

MICHIGAN ENERGY MEASURES DATABASE: BEHAVIOR MODIFICATION REPORT CALIBRATION STUDY FOLLOW-UP

MICHIGAN ENERGY WASTE REDUCTION (EWR)
COLLABORATIVE

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Michigan Energy Measures Database: Behavior Modification Report Calibration Study Follow-Up

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Based upon Commission Staff review of the Behavior Modification Report Calibration Study, several questions were posed during the May EWR Collaborative meeting. The first question pertained to the three Consumers Energy waves that were excluded from the calibration study.

Question 1: Appendix Table A2 of the Behavior Modification Report Calibration Study presentation identified four waves that were excluded from the study. For three of the waves, the reason originally provided in the table was that no zip codes were available. Can Consumers Energy and the evaluators provide additional clarification?

Original Table A2. Waves excluded in the Calibration Study

Wave	Utility	Fuel	Start Date	Participants	Controls	Reason
DTE_2015_04_d	DTE	Gas	4/1/2015	31,418	15,697	Usage was below 900 Therm cutoff
CMS_201204_e_bc	CMS	Elec	4/1/2012	20,584	15,168	No zip codes for CDD/HDD
CMS_201203_g	CMS	Gas	3/1/2012	100,615	40,825	No zip codes for CDD/HDD
CMS_201403_d	CMS	Gas	3/1/2012	34,992	9,999	No zip codes for CDD/HDD

Source: Navigant analysis of customer billing data

Q1 Navigant Response: Upon further investigation, the reasons given in the original presentation for excluding the first two waves (“CMS_201204_e_bc” and “CMS_201203_g”) were incomplete. While zip codes were missing in the files provided to Navigant, the reason these customers were excluded from the study was because a Consumers Energy program change resulted in treatment for those waves being cancelled part way through year 1, so they did not get a full year of reports and therefore did not qualify to be included in the analysis.

For the third wave that was excluded (CMS_201403_d), the original explanation of missing zip codes was accurate, but incomplete. This data was also excluded because this wave only received 1 year of treatment. Since the calibration study already had a very large sample of participant year 1 data, the addition of these 34,992 participants who had received reports for one year would not have improved the precision of the results. The time required to fix the missing zip code issue would have delayed study completion with no improvement in study quality.

Updated Table A2. Waves excluded in the Calibration Study

Wave	Utility	Fuel	Start Date	Participants	Controls	Reason
DTE_2015_04_d	DTE	Gas	4/1/2015	31,418	15,697	Usage was below 900 Therm cutoff
CMS_201204_e_bc	CMS	Elec	4/1/2012	20,584	15,168	Not included because wave was cancelled and participants received less than 12 months of treatment.
CMS_201203_g	CMS	Gas	3/1/2012	100,615	40,825	Not included because wave was cancelled and participants received less than 12 months of treatment.
CMS_201403_d	CMS	Gas	3/1/2012	34,992	9,999	Time to fix missing zip code data issue would have delayed study completion with no improvement in quality – this wave only received 1 year of reports and a large sample of year 1 participant treatment data was already available.

The second question pertained to whether the proposed Year 6 values were included in the calibration study.

Question 2: Preliminary Year 6 values were included in the white paper submission for behavior modification reports. Were the Year 6 values included in the calibration study?

Table 1. Behavior Modification Report MEMD Usage Bands¹

Fuel	Usage Band	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Electric	5 to 7 MWh	0.48%	0.77%	-	-	-	-
Electric	7 to 9 MWh	0.84%	1.50%	1.82%	2.27%	2.01%	1.70%**
Electric	9 to 11 MWh	1.08%	1.52%	1.77%	1.25%	2.18%*	2.12%**
Electric	> 11 MWh	1.20%	1.78%	-	-	-	-
Gas	900-1200 Therms	0.34%	0.53%	0.91%	0.86%	0.66%	0.73%**
Gas	>1200 Therms	0.43%	0.60%	0.57%	0.66%	1.09%*	0.73%**

* These savings values have not changed from the deemed value as there was not enough data to calibrate them.

** Proposed Year 6 values (final).

Navigant Response: Table 1 presents the proposed savings values for the 2018 MEMD. All values, excluding those denoted with a * or **, were calibrated. The values that were not calibrated include two Year 5 values (denoted by *) for which there was insufficient data to include in the calibration study, and all of the Year 6 values (denoted by **).

The Year 6 values were submitted by DTE Energy as a result of new data available on the savings performance of the Behavior Modification Report in its sixth year of continuous operation. A complete 12 months of post- program data were unavailable at the time of the calibration study and, as a result, were not included.

NOTE: The values presented in Table 1 above include the final Year 6 values.

The third question pertained to whether the proposed new usage bands will be used by DTE Energy when claiming savings.

Question 3: Table 2 presents the calibrated MEMD usage bands with new bands in bold text. Does DTE Energy expect to use the new usage bands introduced in the Behavior Modification Report Calibration Study?

Table 2. Calibrated MEMD Usage Bands¹

Fuel	Usage Band	Year 1	Year 2	Year 3	Year 4	Year 5
Electric	5 to 7 MWh	0.48%	0.77%	-	-	-
Electric	7 to 9 MWh	0.84%	1.50%	1.82%	2.27%	2.01%
Electric	9 to 11 MWh	1.08%	1.52%	1.77%	1.25%	2.18%*
Electric	> 11 MWh	1.20%	1.78%	-	-	-
Gas	900-1200 Therms	0.34%	0.53%	0.91%	0.86%	0.66%
Gas	>1200 Therms	0.43%	0.60%	0.57%	0.66%	1.09%*

* These savings values have not changed from the deemed value as there was not enough data to calibrate them.

Navigant Response: Based on 2016 reconciliation, half of the electric waves would rely on new usage bands (see Table 3 on the next page).

Based on the 2016 reconciliation, half of DTE Energy’s electric waves would rely on new usage bands (five out of nine, or 55%). In addition, none of the gas waves are outside of the proposed gas usage bands. If the calibrated values are not accepted in the 2018 MEMD, DTE Energy will claim savings based on existing using bands which provide a less accurate estimate of savings.

Table 3. DTE Energy’s Expected Use of New MEMD Usage Bands

Wave	Electric (MWh)	New Electric Band?	Gas (therms)	Outside of New Gas Bands?
DTE_2013_09_d	11.00	Yes	1,158	No
DTE_2013_09_e	16.49	Yes	n/a	n/a
DTE_2014_01_d	5.93	Yes	1,217	No
DTE_2014_01_e	11.55	Yes	n/a	n/a
DTE_2015_04_d	7.33	No	952	No
DTE_2015_04_e	11.46	Yes	n/a	n/a
DTE_2016_02_d	10.70	No	1,098	No
DTE_2016_02_g	n/a	n/a	1,773	No
DTE_2016_06_d	7.41	No	986	No
DTE_2016_06_e	9.66	No	n/a	n/a
DTE_2016_10_g	n/a	n/a	1,344	No

Behavior Modification Report Calibration Study

Presentation delivered to the Energy Waste Reduction Collaborative on May 15, 2017



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