



October 31, 2014

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

**Re: Docket Nos. D2013.5.33/D2014.5.46 Electric Tracker
MEIC Set 1 (001-011) Data Requests**

Dear Ms. Whitney:

Enclosed for filing is a copy of NorthWestern Energy's responses to MEIC Set 1 (001-011) data requests. The responses will be hand delivered to the Montana Public Service Commission and the Montana Consumer Counsel. The responses will be mailed to the service list in this docket and e-filed with the PSC, and emailed to counsel of record.

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

Sincerely,

Tracy Lowney Killoy
Administrative Assistant

CERTIFICATE OF SERVICE

I hereby certify that a copy of Northwestern Energy's responses to MEIC Set 1 Data Requests in Docket Nos. D2013.5.33/D2014.5.46 has been hand delivered to the Montana Public Service Commission and to the Montana Consumer Counsel this date. They will be e-filed on the PSC website, e-mailed to counsel of record, and served on the most recent service list by mailing a copy thereof by first class mail, postage prepaid.

Date: October 31, 2014


Tracy Lowney Killoy
Administrative Assistant
Regulatory Affairs

Docket No. D2013.5.33/ D2014.5.46
Service List

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

Charles Magraw
501 8th Ave
Helena MT 59601

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

Joe Schwartzenberger
NorthWestern Energy
40 E Broadway
Butte MT 59701

Tracy Lowney Killoy
NorthWestern Energy
40 E Broadway
Butte MT 59701

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

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

Robert A Nelson
Montana Consumer Counsel
111N Last Chance Gulch Ste 1B
P O Box 201703
Helena MT 59620-1703

Matthew Gerhart
Earthjustice
705 Second Ave. Suite 203
Seattle WA 98104

Jenny Harbine
Earthjustice
313 E. Main St.
Bozeman MT 59715

Monica Tranel
Montana Consumer Counsel
P.O. Box 201703
Helena MT 59620-1403

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

NorthWestern Energy
Docket D2013.5.33/D2014.5.46
Electric Tracker

Montana Environmental Information Center/Sierra Club
Set 1 (001-011)

Data Requests received September 29, 2014

MEIC-1 Subject: Colstrip 4 Outage Cause
 Witness: Mike Barnes

Please refer to the direct testimony of Kevin J. Markovich, page 9, lines 9-14. Please provide a detailed description of the events leading up to Colstrip Unit 4 tripping off line.

RESPONSE:

In order to fully respond to this data request, NorthWestern needs to refer to the Root Cause Analysis. See the response to Data Request MEIC-9 for more information regarding the Root Cause Analysis.

NorthWestern Energy
Docket D2013.5.33/D2014.5.46
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Montana Environmental Information Center/Sierra Club
Set 1 (001-011)

Data Requests received September 29, 2014

MEIC-2 Subject: Colstrip 4 Outage Cause
 Witness: Mike Barnes

Please provide any outage report(s) prepared by or for the Company for the Colstrip Unit 4 outage that lasted from July 1, 2013 to January 23, 2014.

RESPONSE:

NorthWestern has many emails responsive to this request. However, information contained within these emails discusses the repair process performed by Siemens. Siemens has advised NorthWestern that it intends to file a motion for protective order (Motion) regarding certain information that is included within the emails in NorthWestern's possession. Siemens indicated the Motion will be forthcoming. NorthWestern will provide an updated response to this data request to reflect the Commission's order regarding that Motion.

NorthWestern Energy
Docket D2013.5.33/D2014.5.46
Electric Tracker

Montana Environmental Information Center/Sierra Club
Set 1 (001-011)

Data Requests received September 29, 2014

MEIC-3 Subject: Colstrip 4 Outage Cause
 Witness: N/A

Please provide copies of the material used in any presentations to the Company's Board of Directors (and all committees or subcommittees thereof) or to the Company's President, CEO or CFO which addressed any of the following subjects:

- a. the Colstrip Unit 4 trip of July 1, 2013 or the cause(s) of that trip.
- b. the Colstrip Unit 4 outage which began on July 1, 2013 and lasted until January 23, 2014.
- c. The events or problems which prevented or were preventing the return of Colstrip Unit 4 to service following the July 1, 2013 trip.

