



September 6, 2012

Ms. Kate Whitney
Utility Division
Montana Public Service Commission
1701 Prospect Avenue
PO Box 2022601
Helena, Montana 59620-2601

**Re: Docket No. D2012.5.49 Electric Tracker
NorthWestern Energy's Responses to PSC Set 3 (014-032) Data Requests**

Dear Ms. Whitney:

Enclosed for filing is a copy of NorthWestern Energy's response to PSC Set 3 (014-032) data requests. This set of data request responses has been mailed to the service list in this docket and hand delivered to the PSC and MCC. They have been efiled with the PSC.

Should you have questions please contact Joe Schwartzenberger at (406) 497-3362.

Sincerely,

Nedra Chase
Administrative Assistant

Enclosures

CERTIFICATE OF SERVICE

I hereby certify that a copy of NorthWestern Energy's responses to PSC Set 3 Data Requests (014-032) in Docket D2012.5.49 Electric Tracker has been served by mailing a copy thereof by first class mail, postage prepaid to the service list in this Docket and hand delivered to the PSC and MCC. These responses have also been efiled with the PSC.

Date: September 6, 2012



Nedra Chase
Administrative Assistant
Regulatory Affairs

A. Service List
D2012.5.49

Al Brogan
NorthWestern Energy
208 N. Montana Ave Ste 205
Helena MT 59601

Nedra Chase
NorthWestern Energy
40 E. Broadway
Butte MT 59701

Charles Magraw
501 8th Ave.
Helena MT 59601

Robert Nelson
Montana Consumer Counsel
111 N. Last Chance Gulch
Suite 1B
Helena MT 59620-1703

Sarah Norcott
NorthWestern Energy
208 N. Montana Ave Ste 205
Helena MT 59601

Dr. Thomas M. Power
920 Evans Ave.
Missoula MT 59801

Joe Schwartzenberger
NorthWestern Energy
40 E. Broadway
Butte MT 59701

Kate Whitney
Public Service Commission
1701 Prospect Ave.
P O Box 202601
Helena MT 59620-2601

John W. Wilson
JW Wilson & Associates
1601 North Kent St. Ste 1104
Arlington VA 22209

NorthWestern Energy
Docket D2012.5.49
Electric Tracker

Montana Public Service Commission (PSC)
Set 3 (014-032)

Data Requests received August 16, 2012

PSC-014

Regarding: 2010-2011 Tracker Period
Witnesses: Bennett, Markovich, Hansen, Thomas, Cashell

- a. Please provide working electronic copies of all Exhibits with all supporting files and links intact.
- b. Please update any exhibits that contained estimated figures relating to the 2011-2012 tracker period with actual figures, including Exhibits FVB-1, FVB-4, FVB-6, WMT-1 and WMT-2.
- c. Staff appreciates NWE's efforts to provide additional information regarding market transactions in Exhibit FVB-2. Staff is concerned, however, that Exhibit FVB-2 conveys less information regarding specific resources, particularly in the category of "Net Base Fixed Price Contracts." See Ex. FVB-1, pp. 3-5. Please provide a version of Exhibit FVB-2 (showing estimates for the 2012-2013 tracker period) in the same format and with the same categories of information as in Exhibit FVB-1.
- d. Please identify and specify the extent of any actual or potential overlap between the categories outlined on pages KJM-12 through KJM-15.

RESPONSE:

- a. See files on the enclosed CD in the folders named "PSC-014a." Please note that Exhibit__ (FVB-3) is copyright-protected information and a hard copy of it on blue paper is being provided only to the Commission and the Montana Consumer Counsel under limited license from the publisher. Please note as well that the revised Exhibit__ (MRC-1 Rev) is also being provided in the response to Data Request MCC-039, along with an explanation of the exhibit changes.
- b. See the CD attached to part a, above.
- c. See attached. These pages on Exhibit__ (FVB-2) were reformatted manually to respond to this data request, but due to the amount of manual processing required to provide the "old" version, NWE does not intend to provide both versions in the future.
- d. No transaction is included in more than one category depicted in KJM-12 through KJM-15.

Generation in MWh	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Total
	Estimate	Estimate	Estimate	Estimate									
Non-Base Transactions													
Net Fixed Price Transactions	91,488	77,086	19,200	21,600	20,000	30,000	-	-	-	-	-	-	259,374
Net Market Transactions	64,412	72,975	40,878	15,718	43,636	89,231	7,938	7,171	(36,887)	(66,436)	(27,816)	9,865	220,686
Total Non-Base Transactions	155,900	150,061	60,078	37,318	63,636	119,231	7,938	7,171	(36,887)	(66,436)	(27,816)	9,865	480,060
Rate Based Assets													
Colstrip Unit 4 MWh	151,032	151,032	146,160	151,032	146,160	151,032	151,032	136,416	151,032	146,160	99,876	90,132	1,671,096
Mill Creek Generating Station	5,208	5,208	5,040	5,208	5,047	5,208	5,208	4,704	5,201	5,040	5,208	5,040	61,320
Spion Kop	-	-	-	7,752	14,400	11,904	17,856	10,752	11,888	11,520	8,928	8,640	103,640
Total Rate Based Assets	156,240	156,240	151,200	163,992	165,607	168,144	174,096	151,872	168,121	162,720	114,012	103,812	1,836,056
Net Base Fixed Contracts													
PPL 7 Year Contract	124,200	125,400	120,000	125,400	121,325	124,200	124,200	112,800	124,075	121,200	124,200	120,000	1,467,000
PPL 09 RFP	10,000	10,800	9,600	10,800	10,000	10,000	10,400	9,600	10,400	10,400	10,400	10,000	122,400
QF Tier II	56,629	37,248	67,118	72,110	69,667	73,022	72,371	66,880	74,590	68,123	74,697	75,155	807,610
QF Tier II Adjustment	-	-	-	-	-	-	-	-	-	-	-	-	-
QF-1 Tariff	-	-	-	-	-	-	-	-	-	-	-	-	-
Gordon Butte Wind QF	2,928	2,952	2,880	2,976	2,884	2,976	2,976	2,688	2,972	2,880	2,976	2,880	34,968
Musselshell Wind QF	-	-	-	-	-	96	2,976	2,352	2,229	2,160	2,232	1,440	13,485
Musselshell 2 Wind QF	-	-	-	-	-	96	2,976	2,352	2,229	2,160	2,232	1,440	13,485
Two Dot Wind QF	-	-	-	-	-	144	5,208	4,032	3,715	2,160	2,232	1,440	18,931
QF-1 Wind QF	-	-	-	-	-	-	-	-	-	-	-	-	-
Tiber	3,720	3,720	3,600	3,720	3,605	3,720	3,720	3,360	3,715	3,600	3,720	3,600	43,800
Turnbull	9,624	9,504	9,360	9,672	9,373	9,672	9,672	8,736	9,659	9,360	9,672	9,360	113,664
Flint Creek QF	-	-	-	-	-	372	372	336	372	360	720	1,080	3,611
Lower South Fork QF	-	-	-	-	-	-	-	-	-	109	303	361	772
Judith Gap Energy	23,098	25,665	27,309	43,441	49,466	54,316	57,628	42,722	42,109	39,803	35,962	26,626	468,144
Wind Ancillary	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind Other	-	-	-	-	-	-	-	-	-	-	-	-	-
Citigroup 08 RFP	18,600	18,600	18,000	18,600	18,025	18,600	18,600	16,800	18,575	18,000	18,600	18,000	219,000
TransAlta 10 RFP	10,000	10,800	9,600	10,800	10,000	10,000	10,400	9,600	10,400	10,400	10,400	10,000	122,400
Barclays 10 RFP	10,000	10,800	9,600	10,800	10,000	10,000	10,400	9,600	10,400	10,400	10,400	10,000	122,400
Barclays HL 11 RFP	-	-	-	-	-	-	10,400	9,600	10,400	10,400	10,400	10,000	61,200
Cargill HL 11 RFP	-	-	-	-	-	-	20,800	19,200	20,800	20,800	20,800	20,000	122,400
Deutsche HL 11 RFP	-	-	-	-	-	-	10,400	9,600	10,400	10,400	10,400	10,000	61,200
Cargill LL 11 RFP	-	-	-	-	-	-	16,400	14,400	16,350	15,200	16,400	16,000	94,750
Citigroup LL 11 RFP	-	-	-	-	-	-	8,200	7,200	8,175	7,600	8,200	8,000	47,375
Merrill LL 11 RFP	-	-	-	-	-	-	8,200	7,200	8,175	7,600	8,200	8,000	47,375
Net Base Market Contracts													
Powerex 11 RFP	-	-	-	-	-	-	16,400	14,400	16,350	15,200	16,400	16,000	94,750
Morgan Stanley 10 RFP	-	-	-	-	-	-	-	-	-	-	-	-	-
Credit Suisse 08 RFP	-	-	-	-	-	-	-	-	-	-	-	-	-
Basin Creek Fixed Capacity	-	-	-	-	-	-	-	-	-	-	-	-	-
Basin Creek Operating Reserves	-	-	-	-	-	-	-	-	-	-	-	-	-
Basin Creek Wind Firming	-	-	-	-	-	-	-	-	-	-	-	-	-
Basin Creek Fuel	2,103	5,362	4,050	2,371	2,802	4,452	3,807	2,727	1,405	772	571	262	30,684
Basin Creek Variable O & M	-	-	-	-	-	-	-	-	-	-	-	-	-
Basin Creek Gas Storage Capacity	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Reserves	-	-	-	-	-	-	-	-	-	-	-	-	-
DSM Program & Labor Costs	-	-	-	-	-	-	-	-	-	-	-	-	-
DSM Lost T&D Revenues	-	-	-	-	-	-	-	-	-	-	-	-	-
Imbalance	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Base Contract Transactions	270,902	260,851	281,117	310,689	307,147	321,666	426,505	376,186	407,494	389,087	400,116	379,643	4,131,405
Total Delivered Supply	583,042	567,152	492,395	511,999	536,390	609,042	608,540	535,229	538,728	485,372	486,313	493,321	6,447,521
Percent Of Fixed Contracts	88%	85%	90%	94%	88%	82%	92%	93%	100%	107%	99%	92%	92%

Electric Tracker Projection Excluding Generation Assets Cost of Service
 Total Supply Expense

	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Total
	Estimate	Estimate	Estimate	Estimate									
Non-Base Transactions													
Net Fixed Price Transactions	\$ 2,569,804	\$ 2,285,475	\$ 689,760	\$ 775,980	\$ 718,500	\$ 1,070,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,110,019
Net Market Transactions	\$ 1,600,589	\$ 2,142,111	\$ 1,294,721	\$ 437,588	\$ 1,417,289	\$ 3,203,693	\$ 345,240	\$ 315,135	\$ (1,006,531)	\$ (1,547,798)	\$ (589,273)	\$ 242,672	\$ 7,855,436
Total Non-Base Transactions	\$ 4,170,393	\$ 4,427,586	\$ 1,984,481	\$ 1,213,568	\$ 2,135,789	\$ 4,274,193	\$ 345,240	\$ 315,135	\$ (1,006,531)	\$ (1,547,798)	\$ (589,273)	\$ 242,672	\$ 15,965,456
Rate Based Assets													
Colstrip Unit 4 MWh													
Mill Creek Generating Station													
Spion Kop													
Total Rate Based Assets													
Net Base Fixed Contracts													
PPL 7 Year Contract	\$ 6,532,920	\$ 6,596,040	\$ 6,312,000	\$ 6,602,310	\$ 6,387,761	\$ 6,539,130	\$ 6,545,340	\$ 5,944,560	\$ 6,538,753	\$ 6,393,300	\$ 6,551,550	\$ 6,330,000	\$ 77,273,664
PPL 09 RFP	\$ 603,000	\$ 651,240	\$ 578,880	\$ 651,240	\$ 603,000	\$ 603,000	\$ 627,120	\$ 578,880	\$ 627,120	\$ 627,120	\$ 627,120	\$ 603,000	\$ 7,380,720
QF Tier II	\$ 2,076,585	\$ 1,365,884	\$ 2,461,217	\$ 2,644,274	\$ 2,554,689	\$ 2,677,717	\$ 2,653,845	\$ 2,452,490	\$ 2,735,215	\$ 2,498,070	\$ 2,739,139	\$ 2,755,934	\$ 29,615,059
QF Tier II Adjustment													\$ -
QF-1 Tariff													\$ -
Gordon Butte Wind QF	\$ 202,647	\$ 204,308	\$ 199,325	\$ 205,969	\$ 199,602	\$ 205,969	\$ 205,969	\$ 186,036	\$ 205,692	\$ 199,325	\$ 205,969	\$ 199,325	\$ 2,420,135
Musselshell Wind QF	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,644	\$ 205,969	\$ 162,782	\$ 154,269	\$ 149,494	\$ 154,477	\$ 99,662	\$ 933,297
Musselshell 2 Wind QF	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,644	\$ 205,969	\$ 162,782	\$ 154,269	\$ 149,494	\$ 154,477	\$ 99,662	\$ 933,297
Two Dot Wind QF	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,496	\$ 307,272	\$ 237,888	\$ 219,185	\$ 127,440	\$ 131,688	\$ 84,960	\$ 1,116,929
QF-1 Wind QF													\$ -
Tiber	\$ 144,150	\$ 144,150	\$ 139,500	\$ 144,150	\$ 139,694	\$ 144,150	\$ 144,150	\$ 130,200	\$ 143,956	\$ 139,500	\$ 144,150	\$ 139,500	\$ 1,697,250
Turnbull	\$ 630,372	\$ 622,512	\$ 613,080	\$ 633,516	\$ 613,932	\$ 633,516	\$ 635,934	\$ 574,392	\$ 635,079	\$ 615,420	\$ 635,934	\$ 615,420	\$ 7,459,107
Flint Creek QF	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 26,427	\$ 26,486	\$ 23,923	\$ 26,451	\$ 25,632	\$ 51,262	\$ 76,896	\$ 257,077
Lower South Fork QF	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,657	\$ 21,269	\$ 25,365	\$ 54,291
Judith Gap Energy	\$ 733,358	\$ 814,852	\$ 867,072	\$ 1,379,250	\$ 1,570,536	\$ 1,724,530	\$ 1,829,681	\$ 1,356,432	\$ 1,336,963	\$ 1,263,750	\$ 1,141,788	\$ 845,372	\$ 14,863,583
Wind Ancillary													\$ -
Wind Other													\$ -
Cligroup 08 RFP	\$ 1,160,640	\$ 1,160,640	\$ 1,123,200	\$ 1,160,640	\$ 1,124,760	\$ 1,160,640	\$ 1,160,640	\$ 1,048,320	\$ 1,159,080	\$ 1,123,200	\$ 1,160,640	\$ 1,123,200	\$ 13,665,600
TransAlta 10 RFP	\$ 477,500	\$ 515,700	\$ 458,400	\$ 515,700	\$ 477,500	\$ 477,500	\$ 496,600	\$ 458,400	\$ 496,600	\$ 496,600	\$ 496,600	\$ 477,500	\$ 5,844,600
Barclays 10 RFP	\$ 491,500	\$ 530,820	\$ 471,840	\$ 530,820	\$ 491,500	\$ 491,500	\$ 511,160	\$ 471,840	\$ 511,160	\$ 511,160	\$ 511,160	\$ 491,500	\$ 6,015,960
Barclays HL 11 RFP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 423,800	\$ 391,200	\$ 423,800	\$ 423,800	\$ 407,500	\$ 2,493,900
Cargill HL 11 RFP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 849,680	\$ 784,320	\$ 849,680	\$ 849,680	\$ 849,680	\$ 817,000	\$ 5,000,040
Deutsche HL 11 RFP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 426,400	\$ 393,600	\$ 426,400	\$ 426,400	\$ 426,400	\$ 410,000	\$ 2,509,200
Cargill LL 11 RFP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 492,000	\$ 432,000	\$ 492,000	\$ 492,000	\$ 492,000	\$ 480,000	\$ 2,842,500
Cligroup LL 11 RFP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 248,460	\$ 218,160	\$ 247,703	\$ 230,280	\$ 248,460	\$ 242,400	\$ 1,435,463
Merrill LL 11 RFP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 250,100	\$ 219,600	\$ 249,338	\$ 231,800	\$ 250,100	\$ 244,000	\$ 1,444,938
Net Base Market Contracts													
Powerex 11 RFP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 473,796	\$ 398,592	\$ 398,777	\$ 285,456	\$ 283,064	\$ 227,360	\$ 2,067,045
Morgan Stanley 10 RFP	\$ (20,000)	\$ (21,600)	\$ (19,200)	\$ (21,600)	\$ (20,000)	\$ (20,000)	\$ (20,800)	\$ (19,200)	\$ (20,800)	\$ (20,800)	\$ (20,800)	\$ (20,000)	\$ (244,800)
Credit Suisse 08 RFP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Basin Creek Fixed Capacity	\$ 449,333	\$ 449,333	\$ 452,693	\$ 449,333	\$ 452,693	\$ 449,333	\$ 449,333	\$ 459,413	\$ 449,333	\$ 452,693	\$ 449,333	\$ 452,693	\$ 5,415,510
Basin Creek Operating Reserves	\$ 104,160	\$ 104,160	\$ 100,800	\$ 104,160	\$ 100,800	\$ 104,160	\$ 104,160	\$ 94,080	\$ 104,160	\$ 100,800	\$ 104,160	\$ 100,800	\$ 1,226,400
Basin Creek Wind Firming													\$ -
Basin Creek Fuel	\$ 53,501	\$ 141,243	\$ 109,668	\$ 66,782	\$ 88,101	\$ 152,957	\$ 134,706	\$ 96,619	\$ 49,677	\$ 27,218	\$ 20,331	\$ 9,286	\$ 950,089
Basin Creek Variable O & M													\$ -
Basin Creek Gas Storage Capacity													\$ -
Operating Reserves	\$ 104,160	\$ 104,160	\$ 100,800	\$ 104,160	\$ 100,800	\$ 104,160	\$ 104,160	\$ 94,080	\$ 104,160	\$ 100,800	\$ 104,160	\$ 100,800	\$ 1,226,400
DSM Program & Labor Costs													\$ -
DSM Lost T & D Revenues													\$ -
Imbalance													\$ -
Total Base Contract Transactions	\$ 13,743,825	\$ 13,383,442	\$ 13,969,275	\$ 15,170,703	\$ 14,885,367	\$ 15,496,472	\$ 19,491,930	\$ 17,351,389	\$ 18,716,518	\$ 17,891,288	\$ 18,357,908	\$ 17,439,135	\$ 195,897,252
Total Delivered Supply	\$ 17,914,219	\$ 17,811,028	\$ 15,953,756	\$ 16,384,271	\$ 17,021,156	\$ 19,770,665	\$ 19,837,169	\$ 17,666,525	\$ 17,709,987	\$ 16,343,490	\$ 17,768,635	\$ 17,681,807	\$ 211,862,708

