BEFORE THE DEPARTMENT OF PUBLIC SERVICE REGULATION

MONTANA PUBLIC SERVICE COMMISSION

DOCKET NO. D2012.5.49

Electricity Supply Tracker

Colstrip Unit 4 Generation Asset Variable Cost/Adjustment

Dave Gates Generating Station Variable Cost/Credit Adjustments

REBUTTAL TESTIMONY

July 1, 2012 to June 30, 2013

Department of Public Service Regulation
Montana Public Service Commission
Docket No. D2012.5.49
Annual Electric Supply Filing
NorthWestern Energy

PREFILED REBUTTAL TESTIMONY

OF WILLIAM T. RHOADS

ON BEHALF OF NORTHWESTERN ENERGY

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Witness Information

Q. Please state your name and business address.

A. My name is William T. Rhoads and my business address is 40 East Broadway, Butte, Montana 59701.

Q. By whom are you employed and in what capacity?

A. I am NorthWestern Energy's ("NorthWestern" or "NWE") General Manager, Generation and report to Mr. John D. Hines, Vice-President - Supply.

Q. Please summarize your educational and employment experience.

A. I was born and raised in Great Falls, Montana, the son of a highly respected lineman for The Montana Power Company ("MPC"), who served as the president of IBEW Local #44 in the late 1950s. That's where my appreciation and education in the utility industry started.

I began my own career in the utility industry in 1967 as a gardener at MPC's Ryan Hydroelectric Plant. I also worked as an assistant maintenance man, relief operator, and engineering assistant during the summer months at various hydro plants and in the Great Falls Division through 1971. I graduated from Montana State University in Bozeman with a Bachelor of Science degree in Electrical Engineering in 1971 and a Master of Science degree in Project Engineering and Management in 2003. After graduation in 1971, I started work at MPC in the Distribution

Engineering Department. During my career, I have held various supervisory positions in the Generation, Transmission and Distribution areas. Of these, I have spent almost 25 years in thermal generation and hydro operations.

My education also includes a year of study at North Carolina State University, Raleigh, in 1973 while in the U.S. Air Force ("USAF"). I studied advanced meteorology and became an accredited meteorologist. In addition, I attended the Public Utility Executive Course at the University of Idaho, Moscow, in 1993. I am a registered Professional Engineer (since 1980), a senior member of the Institute of Electrical and Electronics Engineers, and have a history of support to local, state and national professional, technical, and service-based organizations.

My work history also includes 24 years of active and reserve service in the USAF as a staff meteorologist and a command and control operations officer. During this time I was a weather forecaster at a pilot training base in Columbus, Mississippi, and a staff meteorologist at the USAF Satellite Test Center at Sunnyvale, California. At Sunnyvale, I was involved in missile launch, on-orbit (including forecasting and interpreting solar events that impacted satellite operations), and satellite payload recovery operations. During my reserve assignments, I was a staff meteorologist for the Titan II missile program at Little Rock Air Force Base ("AFB"),

Arkansas, a reserve Weather Detachment Commander at Minot AFB, North Dakota, and I served as a Command and Control Officer for Disaster and Emergency Services organizations in Montana.

Q. As General Manager, Generation, what are your primary responsibilities?

A. I am responsible for the safe, reliable, and cost-effective operation of NWE's electric power generation resources that will help stabilize electric supply rates over time. I am also involved in the identification and evaluation of potential generation resources, and when applicable, I have been involved with the development of these resources. In addition, I am responsible for Environmental Permitting and Compliance and Real Estate functions at NWE.

Q. Did you file prefiled direct testimony in this docket?

A. No, I did not.

Purpose of Testimony

Q. What is the purpose of your testimony in this docket?

A. I am responding to that part of the Pre-Filed Direct Testimony of Montana Consumer Counsel witness, John W. Wilson ("Wilson Direct Testimony"), at pages 7 through 15, that challenges the inclusion of the Dave Gates

Generating Station's ("DGGS")[1] replacement regulation service costs in rates. The Wilson Direct Testimony urges the Montana Public Service Commission ("Commission" or "MPSC") to exclude some third-party costs that NorthWestern incurred during the three months that DGGS was out of service. I will address several assertions made in the Wilson Direct Testimony regarding consequential damages, the outage at DGGS, the warranty on the power turbines, and related issues.

Q. What is the basis of your testimony?

A. The basis of my testimony is my personal knowledge of the turbine Purchase Order with Pratt & Whitney Power Systems ("PWPS"), the warranty, the waiver of consequential damages, and the outage. I negotiated the original Purchase Order with PWPS, participated in negotiating the new warranty, and managed the outage issues. In short, I have personal and direct knowledge of the events regarding the outage and the warranty described in the Wilson Direct Testimony.

Q. Have you testified previously before this Commission on DGGS issues?

A. Yes. I provided direct and rebuttal prefiled testimony in Docket No. D2008.8.95, in which the Commission preapproved the construction of DGGS.

[1] DGGS was originally named Mill Creek Generating Station (MCGS).

DGGS Operating History

Q. Before addressing Dr. Wilson's testimony directly, please remind us why DGGS was constructed.

A. DGGS began commercial operations on January 1, 2011. Its purpose is to provide regulation service, which balances the difference between load and supply in NWE's balancing authority ("BA") on a moment-to-moment basis. As the record in Docket No. D2008.8.95 demonstrated, NWE constructed DGGS to meet its historic need for regulation service and its increasing need for regulation service due to the integration of variable generation into NWE's BA. NWE had previously purchased regulation service from other providers. In 2006, when NWE integrated a large wind project into its transmission system, NorthWestern found it more difficult to purchase regulation service because wind power was being added throughout the Pacific Northwest. In addition, regulation service was becoming much more expensive due to its decreasing availability. At the same time, the Energy Policy Act of 2005 potentially subjected NWE to severe financial penalties if it did not meet federal reliability standards, specifically control performance standards ("CPS"). NWE must achieve at least a 90% level of compliance with the CPS2 criteria on a monthly basis or be subject to severe penalties. The penalties can reach $1 million per day. Therefore, in order to best ensure that it could meet these standards and provide the regulation service its customers required, NWE built DGGS.

Q. Please remind us what technology was selected for this application.

A. We selected simple cycle "aero derivative" gas turbine generators, with engines or prime movers similar to those used in commercial jet planes, to provide regulation service. This is a proven technology that meets the requirements for availability, reliability, ramp rate, minimum operating level, emissions, and constructability. PWPS FT-8 SWIFTPAC® units were selected for this application. NorthWestern included its technology selection analysis for regulating capacity in the original docket for DGGS. NWE selected these units because they most closely met all of the criteria necessary in the technology evaluation. Each FT-8 SWIFTPAC® unit is designed with two engines ("gas generator" or "GG") which are each aerodynamically coupled to a power turbine ("PT") which drive a common generator. The DGGS facility consists of three SWIFTPACs, with a total of six engines, six power turbines, and three generators. We commonly refer to these as Units 1, 2 and 3, each with two turbines as Unit 1A, Unit 1B, etc.

Q. Did the PWPS technology also provide an additional benefit?

A. Yes. A unique feature of the PWPS SWIFTPAC® units is that one side of the unit can be isolated with the use of a "blanking plate" which allows the use of only one side. No other turbine generator supplier had this

functionality, and it was a feature NWE considered in our selection of the PWPS SWIFTPAC®.

Q. Please review the historic operational performance of DGGS since its commercial operation on January 1, 2011.

A. Overall, the operation of DGGS has been excellent, as shown on Exhibit___(WTR-1) which charts its operational performance since the generating station started commercial operation on January 1, 2011. Exhibit__(WTR-1) provides detailed information on the plant's Equivalent Availability Factor ("EAF") which is the fraction of a given operating period in which a generating unit is available without any outages or equipment deratings due to partial availability.

Q. Has DGGS been recognized as a significant industry accomplishment?

A. Yes. DGGS competed for and received 2011 Honorable Mention and Runner Up status for the "Best Gas Fired Project of the Year" by *Power Engineering* magazine. A link to the article is http://www.power-eng.com/articles/2011/12/winners-named-in-2011-projects-of-the-year-awards.html where the significant competitors were also listed. NWE, PWPS, and others affiliated with the development and construction of the DGGS project were recognized for a significant industry accomplishment. Also, in December 2011 *POWER*, another prominent trade publication,

featured DGGS for its design and operation as a regulating resource. This recognition illustrates the significance of DGGS to the power industry.

Rebuttal of Wilson Direct Testimony

Q. At page 7, lines 5-12, Dr. Wilson summarizes the outage at DGGS. Do you agree with his summary?

A. I believe his summary is incomplete, and because I believe the Commission would appreciate a more detailed description, I will elaborate. In early January 2012, DGGS experienced a vibration problem on the power turbine on Unit 2B, and the vibration forced the unit offline on January 11, 2012. The vibration was due to mechanical damage inside the power turbine portion of the unit. A similar problem appeared on Unit 1 later in the month. NWE voluntarily took Unit 1 offline on January 30, 2012 and inspected the power turbines on that unit. Evidence of damage was found in Unit 1 that was similar to the developing mechanical issues seen on Unit 2B. Based upon PWPS's prudent recommendation, NWE voluntarily took Units 1 and 3 out of service to prevent any further damage to the units which could have resulted in severe damage or failure.

Q. After you took all of the units off line what did NorthWestern do to provide regulation service?

A. NorthWestern's Electric Transmission Department executed emergency contracts for replacement regulation service to cover the period when

DGGS was not capable of providing the level of regulation needed to meet the federal reliability requirements referenced earlier in my testimony. During the three months, February through April 2012, that DGGS was not fully operating, the regulation service provided from contracts decreased as replacement power turbines were installed and the units became available. As of May 3, 2012, five of the six turbines had been returned to service using a combination of the original turbines after servicing, and turbines on loan from PWPS.

Q. The Wilson Direct Testimony does not mention any steps that PWPS took to get DGGS back into service, and in fact appears to question NorthWestern's choice of PWPS as the turbine manufacturer. See Wilson Testimony at p. 15, lines 5-7. Please describe generally the measures that PWPS took to get DGGS back into service.

A. PWPS took extraordinary measures to get DGGS back in service. I have attached a timeline of the sequence of events as Exhibit__(WTR-2). The timeline reflects the compressed sequence to restore DGGS to operation. PWPS took several important actions. First, it provided replacement power turbines from its pool of lease turbines so that DGGS could get back into service as quickly as possible. In fact, PWPS delivered two of the leased power turbines from Santiago, Chile. PWPS did this all at its own cost. Second, it picked up the NWE turbines from Anaconda, repaired them in Connecticut, and returned them for installation at DGGS.

PWPS did this at its cost, not NWE's. Third, it devoted a team of engineers to identifying the mechanical problem and designing a remedy. This was all at PWPS's cost, not NWE's. Within a three-month period, five of the six power turbines had been removed, replacement turbines were retrofitted as needed for the DGGS configuration, and then they were installed at DGGS. At NWE's urging, PWPS's actions were focused on minimizing the outage at DGGS and minimizing the impact to NWE operations and its customers.

Q. Has PWPS been analyzing the underlying problems?

A. Yes, absolutely. PWPS is currently engaged in an analysis of the problem. PWPS immediately began analyzing the problem when the turbine from Unit 2B was sent back to PWPS's shop for disassembly and inspection. PWPS created a "tiger team" of 20-30 engineers, including aeronautical and aerospace engineering talent at the highest levels of the company, to investigate, determine the cause, and remedy the problem. A tiger team is a team of individuals who are assigned to focus on a problem until the solution is identified and implemented. The power turbine was modeled using a technique called a "finite element analysis." Using a number of variable inputs, the performance of the unit can be examined and studied; this information can then be used to remedy the problem. In November and December 2012, PWPS performed field tests of the original design on a highly instrumented power turbine and the

turbine was returned to the PWPS shop for disassembly and inspection. A modification to a power turbine is now in progress. After the modification is made to the power turbine, the turbine will be returned to DGGS for field testing and validation. If the power turbine modification is successful, similar modifications will be made to the remaining power turbines and returned to DGGS for installation. All of this is at no cost to NWE.

Q. At page 14, lines 14-16, the Wilson Direct Testimony states that the turbine warranty has been extended only through March 31, 2013. Is that correct?

A. No. The warranty never expired. PWPS extended it several times while we negotiated a new agreement, and in January 2013, we negotiated a contract modification (Modification No. 4) that is extremely favorable to NWE and its customers. I have attached it as Exhibit__(WTR-3).

Q. The Wilson Direct Testimony questions whether the warranty is "at all sufficient." Wilson Direct at p. 15, line 3. What is your position?

A. Modification No. 4, which is the new or extended warranty that we negotiated this past January, is outstanding. It provides tremendous benefits to consumers, including:

- The power turbines currently in use at DGGS remain under warranty indefinitely or until the last turbine is modified to correct the issue that occurred causing the outage (See Ex. WTR-3 at Par. 1 (A) and (B).
- The power turbines that will be installed in units following verification of the performance test of the modified turbine will be covered with an extended warranty for another two years following installation of the last power turbine to be modified and installed. Id.
- PWPS will provide any additional modifications, at its cost, to the power turbines that it determines are needed as a result of the outage. Id. at Par. 4.
- Additionally, if PWPS determines that further modifications related to the outage will be incorporated into the bill of material for new FT8-3 power turbine builds, PWPS will provide the replacement hardware and shop assembly labor to incorporate hardware at no charge to NWE, regardless of whether the Power Turbine Warranty Extension has expired. Id. at Par. 5.

Q. What is the significance of this?

A. On balance, customers have benefitted tremendously from the outage through a new warranty that does much more than simply warrant the turbines for a finite period of time. The power turbine warranty has now

been extended to at least five years past the original commercial operation date, and because of the warranty's additional provisions, the power turbines, and therefore the plant asset, will be more reliable than they were before and at no additional cost to customers during the extended warranty period. In addition, even after the warranty expires, if PWPS determines that further modifications related to the Outage will be incorporated into the bill of material for new FT8-3 power turbine builds, PWPS will provide the replacement hardware and shop assembly labor at its cost, and not NorthWestern's.

Q. Dr. Wilson also seems to urge the Commission to reject any request that customer rates include some of NWE's third-party regulation service costs when DGGS was down on the basis that NWE signed a contract that excluded consequential damages. Wilson Direct Testimony at page 8, line 9 – page 10, line 5. Did the contract with PWPS for the power turbines exclude consequential damages?

A. Yes, the contract excluded consequential damages.

Q. Why did the contract with PWPS exclude consequential damages?

A. To my knowledge, turbine manufacturers always require a waiver of consequential damages in contracts for the sale of turbine generators because the quantity and value of replacement energy based upon the duration of an outage would be unknowable at the time the contract is

negotiated. In my substantial experience, having negotiated contracts for procurement of major power plant components for many years, I have never seen a contract where an original equipment manufacturer ("OEM") agreed to be liable for consequential damages for replacement power.

Q. Is it common for power plant components to fail?

A. Yes, power plant components fail. Power plants contain many components; the failure of some can lead to an outage, while the failure of other components does not. Certain components are subjected to considerable heat, stress, and fatigue, and those components are more likely to fail than those components that are stationary with few, if any, moving parts. Other failures can occur to structural or electrical components. In my experience, I have witnessed power plant and unit outages caused by component failures due to heat, stress, and vibration, but also due to insulation failure, electrolysis, rock slides, underwater landslides, ice jams, and lightning, among other causes where units were either forced off line or taken off line voluntarily. Some of the outages were brief in duration while others lasted for several years. The key is how the plant owner manages the risk.

Q. How did NWE manage the risk of an outage?

A. Risk management must take into account costs and the impact on ratepayers and shareholders. We always strive to ensure that we deliver

reliable service, reasonably priced. In the context of the construction of DGGS, NWE addressed the risk of an outage in several ways. First, in construction projects, warranties and guarantees are key, as they are the remedy for a component failure. For that reason, while the PWPS contract provided for a one-year warranty, I negotiated a one-year extension of that warranty at a modest cost ($395,000). Therefore, the original warranty was intended to run from January 1, 2011 to December 31, 2012. Also, recognizing the importance of a warranty, NWE selected a reputable and well-established manufacturer, PWPS, that we believed would stand behind the warranty.

Second, NWE designed DGGS with a third unit that serves as an operational spare for periods when maintenance is being performed on the other units, during extreme weather conditions when additional regulation service is needed, or for possible use when backup fuel is needed due to curtailment of natural gas. Exhibit__(WTR-1), referenced above, shows the availability of each unit along with the facility-wide EAF and the two-unit EAF. The exhibit also shows a period from February through April 2012 when the plant had zero or nearly zero availability due to the problem with the power turbines in all three units. Otherwise, the two-unit availability has been above 90% and most frequently between 97% and 100%. As important, DGGS has provided all of the regulation service needed to maintain compliance with federal reliability standards

except for those three months in 2012 when the plant or a portion of the plant was offline.

Third, we designed and installed the “blanking plate” described earlier in my testimony. The blanking plate contributes to NWE’s ability to provide reliable regulation service without the need when possible for backup third-party contracts for regulation service.

Fourth, NWE has developed and nurtured a supportive relationship with PWPS. During the review of the PWPS technology and the development of the purchase order in 2007, business between NWE and PWPS was conducted in a professional, respectful manner. That level of business conduct is partly the reason that PWPS responded promptly when the power turbine failure occurred and is also a reason that NWE received a favorable warranty extension. PWPS is committed to resolving the problem with the power turbines.

Q. Has PWPS honored the warranty?

A. Yes, PWPS has honored the warranty. As I indicated above, PWPS secured leased turbines for us, transported our turbines from Anaconda to its facility in Connecticut, temporarily repaired them and returned them, and has engaged a large team of engineers to identify the required mechanical modification. While the warranty provision does not obligate

PWPS to repair or replace failed components within any specific time frame, PWPS respected our need to get DGGS up and running quickly and, in my view, performed in an extraordinary manner. PWPS's support was timely and professional especially considering the seriousness of the outage to NWE. Since the outage, PWPS has been focused on identifying the cause of the problem, operational tests with a highly instrumented power turbine of the original design at the site, and a modification to the power turbines that will provide a long term remedy to the problem. A modified power turbine will be tested at the site this summer. If the proposed modification is validated as a functional solution, the remaining power turbines will be modified and installed in the latter half of 2013.

Q. At page 8, lines 1 through 8, Dr. Wilson asserts that approval for DGGS was granted by the Commission despite the plant's relatively high costs in comparison with the market regulation service purchases that it replaced. Do you agree?

A. No. Construction of DGGS was necessary and prudent, and the Commission agreed. Nevertheless, as the Prefiled Direct Testimony of Michael Cashell in this docket indicates, NWE must periodically test the market for available alternatives for regulation service to determine whether the total cost of such alternatives would be more cost effective than the variable costs of operating DGGS.

Q. At page 10, lines 15-18, Dr. Wilson states, "In any event, it would seem appropriate under the circumstances here for the Commission to treat this as a matter of dispute between NWE and Pratt & Whitney, without subjecting Montana ratepayers to additional cost obligations." Do you agree with Dr. Wilson's statements?

A. No. NWE never had the ability to obtain consequential damages from PWPS because it is not available in the power turbine industry. Because we managed this outage appropriately, we were able to fully provide all necessary regulation service from DGGS within three months. We have a trusted business partner in PWPS which helped us get back into service as quickly as possible and to meet our customers' needs, and that has devoted many engineers into addressing the long-term solution at DGGS. In addition, customers are far better off, in the long run, with the favorable provisions NWE negotiated in the new warranty.

Q. At page 14, line 6 through page 15, line 3, Dr. Wilson references statements by PWPS and suggests that the warranty provisions are not sufficient. Do you agree?

A. No, I do not agree. DGGS is a unique application for any turbine generator manufacturer, but that does not mean the technology is wrong or inappropriate. Throughout the world and in our daily lives, we all work with and use products that have evolved based upon product history or customer demands. The number of ramping events at DGGS is greater

than is seen in base load or peaking plants, and is at least partially the reason NWE negotiated an extended warranty under the original Purchase Order with PWPS. It is also why, at least in part, we insisted on a very favorable warranty for the modified turbines.

Q. At page 15, lines 7 and 8, Dr. Wilson states that "it is not clear why the Company did not obtain outage insurance … explicitly covering generation replacement costs." What is your response?

A. As a general matter, insurance coverage was planned for and, where appropriate, included in the period when DGGS was under construction as well as its ongoing operation. During construction, NWE included builder's risk insurance, which covers physical loss or damage during construction due to covered causes such as fire, high winds, etc. Since commercial operation, NWE has carried boiler and machinery coverage for failure to machinery, but that coverage does not include outage insurance.

In my experience, where I have been involved in equipment failures and plant outages, there has never been a case where I have been called upon to provide information or data in support of a recovery of costs for outage insurance explicitly covering generation replacement costs. In my experience, I have not been involved in any project in which we had outage insurance and made a claim under it. My assumption is that if available, they would be difficult to write and simply not economical.

Q. Based upon your testimony above, should NWE be allowed to recover the difference between the estimated costs of DGGS as if it had operated without the outage to the actual costs incurred as a result of the outage, including the incremental costs of contracted regulation service?

A. Yes, NWE should be allowed to recover the difference because the risk was managed in a manner that was extremely favorable to ratepayers. Let me start by saying that we did not make a mistake or omission, contrary to Dr. Wilson's suggestion, by signing a contract that waived consequential damages. As indicated previously, recovery of consequential damages were not included as part of the Purchase Order with PWPS because they were not available. In my experience, they are not available with any reputable OEM.

Therefore, as equipment failures sometimes occur, the issue is whether we have adequately and reasonably protected ratepayers and shareholders in managing the risk of constructing a new plant. I believe we have and that NorthWestern should not be penalized under the circumstances. We negotiated an extended warranty to protect ratepayers and shareholders. We designed the plant with a spare third unit to provide redundancy in the event of another unit being down for maintenance or repair. We constructed a blanking plate to take

advantage of and provide operating flexibility which the PWPS SWIFTPAC® had to offer thereby offsetting the need for third-party regulation service. The blanking plate allowed for the partial use of a unit to cover the outage of a loaner turbine until the test turbine was instrumented and installed in its place. And, we maintained our relationship with PWPS when the plant was down and successfully negotiated what I believe is an extraordinary warranty which protects our customers for many years to come.

