 knew
that NSP for itself and as Unit 3 operator on SMMPA’s behalf relied upon General
Electric-related entities technical information and expertise to develop maintenance and
inspection plans for the LP turbines. Defendants’ intentional withholding of that
information rendered NSP unable to identify and detect the SCC damage that was
compromising Unit 3 rotor wheel integrity.
74. Defendants’ intentional, fraudulent misrepresentations, incomplete disclosure, and withholding of information directly and proximately caused damages plaintiffs in an amount well in excess of $50,000.

**Count II: Willful and wanton negligence**

75. A willful and wanton negligence cause of action allows for the recovery of damages for harm to a plaintiff in a position of peril when a defendant knew about the peril and had sufficient time and ability to avert the harm but because of a lack of due care failed to do so. In other words, “if a person fails to exercise ordinary care after (1) the peril was present, and (2) the peril was known to the person, his ordinary negligence rises to a higher level of negligence—*willful and wanton negligence.*” *Gage v. HSM Elec. Prot. Servs., Inc.*, 655 F.3d 821, 826 (8th Cir. 2011) (emphasis added).

76. General Electric Company knew that SCC had caused steam turbines similar to Unit 3 to fail and defective LP turbine rotor wheels similar to Unit 3’s to be replaced even before the installation of the Unit 3 LP turbines. Neither NSP, as a turbine purchaser, owner, and operator, nor SMMPA, as a turbine owner, was aware of the systemic SCC problems.

77. As time passed, General Electric Company acquired even more special knowledge about rotor wheel SCC in LP turbines similar to the ones at Unit 3. This knowledge would certainly have been shared with General Electric-related entities providing technical information and services to operators of G3 type turbines and similar equipment. In fact, General Electric Company and GE Energy Services warned the owners of turbines operating with “once-through” boilers about the need to periodically
inspect LP turbines for SCC but failed to warn NSP for itself and as Unit 3 project manager on SMMPA’s behalf about the same SCC risks associated with the LP turbine rotor wheels in Unit 3.

78. In 2005, General Electric Company applied to patent a new rotor wheel design. The GE patent application acknowledged the inadequacy of the rotor wheel design in existing LP turbines, like Unit 3.

79. Defendants’ relationship with NSP for itself and as Unit 3 project manager on SMMPA’s behalf, and defendants’ special knowledge, obligated them to inform NSP for itself and as Unit 3 project manager on SMMPA’s behalf about SCC risks in the LP turbine.

80. General Electric Company willfully and wantonly breached an ongoing duty of care by failing to warn NSP for itself and as Unit 3 project manager on SMMPA’s behalf about the rotor wheel design changes and all named defendants breached an ongoing duty of care by failing to warn NSP for itself and as Unit 3 project manager on SMMPA’s behalf about the dangers associated with the former design—even as defendants participated in pre-outage meetings and bid on work to be conducted during Unit 3 outages, and in some cases performed such work.

81. In fact, by the time of the 2011 planned outage, General Electric Company had learned about numerous instances of LP turbine rotor wheel SCC damage and had certainly shared that information with General Electric-related entities providing technical information to and performing services for G3 type turbines and similar machinery and equipment. Nevertheless, at pre-outage meetings and during the bidding
process for the 2011 upgrade, “GE” representatives in attendance (including representatives of General Electric Company, GE Control Solutions, Inc. and GE International, Inc.) provided incomplete facts and failed to warn NSP for itself and as Unit 3 project manager on SMMPA’s behalf about risks of which they were specifically and uniquely aware or about a more suitable and robust alternative rotor wheel dovetail design that was available.

82. In short, defendants knew NSP and SMMPA were in a position of peril and faced the potential for catastrophic unit failure as well as the threat of death or serious injury to workers but willfully and wantonly failed to avert the harm that the owners of Unit 3 faced and ultimately suffered. This willful and wanton negligence caused damages to plaintiffs well in excess of $50,000.

Count III: Gross negligence

83. An aggravated act or omission breaching a legal duty, as distinguished from the mere failure to exercise ordinary care, constitutes gross negligence. In other words, a defendant is liable in gross negligence for egregiously breaching a duty that results in damage to the plaintiff.

84. The totality of the evidence presented, rather than individual instances of conduct, determines gross negligence.

85. General Electric Company assumed a duty to design and to build a LP turbine free of defects and to ensure that any existing defects are corrected, and all defendants performing service for, providing technical assistance to and issuing technical
information on Unit 3 assumed a duty to warn NSP for itself and as Unit 3 project manager on SMMPA’s behalf about potential and foreseeable risks.

86. Defendants breached those duties as follows:

a. General Electric Company knew about LP turbine SCC damage when Unit 3 was installed;

b. General Electric Company designed and manufactured rotor wheels that were destined to fail under normal operating conditions;

c. Despite special knowledge, all defendants failed to provide necessary warnings to NSP for itself and as Unit 3 project manager on SMMPA’s behalf about inherent SCC risks;

d. Despite attending pre-outage meetings, bidding on outage work, and otherwise providing ongoing technical information relating to the maintenance and operation of Unit 3, defendants never warned NSP for itself and as Unit 3 project manager on SMMPA’s behalf about risks inherent in the existing design and the need for proper and periodic rotor wheel inspections and maintenance;

e. Prior to the incident, General Electric Company could have replaced or recommended replacement of the rotor wheel that failed; and

f. Defendants failed to advise NSP for itself and as Unit 3 project manager on SMMPA’s behalf that a replacement rotor wheel was available or that the existing rotor wheels were prone to SCC damage.
87. These facts, individually and in the aggregate, constitute gross negligence that directly and proximately caused damages to plaintiffs in an amount well in excess of $50,000.