**Electric Tracker Projection Excluding Generation Assets Cost of Service
 Unit Costs**

	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Total
	Estimate												
Non-Base Transactions													
Net Fixed Price Transactions	\$ 28.09	\$ 29.65	\$ 35.93	\$ 35.93	\$ 35.93	\$ 35.68	n/a	n/a	n/a	n/a	n/a	n/a	\$ 31.27
Net Market Transactions	\$ 24.85	\$ 29.35	\$ 31.67	\$ 27.84	\$ 32.48	\$ 35.90	\$ 43.49	\$ 43.95	\$ 27.29	\$ 23.30	\$ 21.18	\$ 24.60	\$ 35.60
Total Non-Base Transactions	\$ 26.75	\$ 29.51	\$ 33.03	\$ 32.52	\$ 33.56	\$ 35.85	\$ 43.49	\$ 43.95	\$ 27.29	\$ 23.30	\$ 21.18	\$ 24.60	\$ 33.26
Rate Based Assets													
Colstrip Unit 4 MWh													\$ -
Mill Creek Generating Station													\$ -
Spion Kop													\$ -
Total Rate Based Assets	\$ -												
Net Base Fixed Contracts													
PPL 7 Year Contract	\$ 52.60	\$ 52.60	\$ 52.60	\$ 52.65	\$ 52.65	\$ 52.65	\$ 52.70	\$ 52.70	\$ 52.70	\$ 52.75	\$ 52.75	\$ 52.75	\$ 52.67
PPL 09 RFP	\$ 60.30	\$ 60.30	\$ 60.30	\$ 60.30	\$ 60.30	\$ 60.30	\$ 60.30	\$ 60.30	\$ 60.30	\$ 60.30	\$ 60.30	\$ 60.30	\$ 60.30
QF Tier II	\$ 36.67	\$ 36.67	\$ 36.67	\$ 36.67	\$ 36.67	\$ 36.67	\$ 36.67	\$ 36.67	\$ 36.67	\$ 36.67	\$ 36.67	\$ 36.67	\$ 36.67
QF Tier II Adjustment	n/a												
QF-1 Tariff	n/a												
Gordon Butte Wind QF	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21
Musselshell Wind QF	n/a	n/a	n/a	n/a	n/a	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21
Musselshell 2 Wind QF	n/a	n/a	n/a	n/a	n/a	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21	\$ 69.21
Two Dot Wind QF	n/a	n/a	n/a	n/a	n/a	\$ 59.00	\$ 59.00	\$ 59.00	\$ 59.00	\$ 59.00	\$ 59.00	\$ 59.00	\$ 59.00
QF-1 Wind QF	n/a												
Tiber	\$ 38.75	\$ 38.75	\$ 38.75	\$ 38.75	\$ 38.75	\$ 38.75	\$ 38.75	\$ 38.75	\$ 38.75	\$ 38.75	\$ 38.75	\$ 38.75	\$ 38.75
Turnbull	\$ 65.50	\$ 65.50	\$ 65.50	\$ 65.50	\$ 65.50	\$ 65.50	\$ 65.75	\$ 65.75	\$ 65.75	\$ 65.75	\$ 65.75	\$ 65.75	\$ 65.62
Flint Creek QF	n/a	n/a	n/a	n/a	n/a	\$ 71.04	\$ 71.20	\$ 71.20	\$ 71.20	\$ 71.20	\$ 71.20	\$ 71.20	\$ 71.18
Lower South Fork QF	n/a	\$ 70.29	\$ 70.29	\$ 70.29	\$ 70.29								
Judith Gap Energy	\$ 31.75	\$ 31.75	\$ 31.75	\$ 31.75	\$ 31.75	\$ 31.75	\$ 31.75	\$ 31.75	\$ 31.75	\$ 31.75	\$ 31.75	\$ 31.75	\$ 31.75
Wind Ancillary	n/a												
Wind Other	n/a												
Citigroup 08 RFP	\$ 62.40	\$ 62.40	\$ 62.40	\$ 62.40	\$ 62.40	\$ 62.40	\$ 62.40	\$ 62.40	\$ 62.40	\$ 62.40	\$ 62.40	\$ 62.40	\$ 62.40
TransAlta 10 RFP	\$ 47.75	\$ 47.75	\$ 47.75	\$ 47.75	\$ 47.75	\$ 47.75	\$ 47.75	\$ 47.75	\$ 47.75	\$ 47.75	\$ 47.75	\$ 47.75	\$ 47.75
Barclays 10 RFP	\$ 49.15	\$ 49.15	\$ 49.15	\$ 49.15	\$ 49.15	\$ 49.15	\$ 49.15	\$ 49.15	\$ 49.15	\$ 49.15	\$ 49.15	\$ 49.15	\$ 49.15
Barclays HL 11 RFP	n/a	n/a	n/a	n/a	n/a	n/a	\$ 40.75	\$ 40.75	\$ 40.75	\$ 40.75	\$ 40.75	\$ 40.75	\$ 40.75
Cargill HL 11 RFP	n/a	n/a	n/a	n/a	n/a	n/a	\$ 40.85	\$ 40.85	\$ 40.85	\$ 40.85	\$ 40.85	\$ 40.85	\$ 40.85
Deutsche HL 11 RFP	n/a	n/a	n/a	n/a	n/a	n/a	\$ 41.00	\$ 41.00	\$ 41.00	\$ 41.00	\$ 41.00	\$ 41.00	\$ 41.00
Cargill LL 11 RFP	n/a	n/a	n/a	n/a	n/a	n/a	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00
Citigroup LL 11 RFP	n/a	n/a	n/a	n/a	n/a	n/a	\$ 30.30	\$ 30.30	\$ 30.30	\$ 30.30	\$ 30.30	\$ 30.30	\$ 30.30
Merrill LL 11 RFP	n/a	n/a	n/a	n/a	n/a	n/a	\$ 30.50	\$ 30.50	\$ 30.50	\$ 30.50	\$ 30.50	\$ 30.50	\$ 30.50
Net Base Market Contracts													
Powerex 11 RFP	n/a	n/a	n/a	n/a	n/a	n/a	\$ 28.89	\$ 27.68	\$ 24.39	\$ 18.78	\$ 17.26	\$ 14.21	\$ 21.82
Morgan Stanley 10 RFP	n/a												
Credit Suisse 08 RFP	n/a												
Basin Creek Fixed Capacity	n/a												
Basin Creek Operating Reserves	n/a												
Basin Creek Wind Firming	n/a												
Basin Creek Fuel	\$ 25.43	\$ 26.34	\$ 27.08	\$ 28.17	\$ 31.44	\$ 34.35	\$ 35.39	\$ 35.43	\$ 35.37	\$ 35.24	\$ 35.61	\$ 35.50	\$ 30.96
Basin Creek Variable O & M	n/a												
Basin Creek Gas Storage Capacity	n/a												
Operating Reserves	n/a												
DSM Program & Labor Costs	n/a												
DSM Lost T&D Revenues	n/a												
Imbalance	n/a												
Total Base Contract Transactions	\$ 50.73	\$ 51.31	\$ 49.69	\$ 48.83	\$ 48.46	\$ 48.18	\$ 45.70	\$ 46.12	\$ 45.93	\$ 45.98	\$ 45.88	\$ 45.94	\$ 47.42
Total Delivered Supply	\$ 30.73	\$ 31.40	\$ 32.40	\$ 32.00	\$ 31.73	\$ 32.46	\$ 32.60	\$ 33.01	\$ 32.87	\$ 33.67	\$ 36.54	\$ 35.84	\$ 32.86

NorthWestern Energy
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Electric Tracker

Montana Public Service Commission (PSC)
Set 3 (014-032)

Data Requests received August 16, 2012

PSC-015

Regarding: Qualifying Facility (QF) Projects
Witness: Bennett

- a. Please provide copies of any QF contracts that NWE entered into or cancelled during the 2011-2012 tracker period.
- b. Please provide a spreadsheet setting forth the counterparty (its full legal title), owner, price, nameplate capacity, capacity factor, contract date and contract term of each QF from which NWE purchased electricity supply during the 2011-2012 tracker period or from which NWE expects to purchase supply during the 2012-2013 tracker period.
- c. Please provide a list of QF projects, including their owner (full legal title) fuel type, size and location (by county), that have indicated an intention to proceed with developing a project or have sought a contract with NWE.
- d. Please describe the status of the project being developed by Fairfield Wind, LLC, and steps taken by NWE to procure supply from that project.

RESPONSE:

- a. See the folder named "PSC-015a" on the CD attached to PSC-014a for the following Qualifying Facility power purchase agreements:
 - Attachment 1 - Gordon Butte Wind, LLC
 - Attachment 2 – Lower South Fork, LLC
 - Attachment 3 – Flint Creek Hydroelectric, LLC
 - Attachment 4 – Musselshell Wind Project, LLC
 - Attachment 5 – Musselshell Wind Project Two, LLC
 - Attachment 6 – Two Dot Wind Farm, LLC
 - Attachment 7 – Fairfield Wind, LLC (9/22/2011) terminated
 - Attachment 8 – Fairfield Wind, LLC (3/22/2012)
- b. See the attached table.
- c. NorthWestern is regularly contacted by potential QF developers; however, until such time as a QF developer executes a contract with NorthWestern, NorthWestern is not fully aware of development plans or locations of the individual developer's project(s).

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PSC-015 cont'd

- d. NorthWestern has twice negotiated with the developer for a Power Purchase Agreement ("PPA"). The first PPA was terminated when security was not posted. The second PPA is still in place; however, NorthWestern's Transmission group terminated the Generator Interconnection Agreement ("GIA") due to Fairfield's failure to comply with terms of the GIA. NorthWestern is working with Fairfield on a replacement GIA.

Docket D2012.5.49 Purchased QF Generation

QF Owner/Facility	11/12 or 12/13		11/12 or 12/13		Term in Years
	Price \$/MWh	Plant kW	Capacity Factor	Dated	
1 Mr. Thomas G. Agnew (Agnew Ranch)	\$49.90	65	10%	1-Nov-07	7
2 James Walker Sievers (Barney Creek)	\$68.14	60	29%	14-Nov-84	35
3 Yellowstone Energy Limited Partnership (BGI)	\$77.14	52,000	96%	1-Mar-91	35
4 Boulder Hydro Limited Partnership (Lee Tavenner)	\$16.42	510	40%	1-Jul-07	15
5 State of MT DNRC (Broadwater Dam)	\$82.60	10,000	70%	30-Oct-87	35
6 James Walker Sievers (Cascade Creek)	\$70.38	68	65%	1-Oct-84	35
7 Colstrip Energy Limited Partnership (MT One)	\$69.28*	35,000	92%	15-Oct-84	35
8 Fairfield Wind LLC	\$85.30#	10,000	37%	22-Mar-12	25
9 Flint Creek Hydroelectric LLC	\$85.30	2,000	59%	16-Jan-12	25
10 Gordon Butte Wind LLC	\$69.21	9,600	40%	21-Mar-11	25
11 Donald Fred Jenni (Hanover Hydro)	\$65.94	240	33%	26-Nov-84	26
12 Lower South Fork LLC	\$85.30	455	47%	16-Jan-12	25
13 Two Dot Wind LLC (Martinsdale Colony)	\$22.31	750	19%	23-Apr-08	20
14 Two Dot Wind LLC (Martinsdale Colony South)	\$22.34	2,000	7%	23-Apr-08	20
15 Two Dot Wind Energy LLC (Mission Creek)	\$49.90	65	29%	**	
16 Two Dot Wind LLC (Moe Wind)	\$23.60	450	17%	23-Apr-08	20
17 Two Dot Wind Energy LLC (Montana Marginal Energy)	\$49.90	195	17%	**	
18 Musselshell Wind Project LLC	\$69.21#	10,000	33%	24-Mar-11	25
19 Musselshell Wind Project Two LLC	\$69.21#	10,000	32%	24-Mar-11	25
20 Howard Carter (Pine Creek)	\$69.89	300	39%	15-Nov-84	35
21 Gerald Ohs (Pony Generating Station)	\$83.32	400	46%	10-Dec-10	10
22 Ross Creek Hydro LC	\$34.70	450	55%	24-Jul-96	36
23 Two Dot Wind LLC (Sheep Valley Ranch)	\$23.01#	455	26%	23-Apr-08	20
24 Hydrodynamics Inc (South Dry Creek)	\$59.93	1,800	45%	31-Oct-84	35
25 Hydrodynamics Inc (Strawberry Creek)	\$60.33	275	72%	15-Nov-84	35
26 Two Dot Wind Farm LLC	\$59.00	9,720	42%	19-Aug-11	25
27 United Materials of Great Falls Inc	\$51.15	9,000	22%	12-Apr-12	0.25
28 Wisconsin Creek Limited Partnership	\$49.90	550	26%	1-Jul-07	7

Note: *1. Price subject to district court action.

**2. Contract negotiation ongoing.

#3. Year 12/13

NorthWestern Energy
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Montana Public Service Commission (PSC)
Set 3 (014-032)

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PSC-016

Regarding: Wind Resources
Witness: Bennett (a, b, and c) Fine (d)

- a. Please provide a list of the wind resources interconnected to NWE's transmission or distribution system, including the owner (full legal title), price, contract term, nameplate capacity and capacity factor of each.
- b. Please provide the total cost of integration service actually incurred by month during the 2011-2012 tracker period (including the fixed and variable costs of DGGS attributable to providing wind integration service), and for each resource interconnected to NWE's system, provide a calculation or estimate of the amount of integration costs attributable to that resource based on its size, location, date of commercial operation, and coincidence of scheduling errors.
- c. Please define and describe the "Judith Gap costs" that are a subset of "wind other costs" described on lines 3-4 of page FVB-12.
- d. Please explain what steps NorthWestern has taken to schedule variable energy resources on an intra-hourly basis to reduce scheduling errors.

RESPONSE:

- a. See the attached table.
- b. NorthWestern is unable to respond as it has not performed the requested analysis.
- c. Judith Gap costs would include most of the costs in all categories of "wind other" including 3TIER forecasting services, electric service charges at met tower sites, WREGIS charges, Judith Gap reimbursements for other contract charges like property taxes and impact fees; however, "wind other" charges also include those attributable to wind that might only be indirectly attributable to Judith Gap, such as WREGIS charges for other renewable generating facilities.
- d. The Intra-Hour Transaction Accelerator Platform ("I-TAP") began as a Columbia Grid initiative and was developed by utilities in the western U.S to make intra-hour trading easier and more efficient. NorthWestern Energy was an original member of the group that developed I-TAP. On November 14, 2011 I-TAP was implemented and the trading platform (WebExchange) reached commercial operation. Activity on WebExchange has been limited and the market for intra-hour trading has not developed. The utilities that created this system, including NorthWestern, are continuing efforts to increase

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Montana Public Service Commission (PSC)
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Data Requests received August 16, 2012

PSC-016 cont'd

participation in the hopes of developing an intra-hour market. A technical steering committee has been formed and is working on enhancements to WebExchange. NorthWestern has a representative on this committee and is committed to participating in activities in support of developing the intra-hour market.

Docket D2012.5.49 Interconnected Wind Generation

QF Owner/Facility	11/12 or 12/13		11/12 or 12/13		Term in Years
	Price \$/MWh	Plant kW	Capacity Factor	Dated	
1 Mr. Thomas G. Agnew (Agnew Ranch)	\$49.90	65	10%	1-Nov-07	7
2 Gordon Butte Wind LLC	\$69.21	9,600	40%	21-Mar-11	25
3 Two Dot Wind LLC (Martinsdale Colony)	\$22.31	750	19%	23-Apr-08	20
4 Two Dot Wind LLC (Martinsdale Colony South)	\$22.34	2,000	7%	23-Apr-08	20
5 Two Dot Wind Energy LLC (Mission Creek)	\$49.90	65	29%	**	
6 Two Dot Wind LLC (Moe Wind)	\$23.60	450	17%	23-Apr-08	20
7 Two Dot Wind Energy LLC (Montana Marginal Energy)	\$49.90	195	17%	**	
8 Two Dot Wind LLC (Sheep Valley Ranch)	\$23.01	455	26%	23-Apr-08	20
9 United Materials of Great Falls Inc	\$51.15	9,000	22%	12-Apr-12	0.25
10 WPSA Judith Gap I LLC*	\$29.80	135,000	42%	29-Dec-04	20

Note: **1. Contract negotiation ongoing.

*2. Electric tracker values do not include wind other.

NorthWestern Energy
Docket D2012.5.49
Electric Tracker

Montana Public Service Commission (PSC)
Set 3 (014-032)

Data Requests received August 16, 2012

PSC-017

Regarding: Dave Gates & Regulation Service
Witness: Fine, Cashell

- a. Please provide any documents that describe the forced outages that have occurred at the Dave Gates gas turbines since they became commercial operable.
- b. Please provide the bids received in response to NWE's 2011 regulation service RFP and any subsequent RFP for regulation service, as well as a summary of projected costs for regulation contracts through June 30, 2013.
- c. Please provide a spreadsheet showing NWE's monthly CPS2 score and the amount of regulating reserves available to NWE by month during the 2011-2012 tracker period.
- d. Please provide a spreadsheet showing NWE's 10-minute CPS2 scores beginning the day before the outage at DGGS and continuing for one month thereafter.

RESPONSE:

- a. See Attachment 1, a list of outages for each of the three DGGS units from January 1, 2011 through August 31, 2012, and Attachment 2, a slide presentation about the DGGS outages that was given to the Commission on February 23, 2012. See also the response to Data Request PSC-006.
- b. Attachment 1 is a spreadsheet displaying two of the three bids received in the 2011 RFP process. The spreadsheet shows the capacity, cost, and terms offered on an annual basis. Projected costs through June 30, 2013 would be approximately half of the cost displayed in the "Total Annual Cost (for full contract amount)" column of the supplied spreadsheet. Attachment 2 contains two of the three bids received in response to the RFP.

The third bid has been omitted from Attachment 2 and information regarding it has been redacted from Attachment 1 because Powerex Corp. has indicated that it plans to file a Motion for Protective Order pertaining to this information. NorthWestern will update this response by providing this information in the appropriate format after the Commission rules on any motions and issues a decision or after NorthWestern is informed that Powerex will not file a Motion for Protective Order.

- c. See attached for the requested monthly CPS2 scores. From July 1, 2011 through June 30, 2012, NorthWestern had approximately 105 MW of regulation capacity available to it

NorthWestern Energy
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Montana Public Service Commission (PSC)
Set 3 (014-032)

Data Requests received August 16, 2012

PSC-017 cont'd

from the DGGS facility, excluding the outages listed in Attachment 1 provided in response to part a, above.

- d. By definition CPS2 is a monthly score; as such NorthWestern does not log a 10-minute CPS2 score in its database. Monthly CPS2 scores are provided in the response to part c, above.