Q. Does this conclude your testimony?

A. Yes.

Dave Gates Generating Facility

Operational Performance

	2011												
	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Yearly Average
CPS-2	92.15%	92.54%	93.94%	93.60%	94.90%	93.11%	91.00%	92.86%	95.01%	94.23%	91.36%	94.48%	93.27%
Facility Availability (EAF)*	96.63%	89.17%	87.47%	86.35%	94.09%	90.40%	93.81%	93.82%	86.53%	92.51%	95.87%	97.29%	91.89%
U1 EAF	98.66%	93.50%	93.75%	99.24%	98.43%	99.97%	97.62%	88.01%	94.57%	90.92%	92.82%	99.78%	95.57%
U2 EAF	94.85%	75.94%	70.53%	96.26%	85.81%	99.49%	100.00%	94.76%	88.49%	87.58%	99.04%	96.77%	90.45%
U3 EAF	96.39%	98.07%	98.14%	63.46%	98.04%	71.73%	83.82%	98.68%	76.53%	99.02%	95.76%	95.32%	89.64%
2 Unit Availability	99.97%	99.37%	98.67%	99.54%	99.91%	99.59%	100.00%	99.85%	97.52%	99.58%	97.88%	100.00%	99.33%

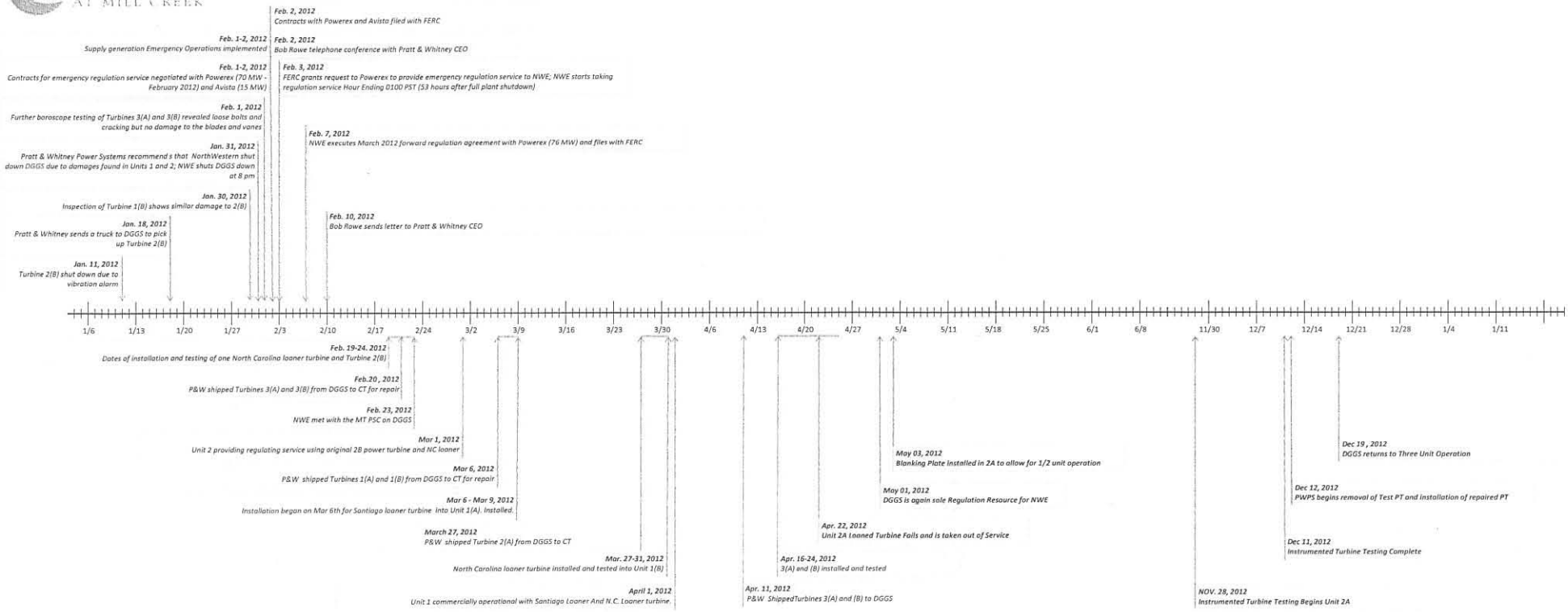
	2012												
	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Yearly Average
CPS-2	95.18%	95.70%	95.60%	95.25%	94.70%	91.67%	91.83%	93.35%	96.02%	93.80%	92.13%	93.56%	94.07%
Facility Availability (EAF)	75.72%	2.52%	32.02%	63.68%	81.72%	82.20%	79.34%	82.25%	82.63%	79.82%	83.77%	92.00%	70.20%
U1 EAF	93.44%	0.00%	0.73%	98.79%	99.40%	98.57%	92.57%	97.47%	98.19%	96.31%	99.89%	99.66%	81.52%
U2 EAF	35.45%	7.57%	95.32%	71.66%	46.26%	50.00%	47.37%	49.83%	50.00%	45.13%	51.60%	76.79%	52.78%
U3 EAF	98.26%	0.00%	0.00%	20.59%	99.50%	98.02%	98.07%	99.44%	99.69%	98.02%	99.83%	99.55%	76.30%
2 Unit Availability	94.08%	0.00%	0.76%	91.41%	99.29%	98.12%	91.51%	96.91%	97.88%	94.33%	99.89%	100.00%	80.61%

	2013			
	Jan-13	Feb-13	Mar-13	Year to Date
CPS-2	92.93%	92.62%	93.16%	92.90%
Facility Availability (EAF)	96.81%	99.06%	99.64%	98.49%
U1 EAF	95.16%	99.43%	100.00%	98.16%
U2 EAF	97.54%	98.55%	99.43%	98.51%
U3 EAF	97.73%	99.20%	99.50%	98.80%
2 Unit Availability	100.00%	100.00%	99.95%	99.98%

Historical Average	
2011-2013	
CPS-2	93.58%
Facility Availability (E	82.86%
U1 EAF	89.51%
U2 EAF	74.52%
U3 EAF	84.53%
2 Unit Availability	90.96%

* EAF stands for Equivalent Availability Factor, which is the fraction of a given operating period in which a generating unit is available without any outages or equipment deratings due to partial availability.

DAVE GATES
GENERATING STATION
AT MILL CREEK



ORIGINAL

MODIFICATION NO. 4
To the Agreement between
NorthWestern Corporation d/b/a NorthWestern Energy
and
Pratt & Whitney Power Systems
Contract # CLM0001695

RE: Purchase Order No. 301264, dated July 2, 2009, and incorporated documents (the "Contract")

Attn: Phil Vecchiarelli
Pratt & Whitney Power Systems
400 Main Street
East Hartford, CT 06108

CONTRACT DESCRIPTION: Engineering, fabrication, shipment and delivery of Turbine Generator sets for the Mill Creek Generating Station n/k/a Dave Gates Generating Station ("DGGS"). Capitalized terms used but not defined herein shall have the definitions set forth in the Contract.

MODIFICATION: In consideration of the terms and conditions contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the above referenced Contract is hereby modified as follows:

1. A. As a result of the outage at DGGS that began in January, 2012 due to distress to the power turbines (the "Outage"), and Contractor's root cause analysis into that Outage, Contractor shall incorporate an inlet module hardware modification into each of the Customer's six (6) power turbines. This modification shall be installed in the power turbines in calendar year 2013.

B. In accordance with Article 10 of the Terms and Conditions of Purchase – Major Equipment, the warranty for the power turbines shall be extended and remain in effect for two (2) years from the date the last of the six (6) power turbines is redelivered to DGGS with the modification described in 1(A) above (the "Power Turbine Warranty Extension").

2. The existing warranty on all other equipment supplied under the Contract (except the Unit #3 Brush Generator), currently set to expire on or about January 1, 2013, shall be extended and remain in effect until May 1, 2013. PWPS' obligation to provide a Spare GG-8 in accordance with Article 10.1 of the Terms and Conditions of Purchase – Major Equipment shall also be extended and remain in effect until May 1, 2013.

3. The warranty on the Unit #3 Brush generator, currently set to expire on or about January 1, 2014, shall be extended and remain in effect until May 1, 2014.

4. Contractor shall, for the term of the Power Turbine Warranty Extension, provide any additional modifications to the power turbines that Contractor determines, in its sole discretion, are needed as a result of the Outage.

5. Additionally, in the event that Contractor determines further modifications related to the Outage will be incorporated into the bill of material for new FT8-3 power turbine builds, replacement hardware and shop assembly labor to incorporate hardware will be provided by the Contractor at no charge to Company, regardless of whether the Power Turbine Warranty Extension has expired.

6. Contractor's obligations under this Modification No. 4 shall be subject to (i) all limitations and requirements set forth in Article 10 of the Terms and Conditions of Purchase – Major Equipment, (ii) Company operating and maintaining the CTG Units in accordance with Contractor or Contractor's suppliers' current or future manuals, bulletins, and similar technical, operating and/or maintenance documents, as such documents are modified from time to time (collectively, "Contractor's O&M Documents"), as well as (iii) the Project Specifications in the Contract, except that the instructions in Contractor's O&M Documents shall replace and supersede the "less than 20 starts per year" specification for the CTG Units in the Project Specifications.

7. All power turbine modifications contemplated under this Modification No. 4 shall apply only to the power turbines purchased by Customer under Purchase Order No. 301264. Further, Customer may not assign any of its rights, nor any of Contractor's obligations, under this Modification No. 4 to any other party, and any attempted assignment in contravention of this restriction shall be null and void.

8. In consideration for this Modification No. 4, Company, on behalf of itself and its respective parent companies, subsidiaries, officers, directors, employees, partners, insurers, agents, affiliates, successors and assigns (the "Releasors"), hereby forever irrevocably releases, remises and discharges Contractor, and its respective past, present and future parent companies, subsidiaries, officers, directors, employees, partners, insurers, agents, affiliates, successors and assigns (the "Releasees"), of and from any and all claims, demands, proceedings, causes of action, orders, obligations, contracts, agreements, debts and liabilities, of whatever nature or kind, at law or in equity, which Releasors now have, ever have had or hereafter would or could have against the Releasees, whether known or unknown, suspected or unsuspected, fixed or contingent, related to or arising from the Outage, except that this paragraph 8 shall not preclude Releasors or Releasees from enforcing the terms of this Modification No. 4.

CONTRACT COMPLETION DATE ADJUSTMENT: None

PAYMENT ADJUSTMENT: None.

OTHER: Any prior agreements, promises, negotiations or representations, either oral or written, relating to the subject matter hereof, not expressly set forth herein, are of no force or effect. The above adjustments constitute the entire and complete modification to the Contract referenced herein, and all other terms and conditions of the Contract

shall remain in full force and effect. This Modification No.4 hereby incorporates by reference any general or miscellaneous terms and conditions set forth in the Contract.

NORTHWESTERN CORPORATION D/B/A NORTHWESTERN ENERGY
(Company)

By: _____
Printed Name: Robert C. Rowe
Title: President & Chief Executive Officer
Date: 1-16-13

PRATT & WHITNEY POWER SYSTEMS
(Contractor)

By: _____
Printed Name: TODD B. EMERY
Title: DIRECTOR, FTS
Date: 1-17-13

Department of Public Service Regulation
Montana Public Service Commission
Docket No. 2012.5.49
Annual Electric Supply Filing
NorthWestern Energy

PREFILED REBUTTAL TESTIMONY

OF FRED LYON

ON BEHALF OF NORTHWESTERN ENERGY

Witness Information and Qualifications

Q. Please state your name and business address.

A. My name is Fred Lyon. My business address is 1031 W. Morse Boulevard, Suite 170, Winter Park, Florida 32789.

Q. By whom are you employed and in what capacity?

A. I am employed as the sole partner of the Lyon Firm, P.A., a law firm which specializes in construction law and contracts, with emphasis on the electric utility industry. I also am the managing director of TriCon Power Group, a construction contracts consulting group which provides training and recommendations to utilities regarding project management and delivery and the proper utilization of commercial terms and conditions.

Q. What is your educational background?

A. I am a 1970 graduate of Duke University with a Bachelor of Arts degree in History. I graduated from the University of Virginia School of Law with a Juris Doctor in 1976. In 2009, I received a Master's degree in Liberal Studies from Rollins College. I also am a mediator with previous certification in North Carolina and training at Duke University and the Harvard Law School Program on Negotiation.

Q. Did you file prefiled direct testimony in this docket?

A. No, I did not.

<u>Purpose of Testimony and Qualification as an Expert</u>

Q. What is the purpose of your prefiled rebuttal testimony in this docket?

A. NorthWestern Corporation d/b/a NorthWestern Energy ("NorthWestern") has retained me as an expert witness to testify regarding whether a waiver of consequential damages and warranty clauses which provide for replace and repair as the sole remedy for a warranty claim are standard industry practices in contracts between turbine manufacturers and utilities.

Q. What are your general qualifications to testify as an expert on this issue?

A. Since 1977, I have worked as an attorney and consultant with offices in Washington, D.C. and Florida. I have specialized in construction law and contracts with a focus since 1977 on the electric utility industry and its procurement practices. In that capacity, I have drafted and negotiated numerous

contracts involving equipment supply, construction, and design in connection with the construction of power projects. Included among these contracts are agreements between utilities and turbine manufacturers. I am very familiar with the language of these agreements and the clauses which are considered to be industry standard. In addition to having worked with a number of utilities on these issues, as outlined below, I have written, spoken, and taught frequently regarding procurement practices in the energy construction arena. I have attached as Exhibit__(FL-1) a resume which describes my experience in greater detail.

Q. Describe the types of utility projects on which you have worked.

A. I have worked on nuclear, coal, integrated gasification combined cycle, and natural gas (combined and simple cycle) contracts and projects, including baseload generation and peaking capacity. I have also worked on environmental contracts, including related equipment supply, for brownfield and greenfield projects and contracts for the construction of transmission systems.

Q. Identify power industry clients for whom you have provided contract drafting, review, and negotiation services.

A. I have provided such services to several of the largest regulated utilities in the United States, including American Electric Power and its various subsidiaries (AEP Ohio, AEP Texas, Appalachian Power, Indiana Michigan Power, Kentucky Power, Public Service Company of Oklahoma, Southwestern Electric Power

Company), Duke Energy, Progress Energy and its predecessor, Florida Power. I have also provided such services to Tampa Electric, the Orlando Utilities Commission, Sierra Pacific, PNMR Resources, International Power, EcoElectrica, and the Florida Municipal Power Association. Although I primarily work with utilities, I have also represented industry vendors and contractors such as Areva, J.A. Jones Construction, and Barton Malow.

Q. Are you currently working with some of these entities on such services?

A. Yes. I am currently working with American Electric Power, Duke Power, and Progress Energy in drafting, reviewing, and negotiating contracts for equipment supply and construction of environmental and baseload facilities.

Q. Identify representative industry-related writings which you have authored.

A. "Improved Construction Contracting for the 1990s," Power Engineering, June 1991.

"Controlling Dispute from Start to Finish – Partnering, Project Neutrals, Mini-trials, Design Review Boards, Mediation," Construction Law Handbook, 1998.

"From CoGen to Coal Gen – EPC Contracting," World Generation, 2001. A copy of this article is attached as Exhibit__(FL-2) .

"Controlling Dispute by Controlling the Forum: Forum Selection Clauses in Construction Contracts," The Construction Lawyer, American Bar Association, 2002.

"Force Majeure and Power Plant Construction Delays: Too Much Terror Not Enough Labor,"

World Generation, 2005.

"Mediation," Construction Law Handbook, 2008.

"Contracting Strategies," Florida Construction Users, 2010.

"Collaborative Contracting," Southeastern Construction Owners, 2012.

"Engineer-Procure-Construct Contracting in a Changing Climate," World Generation, 2013.

In addition, in 2009, Pennwell Publishing retained me to provide the peer-review of a proposed industry standard textbook on utility contracting strategies and contracts.

Q. Identify representative industry-related speaking engagements which you have had.

A. "Construction Claims on the Project-financed Job," Forbes conference, 1992.

"Dispute Avoidance in the Construction of Power Plants," Florida Business Roundtable, 1992.

"OSHA Enforcement and the Power Indsutry," Southeastern Electric Exchange, 1992.

"Industry Legislative Updates," Edison Electric Institute, 1994.

"Contracting in the Power Industry," EXNET, 1996.

"Contracting for the Next Generation of Coal-fired Power Plants," CoalGen 2001.

"EPC Contracting in a Seller's Market," PowerGen 2001.

"EPC Contracts in the International Market," Forbes conference, London, 2002.

"Managing Construction Risk in an Uncertain World," PowerGen 2002.

"Energy, Politics, and Risk," Association of Edison Illuminating Companies, 2003.

"Lessons Learned in Energy Construction," Electric Power, 2003 and 2007.

"Good Jobs Gone Bad," PowerGen 2003.

Series of presentations at PowerGen from 2004 until present on contracting strategies and typical, industry standard contract language.

Series of presentations from 2009 until present to American Boiler Manufacturers Association on contract clauses and commercial language.

Since 1994, I have also provided utilities project management training on commercial terms and conditions. These workshops usually last one to two days and familiarize utility personnel with industry standard terms and conditions.

Q. Describe any industry honors or recognition which you have received.

A. Outstanding Energy Leader, World Generation, 2003.

Duke University Founders Society.

Outstanding Lawyer, Chambers.

Super Lawyers and Best Lawyers in America/

AV rated, Martindale Hubbell.

Consequential Damages

Q. At page 9 (lines 15-17) and page 10 (lines 1-5), John W. Wilson, on behalf of the Montana Consumer Counsel, suggests that it does not seem reasonable to charge ratepayers for the incremental cost of replacement power due to the consequential costs of the Pratt & Whitney Power Systems ("PWPS") turbine failures that were excluded from the warranty. Do you agree?

A. I disagree. As I understand Dr. Wilson's testimony, he is suggesting that the waiver of consequential damages that is included in Section 22.0 of the PWPS-NorthWestern turbine purchase agreement is somehow unreasonable and that the ratepayers should not be required to bear the cost of replacement power purchased by NorthWestern as a consequence of the warranty-related turbine outage. As described below, it is my experience that such waivers of consequential damages are the industry standard, included routinely in major equipment (including but not limited to turbines) and construction contracts utilized in the power construction industry. That experience is reflected on page 9 of my article, that is attached as Exhibit__(FL-2).

Q. Please discuss the various types of damage clauses associated with major equipment contracts and warranties.

A. Damages that result from a breach of contract or breach of warranty are of two types – direct and consequential. Direct damages such as the costs of repair, re-design, or equipment replacement are the immediate result of the breach. Consequential damages, while they must be reasonably foreseeable, are more incidental and remote from the actual breach. Examples of consequential damages include loss of use, loss of goodwill, cost of substitute facilities, and the cost of replacement power. In the power industry, the customary waiver of consequential damage clauses used in the typical equipment supply or construction contract will usually enumerate examples of consequential damages. Such enumerations frequently will identify the "cost of replacement power" (or words to that effect) as one type of consequential damage which a utility agrees to waive.

Q. Describe how consequential damages are treated in the PWPS – NorthWestern turbine purchase agreement.

A. Section 22.0 of that agreement contains a waiver of consequential damages which is customary and typical of such clauses in the power industry and in connection with the purchase of major equipment such as turbines. The section also specifically provides that the "cost of purchased or replacement power or production" is within the scope of the waiver. Again, such a waiver with respect to the recovery of replacement power from a vendor is typical and well within customary industry practices.

Q. Are you able to provide copies of other agreements which contain a waiver of consequential damages?

A. Yes. Attached hereto as Exhibit__(FL-3) through Exhibit__(FL-8) are the recital pages and relevant language from Sample Agreements as found in the legal database Westlaw/Construction Law Section/Sample Contracts. Each of these agreements, including contracts which provide for turbines and those for engineering and construction, contains a waiver of consequential damages as I have described in my testimony and consistent with industry practices and standards. The agreements include:

Engineering, Procurement and Construction Agreement between Georgia Power Company/Oglethorpe Power Corporation and Stone & Webster/Westinghouse Electric Company LLC, Section 17.1 (April 8, 2008) available in Westlaw/ Construction Law Section/Sample Contracts. Construction of nuclear power plant, including turbines.

Engineering, Procurement and Construction Agreement between Florida Power Corporation, d/b/a Progress Energy Florida, Inc. and Westinghouse Electric Company LLC/Stone & Webster, Section 17.1 (Dec. 31, 2008) available in Westlaw/ Construction Law Section/Sample Contracts. Construction of nuclear power plant, including turbines.

Engineering, Procurement and Construction Agreement between South Carolina Electric & Gas Company and Westinghouse Electric Company LLC, et al., Section 17.1 (May 23, 2008) available in Westlaw/ Construction Law Section/Sample Contracts. Construction of nuclear power plant, including turbines.

Development and Construction Services Agreement between Grant County Wind, LLC and Juhl Energy Development, Inc., et al., Section 11. b(Nov. 6, 2009) available in Westlaw/ Construction Law Section/Sample Contracts. Wind turbines supplied by Owner under separate contract.

Contract for Engineering, Procurement and Construction Services New Plymouth Power Plant between Idaho Power Company and Boise Power Partners Joint Venture, Section 26.2 (April 2009) available in Westlaw/ Construction Law Section/Sample Contracts. Turbine supplied by Owner under separate contract.

Engineering and Construction Agreement between Duke Energy Carolinas, LLC and Shaw North Carolina, LLC, Section 17.1 (May 5, 2008) available in Westlaw/ Construction Law Section/Sample Contracts. Turbines suppled by Owner under separate contract.

Also attached hereto as Exhibit__(FL-9) is an agreement for the sale of goods – Equipment – Turbine Generator from 18 American Jurisprudence Legal Forms

2d which provides for a mutual waiver of consequential damages in Section 10.M. Again this clause is typical of such clauses standard in the power industry and in connection with the sale of turbines to utilities.

Q. What is the rationale for such consequential damage waivers?

A. Equipment supply and construction contracts in the power industry are risk allocation documents. Vendors and contractors are unwilling to take on the potentially unlimited risk of such consequential damages. The cost of replacement power for the Dave Gates Generating Station for three months is significant. Potentially, however, a plant may be shut down for a much longer period as a result of a warranty issue. Such shutdowns can be for many months or even years and even eventually require the construction of a whole new replacement facility. Consequential damages in those instances can be billions of dollars. A turbine manufacturer is not willing to take that risk on a contract such as the PWPS agreement with gross revenues of $81 million (and profit margins which are a much smaller portion of those revenues). If vendors and contractors were required to take the risk of consequential damages, they would include a substantial contingency in their price to protect their significant risk exposure. In that instance, the contract price would be higher and the utility (and its ratepayers to the extent that the contract is reasonable and prudent) would pay for the contingency even in the event consequential damages were never actually incurred. By incorporating a waiver of consequential damages, the utility

reduces the cost of the original contract and provides the potential to deliver the project at a significantly reduced price.

Q. Why do you disagree with Dr. Wilson on page 9 (lines 15-17) and page 10 (lines 1-5) of his testimony that it is not reasonable for the ratepayers to be charged with the consequential costs (i.e. replacement power) of the PWPS turbine failure that were excluded from the warranty?

A. The agreement and attendant waiver of consequential damages (including replacement power costs) that NorthWestern entered into with PWPS was typical of the industry and of such agreements with turbine suppliers. By agreeing to a clause which is customary and consistent with what was available in the market, NorthWestern acted reasonably and prudently.

Q. How do you respond to Dr. Wilson's testimony on page 15 (lines 7 to 10) where he states "it is not clear why the Company did not obtain….a warranty explicitly covering generation replacement costs?"

A. The scope of a typical turbine warranty clause limits the remedy for a breach to repair, re-design, make good, and/or replacement of equipment. As explained previously, turbine manufacturers are unwilling to agree to language which exposes them to the risk of consequential damages such as generation replacement costs. Warranty clauses are limited in remedy to direct damages. It is clear to me why NorthWestern did not obtain a warranty explicitly covering

generation costs. Such a warranty was not available; NorthWestern could not purchase what was not for sale.

Q. Are you aware of any turbine warranties which cover generation replacement costs?

A. No.

Q. Does this complete your rebuttal testimony in this matter?

A. Yes.

V. Frederic Lyon

An attorney for 36 years, Fred Lyon has practiced energy and power plant construction law and litigation in Washington D.C., Maryland, Virginia, and Florida. He is experienced in engineering-procure-construct (EPC) power plant contracts and has worked with many of the industry's largest owners and utilities (including two of the three largest utilities in the United States), vendors, architect/engineers, and contractors. He has prepared and negotiated power industry contracts whose total values is between $15 and $20 billion. A long time proponent of alternative dispute resolution, he has substantial experience in its various forms, including arbitration, mediation, and nonbinding mini-trials. He has practiced as an advocate in a significant number of energy construction mediations and arbitration and has provided alternative dispute resolution services as a neutral, both as a mediator and arbitrator. He writes and speaks frequently on these issues to members of the bar and to energy trade associations and construction industry groups interested in reducing the costs of dispute resolution. Mr. Lyon currently practices with The Lyon Firm, P.A., which has offices in Florida and Washington D.C. He is also of counsel to Seeger PC, a Washington D.C. firm specializing in construction and commercial law.

