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April 25, 2006

## MEMORANDUM

**TO:** Council Members

**FROM:** Tom Eckman

**SUBJECT:** Briefing on Proposed Business Operating Plan and Funding Mechanism for the Regional Technical Forum

The purpose of this briefing is to provide a progress report on establishing stable and sustainable funding mechanism for the Regional Technical Forum (RTF).

The Council identified the need to secure additional funding to support the activities of the RTF in the 5<sup>th</sup> Plan. The staff developed a "Proposed Business Operating Plan and Funding Mechanism" for the RTF. This draft was reviewed by the RTF at its March meeting. The RTF approved the accompanying draft proposal for release for public comment. Staff distributed the proposal to a list of parties who have maintained an interest in the RTF's work. Staff will present an overview of the proposal and summarize the limited public comment we have received. Staff will also be recommending that the next step in this process is to now seek three-year financial sponsorship commitments from Bonneville and the region's largest utilities and system benefit charge administrators to support the RTFs work.

The attached proposal contains a brief overview of the origin of the RTF, its major work products, a summary of its income and expenditures that may be useful as background to this discussion.

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## Proposed Business Operating Plan and Funding Mechanism

March 13, 2006

**Introduction:** The purpose of this document is to set forth a proposal for how the Regional Technical Forum (RTF) can carry out the functions assigned it by Congress, the Comprehensive Review of the Northwest Power System and the Council on a sustained basis. This proposal describes the RTF's historical role, activities and funding and then provides a vision for the RTF future role and mechanism for funding its activities.

**Background:** In 1995, the Bonneville Power Administration (Bonneville) began to shift responsibility for financing and acquiring conservation savings over to its utility customers. This shift in responsibility was intended to reduce Bonneville's costs and permit utilities to better tailor their programs to local situations. Congress recognized that one implication of this shift would likely be a more diversified approach to conservation acquisition across the region. Consequently, in 1996 it directed Bonneville and the Northwest Power Planning Council (Council) to convene a Regional Technical Forum (RTF) to develop standardized protocols for verifying and evaluating conservation savings. This was considered valuable because of the continued high importance of conservation and necessary because of the anticipated decentralization and fundamental redesign of conservation programs. Congress further recommended that the RTF's membership include individuals with technical expertise in conservation program planning, implementation, and evaluation and that its services be made available to all utilities in the Northwest.

The Comprehensive Review of the Northwest Energy System (Comprehensive Review) supported the Congressional directives and recommended that the RTF should, in addition, track conservation and renewable resource goals and provide feedback and suggestions for improving the effectiveness of conservation and renewable resource development programs in the region. The Comprehensive Review also recommended that the RTF conduct periodic reviews of the region's progress toward meeting its conservation and renewable resource goals at least every five years and communicate recommended changes to appropriate decision-makers. These periodic reviews are to acknowledge changes in the market and adjust target appropriately.

The Comprehensive Review's recommendations were based on its perception that the region needed to track conservation activities and renewable resource development systematically to assess whether public purpose goals are being achieved. The Comprehensive Review also stated that the uniform standards for verification and evaluation will become increasingly important as consumers gain access to energy service markets where utilities and new market entrants can expect to compete for "public purpose" funds to meet consumer demands for energy services.

In February of 1999 the Administrator of the Bonneville Power Administration requested that the Council also charge the RTF with providing specific recommendations to the agency to assist it in

the implementation of a conservation and renewable resource rate discount. These recommendations were to include a list of measures that would qualify for the rate discount and evaluation protocols that could be used to establish the savings associated with more complex or unique efficiency improvements and the output of certain distributed or direct-application renewable resources.<sup>1</sup>

At its April 1999 meeting the Council voted to form the RTF to facilitate the development of the conservation and renewable resources identified in the Council's Plan and to assist the Bonneville Power Administration in implementing a Conservation and Renewable Resources Rate Discount.<sup>2</sup> Specifically, the four goals adopted by the Council for the RTF corresponding to its original charge from Congress and the Comprehensive Review were to:

1. Develop standardized protocols for verification and evaluation of energy savings and the performance of renewable resources.
2. Track regional progress toward the achievement of the region's conservation and renewable resource goals.
3. Provide feedback and suggestions for improving the effectiveness of the conservation and renewable resource development programs and activities in the region.
4. Conduct periodic reviews of the region's progress toward meeting its conservation and renewable resource goals at least every 5 years, acknowledging changes in the market for energy services and the potential availability of cost-effective conservation opportunities.

Consistent with these goals, the RTF was called upon to make recommendations to Bonneville to facilitate the operation of the "Conservation and Renewable Resources Discount program (C&RD). These recommendations included:

- A list of eligible conservation measures and programs, the estimated savings associated with those measures and programs, and the estimated regional power system value associated with those savings.
- A process for updating the list as technology and standard practices change and an appeals process through which customers can demonstrate that different savings and value estimates should apply.
- A set of protocols by which the savings and system value of measures/programs not on the list could be estimated. These would include complex commercial or industrial projects.
- Criteria for eligible renewable resource projects.
- Recommended protocols for measurement and evaluation of savings or production.

