



December 3, 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  
PSC Set 2 Data Requests (004-006)**

Dear Ms. Whitney:

Enclosed for filing is a copy of NorthWestern Energy's responses to PSC Set 2 Data Requests in Docket Nos. D2013.5.33/D2014.5.46. It will be hand delivered to the Montana Public Service Commission and the Montana Consumer Counsel this date. It will also be mailed to the service list in this docket, e-filed on the PSC website, and emailed to counsel of record.

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

Sincerely,

Tracy Lowney Killoy  
Administrative Assistant

**CERTIFICATE OF SERVICE**

I hereby certify that a copy of NorthWestern Energy's PSC Set 2 Data Requests (004-006) 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. It will be e-filed on the PSC website, emailed to counsel of record, and served on the most recent service list by mailing a copy thereof by first class mail, postage prepaid.

Date: December 3, 2014



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Docket No. D2013.5.33/D2014.6.46  
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**NorthWestern Energy**  
**Docket D2013.5.33/D2014.5.46**  
**Electric Tracker**

**Montana Public Service Commission**  
**Set 2 (004-006)**

Data Requests received November 13, 2014

PSC-004

Regarding: Electronic Files

Witnesses: All

- a. Please provide working electronic copies of all Exhibits with all supporting files and links intact, and actual figures for 2013-14.
- b. If these files have already been provided through discovery, please identify the relevant data responses.

RESPONSE:

- a. Working electronic copies of all exhibits from Docket No. D2014.5.46 were provided on CD as part of NorthWestern's initial response to the MCC Set 1 Data Requests on November 7, 2014. Find them in the following folders on that CD:
  - William Thomas exhibits – folder "MCC-061"
  - Frank Bennett exhibits – folder "MCC-076"
  - Joseph Janhunen exhibits – folder "MCC-092"
- b. See the response to part a, above.

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PSC-005

Regarding: Energy Savings Adjustment Factors  
Witness: Joe Schwartzberger

- a. At WMT-35:29-32 you state: "For the 2011-12 tracker period forward, an Adjustment Factor of 0.91 is used to de-rate gross reported DSM energy savings to net adjusted DSM energy savings used in DSM Lost Revenue computations." Please confirm that your adjustment factor of 0.91 is intended to comply with a net-to-gross adjustment directed in Final Order No. 7219h, ¶ 50.
- b. Final Order No. 7219h, ¶ 50 directs NorthWestern to apply the net-to-gross adjustment of 0.91 to realized savings, or reported savings adjusted for a savings realization rate of 0.87. *id.* ¶ 42. Ordered net realized savings equals 0.79, the product of the savings realization rate and the net-to-gross adjustment. Please show how NorthWestern has adjusted reported savings for this savings realization rate and identify the electronic files where the adjustment calculations are included.

RESPONSE:

- a. Confirmed. NorthWestern notes that the application of the net-to-gross ratio directed in Order No. 7219h is pending in district court.
- b. The 0.87 net savings adjusted rate (or realization rate) is computed as the ratio of the electric energy savings verified by SBW for NorthWestern's entire portfolio of electric programs for the six-year evaluation period to NorthWestern's reported savings for the same programs over the same period. Said another way, 0.87 is the average realization rate for the portfolio of programs for the evaluation period. SBW's verified savings are the result of the application of various program- and measure-specific adjustments determined by SBW to be necessary to reflect the savings actually produced by the programs.

NorthWestern did not apply the 0.87 realization rate to further adjust reported savings for purposes of computing lost revenues for the 2012-2013 and 2013-2014 tracker periods. Rather, NorthWestern applied deemed measure savings and other measure-specific savings adjustments that were derived by SBW as part of its evaluation, applied other Commission-ordered adjustments to compute reported savings, and then applied the 0.91 net-to-gross factor to the reported savings for purposes of computing lost revenues. Consequently, applying a 0.87 realization rate to the already adjusted reported savings would effectively be a "double" adjustment resulting in under estimating savings used to compute lost revenues, all else being equal.

