

Northwest Power and Conservation Council
Development of a Model to Estimate Demand Response Potential
Request for Proposals (RFP)

The Northwest Power and Conservation Council (NWPCC or “the Council”) is requesting proposals to develop a model that Council staff will use to develop Demand Response supply curves. The Council is seeking to use this model in the forthcoming Eighth Plan.

Project Timeline

Release of RFP	April 18, 2018
Proposals Due	May 18, 2018
Decision	May 29, 2018
Work Begins	June 4, 2018
Draft Model Due	August 15, 2018
Final Model and Users Guide Due	September 28, 2018

Proposals must be delivered electronically, no later than 5:00 p.m. PDT on Friday, May 18, 2018, to:

Northwest Power and Conservation Council
Tina Jayaweera
Senior Energy Analyst
tjayaweera@nwcouncil.org

Overview of the Council

The Council was established by Congress, through the Pacific Northwest Electric Power Planning and Conservation Act of 1980, to assure the Pacific Northwest (the region) of an adequate, efficient, economical, and reliable power supply; to protect, mitigate and enhance the fish and wildlife, including related spawning grounds and habitat, of the Columbia River and its tributaries; and to give the citizens of Idaho, Montana, Oregon, and Washington a greater role in energy planning and fish and wildlife protection in the Columbia River Basin. The Council has three primary responsibilities under the Act: (1) Developing a regional power plan for meeting the electric energy needs of the Pacific Northwest for the next 20 years; (2) Developing a regional program to protect and enhance fish and wildlife affected by the development and operation of hydroelectric facilities in the Columbia River Basin; and (3) Educating

citizens and regional stakeholders on energy and fish and wildlife issues and involving them in the development of both the Council's regional power plan and fish and wildlife program.

Research Needs of the Council

Tracking and forecasting energy use and assessing demand response (DR) potential are a key part of the Council's energy planning responsibilities. In February 2016, the Council released its Seventh Power Plan, which identified demand response as an important component for the region to maintain a low-cost reliable electricity system. The Council wishes to engage a third-party firm to develop a model for use in creating the DR supply curves for the Eighth Power Plan. The supply curves represent the achievable technical potential at a given cost of DR available in the region, by DR product. The Council's current DR model used for the Seventh Power Plan can be found on the Council's website <https://www.nwcouncil.org/energy/powerplan/7/plan/technical>.

The DR supply curves used in determining the amount of annual DR potential available in the region are built-up by sector into regional totals. For the Eighth Power Plan, the Council may conduct a region-wide as well as a Bonneville Power Administration (BPA)-specific assessment and the Contractor should build the model to readily incorporate both territories for this study.

Scope of Work

The Council requests a Contractor to develop a model to estimate achievable technical demand response potential as a function of levelized cost for a variety of demand response products that could be implemented across the Pacific Northwest region¹ as well as for the Bonneville Power Administration (BPA) territory.² The model should allow for the assessment of both firm (i.e. dispatchable) and non-firm (i.e. tariff based) DR. This model will only consider electric DR (i.e. not natural gas or other fuels) and be limited to developing supply curves based on the cost of the resource and achievable technical potential. No cost-effectiveness assessment within the model is required. The Contractor will not be estimating the potential; rather, the Contractor is simply building a model that Council staff can use to make these estimates in a robust way.

¹ The region is defined by the states of Washington, Oregon, Idaho, and Western Montana. The Council will supply the selected Contractor the specific counties in Montana considered part of the region.

² BPA territory includes the area covered by all firm energy customers served by BPA.

Specific tasks are as follows:

Task 1- Develop a Demand Response Product List

The Contractor should start with the DR products considered in the [Seventh Power Plan](#) and should include products considered by BPA in their DR Potential Study.³ However, the Council expects the Contractor to recommend additional products. The product list will inform the parameters needed to estimate the cost and potential for each option and thus the list should be comprehensive to allow for the model to be sufficiently flexible. The Council's focus is on commercially available products, but the Contractor may include promising emerging products. The Contractor will share a draft product list with Council staff.

