REQUEST FOR PROPOSALS
Scoping Study for RTF Analytical Tools
February 20, 2020

I. Contracting Organizations

The Northwest Power and Conservation Council’s (Council) Regional Technical Forum (RTF) is issuing this Request for Proposals.

A. The Council and its Activities

The Council is an interstate compact agency formed in 1981 by the states of Idaho, Montana, Oregon, and Washington as authorized in 1980 by Congress in the Pacific Northwest Electric Power Planning and Conservation Act, 16 U.S.C. §839, et seq. The Council is composed of eight Council members, two appointed by the governor of each of the four states. Congress charged the Council with developing two major planning documents:

- A program to protect, mitigate and enhance fish and wildlife affected by the development, operation, and management of the hydroelectric facilities located on the Columbia River or its tributaries, and
- A regional power and conservation plan to assure the Pacific Northwest an adequate, efficient, economical and reliable power supply.

Congress also charged the Council with informing the Pacific Northwest public of major regional power issues and insuring widespread public involvement in the formulation of its regional power plan and fish and wildlife program.

B. The RTF

The RTF is an advisory committee to the Council. It was formed at the request of Congress to:

- Develop standardized protocols for verification and evaluation of energy savings
- Track regional progress toward the achievement of the region’s conservation and renewable resource goals
- Provide feedback and suggestions for improving the effectiveness of conservation and renewable resource development programs in the region
- Conduct periodic reviews of the region’s progress toward meeting its conservation and renewable resource goals
II. Services Sought by the RTF

The RTF is seeking proposals for a scoping study for RTF Analytical Tools. Currently, the RTF relies on the Simplified Energy Enthalpy Model (SEEM) residential building model to support its analysis of energy efficiency measures.\(^1\) SEEM was developed and is maintained by Ecotope, primarily for use at the RTF. Over the past several years, the RTF has made significant investments in calibrating the outputs of the model to support reliable savings estimation.

In 2019, the RTF also leveraged SEEM to support initial analysis around demand response technologies. The RTF’s current role for demand response is to estimate the maximum per unit technical potential for a handful of demand response technologies.\(^2\)

Despite the longstanding use of SEEM, the RTF recognizes that there are some limitations, and is, therefore, interested in exploring how to improve the reliability of its modeling of energy efficiency and demand response, whether through enhancements to the existing SEEM model or through the employment of other models. Thus, the RTF is seeking a contractor to conduct a review of the RTF’s existing analytical tools for residential building modeling and demand response analysis, explore potential alternative tools based on the RTF’s needs, and provide recommendations on a path forward based on the advantages and disadvantageous of the various tools.

To complete this work, the RTF anticipates the following tasks:

**Task 1. Stakeholder Interviews**

The contractor will conduct stakeholder interviews to understand the use cases and needs for analytical tools for both demand response and energy efficiency analysis.

**Anticipated Deliverable:** Memo summarizing the findings of stakeholder discussions

**Anticipated Task Completion Date:** Due within 6 weeks of contract start date

**For Proposal:** Proposals should include a stakeholder interview strategy, accounting for up to 15 interviews. At a minimum, proposal should include the following stakeholders in the interview strategy:

- Council Staff
- RTF Contract Analysts
- RTF Members (up to 5)
- BPA Staff (planning and engineering teams)
- NEEA Staff (planning team)

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\(^1\) More information on SEEM is available here: [https://rtf.nwcouncil.org/simplified-energy-enthalpy-model-seem](https://rtf.nwcouncil.org/simplified-energy-enthalpy-model-seem).

\(^2\) More detail on the RTF’s demand response analysis is available here: [https://rtf.nwcouncil.org/subcommittee/demand-response](https://rtf.nwcouncil.org/subcommittee/demand-response).

The contractor will conduct a review of tools for residential energy building modeling in support of developing energy efficiency savings. At a minimum, tools considered should include SEEM and EnergyPlus. RTF staff are aware of efforts by NREL to compare SEEM and EnergyPlus,\(^3\) as well as its assessments of other tools.\(^4\) The contractor should use these analyses and other similar work to inform its review, along with any additional testing the Contractor deems necessary to inform a recommendation.

Key factors to be assessed in this review include, but are not limited to:

- Reliability for modeling energy consumption, savings, and load shapes for both heating and cooling
- Ease of conducting sensitivity analysis
- Usability
- Maintenance requirements
- Transparency for stakeholder understanding and review
- Other factors identified through stakeholder interviews

Upon completing the review, the contractor will develop a findings and recommendations memo. This should include the advantages and disadvantages of the various tools, including the upfront resources that may be necessary to ready a tool for RTF use and then also the long-term resource considerations for the various approaches, including, for example, the maintenance required for each of the tools. As part of the discussion around SEEM, the contractor should outline the potential for enhancements that will address any of the existing gaps and limitations and the resource requirements for that effort. Based on the complete analysis, the contractor should develop a recommendation for RTF consideration.

