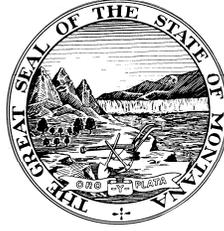


PUBLIC SERVICE COMMISSION STATE OF MONTANA

Bill Gallagher, Chairman
Bob Lake, Vice Chairman
Kirk Bushman, Commissioner
Travis Kavulla, Commissioner
Roger Koopman, Commissioner



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May 17, 2013

Mr. Joe Schwartzenberger
Director, Regulatory Affairs
NorthWestern Energy
40 East Broadway
Butte, MT 59701

RE: Data requests in Docket D2012.5.49

Dear Mr. Schwartzenberger,

Enclosed please find data requests of the Montana Public Service Commission to NorthWestern Energy (NWE) numbered PSC-100 through PSC-117 in the above-referenced Docket. Please begin the response to each new numbered data request on a new page. Please provide responses by May 31, 2013. If you have any questions, please contact me at (406) 444-6191.

Sincerely,

Neil Templeton
Regulatory Division
Montana Public Service Commission

Service Date: May 17, 2013

DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA

* * * * *

IN THE MATTER OF NorthWestern Energy's) REGULATORY DIVISION
Application for Approval of Electricity Supply)
Deferred Cost Account Balance and Projected) DOCKET NO. D2012.5.49
Electric Supply Costs)

**DATA REQUESTS PSC-100 THROUGH PSC-117 OF THE
MONTANA PUBLIC SERVICE COMMISSION
TO
NORTHWESTERN ENERGY**

PSC-100

Regarding: Contract Modification No. 4 (Exhibit_WTR-3)

Witness: Rhoads

Paragraph #8 of Modification No. 4 provides that NorthWestern “hereby forever irrevocably releases” Pratt & Whitney Power Systems from claims of any kind relating to or arising from the DGGS outage. Please explain fully the ramifications of this contract provision and, if it changes NorthWestern’s response to DR MCC-038 (in which NorthWestern stated it is pursuing all possible avenues of compensation from PWPS), provide an updated response.

PSC-101

Regarding: Post-outage testing and results

Witness: Rhoads

On pages 17-18 of your testimony, you state, “PWPS is committed to resolving the problem with the power turbines” and refer to “a modification to the power turbines that will provide a long term remedy to the problem.”

- a. Please identify and describe in detail “the problem with the power turbines.”
- b. Explain what testing PWPS has or is conducting on DGGS to determine the cause of the outage.

- c. Please provide all results and conclusions from any tests related to the cause of the outage, including any testing results that tended to show “the problem with the power turbines.”
- d. Does NWE expect to receive a written report or other document describing the cause of the outage and, if so, when does it expect to receive it?
- e. Please submit any written report or other document addressing the cause of the outage that NWE has received or receives in the future.

PSC-102

Regarding: Control software and ramp rates

Witness: Rhoads

- a. Did NWE conduct any testing to ensure that the station’s control software allowed DGGS to run within the specifications contained within the purchase order?
- b. Explain how NWE employees and/or contract personnel monitored the ramp rates of the units and their engines or power turbines.

PSC-103

Regarding: Operational safeguards at DGGS

Witness: Rhoads

- a. What steps did NWE employees or contract personnel take in 2011 when operating DGGS to ensure that the units did not operate abnormally or outside of the specifications of the purchase order?
- b. On page 9 of your testimony, you state that DGGS experienced a vibration problem in Unit 2B in “early January 2012.” Please specify the date and precise time that NWE first encountered the vibration problem in Unit 2B.
- c. Please provide the most detailed data available showing the output and ramp rates at DGGS between the time that NWE first encountered the vibration problem and the time that “the vibration forced the unit offline on January 11, 2012.” (9:9-12)
- d. Please explain why facility availability for Unit 2, which was not higher than 51.60% between May and November 2012, was so much lower than the availability of the other units during that same time period (*see* 2012 “U2 EAF” in Exhibit_(WTR-1)).

PSC-104

Regarding: Design and operation of DGGS

Witness: Rhoads

On page 7-8 of your testimony, you describe the physical design of DGGS. You explain at 7:12-14 that each unit has “two engines...which are aerodynamically coupled to a power turbine (‘PT’) which drive a common generator. You also note that one side of the unit can be isolated with a “blanking plate” (7:21).

