

## **ATTACHMENT 4**

### **PROGRAM OVERVIEW AND REQUIREMENTS**

#### **TABLE OF CONTENTS**

#### **CONTRACT GENERAL OVERVIEW**

#### **AGENCY BACKGROUND**

#### **DEFINITIONS**

#### **TECHNICAL REQUIREMENTS**

#### **EVALUATION PARAMETERS**

#### **A. GENERAL OVERVIEW**

Bonneville Power Administration (Bonneville) is investigating how to effectively integrate Non-Wires Solutions (as explained in A.2) into our transmission planning process. This request for innovative pilot project proposals is intended to help determine whether non-transmission options can be employed as viable alternatives to transmission expansion.

Bonneville desires to contract for services for development and implementation of Non-Wires Solutions demonstration pilot projects which, when replicated and applied in a portfolio approach, will meet the reliability needs of Bonneville's transmission customers. We are examining the possibilities for deferring certain transmission construction projects for up to five years through a variety of measures including moving loads to off peak hours, using local distributed generation, and implementing energy efficiency measures targeted at reducing peak loads.

#### **A.1 GOALS OF SOLICITATION**

The pilot projects will:

- Demonstrate how, when, where, and under what circumstance portfolios of Non-Wires Solutions measures can provide regionally cost effective power system reliability comparable to the standard of reliability obtained through transmission construction;
- Focus on summer and winter peak loads because stress on the transmission system is most acute during these seasons;
- Demonstrate how utilities and others (e.g., large consumers or third-party aggregators) can identify and capture benefits from the proposed Non-Wires Solutions and demonstrate under what circumstances others are willing to cost-share in the non-wires pilot project development and implementation;
- Provide data for Bonneville's ongoing analysis of Non-Wires Solution's costs and benefits; and
- Be implemented within Bonneville's service territory.

Bonneville has already tested, or is testing, distributed generation aggregation, demand response, residential/commercial load control by means of fiber optics, whole building load control with energy management systems, and several energy efficiency measures with peak demand reduction potential. This solicitation is intended to expand on these options or to deliver more cost efficient or more reliable alternatives.

## A.2 BACKGROUND

Bonneville is a self-funding, cost-based federal agency within the U.S. Department of Energy. Based in the Pacific Northwest, Bonneville markets power from 31 federal hydro projects, one non-federal nuclear plant, and several other non-federal power plants. Bonneville also operates and maintains about three-fourths of the region's high voltage transmission system. The system includes more than 15,000 miles of transmission line and 285 substations. The lines network across 300,000 square miles throughout Bonneville's service territory in Oregon, Washington, Idaho, Montana, and sections of Wyoming, Nevada, Utah, and California. Bonneville recovers its costs by selling power, transmission services and other power related services at wholesale to the region's public utilities, municipalities, investor owned utilities, and some large industries. Bonneville also sells or exchanges power with utilities in Canada and the western United States. This transmission system serves an annual peak usage of about 30,000 megawatts and generates more than \$700 million a year in revenues from the sale of its transmission services. About 45 percent of all the electric power used in the Pacific Northwest comes from Bonneville.

Historically, Bonneville met transmission system capacity needs through construction of transmission lines, substations, and other technical capital investments. Over the last 15 years, Bonneville met the increasing demand for transmission services primarily with lower-cost upgrades such as voltage support devices, advanced controls, and temporary measures. The system has reached the point where reinforcement is necessary.

To address the reliability concerns, Bonneville identified 20 major infrastructure projects and is beginning construction on several new lines. In addition, Bonneville has initiated an effort to analyze the ways in which non-construction initiatives, generally referred to as Non-Wires Solutions, could provide reliable, cost-effective, cost-efficient and practical solutions that allow deferral of new construction. Deferring new transmission construction allows more certainty in the load profile of the project area and, therefore, reduces potential stranded costs. As a result, Bonneville has initiated an effort to develop new measures, technologies, systems, and management processes to aid in maintaining the reliability of the transmission grid without new construction.

The goal of the pilot projects is to test measures that could be elements of a portfolio capable of cost effectively matching the performance of new transmission capacity. We are not expecting each measure to deliver services identical to that of a new transmission line.

Bonneville formed a round table of Northwest leaders, ranging from regulators, to utility experts to environmentalists, to work with the agency in investigating how to effectively integrate non-construction solutions into its transmission planning process to fix transmission bottlenecks.