Areas of Special Interest

- Construction Law; Energy Law; Power Plant Construction; EPC contracts; Mediation and Arbitration

Education

- Duke University A.B. 1970
- University of Virginia School of Law, J.D. 1976
- Rollins College, Masters of Liberal Studies, 2009

Mediation Training

- Harvard Law School Negotiating Project
- Duke University Law School, Private Adjudication Center, Certified Mediator Training
- Advanced Mediation Training, Center for Dispute Settlement, Washington D.C.
- American Arbitration Association, Mediator and Arbitrator Training

ADR Certifications and Memberships

- Panel of Neutrals, Construction Panel, American Arbitration Association
- Certified Civil Mediator, North Carolina
- Member, American Bar Association Section on Dispute Resolution

Experience

- Former U.S. Naval officer
- Judicial clerkship, U.S. Claims Court, Washington D.C.
- 20 years experience in D.C. in private practice as senior partner in own firm prior to relocating to Florida in 1995 where he has continued to practice as senior partner in his own firm
- Practice primarily related to energy representing utilities, independent power producers (IPPs), A/E's, contractors, and original equipment manufacturers (OEMs). Project delivery review, including EPC and alternative contracting systems. Involved in resolution of over

$500 million in claims involving power plants and negotiation of numerous energy construction contracts totaling $15 to $20 billion in value.

- Principal, TriCon Power Group, a project management and delivery consulting company for the power industry

Representative Resolution/Transactional Experience in the Energy Industry

Types of Projects

- Nuclear plants in Washington, Florida, and Louisiana
- Coal plants in Florida, Arkansas, Oklahoma, New York, Massachusetts, Tennessee, Kentucky, Ohio, West Virginia, and Indiana
- Gas turbine plants, including simple and combined cycle in Florida, Louisiana, Texas, North Carolina, Virginia, Georgia, Wisconsin, Iowa, Puerto Rico, Canada, and New Mexico
- Clean coal plants in Indiana, West Virginia, Florida and Nevada
- Environmental retrofits in Florida, West Virginia, Georgia, Kentucky, Oklahoma, Texas, North Carolina, New Mexico, Iowa, Indiana, and Wisconsin
- Oil plant in Egypt
- Nuclear waste facilities in South Carolina and Washington
- Co-generation facilities in Florida, South Carolina, and New York

Types of Claims

- Bankruptcy
- Limitations of liability
- Delay, disruption and acceleration
- Performance guarantees and liquidated damages
- Safety, personal and property damage issues
- Demineralized water provisions
- Insurance coverage and subrogation
- Cost audits
- Environmental contamination and indemnification
- Differing site conditions
- Construction defects and warranty
- Professional malpractice
- Contract interpretation
- Terminations, default and convenience

Representative Energy Transactional Experience

- $200 million EPC gas turbine contracts
- $1 billion environmental retrofit contract
- $5 billion environmental retrofit program
- $2 billion nuclear contract
- $50 million selective catalytic reduction (SCR) contracts
- $25 million simple cycle contracts
- $25 million parts and services agreement (LTSA)
- $100 million mechanical contract, nuclear
- $75 million co-generation contract
- $2 billion million EPC contracts, combined cycle
- $900 million EPC coal plant

Representative Mediation Experience

As an advocate and now as a mediator, Mr. Lyon has substantial experience in the mediation process for over twenty years. He has advocated numerous times throughout the United States on behalf of clients in energy construction mediations involving subjects as diverse as delay claims, safety issues, acceleration and power plant tort claims. As a mediator, he has handled energy construction disputes, delay claims, construction defects, and performance guarantees. His experience in all aspects of power plant construction, his long-time familiarity with mediation, his firm commitment to its goals, and his creativity make Mr. Lyon an effective and capable construction mediator.

Representative Writings/Speeches on Dispute Resolution

- "Your Lawyer as a Project Team Member," Partnering in Design and Construction, 1996
- "Mediation – How it Works," Florida Business Roundtable, 1997
- "Effective Partnering," Construction Law Superconference, 1996
- "Controlling the Dispute from Start to Finish – Partnering, Project Neutrals, Mini-Trials, Design Review Boards, Mediation," The Aspen Law Construction Law Handbook, 1998
- "Advantages of Business Mediation," Florida Business Roundtable, 2000
- "Lawyers and Mediation," American Arbitration Association, 2003
- "Anything but Litigation," World Generation, Spring 2004
- "Practicing Mediation," American Arbitration Association, 2004
- "Partnering and Dispute Avoidance in Power Plant Construction," Florida Business Roundtable
- "Mediation," Construction Law Handbook, 2007 to present

Honors

- Honored as member of Class of 2003, Outstanding Energy Industry Leaders, World Generation
- Charter Member, American College of Construction Lawyers
- Duke University Founders Society
- AV rating, Martindale Hubbell
- Chambers Outstanding Lawyers
- Super Lawyers and Best Lawyers in America
- Outstanding Instructor, Turner Construction Company Minority Contracting Course

Memberships

- Member D.C., Virginia, Maryland, Florida bars
- Member, American Bar Association Forum Committee on the Construction Industry; Sections on Dispute Resolution, Litigation, Public Contracts, Public Utility, Environment and Energy
- Admitted: 1976, U.S. Court of Federal Claims; 1978, U.S. District Court, District of Columbia; 1982, U.S. Court of Appeals, Fourth Circuit; 1983, U.S. District Court, Eastern District of Virginia; 1985, U.S. Court of Appeals, Federal Circuit; 1986, U.S. District Court of Maryland; 1989, U.S. Court of Appeals, District of Columbia Circuit; 1998, U.S. District Court, Middle District of Florida; and U.S. Court of Appeals, Eleventh Circuit

Representative Writings/Speeches

- "Improved Construction Contracting for the 1990's," Power Engineering, June 1991
- "Construction Claims on the Project Financed Job," Forbes Conference on Project Financing, 1992
- "Partnering and Dispute Avoidance in the Construction of Power Plants," Florida Business Roundtable, 1992
- "OSHA Enforcement and the Power Industry," Southeastern Electric Exchange, 1992
- "Legislative Updates," Edison Electric Exchange, 1994
- "Contracting in the Power Industry," EXNET, 1996
- "Controlling the Dispute from Start to Finish – Partnering, Project Neutrals, Mini-Trials, Design Review Boards, Mediation," The Aspen Law Construction Law Handbook, 1998
- "From CoGen to Coal Gen: EPC Contracting" World Generation, 2001
- "EPC Contracting in a Seller's Market," PowerGen 2001
- "Contracting for the Next Generation of Coal Fired Power Plants," Coal-Gen, 2001
- "Controlling Disputes by Controlling the Forum: Forum Selection Clauses in Construction Contracts," V. Frederic Lyon and Douglas W. Ackerman, The Construction Lawyer, American Bar Association, October 2002
- "Force Majeure and Power Plant Construction Delays, Too Much Terror, Not Enough Labor," World Generation, 2002
- "EPC Contracts in an International Power Market," London Forbes Conference, 2002
- "Managing Construction Risk in an Uncertain World," PowerGen 2002
- "Energy, Politics and Risk," Association of Edison Illuminating Companies Annual Meeting, 2003
- "Lessons Learned in Energy Construction," Electric Power 2003 and 2007
- "Good Jobs Gone Bad," PowerGen 2003
- Series of presentations at PowerGen 2004 until 2010 on power industry contracting strategies
- 2009 to present, speaker on contracting issues to American Boiler Manufacturers Association
- "Collaborative Contracting," Florida Construction Users magazine, 2012
- "EPC Contracting in a Changing Climate," World Generation 2013
- Frequent speaker to construction and industry groups, including Southeastern Electric Exchange, Forbes Magazine, Edison Electric Institute, Florida Business Roundtable, Coal-Gen, Power-Gen, American Boiler Manufacturers Association, Association of Edison Illuminating Companies

Community Service/Interests

- Member, Hannibal Square Community Land Trust, Committee, City of Winter Park, Florida
  Elder, Presbyterian Church U.S.A.
- Co-Founder, Corunthians®, a marathon and distance running organization
- Co-Chair, Duke University Leadership Gift Committee, Class of 1970
- Chairman, Parents Fund Council, Choate Rosemary Hall, 2009-2011
- Habitat for Humanity
- Volunteer coach, youth basketball and baseball
- Author, "When Not Performing: New Orleans Musicians," a book on New Orleans music published in 2012 by Pelican Press

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IN THIS IS

FROM COGEN TO CO
IPPS WEIGH-IN
by V. Frederic Lyon

NEPA ON THE WORL
by Prof. Celia Cam

THE RENAISSANCE
by Jeremiah D. Lar

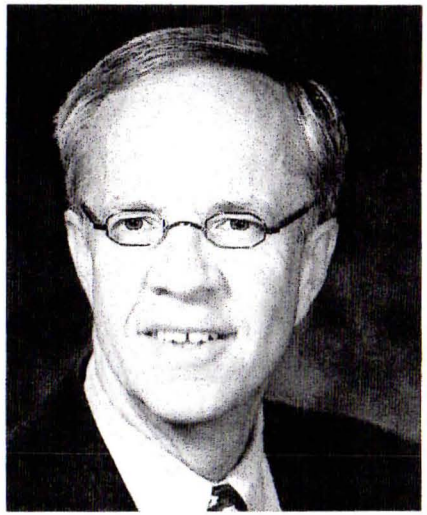
PEAKERS CAN'T BE
EVEN HERE
by Lyn Corum

CAN WE GET BETT
by Jim Schretter &

FROM COGEN TO COAL-GEN... IPPS WEIGH-IN

BY V. FREDERIC LYON

Chicago, IL–The American energy market is completing a decade during which an unprecedented 94 percent of all new generating capacity built has been gas-fired. These projects have been constructed by independent power producers (IPPs), investor-owned utilities (IOUs), and emerging national energy companies taking advantage of a dynamic, changing, and deregulating market



An assortment of construction contracts and project delivery systems have been used to build these various plants. While diverse in approach, reflecting differing risk parameters and considerations, these gas-fired construction contracts share certain similarities, including approaches to performance risk, schedule considerations, and limitation of liability. I will address the lessons learned from the gas experience and consider how they impact the next round of coal-fired construction forecast to occur doing the next 10 to 20 years.

Recent capacity issues in California and elsewhere, the uncertainty of the deregulation process, and concerns over an over-reliance on traditionally volatile gas as an exclusive fuel source have regenerated interest in plentiful coal as an alternative solution to the emerging energy crisis. The Republican administration's recently announced energy plan includes coal as a critical component, with the politically expedient emphasis on clean coal technology as a necessary selling point to the nation's voters and sensitive

E. P.C. CONTRACTING IN A SELLER'S MARKET - SHOULD IT STILL BE THE PROJECT DELIVERY SYSTEM OF CHOICE ?

Fred Lyon, The Lyon Firm, P.A.
Energy Construction Law

In the 1990s, owners, contractors, and vendors frequently utilized an engineer/procure/construct (EPC) approach to project delivery of new power plants ("turnkey" contracting). This system of project delivery evolved in the context of the independent power market and developing technology. The advantage was sole source responsibility and consolidation of risk, in theory to control and limit dispute. Now that the market is changing, with more balance sheet construction, an overheated market with contractors and vendors less willing to assume risk that they cannot control, and the need for rapid delivery, the question must be asked when and even whether EPC construction still makes sense. This presentation will address:

*Types of projects most and least appropriate for EPC contracting
*Which owners are best served by the turnkey approach
*How should the EPC team be configured
*Has EPC contracting actually resulted in less disputes and more timely, cost effective contracting?

Within this context, the important EPC contract clauses will be evaluated and recommendations for their use will be made, including:

*Wrap-around performance guarantees
*Liquidated damages
*Assurances of payment
*Dispute control
*Partnering and teambuilding

As the industry undergoes rapid evolution, old models of doing business need to be constantly re-evaluated. Even EPC contracting, a creature of the 1990s, needs to be scrutinized to see if it remains a preferred business model.

It is a truism that energy construction will remain a hot market for at least a decade. The most pessimistic observers forecast the need for one new power plant a week; those less gloomy nevertheless predict that a plant every other week will be required to avoid shortages and rolling blackouts (New York Times, May 2001). Under any circumstances, major environmental infrastructure will be mandated; attention is also only now being paid to the need for major investment in the too long-ignored transmission grid. In this context, builders of plants, environmental controls, and the grid will look to the most recent past to guide their decision regarding project delivery, risk allocation, and contracting. The attention will inevitably be captured by the EPC contracts which have dominated energy construction during the last decade.

Much has changed during that decade. Technology, environmental issues, and efficient project management have taken on new importance. Contracting techniques which worked in the days of a regulated environment where costs were almost always rolled without question into the rate base are no longer appropriate in an uncertain, deregulating, competitive environment. Project management, which is defined by the commercial terms of a contract and the attendant risk allocation, has especially been recognized as critical to a project's success.

Plants built in the 1990's were almost exclusively gas-fired, frequently constructed by thinly capitalized IPPs. The market has been sensitive to this reality in structuring contracts leading to the emphasis on EPC agreements. Moreover, the first to market often will determine the profitability of a project. One month improvement in a schedule can provide a generator critical access to a peaking season, generating millions of dollars in potential profits. Generators no longer simply manage tightly regulated assets; they sell electricity. Within this context, efficient and timely construction of new facilities directly bears on the short and long term profitability of the selling entity. As outlined below, the allocation of risk in connection with a construction contract no longer can be viewed as simply a boilerplate activity - one way or another, such allocation will always go directly to a project's bottom line - for either the contractor or owner.

Technology and environmental issues will be an important part of the construction equation, influencing the decision whether to use an EPC approach. Both the owner and contractor must manage risk within a changing technological and environmentally sensitive arena. In any construction context, change is the primary risk and danger which will extend schedule and increase costs. Continued uncertainty about environmental regulations (and shifting political allegiances) will impact the construction of new energy facilities and must be factored into the equation of project delivery and EPC contracting. Blindly using an EPC approach, which while effective has nevertheless not been without its problems, will insure problems during the next round of construction. Continued cautious calibration of the risk equation should determine whether an EPC approach is appropriate.

Historical context. Anticipating where the EPC construction market is heading requires an understanding of its historical roots. Prior to the 1990s, plants were typically built by investor-owner utilities utilizing tried and true technology with very conservative project delivery systems. They were typically constructed using the traditional approach to construction - design/bid/build with the utility contracting first with any one of several established Architect/Engineer design firms to engineer the facility and then with a general contractor who built the plant. Frequently these contracts were on a cost-plus basis with few incentives to control costs. During the 1980s, as rate commissions became more cost sensitive, the industry moved away from a single general contractor to experimenting with a lump sum, multiple-prime approach which required greater coordination and occasionally led to cost overruns. However, because the market remained non-competitive, few problems resulted with prudency reviews still typically allowing the recovery of most, if not all, costs associated with the construction of new coal-fired capacity.

Everything changed in the 1990s - including who was building, what they were building, and how they were contracting. Instead of IOUs, the owners were IPPs and the emerging national energy companies; instead of coal and nuclear plants, the project of choice was typically gas fired, both base load and peaking; instead of cost plus traditional contracting, the delivery system of choice became engineer-procure-construct (EPC) or some variation thereof. A host of evolving regulatory and statutory incentives encouraged first the IPPs and then the national energy companies to build new gas facilities. These comparatively new players in the market had different incentives and agendas than the IOUs which directly impacted how they chose to contract for the construction of their new power plants.

In the case of the IPPs, the financing of project was obviously critical. Their projects were not funded off a healthy balance sheet with equity to back-stop the risk in a deal. They were more typically project-financed by any one of several international or domestic lenders notoriously unenthusiastic about risk. These risk-averse lenders demanded that their thinly capitalized borrowers, the IPPs, proceed on a non-recourse basis with a contractor to whom as much (ideally all) risk should be shifted.

Performance - schedule - environmental issues - the lenders for a typical gas project insisted that the EPC contractor assume the risk for virtually all contingencies. Sole source responsibility was intended to obviate problems and reassure skittish lenders. The construction contracts reflected this harsh, often inequitable risk shifting approach (by way of full disclosure, the author believes that the best way to insure successful contracting is for risk to be borne by the party best able to control it, hence risk sharing; risk-shifting contracts, which often serve other agendas, are more likely to result in dispute and contention by the end of the project). The EPC contracts were heavily laden with onerous liquidated damage clauses and associated schedule and performance guarantees, often with no limitation of potential EPC liabilities.

The national energy companies were perhaps more equipped to finance these gas projects off their balance sheets. But as aggressive competitors in a volatile and potentially enormously profitable market, they had their own important construction considerations with a particular emphasis on the premium of being first to market. Consequently, they contracted for speed, with incentives for timely and even early completion and reliance on management techniques like partnering to avoid time-consuming and divisive dispute. Again EPC approaches were favored.

In the case of both the IOUs and national energy companies, environmental considerations dictated the construction of gas-turbine projects. The market reflected increasingly reliable and clean technology with a period at least through the end of the decade into 2000 of comparatively stable fuel prices. Both the IOUs and national companies relied extensively on the EPC model for which they were willing to pay as much as an 8 to 15% premium (for the assumption of risk by the contractor) - emphasis was placed upon the use of performance specifications rather than the detailed design specification approach typically used by the traditional IOU. Performance, not design, was the key. The emphasis was on schedule and performance; the EPC construction contracts reflected these realties of the marketplace.

The contracting industry which serviced this market consisted of the AE firms and the large contractors experienced in the construction of generating facilities. There was consolidation and innovation within this industry - with both the designers and contractors reacting to the use of the EPC model by reaching across the old bright line of responsibilities to begin doing work which they traditionally had left to others. In their enthusiasm to service and support this gas market, these E&C firms initially were too willing or enthusiastic in assuming risk that they often could not control during the construction process - a prescription for financial problems if not disaster.

These E&C contractors would take performance wraps on equipment which they had not purchased or specified; they too often agreed to unrealistic schedules, with either non-existent or relatively narrow limitation of liabilities. The consequence was a number of financial disasters for large E&C contractors. This experience, together with the recent surge in demand, creating a seller's market, has led these contractors to take a more aggressive stance in limiting their risk - walking away from jobs where they are being asked to assume risks that they cannot control, especially with regard to performance and schedule. These E&C contractors are including greater contingencies in their prices (driving up capital costs generally), insisting upon extensive limitation of liabilities, and even demanding a return to cost-plus contracting with incentives.

These realities of the 1990's market will impact the next round of construction and how the projects are constructed. Technology, performance, and schedule will dominate this market in ways completely different from the construction of these plants 20 to 50 years ago. Moreover, the enormous need for new plants, grid capacity will put a tremendous strain on the delivery systems being used. In the gas turbine market, equipment availability is the driving force of construction - but any delays in this process has a ripple effect throughout the entire construction phase. Even more importantly to construction generally is the developing labor shortage, in both engineering and construction. Some estimate a labor shortage of 20-30%, exacerbated by the lack of experienced engineers and project managers. This shortage of skilled designers and craftsmen to build new plants is a fast developing problem that will slow down construction and again go right to the bottom line. A critical factor of the construction risk allocation process will be who will bear the risk of the shortage of labor and engineers.

Within this environment, owners considering the construction of new facilities of whatever type will need to determine what kind of project delivery system best serves their interests - traditional v. EPC, single contractor v. multiple primes, lump sum v. cost plus. As the 1990's market has demonstrated, different owners have different agendas and different risk parameters. Lenders may continue to dictate that project-financed jobs shift all risk to the contractors, suggesting continued reliance on the EPC model with its 8-15% premium. Large IOUs and national energy companies may have sufficient in house construction expertise to parcel out the different construction tasks and to avoid payment of the premium. Builders of all facilities will face the same areas of concern, however, as the IPPs and national energy companies, including:

*Performance risk - with guarantees and warranties
*Schedule risk - with allocation of the risk of delay, liquidated damages, and

force majeure (with labor shortages as a component).
*Limitation of liabilities - the appropriate level of caps and consequential damages.
*Environmental risks- changing political environment
*Dispute control - partnering and techniques to avoid litigation, including disputes review boards, structured negotiations, and mediation.

How the industry addresses these concerns in their construction contracts will translate directly to the bottom line - profits, not traditional prudency, will dictate the appropriate allocation of risk. Every project is different; careful consideration of risk and the appropriateness of the EPC approach will determine profitably.

Project delivery systems. Not all project delivery systems are created equal; not all are right for every type of power plant construction. As outlined, the types most frequently encountered include traditional (Design-bid-build), design build or EPC, construction management, and multiple prime. Pricing can be structured in a variety of ways, including lump sum or fixed price, cost plus on a Not-to exceed basis, straight cost - plus, or cost plus with an incentivized fee structure.

IPPs in the gas market relied heavily on the EPC approach with a fixed price, often paying an 8 to 15% premium for the single source assumption of responsibility of virtually all risk by the EPC contractor. The EPC contractor could come in a variety of forms, including a large AE, contractor, or vendor who would then subcontract its engineering/procure/construct responsibilities as appropriate. The lead EPC role varies - each element of the industry will contend that they are best equipped to serve this responsibility. Increasingly, however, there appears to be reliance on a joint venture as the EPC contractor with appropriate allocation of responsibility in accordance with expertise and financial investment. In that context, joint venture partners who have worked together previously are generally most successful. If a single entity is to be selected, some give less preference to a large contractor with AEs and OEMs less favored

National energy companies also have relied upon the EPC approach. These companies have often locked up large number of turbine contracts with any one of the several OEM vendors. They will then assign these contracts to the successful balance of plant EPC contractor. Under these circumstances, it is especially important for the parties to agree on how the risk of non-performance of the assigned vendor's equipment will be allocated. The balance of plant contractor should be certain that its risk is co-extensive ("back to back" or "flagged up") with or less than that of the vendor who should bear the risk of the non-performance of its equipment. EPC contracts in the 1990's have too often involved assumption of risk of immature technology, with the contractor left holding a very large bag.

Given the recent experience of the energy construction industry with the EPC project delivery system, it is likely that the initial approach to construction of facilities will inevitably focus on the EPC approach. Certainly owners will consider this system in opposition to the traditional approach ("design-bid-serve") they used in the past. In that context, the IOU owners and experienced national energy companies should avoid rushing blindly down the EPC road which carries with it a toll of 8

to 15%. This premium can be avoided if the Owner assumes some risk itself and focuses instead on an aggressively managed construction program relying upon its own in-house staff (lenders may not permit this in the context if a project-financed job). In this context, even a multiple prime approach may be more cost effective. Not only can construction packages be broken down into the traditional trades such as mechanical, electrical, or construction, innovative utilities should consider dividing the construction by facility - even considering transferring the construction and ownership interest of parts of the plant to other, profit-making entities (e.g. the SCRs or other environmental control systems which generate marketable byproduct). It would be a mistake for owners to assume that the EPC project delivery system relied upon in the gas industry is always and necessarily the best approach. Before deciding upon this approach, all the various alternatives should be realistically priced. In a competitive market, an 8 to 15% capitol premium may spell the difference in profitability.

Pricing. The need for certainty and profits would seem to suggest that the best way to price the next round of construction would be on a lump sum or fixed price basis. Unfortunately, the market appears likely to make that approach problematic (again lenders complicate this analysis on project-financed jobs). As discussed, E&C contractors, once burned, are not going to agree to lump sum these contracts, especially in the light of the serious craft and design labor shortage. Already prominent AEs are retreating from the wholesale assumption of uncontrollable risk. The largest component of risk dictating schedule is labor; E&C contractors are reluctant to lump sum this risk given the developing shortages.

Rather than hard money , the preferred approach now is a variation of cost plus, with the owner and contractor agreeing to certain target incentive involving labor and safety and other measurable indicia of efficient performance. The contractor will agree to put part of its fee at risk, depending on how well the various incentives are achieved, but under no circumstances does the contractor assume the risk of cost overruns. Alternatively, the parties will agree on target manhours and productivity rates, with the owner to gain the benefit of any improvements on these targets, but also assuming the risk of any overruns. The E&C community will either shift or share the risk of these marketplace labor realities to the owner which will need to pay a greater construction cost to reflect these conditions.