RESPONSE:

See the attached CD. Please note that information that is not responsive to this data request has been redacted. Additionally, information that Siemens plans to protect (see the response to Data Request MEIC-2) or that discusses the Root Cause Analysis (see the response to Data Request MEIC-9) has been redacted in yellow. NorthWestern will provide an updated response to this data request to reflect the Commission's order on the Motion.

NorthWestern Energy
Docket D2013.5.33/D2014.5.46
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Montana Environmental Information Center/Sierra Club
Set 1 (001-011)

Data Requests received September 29, 2014

MEIC-4 Subject: Colstrip 4 Outage Costs
 Witness: N/A

Please provide copies of the material used in any presentations to the Company's Board of Directors (and all committees or subcommittees thereof) or to the Company's President, CEO or CFO which addressed any of the following subjects:

- a. the incremental O&M expenses and/or capital expenditures incurred to bring Colstrip Unit 4 back on line following the trip of July 1, 2013 including all such expenses incurred during the outage that lasted until January 23, 2014.
- b. the cost of replacement power incurred by the Company due to the unavailability of Colstrip Unit 4 for part or all of the period July 1, 2013 through January 23, 2014.

RESPONSE:

See the MEIC-4 file on the CD attached to Data Request MEIC-3. Please note that information that is not responsive to this data request has been redacted.

NorthWestern Energy
Docket D2013.5.33/D2014.5.46
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Montana Environmental Information Center/Sierra Club
Set 1 (001-011)

Data Requests received September 29, 2014

MEIC-5 Subject: Colstrip 4 Outage Costs
 Witness: Kevin Markovich

Provide copies of all assessments or evaluations of possible sources and/or costs of replacement power for Colstrip Unit 4 that were prepared by or for the Company during the period July 1, 2013 through January 23, 2014.

RESPONSE:

No formal assessments or evaluations of possible sources were performed as NorthWestern is very aware of the markets and resources available to meet its load obligations, evidenced by its transacting in these markets almost every hour.

The Prefiled Direct Testimony of Kevin Markovich in Docket No. D2014.5.46, page KJM-10, lines 6-17, describes the factors that had to be considered in replacing the energy from Colstrip Unit 4 during its outage. Pages KJM-10, lines 19-23 and KJM-11, lines 1-7 in that same docket identify the challenges inherent in trying to calculate an after-the-fact value of the replacement power.

In an attempt to gain consensus on what the replacement value was, NorthWestern identified the key drivers in calculating that value, assumed capacity value and market prices, and inserted different scenarios in the same format and with the same other variables as that supplied by the MPSC staff. Attachments 1 through 3 are three estimates using that methodology and Attachment 4 is an independent value calculated by NorthWestern shortly after the Colstrip 4 outage occurred.

NorthWestern believes Attachment 3, using historical capacity factors and actual market prices, is the most accurate estimate of what replacement costs were. Once again, it must be noted these are estimates of what the actual power replacement costs might have been as it is not possible to determine how the unit would have performed if the outage had not occurred and what the exact procurement changes would have been had it been operational.

Estimated cost of Colstrip Unit 4 outage Hourly Price NWDS Actual Average Hourly Price