## A.3 DEFINITIONS

**COST EFFECTIVE** This solicitation assumes the Regional Cost Test, as defined by the Northwest Power and Conservation Council (<http://www.nwcouncil.org/energy/powerplan/CRAC/backdocs.htm>) and described in more detail in the Transmission Business Line document Policy Issue #3, Defining the Cost Tests at [http://www.transmission.bpa.gov/PlanProj/Non-Construction\\_Round\\_Table/NonWireDocs/P3.pdf](http://www.transmission.bpa.gov/PlanProj/Non-Construction_Round_Table/NonWireDocs/P3.pdf). This test includes all costs and benefits regardless of who pays and regardless of whether the elements apply to transmission, generation, or distribution.

**COST EFFICIENT** - A cost, where all other things being equal, is the lowest direct cost to Bonneville.

**DEMAND RESPONSE** - Load reduction contractually arranged or as price responses from end-use customers.

**DEMAND SIDE MANAGEMENT** – Implementation of measures which serve to control or influence electric demand.

**DIRECT LOAD CONTROL** - Load curtailed directly by a utility or dispatcher, without intervention of an operator at the end-use premises.

**DISTRIBUTED GENERATION** - Small-scale power-generation technology that provides electric power at a site closer to customers than central station generation. The term is commonly used to indicate non-utility sources of electricity, including facilities for self-generation.

**COMBINED HEAT AND POWER** (one form of Distributed Generation) - The consecutive generation of useful thermal and electric energy from the same fuel source, also referred to as cogeneration.

**COST SHARE** - The portion of total project costs that will be paid by the project sponsor(s). For the purpose of this solicitation, cost share must be actual direct financial costs. “In-kind” cost share will not be considered. Cost share will be calculated on the incremental part of the proposal when based on expansion of existing, planned, or mandated projects. (See also Incremental)

**ENERGY CONSERVATION** – Any reduction in electric energy consumption resulting from an increase in the efficiency of energy use. For the purposes of Non-Wires Solutions it refers specifically to measures where the savings impact peak loads.

**ENERGY EFFICIENCY** - used throughout this document to be equivalent to “energy conservation,” (see above.)

**FISCAL YEAR** – Bonneville’s fiscal year (FY) begins October 1 and ends September 30.

**INCREMENTAL** - the project and the funds to support the project must be an increase beyond what would have occurred absent this Non-Wires Solutions pilot projects solicitation. For example, if a project was planned (or mandated) but can be expanded beyond the original plan, only the portion beyond the original plan is “incremental.”

## **B. TECHNICAL REQUIREMENTS**

### **B.1 GENERAL REQUIREMENTS**

All Proponent responses must meet Bonneville’s Financial Assistance Instruction (FAI) requirements. These Instructions are available on BPA’s web site: <http://www.bpa.gov/corporate/business/bfai/>. The Financial Assistance Cooperative Agreement will be based on the information provided. Proposals failing to provide sufficient information to support a Cooperative Agreement under the FAI will not be considered.

### **B.2 SPECIFIC REQUIREMENTS**

All proposals must address the following issues to receive full consideration:

- a) The proposed pilot project demonstration shall be within Bonneville’s service territory in the Pacific Northwest.
- b) Proposal shall include a cost sharing plan which details the rationale for the specific cost share allocation(s), clearly defines the benefits of the proposed pilot demonstration to other entities including

the specific financial value of those benefits to other parties and to Bonneville. Proposals indicating significant cost share will receive more consideration. Letters of intent from cost share parties should be attached.

- c) Proposal must demonstrate how the project effort and the project cost share is incremental.
- d) Proposal shall demonstrate how the approach/technology could be replicated in Bonneville's service territory to meet the overall Non-Wires Solutions goals.
- e) Proposal shall demonstrate approaches not currently being tested by Bonneville, or substantial improvements on existing approaches.
- f) Proposal shall demonstrate either proven or substantially proven technology, which can include any demand side management option, including distributed resource options, direct load control or other approaches/technologies, which will meet the goals of this solicitation.
- g) Proposal shall detail the approaches, technologies, and methodology to be used in the pilot demonstration to measure and document results; including references and access to all studies used to support the technical assumptions of the proposal. This component shall include a strategy for evaluating the pilot's success, identification of barriers, and solutions to those barriers. Proposals specifically testing such solutions will receive more consideration.
- h) Proposal shall detail the specific non-wires methodology to be implemented, including all associated costs, project implementation timeframes, and an analysis of the probabilities for successfully meeting the pilot demonstration goals.
- i) Proposal shall include a coordination plan for working with retail utilities in any effort that might involve their end-use customers. This plan must include how the proponent intends to involve the impacted retail utility and Bonneville, keeping them informed of efforts, issues, impacts, and progress of the pilot.
- j) Proposal shall document the potential cost effectiveness of the proposal to the region and the cost efficiency of the proposal to Bonneville. The proposal should discuss the elements identified in the definition of cost effective in section A.3. The pilot projects must have the potential to be cost effective when included in a Non-Wires Solutions portfolio.
- k) Proposal shall include detailed work plan for implementing the proposal.
- l) Proposal shall demonstrate a clear understanding of the environmental impacts of the proposed approach/technology. Proposals with positive or minor negative environmental impacts will be favored.
- m) Proponent may be expected to present project findings with Bonneville at regional meetings/conferences or similar forums.

