

**ATTACHMENT A**  
**STATEMENT OF WORK**

The following Scope of Work is provided for the purposes of preparing proposals. The actual scope of work and deliverables that will be accomplished and delivered during the term of the EM&V Contractor's contract may vary. Should there be a conflict between this Scope of Work and any provision of §25.181, the rule will prevail.

Proposers are encouraged to read §25.181 and to use terms and definitions as in indicated in §25.181.

**Overview**

The Public Utility Commission of Texas (PUCT) is issuing this request for proposals (RFP) for an evaluation, measurement and verification (EM&V) contractor (an individual firm or team of firms) to assist the PUCT by:

- Documenting the gross and net energy and demand impacts of utilities' individual energy efficiency and load management portfolios
- Determining cost-effectiveness
- Preparing and maintaining a statewide Technical Reference Manual (TRM)
- Providing feedback for the PUCT, utilities, and other stakeholders on program portfolio performance
- Providing input into the utilities' and ERCOT's planning activities

Utilities will conduct their own activities to determine projected and claimed savings values – with the EM&V Contractor providing evaluated savings based on due-diligence reviews, audits, verifications and/or independent analyses. The EM&V Contractor shall operate under the PUCT's supervision and oversight, and the EM&V Contractor shall offer independent analysis to the PUCT in order to assist in making decisions in the public interest.

**EM&V Objectives**

- 1) Documenting the impacts of the utilities' individual energy efficiency and load management portfolios, comparing their performance with established goals, and determining cost-effectiveness on a program by program and portfolio basis;
- 2) Providing feedback for the utilities, PUCT, and stakeholders on program portfolio performance; and
- 3) Providing input into the utilities' and ERCOT's planning activities.

## **Guiding Principles**

An EM&V Contractor must:

- 1) Follow ethical guidelines documented in the American Evaluation Association's Guiding Principles for Evaluators, which call for: systematic inquiry, competence, integrity and honesty, respect for people, and responsibility for general and public welfare.
- 2) Use transparent methods to estimate savings and anticipate that impacts will be reviewed in public stakeholder forums to increase quality and reliability.
- 3) Verify all key assumptions used by program planners and administrators.
- 4) Document all evaluation assumptions and calculations and identify the reliability of results and threats to certainty in evaluation reports.
- 5) Focus the majority of evaluation expenditures and efforts in areas of greatest importance with respect to future efficiency portfolios or uncertainty associated with program savings.
- 6) Aggregate data in such a way as to protect customer proprietary information in any non-confidential reports or filings the EM&V Contractor prepares.
- 7) Utilize data provided or received under PUCT authority only for purposes authorized by this Scope of Work and §25.181.
- 8) Maintain confidentiality of any information it receives related to the work performed unless directed to release the information by the PUCT.

## **Impact Evaluations**

- 1) Preparation of *Annual Impact Evaluations* to determine the following metrics for each utility's individual evaluated programs and portfolio of all programs:
  - a) Gross energy and demand savings documented to have been achieved in the first program year the programs are implemented and gross lifetime energy (and demand) savings, incentives paid, administrative costs that were expended, and the program administrator cost test, which is based on the avoided cost of energy and capacity.
  - b) Net energy and demand savings documented to have been achieved in the first program year the programs are implemented and net lifetime energy (and demand) savings, with consideration of all relevant factors.
  - c) Other metrics related to program performance.

- 2) The impact evaluation activities may include the use of one or more approaches including deemed savings, deemed savings calculations, measurement and verification, or large-scale data analysis with or without the use of control/comparison groups. Evaluations are encouraged to leverage secondary research as appropriate with modifications as deemed necessary by the EM&V Contractor and as approved by PUCT staff. Evaluation activities may also include, or just include, verification activities on a census or sample of projects implemented by the utilities. Evaluations should to the maximum extent possible, also rely on due-diligence of utility-provided documentation of savings and cost-effectiveness, versus the EM&V contractor preparing its own original work, when such utility provided documentation is shown to be adequately, as judged by the EM&V Contractor, reliable.
- 3) When net savings are calculated independently from gross savings, net savings may be calculated with one or more of the following approaches:
  - i) Self-reporting surveys in which information is reported by participants and non-participants without external verification or review;
  - ii) Enhanced self-reporting surveys in which self-reporting surveys are combined with interviews and documentation review and analysis;
  - iii) Statistical models that compare participants' and non-participants' energy and demand patterns;
  - iv) Customer adoption models applied to specific markets; and
  - v) Net-to-gross ratios (ratios that are multiplied by the gross savings to obtain an estimate of net savings) that are based on historic studies of similar programs.