9/5/2012 11:18:25 AM

Event Summary Report

Dave Gates Generating Station at Mill Creek; Year To Date Statistics

Event Type Key

MO = Maintenance Outage

PO = Planned Outage

SF = Startup Failure

U1 = Unplanned (Forced) Outage

D1 = Unplanned (Forced) Derate

For detail or definitions refer to NERC GADS Data Reporting Instructions section III

Report Period: January 2011 to August 2012

Rollup Weighting: N/A

OMC: None

Dave Gates Generating Station - Unit 1							
Event	Type	Start	End	Cause	Description	Eq Hrs	Eq MWH
11	U1	1/2/2011 11:27	1/2/2011 11:47	8817	SCR Shutdown	0.33	16.00
14	MO	1/7/2011 14:30	1/7/2011 16:49	5190	Software upgrade	2.32	111.20
29	MO	1/18/2011 8:47	1/18/2011 9:10	5109	TE-005 not functioning properly.	0.38	18.40
42	MO	1/21/2011 21:52	1/21/2011 21:56	5074	PB dot on shut down will on fuel oil. Had to reset 86s.	0.07	3.20
94	U1	1/22/2011 13:55	1/22/2011 14:05	3661	Low voltage breaker opened causing loss of support system	0.17	8.00
47	U1	1/23/2011 9:47	1/23/2011 10:00	3631	Low voltage breaker opened causing loss of support system	0.22	10.40
54	MO	1/25/2011 9:54	1/25/2011 11:16	5054	Change out U1A VFD for water injection	1.37	65.60
58	MO	1/28/2011 10:52	1/28/2011 16:00	5041	Bad gas hose on 1A	5.13	246.40
72	U1	2/2/2011 2:37	2/2/2011 3:22	5049	gas fuel unit 1 A not indicating fuel flow unit in operation	0.75	36.00
77	U1	2/5/2011 19:15	2/5/2011 20:15	8825	Damper is broken on Unit 1 Cooling fan A	1.00	48.00
80	MO	2/7/2011 2:27	2/7/2011 9:14	3859	Down for no ammonia injection. Valves show no air pressure.	6.78	325.60
81	MO	2/7/2011 11:24	2/7/2011 11:40	8817	5101 SCR problem	0.27	12.80
84	U1	2/9/2011 1:24	2/9/2011 3:15	5079	PTTB U1A Pressure ratio trip	1.85	88.80
99	U1	2/12/2011 15:00	2/13/2011 21:11	8817	Tripped for diff Duct Pressure low. Graph shows a los of signal in the sensor	30.18	1448.80

102	U1	2/14/2011 5:58	2/14/2011 6:01	9693	low diff press and hi pant leg temp	0.05	2.40
107	U1	2/15/2011 19:54	2/15/2011 20:07	8817	duct diff press out of limits	0.22	10.40
128	U1	2/25/2011 4:50	2/25/2011 4:55	5048	switched from liquid fuel to gas fuel unit flamed out and tripped	0.08	4.00
131	SF	2/25/2011 17:15	2/25/2011 17:18	4810	upon start-up breaker closed then unit voltage transformer circuit breaker tripped	0.05	2.40
133	MO	2/26/2011 7:59	2/26/2011 9:00	5299	pt004 sense line frozen had to thaw and blow out	1.02	48.80
136	U1	2/27/2011 20:00	2/27/2011 20:20	5109	pdit 5101 erratic indication	0.33	16.00
145	MO	2/28/2011 22:11	2/28/2011 23:12	8813	Plugged ammonia injection nozzles	1.02	48.80
147	U1	2/28/2011 23:15	2/28/2011 23:18	5114	pdt 605 dp high high	0.05	2.40
151	U1	3/1/2011 7:11	3/1/2011 7:28	3898	SCR Duct Differential Pressure Low (PDIT5101)	0.28	13.60
152	U1	3/1/2011 8:01	3/1/2011 9:59	8817	SCR duct differential pressure low	1.97	94.40
154	U1	3/1/2011 16:57	3/1/2011 17:05	8817	duct DP low caused SCR Emergency Shutdown	0.13	6.40
156	U1	3/1/2011 18:05	3/1/2011 18:09	8817	loss of damper and vfd control caused duct DP press low and unit to trip	0.07	3.20
170	D1	3/3/2011 13:44	3/3/2011 15:33	5009	PT006 had loose connections in pull box	0.87	41.78
172	D1	3/3/2011 16:09	3/3/2011 16:15	5009	loose connection wiring stripped and reconnected	0.05	2.30
178	D1	3/5/2011 17:05	3/5/2011 17:09	5079	PB DOT trip	0.03	1.53
182	U1	3/6/2011 15:44	3/6/2011 15:45	5079	Failure to light off	0.02	0.80
185	D1	3/6/2011 23:22	3/7/2011 1:12	5050	Unit 1 B failed to light off	0.88	42.17
186	U1	3/7/2011 1:12	3/7/2011 2:56	5050	Unit 1 is down to check/change the igniters on engine B.	1.73	83.20
187	D1	3/7/2011 2:47	3/7/2011 3:29	5050	Unit 1 B is down for failed to light off	0.34	16.10
188	U1	3/7/2011 3:29	3/7/2011 8:01	5050	Unit 1 B failed to light off	4.53	217.60
197	U1	3/9/2011 8:02	3/9/2011 8:14	5110	PDT 605 high DP unit tripped.	0.20	9.60
228	PO	3/16/2011 6:00	3/16/2011 17:00	5272	1000 hour borescope inspection	11.00	528.00
230	PO	3/17/2011 9:00	3/17/2011 15:30	5270	SCR stack inspection	6.50	312.00
240	U1	3/20/2011 19:40	3/20/2011 22:34	4899	over-speed trip	2.90	139.20
251	U1	3/27/2011 8:57	3/27/2011 9:48	8656	SCR duct pressure low low	0.85	40.80
253	D1	3/28/2011 21:15	3/28/2011 21:33	5079	Gas compressors down had to change to LF and had flame out on U1B engine	0.14	6.90
256	U1	3/30/2011 14:40	3/31/2011 6:56	8817	SCR duct differential pressure low	16.27	780.80
260	D1	4/3/2011 7:32	4/3/2011 7:49	5009	Filtered TE010 Out of Range	0.14	6.52
261	U1	4/3/2011 7:49	4/3/2011 11:00	5009	Filtered TE 010 Out of Range investigating cause	3.18	152.80
321	U1	4/17/2011 1:03	4/17/2011 3:05	5190	bad sov 1403	2.03	97.60
342	U1	4/20/2011 9:32	4/20/2011 9:46	3641	SCR tripped off line will bringing MCC-3001 back online after dead buss work.	0.23	11.20
372	U1	5/2/2011 11:43	5/2/2011 11:46	4730	voltage transformer circuit breaker trip	0.05	2.40
386	U1	5/5/2011 14:31	5/5/2011 14:35	4750	AO1 unit voltage transformer circuit breaker trip.	0.07	3.20
390	D1	5/5/2011 22:58	5/5/2011 23:03	5048	Thrust Balance Pressure Ratio Trip	0.04	1.92
393	U1	5/6/2011 10:19	5/6/2011 10:23	8817	SCR Remote Shutdown	0.07	3.20
402	U1	5/11/2011 8:02	5/11/2011 19:30	5110	Vaccum pump failure major leak that emptied LO tank	11.47	550.40

446	U1	6/5/2011 0:30	6/5/2011 0:41	4740	unit had a "drop load detected" trip reset all safetys and restarted	0.18	8.80
537	MO	7/4/2011 10:24	7/4/2011 11:58	8820	Cleaning ammonia nozzles	1.57	75.20
540	MO	7/6/2011 17:35	7/7/2011 9:43	5054	Cracked water injection line on 1A replaced line.	16.13	774.40
580	U1	8/3/2011 21:26	8/3/2011 22:16	5054	Nearby lightning strike caused VFD to fault on engine A	0.83	40.00
582	U1	8/3/2011 22:18	8/3/2011 22:30	5054	Testing engine A water injection VFD faulted due to lightning	0.20	9.60
583	U1	8/3/2011 23:07	8/3/2011 23:40	5054	Testing engine A water injection VFD faulted due to lightning	0.55	26.40
605	MO	8/24/2011 15:01	8/24/2011 16:32	5109	leaking oil into tunnel caught on fire	1.52	72.80
610	MO	8/27/2011 6:28	8/30/2011 22:09	8817	duct diff pressure low low	87.68	4208.80
636	MO	9/13/2011 3:58	9/13/2011 4:09	5299	FCV1101 GF valve position error	0.18	8.80
670	MO	9/20/2011 17:00	9/20/2011 17:13	5299	U1B PTTB problems	0.22	10.40
675	D1	9/21/2011 13:44	9/21/2011 14:57	5299	Thrust balance valve/actuator not working.	1.22	58.40
676	U1	9/21/2011 14:57	9/21/2011 16:25	5299	troubleshooting thrust balance problems	1.47	70.40
678	D1	9/21/2011 16:28	9/21/2011 16:44	5299	loose connection on TE010	0.27	12.80
722	MO	9/21/2011 20:35	9/21/2011 20:40	5250	Eng. 1B Thrust Balance Valve Actuator failure.	0.08	4.00
683	D1	9/21/2011 20:41	9/22/2011 7:53	5299	Unit derated, Power Turbine Thrust Balance problems	11.20	537.60
695	U1	9/22/2011 7:54	9/22/2011 11:20	5299	Replaced Failed Thrust Balance Actuator on Engine 1A	3.43	164.80
717	PO	9/30/2011 3:00	10/2/2011 21:44	5272	Semi-Annual Borescope Inspections.	66.73	3203.20
718	U1	10/3/2011 18:00	10/3/2011 20:54	5299	bad sov 1105	2.90	139.20
739	PO	10/13/2011 11:40	10/13/2011 15:22	4810	Annual Powell breaker maintenance	3.70	177.60
744	MO	10/18/2011 11:01	10/18/2011 16:00	8825	Replaced bad VFD for SCR cooling fan	4.98	239.20
747	MO	10/19/2011 6:01	10/19/2011 16:00	5114	Maintenance outage to change GT LUBE OIL FILTERS...	9.98	479.20
750	U1	10/30/2011 7:43	10/30/2011 7:59	5250	Unit tripped on Engine A thrust balance pressure sensor.	0.27	12.80
755	D1	11/8/2011 6:29	11/8/2011 7:40	5299	PTTB trip u1a. Suspected frozen pressure sensing line (PT004).	0.59	29.58
756	U1	11/14/2011 10:33	11/14/2011 13:06	8820	Unit ammonia nozzels and filters plugged.	2.55	127.50
758	U1	11/15/2011 18:33	11/15/2011 18:43	5140	Multiple signal failures and high temp alarms caused Unit shutdown.	0.17	8.33
760	U1	11/16/2011 5:10	11/16/2011 5:27	5120	Lost signal on TE-604	0.28	14.17
762	U1	11/16/2011 16:20	11/16/2011 16:30	8825	miscellaneous signal failures high high drive back on TE 604	0.17	8.33
766	MO	11/17/2011 12:31	11/17/2011 14:11	5190	several erroneous signals drive back on TE 604 trouble shooting problem.	1.67	83.33
768	MO	11/17/2011 16:01	11/17/2011 16:45	9320	removing part to install on unit #3	0.73	36.67
770	D1	11/17/2011 16:46	11/21/2011 11:57	9320	removed card to install on unit #3. New warranty card was installed on unit#1	45.59	2279.58
788	U1	12/4/2011 22:03	12/4/2011 22:07	5299	PTTB pressure ratio trip.	0.07	3.20
793	MO	12/10/2011 9:53	12/10/2011 10:44	5114	Broken bolt in F607 filter housing.	0.85	40.80
796	MO	12/13/2011 9:31	12/13/2011 10:15	8820	Nox climbing need to clean injection nozzles change filter	0.73	35.20
2	MO	1/4/2012 6:34	1/4/2012 13:15	3898	R&R Tempering air fan motor A for modification.R&R EGT cable on U1A,R&R TE001 U1B.	6.68	334.17
10	U1	1/15/2012 11:28	1/15/2012 12:33	5299	PTTB pressure ratio trip.	1.08	54.17
14	D1	1/15/2012 14:43	1/15/2012 17:08	5299	PTTB Pressure ratio problems	1.21	60.42

16	MO	1/15/2012 17:27	1/15/2012 21:05	5299	Troubleshooting PTTB issues, unit is down.	3.63	181.67
22	U1	1/27/2012 9:22	1/27/2012 10:14	8820	plugged injection nozzles	0.87	43.33
24	MO	1/30/2012 12:01	1/31/2012 16:31	5272	Boroscopying the power turbine on A&B engines	28.50	1425.00
27	U1	1/31/2012 17:07	3/31/2012 18:19	5272	Damage to U1B Power turbine	1440.20	72010.00
29	U1	4/2/2012 8:39	4/2/2012 9:16	8820	ammonia injection nozzles plugged.	0.62	30.83
31	MO	4/13/2012 12:56	4/13/2012 17:00	5110	Need to check oil sytem accumulator for proper pressure on bladder.	4.07	203.33
33	MO	4/18/2012 12:40	4/18/2012 13:39	5299	cleaning NH3 nozzles & clean chip detectors	0.98	49.17
36	U1	4/22/2012 19:49	4/22/2012 20:32	8820	change Ammonia nozzels	0.72	35.83
37	U1	4/24/2012 18:27	4/24/2012 19:15	8820	injection nozzle plugged	0.80	40.00
38	U1	4/24/2012 19:19	4/24/2012 19:41	5299	Below idle trip	0.37	18.33
39	U1	4/25/2012 16:37	4/25/2012 16:54	5111	Low oil pump discharge pressure	0.28	14.17
41	U1	4/27/2012 9:51	4/27/2012 10:30	8820	Clean Ammonia nozzles	0.65	32.50
42	U1	4/28/2012 1:30	4/28/2012 1:44	5299	PTTB Ratio trip - U1B	0.23	11.67
45	U1	5/10/2012 11:35	5/10/2012 12:04	8820	Clean ammonia nozzels and change filter	0.48	24.17
47	D1	5/15/2012 13:48	5/15/2012 15:45	5097	Hi Temp on Turbine cooling air. Bad connection TE076	0.25	12.42
48	U1	5/15/2012 14:15	5/15/2012 15:45	8656	Low Cooling air flow to SCR Pantleg "B". Recalibrated both air flow transmitters.	1.50	75.00
53	MO	5/26/2012 20:02	5/26/2012 20:40	8823	Changed ammonia nozzles	0.63	31.67
55	MO	5/30/2012 10:38	5/30/2012 12:12	5044	Trouble shooting F.O. pump clutch oil line	1.57	78.33
57	MO	6/4/2012 4:42	6/4/2012 6:16	8820	change ammonia nozzles and filter	1.57	78.33
60	MO	6/13/2012 7:11	6/13/2012 12:16	5240	Fire systems testing and calibration	5.08	254.17
63	MO	6/22/2012 13:06	6/22/2012 13:57	8820	Change ammonia nozzles	0.65	42.50
65	U1	6/22/2012 17:54	6/22/2012 18:52	5299	Shutdown to change bad SOV 1404 (LF/water drain).	0.97	48.33
67	MO	6/27/2012 18:23	6/27/2012 19:06	8820	change ammonia nozzles and filter	0.72	35.83
69	MO	6/28/2012 7:32	6/28/2012 8:40	5114	Change filter and clean chip detector	1.13	56.67
71	MO	7/1/2012 16:11	7/1/2012 16:55	8820	Planned outage to change Unit 1 NH3 nozzles.	0.73	36.67
75	MO	7/9/2012 18:03	7/9/2012 18:48	8820	Planned outage to change Unit 1 NH3 Nozzles	0.75	37.50
77	U1	7/9/2012 19:16	7/9/2012 19:38	5108	Immediate outage caused from Unit 1 high EGT temperatures.	0.37	18.33
79	U1	7/11/2012 17:07	7/11/2012 17:42	5039	Unit 1A VSV position error. Changed 501 hydraulic filters.	0.58	29.17
81	U1	7/17/2012 20:01	7/17/2012 20:15	9300	Generator protection tripped unit from outside incident.	0.23	11.67
82	PO	7/18/2012 2:54	7/19/2012 19:50	5272	Unit 1 offline for annual planned outage.	40.93	2046.67
85	MO	7/24/2012 7:44	7/24/2012 9:32	5130	Unit 1 A Starter motor, replacing leaking gasket	1.80	90.00
88	MO	7/28/2012 15:02	7/28/2012 16:28	5001	Taking Unit offline to replace Hyd servo (for VSV&IGV) on U1A	1.43	71.67
89	D1	7/28/2012 16:28	7/29/2012 6:52	5001	U1A has problems with VSV. Suspected bad hyd servo.	6.47	323.70
92	MO	7/29/2012 4:46	7/29/2012 6:43	5001	Unit offline to change Hyd. Servo valve for VSV/IGV on GG-A.	1.95	97.50
97	MO	8/14/2012 5:35	8/14/2012 22:08	5245	P&W onsite to install Thermocouples to the outside skin of 1A PT	16.55	827.50
99	U1	8/14/2012 23:55	8/15/2012 0:05	5299	Unit 1 Had a High GT Enclosure temperature	0.17	8.33

PT Outage Event - both sides

108	MO	8/22/2012 10:01	8/22/2012 12:06	5299	Replace Thermocouple element and down load data on Unit #1	2.08	104.17
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Dave Gates Generating Station - Unit 2							
Event	Type	Start	End	Cause	Description	Eq Hrs	Eq MWH
20	MO	1/7/2011 14:06	1/7/2011 16:37	5190	Software upgrade	2.52	120.80
30	MO	1/11/2011 9:58	1/11/2011 22:15	5190	troubleshooting overspeed trip	12.28	589.60
1	MO	1/12/2011 13:34	1/12/2011 14:23	5109	exhaust gas thermal couple failure	0.82	39.20
39	MO	1/14/2011 12:37	1/14/2011 15:26	5084	Retorque S flange bolts engine A & B. Replace hydraulic starter filter o rings.	2.82	135.20
46	MO	1/17/2011 10:00	1/17/2011 16:39	5110	Fix the leaks on the hydraulic starter filter.	6.65	319.20
148	U1	1/22/2011 13:56	1/22/2011 14:05	3631	Low voltage breaker opened causing loss of support system	0.15	7.20
66	U1	1/23/2011 9:47	1/23/2011 10:00	3631	Low voltage breaker opened causing loss of support system	0.22	10.40
67	U1	1/24/2011 3:59	1/24/2011 4:02	8817	unit tripped SCR emergency shut down drop load detected	0.05	2.40
70	MO	1/24/2011 12:52	1/24/2011 12:56	8817	SCR Trip	0.07	3.20
81	U1	1/26/2011 7:00	1/26/2011 7:03	5109	Differential pressure indicator erratic on stack causing unit trip	0.05	2.40
82	SF	1/26/2011 7:03	1/26/2011 7:09	5109	Differential pressure indicator erratic on stack causing unit trip and not light back	0.10	4.80
84	MO	1/26/2011 7:54	1/26/2011 15:21	5115	Vacuum pump replaced	7.45	357.60
86	D1	1/26/2011 16:52	1/26/2011 16:54	5079	PBdot Trip	0.02	0.77
97	MO	1/28/2011 6:58	1/28/2011 10:27	8809	plugged nozzles on ammonia jets	3.48	167.20
101	MO	1/28/2011 23:02	1/28/2011 23:33	5072	Changed TE009 on Unit 2 engine A	0.52	24.80
103	MO	1/29/2011 10:01	1/29/2011 10:26	5049	wrapping insulation around fuel line to prevent rubbing / replacing lost flange bolt	0.42	20.00
107	MO	1/30/2011 6:20	1/30/2011 7:11	5050	Found south side ignitor bad, R&R ignitor	0.85	40.80
131	U1	2/5/2011 7:03	2/5/2011 7:13	5109	5101 loss of signal	0.17	8.00
133	MO	2/5/2011 13:30	2/5/2011 16:30	5109	5101 sensing line frozen at stack	3.00	144.00
135	U1	2/5/2011 23:27	2/6/2011 0:43	8825	Sensing lines are frozen fan trip, sensor trip	1.27	60.80
136	U1	2/8/2011 21:53	2/7/2011 1:14	8817	Unit tripped off for duct diff pressure. Sensing line is frozen.	3.35	160.80
138	U1	2/7/2011 6:56	2/7/2011 11:20	8817	SCR drop load detected	4.40	211.20
146	MO	2/10/2011 10:12	2/10/2011 12:28	5130	Replaced seals in hydraulic starter	2.27	108.80
153	U1	2/13/2011 20:14	2/13/2011 21:20	5048	Eng A FY1101 GF valve Driver shutdown	1.10	52.80
163	U1	2/15/2011 19:04	2/15/2011 20:06	5048	Fuel gas diver fault. still looking into it.	1.03	49.60
192	U1	2/22/2011 22:19	2/23/2011 9:16	4511	Recieved alarm A02 Unit 64F Rotor Earth Fault	10.95	525.60
193	U1	2/23/2011 9:27	2/23/2011 10:41	4609	64F Rotor Ground Faulted	1.23	59.20
194	U1	2/23/2011 10:42	2/23/2011 13:56	4511	Rotor Ground Faulted	3.23	155.20
195	U1	2/23/2011 14:04	2/23/2011 15:13	4511	Earth Fault on generator	1.15	55.20
196	U1	2/23/2011 15:16	2/28/2011 23:59	4511	64F Rotor Earth Fault	128.72	6178.40
258	U1	3/1/2011 0:00	3/7/2011 16:30	4511	64 F Rotor Earth Fault	160.50	7704.00

