
Memorandum

TO: AESC STUDY GROUP

FROM: MAX CHANG AND RICK HORNBY

DATE: AUGUST 27, 2013

RE: REVISIONS TO AESC 2013 APPENDICES

This memo provides an erratum for Appendix B, additional tables for Appendix C and amended tables for Appendix D that have been provided in both Excel and Adobe PDF formats. We apologize for any inconvenience the errata and additional tables may cause. Please contact us with any questions.

APPENDIX B Errata

Column z of the Appendix B workbooks, i.e., *Electric Cross DRIPE 2014 installation year*, does not include values for 2014. The values in 2014, which are reported in Exhibit 7-31, are quite small. Program Administrators (PA's) can input those values in the year 2014 cell under column z as follows:

| State | \$/kWh |
|-------|---------|
| CT | 0.00024 |
| MA | 0.00042 |
| ME | 0.00009 |
| NH | 0.00009 |
| RI | 0.00006 |
| VT | 0.00002 |

APPENDIX C Addendum, GAS DRIPE

Exhibits C-7 through C-16 provide the intrastate natural gas DRIPE values by year by state by load segment for 2014 Gas efficiency installations and 2015 gas efficiency installations respectively. Column 1 of each table provides gas supply DRIPE while columns 2 through 9 provide Gas-to-electric DRIPE by load segment.

- **Gas Supply DRIPE.** PA's would apply the 2013\$/MMBtu values in Column 1 to every MMBtu of gas reduction from efficiency measures installed in the relevant year, i.e. 2014 or 2015, over the life of that measure.
- **Gas-Electric Cross DRIPE:** PA's would apply the 2013\$/MMBtu values from the relevant Column to the MMBtu reductions in relevant load segment use from efficiency measures

installed in the relevant year, i.e. 2014 or 2015, over the life of that measure or 2023 whichever is earlier. (Gas-Electric Cross DRIPE values dissipate by 2024, and hence there are no values for Gas-Electric Cross DRIPE beyond 2023.) For example, PA's would apply values from Column 4 to MMBtu reductions from residential heating efficiency measures.

A program administrator would apply these values regardless of whether or not the program administrator uses avoided costs including or excluding retail margin.

The attached table illustrates the magnitude of gas DRIPE relative to direct gas avoided costs on a 15-year levelized basis for Southern New England, Northern New England and Vermont.

| Avoided Cost of Natural Gas Delivered to Retail Customers by Load Segment - 15 Years Levelized, (2013\$/MMBtu) | | | | | | | | | |
|--|--|-------------|-----------|---------|-------|-------------------------|---------|-------|---------------------|
| Region and State | Component | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | ALL RETAIL END USES |
| | | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| SNE (MA) | Direct Avoided Cost - No avoidable retail margin | 6.08 | 6.57 | 6.73 | 6.60 | 6.26 | 6.58 | 6.44 | 6.53 |
| | Gas DRIPE (Supply) | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| | Gas DRIPE (Gas to Electric) | 2.10 | 3.32 | 3.72 | 3.39 | 2.55 | 3.33 | 2.99 | 3.20 |
| | Total (Direct + Gas DRIPE) | 8.33 | 10.05 | 10.61 | 10.15 | 8.97 | 10.07 | 9.59 | 9.89 |
| | Gas DRIPE as % of Total Avoided Cost | 27.1% | 34.6% | 36.5% | 35.0% | 30.2% | 34.7% | 32.9% | 34.0% |
| NNE (ME) | Direct Avoided Cost - No avoidable retail margin | 6.03 | 7.53 | 8.02 | 7.62 | 6.58 | 7.54 | 7.12 | 7.39 |
| | Gas DRIPE (Supply) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| | Gas DRIPE (Gas to Electric) | 0.43 | 0.71 | 0.80 | 0.72 | 0.54 | 0.71 | 0.63 | 0.68 |
| | Total (Direct + Gas DRIPE) | 6.48 | 8.26 | 8.84 | 8.37 | 7.14 | 8.27 | 7.78 | 8.09 |
| | Gas DRIPE as % of Total Avoided Cost | 7.0% | 8.8% | 9.3% | 8.9% | 7.8% | 8.8% | 8.4% | 8.7% |
| VT | Direct Avoided Cost - No avoidable retail margin | 6.32 | 6.91 | 7.11 | 6.95 | 6.54 | 6.92 | 6.75 | 6.86 |
| | Gas DRIPE (Supply) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| | Gas DRIPE (Gas to Electric) | 0.10 | 0.16 | 0.18 | 0.16 | 0.12 | 0.16 | 0.14 | 0.15 |
| | Total (Direct + Gas DRIPE) | 6.42 | 7.08 | 7.29 | 7.12 | 6.66 | 7.08 | 6.90 | 7.02 |
| | Gas DRIPE as % of Total Avoided Cost | 1.6% | 2.3% | 2.6% | 2.4% | 1.9% | 2.3% | 2.2% | 2.3% |

Notes
Regional avoided costs taken from Exhibits C-2, C-4, C-6
State-specific gas DRIPE values for Massachusetts, Maine, and Vermont used for illustrative purposes

Exhibits C-2, C-4, and C-6 have been amended to correct the date values beyond 2028.

APPENDIX D Errata

Amended Exhibits D-1, D-2, and D-3 provide corrected values for the following:

- Amended Exhibit D-1 provides corrected 10-year and 15-year levelized values for the avoided cost of fuel oil and other fuels. It also provides corrected year by year values for industrial sector fuels, i.e., distillate fuel oil, residual fuel oil, weighted average avoided cost of fuel oil, Kerosene.
- Amended Exhibit D-2 provides corrected year by year values for Industrial sector fuel oil prices, i.e., distillate fuel oil, residual fuel oil, and Kerosene.
- Amended Exhibit D-3 provides correct percentage mix values for industrial sector use of distillate and residual fuel oil.

As a result of these corrections the 10-year levelized weighted average avoided fuel cost for the Industrial sector increases from \$17.01 to \$21.51/MMBtu. The 15-year levelized weighted average avoided fuel cost for the Industrial sector increases from \$19.95/MMBtu to \$22.54/MMBtu.