### **Evaluation Schedule**

The evaluation schedule shall support the above evaluation objectives and be aligned with the portfolio implementation schedules of the utilities as well as the requirements for regulatory decisions, including those associated with the energy efficiency cost recovery factors (EECRFs). Starting as soon as possible and according to a schedule approved by PUCT staff, the EM&V Contractor shall prepare the TRM, Portfolio EM&V Plans and any needed Evaluation Activity-Specific Detailed Research Plans and Site-Specific M&V Plans, Annual Portfolio Evaluation Reports, and publicly available status reports, indicating the status of its activities and any interim results and/or recommendations. PUCT staff will establish the schedule for such status plans and reports.

*Annual final reports, one each for 2012 and 2013, shall be expected to be completed by October 2013 and April 2014, respectively.* It is recognized that a final report due four months after the completion of a program year is considered “soon”; however, this requirement is driven by the portfolio reporting and filing requirements of the utilities.

## **Initial Evaluations**

For evaluation of the 2012 program year's programs and portfolios, the EM&V Contractor may implement a reduced level of EM&V activities. This is because the EM&V contractor is not expected to start work until January of 2013 when the 2012 program year will have already been completed and because the final report, as noted above, is due by October of 2013. While the evaluation of the 2013 program year's programs and portfolios may also be conducted at a somewhat reduced level of effort, as compared to future program years' EM&V efforts, the EM&V Contractor will be expected to provide more effort than for the 2012 program year and prepare a fully complete and very well documented final report for program year 2013 by April of 2014.

Should the EM&V Contractor determine that deemed savings values utilized by the utilities for program years 2012 and/or 2013 are different than values the EM&V Contractor develops for the new statewide TRM, the EM&V Contractor shall report two sets of impacts - one with the new statewide TRM values and one with the utilities' values for 2012 and/or 2013 program years.

## **Tasks**

Tasks are listed below in this section. The tasks defined are at a fairly high level of generalization. A final scope of work and tasks will be prepared as part of Task 1.

### **Task 1: Prepare Evaluation Prioritization Memorandum and Evaluation Planning Documents**

#### *1A - Evaluation Prioritization Memorandum*

Upon initiation of the contract, the EM&V Contractor shall review:

- Relevant PUCT orders.
- Utility energy efficiency and load management program plans and reports for 2012 and 2013 program years, including projected energy savings and, to the degree available, claimed savings.
- Other relevant documents.

As part of this review, the EM&V Contractor shall assess the evaluation, measurement and verification (EM&V) activities and databases the utilities are using for each program to construct their annual claimed savings reports with respect to their applicability and usability for informing the preparation of evaluated savings.

Based on this review, the EM&V Contractor will develop a memorandum prioritizing the programs to be evaluated and recommending approaches to be undertaken to independently determine the 2012 and 2013 portfolio savings and cost-effectiveness. The prioritization will consider criteria such as evaluation costs, magnitude of savings to be achieved by program, relative uncertainty associated with program savings, length of time since program was last

evaluated, relative importance of program with respect to future energy efficiency portfolios as well as other criteria recommended and approved by PUCT staff.

When sampling is involved in the evaluations, a 90-10 confidence and precision criteria shall be used to define sample sizes, unless otherwise approved by PUCT staff. While this confidence/precision level can be defined based on portfolio level savings, key programs may also merit this confidence/precision of sampling; and this should be discussed in the Evaluation Prioritization Memorandum.

EM&V Contractor will review the Evaluation Prioritization Memorandum with PUCT and utility staff and shall modify the memorandum if requested to do so by PUCT staff.

#### *1B – 2012 and 2013 Portfolios' EM&V Plan*

To be prepared in parallel with the Evaluation Prioritization Memorandum, the EM&V Contractor shall develop a detailed 2012 and 2013 Portfolios' EM&V Plan. However, the Evaluation Prioritization Memorandum will need to be finalized and approved by the PUCT staff before the Plan can be completed.

The Plan will indicate the major evaluation activities that will be conducted during the evaluation cycle to determine gross and net savings and cost-effectiveness. It will indicate which programs will be evaluated in each specific program year and the verification and/or evaluation approaches that will be utilized for each evaluated program, as well as the basis for why specific programs and approaches were selected.