Risk allocation. A construction contract does nothing but allocate risk. EPC contracts are no different, with most risk by definition allocated to the contractor. Whoever assumes an allocated risk ideally is compensated accordingly. The best contracts are ones where a party assumes only those risks which it is in the position to control. However that is not always the risk philosophy of either an owner or contractor, depending on the exigencies of the market and the financing of a particular project. Regardless, the primary areas of risk allocation and the related construction clauses will involve performance, schedule, force majeure, limitation of liability, payment, and dispute control and resolution. Although EPC contracts endeavor to shift most of these risks to the contractor, hybrid approaches insure theses issues will remain part of every negotiation.

Performance risk. The energy construction industry of the 1990's, with its emphasis on technology and balance sheet financing, has placed special emphasis on performance. EPC contracts

are intended to implement sole source responsibility for performance. Lending and environmental constraints require no less. Therefore these EPC contracts are replete with performance guarantees and associated liquidated damages for failure to comply with performance specifications. The resulting contracts will delineate very specific performance demands or requirements, like the gas contracts, in the context of Net Heat Rate, Net Electrical Output, and availability. Enforcement of these guarantees is achieved by liquidated damages, subject to a negotiated cap (10 to 35%). These LDs must be reasonable (not a penalty) and bear an approximation to actual damage when forecast. Within the EPC environment and increasingly aggressive contractors and vendors, typical market LDs are as follows:

Schedule - $10,000 to $100,000 daily (with sliding scale)
NEO - $350 to $1,000 kwh (95%)
NHR - $10,000 to $100,000 btu/kwh (105%)

With respect to the various emission and environmental guarantees, the industry has proceeded on a must-fix basis to bring the unit into compliance with its various permitting obligations. Environmental constraints will remain critically important in coming years; must fix remedies will continue to characterize EPC contracts.

Scope of warranty. An unresolved issue in some EPC contracts is the scope of the warranty provided by the vendor. The confusion involves the liability of the vendor for downstream or collateral damage if its product proves defective. Owners prefer to contract for "bumper to bumper" coverage which imposes upon the vendor the obligation to repair all damage done by its defective part, at least within the confines of the supplied equipment. Vendors, not surprisingly, see the scope of this warranty much more narrowly, arguing that their obligation is only to repair a defective part and not collateral damage, even if it is within the configuration of the equipment provided by the vendor. This allocation of risk is directly dependent upon the wording of the warranty clause itself.

Unfortunately, within the as industry, these clauses frequently have not proven clear on this point, leading to dispute on the scope of warranty obligation if and when damage does occur. The parties should devote special attention to this issue as part of contractual negotiations; if addressed up front, any gaps can be covered by insurance. The worst result is if the parties do not squarely address the issue, each have a different interpretation, and then end up in an expensive dispute if and when damage does occur. Like all risk, it is best allocated by the parties prior to a dispute rather than by a third party like a judge after the problem arises. If not directly addressed, confusion will result, especially in the EPC environment.

Schedule risk. In an increasingly competitive market, one month can make all the difference - in access to a peak season, in fuel supply and prices, in increasingly sophisticated and risky trading. Gas turbine construction is relatively short time-framed in comparison to other facilities. Consequently, the EPC gas turbine contracts have placed a special premium on timely construction with associated liquidated damages and even incentives for early completion. This emphasis on speed has sometimes meant that construction begins before complete design, which can be a prescription for problems since a changed design can lead directly to cost overruns.

If the coal market re-energizes, schedule risks in the EPC contract are likely to be allocated somewhat differently. The three year construction of a coal plant provides the comparative luxury that there is simply more time to overcome the impact of a change or a mistake. The more time there is to finish a plant, the more float which is available to bring the project back onto schedule. Moreover, coal is priced more stably than the gas market which will vitiate the need for speed and allow the constructors of new coal facilities to focus on accuracy. Nevertheless, liquidated damage clauses tied to likely losses (and not a Penalty) will be included in coal construction contracts to properly incentive the contractor. Early completion bonuses are less likely since the market is simply less volatile than gas.

Classically risk of delay is also addressed by the inclusion in contracts of clauses which either allow or disallow the contractor's right to recover delay damages for owner-caused delays. These "no damage for delay" clauses are narrowly construed by most courts, but nevertheless can be drafted in such a way that they are enforceable. However, this is a risk shifting device which can be easily abused. To ask a contractor to pay for delay caused by an owner is potentially inequitable. The gas market has recognized this and moved away from these clauses. However, they can still be utilitized if narrowly crafted to delineate the specific types of damages which a contractor can recover in the event of delay. If approached on that basis, they are far less likely to give rise to contractor -inflated claims for extended offsite overhead. These clauses are more typical in the project financed EPC environment where the lender wants to avoid the risk of delays.

Labor shortages. The single most important issue in energy construction for the foreseeable future will be the labor shortage in both design and craft personnel. Given the lack of design on non-gas arenas over the last 20 years, design shortages in these sectors will be particularly acute. Coal plants will require even more skilled craftsmen than the comparative cookie cutter gas facilities. The result is that some observers think that all energy construction schedules should and will be extended by 20 to 40%.

The impact of this critical issue is already being felt. Recent market developments demonstrate that E&C contractors are insisting on pricing their contracts so that the risk of labor shortages are recognized and shared or shifted to the owner. If that does not occur, and a shortage results, E&C contractors are endeavoring to justify late performance by arguing that a labor shortage is a force majeure delay that not only entitles them to more time, but additional money.

While creative, this argument is simply not in accord with most, if not all, force majeure clauses. These clauses are intended to provide time only (not dollars) to a party whose schedules are impacted by an unanticipated risk outside its control. Such a risk would not include the availability of design or craft labor which is a risk a contractor or designer should have been able to anticipate when it signed the contract. It is a risk which, without further risk allocation, is uniquely within a contractor's control. Similarly, to argue that craft unavailability is the basis of an impossibility of impracticability excuse is also unjustified since economic hardship should and does not provide the basis for non-performance (see,e.g. the Westinghouse uranium cases form the 1970s and 1980s).

Again this is an issue, like warranty, that should be dealt with by the parties up-front. Pricing of the contract is the most appropriate place. But the parties should mutually address their expectations with regard to the availability of labor and its impact on the schedule. Schedules should be realistic in light of these expectations. E&C contractors should not oversell; owners should not over demand. Like the other risks associated with construction, this is one which should be considered as part of the contacting process. Under the circumstances, as a practical matter, it would also argue strongly in favor of contracting with an E&C contractor who has access to a skilled labor pool in the area within which the project is going to be located.

Limitations of liability. During recent years, increasingly risk averse E&C contractors who have significantly limited their liabilities in order to avoid financial catastrophe. These limitation of liabilities extend beyond the usual mutual waiver of consequential damages which have been and must continue to be part and parcel of energy construction contracts. Beyond that, however, the E&C contractors have been increasingly aggressive in limiting the scope of their liability for liquidated damages with respect to performance guarantees, schedule, and liquidated damages.

Typically, these Lds are limited separately for both performance (usually in the 10-20% of total contract value) and schedule (increasingly only 10-15% as a cap). Then overall Lds will be limited to 20-30% of the contract value. An overall cap on liability for any reason whatsoever is then attached to the contract - usually 100%, but in view of the LD cap and the consequential damage waiver, this risk in is considered minimal. These limits are far more aggressive than even 2 or 3 years ago, reflecting the reality of a once burned, risk averse marketplace. Such limits are likely to be pursued aggressively in the contractor-oriented markets place. They are simply too well-entrenched to be negotiated out of the industry approach to complex construction.

Payment and performance risk. The payment cycle, its timing and security, is also a significant component of the risk allocation. The owner must be certain that it is dealing with a financially viable entity. Typically, they have sought security of performance with either a letter of credit or corporate/parent guarantee, with surety bonds (and their premium of 1%) somewhat less common. Again the market is changing this reality as contractors shy away from corporate or parent guarantees. Contractors conversely need their own security of payment. In the case of gas contracts, payment risk has occasionally been addressed by aggressive from-end loading of payment to avoid the risk of later problems. This may be especially true in the case of contracts with limited liability companies on a non-recourse basis. However, in that context, it is important for both contractor and owner to pay attention to the payment process to insure that as it proceeds, both parties execute the necessary partial affidavits and waiver of liens to insure that the owner's interest in payment is protected while recognizing the contractor's right to lien in accordance with governing law. Contractors also should insist upon quick payment cycles to insure that they do not get too deeply into the job. Thirty days is typical with non-payment constituting a material breach. This reality is not altered by the EPC context.

Indemnification. Indemnifying or holding harmless another party to the contract for injury to a third party can take a variety of forms. A broad indemnity clause will provide that the contractor indemnifies the owner even for owner's sole negligence. An intermediate clause provides indemnity

if the contractor bears any responsibility for the incident; a narrow clause provides for proportional indemnity based on percent of responsibility. As the industry has matured, more and more contracts have moved away from disfavored broad or even intermediate indemnity clauses in the direction of a more equitable proportional indemnity. In this context, environmental indemnity also looms large. Owners typically take this risk. Contractors should insure that there is adequate owner financial stability since this exposure can be significant. Again the EPC environment does not change this risk allocation reality.

Dispute control. Dispute on a major construction process is inevitable. No contract, no project delivery system can change that reality of business and human relationships. However inevitable it may be, however, dispute can still be controlled. And in that effort, the industry has learned some valuable lessons which can and will be incorporated into the next round of construction. EPC contracting has not eliminated dispute. Because of overly aggressive risk allocation, so some projects continue to have delays, claims, and litigation.

Proactive project management remains the best way to keep dispute from raging out of control and destroying a project. To achieve this result, owners and contractors increasingly have relied on partnering or team building relationships developed during the pre-performance stages to create a framework for effective project communications. These partnering efforts are frequently a contract requirement, although language must be used to clarify that they do not in any way alter contractual obligations. Open-book contracting or the development of long term relationships supplement this approach and creative an atmosphere of mutual trust intended to control dispute.

The EPC construction industry has built into contracts a layer of dispute resolution techniques which are intended to build a firewall around disputes which may otherwise burn over into the holocaust of construction litigation. These contractually mandated techniques include dispute review boards (DRBs) which are usually appointed boards of experienced energy construction professionals who meet during performance to help the parties resolve differences which may arise. If DRBs are not successful or preferred, other contracts mandate structured negotiations and then mediation (consensual non-binding negotiations using a third party) as prerequisites to litigation. All of these techniques are intended to keep the parties out of court and have worked well in recent years, predicated upon the mutual good faith of owner and contractor and the recognition that construction litigation usually serves no one's interests other than the lawyers.

As new plants are brought under contract during the next several years, in many ways they will reflect recent experience. Performance issues will be addressed by virtue of guarantees intended to backstop evolving technology. Schedule issues will be critical given the labor shortages. Pricing will reflect these new marketplace realities. These issues will be worked out in the context of potentially innovative project delivery systems. EPC approaches will remain popular, especially on project-financed jobs. These contracts are not necessarily a panacea. Under any circumstances, however, it will be prudent for the industry to remember that a harsh EPC contract serves the interest of no one. Too frequently they create more problems than they solve - shifting risk which leads to unpredictable results. The best contract remains a fair contract - each party controlling the risk it can control. The result is much more likely to be a project built on time, on budget - which,

after all, is the goal of all construction, then and now. EPC contracts should be carefully considered - they are most appropriate with IPPs, risk averse projects. Competitive IOUs and national energy companies should aggressively consider the alternatives.

ENGINEERING, PROCUREMENT AND CONSTRUCTION AGREEMENT

Introduction

This ENGINEERING, PROCUREMENT AND CONSTRUCTION AGREEMENT (the "Agreement") is entered into as of the 8th day of April, 2008 (the "Effective Date"), by and between GEORGIA POWER COMPANY, a Georgia corporation ("GPC"), acting for itself and as agent for OGLETHORPE POWER CORPORATION (AN ELECTRIC MEMBERSHIP CORPORATION), an electric membership corporation formed under the laws of the State of Georgia, MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA, a public body corporate and politic and an instrumentality of the State of Georgia, and THE CITY OF DALTON, GEORGIA, an incorporated municipality in the State of Georgia acting by and through its Board of Water, Light and Sinking Fund Commissioners, and a consortium consisting of WESTINGHOUSE ELECTRIC COMPANY LLC, a Delaware limited liability company having a place of business in Monroeville, Pennsylvania ("Westinghouse"), and STONE & WEBSTER, INC. a Louisiana corporation having a place of business in Charlotte, North Carolina ("Stone & Webster"). Except where the context otherwise requires, Westinghouse and Stone & Webster hereinafter are individually referred to as a "Consortium Member" and collectively as "Contractor". Owners and Contractor may be referred to individually as a "Party" and collectively as the "Parties".

Recitals

WHEREAS, Owners desire to develop, license, procure and have constructed a two-unit, nuclear-fueled electricity generation facility to be located at the existing site of the Vogtle Electric Generating Plant in Waynesboro, Georgia;

WHEREAS, it is the expectation of GPC that construction of the new facility will begin upon issuance of a certificate for public convenience and necessity by the Georgia Public Service Commission, that all costs incurred in the construction of the facility will be incurred in compliance with such certificate, as it may be amended, and that all costs incurred by GPC during the construction period and verified by the Georgia Public Service Commission will be included in the rate base and fully recovered;

WHEREAS, Westinghouse is engaged in the business of designing, developing, supplying and testing commercial nuclear facilities and has developed a pressurized water Nuclear Power Plant known as the AP1000 for which the U.S. Nuclear Regulatory Commission has issued a Standard Design Certification in the form of a rule set forth in Appendix D to 10 C.F.R. Part 52;

WHEREAS, Stone & Webster is engaged in the business of designing and constructing industrial and power generation facilities;

WHEREAS, Westinghouse and Stone & Webster desire to assist Owners in the licensing of and to design, engineer, procure, construct and test two AP1000 Nuclear Power Plants and related facilities, structures and improvements at the Vogtle plant site in Georgia to be designated VEGP Units 3 and 4; and

WHEREAS, Owners and Contractor now desire to enter into this Agreement to provide for, among other things, the design, engineering, procurement, installation, construction and technical support of start-up and testing of equipment, materials and structures comprising the Facility.

NOW, THEREFORE, in consideration of the recitals, the mutual promises herein and other good and valuable consideration, the receipt and sufficiency of which the Parties acknowledge, the Parties, intending to be legally bound, stipulate and agree as follows:

ARTICLE 17 LIMITATION OF LIABILITY

17.1 NO CONSEQUENTIAL DAMAGES .
IN NO EVENT SHALL CONTRACTOR OR CONTRACTOR INTERESTS OR OWNERS OR OWNERS' INTERESTS BE LIABLE, WHETHER BASED ON CONTRACT (INCLUDING BREACH, WARRANTY, ETC.) OR TORT (INCLUDING FAULT, NEGLIGENCE AND STRICT LIABILITY), OR OTHERWISE, UNDER ANY WARRANTY OR OTHERWISE, RELATING TO OR ARISING OUT OF THE WORK OR THIS AGREEMENT, FOR ANY CONSEQUENTIAL, INDIRECT, SPECIAL, PENAL, OR INCIDENTAL LOSS, DAMAGE OR INJURY, INCLUDING ANY SUCH DAMAGES WHICH RESULT FROM LOSS OF USE OF PROPERTY, EQUIPMENT OR SYSTEMS, LOSS BY REASON OF FACILITY SHUTDOWN OR SERVICE INTERRUPTION, COSTS OF CAPITAL OR EXPENSES THEREOF, LOSS OF PROFITS OR REVENUES OR THE LOSS OF USE THEREOF, LOST BUSINESS OPPORTUNITY, OR COST OF PURCHASED OR REPLACEMENT POWER (INCLUDING ADDITIONAL EXPENSES INCURRED IN USING EXISTING POWER FACILITIES) OR FROM CLAIMS OF CUSTOMERS.

ENGINEERING, PROCUREMENT AND CONSTRUCTION AGREEMENT

Introduction

This ENGINEERING, PROCUREMENT AND CONSTRUCTION AGREEMENT (the "Agreement") is entered into as of the 31st day of December, 2008 (the "Effective Date"), by and between FLORIDA POWER CORPORATION, d/b/a PROGRESS ENERGY FLORIDA, INC. ("Owner"), and a consortium consisting of WESTINGHOUSE ELECTRIC COMPANY LLC, a Delaware limited liability company having a place of business in Monroeville, Pennsylvania ("Westinghouse"), and STONE & WEBSTER, INC., a Louisiana corporation having a place of business in Baton Rouge, Louisiana ("Stone & Webster"). Except where the context otherwise requires, Westinghouse and Stone & Webster hereinafter are individually referred to as a "Consortium Member" and collectively as "Contractor". Owner and Contractor may be referred to individually as a "Party" and collectively as the "Parties".

Recitals

WHEREAS, Owner desires to develop, license, procure and have constructed a nuclear-fueled electricity generation facility;

WHEREAS, Westinghouse is engaged in the business of designing, developing and supplying commercial nuclear facilities and has developed a pressurized water Nuclear Power Plant known as the AP1000 (the "AP1000 Nuclear Power Plant") for which the U.S. Nuclear Regulatory Commission has issued a Standard Design Certification in the form of a rule set forth in Appendix D to 10 C.F.R. Part 52;

WHEREAS, Stone & Webster is engaged in the business of designing and constructing industrial and power generation facilities;

WHEREAS, Westinghouse and Stone & Webster desire to assist Owner in the licensing of, and to design, engineer, procure, construct, and test two AP1000 Nuclear Power Plants and related facilities, structures and improvements at an unimproved, "greenfield" site in Levy County, Florida (the "Facility");

WHEREAS, Owner and Contractor now desire to enter into this Agreement to provide for, among other things, the licensing support, design, engineering, procurement and installation of Equipment (as defined below), and construction and testing of the Facility; and

WHEREAS, Westinghouse, under a separate agreement between Westinghouse and Owner dated the Effective Date, will be supplying Nuclear Fuel and Related Services (as defined below) for the Facility.

ARTICLE 17 LIMITATION OF LIABILITY

17.1 No Consequential Damages.
EXCEPT TO THE EXTENT THE PAYMENT OF LIQUIDATED DAMAGES OR PERFORMANCE OF AN EXPRESS REMEDY COULD OTHERWISE BE DEEMED TO BE SUCH DAMAGES, IN NO EVENT SHALL OWNER OR ITS AFFILIATES OR THEIR CONTRACTORS, OR CONTRACTOR OR CONTRACTOR INTERESTS, BE LIABLE TO EACH OTHER, WHETHER BASED ON CONTRACT (INCLUDING BREACH, INDEMNITY OR WARRANTY) OR TORT (INCLUDING FAULT, NEGLIGENCE AND STRICT LIABILITY), UNDER ANY WARRANTY OR OTHERWISE, RELATING TO OR ARISING OUT OF THE WORK OR THIS AGREEMENT, FOR ANY PUNITIVE DAMAGES OR ANY CONSEQUENTIAL, INDIRECT, SPECIAL OR INCIDENTAL LOSS, DAMAGE OR INJURY, INCLUDING ANY SUCH DAMAGES WHICH RESULT FROM LOSS OF USE OF PROPERTY, EQUIPMENT OR SYSTEMS, LOSS BY REASON OF FACILITY SHUTDOWN OR SERVICE INTERRUPTION, COSTS OF CAPITAL OR EXPENSES THEREOF, LOSS OF PROFITS OR REVENUES OR THE LOSS OF USE THEREOF, OR COST OF PURCHASED OR REPLACEMENT POWER (INCLUDING ADDITIONAL EXPENSES INCURRED IN USING EXISTING POWER FACILITIES) OR FROM CLAIMS OF CUSTOMERS.
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ENGINEERING, PROCUREMENT AND CONSTRUCTION AGREEMENT

Introduction

This ENGINEERING, PROCUREMENT AND CONSTRUCTION AGREEMENT (the "Agreement") is entered into as of the 23rd day of May, 2008 (the "Effective Date"), by and between SOUTH CAROLINA ELECTRIC & GAS COMPANY ("SCE&G"), for itself and as agent for the South Carolina Public Service Authority, a body corporate and politic created by the laws of South Carolina ("Santee Cooper") pursuant to the Limited Agency Agreement between SCE&G and Santee Cooper dated May 23, 2008 attached hereto as Exhibit V (the "Limited Agency Agreement"); and a consortium consisting of WESTINGHOUSE ELECTRIC COMPANY LLC, a Delaware limited liability company having a place of business in Monroeville, Pennsylvania ("Westinghouse"), and STONE & WEBSTER, INC., a Louisiana corporation having a place of business in Charlotte, North Carolina ("Stone & Webster"). Except where the context otherwise requires, Westinghouse and Stone & Webster hereinafter are individually referred to as a "Consortium Member" and collectively as "Contractor". Without limiting the authority of SCE&G to act as agent on behalf of Santee Cooper as provided in Section 3.6(a) hereof, references herein to "Owner" shall mean each of SCE&G and Santee Cooper. Owner and Contractor may be referred to individually as a "Party" and collectively as the "Parties".

Recitals

WHEREAS, Owner desires to develop, license, procure and have constructed a nuclear-fueled electricity generation facility;

WHEREAS, Westinghouse is engaged in the business of designing, developing and supplying commercial nuclear facilities and has developed a pressurized water Nuclear Power Plant known as the AP1000 (the "AP1000 Nuclear Power Plant") for which the U.S. Nuclear Regulatory Commission has issued a Standard Design Certification in the form of a rule set forth in Appendix D to 10 C.F.R. Part 52;

WHEREAS, Stone & Webster is engaged in the business of designing and constructing industrial and power generation facilities;

WHEREAS, Westinghouse and Stone & Webster desire to assist Owner in the licensing of and to design, engineer, procure, construct, and test one or two AP1000 Nuclear Power Plants and related facilities, structures and improvements at the V.C. Summer station;

WHEREAS, Owner and Contractor now desire to enter into this Agreement to provide for, among other things, the design, engineering, procurement and installation of equipment and materials, and construction and testing of the Facility;

ARTICLE 17 LIMITATION OF LIABILITY

17.1 No Consequential Damages.
EXCEPT TO THE EXTENT THE PAYMENT OF LIQUIDATED DAMAGES COULD OTHERWISE BE DEEMED TO BE SUCH DAMAGES, IN NO EVENT SHALL CONTRACTOR OR CONTRACTOR INTERESTS BE LIABLE, WHETHER BASED ON CONTRACT (INCLUDING BREACH, WARRANTY, INDEMNITY, ETC.) OR TORT (INCLUDING FAULT, NEGLIGENCE AND STRICT LIABILITY), UNDER ANY WARRANTY OR OTHERWISE, RELATING TO OR ARISING OUT OF THE WORK OR THIS AGREEMENT, FOR ANY CONSEQUENTIAL, INDIRECT, SPECIAL, PENAL, OR INCIDENTAL LOSS, DAMAGE OR INJURY, INCLUDING ANY SUCH DAMAGES WHICH RESULT FROM LOSS OF USE OF PROPERTY, EQUIPMENT OR SYSTEMS, LOSS BY REASON OF FACILITY SHUTDOWN OR SERVICE INTERRUPTION, COSTS OF CAPITAL OR EXPENSES THEREOF, LOSS OF PROFITS OR REVENUES OR THE LOSS OF USE THEREOF, OR COST OF PURCHASED OR REPLACEMENT POWER (INCLUDING ADDITIONAL EXPENSES INCURRED IN USING EXISTING POWER FACILITIES) OR FROM CLAIMS OF CUSTOMERS.

Exhibit 10.3 DEVELOPMENT AND CONSTRUCTION SERVICES AGREEMENT

Introduction

This Development and Construction Services Agreement ("Contract") is entered into this 6th day of November, 2009 by and between Grant County Wind, LLC, a Minnesota limited liability company ("GCW") and the ten additional signature parties hereto who are each individual wind generator companies and the members of GCW (each a "Generator LLC"; the Generator LLCs and GCW, collectively "Owner") and Juhl Energy Development, Inc., a Minnesota corporation ("Contractor" and collectively with the Owner, the "Parties"). This Contract is intended to supersede any prior written or oral agreements or understandings between the Parties and their respective predecessors and/or affiliates with respect to the subject matter hereof.