197	U1	3/7/2011 17:07	3/7/2011 21:17	5048	gas fuel driver unit 2 A	4.17	200.00
198	D1	3/7/2011 22:39	3/8/2011 2:59	5050	Engine A is down for fuel driver issue	2.08	99.67
201	D1	3/8/2011 21:39	3/11/2011 15:05	5048	Position error main fuel gas driver fault.	31.35	1504.97
209	U1	3/12/2011 12:40	3/14/2011 6:47	5041	Down to look into differential pressure alarm on B fuel gas.	41.12	1973.60
213	PO	3/14/2011 6:47	3/14/2011 19:58	5092	1000 hour bore scope inspection	13.18	632.80
246	D1	3/29/2011 3:17	3/29/2011 3:22	5079	PB DOT trip, shutting down "normal stop request" init. by operator on BOP "run units"	0.04	1.92
254	MO	4/2/2011 14:00	4/3/2011 7:57	5111	LO pump not working troubleshooting pump.	17.95	861.60
255	U1	4/4/2011 21:12	4/4/2011 21:19	5009	TEO010 faulted on unit 2A. Tripped off line	0.12	5.60
261	MO	4/12/2011 13:00	4/12/2011 17:21	5111	Change MOP601 LO Pump	4.35	208.80
266	MO	4/13/2011 14:46	4/13/2011 16:43	5049	Fuel gas piping leak repair for pm by J. charnitski	1.95	93.60
269	U1	4/16/2011 20:06	4/16/2011 20:13	5250	PB-DOT First	0.12	5.60
271	U1	4/18/2011 9:03	4/18/2011 9:08	3632	Open ELA-CB-3001 and Closed ELA-CB-2301 power bump brought down SCR Fans	0.08	4.00
274	U1	4/18/2011 18:06	4/18/2011 18:17	4550	DC lube oil pump tripped causing unit to trip while trying to come up.	0.18	8.80
276	U1	4/18/2011 20:42	4/18/2011 20:48	4550	DC lube oil pump tripped causing unit to trip while trying to come up.	0.10	4.80
278	U1	4/20/2011 9:32	4/20/2011 9:46	3641	SCR tripped will bring MCC 3001 back online after dead buss work	0.23	11.20
299	U1	4/26/2011 23:20	4/26/2011 23:50	8825	B and C fans on SCR tripped causing a start permissive trip.	0.50	24.00
301	U1	4/27/2011 4:04	4/27/2011 4:30	5079	starter not in auto	0.43	20.80
304	U1	4/27/2011 4:40	4/27/2011 4:45	8656	scr fans not in auto	0.08	4.00
306	U1	4/27/2011 12:21	4/27/2011 12:49	8822	SCR controlled drive back and shutdown	0.47	22.40
308	U1	4/28/2011 12:23	4/28/2011 12:45	8822	SCR controlled drive back and shut down looking into cooling fan issues	0.37	17.60
320	U1	5/1/2011 13:26	5/5/2011 15:11	4535	Stator ground target in on Beckwith.	97.75	4692.00
329	MO	5/12/2011 11:00	5/12/2011 17:35	5120	Repairing leak on hydraulic starter, maintenance on PTTB valve.	6.58	316.00
343	U1	5/16/2011 6:08	5/16/2011 6:13	5074	Unit 2 A PB DOT	0.08	4.00
350	MO	5/17/2011 8:03	5/17/2011 8:59	5109	Replaced failed Exhaust Gas Thermocouple TE-007 on 2B Engine	0.93	44.80
358	D1	5/20/2011 9:16	5/20/2011 9:20	5109	PB Dot trip U2A, no alarm indications before hand	0.03	1.53
362	D1	5/23/2011 20:42	5/23/2011 20:53	5109	PB DOT U2A	0.09	4.22
364	U1	5/25/2011 9:47	5/25/2011 9:53	5074	2A PB-DOT	0.10	4.80
368	U1	5/28/2011 23:23	5/28/2011 23:25	5074	2A PB-DOT will shutting down eng B	0.03	1.60
383	MO	6/19/2011 18:04	6/19/2011 18:45	5110	TE 601 failure changing out element	0.68	32.80
391	U1	6/24/2011 9:59	6/24/2011 10:45	5190	ammonia nozzels plugged LOTO installed to clean	0.77	36.80
398	U1	6/29/2011 6:05	6/29/2011 8:10	8825	trying to open 97G unit #3 switching scr fans and unit 2 tripped	2.08	100.00
400	D1	6/29/2011 18:33	6/29/2011 19:15	5108	5201 B cooling air fan faulted due to overload.	0.12	5.60
514	MO	8/14/2011 16:54	8/15/2011 16:20	5190	On U2B water was pouring from northside vent pipe	23.43	1124.80
521	MO	8/16/2011 19:52	8/17/2011 11:08	5190	On U2B water was pouring from northside vent pipe	15.27	732.80
558	D1	8/24/2011 14:05	8/24/2011 16:07	5049	fail to light off failed 125v fuel vent sov 125v positive ground fault	2.03	97.60
579	U1	8/29/2011 8:25	8/29/2011 8:44	5079	ramp up ramp downs causing water injection problems	0.32	15.20

636	U1	9/16/2011 12:10	9/16/2011 12:53	5085	2A Engine TTEC Driveback due to failed TE076 GG to PT Cooling air temperature Failure	0.72	34.40
681	PO	9/26/2011 6:30	9/29/2011 16:40	5272	Semi-Annual Borescope Inspections	82.17	3944.00
690	U1	10/3/2011 17:00	10/4/2011 8:07	5299	Having electrical problems with VFD for Cold Buffer air.	15.12	725.60
691	U1	10/4/2011 8:09	10/4/2011 15:09	5299	Having electrical problems with VFD for Cold Buffer Air	7.00	336.00
692	U1	10/4/2011 15:14	10/4/2011 19:30	5299	Electrical problems with Cold Air Buffer.	4.27	204.80
698	PO	10/11/2011 9:01	10/11/2011 10:45	4810	U2 Powell Vacuum Breaker Maintenance	1.73	83.20
699	U1	10/11/2011 10:46	10/13/2011 11:17	4810	U2 Powell Vacuum Generator Breaker Trip Shaft was found bent during inspection.	48.52	2328.80
713	U1	10/21/2011 10:37	10/21/2011 12:56	5039	EngHeat duct temperature high, had CSD on GG. Taking down unit to replace check valve.	2.32	111.20
725	U1	10/27/2011 19:47	10/28/2011 9:14	8825	Pant-Leg "A" running high temp. Removed unit from service.	13.45	645.60
780	MO	11/11/2011 12:21	11/11/2011 13:00	5130	Repair in leak on hydraulic starter skid.	0.65	32.50
811	MO	11/22/2011 9:20	11/22/2011 15:38	5111	Replace MOP 601	6.30	315.00
854	MO	12/6/2011 7:01	12/6/2011 14:26	9720	AFP fire protection conducting annual fire safety checks	7.42	356.00
856	U1	12/7/2011 5:24	12/7/2011 7:07	9320	demin water supply line to skid is suspected froze no water pressure	1.72	82.40
898	MO	12/14/2011 7:44	12/14/2011 8:10	5110	PDT 605 lost signal or erratic signal	0.43	20.80
900	MO	12/14/2011 11:21	12/14/2011 12:15	5114	change F 605 filter	0.90	43.20
902	MO	12/14/2011 15:11	12/15/2011 4:45	5110	Unit 2 A lube oil leak in tunnel	13.57	651.20
24	MO	1/5/2012 5:01	1/5/2012 15:00	3899	R&R Tempering air fan 2A	9.98	499.17
60	MO	1/12/2012 9:45	1/12/2012 11:01	5272	S-Flange 003 at 3.7Mils alarm at 3 Mils	1.27	63.33
81	U1	1/12/2012 11:02	2/27/2012 15:32	5280	high vibration impact damage found during borescope, investigation underway	1108.50	55425.00
67	D1	2/27/2012 15:35	2/27/2012 18:13	5250	PTTB Relays bad thrust balance valve.	0.54	27.08
64	MO	2/27/2012 16:33	2/27/2012 18:06	5299	Repaired 2A PTTB relays	1.55	77.50
66	MO	2/29/2012 15:51	2/29/2012 17:32	5113	Shutdown to tighten 2A and 2B #8 and #9 scavenge lines.	1.68	84.17
70	U1	3/3/2012 5:05	3/3/2012 5:48	8820	Ammonia injection nozzles clogged, shutdown to clean nozzles.	0.72	35.83
73	U1	3/6/2012 8:49	3/6/2012 9:29	8820	Clogged injection nozzles	0.67	33.33
75	U1	3/6/2012 21:41	3/6/2012 22:30	8820	clean ammonia nozzels	0.82	40.83
76	U1	3/6/2012 22:48	3/6/2012 23:25	8820	broken ammonia nozzle	0.62	30.83
78	U1	3/12/2012 8:03	3/12/2012 8:46	8820	Change Ammonia nozzels	0.72	35.83
80	U1	3/20/2012 1:03	3/20/2012 1:59	8820	Ammonia injector nozzles plugged	0.93	46.67
81	U1	3/25/2012 14:26	3/25/2012 15:15	8820	changed out injection nozzles	0.82	40.83
82	U1	4/2/2012 9:18	4/2/2012 11:03	8820	Ammonia injection nozzles plugged. Lube oil didnt scavenge back on shut down.2A.	1.75	87.50
84	MO	4/4/2012 8:25	4/4/2012 15:33	5111	MOP 603 locked up lube oil.	7.13	356.67
86	U1	4/13/2012 20:32	4/13/2012 21:09	8820	Ammonia injection nozzles clogged.	0.62	30.83
92	U1	4/21/2012 11:30	4/21/2012 13:49	5285	Bentley lost signal channel not ok slot 3	2.32	115.83
93	U1	4/22/2012 23:48	5/3/2012 7:42	5285	S-Flange Vibration Alarm	247.90	12395.00
94	D1	5/3/2012 7:42	7/1/2012 0:00	5285	S-Flange vibration,PT failure R&R	704.15	35207.50
122	PO	7/16/2012 4:55	7/17/2012 18:39	5272	Unit 2 offline for annual planned outage.	37.73	1886.67

Pt Outage Event - both PT's

Pt Outage Event - "A" side

124	U1	7/17/2012 20:01	7/17/2012 20:48	9300	Generator protection tripped unit from outside incident.	0.78	39.17
125	U1	7/20/2012 17:44	7/20/2012 18:18	8825	Tempering Air Fans A&C tripped caused SCR emergency shutdown. Found loose termination.	0.57	28.33
157	MO	8/21/2012 10:32	8/21/2012 13:00	5111	Install new PT oil pump on Unit 2B	2.47	123.33

Dave Gates Generating Station - Unit 3							
Event	Type	Start	End	Cause	Description	Eq Hrs	Eq MWH
22	MO	1/4/2011 10:22	1/4/2011 15:24	5190	Software upgade	5.03	241.60
30	MO	1/7/2011 10:33	1/7/2011 13:46	5190	Software upgrade to fix off damper alarms	3.22	154.40
34	U1	1/7/2011 17:00	1/7/2011 17:18	5000	Engine A Sec Air Damper Closed	0.30	14.40
48	MO	1/10/2011 13:30	1/10/2011 14:51	8813	Plugged Ammonia Filters	1.35	64.80
59	U1	1/12/2011 4:36	1/12/2011 9:13	5000	Trip for ENG A Sec Air Damper Closed	4.62	221.60
78	MO	1/14/2011 10:16	1/14/2011 12:26	5084	Loose and missing casing bolts at the S flange unit 3 engine A	2.17	104.00
83	D1	1/16/2011 20:12	1/16/2011 20:24	5160	on damper not closed bad switch on damper Brett has one coming	0.20	9.60
147	U1	1/22/2011 13:55	1/22/2011 14:05	3631	Low voltage breaker opened causing loss of support system	0.17	8.00
106	MO	1/25/2011 11:17	1/25/2011 12:13	5140	Ground short in battery charger	0.93	44.80
109	SF	1/26/2011 7:01	1/26/2011 7:04	8817	SCR Trip	0.05	2.40
112	MO	1/27/2011 8:00	1/27/2011 12:36	5246	24 VDC Battery Charger Ground Fault	4.60	220.80
114	MO	1/29/2011 20:42	1/30/2011 0:42	5140	125VDC Ground Fault. Changed 1403, fuse, and relay on engine A,	4.00	192.00
116	U1	1/30/2011 10:13	1/30/2011 10:41	5190	SCR trip cause drop load.	0.47	22.40
118	U1	2/1/2011 23:01	2/2/2011 2:24	5000	AO3 eng A sec air damper closed	3.38	162.40
137	U1	2/7/2011 2:09	2/7/2011 2:28	8825	Tripped off line for duct diff perssure low.	0.32	15.20
138	U1	2/7/2011 11:11	2/7/2011 12:43	8817	SCR trip 5101	1.53	73.60
139	U1	2/7/2011 17:03	2/7/2011 18:50	5002	inlet filters plugging with snow	1.78	85.60
140	U1	2/9/2011 1:56	2/9/2011 2:12	5079	Lube oil pump failure trip	0.27	12.80
142	U1	2/9/2011 10:05	2/9/2011 10:49	5111	cold oil due to heat trace	0.73	35.20
154	U1	2/20/2011 5:46	2/20/2011 8:35	5002	inlet filters plugged with snow PDT 4001 B at 5.4 CSD at 6.0	2.82	135.20
166	U1	2/27/2011 9:33	2/27/2011 11:41	5299	damper closed caused B GG to trip. has command to open not opening.	2.13	102.40
169	MO	3/4/2011 11:30	3/4/2011 12:26	5299	Ammonia injectors and filters plugged	0.93	44.80
184	D1	3/10/2011 16:28	3/10/2011 16:29	5001	U3A on damper closed alarm then trip, oil on contacts, cleaned with contact cleaner	0.01	0.38
190	D1	3/14/2011 17:24	3/14/2011 17:36	5250	AVR comm fault- cycle power to MicroNet to resolve issue	0.10	4.60
192	PO	3/15/2011 6:35	3/15/2011 18:17	5092	1000 hour bore scope inspections	11.70	561.60
217	U1	3/31/2011 22:46	3/31/2011 23:59	5248	secondary air damper closed A engine tripped unit.	1.22	58.40
242	U1	4/1/2011 0:00	4/1/2011 1:00	5248	secondary air damper closed A engine tripped unit.	1.00	48.00
248	D1	4/12/2011 16:56	4/12/2011 17:22	5050	failure to light off U3A	0.21	9.97
249	D1	4/12/2011 17:22	4/12/2011 18:14	5050	Unit failure to light off while windmilling	0.42	19.93

252	U1	4/13/2011 18:33	4/20/2011 13:30	4511	Rotor earth fault alarm investigation and troubleshooting underway.	162.95	7821.60
254	MO	4/21/2011 14:30	4/25/2011 17:00	3641	Powell is coming to inspect the breaker Unit is offline	98.50	4728.00
271	SF	5/8/2011 21:28	5/8/2011 22:09	5050	Engine A failed to start on 4 tries, going out to check ignitors	0.68	32.80
274	MO	5/11/2011 7:00	5/11/2011 8:36	8813	Unit is down to inspect the ammonia injection system	1.60	76.80
278	MO	5/12/2011 7:48	5/12/2011 10:25	5109	ammonia inspection and cleaning, emissions investigation.	2.62	125.60
282	MO	5/18/2011 5:56	5/18/2011 15:37	8812	Unit 3 is down to inspect the SCR	9.68	464.80
310	MO	6/2/2011 11:00	6/2/2011 15:26	5035	Water wash Unit 3	4.43	212.80
319	U1	6/5/2011 16:07	6/5/2011 16:18	5280	Eng A S Flange Trip channel not ok	0.18	8.80
320	MO	6/6/2011 14:53	6/6/2011 16:03	5130	Flange joint has a leaking o-ring, replacing o-ring	1.17	56.00
335	U1	6/15/2011 7:02	6/15/2011 7:11	5160	doors left open during startup	0.15	7.20
352	MO	6/22/2011 10:13	6/30/2011 15:48	4899	Generator breaker failed to open on shutdown	197.58	9484.00
371	U1	7/8/2011 12:16	7/11/2011 18:40	4810	13800 breaker failed to open on shutdown until 85G-1 rolled	78.40	3763.20
372	U1	7/11/2011 19:08	7/13/2011 12:58	4810	13800 breaker failed to open on shutdown until 85G1 rolled.	41.83	2008.00
373	U1	7/13/2011 13:41	7/13/2011 13:51	5250	S-flange signal fault causing unit to trip.	0.17	8.00
403	U1	8/2/2011 19:22	8/2/2011 20:18	5079	PB-DOT trip	0.93	44.80
422	MO	8/11/2011 12:38	8/11/2011 21:15	5054	Checking water injection flow meter following recalibration	8.62	413.60
425	U1	8/12/2011 14:34	8/12/2011 14:49	5190	Engine heat duct high temperature Controlled Shut Down	0.25	12.00
458	D1	8/24/2011 15:35	8/24/2011 15:42	5299	3B cooling air TTEC-DB	0.12	5.60
459	D1	8/24/2011 15:55	8/24/2011 16:01	5299	cooling air TTEC-DB	0.10	4.80
504	PO	9/19/2011 5:30	9/26/2011 6:27	5272	Semi-Annual Borescope Inspection and Combustor Inspections.	168.95	8109.60
549	U1	10/12/2011 11:06	10/12/2011 11:29	5190	Unit tripped on Thrust Balance pressure sensor failed	0.38	18.40
550	D1	10/12/2011 11:30	10/12/2011 11:59	5190	Blown electrical relay on U3A Thrust Balance Positioner	0.23	11.12
553	U1	10/14/2011 11:24	10/14/2011 11:33	8825	SCR controlled driveback and shutdown	0.15	7.20
588	D1	10/23/2011 21:57	10/23/2011 22:07	5299	Thrust balance pressure ratio trip.	0.08	3.83
607	MO	10/27/2011 8:31	10/27/2011 14:58	5299	Repair U3B Speed Probe ST006	6.45	309.60
622	U1	11/1/2011 7:44	11/1/2011 11:15	5140	Unit tripped. 125 VDC input card failure.	3.52	175.83
625	MO	11/8/2011 5:01	11/8/2011 19:00	8825	Replace starter on Cooling Fan "A"	13.98	699.17
627	MO	11/9/2011 7:01	11/9/2011 11:29	8825	Replace Cooling Fan "A" VFD	4.47	223.33
651	U1	11/17/2011 1:26	11/17/2011 1:45	5079	PB DOT Trip	0.32	15.83
653	D1	11/17/2011 1:45	11/17/2011 18:18	5048	3B Melted Gas Fuel relay block. Took relay block from 1A to verify engine function.	8.28	413.75
695	U1	12/2/2011 16:27	12/3/2011 15:11	3972	Unit 3 Communication Problems	22.73	1091.20
696	MO	12/3/2011 15:15	12/3/2011 17:56	5110	Remove insulation and inspect Accumulator	2.68	128.80
698	MO	12/4/2011 6:30	12/4/2011 11:30	5110	remove accumulator replace bladder	5.00	240.00
766	U1	12/24/2011 2:53	12/24/2011 7:15	5160	3B secondary air fan#2 tripped breaker	4.37	209.60
6	U1	1/6/2012 4:01	1/6/2012 11:10	5160	Sec air fan fail CSD.	7.15	357.50
30	U1	1/18/2012 18:37	1/18/2012 18:40	5299	Unit tripped due to high CAB temp (TE1602).	0.05	2.50