Specifically, the Plan shall include, but is not limited to:

- Identification of and plan for deployment of staff resources and the management of sub-contractors.
- Project schedule and presentation of tasks, sub-tasks, and milestones.
- Project budget, by task, identifying resources including personnel resources associated with the task.
- Specification of any utility reporting requirements including data required, format of data to be provided by utility tracking systems, reporting schedule, and data confidentiality protection protocols that are required by evaluator.
- Plans for data collection and analysis including, but not limited to, document and database review, telephone, mail and/or in-person data collection, field inspections, metering and monitoring and statistical and economic analysis using appropriately trained and certified personnel. Description of the methodologies, procedures and data tracking systems to be used by the evaluator to conduct its work for each program including data gathering, sampling and analysis methods. This will include sampling plans.
- Identification of how proper use of deemed savings values, deemed calculated approaches, and/or protocols by utilities will be confirmed.
- Plan for determining net energy and demand savings, including what factors shall be considered and how they will be determined.

- Plan for determining lifetime energy and demand savings.
- Plan for reviewing and determining the cost-effectiveness of the 2012 and 2013 portfolios using the PAC test.
- Drawing from the Evaluation Prioritization Memorandum, description of approach for integrating the results of utility's existing internal evaluations into the independent third party assessment. Include which evaluation reports will be used, how the information will be included, and plans for resolving discrepancies in the savings estimates, should such discrepancies arise.
- Description of how program impact results will be combined to report portfolio impacts, addressing the need for adjustments such as accounting for overlap with other programs (i.e. attribution) or other factors. Include description of weighting procedures for developing final estimates of portfolio savings in situations where programs receive different levels of evaluation, or in some cases, none at all.
- Description of content and formats for all deliverables and interim deliverables, including data collection instruments, reports, memoranda, project management documents, electronic files, and all other work products or interim products. Reporting tables are of particular interest – samples with data should be provided for review by PUCT staff. Include description of quality assurance/quality control (QA/QC) procedures to be utilized by evaluator.
- Description of how best-practice approaches appropriate to each program will be used. Description of the tradeoffs in allocating limited budget dollars to specific tasks and programs, and why those tradeoffs were selected.
- Description of other activities to be conducted by the evaluator in support of evaluation-related activities. This may include assessing non-energy benefits, preparation of market assessments, and/or saturation and baseline studies as required to prepare impact evaluations

### *IC - Other Planning Documents*

Other planning documents will likely be required, including:

- Evaluation Activity-Specific Detailed Research Plans - Research plans are created for the major EM&V activities or studies planned in a given cycle prior to the time each effort is launched. The Evaluation Activity-Specific Detailed Research Plans will indicate definitions of baselines to be used in the program evaluation.
- Site-Specific M&V Plans - Site-specific plans may be required for custom project sites that are analyzed and inspected. The Site-Specific M&V Plans will indicate definitions of baselines to be used in the project analysis.

*The planning efforts described above may need to be streamlined for the 2012 program year evaluation activities, as well as perhaps the 2013 program year, given the expected start date of the EM&V contractor's contract. However, at least conceptually the planning activities above are considered critical to each year's evaluation activities.*

## Task 2: Develop and Maintain Technical Reference Manual (TRM)

The EM&V Contractor shall use existing Texas, or other state, deemed savings manual(s), protocols, and the work papers used to develop the values in the manual, as a foundation for developing the TRM. The TRM shall include, for each deemed savings value or deemed savings calculation, applicability requirements such as measure definition; end-use applications; whether measure is for new construction, early replacement or replacement upon failure; and program delivery mechanism, such as direct install, point of sale rebate, or contractor incentive. The TRM may also include standardized EM&V protocols for determining and/or verifying energy and demand savings for particular measures or programs. The TRM shall be reviewed by the EM&V Contractor at least annually, pursuant to a schedule determined by PUCT staff, with the intention of preparing an updated TRM.

Commission staff shall approve the initial TRM and any updated TRMs.

## Task 3: Implement the Impact Evaluation and Verification Efforts in Accordance with the Approved Evaluation Plans

This task involves the actual implementation of the evaluation activities, specified in the evaluation planning documents and as approved by the PUCT staff. This work is to:

- Include evaluating, documenting, and reporting total portfolio energy savings (gross and net) relative to the targets and baselines established at the time of program approval by the PUCT. At a minimum, the evaluations shall include the following information:
  - a. Annual and lifecycle MWh savings, evaluated with statistical sampling that achieves 90-10 confidence and precision for the portfolio
  - b. Cost-effectiveness as indicated by the PAC test
- Provide reasonable assurance that the claimed measures are being properly installed and utilized.
- Be implemented using generally accepted industry practices.