Recitals

A. Owner wishes to obtain the services of Contractor for the development, design, engineering, construction, procurement, installation, erection, and financing of a commercial wind energy generation project (the "Project") on property in which Owner will have control or ownership interest (the "Project Site"), which Project shall include, but is not limited to, the ten (10) [brand omitted] Wind Turbine Generators and related equipment supplied pursuant to the Turbine Supply Agreement (collectively, the "Turbine Equipment"), meteorological stations, foundations (including those for transformers, met masts and Wind Turbines), a collection system, a substation, all facilities necessary to interconnect the Turbine Equipment to the Project's substation, all access roads, interconnection facilities, switchgear, transformers, pad transformers, grid interconnects, electrical works (whether above ground or below ground), control works, cable and pipe ducting, a communications system, communications system cables and interface hardware, maintenance buildings, fiber-optic cabling, staging areas, crane pads, fencing, barriers, and FAA warning lights.

B. Contractor is willing to provide such services on the terms and for the consideration described herein.

C. The Parties wish to set forth the basic terms on which they will proceed with development of the Project.

11. Limitation of Liability.

(a) Overall Limitation of Liability. The aggregate liability of Contractor, its Subcontractors, agents and employees, to Owner (or any successor thereto or assignee thereof) for any and all claims and/or liabilities arising out of or relating in any manner to the BOP Work as is set forth on Exhibit A or to Contractor's performance or non-performance of its obligations with respect to the BOP Work, whether based in contract, tort (including negligence), strict liability, or otherwise, shall not exceed, in the aggregate, fifteen percent (15%) of the Contract Price; provided, however, that upon Substantial Completion, such aggregate liability shall be limited to ten percent (10%) of the Contract Price. Notwithstanding the foregoing, the preceding limits of liability shall (i) exclude any liability satisfied by the proceeds of insurance maintained by Contractor in accordance with this Contract, or which would have been satisfied by insurance had Contractor maintained proper insurance in accordance with this Contract; (ii) not apply to any claims for fraud, gross negligence or willful misconduct, or failure to pay Subcontractors; (iii) not apply with respect to the indemnification obligations pursuant to Section 10; and (iv) exclude the Contractor's warranty obligations under Section 8.

(b) Consequential Damages. Owner and Contractor hereby waive all claims against each other (and against each other's parent company and affiliates and [name intentionally omitted]) for any consequential, incidental, indirect, special, exemplary or punitive damages (including, but not limited to, loss of actual or anticipated profits, revenues or product; loss by reason of shutdown or non-operation; increased expense of operation, borrowing or financing; loss of use or productivity; or increased cost of capital), and regardless of whether any such claim arises out of breach of contract or warranty, tort (including negligence), product liability, contribution, strict liability or any other legal theory.

CONTRACT FOR ENGINEERING, PROCUREMENT AND CONSTRUCTION SERVICES NEW PLYMOUTH POWER PLANT

Introduction

THIS CONTRACT ("Contract") is made and entered into this _____ day of April, 2009, by and between Idaho Power Company, an Idaho corporation with offices located at 1221 West Idaho Street, Boise, Idaho ("Owner") and Boise Power Partners Joint Venture, a joint venture consisting of Kiewit Power Engineers Co., a Delaware corporation with offices located at 7311 W 132nd St., Suite 300, Overland Park, KS 66213, and TIC-The Industrial Company, a Delaware corporation with offices located at 2211 Elk River Road, Steamboat Springs, CO 80487 ("Contractor"), for the design, engineering, procurement and construction services, as more fully described herein.

Recitals

WHEREAS, Owner wishes to have Contractor furnish certain engineering, procurement, construction management and construction services related to the Project, as more fully described in this Contract; and

WHEREAS, Owner desires to furnish certain plant equipment, interconnects, the Facility Site, and other items related to the Project, as more fully described in this Contract; and

WHEREAS, Contractor desires to engineer, procure materials, manage construction, construct and start up the Project, as more fully described in this Contract.

ARTICLE 26 LIMITATIONS OF LIABILITY

26.1 Limitation of Liability.
(a) The liability of Contractor, its members and their affiliates or related companies, for all claims, losses, damages and expenses arising from or related to in any way the performance of this Contract shall not exceed the lesser of (i) ***, excluding any assignments of OFE, or (ii) ***. Owner hereby releases Contractor from any liability in excess thereof. In addition, the total liability cap will be reduced by the proceeds of contractually specified/required insurance. Limitations on liability shall apply even in the event of breach of contract or warranty, tort (including negligence), strict liability or other basis of legal liability and shall extend to the partners, licensors, Subcontractors, and related entities of Contractor, Contractor's directors, officers, employees, and agents and the directors, officers, employees, and agents of Contractor's licensors, Subcontractors, and related entities of Contractor.

(b) Notwithstanding any other provision herein to the contrary, Contractor's risk is specifically limited for all Owner assigned or specified subcontractor items, if any, to that scope and extent of risk that each Owner assigned or specified subcontractor has accepted in its scope. This back-to-back limitation applies specifically to, but is not limited to, termination by any such Owner assigned or specified subcontractor, indemnification, patent indemnification, changes, delays, performance guarantees, emissions, noise, availability/reliability guarantees, and other guarantees of any kind, liquidated damages, liability caps, and warranty. Owner shall retain the collection risk as relates to obligations of such Owner assigned or specified subcontractor including, but not limited to, any liquidated damages. CONTRACTOR SHALL ACCEPT NO RISK FOR OFE WHETHER RISK IS FOR PERFORMANCE, DELAY, OR OTHERWISE.

(c) Upon completion of the Work or termination of the Contract, provisions relating to indemnity, waivers, releases, and limitation of liability, including, but not limited to Article 26, shall remain in full force and effect.

26.2 Consequential Damages.
In no event shall either Party hereto or any Subcontractor of any tier or any related company of either Party, including their agents, assignees, and affiliates, be liable for the loss of profits or revenue, loss of use of the equipment or any associated equipment, cost of capital, cost of substitute equipment, facilities or services, down time costs, costs in excess of estimates, loss of opportunity, loss of data, loss of goodwill, governmental penalties or sanctions imposed on Owner and/or claims of customers of the other Party for such damages or for any special, indirect, exemplary, incidental, punitive, or consequential loss or damages and Owner hereby releases Contractor and all Subcontractors and Contractor hereby releases Owner therefrom. This limitation does not apply to the liquidated damages specified in Article 27 herein.

ENGINEERING AND CONSTRUCTION AGREEMENT

Introduction
This ENGINEERING AND CONSTRUCTION AGREEMENT (the "Agreement") is entered into as of the 5th day of May, 2008 (the "Effective Date"), between DUKE ENERGY CAROLINAS, LLC, a North Carolina limited liability company having its principal place of business in Charlotte, North Carolina ("Owner"), and SHAW NORTH CAROLINA, INC., a North Carolina corporation having its principal place of business in Charlotte, North Carolina ("Contractor" and, together with Owner, collectively the "Parties" and individually a "Party").

Recitals
WHEREAS, Owner has announced its intent to procure, construct, install and commission a new nominally rated 620 MW combustion turbine combined cycle electric power plant at the Buck Generating Facility (the "Facility") in Rowan County, North Carolina, which will consist of (i) two combustion turbine generators, (ii) two natural circulation, duct fired, heat recovery steam generators and (iii) one reheat condensing steam turbine generator (the "Project");

WHEREAS, Contractor is engaged in the business of designing, engineering, constructing and commissioning power generating facilities; and

WHEREAS, Owner has entered into the Owner Equipment Contracts for the supply of the Owner Equipment, which is intended to be installed and commissioned by Contractor;

NOW, THEREFORE, in consideration of the recitals, the mutual promises herein and other good and valuable consideration, the receipt and sufficiency of which the Parties acknowledge, the Parties, intending to be legally bound, stipulate and agree as follows:

17. LIMITATION OF LIABILITY

17.1 No Consequential Damages. [*]THEREOF, LOSS OF PROFITS OR REVENUES OR THE LOSS OF USE THEREOF, OR COST OF PURCHASED OR REPLACEMENT POWER.
GY CAROLINAS LLC

18 Am. Jur. Legal Forms 2d § 253:171.55

American Jurisprudence Legal Forms 2d
Database updated November 2012
Chapter 253. Uniform Commercial Code
Article 2. Sales
III. Form, Formation, and Readjustment of Agreement
D. Formation of Agreement [UCC § 2-204]
1. Form of Agreement

Summary Correlation Table

§ 253:171.55. Agreement for sale of goods—Equipment—Turbine generator

EQUIPMENT PURCHASE AGREEMENT

This Equipment Purchase Agreement (this "Agreement") is made this *[date of agreement]* (the "Effective Date"), between *[name of seller]*, a *[name of state]* limited liability company, having its principal office at *[address of seller]* ("Seller"), and *[name of buyer]*, a *[name of state]* limited liability company, having its principal office at *[address of buyer]* ("Buyer").

RECITALS

A. Buyer desires to purchase one *[name of manufacturer]* industrial gas turbine generator package and associated equipment, parts, structures and records located at or pertaining to Seller's facility in or near *[name of city]*, *[name of state]*, as such items are more particularly described in Exhibit *[designation of exhibit]*, attached to and by this reference made a part of this Agreement (collectively, the "Equipment"). The Equipment shall include only those items described in Exhibit *[designation of exhibit]*.

B. Seller owns the Equipment and is ready, willing and able to sell the Equipment to Buyer pursuant to the terms and subject to the conditions set forth in this Agreement.

In consideration of the matters described above, and of the mutual benefits and obligations set forth in this Agreement, the parties agree as follows:

SECTION ONE. PURCHASE AND SALE OF EQUIPMENT

A. Upon the terms and subject to the conditions contained in this Agreement, on the Closing Date (defined below), Seller shall sell, assign, transfer, convey and deliver to Buyer, and Buyer shall purchase from Seller, any and all of Seller's interest in and rights to the Equipment. As the term is used in this Agreement and the exhibits to this Agreement, "Equipment" shall also mean and include copies of all of Seller's records and files which relate to any of the Equipment, including but not limited to the following: (i) operations, maintenance, environmental and engineering records; (ii) facility records; (iii) accounting files and operating statements and files; (iv) any and

all contracts, purchase orders or other agreements with third parties including those with vendors, suppliers or OEM's; and (v) any other records or files in the possession of Seller relating to the Equipment, save and except for records the disclosure of which would jeopardize any privilege available to Seller relating to such records, would cause Seller to breach a confidentiality obligation to which it is bound, or would cause Seller to violate any applicable law; provided, however, that Seller's corporate minute books, charter documents, corporate stock record books and such other books and records as pertain to the organization, existence or share capitalization of Seller and such other books and records that do not relate to the Equipment shall not be included.

B. By this Agreement, Seller does now assign to Buyer any and all existing assignable warranties, service life policies and patent indemnities of manufacturers of components of the Equipment, if any; and upon the request of Buyer, Seller shall give Buyer reasonable assistance in enforcing the rights of Buyer arising as a result of this Agreement but Buyer shall promptly reimburse Seller for the actual and reasonable costs and expenses incurred by Seller in rendering such assistance; and, from time to time, upon the request of Buyer, Seller shall give notice (with copies to Buyer) to any such manufacturers of the assignment of such warranties, service life policies and patent indemnities to Buyer.

SECTION TWO. PURCHASE PRICE AND PAYMENT TERMS

A. Purchase Price.

In accordance with the following paragraph B, Buyer shall pay Seller for the Equipment the sum of $*[dollar amount of purchase price]* (the “Purchase Price”), as allocated by the parties to the Equipment.

B. Payment Terms.

1. Not later than one business day after the Effective Date, Buyer shall deposit with Seller the sum of $*[dollar amount of deposit]* as a deposit towards the Purchase Price (the “Deposit”), which Deposit shall be applied towards the payment of the Purchase Price at Closing. The Deposit shall be (i) held by Seller in an account designated by Seller in its sole discretion, without interest accrual for the benefit of Buyer, and (ii) nonrefundable to Buyer except as expressly set forth in this Agreement.

2. At the Closing (as defined below), Buyer shall transfer and pay to Seller the balance of the Purchase Price (i.e., the Purchase Price less the Deposit and any amounts that Seller owes to Buyer pursuant to Section Eight, subparagraph A(2) below) by wire transfer of immediately available funds into an account designated in writing by Seller.

SECTION THREE. ASSUMPTION OF LIABILITIES; POSSESSION AND REMOVAL OF EQUIPMENT; TITLE AND RISK OF LOSS

A. Assumption of Liabilities.

At the Closing, Buyer shall assume and agree to pay, perform and discharge when due all liabilities arising out of, in connection with or related to the ownership, removal, operation, use or maintenance of the Equipment relating to periods on or after the Closing Date (as defined below).

B. Possession and Removal of Equipment.

At and after Closing, Seller agrees to permit Buyer and its representatives free and unencumbered access to the site where the Equipment is located so that Buyer can remove the Equipment (the "Removal"). Buyer will at all times while on the site abide by Seller's safety rules and regulations, a copy of which will be provided by Seller to Buyer prior to the Removal. Buyer will work closely with Seller's site personnel to ensure that the Removal shall not interfere with the Seller's operations at the site and Buyer shall comply with the provisions of Section *[designation of section]*, as set forth in Exhibit *[designation of exhibit]*, the terms of which are by this reference incorporated and made a part of this Agreement. Buyer shall complete the Removal no later than *[number of days]* days after the Closing Date unless prohibited from doing so due to Excusable Delay. After such *[number of days]*-day period, Buyer agrees to pay Seller storage fees of $*[dollar amount of daily storage fee]* per day for any Equipment not so removed within such *[number of days]*-day period unless prior arrangements are made or the parties agree otherwise. Seller agrees, at no cost to Seller, to cooperate with the Removal. Following the Removal, Buyer shall restore Seller's remaining facility to a condition which is as near as possible to its original condition as existed prior to the Removal.

C. Title and Risk of Loss.

Title to and risk of loss, damage and destruction of the Equipment shall transfer from Seller to Buyer upon the Closing Date.

SECTION FOUR. REPRESENTATIONS AND WARRANTIES

A. Seller Representations and Warranties.

Seller represents and warrants to Buyer that:

1. At the Closing Date, Seller shall have full legal and beneficial title to the Equipment, free and clear of any and all security interests, liens, claims, charges or encumbrances of any nature whatsoever, together with full power and lawful authority to deliver the Equipment to Buyer; and upon delivery of the Assignment and Bill of Sale to Buyer in accordance with Section Eight, subparagraph D(2), Seller shall have transferred marketable title to the Equipment to Buyer.

2. Seller is an entity duly organized, validly existing and in good standing under the laws of the jurisdiction in which it is formed and has the requisite power and authority to own, lease and operate its properties and to carry on its business as now conducted. Seller is duly qualified to transact business and is in good standing in each jurisdiction in which its ownership of the Equipment and commitments made under this Agreement makes such qualification necessary.

3. Seller has the requisite power and authority to execute this Agreement and to consummate the transactions contemplated by this Agreement. The execution and delivery of this Agreement by Seller and the consummation by Seller of the transactions contemplated by this Agreement have been duly authorized by all necessary action on the part of Seller.

4. The execution and delivery by Seller of this Agreement and the consummation of the transactions contemplated by this Agreement do not and will not (i) violate any provision of the constituent documents of Seller, (ii) violate any order of any governmental authority to which Seller is bound or subject, (iii) violate any applicable law, or (iv) result in the imposition or creation of any lien upon the Equipment. This Agreement has been duly executed and delivered by Seller and, assuming due execution and delivery by Buyer, constitutes a valid and binding obligation of Seller, enforceable against Seller in accordance with its terms. Notwithstanding the foregoing, (i) Seller is required to deliver *[number of days]* days' prior written notice of the sale of the Equipment to the *[name of state]* Independent System Operator ("ISO") and the Federal Energy Regulatory Commission ("FERC"), and (ii) Seller has requested a waiver of such notice requirements from ISO and FERC. In addition, Seller has executed certain contracts with respect to the availability of the Equipment.

5. To Seller's knowledge, except for notice to ISO and FERC, no order or permit issued by, or declaration or filing with, or notification to, or waiver from any governmental authority is required on the part of Seller in connection with the execution and delivery of this Agreement, or the compliance or performance by Seller with any provision contained in this Agreement.

6. All taxes due and payable by Seller with respect to the ownership of the Equipment have been paid or are being contested in good faith through the appropriate proceedings.

7. There is no legal action or order pending or, to Seller's knowledge, overtly threatened against Seller that seeks to restrain or prohibit or otherwise challenge the consummation, legality or validity of the transactions contemplated by this Agreement.

8. Except for such notices as have been disclosed to Buyer in writing, Seller, to Seller's knowledge, has not received any written notice that the Equipment is in violation of any applicable laws.

9. No rights of first offer or other preferential rights to purchase any of the Equipment are held by third parties.

B. Knowledge Defined.

In this Agreement, references to the "knowledge" of Seller shall refer only to the actual knowledge of the Designated Employee (as defined below) of Seller, and shall not be construed, by imputation or otherwise, to refer to the knowledge of Seller, or any affiliate of Seller, or to any other officer, agent, manager, representative or employee of Seller or any affiliate of the same or to impose upon such Designated Employee any duty to investigate the matter to which such actual knowledge, or the absence of actual knowledge, pertains. As used in this Agreement, the term "Designated Employee" shall refer to the following person: *[name of designated employee of seller]*.

C. Survival of Seller's Representations and Warranties.

The representations and warranties of Seller set forth in paragraph A of this Section Four shall survive Closing for a period of *[number of days]* days; provided, however, notwithstanding the foregoing to the contrary, subparagraph A(1) of this Section Four shall survive for a period of *[[number of months]/[number of years]] [months/years]*. No claim for a breach of any representation or warranty of Seller shall be actionable or payable if the breach in question results from or is based on a condition, state of facts or other matter which was specifically disclosed by Seller to and accepted by Buyer in writing prior to Closing.

D. As-Is.

EXCEPT AS AND TO THE EXTENT EXPRESSLY SET FORTH IN THIS AGREEMENT, (i) SELLER MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS, STATUTORY OR IMPLIED, AND (ii) SELLER DISCLAIMS ALL LIABILITY AND RESPONSIBILITY FOR ANY REPRESENTATION, WARRANTY, STATEMENT OR INFORMATION MADE OR COMMUNICATED (ORALLY OR IN WRITING) TO BUYER OR ANY OF ITS AFFILIATES, EMPLOYEES, AGENTS, CONSULTANTS OR REPRESENTATIVES (INCLUDING, BUT NOT LIMITED TO, ANY OPINION, INFORMATION, PROJECTION OR ADVICE THAT MAY HAVE BEEN PROVIDED TO BUYER BY ANY OFFICER, DIRECTOR, EMPLOYEE, AGENT, CONSULTANT, REPRESENTATIVE OR ADVISOR OF SELLER OR ANY OF ITS AFFILIATES). IN PARTICULAR AND WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, SELLER DISCLAIMS ANY REPRESENTATION OR WARRANTY, EXPRESS, STATUTORY OR IMPLIED, AS TO (i) THE MAINTENANCE, REPAIR, CONDITION, QUALITY, SUITABILITY, DESIGN OR MARKETABILITY OF THE EQUIPMENT, (ii) THE CONTENT, CHARACTER OR NATURE OF ANY INFORMATION MEMORANDUM, REPORTS, BROCHURES, CHARTS OR STATEMENTS PREPARED BY SELLER OR THIRD PARTIES WITH RESPECT TO THE EQUIPMENT, (iii) ANY OTHER MATERIALS OR INFORMATION THAT MAY HAVE BEEN MADE AVAILABLE TO BUYER OR ITS AFFILIATES, OR ITS OR THEIR EMPLOYEES, AGENTS, CONSULTANTS, REPRESENTATIVES OR ADVISORS IN CONNECTION WITH THE TRANSACTIONS CONTEMPLATED BY THIS AGREEMENT AND THE ASSIGNMENT AND BILL OF SALE OR ANY DISCUSSION OR PRESENTATION RELATING TO THE SAME, AND (iv) ANY IMPLIED OR EXPRESS WARRANTY OF FREEDOM FROM PATENT OR TRADEMARK INFRINGEMENT. EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, SELLER FURTHER DISCLAIMS ANY REPRESENTATION OR WARRANTY, EXPRESS, STATUTORY OR IMPLIED, OF MERCHANTABILITY, FREEDOM FROM LATENT VICES OR DEFECTS, FITNESS FOR A PARTICULAR PURPOSE OR CONFORMITY TO MODELS OR SAMPLES OF MATERIALS OF ANY ASSETS, RIGHTS OF A PURCHASER UNDER APPROPRIATE STATUTES TO CLAIM DIMINUTION OF CONSIDERATION OR RETURN OF THE PURCHASE PRICE, IT BEING EXPRESSLY UNDERSTOOD AND AGREED BY THE PARTIES TO THIS AGREEMENT THAT BUYER SHALL BE DEEMED TO BE OBTAINING THE EQUIPMENT IN ITS PRESENT STATUS, CONDITION AND STATE OF REPAIR, “AS IS” AND “WHERE IS” WITH ALL FAULTS OR DEFECTS (KNOWN OR UNKNOWN, LATENT, DISCOVERABLE OR UNDISCOVERABLE), AND THAT BUYER HAS MADE OR CAUSED TO BE MADE SUCH INSPECTIONS AS BUYER DEEMS APPROPRIATE. AS PART OF THE PROVISIONS OF THIS PARAGRAPH D, BUT NOT AS A LIMITATION, BUYER AGREES, REPRESENTS AND WARRANTS THAT THE MATTERS RELEASED IN THIS PARAGRAPH ARE NOT LIMITED TO MATTERS WHICH ARE KNOWN OR DISCLOSED, AND BUYER WAIVES ANY AND ALL RIGHTS AND BENEFITS WHICH IT NOW HAS, OR IN THE FUTURE MAY HAVE CONFERRED UPON IT, BY VIRTUE OF THE PROVISIONS OF FEDERAL, STATE OR LOCAL LAW, RULES OR REGULATIONS,

INCLUDING, BUT NOT LIMITED TO, *[CITATION OF STATUTE]* WHICH PROVIDES AS FOLLOWS: "*[TEXT OF STATUTE REGARDING SCOPE OF GENERAL RELEASES]*." Seller and Buyer acknowledge that the compensation to be paid to Seller for the Equipment has been decreased to take into account that the Equipment is being sold subject to the provisions of this paragraph D. Seller and Buyer agree that the provisions of this paragraph D shall survive the Closing Date.

E. Buyer's Representations and Warranties.

Buyer represents and warrants to Seller that:

1. Buyer is an entity duly organized, validly existing and in good standing under the laws of the jurisdiction in which it is formed and has the requisite power and authority to own, lease and operate its properties and to carry on its business as now conducted. Buyer is duly qualified to transact business and is in good standing in each jurisdiction in which its commitments under this Agreement makes such qualification necessary.

2. Buyer has the requisite power and authority to execute this Agreement and to consummate the transactions contemplated by this Agreement. The execution and delivery of this Agreement by Buyer and the consummation by Buyer of the transactions contemplated by this Agreement have been duly authorized by all necessary action on the part of Buyer. This Agreement has been duly executed and delivered by Buyer and, assuming due execution and delivery by Seller, constitutes a valid and binding obligation of Buyer, enforceable against Buyer in accordance with its terms.

3. The execution and delivery by Buyer of this Agreement and the consummation of the transactions contemplated by this Agreement do not and will not (i) violate any provision of the constituent documents of Buyer, (ii) violate any order of any governmental authority to which Buyer is bound or subject, or (iii) violate any applicable law.

4. To Buyer's knowledge, no order or permit issued by, or declaration or filing with, or notification to, or waiver from any governmental authority is required on the part of Buyer in connection with the execution and delivery of this Agreement, or the compliance or performance by Buyer with any provision contained in this Agreement.