### **B.3 FORMAT REQUIREMENTS**

Proposals shall follow the order of information recommended in FAI 2.4(b), referred hereto as the **FAI outline** and should not exceed ten pages, **not** including the work plan or resumes. Information required to meet the Specific Requirements (B.2) which does not relate to the information categories listed in the FAI outline should be attached at the end of the proposal in the order listed in the Specific Requirements section (B.2). The work plan must be included as item (3)(C). Some of the information indicated in the FAI outline duplicates information required in the work plan (see Attachment A). This information can be addressed by reference to the work plan. It is recommended the entire Proposal, including all components, not exceed 30 pages.

All proposals shall include a single cover-sheet, providing the following information as applicable.

- a) Name of company, contact name, telephone number, fax number, e-mail address, and street address;
- b) Technology or concept to be addressed;
- c) A single paragraph summary of the Non-Wires Solutions application rationale;
- d) Total budget estimate; and
- e) A list of utility or other partners.

A complete table of contents shall follow the cover sheet.

All proposals shall use Attachment A in preparing the required work plan (see Specific Requirement k). Attachment A provides the standardized order and content to be included in the work plan. The work plan shall not exceed 10 pages. The information contained in the work plan will be a fundamental component in the Cooperative Agreement Bonneville will use to implement the financial assistance funding. Therefore, all components of the work plan must be completed and shall not be addressed by reference to other documents or sections of the proposal.

There are five alternative implementation scenarios. See B.5 regarding these options. The work plan must detail the scenario selected and the work plan schedule must meet these parameters.

See Section B.5 for requirements for a partial proposal option.

## **B.4 PRICING**

Total budget for this portion of the Non-Wires Solution initiative will not exceed \$1,000,000 in Bonneville's fiscal year 2005. No single proposed demonstration project will be funded for an amount in excess of \$500,000. Multiple proposals may be funded from this single request.

A pre-award presentation at the discretion of Bonneville may be required, and costs must be born by the proposer.

A post-award conference with the Contracting Officer's Technical Representative (COTR) will be required to discuss and agree on a detailed work plan and should be included in the proposal as part of the project costs.

## **B.5 SCHEDULE**

### **B.5.a – Proposals**

Proposals must be submitted to Bonneville per the dates noted in the cover letter.

**Scenario 1** - Proposal to meet winter peak demand in winter of 2004/2005: Must be implemented and operational by December 1, 2004, with testing completed by March 15, 2005. The final report shall be delivered to Bonneville no later than April 30, 2005.

**Scenario 2** - Proposal to meet summer peak demand in summer of 2005: Must be implemented and operational by May 15, 2005, with testing completed by September 15, 2005. The final report shall be delivered to Bonneville no later than October 31, 2005.

**Scenario 3** - Proposal to meet winter peak demand in winter of 2005/2006: Must be implemented and operational by December 1, 2005, with testing completed by March 15, 2006. The final report shall be delivered to Bonneville no later than April 30, 2006.

**Scenario 4** - Proposal to meet summer peak demand in summer of 2006 must be implemented and operational by May 15, 2006, with testing completed by September 15, 2006. The final report shall be delivered to Bonneville no later than October 31, 2006.

**Scenario 5 - Multi-year Scenarios:**

Proposals may be submitted for multi-year for both FY 2005 and FY 2006. The operational dates would be similar to the peak periods noted above, but the test period would be multi year.

OR

Proposals may be submitted for multi-years where the technology is installed any time during the previous year, but operational and tested during one peak period noted above for FY 2006.

Proposals that address both winter and summer peaks may also be submitted. The implementation and operation schedule dates must meet the requirement for those periods as noted above.

**B.5.b. Partial Proposals**

Proponents interested in submitting proposals under Scenario 3 or 4 may submit a partial proposal instead of a full proposal by the date indicated in the cover letter.