33	D1	1/18/2012 21:46	1/19/2012 1:40	5299	Replacing CAB Motor	1.95	97.50	
34	U1	1/31/2012 20:09	4/24/2012 16:39	5272	Boroscopying the power turbine on A&B engines.	2011.50	100675.00	PT Outage event
37	U1	4/26/2012 3:06	4/26/2012 3:45	8820	plugged ammonia injection nozzles	0.65	32.50	
40	U1	4/29/2012 12:50	4/29/2012 13:39	5050	Unit trip Flame-out	0.82	40.83	
41	U1	4/29/2012 13:45	4/29/2012 14:15	5054	water in vent pipe. Replace SOV 1403	0.50	25.00	
42	U1	4/30/2012 14:29	4/30/2012 15:36	8820	plugged injection nozzle U3 B	1.12	55.83	
52	U1	5/7/2012 14:52	5/7/2012 16:02	5041	Change Relay for SOV 1602 and valve	1.17	58.33	
53	MO	5/7/2012 16:02	5/7/2012 16:37	5114	Change U3B F-607 filter	0.58	29.17	
55	MO	5/9/2012 8:45	5/9/2012 10:01	5299	Purge sensing lines for PDT 629	1.27	63.33	
56	MO	5/27/2012 10:43	5/27/2012 11:23	8823	change ammonia nozzles	0.67	33.33	
62	MO	6/5/2012 13:16	6/5/2012 14:16	5113	Oil in vacuum pump lines	1.00	50.00	
64	MO	6/5/2012 14:38	6/5/2012 16:08	5113	U3A 601 check valve stuck	1.50	75.00	
68	MO	6/13/2012 12:16	6/13/2012 16:35	5240	Fire protection system testing/calibration	4.32	215.83	
71	U1	6/24/2012 7:32	6/24/2012 7:54	5160	U3B CAB VFD fault	0.37	18.33	
73	U1	6/24/2012 8:14	6/24/2012 8:52	5190	U3B CAB VFD faulted	0.63	31.67	
74	D1	6/24/2012 8:57	6/24/2012 20:00	5299	Cold Air Buffer motor went bad on U3B	5.53	276.25	
76	U1	6/24/2012 20:00	6/24/2012 20:33	5299	Shutdown to test rotation of new CAB motor on U3B	0.55	27.50	
78	MO	6/27/2012 3:18	6/27/2012 3:39	5190	Replace relay	0.35	17.50	
79	U1	7/17/2012 20:01	7/17/2012 20:32	9300	Generator protection tripped unit from outside incident.	0.52	25.83	
80	PO	7/20/2012 5:01	7/20/2012 17:32	5272	Unit 3 annual planned maintenance outage.	12.52	625.83	
85	MO	7/31/2012 13:10	7/31/2012 14:30	8817	Investigation of Unit 3 SCR NOx control.	1.33	66.67	
91	U1	8/4/2012 14:29	8/4/2012 14:42	5250	U3 engine A Thrust balance pressure ratio trip, 1 min after breaker closure.	0.22	10.83	
92	MO	8/8/2012 8:06	8/8/2012 11:48	5299	Planned MO. U3A Thrust Balance Actuator is being replaced.	3.70	185.00	
99	U1	8/28/2012 10:03	8/28/2012 10:08	8656	Unit 3 HMI reset caused SCR driveback and trip.	0.08	4.17	
101	MO	8/28/2012 10:57	8/28/2012 11:08	5113	U3B-Change starter hose.	0.18	9.17	



DAVE GATES GENERATING STATION

Outage Status Presented by NorthWestern Energy
February 23, 2012



NorthWestern
Energy
Delivering a Bright Future

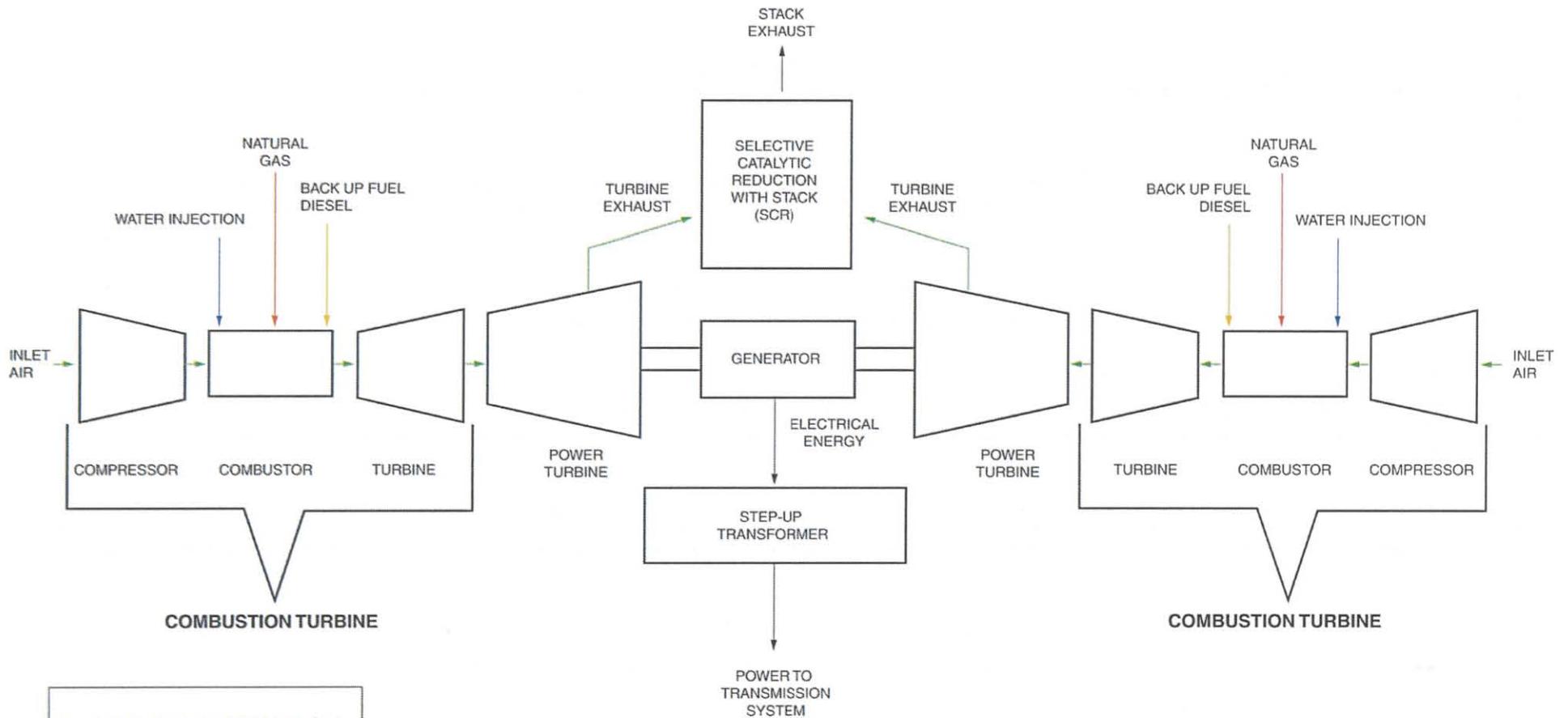
OUTLINE

- I. DGGS Background
- II. Engineering: What Happened
- III. NorthWestern's Response
- IV. Short and Long-Term Plans
- V. Costs
- VI. Conclusion

I. DGGS BACKGROUND

- Project came in on time and under budget
- One full year of successful commercial operation
- Achieved successful mandatory reliability measure (Control Performance Standard (CPS2)) every month
- Performed well under challenging conditions including severe weather and use of back-up fuel when required
- Met all performance expectations during first year

II. ENGINEERING: SIMPLE CYCLE COMBUSTION TURBINE GENERATOR UNIT



LEGEND FOR SYSTEM FLOW	
	Combustion Air and Gases
	Natural Gas Fuel
	Diesel Fuel
	Control Water Injection
	Electric Power

II. ENGINEERING: DAVE GATES GENERATING STATION⁵



II. ENGINEERING: WHAT HAPPENED

- Outage began with vibration alarm on power turbine unit 2B on January 11, 2012
- Borescope inspection of power turbine revealed liberated bolts, cracks, and foreign object damage
- Obtained additional borescope to investigate other power turbines
- Inspection of other power turbines revealed similar issues, some not as severe
- On January 31, 2012, original equipment manufacturer, Pratt & Whitney Power Systems (PWPS), recommended that NWE not operate Units 1, 2 and 3 at DGGS based upon borescope inspection of Units 1 and 2
- Plant was shut down at about 8 p.m. on that same evening

III. NORTHWESTERN'S RESPONSE

- **Balancing Authority (BA) Operations**
 - As of 8:10 on 1/31/12, we began balancing the BA using other NWE generation resources. Short term only. Inadequate in longer term.
 - Close contact with the WECC Reliability Coordinator
 - No violations of reliability criteria
- **Contracts for Replacement Regulation Service**
 - Emergency agreements with Avista (15 MW) and Powerex Balance of Month (BOM) (70 MW)
 - Began 0100 PT on Friday 2/3/12 totaling 85 MW (53 hours after forced outage)
 - Emergency filings made with FERC 2/2/12 (Powerex BOM approval already received)

III. NORTHWESTERN'S RESPONSE (CONT.)

- Second agreement with Powerex for March and beyond executed and filed 2/6/12
 - Total capacity beginning in March is up to 76 MW
 - Agreements with Avista and Powerex each allow NWE to reduce regulating reserve capacity on a monthly basis, with notice, to tailor our needs as DGGS units come back into service
 - Gave notice to reduce Powerex to 50 MW on 3/1/12 based on current expectations
 - Monthly cost of replacement agreements approximately \$920K at 65 MW (March reduced level)
 - CPS2 compliant in February

IV. SHORT AND LONG-TERM PLANS

- Power turbine 2B sent to repair facility for inspection, tear down, and repair – NWE engineer on site for initial tear down
- Several factory engineers dedicated to the investigation
- PWPS considers this its highest priority
- PWPS continues to drive investigation to identify root cause through:
 - Hardware Inspection
 - Data analysis
 - Engineering modeling
 - Field experience
- NWE and PWPS goal is to return to regulation service from DGGS as quickly as possible

IV. SHORT AND LONG-TERM PLANS (CONT.)

- PWPS arranged for loaner power turbines from facilities in North Carolina and Santiago, Chile
- Repair of power turbine 2B complete and returned to DGGS with power turbine from North Carolina on Sunday, February 19
- PWPS airlifted Santiago power turbines to Miami, FL on Thursday, February 16, and cleared customs on February 17
- 3A and 3B power turbines shipped to repair facility from DGGS on Monday, February 20

IV. SHORT AND LONG-TERM PLANS (CONT.)

- Inherent design of turbine generator units provides for the flexibility to run ½ unit if needed
- Blanking plate for exhaust duct designed, fabricated, and delivered to site middle of week of February 27
- Will allow for the use of ½ unit in case extended delay in return of a power turbine – will be able to generate 25 MW and provide about 21.5 MW of regulation

IV. SHORT AND LONG-TERM PLANS (CONT.)

- With best information as of 2/23/12:
 - February 27-March 2: Unit #2 expected to return to service using 1 DGGs power turbine and 1 NC loaner
 - February 27-March 5: Unit #1 expected return to service using 1 NC loaner and 1 Santiago loaner
 - March 12–16: Unit #3 expected return to service using 2 DGGs power turbines
 - April-June: Reconstitute plant with remaining original DGGs power turbines after repaired and returned from repair facility
 - Engage in final root cause analysis and ultimate repair recommendation
 - Remove power turbines one by one to institute long-term fix and reinstall

V. COSTS

NWE Regulation Contracts Cost Summary 2-2012								Prepared Feb 2012
	Term	Capacity (MW)	Capacity Charge (\$/kW-month)	Total Capacity Charge	3rd Party Transmission Rate	3rd Party Transmission Cost	Cost (for full contracts amount)	\$/kw-month
Avista	Monthly	15	\$7.62	\$114,300	\$2.00/ kW-month	\$30,000	\$144,300	9.62
Grant	Not Applicable	----	----	----	----	----	----	----
PowerEx	Monthly	76	\$9.43	\$716,680	\$6.10 / kw-month	\$463,600	\$1,180,280	15.53
	Total	91					\$1,324,580	

Monthly Regulation Contract Costs versus DGGs Fuel Costs					
	Jurisdiction	Allocation	Regulation Contract Cost Allocations	MPSC Current Rate Revenues	Difference
91 MW ----->	Retail	70/91	\$ 1,018,908	\$ 772,084	\$ 246,824
	Wholesale	21/91	\$ 305,672	\$ 193,021	\$ 112,651
	Total		\$ 1,324,580	\$ 965,105	\$ 359,475

	Jurisdiction	Allocation	Regulation Contract Cost Allocations	MPSC Current Rate Revenues	Difference
65 MW ----->	Retail	44/65	\$ 623,311	\$ 772,084	\$ (148,773)
	Wholesale	21/65	\$ 297,489	\$ 193,021	\$ 104,468
	Total		\$ 920,800	\$ 965,105	\$ (44,305)

V. OUTAGE COSTS

- Regulatory Process for Cost Recovery and Review
 - DGGGS Variable Cost True-up Filings
 - MPSC Annual
 - FERC Monthly Tariff Adjustments
- Variable costs associated with DGGGS Outage:
 - DGGGS Fuel Costs (decrease)
 - Supplemental Regulation Contracts Costs (increase)
 - Other True-ups:
 - 27 avg. MWs Revenue Credits
 - 7 avg. MWs

CONCLUSION

- Terrific internal teamwork to recover from outage
- PWPS very responsive to repair
 - Example – Minimal repair time in shop
 - Aggressive loaner program to get DGGS back into production in minimal time
 - Excellent cooperation between PWPS Customer Support Group and NWE
 - Embedded NWE consultant experts
- Focused on immediate response and ultimate recovery using benefit of root cause analysis
- DGGS will remain a reliable long-term regulation resource



QUESTIONS

Thank you



NorthWestern Energy
Delivering a Bright Future

	Term	Capacity (MW)	Capacity Charge (\$/kW-month)			Total Capacity Charge	3rd Party Transmission Rate	3rd Party Transmission Cost	Total Annual Cost (for full contract amount)
Bidder 1									
	01/01/2013 through 12/31/2013	10	\$7.62			\$914,400	\$2.00/ kW-month	\$240,000	\$1,154,400
Bidder 2									
Year 1	01/01/2013 through 12/31/2013	25	\$10.00			\$3,000,000	\$2.00/ kW-month	\$600,000.00	\$3,600,000.00
Year 2	01/01/2014 through 12/31/2014	25	\$10.30			\$3,090,000	\$2.00/ kW-month	\$600,000.00	\$3,690,000.00
Year 3	01/01/2015 through 12/31/2015	25	\$10.61			\$3,183,000	\$2.00/ kW-month	\$600,000.00	\$3,783,000.00
Bidder 3									
Year 1	01/01/2013 through 12/31/2013						/ kw-month		
Year 2	01/01/2014 through 12/31/2014						/ kw-month		
Year 3	01/01/2015 through 12/31/2015						/ kw-month		



November 18, 2011

Jonathan D. Ogur, Associate
Brown, Williams, Moorhead & Quinn, Inc.
1155 15th Street, NW, Suite 400
Washington, DC 20005

Dear Mr. Ogur,

Grant County PUD is pleased to provide this in response to NorthWestern Energy's request for proposal for regulating reserve service, dated October 3, 2011. The following offer is subject to approval by our Board of Commissioners.

Starting January 1, 2013, continuing through December 31, 2015, Grant shall make available up to 25 MW of regulating reserve capacity. That is, at any given time, NWE would have an available range of unloaded AGC responsive capacity of zero to up to 25 MW at any moment of any hour, scheduled dynamically.

NWE may choose to take regulating reserve service in 5 MW increments up to 25 MW for any portion of the three year term being offered, in one year blocks. For example, NWE has the option to ramp up or down service annually in 5 MW increments (i.e. year 1- 10MW, year 2- 15MW and year 3- 25 MW). NWE must make its election for the entire term in the contract.

The regulating reserve service supplied by Grant to NWE's balancing authority area is firm with Grant providing the required contingency reserves. This service, however, is contingent on Grant obtaining firm transmission service from Avista's posted OASIS path BPATPUD to AVAT, NWMT, or other mutually agreeable path or transmission service provider that will satisfy NWE's requirements.

Regulating reserve service shall be supplied from Grant's system resources primarily comprised of hydro-electric generation capable of quickly responding to system requirements; for purposes of this contract the minimum ramp rate shall be 25MW per minute.

Grant's cost for obtaining transmission service and losses shall be passed through to NWE without additional mark up. Regulating reserve service capacity charge shall be \$10.00 per kW-month for year one, \$10.30 per kW-month for year two and \$10.61 per kW-month for year three.

Energy supplied by Grant associated with the reserve service shall be charged at an applicable Mid-Columbia index rate, mutually agreed to by NWE and Grant from the following selection of providers: Powerdex, IntercontinentalExchange, DowJones.

If a market power study is deemed necessary by the FERC, in order for NWE to obtain rate approval for this regulating reserve service from Grant, Grant shall obtain a study at its sole expense.

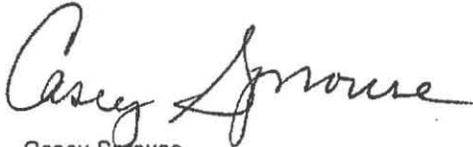
Grant believes, based upon prior experience in providing regulating reserve service to NWE that it currently possesses adequate computer interface, hardware, software and communications to successfully provide the requisite communications, delivery and accounting functions.

Should this offer develop into a contract, Grant contends that neither party could assign any interest in the contract without prior written approval from the other party, which should not be unreasonably withheld.

Grant's strongest support for demonstrating its ability to provide the type of service required within the RFP is its experience in successfully providing the identical service to NWE from January 2009 through December 2010, a copy of that agreement can be provided upon request or confirmed by contacting:

Casey Johnston
NorthWestern Energy
Director, SOCC Operations and Transmission Marketing
40 E Broadway
Butte, MT, 59701
Phone 406.497.4575

Thank you for the opportunity to respond and please contact me if you have any questions.



