

BPA Responses to Site Specific Evaluation Recommendations

This memo collects BPA's responses to the recommendations of the November 2015 Impact Evaluation of the FY2012-13 Site-Specific Savings Portfolio. The recommendations and responses are broken out below by the recommendation section and number.

SECTION 1.1. INCREASING RELIABILITY OF M&V SAVINGS ESTIMATES

1. Recommendation: Avoid Embedded Realization Rates. An Option 2 utility is applying realization rates to its individual measure savings estimates prior to reporting savings to BPA. We recommend against this practice, as it appears to be under-estimating savings for the Option 2 domains and creates systematic differences in savings reported to BPA. Best practice is to apply realization rates the total savings for a domain or portfolio rather than in the individual measure savings data maintained the reporting system.

Response: We agree with this recommendation and have already taken action. The utility that was using embedded realization rates was informed by its COTR and EER to avoid using those factors for FY 2015 and beyond reporting.

2. Recommendation: Avoid or Improve Simplified Saving Calculators. Some Option 2 projects use "deemed" values or simplified calculators for Non-Lighting measures. These do not provide reliable site-specific estimates of savings. We recommend that BPA require site-specific savings estimates in accordance with BPA M&V protocols or that these calculators be upgraded to conform to the RTF guidelines for Standard Protocols.

Response: We agree with this recommendation. Currently, the M&V protocol team is training Option 2 utilities on BPA M&V protocols and working to clarify utility-specific M&V protocols.

3. Recommendation: Clarify M&V Protocols related to Typical vs. First Year Savings. The BPA M&V protocols are not clear about whether to estimate savings for typical conditions or for the first year after measure implementation. We recommend BPA determines which savings estimates are required. Then make changes to the BPA protocols to provide specific guidance on how to appropriately handle all parameters in the savings model to achieve the required savings estimates.

Response: We agree with this recommendation. The BPA Planning and Evaluation group will work on this topic of savings definition in conjunction with the RTF and Council. If this work results in an update recommendation to the BPA M&V protocols, the Planning and Evaluation group will work with Engineering as needed.

4. Recommendation: Clarify Current Practice Baseline. The M&V protocols are not aligned with RTF Guidelines on the definition of current practice baselines. We recommend BPA investigate the differences and determine the best method for aligning these definitions.

Response: We agree with this recommendation. The RTF Guidelines Subcommittee is currently clarifying the definition of the current practice baseline, and BPA continues to actively engage in this process. The engineering team, with support of the planning team, will review its M&V protocols



after the RTF Guidelines have been updated and update M&V protocols and IM language as needed.

5. Recommendation: Improve Quality Control for ESRP projects. The savings for this domain are being overestimated, although this domain accounts for only 3% of the portfolio. We recommend BPA provide additional quality control review of M&V data collection and modelling for these projects.

Response: We generally agree with this recommendation, and have found work has already been done to address gaps in quality control reviews. The ESRP team reports that the existing implementation and M&V procedures are thorough and, when followed, have not created any issues. The ESRP implementation processes were updated following the evaluation years to eliminate the gaps in quality control noted in the recommendation.

6. Recommendation: Improve Lighting Calculators: The BPA and Option 2 lighting calculators are not consistent and they both lack key features. We recommend that BPA modify its calculator and require that Option 2 calculators include the following features:

- TAP coding for all line items, i.e., groups of fixtures.
- Use standardized space types.
- Use CBSA building types and create standardized sub-building types if greater specificity is required to align with HVAC interaction factors.
- Improve new-construction functionality allowing for adjustable operation hours and space-specific lighting power density.
- Incorporate revised HVAC interaction factors, currently under development by BPA, in the BPA and Option 2 utility lighting calculators.

- Include entries for NEBs such as changes in O&M costs and include calculation of lifetime costs, benefits and the resultant TRC ratio.