	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Total
Actual MWh with outage ¹	73,215	81,713	79,371	71,355	70,692	81,925	104,897	458,271
Capacity factor ²	88.7%	98.9%	99.3%	86.4%	88.5%	99.2%	98.9%	
Estimated MWh without outage ³	146,430	163,426	158,742	142,710	141,384	163,850	163,407	916,542
Actual variable cost with outage ⁴	1,527,767	1,610,318	1,561,015	1,488,015	1,413,922	1,460,984	1,724,690	10,786,711
Actual fuel cost with outage ⁴	1,258,603	1,344,565	1,297,141	1,233,848	1,126,537	1,359,517	1,516,331	9,136,542
Fuel cost per MWh ⁵	\$17.19	\$16.45	\$16.34	\$17.29	\$15.94	\$16.59	\$14.46	
Estimated fuel cost without outage ⁶	2,517,206	2,689,130	2,594,282	2,467,696	2,253,074	2,719,034	2,362,118	17,602,540
Estimated variable cost without outage⁷	2,786,370	2,954,883	2,858,156	2,721,863	2,540,459	2,820,501	2,570,477	19,252,709
Estimated MWh lost from outage ⁸	73,215	81,713	79,371	71,355	70,692	81,925	58,510	516,781
Actual monthly spot purchase prices ⁹	27.92	34.34	33.55	32.88	34.24	48.99	41.22916141	
Cost to replace MWh lost from outage ¹⁰	2,044,414	2,806,351	2,662,936	2,346,308	2,420,586	4,013,339	2,412,319	18,706,252
Cost of providing expected CU4 MWh with outage¹¹	3,572,181	4,416,669	4,223,951	3,834,323	3,834,508	5,474,323	3,374,326	28,730,280
Change in supply cost from CU4 outage¹²	785,811	1,461,786	1,365,795	1,112,460	1,294,049	2,653,822	803,849	9,477,571

Notes:

- Reported in May 29, 2014 Electricity Supply Tracker, D2014.5.46, Exhibit (FVB-1)13-14, p. 3
- (Actual MWh / (111*hrs per month)) Reciprocal sharing agreement provides NWE 111 MW of PPLM's 222 MW share of CU3
- (222 * capacity factor * hrs per month) Assumes CU4 would have operated at CU3 capacity factor absent the outage
- Reported in May 29, 2014 Electricity Supply Tracker, D2014.5.46, Exhibit (FVB-4)13-14, p. 2
- (Actual fuel cost / actual MWh with outage)
- (Estimated MWh without outage * Fuel cost per MWh)
- (Estimated fuel cost without outage + non-fuel variable costs) Non-fuel variable costs are the difference between actual variable & fuel costs with outage. This assumes other components of CU4 "variable" costs, such as the property tax adjustment and DSM lost revenue, would have been the same had the outage not occurred.
- One-half of estimated MWh without outage, based on reciprocal sharing agreement
- Hourly Price NWDS Actual Average Hourly Price**
- (Estimated MWh lost from outage * spot purchase price) Assumes NWE replaced all lost production with spot purchases.
- (Actual variable cost + Cost to replace MWh lost from outage)
- (Cost of providing expected CU4 MWh with outage - variable cost without outage)

Estimated cost of Colstrip Unit 4 outage Historical Capacity Factor

	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Total
Actual MWh with outage ¹	73,215	81,713	79,371	71,355	70,692	81,925	104,897	458,271
Capacity factor ²	91.0%	91.0%	91.0%	91.0%	91.0%	91.0%	91.0%	91.0%
Estimated MWh without outage ³	150,303	150,303	145,454	150,303	145,454	150,303	150,303	892,120
Actual variable cost with outage ⁴	1,527,767	1,610,318	1,561,015	1,488,015	1,413,922	1,460,984	1,724,690	10,786,711
Actual fuel cost with outage ⁴	1,258,603	1,344,565	1,297,141	1,233,848	1,126,537	1,359,517	1,516,331	9,136,542
Fuel cost per MWh ⁵	\$17.19	\$16.45	\$16.34	\$17.29	\$15.94	\$16.59	\$14.46	
Estimated fuel cost without outage ⁶	2,583,783	2,473,193	2,377,126	2,598,990	2,317,939	2,494,224	2,172,692	17,017,947
Estimated variable cost without outage⁷	2,852,947	2,738,946	2,641,000	2,853,157	2,605,324	2,595,691	2,381,051	18,668,116
Estimated MWh lost from outage ⁸	77,088	68,590	66,083	78,948	74,762	68,378	45,406	479,255
Actual monthly spot purchase prices ⁹	34.93	36.84	38.62	34.74	32.05	54.82	42.65	
Cost to replace MWh lost from outage ¹⁰	2,692,680	2,526,851	2,552,141	2,742,649	2,396,135	3,748,475	1,936,561	18,595,492
Cost of providing expected CU4 MWh with outage¹¹	4,220,447	4,137,169	4,113,156	4,230,664	3,810,057	5,209,459	2,683,113	28,404,065
Change in supply cost from CU4 outage¹²	1,367,500	1,398,224	1,472,156	1,377,508	1,204,733	2,613,768	302,061	9,735,949

