

Invitation for Proposals

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CUSTOMER ENERGY SOLUTIONS INTEREST GROUP (CESIG)

CEATI PROJECT No. CESIG-12-01

**BEST PRACTICES GUIDE FOR MEASUREMENT
AND VERIFICATION OF DEMAND RESPONSE**

CEATI International Inc. (CEATI) invites the submission of proposals to perform research work on the following topic:

TITLE

Best Practices Guide for Measurement and Verification of Demand Response

INTRODUCTION

Measurement and Verification (M&V) is a process of corroboration of results/success of Demand Response (DR) programs and projects implemented by utilities and aggregators in North America and elsewhere. Different measurement protocols and methods have been deployed in various areas. This variety of methods leads to problems and confusion in trying to analyze and compare results of different DR measurements and the outcomes in various regions and consumer sectors. The need for the development of an international protocol for M&V of DR programs has been identified, but it is an effort that is both costly and complex to accomplish at this time. Instead, the CESIG sponsoring utilities wish to obtain a reference document that records the best practices in North America and elsewhere as applicable.

PROJECT OBJECTIVES

The main objectives of this project are to compile the current practices in M&V of DR and to recommend the best practices.

SCOPE OF THE STUDY

This project aims at recording the most successful M&V practices deployed to-date and developing a simple guide to be available to the sponsoring utilities when they introduce or evaluate their DR programs and projects, and resulting load changes.

TASKS

Task 1: Review of Existing Applicable Protocols and Literature

- a. Examine the existing DR M&V protocols in North America and elsewhere. Examples to be included in IFP will include the following, and any others:
 - Ontario Power Authority's Protocols for Estimating Load Impacts Associated with DR Resources in Ontario
 - California Energy Efficiency Evaluation Protocols, and Load Impact Estimation for Demand Response: Protocols and Regulatory Guidance North American Energy Standards Board's (NAESB) Business Practices for M&V of DR Programs
 - PJM and ISO-New England DR protocols
 - Pacific Northwest Protocol Development
- b. Seek out and review additional literature. Examples to be included in the IFP will include but not be restricted to the following:
 - Protocols outside of North America
 - DR Baseline and M&V white papers and published articles

- EVO's findings in review of the "DR Baseline Protocol" document, prepared by Xenergy for the California Energy Commission in 2002

Task 2: Based on the findings in Task 1, analyze and evaluate existing practices (e.g. protocols, approaches, techniques) for residential, commercial, industrial, institutional, and agricultural customers.

Task 3: Recommend the best practices for North American utilities in various sectors evaluated in Task 2 (R, C, I, A).

POTENTIAL BENEFITS

- Reference of the best practices in DR M&V
- Recommendation of a Best Practices Guide M&V of DRA Projects and Programs.

DELIVERABLES

The successful proponent is expected to prepare a ready-to-publish report on the results of the investigation and present the results to funding consortium members. The completed report must be submitted for CEATI approval in editable, electronic format (Microsoft Word). In addition, the platform and version should be specified for any software or programs to be developed.

Progress reports will also be required on either a quarterly or milestone basis - normally these are scheduled to coincide with the completion of the identified tasks.

The successful proponent is also expected to provide the following:

- a. **A ten to fifteen (10-15) slide Power Point Presentation.** This should be composed of three main sections:
 1. The factors motivating the initiation of the work;
 2. A description of the main findings;
 3. Summary of the conclusions and recommendations for future research.
- b. **Contents for the Project's Technical Brief.** This is a summary of the report (between 1,000 and 1,500 words), which is published separately by CEATI. Proponents are not responsible for the preparation of a ready-to-print Technical Brief, but solely to provide the contents for the following 4 sections: Background, Summary, Conclusions and Recommendations.
 1. The Report Background section should be short (approximately 200 words) and should detail the reasons the work was conducted.
 2. The Summary section should be approximately 700 words. It must provide a general description of the work program.
 3. The Conclusions section should be about 150 words and should provide a general outline of the key results (do not include specifics).
 4. The Recommendations section should be about 200 words and should include a description of the potential applications of the results.

Please note that all reporting must be submitted in English. If written English is not the author's strong suit, it is recommended that a technical writer be hired to review the document prior to submission.

BUDGET AND SCHEDULE

The proposal must contain a schedule and a quote of required remuneration for the work in US or Canadian dollars. All prices shall be presumed to be in Canadian dollars (CAD) unless explicitly specified otherwise in the proposal. Proponents' responses to this section must include a full breakdown of the budget and schedule, including an indication of rates and hours and the task allocation for the key personnel by task and must correspond to any phases or milestones outlined above. (Please refer to the Proposal Template for more information).

It is expected that this project can be completed (draft final report submitted for review and approval) **within 3-4 months of initiation**.

The proposal must include the names and qualifications of the key individuals who will be involved, as well as the name of the accountable manager.

CEATI is not bound to accept any proposal but any selection will take into account technical merit, qualifications, price and schedule. A proposal may be accepted in whole or in part. A commitment to proceed with the first phase of a multi-phase project does not automatically imply that the work of the subsequent phases will be undertaken.

ALTERNATIVE WORKS

Proponents shall generally follow the above description of work, but are encouraged to offer alternative works if these alternatives will meet the objectives and provide a better end product to the utilities sponsoring this work. Alternatives shall be fully described including logistics explaining why the alternate works are being offered and the benefits to be realized by the funding utilities. Where alternatives are proposed, separate budgets shall be calculated for each alternative.

SUBMISSION OF PROPOSALS

The consideration of proposals received will be limited to those who indicate their intent to employ a suitable experienced project team and who possess proper facilities to perform the work. Receipt of this "IFP" does not necessarily constitute a prior determination by CEATI that your organization has the requisite experience and facilities.

The proposal must be properly completed and executed in accordance with the CEATI guidelines available at <http://www.ceati.com/technology-providers/submission-guidelines>, and shall be submitted to CEATI as an attachment in Microsoft Word at the following website: <http://prs.ceati.com/proposals/>. Be sure to indicate project number "CESIG-12-01" on the submission form. For assistance, please contact us at 514-866-5377.

The successful proponent will be required to sign the CEATI Standard Agreement upon project initiation. Proponents are encouraged to download a copy of the Standard Agreement for review from <http://www.ceati.com/technology-providers/submission-guidelines> prior to submitting a proposal, if they are not already familiar with these terms. Proponents may contact CEATI at projects@ceati.com to discuss any questions or concerns regarding these terms.

CLOSING DATE FOR RECEIPT OF PROPOSALS

Thursday, January 26, 2012, 4:00 pm EST