Response: Generally, we support consistency with lighting calculators throughout the region. Several of the above recommendations have already been implemented in the Option 1 calculator. Yet, the evaluation had a high realization rate on both Option 1 and Option 2 lighting projects, so we do not see a pressing need for immediate action. BPA is in the process of updating its lighting calculator, in part to update to the latest RTF standard protocol for non-residential lighting. This will help the non-res lighting team to align with more regional calculators and balance high reliability of the calculations with practical implementation.

SECTION 1.2. IMPROVING PROGRAM DOCUMENTATION

1. Recommendation: Investigate Opportunities for Reducing Reporting and QC Burden. There may be opportunities for reducing the reporting and quality control burden for utilities and BPA staff. We recommend BPA undertake a review of the information needed during each phase of development for both Option 1 and Option 2 projects. The review should identify opportunities for reducing redundancy or unnecessary reporting and for developing tools that reduce the reporting effort and facilitate quality control.

Response: We generally agree with this recommendation, but do not think it is worth the effort at this time to undertake a specific project on this topic. Planning team will include this as an option for Efficiency Forward activities in the future.

2. Recommendation: Require Working Models. We could not obtain a working M&V model for some projects. This makes evaluation and BPA quality control much more difficult. We recommend requiring submission of working M&V models.

Response: We generally agree with this recommendation as a best practice and will investigate including this as a best practice recommendation in our implementation manual language for custom projects.

3. Recommendation: Document M&V Protocol and Project Engineer. Project documentation does not currently indicate what M&V protocol was used in estimating savings or the name of the assigned project engineer (BPA, utility or ESIP). We had to deduce the protocol that should have been used and infer what protocol was used from the supporting documentation. Therefore, we recommend that BPA require reporting of the M&V Protocol used for a project and the justification for its selection; as well as noting the project engineer that made these decisions. Additionally, the Option 2 utilities should all be documenting the M&V plan used for each project.

Response: While this is being done by Option 1, it is not being done by Option 2, but we are concerned about additional requirements for Option 2 utilities. Planning team will investigate including this as a recommendation, but not a requirement, in our implementation language.

4. Recommendation: Obtain and Store Project Invoices. We could not obtain invoices for half of the Option 1 Lighting measures. The invoice provides important substantiation of what equipment was purchased. The data are important for evaluation and BPA quality control. We recommend that BPA consider ways to improve the collection and storage of invoices. End user documentation of costs should not be accepted in lieu of invoices that substantiate those costs.

Response: The Industrial team has noted that in those Option 1 Industrial cases where the evaluation found missing invoices, equivalent documentation was found – i.e., SAP accounting system information. Therefore, the planning team will work with the COTRs to see if it is possible for large end users to provide equivalent documentation in lieu of invoices. Additionally, the COTRs plan to conduct oversight on this measure in the future to improve compliance with the invoice requirements.

5. Recommendation: Improve Document Organization and Version Control. Especially for Non-Lighting measures, project documentation has many components (e.g., meter data files, project application, project completion report, invoices and cut sheets) and it is difficult to determine how the data in this documentation are used in estimating savings. In addition, there may be multiple versions for some of these components. We recommend that documents be organized in a standardized folder structure. A best practice example is the file structure used for ESRP sites. Old versions of any file should be stored in separate sub-folders. In addition, an analysis map should be included that indicates how each supporting data file is used in estimating savings.

Response: We generally agree with this recommendation as a best practice, but do not support additional requirements for utility reporting. We will ensure this is on the list to be addressed with future tracking and reporting systems.

6. Recommendation: Document Project Specifications. We found that it is often difficult to understand the exact specifications for measures. This is important for evaluation and BPA quality control. We recommend that key system specifications are included in the documentation, e.g. photos of nameplates and cut sheets. For cut sheets, indicate which specific make and model is used by the

measure. Consider requiring cut sheets for Option 1 Lighting measures unless power measurements are taken for the affected equipment.

Response: We generally agree with this recommendation, but do not want to make additional requirements and need to be sensitive to privacy issues. Planning team will investigate including this as a recommendation, but not a requirement, in our implementation language.

7. Recommendation: Document Milestone Dates. We found it is often difficult to deduce important milestone dates in the current documentation. Such dates are critical to determining which data are relevant to the measure baseline and efficient-case energy use. Important dates include: start of implementation, final inspection, commissioning completion, M&V data collection start and end. We recommend that these dates be included in the project documentation.