5. There is no legal action or order pending or, to Buyer's knowledge, overtly threatened against Buyer that seeks to restrain or prohibit or otherwise challenge the consummation, legality or validity of the transactions contemplated by this Agreement.

6. No person has acted, directly or indirectly, as a broker, finder or financial advisor for Buyer in connection with the transactions contemplated by this Agreement, and Seller is not or will not become obligated to pay any fee or commission or like payment to any broker, finder or financial advisor, as a result of the consummation of the transactions contemplated by this Agreement based upon any arrangement made by or on behalf of Buyer.

F. Knowledge Defined.

In this Agreement, references to the "knowledge" of Buyer shall refer only to the actual knowledge of the Designated Employee (as defined below) of Buyer, and shall not be construed, by imputation or otherwise, to refer to the knowledge of Buyer, or any affiliate of Buyer, or to any other officer, agent, manager, representative or employee of Buyer or any affiliate of the same or to impose upon such Designated Employee any duty to investigate the matter to which such actual knowledge, or the absence of actual knowledge, pertains. As used in this Agreement, the term "Designated Employee" shall refer to the following person: *[name of designated employee of buyer]*.

G. Survival of Buyer's Representations and Warranties.

The representations and warranties of Buyer set forth in paragraph E of this Section Four shall survive Closing for a period of *[number of days]* days. No claim for a breach of any representation or warranty of Buyer shall be actionable or payable if the breach in question results from or is based on a condition, state of facts or other matter which was specifically disclosed by Buyer to and accepted by Seller in writing prior to Closing.

SECTION FIVE. INSPECTION, PRESERVING AND OPERATING THE EQUIPMENT

A. Inspection and Access.

Immediately following the Effective Date, Buyer and its representatives shall, upon prior written notice to Seller, have access to the site where the Equipment is located so that Buyer and its representatives can inspect the Equipment and review the books, records and information relating to the Equipment, and speak to the personnel of Seller that may have information relating to the history, operation and maintenance of the Equipment; provided, however, that Seller shall have the right to have a representative present at any such access to the site. Such activities shall include the Buyer's right to check and borescope the turbines and meggering the generators and such other tests and inspections deemed appropriate by Buyer in order to assess the integrity and condition of the Equipment, provided that any and all such testing and inspections shall be made only upon prior written notice to Seller, Seller shall have the right to have a representative present for any such testing, all of such testing shall be performed in compliance with all applicable laws, and Buyer shall deliver to Seller a copy of any data, results or reports prepared in connection with such testing. Buyer will at all times while on the site abide by Seller's safety rules and regulations, a copy of which will be provided by Seller to Buyer prior to execution of the work. Seller agrees to cooperate with Buyer and provide all reasonable assistance in relation to Buyer performing its inspection activities. Prior to the Closing, Buyer, at Buyer's sole cost and expense, shall have the right to remove the gas turbine engine and related hardware from the site for purposes of further testing and repair. Notwithstanding the foregoing to the contrary, if Buyer's inspections of or tests upon the Equipment would cause the operation of the Seller's facilities to be interrupted, or should Buyer remove the gas turbine equipment from the site, Buyer shall provide Seller, at Buyer's sole cost and expense, with such temporary replacement equipment as is necessary for Seller to maintain such operation until the earlier of the Closing or Buyer's reinstallation of the Equipment in operating condition. If Buyer elects to remove the Equipment, Buyer shall maintain insurance on the Equipment in the amount of the Purchase Price for any damage or destruction of the Equipment while in Buyer's possession. Upon prior written notice to Seller, Buyer shall also be permitted to speak directly with vendors and suppliers associated with the Equipment, including the OEMs, and if required Seller shall promptly provide all necessary authorization and assistance in order that Buyer can freely engage said vendors and suppliers in obtaining information from them as part of Buyer's inspection activities, provided that Seller shall have the right to have a representative participate in any such engagement. Following any inspection, testing or removal of

the Equipment, Buyer shall restore the Equipment to its original condition as existed prior to any such inspections or tests. Upon request by Seller, Buyer shall provide Seller with evidence that Buyer has a policy of general liability insurance, from an insurer and in an amount reasonably acceptable to Seller, which insurance shall (i) name Seller as an additional insured party, and (ii) provide coverage against any claim for personal liability or property damage caused by Buyer or its agents, employees or contractors in connection with such inspections, tests and removal activities.

B. Preserving the Equipment.

During the period from the Effective Date to and through the Closing Date, Seller shall use commercially reasonable efforts to conduct its business (as it pertains to the Equipment) in all material respects in the ordinary course of business and to maintain and preserve the Equipment consistent with Seller's past practices.

SECTION SIX. INDEMNIFICATION

A. Buyer Indemnity.

Buyer assumes liability for, and agrees to indemnify, protect, save and keep harmless Seller and its directors, officers, and employees from and against any and all liabilities, obligations, losses, damages, penalties, claims (including but not limited to claims involving strict or absolute liability in tort), actions, suits, costs, expenses and disbursements, including but not limited to reasonable attorney's fees and expenses, of any kind or nature, which may be imposed on, incurred by or asserted against Seller arising out of and in connection with (i) a breach by Buyer of its obligations under this Agreement; (ii) acceptance, ownership, delivery, possession, use, operations, maintenance, repair, function, registration, sales, return, storage, or other disposition of the Equipment or any accident in connection with the Equipment (including but not limited to latent and other defects, whether or not discoverable) after the transfer of the title of the Equipment to Buyer on the Closing Date; or (iii) the negligence of Buyer, or any of its employees, representative, contractors or agents; provided, however, that Buyer shall not be required to indemnify Seller or its assigns for any claim resulting from acts which would constitute Seller's misconduct or negligence or a breach by the Seller of the terms of this Agreement.

B. Seller Indemnity.

Seller assumes liability for, and agrees to indemnify, protect, save and keep harmless Buyer and its directors, officers, and employees from and against any and all liabilities, obligations, losses, damages, penalties, claims (including but not limited to claims involving strict or absolute liability in tort), actions, suits, costs, expenses and disbursements, including but not limited to reasonable attorney's fees and expenses, of any kind or nature, which may be imposed on, incurred by or asserted against Buyer arising out of and in connection with (i) a breach by Seller of its obligations under this Agreement; (ii) acceptance, ownership, delivery, possession, use, operations, maintenance, repair, function, registration, sales, return, storage, or other disposition of the Equipment or any accident in connection with the Equipment (including but not limited to latent and other defects, whether or not discoverable) before the transfer of the title of the Equipment to Buyer on the Closing Date, including any claims arising out of existing contracts affecting or based upon the Equipment; or (iii) the negligence of Seller, or any of its employees, representative, contractors or agents; provided, however, that Seller shall not be required to indemnify

Buyer or its assigns for any claim resulting from acts which would constitute Buyer's misconduct or negligence or a breach by the Buyer of the terms of this Agreement or any other agreement between Seller and Buyer.

SECTION SEVEN. TAXES

All ad valorem taxes, real property taxes and personal property taxes relating to the Equipment for the year in which the Closing Date occurs shall be apportioned as of the Closing Date between Seller and Buyer. Seller shall be liable for the portion of such taxes based upon the number of days in the year occurring prior to the Closing Date, and Buyer shall be liable for the portion of such taxes based upon the number of days in the year occurring on and after the Closing Date. For any year in which an apportionment is required, Buyer shall file all required reports and returns incident to these taxes assessed for the year in which the Closing Date occurs that are not filed by Seller as of the Closing Date. Seller shall pay to Buyer, at the time of Buyer's remittance, Seller's share of such taxes. If Seller has paid any portion of such taxes apportioned to Buyer under this Section Seven, Buyer shall pay to Seller, promptly upon notice from Seller of the portion of such taxes apportioned to Buyer, Buyer's share of such taxes. Buyer shall pay all sales taxes, if any, arising in connection with the sale of the Equipment.

SECTION EIGHT. CLOSING

A. Conditions Precedent to Obligations of Each Party.

The respective obligations of Seller and Buyer to consummate the transactions contemplated by this Agreement are subject to the fulfillment, on or prior to the Closing Date, of the following conditions:

1. No order issued by any court of competent jurisdiction preventing the consummation of the transactions contemplated by this Agreement shall be in effect, nor shall any material proceeding initiated by any governmental authority of competent jurisdiction having valid enforcement authority seeking such an order be pending, nor shall there be any action taken, or any law or order enacted, entered or enforced that has not been subsequently overturned or otherwise made inapplicable to this Agreement, that makes the consummation of the transactions contemplated by this Agreement illegal.

2. Any waiting period (including any extension of a waiting period) applicable to the purchase and sale of the Equipment to Buyer under the regulations of any other applicable governmental antitrust or competition authority shall have been terminated or expired and any waivers or approvals required by any bodies applicable to transactions contemplated by this Agreement shall have been obtained; provided, however, that Buyer may, upon written notice to Seller not later than *[number of days]* days prior to the Closing Date, elect to extend the Closing Date to a date which is not later than *[number of days]* days from the Effective Date, to permit for the termination or expiration of any such waiting period or the obtaining of any such waivers or approvals, as applicable. If the Closing is not extended pursuant to this subparagraph 2, this Agreement shall terminate and the Deposit shall be returned to Buyer. If the Closing is extended pursuant to this subparagraph 2, and if Buyer has removed the gas turbine engine from the site and has provided a temporary replacement of the turbine engine, then Seller agrees during the extended period to pay Buyer an amount equal to $*[dollar amount of stand-by fee]* for each *[number of days]*-day period, or portion of a *[number of days]*-day period, as a stand-by fee, plus $*[dollar amount of daily fee for operation of temporary equipment]* for each day that the temporary equipment is operated.

B. Conditions Precedent to Obligations of Buyer.

The obligation of Buyer to consummate the transactions contemplated by this Agreement is subject to the fulfillment, on or prior to the Closing Date, of each of the following conditions (any or all of which may be waived by Buyer, in whole or in part, subject to applicable law):

1. All of the representations and warranties of Seller contained in this Agreement shall be true and correct in all material respects on and as of the Closing Date, except those representations and warranties of Seller that speak of a certain date, which representations and warranties shall have been true and correct in all material respects as of such date;

2. Seller shall have performed and complied with in all material respects its obligations and covenants required by this Agreement to be performed or complied with by Seller on or prior to the Closing Date; and

3. Buyer shall have been furnished with the documents referred to in paragraph D of this Section Eight.

C. Conditions Precedent to Obligations of Seller.

The obligations of Seller to consummate the transactions contemplated by this Agreement are subject to the fulfillment, prior to or on the Closing Date, of each of the following conditions (any or all of which may be waived by Seller, in whole or in part, subject to applicable law):

1. All of the representations and warranties of Buyer contained in this Agreement shall be true and correct in all material respects on and as of the Closing Date, except those representations and warranties of Buyer that speak of a certain date, which representations and warranties shall have been true and correct in all material respects as of such date;

2. Buyer shall have performed and complied with in all material respects all obligations and covenants required by this Agreement to be performed or complied with by them on or prior to the Closing Date; and

3. Seller shall have been furnished with the documents referred to in paragraph E of this Section Eight.

D. Documents to Be Delivered by Seller.

At the Closing, Seller shall deliver to Buyer the following:

1. a certificate of an officer of Seller certifying that the closing conditions set forth in subparagraph B(1) of this Section Eight have been satisfied;

2. the Assignment and Bill of Sale substantially in the form of Exhibit *[designation of exhibit]* attached to this Agreement, and such other instruments of conveyance necessary for the transfer of the Equipment, duly executed by Seller; and

3. a Non-Foreign Affidavit in compliance with the provisions of Treasury Regulation § 1.1445-2(b)(2) certifying that Seller is not a foreign person within the meaning of the Code.

E. Documents to Be Delivered by Buyer.

At the Closing, Buyer shall deliver to Seller the following:

1. evidence of the wire transfer referred to in Section Two, subparagraph B(2) of this Agreement;

2. a certificate of an officer of Buyer certifying that the closing conditions set forth in subparagraph C(1) of this Section Eight have been satisfied; and

3. the Assignment and Bill of Sale substantially in the form of Exhibit *[designation of exhibit]* attached to this Agreement, and such other instruments of conveyance necessary for the transfer of the Equipment, duly executed by Buyer.

F. Time and Place of Closing.

The closing of the purchase and sale of the Equipment (the "Closing") shall take place at the facility site where the Equipment is located at *[time of day]*, local time, on *[date of closing]*, and after the conditions to Closing set forth in paragraphs A, B and C of this Section Eight (excluding conditions that, by their terms, cannot be satisfied until the Closing) have been satisfied (or waived by the party entitled to waive such condition) (as the same may be extended pursuant to the provisions of subparagraph A(2) of this Section Eight, the "Closing Date"), or at such other location or time as may be agreed by the parties.

G. Failure of Condition.

In the event of the failure of any condition to Closing set forth in paragraph A or B of this Section Eight, then this Agreement shall terminate and the Deposit shall be returned to Buyer and Seller shall pay Buyer any amounts owed pursuant to subparagraph A(2). In the event of the failure of any condition to Closing set forth in paragraph C of this Section Eight, then this Agreement shall terminate and the Deposit shall be retained by Seller less any amounts Seller owes to Buyer pursuant to subparagraph A(2).

SECTION NINE. DEFAULT AND REMEDIES

A. Events of Default.

It shall be an event of default if all or any of the following shall have occurred (an “Event of Default”):

1. If either party shall default in the performance of any of the material provisions contained in the Agreement, which default shall continue for *[number of days]* business days after written notice of default to the defaulting party; or

2. If any representation or warranty by either party made in this Agreement or in any statement or certificate furnished or required under this Agreement, or in connection with the execution and delivery of this Agreement, proves untrue in any material respect as of the date of issuance or making of the statement or certificate.

B. Remedies.

1. Upon the occurrence of an Event of Default by Seller, Buyer shall be entitled, as its sole remedy, either (a) to receive any amounts Seller owes to Buyer under Section Eight, subparagraph B(2), and the return of the Deposit and any other moneys paid by Buyer to Seller as of the date of the Event of Default, which return shall operate to terminate this Agreement and release Seller from any and all liability under this Agreement; or (b) to enforce specific performance of Seller's obligation to execute the documents required to convey the Equipment to Buyer, it being agreed that the remedy of specific performance shall not be available to enforce any other obligation of Seller under this Agreement. Buyer waives its rights to seek damages upon the occurrence of an Event of Default by Seller under this Agreement. Buyer shall be deemed to have elected to terminate this Agreement and receive any amounts Seller owes to Buyer under Section Eight, subparagraph A(2), the Deposit, and any other moneys paid by Buyer to Seller as of the date of the Event of Default, if Buyer fails to file suit for specific performance against Seller in a court having jurisdiction in *[name of county]*, *[name of state]*, on or before *[number of days]* days following the date upon which Closing was to have occurred.

2. Upon the occurrence of an Event of Default by Buyer, Seller shall be entitled to retain the Deposit (less any amounts Seller owes to Buyer under Section Eight, subparagraph A(2)) as liquidated damages (the “Liquidated Damages”), which shall be the sole and exclusive remedy and measure of damages as a result of the occurrence of an Event of Default by Buyer. Seller waives its rights to seek damages upon the occurrence of an Event of Default by Buyer under this Agreement. THE PARTIES HAVE AGREED THAT SELLER'S ACTUAL DAMAGES, IN THE EVENT OF A FAILURE TO CONSUMMATE THIS SALE DUE TO BUYER'S DEFAULT UNDER THIS AGREEMENT, WOULD BE EXTREMELY DIFFICULT OR IMPRACTICABLE TO DETERMINE. AFTER NEGOTIATION, THE PARTIES HAVE AGREED THAT, CONSIDERING ALL THE CIRCUMSTANCES EXISTING ON THE DATE OF THIS AGREEMENT, THE AMOUNT OF THE LIQUIDATED DAMAGES IS A REASONABLE ESTIMATE OF THE DAMAGES THAT SELLER WOULD INCUR IN SUCH EVENT. BY PLACING THEIR INITIALS BELOW, EACH PARTY SPECIFICALLY CONFIRMS THE ACCURACY OF THE STATEMENTS MADE ABOVE AND THE FACT THAT EACH PARTY WAS REPRESENTED BY COUNSEL WHO EXPLAINED, AT THE TIME THIS AGREEMENT WAS MADE, THE CONSEQUENCES OF THIS LIQUIDATED DAMAGES PROVISION. THE FOREGOING IS NOT INTENDED TO LIMIT BUYER'S INDEMNITY OBLIGATIONS UNDER OTHER SECTIONS OF THIS AGREEMENT.

SELLER: *[seller's initials]*

BUYER: *[buyer's initials]*

SECTION TEN. MISCELLANEOUS

A. Notices.

Any and all notices given or required to be given under this Agreement shall be in writing and shall be deemed to have been adequately given when received by the party to whom such notice is being given. Notices shall be addressed as follows:

If to Buyer: *[name of buyer], [address of buyer]*, Attn: *[name or title of contact person for buyer]*;

If to Seller: *[name of seller], [address of seller]*, Attn: *[name or title of contact person for seller]*;

or such other address as the respective parties to this Agreement shall from time to time designate in writing to the other party.

B. Exhibits.

All Exhibits described in this Agreement shall be deemed to be incorporated and made a part of this Agreement, except that if there is any inconsistency between this Agreement and the provisions of any Exhibit, the provisions of the Exhibit shall control. The parties shall, from time to time prior to or at the Closing by written agreement, supplement or amend the description of the Equipment in this Agreement and the Exhibits to accurately and more fully reflect the list of Equipment that is being conveyed under this Agreement.

C. Headings.

Section and paragraph headings set forth in this Agreement are for convenience of reference only and shall not in any manner be deemed to limit or restrict the context of the section or paragraph to which they relate.

D. Applicable Law.

This Agreement is entered into and shall be governed by and interpreted in accordance with the laws of *[name of state]*, notwithstanding its conflict of law provisions.

E. Entire Agreement.

This Agreement supersedes all prior understandings, representations, negotiations, and correspondence between the parties and constitutes the entire agreement between the parties with respect to the transaction contemplated and shall not in any manner be supplemented, amended or modified by any course of dealing, course of performance or usage of trade or by any other means except by a written instrument executed on behalf of the parties by their duly authorized officers.

F. Confidentiality.

Seller and Buyer agree to treat this Agreement and the terms of this Agreement as confidential and, without the prior written consent of the other party to this Agreement, not to disclose the terms of this Agreement to any other person except (i) to its counsel and accountants or other agents or professional advisors in connection with or relating to the transactions contemplated by this Agreement; (ii) to any court, governmental agency or instrumentality or other supervising body requesting such disclosure; (iii) to any person as may be required by any government regulation or order (including any regulation, request or order of a bank regulatory agency or authority or under any disclosure requirements affecting public companies, including, but not limited to, regulations of the Securities and Exchange Commission), law, statute, regulations, decrees, subpoenas or court orders; (iv) its directors, officers, employees, affiliates, successors and assigns; (v) to any banks or other financial institutions in any debt financing by or for the benefit of Buyer; or (vi) in connection with any enforcement of the terms of this Agreement. Seller and Buyer shall cause its officers, directors, agents, and employees to comply with this paragraph F. Notwithstanding the foregoing to the contrary, Seller shall, upon reasonable prior written notice to Buyer, have the right to issue press releases regarding this transaction.

G. Further Assurances.

Seller and Buyer agree that from and after the Closing Date, each of them will, and will cause their respective representatives and affiliates to, execute and deliver such further instruments of conveyance and transfer and take such other action as may reasonably be requested by any party to this Agreement to carry out the purposes and intents of this Agreement.

H. Casualty Loss.

If, subsequent to the date of this Agreement and prior to the Closing, a portion of the Equipment in excess of $*[dollar amount of value of equipment]* is damaged or destroyed by fire or other casualty, is taken in condemnation or under the right of eminent domain, or proceedings for such purposes are pending or threatened (collectively, "Casualty Loss"), Buyer shall have the option to either (a) purchase the Equipment notwithstanding any such Casualty Loss, without reduction of the Purchase Price; or (b) terminate this Agreement without further obligation of either party except that Buyer shall be entitled to receive any amounts Seller owes to Buyer under Section Eight, subparagraph A(2), and the return of the Deposit and all other monies paid to Seller towards the Purchase Price. In the event of clause (a) above, Seller shall: (x) at the Closing, pay to Buyer all sums paid to Seller by insurance companies and other third parties by reason of the Casualty Loss of such Equipment; (y) assign, transfer and set over to Buyer all of the right, title and interest of Seller in and to any unpaid awards or other payments from third parties arising from the Casualty Loss; and (z) not voluntarily compromise, settle or adjust any material

amounts payable by reason of any Casualty Loss of any portion of the Equipment without first obtaining the written consent of Buyer.

I. Expenses.

Except as otherwise set forth in this Agreement, Seller and Buyer shall each bear its own expenses (including but not limited to attorney's fees) incurred in connection with the negotiation and execution of this Agreement and each other agreement, document and instrument contemplated by this Agreement and the consummation of the transactions contemplated by this Agreement.

J. Submission to Jurisdiction.

The parties agree to unconditionally and irrevocably submit to the exclusive jurisdiction of the federal or state courts sitting in *[name of state]*, and any appellate court from any of such federal or state courts, for the resolution of any claim or dispute relating to or arising under this Agreement.

K. Excusable Delay.

Neither Seller nor Buyer shall be responsible to the other for any delay ("Excusable Delay") in the performance of its duties under this Agreement due to any cause beyond its reasonable control and not occasioned by its intentional act, fault or negligence including but not limited to acts of nature, strikes, lockout or other industrial disturbances, acts of public enemies, orders of any kind of the government of the United States or any state or local government or any of their departments, agencies or officials, or any civil or military authority, insurrections, riots, earthquake, fire, storm, adverse weather conditions, restraint of government and people, civil disturbances, or explosions. Either Seller or Buyer shall promptly notify the other when an Excusable Delay has occurred or is likely to be incurred and in each case specify to the extent practicable the estimated extent of such delay. Either party may terminate this Agreement if the Excusable Delay lasts more than *[number of days]* days.

L. Severability.

If any provision of this Agreement is invalid or unenforceable, the balance of this Agreement shall remain in effect.

M. Limitation of Liability.

NOTWITHSTANDING ANYTHING TO THE CONTRARY IN THIS AGREEMENT OR OTHERWISE, NO PARTY TO THIS AGREEMENT (OR ANY OF ITS SUBSIDIARIES, AFFILIATES OR ASSIGNS) SHALL, UNDER ANY CIRCUMSTANCE, BE LIABLE TO ANY OTHER PARTY (OR ANY OF ITS SUBSIDIARIES, AFFILIATES OR ASSIGNS) FOR ANY CONSEQUENTIAL, EXEMPLARY, SPECIAL, INCIDENTAL OR PUNITIVE DAMAGES CLAIMED BY SUCH OTHER PARTY UNDER THE TERMS OF OR DUE TO ANY BREACH OF THIS AGREEMENT, INCLUDING, BUT NOT LIMITED TO, LOSS OF REVENUE OR INCOME, COST OF CAPITAL, OR LOSS OF BUSINESS REPUTATION OR OPPORTUNITY.

N. Binding Effect; Assignment.

This Agreement shall be binding upon and inure to the benefit of the parties and their respective successors and permitted assigns. No assignment of this Agreement or of any rights or obligations under this Agreement may be made by Seller or Buyer (by operation of law or otherwise) without the prior written consent of the other party to this Agreement and any attempted assignment without the required consent shall be void. Notwithstanding the foregoing, Buyer may be entitled to assign its rights in and to this Agreement to an affiliate or subsidiary entity without the consent of Seller, provided that (a) the assignee shall expressly assume all of Buyer's obligations under this Agreement pursuant to a written agreement in form and substance reasonably acceptable to Seller, (b) Seller receives a copy of such assignment and assumption agreement on or before *[number of days]* business days prior to the Closing, and (c) the assignee shall be deemed to have reaffirmed all of the representations and warranties of Buyer in this Agreement.