Notes:

- Reported in May 29, 2014 Electricity Supply Tracker, D2014.5.46, Exhibit_(FVB-1)13-14, p. 3
- Historical Capacity Factor**
- (222 * capacity factor * hrs per month) Assumes CU4 would have operated at CU3 capacity factor absent the outage
- Reported in May 29, 2014 Electricity Supply Tracker, D2014.5.46, Exhibit_(FVB-4)13-14, p. 2
- (Actual fuel cost / actual MWh with outage)
- (Estimated MWh without outage * Fuel cost per MWh)
- (Estimated fuel cost without outage + non-fuel variable costs) Non-fuel variable costs are the difference between actual variable & fuel costs with outage. This assumes other components of CU4 "variable" costs, such as the property tax adjustment and DSM lost revenue, would have been the same had the outage not occurred.
- One-half of estimated MWh without outage, based on reciprocal sharing agreement
- Reported in May 29 Electricity Supply Tracker, D2014.5.46, Exhibit_(FVB-1)13-14, p. 5
- (Estimated MWh lost from outage * spot purchase price) Assumes NWE replaced all lost production with spot purchases.
- (Actual variable cost + Cost to replace MWh lost from outage)
- (Cost of providing expected CU4 MWh with outage - variable cost without outage)

Estimated cost of Colstrip Unit 4 outage Hourly Price NWDS Actual Average Hourly Price & Historical Capacity Factor

	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Total
Actual MWh with outage ¹	73,215	81,713	79,371	71,355	70,692	81,925	104,897	458,271
Capacity factor ²	91.0%	91.0%	91.0%	91.0%	91.0%	91.0%	91.0%	91.0%
Estimated MWh without outage ³	150,303	150,303	145,454	150,303	145,454	150,303	150,303	892,120
Actual variable cost with outage ⁴	1,527,767	1,610,318	1,561,015	1,488,015	1,413,922	1,460,984	1,724,690	10,786,711
Actual fuel cost with outage ⁴	1,258,603	1,344,565	1,297,141	1,233,848	1,126,537	1,359,517	1,516,331	9,136,542
Fuel cost per MWh ⁵	\$17.19	\$16.45	\$16.34	\$17.29	\$15.94	\$16.59	\$14.46	
Estimated fuel cost without outage ⁶	2,583,783	2,473,193	2,377,126	2,598,990	2,317,939	2,494,224	2,172,692	17,017,947
Estimated variable cost without outage⁷	2,852,947	2,738,946	2,641,000	2,853,157	2,605,324	2,595,691	2,381,051	18,668,116
Estimated MWh lost from outage ⁸	77,088	68,590	66,083	78,948	74,762	68,378	45,406	479,255
Actual monthly spot purchase prices ⁹	27.92	34.34	33.55	32.88	34.24	48.99	41.23	
Cost to replace MWh lost from outage ¹⁰	2,152,558	2,355,651	2,217,130	2,595,978	2,559,962	3,349,693	1,872,046	17,103,018
Cost of providing expected CU4 MWh with outage¹¹	3,680,325	3,965,969	3,778,145	4,083,993	3,973,884	4,810,677	2,618,598	26,911,591
Change in supply cost from CU4 outage¹²	827,378	1,227,023	1,137,145	1,230,837	1,368,560	2,214,986	237,547	8,243,475

