

PROGRAMS RESPONSE TO NAVIGANT'S RECOMMENDATIONS

(February 19, 2018)

on Impact Evaluation of FY2014-2015 Residential Insulation and Windows Measures and Analysis of FY2009 – 2011 PTCS Conversions and Performance Duct Sealing Data

5.1 Program Recommendations FY2015 UES Portfolio Summary

5.1.1 **Navigant recommends** BPA continue to use the most current RTF UES values for residential insulation and window retrofits.

Programs Response: For insulation, we agree that the evaluation savings results of the FY2014 – 2015 Residential insulation measures are consistent with current RTF UES values, and therefore should continue to be used. While the evaluation of insulation measures didn't provide recommendations directly to improve program design, BPA is nevertheless working to improve insulation measures and the results of this evaluation will support further research.

For windows, BPA will work with the RTF to incorporate these findings into any updates made to windows savings values.

5.1.2 **Navigant recommends** BPA share the findings resulting from this impact evaluation of window retrofits with the RTF so that they may incorporate these findings into the next review of this measure.

Programs Response: We agree, and will make the findings available to the RTF, as noted in the BPA response to recommendation 5.1.1.

5.2 Future Evaluation & Research Recommendations

5.2.1 **Navigant recommends** that BPA consider prioritizing future evaluation resources on measures other than insulation, because the findings here support the current insulation UES values. While there may be opportunities for program improvement or for insulation measures to achieve additional savings, the insulation measures are



currently cost-effective and meeting the expected savings, while other measures are not.

Programs Response: We agree it appears future evaluations no longer need to prioritize studies of insulation measures, but rather should focus on other measures where questions remain concerning their energy savings or cost effectiveness.

- 5.2.2 **Navigant recommends** that BPA consider additional research for window measures, because the realization rate and benefit/cost ratio were lower than expected and because this measure is important to BPA’s utility customers and stakeholders. To better understand the current UES values, BPA could consider conducting a secondary literature of window retrofit savings in other regions, document reviews and/or engineering reviews of the current UES. To better understand how end-use customers are interacting with this measure, BPA could consider surveying program participants. Lastly, to better understand how this measure is being delivered, BPA could consider conducting interviews with trade-allies.

Programs Response: We agree to further investigate the window UES measure in conjunction with the RTF committee and our regional partners. Specifically, BPA would seek additional measure-level granularity to understand how to improve the program.

- 5.2.3 Regarding future billing analysis research and based on the findings from this work, **Navigant recommends** BPA (1) incorporate stakeholder input on methodology before collecting data and before conducting analysis; (2) use a phased approach to pilot the analysis and results, and to create opportunities for additional research as warranted by findings; and (3) identify the analysis results that will be used as evaluation findings before conducting the analysis, with parallel analysis to corroborate findings.

Programs Response: BPA agrees with these recommendations and will plan to proceed with future evaluations of this type using the same framework. In particular, BPA will continue to improve its process for incorporating stakeholder input on the methodology because doing so will maximize opportunities for improving programs after results are available.

E.4 Future Research

The evaluation team recommends letting the results of the on-going research summarized in Figure E 1 inform the need and direction of additional investigation into these measure groups.

Figure E 1: Ongoing Research for Residential HVAC Measures

Results on Additional HVAC Billing Analysis (Spring 2018) - Ductless Heat Pumps (eFAF and Zonal), and Prescriptive Duct Sealing

Results of Document Review on PTCS Measures (Spring 2018) - Heat Pump Conversions & Upgrades, Variable Speed, Air-Source, and Ground-Source Heat Pumps, CC&S, and Prescriptive Duct Sealing

Programs Response: For FY2009 – 2011 PTCS Heat Pump conversions and Performance Duct Sealing, the data set used was intended to help BPA’s evaluation team test future evaluation methods. Because the data set used is old, and significant program changes have occurred since 2011, this evaluation is likely to have minimal, if any, impact on future PTCS and Performance Duct Sealing program design and implementation. BPA is expecting more evaluation data for both program areas to become available in 2019 and will use that data to consider program improvements, refinements and simplification.