- a. Absent the use of the blanking plate, are the two engines of a unit designed to ramp up and down in tandem and, if so, was that the operational experience at DGGS?
- b. Was the ramping of DGGS in advance of the outage, and today, typical of the ramps experienced by other aero derivative gas turbine generators?
- c. Were any of the DGGS units or engines operating outside of their design specifications at any time before the outage occurred?
- d. Were any blanking plates installed in anticipation of routine operations before the DGGS facility became operational in 2011 or utilized during operations preceding the outage?
- e. Were blanking plates immediately available on site at the time of the outage? If not, when did they become available?

PSC-105

Regarding: Ramp rates

Witness: Rhoads

On 7:5-7 of your testimony, you write that “This [the aero derivative gas turbine generator of the kind used at DGGS] is a proven technology that meets the requirements for availability, reliability, *ramp rate*, minimum operating level, emissions, and constructability” [emphasis added].

- a. Does NWE retain minutely data on ramp rates at DGGS and for each of its units and engines?
- b. If the answer to (a) is yes, please provide that data in electronic spreadsheet format for the 60-day period leading up to the outage.
- c. On pages 19-20 of your Rebuttal Testimony you state, “The number of ramping events at DGGS is greater than is seen in base load or peaking plants.” To what extent and how did this operational fact cause or contribute to the outage?

PSC-106

Regarding: Modification to DGGS hardware and software

Witness: Rhoads

- a. You write that “A modification to a power turbine is now in progress.” (12:2; 18:7-8.) Describe that modification in detail, specifying the specific components modified, and explain why it is necessary.
- b. Has any software used to run the facility been modified in reaction to the outage? If so, please explain how it has been modified.
- c. Describe the “finite element analysis” model described on 11:18-22 of your testimony and describe in detail the problems with DGGS that it unearthed.
- d. Other than the modification to the power turbine referenced in (a), has any other hardware been modified or re-designed? If so, please explain what changes have been made.

PSC-107

Regarding: Warranty

Witness: Rhoads

On pages 14:11-15:4, you note that NWE’s warranty with PWPS did not cover consequential damage and observe, “I have never seen a contract where an original equipment manufacturer (‘OEM’) agreed to be liable for consequential damage for replacement power.” The response to PSC-006d, Attachment 1, pg. 4, includes a Jan. 31, 2012, email where an NWE employee wrote to a PWPS representative asserting, “Some of the additional costs that could result from DGGS operating at reduced capacity or being totally offline may include: The total cost of sufficient incremental regulation service necessitated by the loss of power production at the DGGS; incremental costs not recoverable through FERC and state tariffs; any compliance costs or regulatory fines associated with the inability to meet mandatory reliability criteria; any additional supply power costs if NWE must operate other generation resources to replace regulation needs supplied by the DGGS and the cost of operating generation for regulation. We expect Pratt & Whitney to reimburse NWE for all of the direct and indirect costs that these power turbine failures will impose on the company.”

- a. Does NWE no longer “expect” PWPS “to reimburse NWE” for the costs listed in the Jan. 31, 2012, email?
- b. If so, what caused NWE to change its expectation?
- c. Does NWE contend that, before its renewed warranty was issued for DGGS, its only recourse for the recovery of those costs was through the warranty process?

PSC-108

Regarding: Email Correspondence
Witness: Rhoads

In the proprietary response to PSC-006d, Attachment 1, page 67, you reference in an email to NWE executives that you had a discussion with Todd Emery that you would summarize in a separate email.

- a. Please identify Todd Emery's occupation and what role he occupies in relation to NWE.
- b. Please provide a full copy of the separate e-mail referenced in the email, as well as any responses to it, and any correspondence between you and Mr. Emery.

PSC-109

Regarding: Off System Transactions, Hedging
Witness: Markovich

- a. Do any of the "fixed price energy supply market transactions" you refer to on page 3 or the "fixed price hedges entered into at the Mid C market" on page 4 of your rebuttal testimony *not* involve the physical delivery of power from the contractual counterparty to NorthWestern?
- b. If the answer to subpart a. is yes, please identify the counterparty, number of megawatts hours contracted for, and terms (including price) of any transaction in which the contractual counterparty does not physically deliver electricity to NorthWestern.
- c. Mr. Donkin expressed surprise that NWE does not closely follow with detailed calculations how its electric supply hedges are performing, and believes that invoices with counterparties should have been provided in response to MCC-003(b). On page 4 of your rebuttal testimony, you assert, "NWE closely follows how its electric supply hedges and hedging programs are performing." Please provide any underlying data, including invoices, that enables NorthWestern to closely follow how transactions not involving the physical delivery of power from the contractual counterparty to NWE performed between July 2011 and June 2013.
- d. On page 4 of your rebuttal testimony, you state, "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." Please explain how evaluation of individual hedging transactions could produce conclusions that result in more risk to customers.