Notes:

- Reported in May 29, 2014 Electricity Supply Tracker, D2014.5.46, Exhibit_(FVB-1)13-14, p. 3
- Historical Capacity Factor**
- (222 * capacity factor * hrs per month) Assumes CU4 would have operated at CU3 capacity factor absent the outage
- Reported in May 29, 2014 Electricity Supply Tracker, D2014.5.46, Exhibit_(FVB-4)13-14, p. 2
- (Actual fuel cost / actual MWh with outage)
- (Estimated MWh without outage * Fuel cost per MWh)
- (Estimated fuel cost without outage + non-fuel variable costs) Non-fuel variable costs are the difference between actual variable & fuel costs with outage. This assumes other components of CU4 "variable" costs, such as the property tax adjustment and DSM lost revenue, would have been the same had the outage not occurred.
- One-half of estimated MWh without outage, based on reciprocal sharing agreement
- Hourly Price NWDS Actual Average Hourly Price**
- (Estimated MWh lost from outage * spot purchase price) Assumes NWE replaced all lost production with spot purchases.
- (Actual variable cost + Cost to replace MWh lost from outage)
- (Cost of providing expected CU4 MWh with outage - variable cost without outage)

On-Peak Market Price vs. CU 4 Variable Costs

	On-Peak Market Price	Fuel	Volume (100 MWh)	Difference
Jul-13	\$ 39.68	\$11.36	41,600	\$ (1,178,205)
Aug-13	\$ 43.28	\$11.36	41,600	\$ (1,327,965)
Sep-13	\$ 35.33	\$11.74	40,000	\$ (943,746)
Oct-13	\$ 32.45	\$11.36	43,200	\$ (911,185)
Nov-13	\$ 33.75	\$11.74	38,400	\$ (845,324)
Dec-13	\$ 36.75	\$11.36	41,600	\$ (1,056,317)
				\$ (6,262,743)

*** This analysis is based on actual July prices and forward prices for August through December.

*** Fuel costs are based on values from the monthly trackers filed in July and August 2013.

*** Volumes are assumed to be 100 aMW, a value that approximates historical capacity factors for Colstrip 3 & 4.

*** This is a forecast only. Actual results will vary depending on market prices, transmission, when replacement purchases are made (hourly vs. day-ahead vs term markets), when CU4 comes back online, etc.

NorthWestern Energy
Docket D2013.5.33/D2014.5.46
Electric Tracker

Montana Environmental Information Center/Sierra Club
Set 1 (001-011)

Data Requests received September 29, 2014

MEIC-6 Subject: Colstrip 4 Outage Cause
 Witness: Mike Barnes

Please refer to the direct testimony of Kevin J. Markovich, page 9, lines 12-14. Please provide a detailed description of the actions taken to bring Colstrip unit 4 back on line after the events of July 1, 2013.

RESPONSE:

Details are provided under three separate actions: determine extent of damage, plan and approval of a repair, execution of plan.

The actions taken to determine the extent of the damage are detailed in the Root Cause Analysis.

The actions taken to plan and approve a repair are detailed in the following:

- 7/11/13 1:05 email from Neil Dennehy;
- 7/16/13 2:20 email from Neil Dennehy including an attached Word file that includes the repair recommendation and request for authorization for the repair on Colstrip Unit 4 Generator; and
- 7/17/13 Owners meeting minutes records the unanimous approval of a repair plan to return the unit to service.

These are two of the emails responsive to Data Request MEIC-2 that contain information that Siemens plans to protect. Additionally, the Owners meeting minutes also contain information that Siemens plans to protect. NorthWestern will update this response to reflect the Commission's order addressing Siemen's Motion.

The actions taken to execute the repair plan are detailed in the following:

- 8/21/13 8:17 email from Neil Dennehy; and
- Shift repair reports.