Casey Sprouse
Senior Term Marketer
Grant County Public Utility District
PO Box 878 Ephrata WA 98823
509-754-5294 Office
509-989-2081 Cell
509-754-6757 Fax

TERM SHEET
Response to NorthWestern Energy RFP
Regulation Service to Optimize the David Gates Generation Station

Avista Corporation
Up to 10 MW Dynamic Capacity and Energy Service
November 22, 2011

Intent: The intent of this Term Sheet is to propose terms under which Avista Corporation ("Avista") will assist NorthWestern Energy (NorthWestern) Transmission Services in balancing its resources with its load requirements by providing Dynamic Capacity and Energy Service under Avista Corporation's cost-based Volume 10, Service Schedule A. NorthWestern shall not intentionally use energy from Avista's system that provides a market advantage to NorthWestern. This agreement would be substantially similar to the prior long-term non-conforming service agreements between Avista and NorthWestern filed and accepted under FERC Docket Nos. ER08-1532-000 and ER08-1537-000.

Term: January 1, 2013 through December 31, 2013 with a mutually agreeable extension option.

Product Type: Provide a Dynamic Capacity and Energy Service to NorthWestern by electronically following a load control signal provided by NorthWestern's System Operations and Control Center.

Ramp Rate: There are no ramp rate restrictions.

Capacity Amount: Up to 10 MW

NorthWestern shall purchase from Avista an amount of such Dynamic Capacity and Energy Service from 0 to 10 MW for each hour.

Transmission and Transmission Availability: A 0 to 10 MW dynamic transmission path on Avista's transmission system will be used for the energy delivery to NorthWestern at NWMT-AVAT. NorthWestern will reimburse Avista LSE for the transmission at Avista's tariff rate and pay for the losses associated with any energy deliveries. Delivery points other than NWMT-AVAT will be acceptable on a mutually agreeable basis. NorthWestern will pay for any additional transmission costs and losses to deliver at alternate points.

Balancing Account: Energy transfers will occur on an instantaneous basis and Avista will maintain an account that records integrated hourly energy values. This account will capture the values for financial settlement.

Energy Compensation: Avista will be compensated for the integrated hourly energy in the balancing account and will be compensated for energy sent to NorthWestern based upon the ICE (Intercontinental Exchange) Daily Firm Energy Index Rate for applicable On Peak or Off Peak hours plus any balancing penalties incurred. The balancing account will be settled on a monthly basis. Any net sale of power by Avista associated with the financial settlement shall be under Avista Corporation's Volume 9, Service Schedule C.

Balancing Penalties: If Avista, at its sole discretion, determines that NorthWestern has used this Dynamic Capacity and Energy Service to provide a market advantage to NorthWestern, the integrated hourly amount of energy in the balancing account for those hours will be charged at 120% of the ICE Firm Energy Index Rate for applicable On Peak or Off Peak hours.

Pricing:

- 0 - 10 MW Price -- $\$7.62/\text{kW-Mo}$ Dynamic Capacity and Energy Service charge ($10 \text{ MW} * 1000 \text{ kW/MW} * \$7.62/\text{kW-Mo}$) = $\$76,200/\text{Mo}$.
- Transmission – Tariff rate (Currently $\$2.00/\text{kW-Mo}$.)
- Transmission Losses – For energy losses incurred by Avista Corp for energy deliveries to NorthWestern, current tariff rate (3%) settled at the ICE Firm Energy Index Rate for applicable On Peak or Off Peak hours plus $\$1.00/\text{MWh}$.
- Energy – Financially settle at the ICE Firm Energy Index Rate for the applicable On Peak or Off Peak hours.
- Balancing Penalties (see above).

Negative Market Conditions: If the ICE Firm Energy Index Rate is negative for the applicable On Peak or Off Peak hours, Avista will not compensate NorthWestern for energy delivered by Avista.

Exceptions and Limitations:

- Avista is not proposing to supply overlap regulation service or regulation service as defined by the North American Reliability Corporation ("NERC").
- Avista shall not assume through this transaction any responsibility or obligation with regard to NorthWestern's compliance with any NERC or WECC reliability standard.
- Avista's proposal is contingent upon Avista LSE's ability to reserve any necessary transmission on Avista's transmission system.

Assignment and Termination:

Provisions for assignment and termination will be negotiated by the parties and may include, among other provisions, the following:

- In the unintended event that NorthWestern utilizes Dynamic Capacity and Energy Service in excess of the amounts set forth above, or amounts otherwise agreed to by the parties, during multiple hours during a single calendar month, and such unintended event occurs in a total of three calendar months (which three calendar months need not be consecutive, during the term of the contract, then either party shall have the option at its sole discretion to terminate the contract upon 30 days advance notice to the other party.
- In the event that either NorthWestern or Avista incur charges on account of the use of facilities of third parties, the use of which is commercially and reasonably required to provide the proposed service, such charges shall be paid by NorthWestern. If NorthWestern determines that such third party charges materially increase the costs of the proposed service to NorthWestern beyond those that would be reasonably expected and are inconsistent with the proposed service, NorthWestern shall have the right to terminate upon 30 days advance written notice to Avista.

This Term Sheet is an indicative proposal and does not constitute a legal offer or otherwise create a binding agreement or obligation to consummate any contemplated transaction. Any such obligation or agreement will be created only by the execution of definitive agreements, the provisions of which, if so executed, will supersede this Term Sheet and all other agreements, if any, between NorthWestern and Avista related to this Term Sheet.

Contact:

Steve Silkworth
Wholesale Contracts Manager
Avista Utilities
1411 E Mission Ave
P.O. Box 3727
Spokane, WA 99220
(509) 495-8093
Email @ steve.silkworth@avistacorp.com

NWMT CPS2 Scores

	%
July 2011	91.0
August 2011	92.8
September 2011	95.0
October 2011	94.2
November 2011	91.4
December 2011	94.5
January 2012	95.0
February 2012	95.7
March 2012	95.6
April 2012	95.2
May 2012	94.8
June 2012	91.7

NorthWestern Energy
Docket D2012.5.49
Electric Tracker

Montana Public Service Commission (PSC)
Set 3 (014-032)

Data Requests received August 16, 2012

PSC-018

Regarding: Hedging
Witness: Markovich

- a. Is NWE seeking MPSC authorization to engage in financial hedging for electric supply?
- b. Did NWE financially hedge any amount of electric supply for the 2011-2012 or 2012-2013 tracker periods?
- c. For each month during the 2011-2012 tracker period, please provide a list of the forecasted supply needs that were fixed price hedged, detailing the counterparty, transaction type, trade date, start date, end date, terms, price, quantity. See e.g. Response to MCC-010, D2011.5.38 (Sept. 7, 2011).
- d. Please provide a copy of NWE's most recent hedging strategy.

RESPONSE:

- a. No.
- b. No.
- c. See the response to Data Request MCC-005.
- d. See attached for the most recent public version of this document. NorthWestern has filed a Motion for Protective Order regarding certain information contained in this document and will provide this information in the appropriate format after the Commission rules on the motion and issues a decision.

APPENDIX 1

Energy Supply Hedging Strategy

Public (Redacted) Version

The electric supply hedging strategy discussed in this Appendix is intended to accomplish a number of things including: dampening the effects of market price volatility; increasing price stability for ratepayers; and improving the probability of cost recovery for NorthWestern. These goals can be achieved by limiting exposure to short-term market volatility. The Plan as a whole sets the stage for implementing actions for longer-term stability; this Appendix provides a structured approach with specific measures and timelines that sets forth a guided, disciplined approach to energy supply hedging for a four-year window covering the period 2012 through 2015. While this systematic approach seeks to mitigate supply price volatility, it cannot completely protect customers from electric market price trends. The information regarding hedging strategies discussed below is provided for planning purposes and is based on current market conditions. Accordingly, it is subject to change. If NorthWestern does deviate from these strategies it will document the reasons.

This hedging strategy will allow NorthWestern to assemble a portfolio of energy supply resources and purchases that are reflective of market conditions over time, not market conditions at one specific point in time. In doing so, price volatility will be reduced which will in turn provide more stable supply prices for customers. This approach to resource procurement will result in a set of resources that will not be either the lowest or highest possible cost portfolio, but rather a blended value derived from market conditions over an extended period of time. It must be emphasized that nothing in this hedging strategy impedes NorthWestern from developing or acquiring physical assets. Should such an acquisition occur, any hedges in place as part of this strategy will be managed as appropriate given market conditions and the portfolio position at that time, and the net

result will be included in overall supply rates. This approach is consistent with what was done when Colstrip Unit 4 was put in rate base in 2009.

Throughout this Appendix when discussing “hedging”, “fixed price hedges”, “locking in”, or other similar terms, we are referring to the price of the supply and not necessarily the physical supply delivered to our Montana system.

NorthWestern employs a combination of two approaches to execute its hedging strategy. The first is to purchase physical, fixed-price energy for future delivery in Montana. While this approach makes intuitive sense, there are a limited number of suppliers willing to offer medium and long-term fixed-price contracts delivered in Montana. Because of this, NorthWestern also employs a second hedging approach, which is the combination of physical, fixed-price forward purchases at the Mid-Columbia trading hub and either physical, index-priced or physical, spot market sales at Mid-Columbia.¹ Both of these approaches have the effect of locking in or fixing the price of energy. A hedging strategy using the combination of these approaches provides the needed flexibility to take advantage of favorable buying opportunities to lock-in or financially hedge material amounts of supply when market conditions dictate.

In the past, NorthWestern has employed Requests for Proposals (“RFPs”) to procure energy for some periods, and has transacted through brokers and through bi-lateral negotiations for energy for other periods. NorthWestern intends to use any or all of these methods in implementing this strategy. Since the forward market typically has good liquidity and transparency in the periods within the hedging window, the use of brokers and bilateral negotiations may be the most efficient methodology.

¹ When using this hedging approach at Mid-Columbia, NorthWestern must still procure physical, index-priced or spot market energy in Montana to serve its load. Such purchases are operational and not related to price hedging, so they are not addressed in this document.

Hedging Strategy Going Forward from 2012

The primary goal of NorthWestern's hedging strategy is to dampen electricity price volatility in an effective, systematic, and efficient manner. NorthWestern currently acquires the majority of its physical electricity through rate-based assets and long and medium term market purchase contracts, with the remaining volumes purchased in the day-ahead and hourly markets. The hedging strategy NorthWestern proposes for this Plan involves two main areas:

- 1) Entering into systematic and defined fixed-price market purchases based on portfolio metrics and timelines while taking into consideration resource and asset development activities;
- 2) Setting "hard target" price values that supplement other hedging techniques and allow for increased purchases of fixed price electricity when forward market prices are relatively low.

Systematic and Defined Market Purchases

Fixed price market transactions will be utilized to fill gaps in the portfolio where long-term resources and contracts are not sufficient to provide adequate price protection. These systematic and defined purchases with firm timetables are intended to provide the necessary discipline and direction to avoid the volumetric exposure mentioned earlier. The hedge percentage ranges employed will provide the needed flexibility to take advantage of down turns in the market by allowing for the procurement of larger volumes of supply when the market is viewed as being favorable.

Hedging Targets

All of the hedging targets described below will be measured on an energy basis using normal weather. Unit-contingent resources will be forecasted at historical capacity

factors after taking into consideration planned, and when applicable, unplanned maintenance outages.

- 1) Prior to the beginning of each month, at least (Redacted)% of the forecasted supply needs for that month must be fixed price hedged.
- 2) At all times for the (Redacted)years, at least (Redacted)% of forecasted supply needs must be fixed price hedged. Individual months and quarters within the (Redacted) years may be less than (Redacted)% hedged; the target applies to the total forecasted need for the period.
- 3) At all times for periods beyond the (Redacted), at least (Redacted)% but no more than (Redacted)% of the total supply needs for that period must be fixed price hedged. Again, individual months and quarters within the (Redacted)years may be less than (Redacted)% or more than (Redacted)% hedged; the targets apply to the total forecasted need for the period.

It should be noted that under normal conditions, it is NorthWestern's intent not to have an energy portfolio that is more than (Redacted)% hedged during any calendar quarter.

Hard Targets

In addition to the systematic and defined market purchase strategy discussed above, a "hard target" mechanism will be utilized to trigger additional fixed price market purchases for forward delivery. These targets will be set at levels deemed to be favorable to customers. This reflects the view that at some "low" price there may be less desire to have exposure to floating or index prices.

At any time, if market prices for forward delivery of around-the-clock energy at Mid-Columbia for the remainder of the hedging window beyond (Redacted) reach the levels below, the hedge thresholds will be increased to the corresponding levels.

<i>Forward Market Price</i>	<i>Minimum % Hedged</i>	<i>Maximum % Hedged</i>
\$(Redacted)	(Redacted)%	(Redacted)%
\$(Redacted)	(Redacted)%	(Redacted)%
\$(Redacted)	(Redacted)%	(Redacted)%

NorthWestern Energy
Docket D2012.5.49
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Montana Public Service Commission (PSC)
Set 3 (014-032)

Data Requests received August 16, 2012

PSC-019

Regarding: Colstrip Unit 4 (CU4)
Witness: Markovich

- a. How many hours during the 2011-2012 tracker period was CU4 re-dispatched or not dispatched as a result of lower market prices (i.e. economic dispatch)?
- b. How long is “an appropriate period of time” for market prices to remain low and thereby justify backing down CU4, and how does NWE forecast those periods of time? See Ex. KJM-5, lines 12-15.
- c. Does forecasting an appropriate period of time to justify economic dispatch require NWE to speculate on energy price movements?
- d. Please provide a table summarizing the value realized from backing down CU4 and replacing it with market purchases during the 2011-2012 tracker period, and explain whether and how those figures account for the operational costs (please describe these costs) of backing down and starting up CU4.
- e. Please provide any documents that describe any outages that occurred at CU4 during the 2011-2012 tracker period.

RESPONSE:

- a. See the folder named “PSC-019a” on the CD attached to Data Request PSC-014a. CU4 was backed down and replaced with market purchases in 2,328 hours during the 2011-2012 tracking period.
- b. Energy Supply schedulers target a period of at least four hours of market prices below the dispatch price to back down CU4. The schedulers survey the market and make informed judgments prior to making the decision to back down the unit.
- c. NWE considers it informed decision-making as opposed to speculation, but at the same time there is no guarantee prices will remain below the variable cost before backing down the unit. It is a constant balancing act between not putting too much wear and tear on the equipment and taking advantage of low market prices to provide value to ratepayers.
- d. See the response to Data Request MCC-007d. The costs of backing down and starting up CU4 are not quantifiable, are not a significant factor, and have not been included in this computation. The variable O&M costs and fuel are included in this analysis.

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PSC-019 cont'd

- e. See the folder named "PSC-019e" on the CD attached to Data Request PSC-014a.

NorthWestern Energy
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Montana Public Service Commission (PSC)
Set 3 (014-032)

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PSC-020

Regarding: Electricity Supply Service Tariff
Witness: Hansen

- a. Please explain why the term “default” was eliminated from the Electricity Supply Service Tariff (ESS-1) beginning January 1, 2012, and the effect of eliminating the term “default” from that tariff.
- b. Does NWE offer or intend to offer electricity supply service under any MPSC-approved tariff to non-default or choice customers?

RESPONSE:

- a. See attached.
- b. See attached the relevant Montana Code Annotated § 69-8-201, resulting from House Bill 25. This governs the guidelines NWE currently follows.

December 9, 2011

Ms. Kate Whitney
Administrator
Montana Public Service Commission
1701 Prospect Avenue
PO Box 202601
Helena, MT 59620-2601

Dear Ms. Whitney:

Re: Tariff Letter No. 212-E

With this letter, NorthWestern Energy ("NWE") submits Electric tariff sheets for approval by the Montana Public Service Commission ("Commission"). The Electric tariffs have been revised to reflect the following:

- 1) Removal of references to "Default" and replacement of these references with "Electricity" to be consistent with House Bill 25. Other substantial tariff changes relating to House Bill 25 will be made at a later date as time permits; and
- 2) Revisions to provide clarity and correction of language regarding the income tax surcharge on advances or contributions.

These revisions are necessary so that these tariff sheets properly reflect current circumstances and are consistent with other tariff sheets that have been previously approved.

In addition to a clean version of the tariff sheets, with the exception of the Table of Contents, red-lined copies are provided to highlight the changes from the previously approved version.

Enclosed with this letter are three copies each of the revised tariff sheets.

Below are the Electric tariff sheets being filed for the Commission approval:

<u>NWE Sheet Number</u>	<u>Title of Sheet</u>	<u>Canceling NWE Sheet Number</u>
146 th Revision 1.1	Table of Contents	145 th Revision 1.1
101 th Revision 1.2	Table of Contents	100 st Revision 1.2
10 th Revision 1.3	Table of Contents	9 th Revision 1.3
1 st Revision 2.2 and 2.3	Preliminary Statement Part B	Original 2.2 and 2.3
30 th Revision 10.1	Residential Electric Delivery Service	29 th Revision 10.1
6 th Revision 10.2	Residential Electric Delivery Service	5 th Revision 10.2
4 th Revision 10.3	Residential Electric Delivery Service	3 rd Revision 10.3

<u>NWE Sheet Number</u>	<u>Title of Sheet</u>	<u>Canceling NWE Sheet Number</u>
18 th Revision 20.1	General Service Electric Delivery Service	17 th Revision 20.1
1 st Revision 20.3	General Service Electric Delivery Service	Original 20.3
18 th Revision 21.1	General Service Substation/Transmission Level Electric Delivery Service	17 th Revision 21.1
2 nd Revision 21.2	General Service Substation/Transmission Level Electric Delivery Service	1 st Revision 21.2
30 th Revision 30.1	Irrigation Pumping & Sprinkling Electric Delivery Service	29 th Revision 30.1
2 nd Revision 30.2	Irrigation Pumping & Sprinkling Electric Delivery Service	1 st Revision 30.2
18 th Revision 40.1	Electric Lighting Delivery Service	17 th Revision 40.1
2 nd Revision 40.4	Electric Lighting Delivery Service	1 st Revision 40.4
95 th Revision 60.1	Electricity Supply Service	94 th Revision 60.1
19 th Revision 60.2	Electricity Supply Service	18 th Revision 60.2
1 st Revision 60.3 and 60.4	Electricity Supply Service	Original 60.3 and 60.4
1 st Revision 65.1 and 65.2	Electric Emergency Supply Service	Original 65.1 and 65.2
1 st Revision R-5.5	Rule No. 5 – Service Conditions	Original R-5.5
2 nd Revision R-7.4	Rule No. 7 – Customer Installation	1 st Revision R-7.4
1 st Revision R-8.1 thru 8.3	Rule No. 8 – Utility's Installation	Original R-8.1 thru 8.3

The sheets that are three-hole punched are for retention in the Commission's files; the other, unpunched sheets should be returned to NorthWestern after they have been certified and signed. Because NorthWestern's copies are used for publication and distribution purposes please do not stamp or mark the face of these copies, other than with the Commission Seal and signature.

If there are any questions, please call me at (406) 497-3362.