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An alternative approach might be to artificially “gross-up” reported savings by using the deemed savings and other measure savings assumptions that NorthWestern used to compute reported savings during the evaluation period – 3.7 burn hours for residential CFLs, for example. The 0.87 realization rate could then be applied to the total “grossed-up” savings for all programs. The further Commission-ordered adjustments to savings would best be applied using this approach.

NorthWestern recommends using the method it used for the 2012-2013 and 2013-2014 tracker periods and going forward until new adjustments are identified in the next evaluation. This method is less administratively burdensome, and likely less confusing, because it is not necessary to continue to maintain and use outdated measure level energy savings information to produce reported savings. Further, this method should generally produce reported savings that better reflect estimated actual savings by program.

See the response to Data Request MCC-036 for deemed measure savings used by NorthWestern to derive reported savings prior to the SBW evaluation and deemed measure savings included in the SBW program evaluation report. The SBW deemed measure savings values are used for reported savings for the 2012-2013 and 2013-2014 electric tracker periods. Also see the response to Data Request MCC-067 for measure-specific adjustments that are reflected in the reported savings for the 2012-2013 and 2013-2014 tracker periods. Specifically:

- See tab “E+ Audit 12.13” and the table starting at cell “I3” for the post-SBW unit energy savings (UES) values used to calculate audit savings in the 2012-2013 electric tracker.
- See tab “CFL Mail-Out 12.13” and starting at cell “AC8” for the post-SBW UES values used to calculate savings in the 2012-2013 electric tracker.
- See tab “CFL Mail-In 12.13” and starting at cell “P72” for the post-SBW UES values used to calculate savings in the 2012-2013 electric tracker.
- See tab “CFL In Store Coupon 12.13” and starting at cell “I545” for the post-SBW UES values used to calculate savings in the 2012-2013 electric tracker.
- See tab “Resid CFL Direct Install 12.13” and starting at cell “AJ8” for the post-SBW UES values used to calculate savings in the 2012-2013 electric tracker.
- See tab “CFL Trade Show 12.13” and starting at cell “AJ8” for the post-SBW UES values used to calculate savings in the 2012-2013 electric tracker.
- See tab “In-Store CFL Buy Down 12.13” and starting at cell “P26” for the post-SBW UES values used to calculate savings in the 2012-2013 electric tracker.

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- See tab “BOC 12.13” for the Building Operator Certification program, cells “F26” and “F28” for the post-SBW UES values used to calculate savings in the 2012-2013 electric tracker.
- See tab “E+ New Homes 12.13” and starting at cell “O4” for the post-SBW UES values used to calculate savings in the 2012-2013 electric tracker.
- See tab “Comm CFL Direct Install 12.13” and starting at cell “AK9” for the post-SBW UES values used to calculate savings in the 2012-2013 electric tracker.
- See tab “E+ Resid NC Elect Rebate 12.13” and starting at cell “L30” for the post-SBW UES values used to calculate savings in the 2012-2013 electric tracker.
- See tab “E+ Resid EX Elect Rebate 12.13” and starting at cell “J186” for the post-SBW UES values used to calculate savings in the 2012-2013 electric tracker.
- See tab “E+ Comm NC Elect Rebate 12.13” and starting at cell “M38” for the post-SBW UES values used to calculate savings in the 2012-2013 electric tracker.
- See tab “E+ Comm EX DSM Elec Rebate 12.13” and starting at cell “M234” for the post-SBW UES values used to calculate savings in the 2012-2013 electric tracker.
- For NEEA CFL savings, see the response to Data Request MCC-035, tab “CFLs” cells “F7” and “F8” for post-SBW UES used to calculate savings in the 2012-2013 electric tracker.
- See tab “E+ Audit 13.14 12+0” and the table starting at cell “J5” for the post-SBW UES values used to calculate audit savings in the 2013-2014 electric tracker.
- See tab “CFL Mail-Out 13.14 12+0” and starting at cell “R8” for the calculated savings using post-SBW UES values in the 2013-2014 electric tracker.
- See tab “CFL Mail-In 13.14 12+0” and starting at cell “O51” for the calculated savings using post-SBW UES values in the 2013-2014 electric tracker.
- See tab “CFL In Store Coupon 13.14 12+0” and starting at cell “S8” for the calculated savings using post-SBW UES values in the 2013-2014 electric tracker.
- See tab “Resid CFL DI 13.14 12+0” and starting at cell “X9” for the calculated savings using post-SBW UES values in the 2013-2014 electric tracker.
- See tab “CFL Trade Show 13.14” and starting at cell “V8” for the calculated savings using post-SBW UES values in the 2013-2014 electric tracker.
- See tab “In Store CFL Buydown 13.14 12+0” and starting at cell “O25” for the calculated savings using post-SBW UES values in the 2013-2014 electric tracker.
- See tab “BOC 13.14 12+0” for the Building Operator Certification program, cells “F15” and “F17” for the post-SBW UES values used to calculate savings in the 2013-2014 electric tracker.