These documents contain information that Siemens plans to protect. NorthWestern will update this response to reflect the Commission's order addressing Siemen's Motion.

NorthWestern Energy
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MEIC-7 Subject: Colstrip 4 Outage Costs
 Witness: Kevin Markovich

Please refer to the direct testimony of Kevin J. Markovich, page 10, lines 19-23. Please produce all studies or calculations of the “amount and/or cost” of the “replacement power” purchased during the “CU4 outage.” If no such studies or calculations exist, please so state.

RESPONSE:

See the response to Data Request MEIC-5.

NorthWestern Energy
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Montana Environmental Information Center/Sierra Club
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Data Requests received September 29, 2014

MEIC-8 Subject: Colstrip 4 Outage Cause
 Witness: Mike Barnes

Did the scheduled maintenance in May and June 2013 cause or contribute to Colstrip unit 4 tripping off-line in July 2013? Please produce all documents relied upon and/or supporting the response.

RESPONSE:

In order to fully respond to this data request, NorthWestern must refer to the Root Cause Analysis. See the response to Data Request MEIC-9 for more information regarding the Root Cause Analysis.

NorthWestern Energy
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Montana Environmental Information Center/Sierra Club
Set 1 (001-011)

Data Requests received September 29, 2014

MEIC-9 Subject: Colstrip 4 Outage Cause
 Witness: Mike Barnes

Have any outside consultants or companies investigated what caused the event that led Colstrip unit 4 to trip off-line on July 1, 2013?

- a. If yes, please produce all final reports from such outside consultant(s) and/or company/companies.

RESPONSE:

Yes, a Root Cause Analysis was completed collectively by independent outside consultants Ronald A. Halpern of Generator Consulting Services, Inc. and Robert Ward of Ward Electric Service Corporation.

- a. PPL, NorthWestern, and the other Owners of Unit 4 are still trying to determine if this document can be publicly disclosed. A determination should be made by November 7, 2014. Once a determination is made, NorthWestern will update this response.

NorthWestern Energy
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Montana Environmental Information Center/Sierra Club
Set 1 (001-011)

Data Requests received September 29, 2014

MEIC-10 Subject: Colstrip 4 Outage Costs
 Witness: Kevin Markovich

Please refer to the dissenting opinion on June 18, 2014 in Docket No. D.2013.5.33 and D.2014.5.46 of Commissioner Travis Kavulla, page 3, stating that \$11,135,466 represents the “Commission staff’s best guess, given the information available at present, of the incremental costs of the outage, beyond the ordinary fixed and variable costs of CU4 that could have been expected were the plant operational.” Please state whether NorthWestern agrees with the statement quoted above.

RESPONSE:

NorthWestern does not have access to the other estimates made by the Commission staff and thus cannot determine if this is the best.

NorthWestern Energy
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Montana Environmental Information Center/Sierra Club
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MEIC-11 Subject: Colstrip 4 Outage Costs
 Witness: Kevin Markovich

Please refer to Exhibit A attached to the dissenting opinion on June 18, 2014 of Commissioner Travis Kavulla in Docket Nos. D.2013.5.33 and D.2014.5.46.

- a. Does NorthWestern accept as accurate all of the data listed in Exhibit A?
 - i. If no, please identify each cell containing data that NorthWestern believes is inaccurate.

- b. Does NorthWestern accept as proper the methodology used in Exhibit A to calculate the incremental cost of the Colstrip unit 4 outage?
 - i. If no, please explain why not.
 - ii. If no, please describe the alternative methodology that NorthWestern believes should be used to calculate the incremental cost of the Colstrip unit 4 outage.

RESPONSE:

- a. NorthWestern has reviewed the data incorporated in each cell of the MPSC Staff analysis and takes no issue with the data at this time.

- b. No. NorthWestern believes an estimate using historical capacity factors for Colstrip Unit 4 and actual hourly prices incurred during the outage is a more appropriate methodology. This estimate is shown as Attachment 3 to the response to Data Request MEIC-5.