Sincerely,

Joe Schwartzenberger
Director of Regulatory Affairs

Enclosures

Montana Code Annotated 2011

[Previous Section](#) [MCA Contents](#) [Part Contents](#) [Search](#) [Help](#) [Next Section](#)

69-8-201. Public utility -- customer electricity supply service options and requirements -- exemption. (1) (a) Except as provided in subsections (1)(b) and (1)(c), a retail customer that has an individual load with an average monthly demand of greater than or equal to 5,000 kilowatts and that is not purchasing electricity supply service from a public utility on October 1, 2007, may not purchase electricity supply service from a public utility.

(b) A retail customer referred to in subsection (1)(a) may request electricity supply service from the public utility, and the public utility shall provide electricity supply service if the retail customer demonstrates that the provision of electricity supply service to the retail customer will not adversely impact the public utility's other customers over the long term as determined by the commission.

(c) If a public utility provides electricity supply service to a retail customer as provided in subsection (1)(b), that service is regulated by the commission and the customer may not, at a later date, purchase electricity supply service from another provider of electricity supply service.

(2) (a) A retail customer that has an individual load with an average monthly demand of less than 5,000 kilowatts that is not purchasing electricity from a public utility on October 1, 2007, may continue to purchase electricity from an electricity supplier. The retail customer may subsequently purchase electricity from a public utility subject to commission rule or order, but the customer may not, at a later date, choose to purchase electricity from another source.

(b) A retail customer that has an individual load with an average monthly demand of less than 5,000 kilowatts and that is currently purchasing electricity from a public utility may not choose to purchase electricity from another source after October 1, 2007.

(3) Nothing in this section affects a retail customer's rights and obligations with respect to net metering, cogeneration, self-generation, or ancillary sales of electricity related to deviations from scheduled energy deliveries from nonutility suppliers, as may be provided for in law, commission rule or order, or a tariff approved by the public service commission or the federal energy regulatory commission.

(4) (a) Except as provided in [69-5-101](#), [69-5-102](#), [69-5-104\(2\)](#), [69-5-105](#) through [69-5-112](#), [69-8-402](#), and subsection (4)(b) of this section, a public utility currently doing business in Montana as part of a single integrated multistate operation, no portion of which lies within the basin of the Columbia River, is exempt from the requirements of this chapter.

(b) To the extent that a public utility described in subsection (4)(a) becomes the successor in interest of another public utility that has restructured in accordance with this chapter before October 1, 2007, it is subject to the requirements of this chapter with respect to the service area of the acquired public utility.

History: En. Sec. 5, Ch. 505, L. 1997; amd. Sec. 30, Ch. 575, L. 1999; amd. Sec. 1, Ch. 175, L. 2001; amd. Sec. 10, Ch. 577, L. 2001 (voided by I.R. No. 117, Nov. 5, 2002); amd. Sec. 3, Ch. 584, L. 2001; amd. Sec. 8, Ch. 565, L. 2003; amd. Sec. 7, Ch. 491, L. 2007.

Provided by Montana Legislative Services

NorthWestern Energy
Docket D2012.5.49
Electric Tracker

Montana Public Service Commission (PSC)
Set 3 (014-032)

Data Requests received August 16, 2012

PSC-021

Regarding: Line Losses & Loss Factors
Witness: Hansen

- a. Staff appreciated NWE's inclusion of "MPSC System Average" loss factors on page 1 of Appendix E in the 2010-2011 monthly tracker docket (D2010.7.74). However, NWE stopped providing that figure beginning in July 2011. Please provide "MPSC System Average" loss factors by month based on forecasted load during the 2011-2012 tracker period. Also, please update page 3 of Exhibit CAH-2 to include a system average loss factor on line 25.
- b. Please provide the same figures requested in PSC-021a based on actual load during the 2011-2012 tracker period.
- c. Does NWE have any plans to monitor, study or quantify actual lines losses on its transmission and distributions systems?

RESPONSE:

- a. The "MPSC System Average" loss factor as shown on Appendix E is a simple calculation representing the weighted average loss factor for supply loads only. It is not based on generation; therefore, it does not represent a total system loss factor nor does it represent an actual loss factor. The individual class loss factors on Appendix E are inputs which are multiplied by forecasted retail sales to derive retail sales plus losses for use in the supply rate design. The loss factor calculation is as follows:

$$1 - (\text{retail sales} / \text{retail sales plus losses})$$

- See the folder named "PSC-021a" on the CD provided in response to Data Request PSC-014a for an Excel workbook that includes the average loss factors renamed "NWE Supply Average" for all months of the 2011-2012 tracker period, as well as Exhibit CAH-2. Because the calculation is based on 12 months of forecasted sales data, it is an annual average loss factor, and therefore doesn't vary much by month.
- b. Please refer to the response to part a, above. The loss factor as shown in that response is based on forecasted supply loads. NWE does not calculate an actual supply average system loss factor.
 - c. There are no specific plans at this time to study actual line losses. It is a fairly complicated process to gather the loads and data necessary to conduct a loss study.

NorthWestern Energy
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Montana Public Service Commission (PSC)
Set 3 (014-032)

Data Requests received August 16, 2012

PSC-022

Regarding: Forecasting Wind
Witness: Fine

- a. Please provide any graphical or numerical expressions of monthly forecast accuracy provided to NWE by 3-Tier during the 2011-2012 tracker period.
- b. Please compare the wind forecasts NWE receives from 3-Tier to NWE's real-time projections and actual generation, providing hourly data and monthly summaries for the 2011-2012 tracker period. See e.g. Updated Response to PSC-005d, D2011.5.38 (Dec. 22, 2011).
- c. Please explain what steps NorthWestern has taken to improve its wind forecasting capabilities.

RESPONSE:

- a. See the graphs included in the folder named "PSC-022a" on the CD attached to Data Request PSC-014a.
- b. See the 12 Excel workbooks in the folder named "PSC-022b" on the CD attached to Data Request PSC-014a.
- c. As 3TIER (NorthWestern's wind forecast service provider) has made updates and improvements to its web-based products, NorthWestern staff have received training in the use of new forecasting tool options and additional instruction on the use of the suite of forecasting services. NorthWestern recognizes that additional wind resources in the supply portfolio will require changes to the wind forecasting activities that it currently performs. For this reason, NorthWestern is exploring tools and protocols that can be effectively used to provide forecasts for multiple wind projects to improve on existing wind and wind power forecasting capabilities.

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Montana Public Service Commission (PSC)
Set 3 (014-032)

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PSC-023

Regarding: Competitive Solicitations
Witness: Fine

- a. Please provide copies of all competitive solicitations (including RFPs and RFIs) that NWE drafted or issued during the 2011-2012 tracker period.
- b. Please describe each competitive solicitation that NWE intends to issue during the 2012-2013 tracker period, including the amount of resource, type of resource, contract term and resource attributes that NWE intends to solicit.

RESPONSE:

- a. Please see attached.
- b. On August 2, 2012 NorthWestern issued an RFP for qualified Community Renewable Energy Projects. The RFP seeks up to 45 megawatts of renewable resources that could begin delivering energy and associated renewable attributes as early as 2013 for purchase power agreements and as early as 2014 for build-transfer proposals. At this time, NWE does not anticipate issuing any additional competitive solicitations during the 2012-2013 tracker period.



REQUEST FOR PROPOSALS - FIRM ELECTRICITY AND EXCHANGE

September 30, 2011

By this Request for Proposal (RFP), NorthWestern Energy (NWE) invites proposals to provide firm electricity products and exchanges ("Firm Supply") to NWE for the purposes of providing reliable service to NWE's retail customers in its Montana Balancing Authority. No legal obligation will arise between NWE and any respondent absent a definitive final agreement executed by each party.

NWE is seeking up to 100 MW of Firm Supply for the period of January 1, 2013 through December 31, 2014, as described in more detail below.

NWE will evaluate the proposals based on the following criteria:

A. Compliance with Requirements

The respondents must satisfy the specific requirements listed in this RFP document. Proposals not meeting the requirements of this RFP shall not be considered.

B. Price of Service

NWE will accept proposals that rely on a fixed dollar value or fixed price per Megawatt hour (MWh) or proposals based on the Intercontinental Exchange (ICE) day-ahead index for Mid C Peak and Mid C Off-Peak transactions.

C. Delivery Points

NWE seeks offers which will deliver Firm Supply to: (1) Any available interconnection point on the NWE Energy transmission system where NWE can take delivery pursuant to its existing Network Transmission Service on the NWE transmission system or (2) at the Mid Columbia trading hub.

D. Contract

NWE intends to utilize industry standard agreements such as the WSPP, EEL, ISDA, or other similar standard agreements with the successful respondent(s). Respondent may submit, provided the terms allow, its offer pursuant to an existing master agreement between itself and NWE. If there is not an acceptable enabling agreement between NWE and a respondent at the response deadline, the respondent's offer will not be considered.

Potential respondents that do not currently have a master agreement in place should notify NWE by October 5 of their intent to respond. During the time this RFP is open, NWE will work in good faith to negotiate and execute a master agreement that would govern the terms of the transaction(s) if the respondent is successful. NWE makes no warranty that an enabling agreement will be negotiated and executed prior to the response deadline.

F. Credit

Each respondent will be required to provide NWE a minimum of \$20 million in open credit for the full RFP quantity (or a proportional amount if the respondent offers a lower quantity), either through an existing agreement, additional credit through an existing agreement, or through an arrangement specific to this transaction. NWE will not grant any credit to a respondent that does not meet its internal creditworthiness standards. NWE will, in its sole discretion, consider a letter of credit or some other acceptable form of collateral in the event a respondent does not meet NWE's creditworthiness standards. Respondents should indicate how credit will be addressed in their offers.

I. Requirements:

A. Firm Supply

Firm Supply is defined as firm energy with Contingency (Operating) Reserves. By submitting its offer, a respondent acknowledges that it will adhere to the standards, requirements, and rules of the WECC and the Balancing Authority (BA) where the energy is delivered, particularly those involving responsibility for contingency reserves.

B. Products Requested

NWE seeks Firm Supply proposals for the following volumes and terms:

Product #1: On-Peak Fixed Price Purchase

Term: 1/1/2013 through 12/31/2014 (2 Years)
Volume: Fixed quantity of up to 100 MW in 25 MW increments
Type: Firm Energy
Delivery: Mid-C or NWE System as described above
Price: Must be a fixed price per MWh

Product #2: Off-Peak Fixed Price Purchase

Term: 1/1/2013 through 12/31/2014 (2 Years)
Volume: Fixed quantity of up to 100 MW in 25 MW increments
Type: Firm Energy
Delivery: Mid-C or NWE System as described above
Price: Must be a fixed price per MWh

Product #3: On-Peak Index Based Purchase

Term: 1/1/2013 through 12/31/2014 (2 Years)
Volume: Fixed quantity of up to 100 MW in 25 MW increments
Type: Firm Energy
Delivery: NWE System as described above
Price: Based on the ICE day-ahead Mid C Peak index plus or minus a fixed amount per MWh.

Product #4: Off-Peak Index Based Purchase

Term: 1/1/2013 through 12/31/2014 (2 Years)
Volume: Fixed quantity of up to 100 MW in 25 MW increments
Type: Firm Energy
Delivery: NWE System as described above
Price: Based on the ICE day-ahead Mid C Off-Peak index plus or minus a fixed amount per MWh.

Product #5: On-Peak Exchange

Term: 1/1/2013 through 12/31/2014 (2 Years)
Volume: Fixed quantity of up to 100 MW in 25 MW increments
Type: Firm Energy for Firm Energy
Delivery: NWE receives energy at any available interconnection point on the NWE transmission system where NWE can take delivery pursuant to its existing Network Transmission Service with the NWE Balancing Authority. NWE delivers a like-quantity of energy at the Mid Columbia trading hub.

Price: Must be a fixed price per MWh paid to or received from NWE

Product #6: Off-Peak Exchange

Term: 1/1/2013 through 12/31/2014 (2 Years)

Volume: Fixed quantity of up to 100 MW in 25 MW increments

Type: Firm Energy for Firm Energy

Delivery: NWE receives energy at any available interconnection point on the NWE transmission system where NWE can take delivery pursuant to its existing Network Transmission Service with the NWE Balancing Authority. NWE delivers a like-quantity of energy at the Mid Columbia trading hub.

Price: Must be a fixed price per MWh paid to or received from NWE

II. RFP Responses

1. Response Development and Presentation

On the attached offer sheets, or as a separate attachment, if warranted, respondents should provide special conditions or qualifications including but not limited to:

- a) Definition of Terms used in the response
- b) Description of Firm Supply to be provided
- c) Scheduling and Tagging Provisions.
- d) Pricing
- e) Non-Price Terms and Conditions
- f) Administrative Matters as Appropriate at the Proposal level
- h) Contact Person (mailing address, fax, phone, e-mail).
- i) Respondents submitting offers must hold open the offer until the Award Notification date and time.. At that time, verbal, telephonically recorded confirmations will be made pending final written agreements.

Responses that fail to meet the foregoing criteria and the minimum requirements set out in Section II shall be deemed incomplete and rejected from consideration without notification or justification to respondent.

2. Responses

It is expected that potential suppliers will respond by e-mail prior to the deadline to Kevin Markovich at the email address provided below.

Offers may be made on any or all products. NWE will select the combination of offers that it determines provides the highest value to NWE customers.

3. Schedule and Deadline to Respond

The proposed procurement and selection process will be carried out in accordance with the following schedule:

<u>Activity</u>	<u>Time and Date</u>
RFP Issued	9/30/2011
Submission Deadline	3:00 pm MDT on 10/12/2011
Award Notification	4:00 pm MDT on 10/12/2011

All offers are due by 3:00 pm MDT on Wednesday, October 12, 2011. All offers must remain valid until 4:00 pm MDT on Wednesday, October 12, 2011.

NWE will notify successful bidders, if any, by 4:00 pm on October 12, 2011.

NWE Reserves the right to modify all or part of this proposed schedule at any time during the RFP process.

III. Selection

NWE reserves the right, in its sole discretion: (1) to select some or none of the proposals; (2) to modify, revise, amend, or otherwise change the requirements of this RFP and (3) to withdraw, in whole or in part, without notice, this RFP. This is an RFP and no binding legal obligation will be entered into unless and until the successful bidder and NWE negotiate and execute a definitive agreement.

IV. Confidentiality

NWE may be required to release RFP information to the appropriate regulatory authorities and other intervening parties during the course of future regulatory proceedings. NWE will not seek protection on behalf of any Respondent for the information contained in any bid.

V. Contacts

Questions regarding this RFP should be directed to:

Kevin Markovich
Kevin.Markovich@northwestern.com
Phone: 406-497-3336
Cell: 406-490-3284
Fax: 406-497-2629

Credit questions should be directed to:

Dennis Heinz
Dennis.Heinz@northwestern.com
Phone: 605-353-7517
Cell: 605-354-2163
Fax: 605-353-7560

NorthWestern Energy
Docket D2012.5.49
Electric Tracker

Montana Public Service Commission (PSC)
Set 3 (014-032)

Data Requests received August 16, 2012

PSC-024

Regarding: Comprehensive Rate Case
Witnesses: Corcoran

- a. Please specify when NWE expects to file its next rate case.
- b. Is NWE planning to file its next rate case as a comprehensive rate case, including cost of service studies for transmission and distribution, electric supply, CU4, and DGGS?

RESPONSE:

- a. NWE evaluates whether or not to make general rate filings on an annual basis.
- b. Yes, with the exception of “electric supply” which NWE has interpreted as referring to the annual electricity supply tracker. All other generation assets would be included.

NorthWestern Energy
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Montana Public Service Commission (PSC)
Set 3 (014-032)

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PSC-025

Regarding: Short-Term Purchases & Sales
Witness: Bennett

- a. Please explain why NWE expects spot sales to average \$51.83 per megawatt-hour in December 2012. See Ex. FVB-2, p. 5, line 141.
- b. Please explain why NWE expects to sell electricity in the spot market for a lower unit price than it expects to purchase electricity from the spot market in every month during the 2012-2013 tracker period. See Ex. FVB-2, p. 5, lines 164-165.
- c. Please quantify the price difference, by hour and in dollars per megawatt-hour, between electricity supply prices during each of the forty most expensive hours of the 2011-2012 tracker period and the average electricity supply price during all other hours over the same period.

RESPONSE:

- a. The correct value is \$34.55 per MWh and the correct associated volume value in Exhibit__(FVB-2)12_13, p. 3, line 21 should be (30,000). See the corrected exhibit provided in response to Data Request PSC-014a.
- b. Sales are normally made during off-peak (light load) hours and purchases are normally made during on-peak (heavy load) hours which account for the price difference.
- c. NorthWestern is relying on the "fair use" exemption of federal copyright law to supply the attached information. This copyright-protected document is being provided for purposes of this Docket only. No copies of this document should be made, nor should the parties receiving the copyright information use the copyrighted material for any purposes other than for this Docket. This document has not been efiled on the Commission website.

The average electricity supply price during all other hours is \$19.13 per MWh.

**NorthWestern Energy
Docket D2012.5.49
Electric Tracker**

**Montana Public Service Commission (PSC)
Set 3 (014-032)**

Data Requests received August 16, 2012

PSC-026

Regarding: Administrative Expenses
Witness: Bennett

Please provide a detailed breakdown, by category, counterparty and expense, of all administrative expenses incurred during the 2011-2012 tracker period.

RESPONSE:

See the attached.

Actual Admin Costs		Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12
Taxes	MPSC Tax Collection	\$75,355.18	\$88,106.26	\$87,269.38	\$36,131.49	\$36,161.83	\$41,525.25	\$44,038.61	\$42,358.16	\$39,480.50	\$36,870.81	\$34,794.87	\$37,038.51
	MCC Tax Collection	\$19,735.87	\$23,075.49	\$22,856.26	\$21,788.92	\$21,697.11	\$24,915.16	\$26,423.17	\$25,414.89	\$23,688.31	\$22,122.48	\$20,876.91	\$22,223.10
		\$95,091.05	\$111,181.75	\$110,125.64	\$57,920.41	\$57,858.94	\$66,440.41	\$70,461.78	\$67,773.05	\$63,168.81	\$58,993.29	\$55,671.78	\$59,261.61
Modeling	Lands Energy		\$17,497.50			\$5,583.33	\$5,625.00	\$2,687.50	\$187.50	\$6,985.39	\$187.50		
	Power Cost Inc.	\$62,567.00	\$31,667.00	\$31,667.00		\$63,334.00		\$63,334.00	\$31,667.00	\$31,667.00		\$31,667.00	\$31,667.00
	Great Divide Energy	\$1,603.38											
	Genivar	50080.74											
Total Real-time & Modeling		\$114,251.12	\$49,164.50	\$31,667.00	\$0.00	\$68,917.33	\$5,625.00	\$66,021.50	\$31,854.50	\$38,652.39	\$187.50	\$31,667.00	\$31,667.00
Pricing Information	ICE	\$4,250.00	\$4,250.00	\$4,250.00	\$4,250.00	\$4,250.00	\$4,250.00	\$4,250.00	\$4,850.00	\$4,850.00	\$4,850.00	\$4,850.00	\$4,850.00
	Telvent (DTN)	\$1,151.00	\$1,151.00		\$1,151.00	\$1,151.00	\$2,338.00	\$1,187.00	\$1,187.00	\$2,461.00	\$1,824.00		\$1,274.00
	TFS	\$510.00			\$1,530.00	\$510.00	\$510.00	\$510.00		\$1,020.00	\$510.00	\$510.00	\$510.00
Broker	Tullet-Prebon	\$912.00	\$972.00	\$3,684.00	\$14,492.13	\$28,128.00		\$900.00	\$300.00	\$924.00	\$1,236.00	\$474.00	\$624.00
Total Trading & Marketing		\$6,823.00	\$6,373.00	\$7,934.00	\$21,423.13	\$34,039.00	\$7,098.00	\$6,847.00	\$6,337.00	\$9,255.00	\$8,420.00	\$5,834.00	\$7,258.00
Admin Misc	Credit Management System									\$3,520.00			
	Moody's (Accrued Use)									\$72,904.50			
	Oati Software	\$4,400.00	\$4,400.00	\$4,400.00	\$8,800.00	\$4,400.00	\$4,400.00	\$4,400.00	\$4,400.00	\$4,400.00	\$4,400.00	\$4,650.00	\$4,400.00
	WSI Corp (weather service)		\$2,700.00		\$2,700.00								
	Orcapoint Consulting (BPA ratecase)	\$392.20	\$562.40										
	CME Group (index service)					\$4,500.00							
	DNV Renewables USA	\$827.50				\$347.50		\$9,895.92	\$13,712.50				
	Powerdex Inc		\$4,450.00										
	Washington 2 Associates					\$5,163.49							
	Whitman, Requardt & Associates							\$520.00					
	Citrix Online										\$12.95		
Total Administration General		\$5,619.70	\$12,112.40	\$4,400.00	\$11,500.00	\$14,410.99	\$4,400.00	\$14,815.92	\$18,112.50	\$80,824.50	\$4,412.95	\$4,650.00	\$4,400.00
Tracker Administrative Expenses		\$221,785	\$178,832	\$154,127	\$90,844	\$175,226	\$83,563	\$158,146	\$124,077	\$191,901	\$72,014	\$97,823	\$102,587

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PSC-027

Regarding: Transmission Costs
Witness: Bennett

Please provide copies of all invoices related to the transmission costs incurred during the 2011-2012 tracker period and recovered through the electricity supply rate.