**Anticipated Deliverable:** Memo summarizing the advantages and disadvantages of various tools, potential enhancements to SEEM model, and final recommendations for the analytical tools to support future energy efficiency analysis

**Anticipated Task Completion Date:** Due within 12 weeks of the contract start date

**For Proposal:** Proposals should identify tools to be assessed as part of this review and the approach for reviewing and comparing options. If the proposal includes testing of tools, the benefits of this additional testing should be clearly outlined, and the costs associated with testing should be separated out from the remainder of the task.

Task 3: Review of Analytical Tools for Demand Response Analysis

The RTF demand response work focuses on estimating the maximum, per unit technical potential for demand savings for different demand response technologies. The contractor will conduct a

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\(^3\) NREL assessment available here: [https://www.nrel.gov/docs/fy16osti/65858.pdf](https://www.nrel.gov/docs/fy16osti/65858.pdf).

\(^4\) Another example is the NREL assessment of the US DOE Home Energy Scoring Tool ([https://www.nrel.gov/docs/fy12osti/54074.pdf](https://www.nrel.gov/docs/fy12osti/54074.pdf)).
review of tools that could be used to support this analysis. At a minimum, SEEM should be included in the review.

Key factors to be assessed in this review include, but are not limited to:

- Usability
- Reliability for modeling energy consumption and load shapes for a variety of demand response technologies
- Ease of conducting sensitivity analysis
- Maintenance requirements including frequency and resources
- Transparency for stakeholder understanding and review
- Other factors identified through stakeholder interviews

Upon completing the review, the contractor will develop a findings and recommendations memo. This should include the advantages and disadvantages of the various tools, including the upfront resources that may be necessary to ready a tool for RTF use and then also the long-term resource considerations for the various approaches, including, for example, the maintenance required for each of the tools. As part of the discussion around SEEM, the contractor should outline the potential for enhancements that will address any of the existing gaps and limitations and the resource requirements for that effort. Based on the complete analysis, the contractor should develop a recommendation for RTF consideration.

Anticipated Deliverable: Memo summarizing the advantages and disadvantages of various tools, potential enhancements to SEEM model, and final recommendations for the analytical tools to support future demand response analysis

Anticipated Task Completion Date: Due within 14 weeks of the contract start date

For Proposal: Proposals should identify tools to be assessed as part of the review and an approach for reviewing and comparing options.

III. Budget Expectations

The RTF estimates a budget of $35,000 to complete this work. Proposals shall include the proposer’s actual estimated costs to perform the work irrespective of the RTF’s estimated budget. Proposals should be based on time and materials, with a not-to-exceed limit, and should provide a detailed cost estimate for each task.

IV. How to Submit a Proposal

Proposals should be submitted to the RTF in electronic form by March 27, 2020.

Proposals should be emailed to:
Jennifer Light
RTF Manager/Chair
Jlight@nwcouncil.org
(503) 222-5161
Proposals shall include the following elements:

- Contact information and brief description of the firm submitting the proposal
- Description of the technical and management approach to be used to complete the work, including responses to the proposal considerations identified under each specific task in Section II, above
- Qualifications of all personnel who will be working on the project
- Budget proposal that details the level of effort, labor costs (hours and rates of all personnel), and any material costs for each of the major tasks as outlined in Section II
- Reporting schedule and project timeline consistent with the anticipated task completion deadlines provided in Section II
- Web site addresses or listing of similar work that can be reviewed by the RTF proposal evaluation team
- Any other material the proposer deems pertinent

Any questions regarding this RFP shall be directed to Jennifer Light. Please note that responses are limited to correcting errors in the RFP or clarifying the RFP’s provisions. If, however, questions are posed that identify significant information that would assist all proposers in submitting a competitive proposal, such information shall be made available by reasonable means, such as posting on the RTF’s webpage, to ensure all proposers have access to the same information.

V. Evaluation Criteria and Selection of a Final Proposal

An evaluation team will review the proposals received. The evaluation team will include staff from the Council’s conservation group and RTF staff. Proposals will be evaluated using the following criteria:

- **Technical Approach**: The proposer’s technical approach to meeting each of the tasks in Section II, above.
- **Management Approach**: The proposer’s approach to managing the project, including working with Council, the RTF staff, and stakeholders.
- **Team Qualifications/Experience**: Demonstrated experience with RTF work products or similar work as well as knowledge of the electric utility and energy efficiency environments.
- **Price**: This contract will be awarded on a not-to-exceed basis.

A final proposal will be selected based on the evaluation team’s review of each proposal in consideration of the above criteria. If successful, following selection of the final proposal, contract negotiations will be initiated.

All qualified proposers will be evaluated and considered for selection without regard to race, color, national origin, religion, gender, gender identify (including gender expression), sexual orientation, marital status, age, disability, genetic information, or military or veteran status.
VI. RFP Schedule

Proposals Due: March 27, 2020
Selection of Winning Proposal(s): Week of March 30, 2020
Project Start Date: Week of April 13, 2020

VII. Costs and Obligations

Prospective or actual proposers shall bear any and all costs and risks of participation in this RFP process. The RTF shall not be obligated to procure any services resulting from this RFP.