O. Counterparts.

This Agreement may be executed in any number of counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument.

P. Broker, Finder, and Financial Advisor Fees.

If the transaction contemplated by this Agreement is consummated, but not otherwise, Seller agrees to pay to *[name of broker]* (the “Broker”) at Closing a brokerage commission pursuant to a separate written agreement between Seller and Broker. Each party agrees that should any claim be made for brokerage commissions or finder's fees by any broker, finder or financial advisor other than the Broker by, through or on account of any acts of such party or its representatives, that party will indemnify and hold the other party free and harmless from and against any and all loss, liability, cost, damage and expense in connection with the same. The provisions of this paragraph P shall survive Closing or earlier termination of this Agreement.

SECTION ELEVEN. AFFIRMATION BY THE PARTIES

A. In performance of its duties under this Agreement, each Party is prohibited from engaging directly or indirectly in any illegal, immoral or unethical conduct. Illegal conduct shall be that defined under the laws of the United States.

B. Each Party shall comply, and require that its affiliates, agents, and employees comply, in all respects with the United States Foreign Corrupt Practices Act, any comparable law or regulation in any applicable jurisdiction and any multilateral international conventions dealing with bribery and corrupt practices, as they may be amended from time to time, regardless of whether they are by their terms otherwise applicable to them. Without limiting the generality of the foregoing, no Party under this Agreement will use, and will require that its respective agents, adviser, and affiliates will not use, any payment or other benefit derived in connection with this Agreement to offer, promise or pay any money, gift or any other thing of value to any person for the purpose of influencing official actions or decisions affecting this Agreement or any of the transactions contemplated under this Agreement in connection with the services, while knowing or having reason to know that any portion of this money, gift or thing

will, directly or indirectly, be given, offered or promised to: (i) an employee, officer or other person acting in an official capacity for any government or its instrumentality; or (ii) any political party, party official or candidate for political office.

C. The Parties will not, and will require that their respective employees, agents, and adviser will not, conduct business with or assist an entity or person owned or controlled by, a "suspected terrorist" as defined by U.S. Executive Order 13224.

The parties have executed this Agreement at *[place of execution]* the day and year first set forth above.

[Name of seller]
By:
_____ *[Name of officer of seller]*
[Title of officer of seller]
[Name of buyer]
By:
_____ *[Name of officer of buyer]*
[Title of officer of buyer]
[Acknowledgments]
[Attach exhibits]

Notes

Drafter's Notes

For forms of acknowledgments, see §§ 7:1 et seq.

West's Key Number Digest

West's Key Number Digest, Sales 1 to 484

Legal Encyclopedias

Agreement for sale of goods. Am. Jur. 2d, Sales §§ 98 et seq.

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End of Document

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Department of Public Service Regulation
Montana Public Service Commission
Docket No. D2012.5.49
Annual Electric Supply Filing
NorthWestern Energy

PREFILED REBUTTAL TESTIMONY

OF MICHAEL R. CASHELL

ON BEHALF OF NORTHWESTERN ENERGY

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Witness Information

Q. Please state your name and business address.

A. My name is Michael R. Cashell, and my business address is 40 East Broadway, Butte, Montana 59701.

Q. By whom are you employed and in what capacity?

A. I am NorthWestern Energy's ("NWE" or "NorthWestern") Vice President - Transmission.

Q. Are you the same Michael R. Cashell who submitted prefiled direct testimony in this docket?

A. Yes.

Purpose of Testimony

Q. Please describe the purpose of your testimony.

A. I will address Montana Consumer Counsel witness John W. Wilson's discussion, in his prefiled direct testimony in this docket, of the Federal Energy Regulatory Commission's ("FERC") Administrative Law Judge's ("ALJ") remarks in the Initial Decision in FERC Docket Nos. ER10-1138-000 and ER12-316-000 regarding recovery of replacement regulation services costs incurred by NWE during the Dave Gates Generating

Station ("DGGS")[1] turbine outage. See Pre-Filed Direct Testimony of John W. Wilson ("Wilson Direct Testimony") at pages 11 – 13.

Q. What is the effect of the Initial Decision in general?

A. The decision is non-binding. Since the Initial Decision was issued, the parties, including but not limited to NorthWestern and the Montana Public Service Commission ("Commission"), have submitted briefs in support or opposition of the Initial Decision. These briefs have been filed with FERC, and FERC is expected to consider the entire DGGS matter and issue a binding decision sometime in 2013. In arriving at its final decision, FERC is not obligated to follow any of the ALJ's findings or conclusions and can accept or reject the Initial Decision in whole or in part.

Schedule 3, Component "C"

Q. At page 12 of his testimony, Dr. Wilson quotes the FERC ALJ's decision regarding NorthWestern's FERC tariff at Schedule 3, and a proposed Component "C." What does the Schedule 3 currently on file with FERC allow NorthWestern to recover under Component "C"?

A. Under the current Schedule 3 on file with FERC, NorthWestern is allowed to include in the Demand Rate a Component "C" where "C" is the transmission provider's total cost of procuring regulation service, if any, for transmission customers from third-party providers.

[1] DGGS was originally named Mill Creek Generating Station (MCGS).

Q. Did NorthWestern include the third-party costs of regulation service incurred during the outage of DGGS in its Schedule 3 calculations?

A. Yes.

Q. Is there a limitation in NorthWestern's Schedule 3 that precludes NorthWestern from recovering third-party regulation costs incurred due to the outage at DGGS?

A. No.

Q. When NorthWestern proposed Component "C" for inclusion in Schedule 3, did NorthWestern expect to recover this type of cost, that is, the costs of replacement regulation services provided by third parties due to a complete outage of DGGS?

A. Yes. While NorthWestern did not contemplate every conceivable situation for which third party regulation services might be required, there is no limitation under Component "C" for recovery of third-party regulation costs. Component "C" was also included in response to Final Order No. 6943a issued in Docket No. D2008.8.95 by the Commission because this Commission's Order, in Paragraph 262, contemplated that NorthWestern may provide regulation service as described below, from time to time, purchased from other providers:

Paragraph 262 of the Order states:

> NWE expects construction of MCGS to be completed by the end of 2010. NWE's current contracts for regulation service expire on December 31, 2010, although NWE's response to data request MCC-054 indicates that NWE's current counterparties might be able to provide service through 2012. The Commission encourages NWE to complete the MCGS by the end of 2010 so that regulation service will be assured in the event cost-effective market service is not available. However, NWE must continue to pursue with its current counterparties, and with others, market alternatives that may be cost-effective compared to dispatching MCGS. NWE must continue to issue periodic RFP's for regulation services and evaluate whether within-hour load following services, whether combined with market regulation or MCGS dispatch, would improve the cost-effectiveness of NWE's approach to satisfying control performance criteria. Each quarterly report (discussed in the previous paragraph) must detail NWE's efforts in this regard.

As a result, Component "C" was also required in order to comply with the Commission's Final Order No. 6943a.

Q. Does this suggest that Component "C" can only be used under a circumstance when third-party contracts are being utilized as an economic alternative to operating DGGS in whole or in part?

A. No. While Component "C" allows for the recovery of the costs of third-party regulation services contracts incurred based on economic considerations, it does not preclude the recovery of such costs related to an outage of DGGS. Component "C" simply allows for the recovery of all of the Transmission Provider's costs associated with procurement of regulation service.

Section 205 Filing

Q. Dr. Wilson states that it is not clear why NorthWestern has not made a Section 205 filing for the express purpose of recovering DGGS outage-related regulation services replacement costs. See Wilson Direct Testimony at page 13. Why hasn't NorthWestern made such a filing?

A. NorthWestern has not made such a filing because it believes that the current Schedule 3 allows for the recovery of these costs. Furthermore, the Initial Decision, including the ALJ's statements cited by Dr. Wilson, is non-binding and can be rejected in whole or in part by FERC.

Q. Does NorthWestern ever plan to make a Section 205 filing with FERC for recovery of the regulation services replacement costs related to the DGGS outage?

A. NorthWestern is waiting for FERC to issue its final order on the entire DGGS matter before it makes such a decision.

Cost of DGGS Outage

Q. In his prefiled direct testimony, Dr. Wilson also states that he believes that the outage of DGGS increased the regulation costs by $1.27 million. See Wilson Direct Testimony at page 7, line 13 – page 8, line 1. Is that the correct number?

A. No, it is not. While Dr. Wilson based his analysis on Exhibit__(MRC-1) included with my prefiled direct testimony, we subsequently corrected this exhibit in response to Data Request MCC-039 as described in more detail below. However, to be clear, and as explained in my prefiled direct testimony, the approach taken in the analysis included in Exhibit__(MRC-1) compared the estimated costs of DGGS as if it continued to operate with no outage to the actual costs incurred as a result of the outage including the incremental costs of contracted regulation service.

Q. What was the correction made to Exhibit__(MRC-1) in the response to Data Request MCC-039, and what was the result?

A. In the computation that assumed no outage, the cost of the 7 average MW of baseload generation that is scheduled to Energy Supply was corrected to reflect the market price for energy rather than the fixed rate established in Docket No. D2008.8.95. As a result, the overall difference between the "no outage case" and the "outage case" increased from $1,270,467, as referenced by Dr. Wilson, to $1,419,172 or an additional $148,705.

Q. Does this conclude your testimony?

A. Yes, it does.

Department of Public Service Regulation
Montana Public Service Commission
Docket No. D2012.5.49
Annual Electric Supply Filing
NorthWestern Energy

PREFILED REBUTTAL TESTIMONY

OF KEVIN J. MARKOVICH

ON BEHALF OF NORTHWESTERN ENERGY

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Exhibits

Hedge Example	Exhibit__(KJM-2)

Witness Information

Q. Please state your name and business address.

A. My name is Kevin J. Markovich and my business address is 40 East Broadway, Butte, Montana 59701.

Q. By whom are you employed and in what capacity?

A. I am NorthWestern Energy's ("NWE" or "NorthWestern") Director of Energy Supply Market Operations.

Q. Are you the same Kevin J. Markovich who submitted prefiled direct and supplemental testimony in this docket?

A. Yes, I am.

Purpose of Testimony

Q. What is the purpose of your rebuttal testimony?

A. My testimony will address issues and concerns raised by the Montana Consumer Counsel ("MCC") in the Pre-filed Direct Testimony of George L. Donkin ("Donkin Direct Testimony") dated March 22, 2013.

Q. The MCC witness, Mr. Donkin, takes issue with NorthWestern's response to Data Request MCC-003(b) regarding its "Hedging Gains or Losses" in recent years. Please address the terminology used in the Donkin Direct Testimony.

A. Mr. Donkin uses the terms "hedging gains and losses" and "hedging losses," indicating there is some profit or loss component to hedging. That terminology in and of itself is confusing, potentially creating a misunderstanding of what hedging is and what it is intended to accomplish in the case of NorthWestern. In Barron's *Dictionary of Finance and Investment Terms,* Hedge/Hedging is defined as a "strategy used to offset investment risk. A perfect hedge is one eliminating the possibility of future gain or loss." Further, in that same dictionary, Speculator is defined as a "market participant who tries to profit from buying futures and options contracts by anticipating future price movements." NWE does not speculate on future price movements, in either natural gas or electric portfolio supply management. NWE uses hedging as a tool for managing risk and the rates charged to its customers. All fixed price energy supply market transactions that NWE enters into are hedges which serve to reduce risk to customers. Speculative trading is strictly prohibited in NWE's internal risk management policies (up to and including termination for any offense) and it is something NWE does not tolerate.

Q. Mr. Donkin goes on to state on page 11, lines 6-8 that he is "surprised that the Company does not closely follow with detailed calculations how its electric supply hedges are performing…." Is this statement correct?

A. No. NWE closely follows how its electric supply hedges and hedging programs are performing. NWE appropriately evaluates its hedging results on a portfolio basis in the form of overall supply rates charged to customers. NWE has many different hedges, both on-system and at the Mid C market, including Colstrip 4, Judith Gap, Spion Kop, Turnbull Hydro, the PPL Montana, LLC ("PPL") supply contract, and fixed price hedges entered into at the Mid C market as described in the Donkin Direct Testimony. Any assets or contracts that NWE has which are fixed price and do not fluctuate based on current market prices are considered hedges, as they eliminate the possibility of future gains or losses to customers and thus reduce risk. Evaluation of individual transactions could produce conclusions or recommendations that result in more rather than less risk to customers and it would provide little or no value in managing the future supply portfolio. The standard to which NWE is held accountable is whether NWE acted prudently based on information it knew or should have known at the time of the transaction, and that has always been the case.

Q. On page 15, lines 12-13, Mr. Donkin states that he sees "a potentially serious problem regarding NWE's electric supply cost hedging plan and related hedging activities" and then he goes on to describe those problems. Please comment on those concerns.

A. Mr. Donkin's testimony describes the counter parties NWE transacts with along with their incentives and economics. He states that since NWE does not seek to realize gains from its hedging activities, "NWE is more likely to be the loser over time in its hedging deals with counter parties who really want to win their bets with NWE." (page 17, lines 5-7) He goes on to say that the counter parties NWE is dealing with are putting their own money at risk as opposed to NWE which is hedging on behalf of ratepayers and suggests that NWE's counter parties have a greater incentive to win their hedging bets with NWE.

Such statements are factually unfounded and cannot be supported. For those comments to be true, the NWE counter parties would have to be able to influence future market prices to ensure they win their "bets" with NWE. In a liquid and robust market such as exists at the Mid C, with many participants and an electronic trading platform providing transparent pricing, manipulating the market would be very difficult. In addition, with the regulatory oversight provided by the Federal Energy Regulatory Commission and now the Commodities Futures Trading Commission, such behavior would very likely be detected. Furthermore, at the time NWE enters into a fixed price purchase to hedge costs, it has the opportunity to instead enter into a fixed price sale at approximately the same price. However, because the supply portfolio is short energy NWE rarely enters into a fixed price sale because selling energy would make it

even shorter, thereby increasing risk to customers. Recently, the electricity market has moved from a period of high prices to a period of abnormally low prices. Had the opposite occurred, meaning a market price shift from being low to very high, the fixed price hedges would have provided lower costs to customers, and claims about market manipulation incentives to win "bets" would be nonexistent.

Q. Can you cite an analogy or every day example that helps illustrate the hedging concept?

A. The best example I can think of that is analogous to hedging is insurance. Most people who own a home or automobile have insurance that covers the value of the asset should it become damaged or destroyed. An insurance policy covers a set period of time and requires a payment regardless of whether the underlying asset is damaged or destroyed during the term. The value of insurance is the protection it provides, and that value is received whether or not there are any damage claims. I believe that few, if any, individuals recognize an "insurance loss" during periods when no claims are made or an "insurance gain" when damage occurs and the insurance payment exceeds the cost of the premium. An insurance policy is intended to mitigate very adverse outcomes, and the same holds true with hedging. NWE's hedging strategy provides protection while still allowing consumers to benefit from decreasing market prices.

Q. Can you provide a real life example that demonstrates the value of hedging?

A. Please refer to Exhibit__(KJM-2) which illustrates the value NWE customers received by being hedged during the 2000/2001 California energy crisis. During that time NWE had a full requirements (100%) contract with PPL to provide all the energy needed to serve Default Supply (non-choice) loads. The full requirements price from PPL was $22.85 per MWh, resulting in a total estimated cost of over $149 million for supply during that period.

Had NWE not been hedged during the California energy crisis, but rather totally exposed to the market, that same energy would have cost over $1.4 billion, an increase of 841% for supply costs. For December of that period the cost of supply would have increased 2196% over what it actually was.

Q. Are you suggesting that you know that an electric market similar to the market experienced in the time frame covered by your exhibits is imminent?

A. Not at all. However, I do not believe that most market participants anticipated such a market prior to it developing. Fundamentally, there is no greater certainty today concerning what future market prices will be than there was then, and that reality supports the basic value proposition for hedging.

Q. Do you have any concluding thoughts you would like to share?

A. Yes. The NWE Hedging Plan ("Plan") has been in existence for many years, and it works. It is tried and tested, and the results have accomplished what was intended. During recent periods of declining market prices, customer rates have decreased. Under the Plan, portfolio costs move in the same direction as the market, but less dramatically. While rates have decreased, customers have still enjoyed protection against rising prices. NWE's Plan is disciplined; it provides flexibility in decision-making without allowing for speculation or gambling; it works in periods of high <u>and</u> low prices; and, very importantly, it provides results that are directly aligned with the Montana Public Service Commission-approved Procurement Guidelines. The Procurement Plan that NWE prepares and follows has worked exactly as planned. It has provided rates that are reasonable, stable, and reflect market conditions over time.

Q. Does this complete your testimony?

A. Yes, it does.

Analysis of Hedge Value During California Energy Crisis

	MWh	Hedged Price	Mid C Price	Actual Cost	Non-Hedged Cost	Difference
Jul-00	569,000	$ 22.85	$ 98.08	$ 13,001,650	$ 55,807,520	$ 42,805,870
Aug-00	614,000	$ 22.85	$ 166.06	$ 14,029,900	$ 101,960,840	$ 87,930,940
Sep-00	497,000	$ 22.85	$ 114.73	$ 11,356,450	$ 57,020,810	$ 45,664,360
Oct-00	480,000	$ 22.85	$ 96.81	$ 10,968,000	$ 46,468,800	$ 35,500,800
Nov-00	557,000	$ 22.85	$ 161.29	$ 12,727,450	$ 89,838,530	$ 77,111,080
Dec-00	615,000	$ 22.85	$ 524.64	$ 14,052,750	$ 322,653,600	$ 308,600,850
Jan-01	594,000	$ 22.85	$ 261.17	$ 13,572,900	$ 155,134,980	$ 141,562,080
Feb-01	545,000	$ 22.85	$ 275.21	$ 12,453,250	$ 149,989,450	$ 137,536,200
Mar-01	518,000	$ 22.85	$ 260.71	$ 11,836,300	$ 135,047,780	$ 123,211,480
Apr-01	496,000	$ 22.85	$ 289.74	$ 11,333,600	$ 143,711,040	$ 132,377,440
May-01	507,000	$ 22.85	$ 223.45	$ 11,584,950	$ 113,289,150	$ 101,704,200
Jun-01	538,000	$ 22.85	$ 62.00	$ 12,293,300	$ 33,356,000	$ 21,062,700
	6,530,000	$ 22.85	$ 211.16	$ 149,210,500	$ 1,404,278,500	$ 1,255,068,000

Increase in Supply Costs	841%
Increase in December Supply Costs	2196%

* Estimated monthly volumes. Actual Mid C prices.

Department of Public Service Regulation
Montana Public Service Commission
Docket No. 2012.5.49
Annual Electric Supply Filing
NorthWestern Energy

PREFILED REBUTTAL TESTIMONY
OF WILLIAM M. THOMAS
ON BEHALF OF NORTHWESTERN ENERGY

Description	**Starting Page No.**
Witness Information	2
Purpose of Testimony	2
Testimony of Dr. Wilson	2
Testimony of Mr. Stamatson	8

Attachments and Exhibits

Summary of Residential/Commercial Splits	Attachment 1
Reconciled Electric DSM Lost Revenues 2006-2012 NWE Facilities Removed	Exhibit__(WMT-5.1)
Reconciled Electric DSM Lost Revenues 2006-2012 NWE	Exhibit__(WMT-5.2)

Witness Information

Q. Please state your name and business address.

A. My name is William M. Thomas and my business address is 40 East Broadway, Butte, Montana 59701.

Q. By whom are you employed and in what capacity?

A. I am NorthWestern Energy's ("NWE" or "NorthWestern") Manager of Regulatory Support Services in the Government and Regulatory Affairs Department.

Q. Are you the same William M. Thomas who submitted prefiled direct and supplemental testimony in this proceeding?

A. Yes, I am.

Purpose of Testimony

Q. What is the purpose of your testimony?

A. I respond to certain positions advanced in the prefiled direct testimonies in this proceeding of Dr. John Wilson and Mr. Jaime Stamatson for the Montana Consumer Counsel ("MCC"), and I update Revised Lost Revenues and associated reconciliation amounts presented in my prefiled supplemental testimony.

Testimony of Dr. Wilson

Q. Do you agree with Dr. Wilson's position that NWE should not include the

electric conservation savings achieved at its own buildings and facilities ("NorthWestern Facilities DSM") in its calculation of lost revenues?

A. Yes. NorthWestern believes Dr. Wilson is correct.

Q. What is the amount of NorthWestern Facilities DSM acquired during the time period covered by the SBW Evaluation?

A. The following table presents the amounts of gross reported NorthWestern Facilities DSM:

Table 1: DSM from NorthWestern Facilities (July 1, 2006 – June 30, 2013)

	NorthWestern Facilities DSM	
Tracker Year	**Annual kwh**	**Annual aMW**
2006-2007	12,532	0.0014
2007-2008	43,382	0.0050
2008-2009	157,132	0.0179
2009-2010	286,247	0.0327
2010-2011	7,374	0.0008
2011-2012	50,710	0.0058
2012-2013	430,267	0.0491
Total	987,645	0.1127

Note: value for 2012-2013 is a "to date" estimate

Q. What are the amounts of electric DSM lost revenue in each past tracker period that are associated with NorthWestern Facilities DSM?

A. I calculate the total DSM lost revenue attributable to NorthWestern's facilities to be $44,573. I performed a detailed, iterative, multi-step process to determine this amount. First, I revised the Residential/Commercial Splits. Second, I updated the Lost Revenue Reconciliation Workbook. Third, I compared and totaled the

changes to DSM lost revenue. Finally, I incorporated additional revisions advocated by the MCC. I explain each of these steps and its rationale below.

Q. Why is it appropriate to revise the Residential/Commercial Splits and what are the updated values?

A. The percentage of energy savings attributable to residential and commercial/industrial customers ("Residential/Commercial Splits") is important to the final calculation of lost revenues because different transmission and distribution retail rates apply to each respective customer class. As NorthWestern, intervenors, and the Commission work through an electric tracker docket, more current information becomes available, and it is normal to update these percentages. When it files a tracker docket, NorthWestern has data for 9 months of reported energy savings and 3 months of estimated ("9+3") energy savings data. Later in the year (typically late third calendar quarter), NorthWestern has 12 months of reported and 0 months of estimated ("12+0") energy savings data. When this additional data is available, NorthWestern updates the Residential/Commercial Splits.

In this particular electric tracker, the results of the DSM Evaluation Study performed by SBW, Inc. require additional changes to the Residential/ Commercial Splits, adding further complication.

NorthWestern agrees with Dr. Wilson that the NorthWestern Facilities DSM should not be used when computing electric DSM lost revenues. Removal of

energy savings attributable to NorthWestern's facilities adds yet another change to the reported energy savings and consequent allocation of overall energy savings to residential and commercial/industrial customers. NorthWestern Facilities DSM occurred over many years beginning with the 2006-2007 tracker period and will continue through the 2012-2013 tracker period. It is appropriate to update the reconciled lost revenue calculations ("Revised Lost Revenues") to remove the NorthWestern Facilities DSM for all of those tracker periods. NorthWestern facilities that produce DSM are classified as commercial accounts; the electric DSM resource obtained from them affects the commercial portion of the Residential/Commercial Splits which will, in turn, change the residential portion of the Residential/Commercial Splits.

Attachment 1 presents the Residential/Commercial Splits at three different points in time through the processing of this electric tracker. An image of Attachment 1 is shown below for reference.

> Section 1 presents the Residential/Commercial Splits computed with 12 months actual energy savings data used in the previous respective electric tracker dockets before results of the SBW DSM Evaluation findings were finalized.
>
> Section 2 adjusts the Residential/Commercial Splits with data received from SBW, Inc., but does not include the effects of removing NorthWestern Facilities DSM.
>
> Section 3 further adjusts the Section 2 data by removing the NorthWestern Facilities DSM. NorthWestern believes the Section 3

data is the most current available and is the appropriate data to use in an updated reconciliation of the electric DSM lost revenues for all time periods covered by Exhibit__(WMT-5) attached to my prefiled supplemental testimony.