RESPONSE:

See the CD attached to the response to Data Request PSC-014a.

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PSC-028

Regarding: Rate Design
Witness: Corcoran

- a. Please describe whether and how NWE could improve the rate design of the electricity supply rate for any particular customer class based on principles of cost causation.
- b. Please describe whether and how NWE could improve cost allocations between customer classes based on principles of cost causation.

RESPONSE:

- a & b. NWE attempted this as part of its filing in Docket No. D2009.9.129, for both cost allocations and rate designs. Please see NWE Supplemental Allocated Cost of Service and Rate Design Filing made on January 15, 2010 for details.

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PSC-029

Regarding: DSM Programs
Witness: Thomas

- a. Please list and describe any new DSM programs or measures that NWE is considering implementing during the 2012-2013 tracker period.
- b. Please describe the status and progress of NWE's smart grid demonstration project, addressing improvements to reliability, customer response to price signals, and whether the project is on schedule.
- c. Please provide any results or documentation available of the cost-effectiveness of the Green Blocks and Building Blocks Programs.
- d. Please discuss whether a pilot or demonstration project would be an appropriate methodology for testing the cost-effectiveness of a behavior-based DSM program or measure, and why.

RESPONSE:

- a. NorthWestern's plans for DSM programs during the 2012-2013 tracker period are described in William M. Thomas's prefiled direct testimony beginning on page WMT-8. Additional details on specific plans to market and promote NorthWestern's DSM programs are provided in Exhibit__(WMT-4a) and Exhibit__(WMT-4b). The DSM electric avoided costs currently in use by NorthWestern are lower than in recent prior years, making it very difficult to implement anything new. Declining avoided costs translate directly to fewer energy efficiency measures that qualify for inclusion in DSM programs. NorthWestern has entered into very preliminary discussions with the state of Montana about a possible partnership to offer financing for qualified DSM measures and equipment at subsidized interest rates or otherwise favorable terms. NorthWestern will review and fully consider the results and recommendations of the DSM Evaluation now being performed by SBW, Inc. prior to making additional changes (if any) to its DSM Portfolio.
- b. The Smart Grid Project is on schedule and on budget. The project is managed by the Pacific Northwest National laboratory operated by Battelle ("PNNL" or "Battelle"). Battelle has divided the project into three distinct phases, called Release Cycles (RC-1, RC-2 and RC-3). These can generally be thought of as Plan (RC-1), Build (RC-2), and Operate/Evaluate (RC-3). NorthWestern and some, but not all, of the other participating

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utilities are at the threshold of RC-3. This is a significant project milestone representing progress to the point of completion of planning and field installation of all components and systems, and readiness for activation of the Transactive Control system and all associated assets that are controlled by and responsive to it. For NorthWestern, achieving RC-3 status means that its control system, or Transactive Node installed at the Montana Data and Communications Center in Butte, MT must go into operation and interact dynamically and correctly with Battelle's Electric Infrastructure Operations Center in Richland, WA. Also, the various field devices, switches, meters, customer premises equipment, voltage regulators, capacitor banks, sensors, communications networks and all associated software must be substantially ready to function. To satisfy Battelle, we are required to test our node for conformance to the RC-3 performance specifications set forth by its project level infrastructure partners (IBM, Quality Logic, and Neteeza). NorthWestern staff assigned to the project participated in RC-3 conformance testing the week of August 27, 2012 (one week earlier than originally scheduled) and successfully passed the RC-3 conformance test. This was the final development step prior to live operation of the regional Transactive Control System.

The system that enables time-of-use pricing for participating customers will undergo final testing in August and become operational for participating customers beginning with the first regular billing cycle in September.

Following is a general project timeline, a list of recent activities and accomplishments that have brought NorthWestern to this point in the 5-year project, and a list of planned activities:

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Smart Grid Project Timeline

	2010	2011	2012	2013	2014
Phase 1 - Design	6 months				
Phase 2 - Build Out		24 months			
Phase 3 - Data Collection				24 months	
Phase 4 - Cost Benefit Analysis & Reporting					6 months

Phase 2 - Build Out	2011				2012	
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter
Utility Side - Energy Efficiency (Volt/VAR)	Software Installation			Test/Train		
			Helena - Field			
			Philipsburg - Field Equip			
Utility Side - Reliability (DA or FLISR)			Software	Test/Train		
				Helena - Field Equip		
				Pburg - Field Equip		
Customer Side - Energy Efficiency	Lockheed Martin / Tendril / Itron			Test/Train		
			Home Area Networks			

Project Status & Recent Activities

- ✓ All utility-side devices are installed.
- ✓ Communications system in Philipsburg is now being completed.
- ✓ Acceptance testing for Cooper/Yukon automation software was performed the week of August 20, 2012, resulting in a short list of follow-up action items. This system is expected to become operational by the end of the second week of September 2012.
- ✓ In Helena, all distribution system hardware has been purchased and installed.
- ✓ Acceptance testing of the S&C Volt/VAR software is ongoing. NorthWestern's expectation is that this system will go into production mode sometime during the week following Labor Day 2012.
- ✓ ITRON, Inc. conducted ChoiceConnect Fixed Network training to familiarize NorthWestern field personnel with operation of the fixed network meter reading system.
- ✓ NorthWestern completed recruitment of targeted 200 residential customer participants in Helena:
 - ✓ Performed all Home Area Network equipment installations.
 - ✓ Conducted customer education on use of system.

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- ✓ Completed installation and testing of fixed meter reading network in Helena.
- ✓ Successfully completed testing of the meter data management (MDM) system, including all internal/external data pathways, production of billing determinants, routing of customer inquiries, and other internal business processes.
- ✓ Identified an operating system upgrade for the IntelliTeam Volt/VAR application in Philipsburg. Full functionality of this system should be achieved in November 2012.
- ✓ Completed the Geographic Information System mapping of the Philipsburg distribution feeder.
- ✓ Completed the software work needed for a working application program interface for hourly energy pricing. This interface ties the NorthWestern Smart Grid core software with contractor Tendril's system that operates the home area networks in participants' homes.
- ✓ Initiated data collection programming and feeding of data to a file transfer web site.
- ✓ Continued and completed Transactive Control node programming.
- ✓ Completed Cyber Security Plan outline document.
- ✓ Completed factory acceptance test of Yukon Feeder Automation software.
- ✓ Completed Metcalf Building lighting project design.
- ✓ Continued external audit of all project activities and updated all subcontracts with Davis Bacon language.
- ✓ Outlined data collection method for voltage and bank measurements.
- ✓ Completed Beckwith capacitor controller communication troubleshooting.
- ✓ Issued Mechanical Technologies Inc. installation contract for work on the State of Montana buildings involved in the project.
- ✓ Completed filming of a Smart Grid educational video in cooperation with Montana State University.

Planned Activities

- Perform final testing of the S&C Volt/VAR software beginning next week in Helena.
- The Volt/VAR Optimization application in Helena application should be fully operational by year end and in Philipsburg by September 2012.
- The Distribution Automation application is also making good progress. In Helena, both applications should be running by Q3 2102.
- Begin regular monthly communication with 200 HAN participants.

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- Start State of Montana smart grid system integration installation. This installation should be completed by mid October 2012.
 - Continue to prepare and provide required monthly reports:
 - American Recovery and Reinvestment Act of 2009 Monthly Contract Cost-to-Date Estimate.
 - Monthly Report.
 - Request for Reimbursement.
 - Continue to work with major vendors. This includes:
 - Weekly teleconferences and continued testing of S & C Electric IntelliTeam VV software.
 - Weekly teleconferences and continued testing of Tendril Vantage Portal and software.
 - Meetings with Cooper Power Systems for distribution automation software.
- c. The report on evaluation of the Green Blocks Program operated in Missoula in 2008 is provided in the folder named "PSC-029c" on the CD attached to Data Request PSC-014a. The Building Blocks program in Bozeman was a small, targeted pilot effort. SBW, Inc. will examine some aspects of the Building Blocks pilot program in the course of its DSM Evaluation study.
- d. A pilot or demonstration project would be an appropriate methodology for testing the cost-effectiveness of a behavior-based DSM program, depending on the specific definition and elements of a behavior-based program, and whether there exists sufficient or compelling evidence to suggest such that behavior-based DSM programs could ultimately be cost effective.

The term "behavior-based" can be ascribed to many different DSM program designs. Behavior-based programs focus on energy savings resulting from changes in individual or organizational behavior and decision-making based on new or additional data, information and knowledge gained from external sources. These external sources may be the utility, government, mass media, or other public or private sources. Mechanisms used to influence consumer energy decisions include marketing, customer education, communications, tips and technical assistance, goal setting, rewards, recognition, and financial help in the form of loans, grants, incentives or rebates. All of this is intended to increase consumer awareness of and engagement in energy use decisions. In whole or in part, all of NorthWestern's DSM programs utilize these mechanisms and techniques to attempt to modify consumer behavior to reduce energy consumption. Therefore, all of

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NorthWestern's DSM programs have a behavior-based component. The Smart Grid Pilot Demonstration Program now beginning to operate includes a customer behavior-modification feature based on regular provision of time-of-use energy consumption and time-of-use pricing. This pilot program will give NorthWestern additional insight into the effects of higher levels of detailed energy usage information on consumer energy decision-making and whether customer behavior can be changed through regular provision of energy use information. It remains to be determined whether the benefits of energy savings will offset the costs of providing the energy use information.

One category of programs currently being marketed by certain vendors (OPOWER, ACLARA) supplies consumers with billing and energy usage data from the utility billing system at regular intervals, along with comparative billing and usage data from other "neighboring" or "similar" facilities. This is generally referred to as benchmarking. Benchmarking programs calculate an Energy Use Index ("EUI") and present it to participating consumers. Benchmarking programs seek to inform consumers about their energy use (customer education), keep it raised in their consciousness (increased awareness and customer engagement), and create mild anonymous peer pressure and competition among participants to reduce their respective EUI.

NorthWestern is skeptical of the ability of benchmarking programs to produce cost-effective electric energy savings that persist for several years into the future, and to produce cost-effective DSM resource. There are questions about the wisdom of the utility company trying to use the techniques of peer pressure and competition, comparing an individual household's energy use to that of their neighbors, even if done anonymously. Even if they live in similar size and vintage dwellings, consumers have different personal situations, temperature tolerance levels, and working schedules. In a given neighborhood, some may be retirees or people with home-based businesses and may be more likely to be at home during the day and thus run their space heating/cooling more than peer participants. Comparing their power use to a neighborhood that is at work most of the day may falsely convey the impression that these people are not concerned about the many issues surrounding energy, the environment, or societal costs.

In 2011, NorthWestern evaluated a program proposal from a vendor (OPOWER) selling its DSM benchmarking services. The results of this analysis concluded that there was a very low probability of that program meeting standard cost-effectiveness tests used to measure the success of utility DSM programs. Since that time, electric avoided costs, the primary determinant of benefits of DSM programs, has dropped by almost one-fourth.

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Currently in the western United States, NorthWestern is aware of pilot programs to examine the performance and cost-effectiveness of behavior-based DSM programs that are being operated by Puget Sound Energy ("PSE"), the Energy Trust of Oregon ("ETO"), and Sacramento Municipal Utility District ("SMUD"). NorthWestern intends to follow closely the efforts and results of the PSE, ETO and SMUD pilot programs and learn from results of its Smart Grid Pilot Program, and then decide whether it is prudent to conduct a behavior-based DSM pilot program of its own.

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PSC-030

Regarding: NWE's Facilities
Witness: Thomas

- a. Please identify the funding source for NWE's efforts to secure cost-effective DSM in its own buildings and facilities as described on pages WMT-26 and WMT-27.
- b. Please explain whether NWE intends to include the savings achieved at its own buildings and facilities in its calculation of lost revenues.

RESPONSE:

- a. The funding for NWE's efforts to secure cost-effective DSM in its own buildings and facilities comes from three sources:
 - 1. Universal System Benefits funds covered the cost of the commercial energy appraisals (building audits) that were performed by KEMA.
 - 2. The NorthWestern Facilities Department budget covers the cost incurred by NCAT to perform energy efficient equipment retrofit. Most of this retrofit work to date has been upgrading of lighting.
 - 3. NCAT and NorthWestern Facilities Department staff complete applications for DSM program rebates for qualified measures and mail the rebate applications to KEMA. KEMA reviews and either accepts or rejects the rebate applications and, in cases where the rebates are approved, sends reimbursement to NorthWestern. The funding source for these rebates comes through the electricity supply tracker.
- b. Yes, NorthWestern intends to include the savings achieved in its own buildings and facilities in its calculation of lost revenues. NorthWestern bills itself for electricity used in its buildings and facilities, and the electricity consumption in those buildings and facilities is included in the calculation of test period loads and costs upon which rates, including transmission and distribution, are ultimately established. As a participant in energy supply funded DSM programs, because NorthWestern is its own retail energy supply, transmission and distribution customer, NorthWestern is treated the same as any other retail energy supply, transmission and distribution customer. The DSM program rebates and incentives available to NorthWestern for its buildings and facilities are the same (provided the energy efficiency measures installed are program-qualified). Reporting of energy savings from those DSM measures installed in its buildings and facilities, as well as inclusion of those reported energy savings in calculation of lost

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revenues, is handled in the same manner as it is with any other eligible retail electric customer.

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PSC-031

Regarding: E+ Lighting Programs
Witness: Thomas

- a. Please provide specific dates when NWE will modify its E+ Lighting programs to account for federal regulations restricting the manufacture of certain less-efficient light bulbs.
- b. Please provide any documentation available that supports the claim that “remaining stock of lighting products (e.g., incandescent bulbs) will continue to be sold and installed by consumer for perhaps a year or more following the effective dates of the new regulations for each respective lighting product.” See Ex. WMT-10, lines 10-13.
- c. What percentage of the bulbs NWE subsidized during the 2011-2012 tracker period would be subject to the new federal lighting standards, and what percentage of the total cost of the E+ Residential Lighting Program is attributable to subsidizing and distributing those bulbs?
- d. In November 2011 the Northwest Energy Efficiency Alliance issued the “Long-Term Northwest Residential Lighting Tracking and Monitoring Study.” KEMA, Inc. prepared this study. Did NWE refer to this document to estimate savings from its E+ Lighting Program? If so, please specify which figures, assumptions, or conclusions NWE utilized to estimate savings from its E+ Lighting Program.
- e. Please estimate what percentage of the current stock of lighting products for sale in NWE’s service territory already complies with the new federal regulations, and describe how such an estimate might be used to refine estimates of the savings attributable to the E+ Lighting Program.

RESPONSE:

- a. NorthWestern will review and modify as appropriate its E+ Lighting Programs each year in early January to account for federal regulations restricting the manufacture of certain less-efficient light bulbs, but program adjustments will lag effective dates for each category of less-efficient light bulbs by at least one year for the reasons stated in William M. Thomas’s prefiled direct testimony (see page WMT-10).
- b. NorthWestern has no such documentation. NorthWestern relied on common sense, direct observation, and professional judgment to reach this conclusion. Incandescent bulbs continue to be available at retail outlets and are available in quantities. During 2012, the

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- first year of the new federal lighting efficiency regulations (affecting manufacture of 100-watt incandescent lamps), NorthWestern staff have observed retailer shelf stock that has been sold out of 100-watt incandescent lamps and then restocked with more 100-watt incandescent lamps a few days later. NorthWestern believes that consumer demand for incandescent lights will be met by retailers with supply and NorthWestern proposes to continue working to influence that market space with incentives aimed at persuading customers to choose more energy efficient lamps.
- c. For both the percentage of the bulbs NWE subsidized during the 2011-2012 tracker period that would be subject to the new federal lighting standards, and the percentage of the total cost of the E+ Residential Lighting Program that is attributable to subsidizing and distributing those bulbs, NorthWestern estimates this value to be 6.85%. The supporting data and calculations are provided in the folder named "PSC-031c" on the CD attached to Data Request PSC-014a. See the first worksheet tab entitled *Residential reporting* in the spreadsheet workbook file *PSC-031_August_2012 CFL Reporting*.
- d. NorthWestern did not refer to this document to estimate savings from its E+ Lighting Program. Energy savings for lighting is determined using values for average burn hours for common lighting applications, or through project-specific calculations. Average burn hours were developed by Nexant/Cadmus in its report, "Assessment of Energy Efficiency Potentials (2012-2029)" provided to NorthWestern on April 27, 2010, over a year earlier than publication of the NEEA document. The NEEA study is a regional view, and the NEXANT/CADMUS work is specific to NorthWestern's service territory in Montana.
- e. NorthWestern has no idea of the current stock of lighting products for sale in its service territory that complies with the new federal regulations and knows of no feasible way to make such an estimate. Learning that would require an inventory of every retail and wholesale outlet in its service territory that offers lighting products, including products available through mail order. Such an inventory would be accurate only momentarily, as product sales and product restocking proceeds throughout each day, week and month moving into the future. Without the means to make a reasonable estimate, it is unclear how any adjustments to the savings attributable to the E+ Lighting Program can be made. SBW, Inc. will provide its findings on savings attributable to the E+ Lighting Program during the 2006-2011 evaluation period, accounting for various factors such as free riders, persistence, and spillover.

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PSC-032

Regarding: Relief Requested
Witness: Hansen

NWE's application requested that the MPSC grant "final approval of the proposed rates included in Appendix A to be effective on a monthly basis for service on and after July 1, 2012" (emphasis added). Please confirm that NWE is requesting final approval of the "Net Deferred Electric Supply Rate" on an annual (tracker year) basis.

RESPONSE:

Yes.