Partial proposals must include:

- a) Name of company, contact name, telephone number, fax number, e-mail address, and street address;
- b) Technology or Concept to be addressed;
- c) Non-Wires Solution application rationale;
- d) Budget estimate; and
- e) Potential utility or other partners

Bonneville expects to decide if it will pursue additional proposals by November 1, 2004. **NOT ALL PARTIAL PROPOSALS WILL BE INVITED FOR FURTHER CONSIDERATION.**

Bonneville will only consider partial proposals under two circumstances.

- 1) If sufficient proposals to meet the program goals were not received under the initial offer
- 2) To the extent a Partial Proposal provides:
  - a) Unique concepts not addressed in full proposals previously awarded under this solicitation;
  - b) Extraordinary value to Bonneville Transmission Non-Wires Solutions; or
  - c) Concepts with high Non-Wires Solutions potential, which were awarded to other parties but were not implemented.

All parties who submitted partial proposals will be notified by electronic mail of their proposal's status. Some partial proposals will be rejected while others will continue to be considered. Proposals still under consideration will be invited to submit full proposals by a new date, currently expected to be January 14, 2005.

### C. EVALUATION PARAMETERS

1) Amount of peak load (in kW) mitigation anticipated from the methodology and clear demonstration it can deliver and is incremental. Non-incremental projects will not be considered.
2) Proposal demonstrates the proposed pilot approach can be replicated in other areas of Bonneville's service territory.
3) Proposal quantifies the cost and benefit allocation of the approach/technology to all impacted parties.
4) Willingness to cost-share. Proposal demonstrates involvement of other parties in cost sharing in the implementation of the approach/technology. Bonneville will favor cost sharing of program efforts that are not already underway and budgeted, e.g., mandated energy efficiency programs, etc. Non-incremental cost share cannot be included, see definitions A.3. Proposals indicating significant cost share from parties other than Bonneville will receive more consideration.
5) Cost Effectiveness. Proposal's cost-effectiveness discussion includes sufficient detail to determine if proposal can be regionally cost effective in the appropriate circumstances. (Reference cost-effective definition in section A.3) Proposal must document cost efficiency to Bonneville.
6) Proposal includes a detailed work plan for proposal implementation.
7) Demonstrated awareness of the likely environmental impacts anticipated from implementation of the proposed technology(s) and systems. Proposals with positive or minor negative environmental impacts will be favored.
8) Coordination plan describing how the proposer will work with the local retail utility and Bonneville to market, implement, and evaluate the pilot project.
9) Evaluation strategy describes how the proposer intends to demonstrate success, identify barriers, and recommend solutions.
10) Plan for meeting the specific federal requirements, detailed in Attachment 3(clauses), where appropriate.
11) Contact information for at least three professional references.
12) Proposal includes information on the experience for both the company and listed staff, including resumes that clearly demonstrate ability to implement the proposed work plan.

## Attachment A

# Technical Exhibit

### WORKPLAN OUTLINE AND CONTENT

#### Part A – General

A.1 Goal of this Pilot Project Proposal

A.2 Pilot Project role in meeting the purpose and goals of the overall NWS initiative including how this proposal will meet the purpose and goals.

A.3 Location of project.

A.4 Property, information or services required from Bonneville to implement the proposal

<u>Description</u>	<u>Point of Delivery</u>	<u>Date</u>	<u>Disposition of Property at end of Project</u>
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A.5 Contractor furnished property or services.

A.6 Qualifications of the proposer and team.

A.7 References and resumes

#### Part B -- Technical Approach/Tasks of the Work Plan

B.1 General approach.

B.2 Methods to be used.

B.3 Specific requirements.

a. Basic statement of tasks to be performed to accomplish the pilot implementation. Must include expectation of staff assignments for technical task implementation.

b. Miscellaneous items to be included.

B.4 Deliverables (reports)

B.5 Time schedule (including progress check points, meeting with parties and other key dates).

Part C – Inspection and Quality Assurance recommendations.

Part D – Technical Exhibits

Must include a cost proposal which includes the following:

- a. Labor (specify the various types and rates); the types must match up with the task noted above;
- b. Materials (major items should be separately identified);
- c. Equipment (major items should be separately identified and estimated);
- d. Travel (see contract clauses for limitations on travel costs);
- e. Other direct expenses (be specific);
- f. Overhead (general and administrative costs, indirect expenses);
- g. Profit (where applicable); and
- h. See clauses for specific prohibited costs such as “taxes”