Activities will include, but are not limited to:

- Acquiring and verifying data from utilities and other sources.
- Conducting field inspections using trained personnel and installing spot, short-term and long-term metering equipment on participant property as required by the evaluation plans.
- Reviewing and providing due-diligence of utility claimed savings estimates and baselines.

- Developing survey instruments (using sampling with 90/10 confidence/precision criteria, or other criteria as specified in the planning documents) and collecting and analyzing data.
- Calculating net and gross program and portfolio energy savings.
- Calculating cost-effectiveness results including review of methodology, inputs, and calculation, consistent with PUCT orders.
- Commenting on the reliability (accuracy) of evaluated savings values; this should include discussion of the threats to validity and sources of bias and the approaches used to reduce threats, reduce bias and increase the reliability of the findings, and a discussion of findings' precision levels.
- Providing input to the PUCT and stakeholders on the implications of the results and recommendations the EM&V contractor may have with respect to future evaluations or the programs/portfolios themselves.
- Interfacing and coordinating reporting with utilities, PUCT staff and stakeholders.

#### Task 4: Additional Activities

The following additional activities may be required and/or requested:

- Preparing an assessment of the effectiveness of program operations and recommendations for each evaluated program with respect to possible improvements that could improve portfolio, program or measure implementation with respect to savings achieved, cost-effectiveness, or other factors. Recommendations may also include suggestions for other program designs or markets to address as well as suggestions for improving the ability to conduct effective evaluation activities.
- Developing evaluation plans to address issues such as persistence of savings, measure retention, market effects indicative of market transformation, and other research topics that may require investigation. Preparing related market assessment, saturation and baseline studies as required to prepare impact evaluations.
- Providing experts for hearings; reviewing petitions to amend or develop deemed savings; workshops and other meetings, including EEIP meetings; preparing technical information for possible inclusion in meetings and reports; and informing the PUCT of opportunities for implementing EM&V best practices.

#### Task 5: Project Management and Reporting

The EM&V Contractor will conduct required project management and reporting activities, including, but not limited to, holding a project initiation meeting, semi-annual meetings and a final presentation with PUCT staff, utilities and stakeholders; development of a Research Prioritization Memorandum and complete evaluation plans (see Task 1), and preparation and delivery of both 2012 and 2013 program year evaluation final reports. Interim memoranda and

presentations will also be required, at PUCT's request and per a schedule approved in the evaluation plans.

The EM&V Contractor shall prepare reports, including, but not limited to:

- Site-Specific M&V Reports - Site-specific measurement and verification reports are required for projects for which site-specific M&V Plans were developed. These reports document the impacts determined for a specific site or measure as well as the methods used to determine the impacts. Utilities will have opportunities to provide input on these reports.
- Impact Evaluation Reports - The results of carrying out the evaluation activities described in each Impact Evaluation Plan are documented in an Impact Evaluation Report. The report documents the impacts and cost-effectiveness of a program or bundle of programs as well as the methods used to determine the impacts. Utilities and other stakeholders will have opportunities to provide input on these reports. The final reports shall be publicly available.
- Annual Portfolio Evaluation Reports - The results of carrying out the evaluation activities described in the EM&V Portfolio Plans are documented in a Portfolio Evaluation Report. It documents the impact metrics (e.g., gross and net energy and demand savings, first year, and lifecycle) and cost-effectiveness associated with the portfolio of programs as well as the methods used to determine the impacts. Utilities and other stakeholders will have opportunities to provide input on these reports. The final reports shall be publicly available.
- The evaluator will be responsible for delivering draft and final reports that include the following elements:
  - Executive summary
  - A synthesis summary of the evaluation process, results, the implications of the results, and recommendations (this may be a stand-alone document)
  - Introduction and project overview
  - Methods and scope
  - Measurement and analysis
  - Results and findings
  - Conclusions and recommendations
  - Appendices
  - Electronic databases with clear documentation

In addition, the reporting is expected to include the following items:

- Monthly – Project status reports submitted to the PUCT highlighting issues with each evaluation activity and problems (difficulties in getting the job done, with recommended or agreed solutions).
- Ad-hoc – To document problems, resolution and urgent issues as they arise. These reports may also need to be linked to changes in work efforts.