**Count IV: Professional negligence**

88. Under various contracts, General Electric Company and General Electric-related entities performed engineering services on Unit 3 including LP turbine inspections. Minn. Stat. § 544.42 designates engineers as “professionals.”

89. Professionals who render services must exercise such care, skill, and diligence as members of that profession ordinarily practice under like circumstances.

90. On numerous instances, defendants deviated from the applicable professional standard of care, including, but not limited to:

   a. General Electric Company designed and manufactured a turbine that was unduly susceptible to SCC;

   b. Defendants, while attending pre-outage meetings, bidding on outage work, and providing technical information and other engineering services, failed to provide sufficient warnings about SCC risks around the Wilson Line;

   c. Defendants, while attending pre-outage meetings, bidding on outage work, and providing technical information and other engineering services failed to conduct or recommend conducting periodic and proper testing of the LP Turbine rotor wheels during the life of Unit 3; and
d. After 2005, defendants failed to replace or recommend replacing the rotor wheels even though the replacement rotor wheels were available, and failed to advise NSP for itself and as Unit 3 project manager on SMMPA’s behalf that General Electric Company had developed a new rotor wheel design because designs of the type employed in the Unit 3 LP turbines was prone to SCC damage.

91. These facts, individually and in the aggregate, constitute a failure to exercise the reasonable care, skill and diligence reasonable expected of a turbine engineer. This professional malpractice directly and proximately caused damage to plaintiffs in an amount well in excess of $50,000.

**Count V: Post-sale failure to warn**

92. General Electric Company continues to promote, sell, and service turbines. Besides that, defendants attempted to provide customers continuing surveillance of the G3 type turbines and based upon data derived from those surveillances, defendants developed technical information and recommendations. Defendants had the opportunity to disseminate this information and to make recommendations based upon the surveillance information through TILs and through their attendance in pre-outage meetings.

93. Defendants breached an ongoing duty to warn as follows:

a. Since the early 1970s, General Electric Company knew about turbine damage, and more specifically knew about the area around the Wilson Line being vulnerable to SCC. General Electric
Company's awareness of LP turbine rotor wheel SCC problems increased throughout the 1980s, 1990s, and 2000s, as its LP turbine rotor wheels more frequently experienced SCC. This knowledge would certainly have been shared with General Electric-related entities providing technical information and services to operators of G3 type turbines and similar equipment (as evidenced in TIL 1277-2). If this special knowledge had been shared with NSP and SMMPA, proper turbine inspection and maintenance could have prevented the substantial property damage caused by SCC in the LP turbine;

b. Defendants failed to advise NSP for itself and as Unit 3 project manager on SMMPA's behalf during any outage of the potential for failure in the LP turbine rotor wheel around the Wilson Line or of the steps that could be taken to detect SCC damage and to prevent an LP turbine failure; and

c. General Electric Company's '494 patent acknowledged LP rotor wheel design deficiencies, but all of the defendants failed to adequately warn NSP for itself and as Unit 3 project manager on SMMPA's behalf either about the availability of a suitable replacement or of the potential for catastrophic failure. In fact, defendants apparently deliberately withheld such information.
94. By failing to adequately warn NSP or SMMPA about the ongoing risks—especially as defendants learned more about SCC rotor wheel problems around the Wilson Line—defendants breached the ongoing duty to warn.

95. This intentional breach of the duty to warn directly and proximately caused damages to plaintiffs in an amount well in excess of $50,000.

**PRAYER FOR RELIEF**

WHEREFORE, plaintiffs ask for the following relief:

1. A judgment in an amount well in excess of $50,000, plus interest; and

2. Costs and disbursements, including costs of investigation and reasonable attorney’s fees.

January 27, 2014

BRIGGS AND MORGAN

By

Timothy R. Thornton (MN#109630)
Kevin M. Decker (MN#314341)
2200 IDS Center
80 South Eighth Street
Minneapolis, MN 55402
612-977-8400
612-977-8650 (fax)

*Attorneys for Northern States Power Company*

LINDQUIST & VENNUM

By

William E. Flynn (MN#0030600)
Kurtis A. Greenley (MN#0037527)
Meghan M. Elliott (MN#0318759)

29
4200 IDS Center
80 South Eighth Street
Minneapolis, MN 55402
612-371-3211
612-371-3207 (fax)

Attorneys for Southern Minnesota Municipal Power Agency

GROTEFELD HOFFMANN SCHLEITER
GORDON & OCHOA

By
David S. Evinger (MN#027935)
Terrence R. Jay (MN#0128521)
Daniel W. Berglund (MN#0329010)
150 South Fifth Street, Ste 3650
Minneapolis, MN 55402
612-564-4895
612-326-9996 (fax)

Attorneys for Interested Insurers

ACKNOWLEDGMENT

The undersigned hereby acknowledges that sanctions may be imposed pursuant to
Minn. Stat. § 549.211, subd. 3.

[Signature]