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- See tab “E+ New Homes 13.14 12+0” and starting at cell “R4” for the post-SBW UES values used to calculate savings in the 2013-2014 electric tracker.
- See tab “Comm CFL DI 13.14 12+0” and starting at cell “Y8” for the calculated savings using post-SBW UES values in the 2013-2014 electric tracker.
- See tab “E+ Resid NC Elec 13.14 12+0” and starting at cell “P30” for the post-SBW UES values used to calculate savings in the 2013-2014 electric tracker.
- See tab “E+ Resid EX Elec 13.14 12+0” and starting at cell “Q8” for the post-SBW UES values used to calculate savings in the 2013-2014 electric tracker.
- See tab “E+ Comm NC Elec 13.14 12+0” and starting at cell “O28” for the calculated savings using post-SBW UES values in the 2013-2014 electric tracker.
- See tab “E+ Com EX DSM Elec 13.14 12+0” and starting at cell “P61” for the calculated savings using post-SBW UES values in the 2013-2014 electric tracker.

See also the response to Data Request PSC-006 for further explanation regarding adjustments NorthWestern has made to residential CFL savings.

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PSC-006

Regarding: Residential Lighting Program Savings  
Witness: Joe Schwartzenberger

For all components of the residential lighting program, please illustrate in detail how estimated savings are derived from the fundamental program data, providing reference to electronic files where appropriate. In particular show how the savings estimates conform to SBW verified savings and Final Order No. 7219h.

RESPONSE:

SBW has not verified savings for either the 2012-2013 or 2013-2014 electric tracker period. Therefore, NorthWestern interprets the question as requesting NorthWestern to reconcile the method it used to compute reported savings for the residential lighting program for the 2012-2013 and 2013-2014 tracker periods to the method SBW used to determine verified savings for the evaluation period, and to show how the further adjustments required in Final Order No. 7219h are addressed by NorthWestern in its reported savings.

The method NorthWestern used to compute reported savings for the 2012-2013 and 2013-2014 tracker periods does not reconcile to SBW's method of determining verified savings for the evaluation period. Rather, as demonstrated below, NorthWestern's method is somewhat conservative relative to SBW's method.

The basic equation used to calculate the savings resulting from installation of a CFL is:

$(\text{wattage of base-case lamp} - \text{wattage of replacement CFL}) * (1.0 \text{ kW}/1000 \text{ watts}) * \text{burn hours per day} * 365 \text{ days per year} = \text{annual kWh savings}$

Prior to the SBW evaluation, NorthWestern used 3.7 burn hours per day to determine reported savings for CFLs, based on the previous evaluation conducted by Nexant. This value was used by NorthWestern to compute reported savings during the SBW evaluation period. After the fact, SBW found an average 2.3 burn hours per day to be appropriate for determining verified savings for the evaluation period. The reduction to 2.3 from 3.7 burn hours suggests a 0.62 realization rate ( $2.3 / 3.7 = 0.62$ ). Note that this simple ratio can be used to compute the realization rate because the savings varies in a linear fashion with burn hours per the lighting savings equation above.). Yet, SBW determined a realization rate of 0.78 for the program for the evaluation period. NorthWestern understands that the primary driver for the higher realization rate was the fact that SBW found that some CFLs rebated through the residential lighting program were actually installed in commercial applications with significantly longer burn hours (6.14 versus 2.3 hours per day), and that resulted in greater savings than for CFLs installed in residential applications. NorthWestern believes that some CFLs rebated under the program will continue to

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be installed in commercial applications. NorthWestern has not further adjusted (increased) its reported savings to reflect this potential.