Deliverables and timeline

1. Draft product list – due June 15, 2018.
2. Final product list (including identifying key information needed to estimate cost and potential) – due June 29, 2018.

Task 2 – Develop Model

Based on the products identified in Task 1, the Contractor will develop a model that will be able to calculate levelized costs and estimate potential for each product. In general, the model should be able to develop potential from both a “bottom-up” and “top-down” approach. The bottom-up approach estimates the potential based on a per-unit impact multiplied by the number of units. A top-down approach estimates the potential from load savings disaggregated by end-use. The Contractor will coordinate with Council staff to understand the data availability from the load forecast.

Council staff are flexible to which software platform be used for the model. Robustness, ease of use, and transparency are critical components. Council staff anticipate being able to make any future updates and enhancements in-house, and would not require an on-going maintenance contract. Bidders should indicate in their proposal the choice of software platform and why.

Deliverables and timeline

Draft model – Aug 15, 2018.

³ BPA will be completing their DR potential study in late March, 2018.

Task 3 – Final Model and User’s Guide

Based on input from Council staff, the Contractor will make any revisions to the model and develop a user’s guide. The user’s guide should include information on how to use the model, as well as on the mechanics of the model itself, should enhancements be required. Contractor should anticipate at least one training session for Council staff.

Deliverables and timeline

Model training – September 1, 2018

Final model and users guide – September 28, 2018.

Timeline and Budget Expectations

All work performed under this Request for Proposals must be completed by September 28, 2018. There is no flexibility in the completion date insofar as the budget for the work resulting from this RFP cannot be rolled-over into FY 2019. The Council anticipates a price not to exceed \$25,000 for this project.

Proposal Review

All proposals meeting the RFP’s requirements will be evaluated by a proposal review panel consisting of members of Council staff. Proposals meeting the requirements will be evaluated on the following criteria:

- Proposer’s capabilities, experience, qualifications, and expertise in developing demand response potential assessment models
- Proposed software platform, including usability, transparency, and flexibility of model
- Price
- Ability and commitment to train staff on usage and complete deliverables on time

Selection of Winning Proposal

The review panel will make a recommendation to the Council for its consideration. The final decision on proposal selection, if any, will be made by May 25.

Proposal Instructions

Proposals should be sufficiently comprehensive for the Council to evaluate without requiring additional meetings or communication. All proposals shall be limited to 30 pages (not including CVs) and shall be organized according to the following topics and sequence:

- i. Overview of your company
- ii. Demand response potential assessment expertise
- iii. Modeling expertise
- iv. Project team with qualifications and roles, including any sub-contract arrangements
- v. Project approach
- vi. Proposed project schedule
- vii. Pricing
- viii. Example project descriptions with references (three preferred)

Any questions regarding this RFP shall be directed to Tina Jayaweera (tjayaweera@nwcouncil.org).

Please note that responses are limited to correcting errors in the RFP or clarifying the RFP's provisions. If such responses provide significant information that would assist a proposer in submitting a competitive proposal, such information shall be made available by reasonable means, such as posting on the Council's webpage, to all persons or entities who have received the RFP to ensure all bidders have access to the same information.

Disclosure Notice

The Council does its work in public as required by the Northwest Power Act. The Council, although not a federal agency, complies with the Freedom of Information Act (see [Council's policy](#)).

Discussion of the proposals with the Council will take place at a regularly-scheduled Council meeting that is open to the public. The Council will consider requests for non-disclosure of confidential commercial or financial information submitted with a proposal. Any such information considered by the submitter to constitute confidential commercial or financial information should be clearly marked and separate and distinct from the rest of the proposal. Any such confidential commercial or financial information will not be disclosed to persons outside the Council or Council staff. Be aware, however, that the Council strives to be as transparent as possible when conducting its business and therefore encourages submitters to be as transparent and open as possible about their work especially as it relates to factors submitters may want the Council to consider in selecting the winning proposal.

Council Bears No Costs or Obligations

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