Response: We generally agree with this recommendation, and the ESI program is currently practicing this. Some of these fields are already present in our calculators, but not all of them.

For Option 1, the following fields are required:

- Estimated Project Start Date
- Actual Project Start Date
- M&V Completion date

For Option 2, these fields are required:

- Actual Project Start Date
- Completion Date of Project

Yet, we but do not want to make additional requirements in the Implementation Manual for utilities. Planning team will investigate including this as a recommendation of a best practice, but not a requirement, in our implementation language.

8. Recommendation: Improve TAP Coding. TAP coding is not being done for Option 1 Lighting measures. In addition, consistent rules are not being applied to custom measures, including Option 1 Non-Lighting and all Option 2 measures. This makes it difficult to determine what M&V protocols should apply. In some cases, projects that contain multiple measures are not being appropriately divided into separate measures with distinct TAP codes. We recommend that BPA develop and enforce quality control procedures for TAP coding. These procedures should require that projects comprising multiple TAPs be entered as a series of TAP-specific measures. In addition, TAP codes should be modified so there is a single TAP for Lighting Power Density changes.

Response: We generally agree with this recommendation as a best practice. The BPA lighting calculator is currently being updated and efforts are underway to align lighting measure reporting via refnos and TAP codes between the lighting and Option 1 and 2 calculators. The Option 1 and Option 2 calculator measure lists were just updated to have the TAPs available on both the measure lists match. The Planning team will investigate adding single TAP for Lighting Power Density changes.

SECTION 1.3. CONDUCTING FUTURE EVALUATIONS

1. Recommendation: Align evaluation procedures with M&V protocols. As noted above, the BPA M&V protocols need additional clarifications regarding typical vs first-year savings and current practice baselines. Once BPA clarifies these factors, we recommend that future evaluation protocols are consistent with them.

Response: BPA agrees that future evaluation should be aligned with BPA's M&V protocols, once those are clarified for the issues noted above.

2. Recommendation: Consider Faster or Real-Time Evaluation. We found that this evaluation was hampered by the long duration from project completion to evaluation. We recommend that BPA consider conducting a more streamlined evaluation process that uses recent projects. A further improvement would be to conduct “real-time” evaluation on current projects that would allow evaluation to work closely with project engineers. The evaluators could advise on the implementation of M&V protocols, work with the project engineer in implementing evaluation protocols for sampled measures, and advise on the collection of baseline data useful for both M&V and evaluation.

Response: BPA agrees that evaluation could be more streamlined in the future. Evaluation is currently working with engineering and C&I teams to strategize on this topic.

3. Recommendation: Require and Simplify End User Contact. Per BPA direction, this evaluation tried to limit the number of end user sites visited and relied in some cases only on program documentation. This made it difficult to confirm the current condition of measures and whether there were any relevant changes during the first year of measure operation. This also led to utility and end user contact protocols that were complex and difficult to enforce and track. We recommend that end user contact protocols be simplified and that future evaluations plan to make contact with all sampled end users, including as needed telephone calls, email or site visits.

Response: We agree and the evaluation team will consider how to improve and simplify end user contact protocols in the future.

4. Recommendation: Improve Tracking of Utility and End-user Contact. For some sampled measures, we failed to notify utilities when the site visit was scheduled. We recommend future

evaluations institute better tracking systems to ensure that this does not happen.

Response: We agree with this recommendation and future evaluations will focus more attention on tracking the contact with utilities and end-users and steps within communication protocols.

5. Recommendation: Ensure all Site-Specific projects are included in evaluation. Due to reporting system issues, this evaluation did not include SIS or Energy Smart Grocer custom projects, although they both have site-specific savings measures. BPA should ensure that any future evaluations of site-specific savings include all measures using standard protocols and any regional programs tracked out of the primary BPA reporting system.

Response: We agree with this recommendation and evaluation team will ensure to correctly allocate savings types within the portfolio for evaluation purposes.