PSC-110

Regarding: Off System Transactions, Hedging
Witness: Markovich

Exhibit_(GLD-1) in George L. Donkin's direct testimony contains analysis of off-system transactions displayed in Exhibit_(FVB-2)12_13 in Frank V. Bennett's direct testimony.

- a. Do you consider the off-system transactions described in pp. 3-5 of Exhibit_(FVB-2)12_13 to be examples of hedging?
- b. For each off-system "Competitive Solicitation" or "Term" transaction listed in Exhibit_(FVB-2)12_13, p.3, rows 9-18, please provide a copy of the contract and, if applicable, the RFP or RFI from which it resulted.
- c. Please explain why the fixed price competitive solicitation purchases appear significantly more expensive than term fixed price purchases and the various index price sales. (See Exhibit_(FVB-2)12_13, p.5, rows 129, 132, 137-141.)

PSC-111

Regarding: Hedging Gains and Losses, Risk
Witness: Markovich

On p.4 of your rebuttal testimony, you state, "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."

Does this mean a mark-to-market or alternative analysis of price differences is not valid in this case? How would you propose to assess the efficacy of a hedging policy with respect to costs and benefits?

PSC-112

Regarding: 2013 RFP, Hedging
Witness: Markovich

Regarding the RFP issued by NorthWestern on May 9, 2013, do you consider the requested products to be examples of hedging?

PSC-113

Regarding: Hedging
Witness: Markovich

At page 7 of your rebuttal testimony on lines 3 through 14, you describe hedging provided by the full requirements contract with PPL. Was that buy back contract included in Senate Bill 390?

PSC-114

Regarding: Hedging
Witness: Markovich

At page 4 of your rebuttal testimony you state, "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 supply contract, and fixed price hedges entered into at the Mid C market as described in the Donkin Direct Testimony."

Please provide a schedule from July 2011 through June 2013 showing each of the hedges described in your testimony including the cost of each hedge. Indicate whether the hedges produced a gain or loss compared to simply buying electricity in the market.

PSC-115

Regarding: PWPS FT-8 SWIFTPACK units
Witness: Rhoads

At page 7 of your rebuttal testimony you describe the three FT-8 SWIFTPACK units which were selected for use in constructing the Dave Gates Generating Station which was built for the purpose of providing regulation service for NorthWestern. You state that "This is a proven technology that meets the requirements for availability, reliability, ramp rate, minimum operating level, emissions and constructability."

- a. Are you aware of any other facilities in the utility industry that use the SWIFTPACK aero derivative gas turbine generators for the purpose of providing regulation service?
- b. If you are not aware of any other utilities using this technology to provide regulation service, please explain how you arrive at the conclusion that "this is a proven technology" when used to provide regulation service?

PSC-116

Regarding: Operation of DGGS

Witness: Rhoads

- a. At page 8, line 6 of your rebuttal testimony you note, "Overall the operation of DGGS has been excellent." In the months of February, March and April 2012 how do you evaluate the operation of DGGS with respect to design and function of the original turbines?
- b. Given that the three turbines developed mechanical problems after just 13 months of operation, what is your conclusion as to adequacy of the original design of the turbines for use in providing regulation service?
- c. Did the original PWPS design properly account for the operating temperatures inside the turbines while performing the ramping associated with the provision of regulation service?
- d. Did the original PWPS design properly secure the bolts which were part of the mechanical problems experienced with the turbines?

PSC-117

Regarding: Failure of power plant components

Witness: Rhoads

- a. At page 15 of your rebuttal testimony you discuss the failure of power plant components. In your professional experience have you had experience where a power plant had a mechanical outage after its first thirteen months of operation?
- b. Has the mechanical problem which resulted in a three-month outage for the DGGS caused NorthWestern to reevaluate for the future the need for a warranty which provides that the vendor will pay for part or all of replacement power due to an outage during the original plant warranty?