Section 1: Residential/Commercial Splits from Testimony

Electric		Original Splits		
Tracker Period	Docket No.	Residential	Commercial	Total
2006-07	D2007.5.46	75.1%	24.9%	100.0%
2007-08	D2008.5.45	66.5%	33.5%	100.0%
2008-09	D2009.5.62	62.2%	37.8%	100.0%
2009-10	D2010.5.50	68.5%	31.5%	100.0%
2010-11	D2011.5.38	78.4%	21.6%	100.0%
2011-12	D2012.5.49	64.82%	35.18%	100.0%
2012-13	D2012.5.49	67.4%	32.6%	100.0%

Section 2: Revised Residential/Commercial Splits using SBW Adjusted Energy Savings (2006-11) BEFORE Removal of NWE Facilities DSM

	Revised Splits based on SBW Evaluation data			SBW Adjusted Energy Savings	
	Residential	Commercial	Total	kwh	aMW
2006-07	78.1%	21.9%	100.0%	37,390,699	4.268
2007-08	69.0%	31.0%	100.0%	41,756,926	4.767
2008-09	61.9%	38.1%	100.0%	52,189,046	5.958
2009-10	63.7%	36.3%	100.0%	66,500,169	7.591
2010-11	75.3%	24.7%	100.0%	60,295,578	6.883
5-year avg. (2006-2011) =	69.60%	30.40%			
	Time periods outside SBW study period; these splits are from updated exhibits to prefiled direct testimony			NWE Gross Reported Savings or Annual DSM Goal	
2011-12	64.82%	35.18%	100.0%	81,603,067	9.32
2012-13	67.4%	32.6%	100.0%	52,560,000	6.00

source for 2011-12: Exhibit__(WMT-1) 2011-12 Tracker 12mth Acutal Electric DSM Savings FINAL 082312.xlsx provided in response to PSC-014a

source for 2012-13: Exhibit__(WMT-3) Electric DSM Lost Revenues 12 mth actual 2010-13 with backup.xlsx provided in response to PSC-014a

Section 3: Revised Residential/Commercial Splits using SBW Adjusted Energy Savings (2006-11) AFTER Removal of NWE Facilities DSM

Electric					SBW Adjusted Energy Savings - NWE Facilities DSM	
		Revised Splits based on SBW Evaluation				
Tracker Period	Docket No.	Residential	Commercial	Total	kwh	aMW
2006-07	D2007.5.46	78.1%	21.9%	100.0%	37,378,167	4.267
2007-08	D2008.5.45	69.1%	30.9%	100.0%	41,713,543	4.762
2008-09	D2009.5.62	62.1%	37.9%	100.0%	52,031,915	5.940
2009-10	D2010.5.50	64.0%	36.0%	100.0%	66,213,922	7.559
2010-11	D2011.5.38	75.3%	24.7%	100.0%	60,288,203	6.882
5-year avg. (2006-2011) =		69.7%	30.3%			
		Revised Splits			NWE Gross Reported Savings	
2011-12	D2012.5.49	64.86%	35.14%	100.0%	81,552,357	9.31
2012-13	D2012.5.49	69.7%	30.3%	100.0%	52,560,000	6.00

Q. How are the updated Residential/Commercial Splits used to update the Lost Revenue Reconciliation Workbook?

A. In Exhibit__(WMT-5) of my prefiled supplemental testimony, I presented a reconciliation of electric DSM lost revenues that included NorthWestern Facilities DSM. To determine the effect of removal of NorthWestern Facilities DSM on that reconciliation, I prepared an updated version, Exhibit__(WMT-5.1). I entered the updated Residential/Commercial Splits from Section 3 of Attachment 1 into the various spreadsheet workbooks that feed the Exhibit__(WMT-5) reconciliation summary to develop Revised Lost Revenues. I also subtracted the amounts of

NorthWestern Facilities DSM from Table 1 above from the reported energy savings values in the relevant and appropriate cells of the same spreadsheet workbooks that feed the results summarized in Exhibit__(WMT-5). This updating process produces a revised version presented here as Exhibit__(WMT-5.1).

Q. What is the amount of lost revenues associated with NorthWestern Facilities DSM and how was it calculated?

A. I compared the amount of DSM Lost revenue by tracker year in Exhibit__(WMT-5) to the updated values for corresponding periods in Exhibit__(WMT-5.1). The amount of electric DSM lost revenue attributable to NorthWestern Facilities DSM during the 2006-2012 period is $44,573. This value is the difference between the Total Lost Revenues of $18,182,874 for July 1, 2006 through June 30, 2012 presented on Exhibit__(WMT-5) and the Total Lost Revenues further adjusted to remove the effects of NorthWestern Facilities DSM of $18,138,301 presented on Exhibit__(WMT-5.1). As a result, the over-collection or reconciliation amount for the period increases from $129,751 to $174,324.

Q. Does this represent NorthWestern's proposed updated electric DSM Lost Revenue Reconciliation amount?

A. No. Exhibit__(WMT-5.1) is an intermediate step to fully updating the electric DSM lost revenues with currently available information. I performed this step to isolate the effects of removal of NWE Facilities DSM. The lost revenues calculation for the 2012-2013 tracker period is also affected by the changes discussed above, and I wish to respond to certain elements of the prefiled direct

testimony of Mr. Stamatson before presenting completed updates to Exhibit__(WMT-5) of my prefiled supplemental testimony.

Q. How will NorthWestern account for NWE Facilities DSM in the 2012-2013 and future tracker periods?

A. In Docket No. D2012.5.49, the 2012-2013 tracker year is a forward-looking time period and energy savings for this period is based on a goal of 6.0 aMW. When the actual gross reported DSM savings is prepared for the 2012-2013 time period as the upcoming tracker filing is prepared (during May 2013), NorthWestern will exclude any reported energy savings from NorthWestern Facilities DSM in its calculation of electric DSM lost revenues. NorthWestern Facilities DSM will count toward the annual DSM goal, but will not be used in lost revenue calculations.

<u>Testimony of Mr. Stamatson</u>

Q. The proposed lost revenue true-up amount on page 10, line 13 in your prefiled supplemental testimony is $129,571 and the amount in Exhibit__(WMT-5) included with that testimony is $129,751. Which value is correct?

A. The correct number for the reconciliation amount proposed at that time is $129,751 as presented in Exhibit__(WMT-5) in cell N28.

Q. Do you agree with Mr. Stamatson's position that there is a discrepancy in the DSM lost revenue amounts associated with CU-4 for January-June 2009

time period between Exhibit__(WMT-5) and Exhibit__(WMT-3-S)?

A. Yes. The value of 2.98 aMW (instead of 3.34 aMW) is the correct value that should be in cell D7 on *Tab 8. CU-4 Related LRs* of the spreadsheet workbook file named *Recon-SBW-Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 2010-11 with backup.xlsx* when preparing the reconciliation of lost revenues presented in Exhibit__(WMT-5).

Q. Do you agree with Mr. Stamatson's recommended changes to the residential and commercial percentage splits used in the lost revenue reconciliation calculations?

A. Because even more current Residential/Commercial Splits have been incorporated into Exhibit__(WMT-5.1) to correct for NWE Facilities DSM as described above, neither Mr. Stamatson's recommendation to use the most current data available, nor my counter argument to his position, is relevant at this point. The Residential/Commercial Splits developed in Section 3 of Attachment 1 are based on the most current data available from SBW, with further adjustment to remove the NWE Facilities DSM, and are used to derive updated Revised Lost Revenues. The five-year average commercial/residential values of 69.7% and 30.3% respectively are appropriate for use against the DSM goal for the 2012-2013 tracker period until 9 months actual + 3 months reported energy savings for the 2012-2013 period can be determined and incorporated into the 2013-2014 electric tracker filing.

Q. Are there any other adjustments to the lost revenue calculations that are

necessary?

A. Yes. Several workbooks feed results to Exhibit__(WMT-5), Exhibit__(WMT-5.1), and Exhibit__(WMT-5.2). In one of those workbooks, *5.2UPDATEDRecon-SBW-Exhibit__(WMT-3) Electric DSM Lost Revenues 12 mth actual 2010-13 with backup.xlsx,* I noticed and corrected an error in a value used for the adjustment factor for the 2011-2012 tracker period in the calculations of lost revenues related to the Dave Gates Generating Station ("DGGS"). This correction changed the value used for an adjustment factor from 1.0 to 0.89 on *Tab 9, DGGS Related LRs*, column E lines 98-101. This one change decreases previously calculated lost revenues associated with DGGS for the 2011-2012 tracker period by $10,550.

Q. Have you prepared an updated exhibit that incorporates all changes to the electric DSM lost revenues for the tracker periods from July 1, 2006 through June 30, 2013?

A. Yes. I present the updated lost revenues for each tracker period in Exhibit__(WMT-5.2). Exhibit__(WMT-5.2) is based on Exhibit__(WMT-5.1) with the additional changes discussed above including updated Residential/ Commercial Splits, updated reported energy savings associated with CU-4 for the January-June 2009 time period, and an updated adjustment factor associated with DGGS for the 2011-2012 time period.

In my prefiled supplemental testimony, Exhibit__(WMT-5), I presented Revised Lost Revenues of $18,182,874 and an over-collection, or reconciliation amount,

of $129,751.

My updated Exhibit__(WMT-5.2) shows Revised Lost Revenues of $18,086,923 and the over-collection, or reconciliation amount, of $225,703.

Q. Does this conclude your testimony?

A. Yes.

Attachment 1
to Rebuttal Testimony of William M. Thomas
Docket No. D2012.5.49

Summary and comparison of the Residential/Commercial % splits used in previous electric tracker dockets versus those derived using SBW DSM Evaluation data and effects on them of removal of NorthWestern Facilities DSM energy savings.

Produced for Thomas Rebuttal Testimony in D2012.5.49

Section 1: Residential/Commercial Splits from Previous Electric Tracker Dockets

Electric		Original Splits		
Tracker Period	Docket No.	Residential	Commercial	Total
2006-07	D2007.5.46	75.1%	24.9%	100.0%
2007-08	D2008.5.45	66.5%	33.5%	100.0%
2008-09	D2009.5.62	62.2%	37.8%	100.0%
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2010-11	D2011.5.38	78.4%	21.6%	100.0%
2011-12	D2012.5.49	64.82%	35.18%	100.0%
2012-13	D2012.5.49	67.4%	32.6%	100.0%

Section 2: Revised Residential/Commercial Splits using SBW Adjusted Energy Savings (2006-11) BEFORE Removal of NWE Facilities DSM

	Revised Splits based on SBW Evaluation data			SBW Adjusted Energy Savings	
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2007-08	69.0%	31.0%	100.0%	41,756,926	4.767
2008-09	61.9%	38.1%	100.0%	52,189,046	5.958
2009-10	63.7%	36.3%	100.0%	66,500,169	7.591
2010-11	75.3%	24.7%	100.0%	60,295,578	6.883

5-year avg. (2006-2011) = 69.60% 30.40%

	Time periods outside SBW study period; these splits are from updated exhibits to prefiled direct testimony			NWE Gross Reported Savings or Annual DSM Goal	
	Residential	Commercial	Total	kwh	aMW
2011-12	64.82%	35.18%	100.0%	81,603,067	9.32
2012-13	67.4%	32.6%	100.0%	52,560,000	6.00

source for 2011-12: Exhibit__(WMT-1) 2011-12 Tracker 12mth Acutal Electric DSM Savings FINAL 082312.xlsx provided in response to PSC-014a

source for 2012-13: Exhibit__(WMT-3) Electric DSM Lost Revenues 12 mth actual 2010-13 with backup.xlsx provided in response to PSC-014a

Section 3: Revised Residential/Commercial Splits using SBW Adjusted Energy Savings (2006-11) AFTER Removal of NWE Facilities DSM

Electric		Revised Splits based on SBW Evaluation			SBW Adjusted Energy Savings - NWE Facilities DSM	
Tracker Period	Docket No.	Residential	Commercial	Total	kwh	aMW
2006-07	D2007.5.46	78.1%	21.9%	100.0%	37,378,167	4.267
2007-08	D2008.5.45	69.1%	30.9%	100.0%	41,713,543	4.762
2008-09	D2009.5.62	62.1%	37.9%	100.0%	52,031,915	5.940
2009-10	D2010.5.50	64.0%	36.0%	100.0%	66,213,922	7.559
2010-11	D2011.5.38	75.3%	24.7%	100.0%	60,288,203	6.882

5-year avg. (2006-2011) = 69.7% 30.3%

	Revised Splits			NWE Gross Reported Savings	
	Residential	Commercial	Total	kwh	aMW
2011-12	64.86%	35.14%	100.0%	81,552,357	9.31
2012-13	69.7%	30.3%	100.0%	52,560,000	6.00

Exhibit__(WMT-5.1)

William M. Thomas Rebuttal Testimony Docket D2012.5.49

Electric DSM Lost Revenue Exhibits in previous Electric Tracker Dockets

Time Period[1]	Docket No.	Source file name	Montana T&D	Colstrip Unit #4[2]	Dave Gates Mill Creek Station[3]	Total DSM Lost Revenue[4]
Tracker 2006-07	D2007.5.46	Exhibit__(WMT-5).07-08 DSM Lost Revenues True-up final.xls	$ 1,338,798			$ 1,338,798
Tracker 2007-08	D2008.5.45	2007-08 ElecLostRevs-trued up-NEXANTandRATES RESET.xls	$ 2,101,858			$ 2,101,858
January-June 2008	D2008.5.45	Exhibit__(WMT-3) Electric DSM Lost Revenues UPDATED final orig.xls	$ 321,790			$ 321,790
Tracker 2008-09	D2009.5.62	Exhibit__(WMT-3) Electric DSM Lost Revenues UPDATED final orig.xls	$ 1,428,667	$ 83,021		$ 1,511,688
Tracker 2009-10	D2009.5.62	Exhibit__(WMT-3) Electric DSM Lost Revenues UPDATED final orig.xls	$ 3,062,576	$ 716,410		$ 3,778,987
Tracker 2010-11:						
July-December 2010	D2010.5.50	Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 2010-11 with backup.xlsx	$ 543,454	$ 762,879		$ 1,306,332
January-June 2011	D2010.5.50	Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 2010-11 with backup.xlsx	$ 1,112,639	$ 762,879	$ 74,329	$ 1,949,846
Tracker 2010-11 Total	D2010.5.50	Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 2010-11 with backup.xlsx	$ 1,656,092	$ 1,525,758	$ 74,329	$ 3,256,179
Tracker 2011-12	D2011.5.38	Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 12 mth actual 2010-13 with backup.xlsx	$ 3,325,423	$ 2,381,708	$ 296,195	$ 6,003,326
Tracker 2012-13	D2012.5.49	Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 12 mth actual 2010-13 with backup.xlsx	$ 5,138,335	$ 3,112,713	$ 597,570	$ 8,848,617
Total Lost Revenues (July 1, 2006 through June 30, 2012)						**$ 18,312,625**
Total Lost Revenues (July 1, 2006 through June 30, 2013)						**$ 27,161,243**

Updated Electric DSM Lost Revenues Using Results of 2012 DSM Evaluation by SBW, Inc.

These numbers are based on Exhibit__(WMT-5), and with NWE Facilities DSM removed

Updated Source Exhibit	Montana T&D	Colstrip Unit #4	Dave Gates Mill Creek Station	Total DSM Lost Revenue
5.1UPDATEDRecon-SBW-Exhibit__(WMT-5).07-08 DSM Lost Revenues True-up final.xlsx	$ 1,768,511			$ 1,768,511
5.1UPDATEDRecon-2007-08 ElecLostRevs-trued up-NEXANTandRATES RESET.xlsx	$ 1,889,697			$ 1,889,697
5.1UPDATEDRecon-SBW-Exhibit__(WMT-3) Electric DSM Lost Revenues UPDATED final orig.xlsx	$ 334,913			$ 334,913
5.1UPDATEDRecon-SBW-Exhibit__(WMT-3) Electric DSM Lost Revenues UPDATED final orig.xlsx	$ 1,481,064	$ 83,021		$ 1,564,085
5.1UPDATEDRecon-SBW-Exhibit__(WMT-3) Electric DSM Lost Revenues UPDATED final orig.xlsx	$ 3,175,025	$ 752,795		$ 3,927,820
5.1UPDATEDRecon-SBW-Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 2010-11 with backup.xlsx	$ 506,627	$ 799,498	$ -	$ 1,306,125
5.1UPDATEDRecon-SBW-Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 2010-11 with backup.xlsx	$ 1,036,879	$ 799,498	$ 69,327	$ 1,905,703
5.1UPDATEDRecon-SBW-Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 2010-11 with backup.xlsx	$ 1,543,506	$ 1,598,995	$ 69,327	$ 3,211,828
5.1UPDATEDRecon-SBW-Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 12 mth actual 2010-13 with backup.xlsx	$ 2,962,327	$ 2,190,459	$ 288,661	$ 5,441,446
5.1UPDATEDRecon-SBW-Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 12 mth actual 2010-13 with backup.xlsx	$ 4,847,629	$ 2,950,355	$ 588,770	$ 8,386,754
Total Lost Revenues (July 1, 2006 through June 30, 2012)				**$ 18,138,301**
				$ 174,324
Total Lost Revenues (July 1, 2006 through June 30, 2013)				**$ 26,525,055**
				$ 636,188

Notes:

1. Electric DSM Lost Revenues were reset Jan. 1, 2008 due to newly established T&D rates

Refer to Electric Default Supply Service D2007.7.80, Tariff 144-E and General Rate Case D2007.7.82 Interim Order No. 6852b, Tariff 145-E

Tracker Period 2010-2011 based on 12+0 energy savings

Electric DSM Lost Revenues were reset again on Jan. 1, 2011 due to newly established T&D rates
Refer to Docket D2009.9.129, Final Order No. 7046h

2. MPSC Final Order 6921c authorizes CU-4 related Lost Revenues in the amount of $83,021 for the 2008-09 period.
There is no "reset" of DSM savings for CU-4 related Lost Revenues, because there were no new rates established.

3. DGGS began commercial service on January 1, 2011

4. MPSC Final Order 7093c authorizes DSM Lost Revenues in the amount of $3,778,987 for the 2009-10 period.

This version (Exhibit__(WMT-5.1) was prepared as part of Thomas Rebuttal Testimony

Exhibit__(WMT-5.2)

William M. Thomas Rebuttal Testimony Docket D2012.5.49

Electric DSM Lost Revenue Exhibits in previous Electric Tracker Dockets

Time Period[1]	Docket No.	Source file name	Montana T&D	Colstrip Unit #4[2]	Dave Gates Mill Creek Station[3]	Total DSM Lost Revenue[4]
Tracker 2006-07	D2007.5.46	Exhibit__(WMT-5).07-08 DSM Lost Revenues True-up final.xls	$ 1,338,798			$ 1,338,798
Tracker 2007-08	D2008.5.45	2007-08 ElecLostRevs-trued up-NEXANTandRATES RESET.xls	$ 2,101,858			$ 2,101,858
January-June 2008	D2008.5.45	Exhibit__(WMT-3) Electric DSM Lost Revenues UPDATED final orig.xls	$ 321,790			$ 321,790
Tracker 2008-09	D2009.5.62	Exhibit__(WMT-3) Electric DSM Lost Revenues UPDATED final orig.xls	$ 1,428,667	$ 83,021		$ 1,511,688
Tracker 2009-10	D2009.5.62	Exhibit__(WMT-3) Electric DSM Lost Revenues UPDATED final orig.xls	$ 3,062,576	$ 716,410		$ 3,778,987
Tracker 2010-11:						
July-December 2010	D2010.5.50	Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 2010-11 with backup.xlsx	$ 543,454	$ 762,879		$ 1,306,332
January-June 2011	D2010.5.50	Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 2010-11 with backup.xlsx	$ 1,112,639	$ 762,879	$ 74,329	$ 1,949,846
Tracker 2010-11 Total	D2010.5.50	Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 2010-11 with backup.xlsx	$ 1,656,092	$ 1,525,758	$ 74,329	$ 3,256,179
Tracker 2011-12	D2011.5.38	Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 12 mth actual 2010-13 with backup.xlsx	$ 3,325,423	$ 2,381,708	$ 296,195	$ 6,003,326
Tracker 2012-13	D2012.5.49	Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 12 mth actual 2010-13 with backup.xlsx	$ 5,138,335	$ 3,112,713	$ 597,570	$ 8,848,617
Total Lost Revenues (July 1, 2006 through June 30, 2012)						**$ 18,312,625**
Total Lost Revenues (July 1, 2006 through June 30, 2013)						**$ 27,161,243**

Updated Electric DSM Lost Revenues Using Results of 2012 DSM Evaluation by SBW, Inc.

These numbers are based on Exhibit__(WMT-5.1) with additional updates as described in the Pre-filed Rebuttal Testimony of William M. Thomas

Updated Source Exhibit	Montana T&D	Colstrip Unit #4	Dave Gates Mill Creek Station	Total DSM Lost Revenue
5.2UPDATEDRecon-SBW-Exhibit__(WMT-5).07-08 DSM Lost Revenues True-up final.xlsx	$ 1,768,511			$ 1,768,511
5.2UPDATEDRecon-2007-08 ElecLostRevs-trued up-NEXANTandRATES RESET.xlsx	$ 1,889,697			$ 1,889,697
5.2UPDATEDRecon-SBW-Exhibit__(WMT-3) Electric DSM Lost Revenues UPDATED final orig.xlsx	$ 334,913			$ 334,913
5.2UPDATEDRecon-SBW-Exhibit__(WMT-3) Electric DSM Lost Revenues UPDATED final orig.xlsx	$ 1,481,064	$ 83,021		$ 1,564,085
5.2UPDATEDRecon-SBW-Exhibit__(WMT-3) Electric DSM Lost Revenues UPDATED final orig.xlsx	$ 3,175,025	$ 752,795		$ 3,927,820
5.2UPDATEDRecon-SBW-Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 2010-11 with backup.xlsx	$ 506,627	$ 779,083	$ -	$ 1,285,711
5.2UPDATEDRecon-SBW-Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 2010-11 with backup.xlsx	$ 1,036,879	$ 779,083	$ 69,327	$ 1,885,289
5.2UPDATEDRecon-SBW-Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 2010-11 with backup.xlsx	$ 1,543,506	$ 1,558,167	$ 69,327	$ 3,170,999
5.2UPDATEDRecon-SBW-Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 12 mth actual 2010-13 with backup.xlsx	$ 2,962,327	$ 2,190,459	$ 278,111	$ 5,430,897
5.2UPDATEDRecon-SBW-Exhibit__(WMT-3-Rev) Electric DSM Lost Revenues 12 mth actual 2010-13 with backup.xlsx	$ 4,847,629	$ 2,950,355	$ 588,770	$ 8,386,754
Total Lost Revenues (July 1, 2006 through June 30, 2012)				**$ 18,086,923**
				$ 225,703
Total Lost Revenues (July 1, 2006 through June 30, 2013)				**$ 26,473,676**
				$ 687,566

Notes:

1. Electric DSM Lost Revenues were reset Jan. 1, 2008 due to newly established T&D rates

Refer to Electric Default Supply Service D2007.7.80, Tariff 144-E and General Rate Case D2007.7.82 Interim Order No. 6852b, Tariff 145-E

Tracker Period 2010-2011 based on 12+0 energy savings

Electric DSM Lost Revenues were reset again on Jan. 1, 2011 due to newly established T&D rates
Refer to Docket D2009.9.129, Final Order No. 7046h

2. MPSC Final Order 6921c authorizes CU-4 related Lost Revenues in the amount of $83,021 for the 2008-09 period.
There is no "reset" of DSM savings for CU-4 related Lost Revenues, because there were no new rates established.

3. DGGS began commercial service on January 1, 2011

4. MPSC Final Order 7093c authorizes DSM Lost Revenues in the amount of $3,778,987 for the 2009-10 period.

This version (Exhibit__(WMT-5.2) was prepared as part of Thomas Rebuttal Testimony