In addition, rather than using SBW's average 2.3 burn hours per day value, NorthWestern used 2.02 burn hours per day to compute reported savings for the residential lighting program for both the 2012-2013 and 2013-2014 tracker periods. This is consistent with Final Order No. 7219h. NorthWestern notes that it used 2.02 burn hours per day per CFL to compute reported savings for the residential lighting program in its initial application in Docket No. D2013.5.33, which was submitted prior to the issuance of Final Order No. 7219h. SBW determined 2.02 burn hours for residential CFLs for the last year of its evaluation, and NorthWestern concluded that was the appropriate value to use going forward because it was the most current information available.

NorthWestern included two additional adjustments to compute reported savings for the residential lighting program for the 2012-2013 and 2013-2014 tracker periods. Due to the federal regulations phasing out standard efficiency incandescent lamps starting on January 1, 2013, NorthWestern reduced the maximum baseline lamp wattage to 75 watts for purposes of computing CFL savings. Also due to the federal regulations, on January 1, 2014, NorthWestern further reduced the maximum baseline lamp to 60 watts. These adjustments are further described in the Prefiled Direct Testimonies of William Thomas in Docket Nos. D2013.5.33, pages 9-11, and D2014.5.46, pages 10-12.

For the 2012-2013 electric tracker period see the response to Data Request MCC-067 for each of the Residential Lighting Program delivery mechanisms. Savings for each mechanism is computed using the basic equation shown above. Specifically:

- See tab "CFL Mail-Out 12.13" and starting at cell "AC8" for the post-SBW unit energy savings (UES) values.
- See tab "CFL Mail-In 12.13" and starting at cell "P72" for the post-SBW UES values.
- See tab "CFL In Store Coupon 12.13" and starting at cell "I545" for the post-SBW UES values.
- See tab "Resid CFL Direct Install 12.13" and starting at cell "AJ8" for the post-SBW UES values.
- See tab "CFL Trade Show 12.13" and starting at cell "AJ8" for the post-SBW UES values.
- See tab "In-Store CFL Buy Down 12.13" and starting at cell "P26" for the post-SBW UES values.

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For the 2013-2014 electric tracker period see the response to Data Request MCC-067 for each of the Residential Lighting Program delivery mechanisms. Savings for each mechanism is computed using the basic equation shown above. Specifically:

- See tab “CFL Mail-Out 13.14 12+0” and starting at cell “R8” for the calculated savings using post-SBW UES values.
- See tab “CFL Mail-In 13.14 12+0” and starting at cell “O51” for the calculated savings using post-SBW UES values.
- See tab “CFL In Store Coupon 13.14 12+0” and starting at cell “S8” for the calculated savings using post-SBW UES values.
- See tab “Resid CFL DI 13.14 12+0” and starting at cell “X9” for the calculated savings using post-SBW UES values.
- See tab “CFL Trade Show 13.14” and starting at cell “V8” for the calculated savings using post-SBW UES values.
- See tab “In Store CFL Buydown 13.14 12+0” and starting at cell “O25” for the calculated savings using post-SBW UES values.

For the 2012-2013 tracker period NorthWestern also adjusted the residential lighting program reported savings to account for the 8.6% CFL storage rate for all delivery mechanisms except the direct install mechanism. See the response to Data Request MCC-067, tab “2011-2013 CALCS”. NorthWestern did not adjust residential lighting program reported savings for the 2013-2014 tracker period for the 8.6% CFL storage rate. This was an inadvertent omission, and NorthWestern will make this correction in rebuttal testimony.