It was envisioned that the RTF would analyze the information submitted by customers to Bonneville to claim their discounts in order to track the kinds of conservation measures being implemented, the costs and electricity savings achieved and the quantities and types of renewable resource research, demonstration or production achieved with the discount. The purpose would be to provide a regional level assessment of the effectiveness of the conservation and renewable resource discount (C&RD). The RTF would also have the ability to carry out, through staff or contractors, a limited number of targeted evaluations. These evaluations were intended to improve understanding of the cost and

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<sup>1</sup> To view Bonneville's complete request see: <http://www.nwcouncil.org/energy/rtf/charter.htm>

<sup>2</sup> The Regional Technical Forum was chartered by the Council under the Pacific Northwest Electric Power Planning and Conservation Act, P.L. 96-501, 16 U.S.C. §839 et seq. in Section 4 which authorizes the Pacific Northwest Electric Power and Conservation Planning Council to ". . . establish such other voluntary advisory committees as it determines are necessary or appropriate to assist it in carrying out its functions and responsibilities . . ."

performance of technologies or applications that proved to be popular and with which there is relatively little experience.

**Historical Activities and Funding:** The RTF held its first meeting in July of 1999. Throughout the remainder of 1999 until August of 2000 the RTF prepared its initial recommendations to Bonneville.<sup>3</sup> These recommendations were delivered to Bonneville on September 1, 2000 and served as the basis for its early implementation of the C&RD program.

Over the course of the next five years the RTF met more than 50 times to review, revise, refine and augment its recommendations to BPA and to other utilities, Northwest Energy Efficiency Alliance and system benefits charge administrators (e.g., the Energy Trust of Oregon). The RTF conducted technical reviews of potentially cost-effective efficiency measures, updated program specifications and developed the scope of work for the first regional evaluation of the performance of air source heat pumps. Per its charge from the Council, the RTF surveyed the region's utilities in 2000, 2002 and 2004 to assess regional progress on conservation and reported these results to the region.<sup>4</sup>

From the formation of the RTF in 1999 until 2004 much of the RTF's work effort was focused on developing the data, specifications and evaluation protocols and tracking and reporting software for use in Bonneville's C&RD program. Consequently, during this period the Council and Bonneville underwrote all of its activities. However, when it formed the RTF, the Council envisioned that it would have a broader purpose. In keeping with the instructions it received from Congress and the Comprehensive Review, the Council intended that the work and services of the RTF would be made available to all of the region's utilities.<sup>5</sup> In order to spread the cost of supporting the RTF among all of the parties that might benefit from its services, the Council solicited funding support from the region's investor owned utilities and system benefits charge administrators in late 2003.<sup>6</sup> Several entities responded to this request by providing funds to support the work of the RTF. Table 1 shows the RTF's historical sources of funding and major categories of expenditures for fiscal years 2000 - 2005. Table 1 does not include Bonneville funding for the development and maintenance of the online planning, tracking and reporting systems used by Bonneville nor does it include the cost of Council staff support for the RTF.

As can be seen from Table 1, Bonneville has provided approximately 35 percent of the RTF's funding over the past five years. The remaining 65 percent of RTF funding has come from three of the region's investor owned utilities and the Energy Trust of Oregon. .

Averaged over this five-year period the RTF's annual operating budget has been about \$100,000 not counting Council or Bonneville staff support costs and RTF member costs. The bulk (80%) of the RTF's funds were spent on consultant contracts to review energy efficiency technologies and develop better estimates of energy savings and costs, the largest of which was an investigation of the performance of air source heat pumps. Other examples of these contracts include the review of an

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<sup>3</sup> See <http://www.nwcouncil.org/energy/rtf/crd/recommendations/recommendations.pdf>

<sup>4</sup> See <http://www.nwcouncil.org/energy/rtf/consreport/Default.asp>

<sup>5</sup> All of the RTF's work products are in the "public domain" and to facilitate their use nearly all of them are posted on the Council's web site so this information is available to anyone with Internet access anywhere in the world. In addition, the RTF arranges for "guest accounts" on the RTF and Bonneville's online conservation program planning, tracking and reporting system to provide more efficient access to the results of its analysis.

<sup>6</sup> To encourage utility contributions to the RTF, Bonneville agreed to make such contribution eligible for credit under its C&RD program. Contributions to the RTF will no longer be eligible for credit under Bonneville's Conservation Rate Credit program.

electronic motor controller by staff from the Washington State University Energy Program and Oregon State University Motor Testing Laboratory and an analysis of the impact of duct system efficiency on heat pump performance.

<b>TABLE 1 - SUMMARY OF REGIONAL TECHNICAL FORUM INCOME AND EXPENSES FOR FISCAL YEARS 2000 - 2005</b>	
<b>INCOME</b>	
Avista	\$ 25,000
Bonneville Power Administration	\$ 188,803
Energy Trust of Oregon	\$ 50,000
Idaho Power Company	\$ 55,000
Puget Sound Energy	\$ 200,000
Sub-Total Income	\$ 518,803
<b>EXPENSE</b>	
Member Special Project Support	\$ 30,038
Technology Reviews/Evaluations	\$ 324,098
Software Development Support	\$ 41,000
Meetings and Travel	\$ 12,834
Sub-Total Expenses	\$ 407,970
<b>BALANCE</b>	<b>\$ 110,833</b>

In addition to expenditures for consultant services, the RTF has used its funds to provide limited reimbursement for the labor of some members when they are asked to spend a significant amount of time on special projects such as the detailed review of program technical specifications, staff technical analysis and consultant work products. The remainder to the RTF budget has been used for travel and meeting cost reimbursement and to secure software-programming assistance.

**Future Activities and Budget:** The RTF’s specific work plan is dictated by the requests it receives from parties within the region, primarily utilities, Bonneville, the Energy Trust of Oregon, the Northwest Energy Efficiency Alliance and state energy agencies. These requests fall into four major categories:

1. Development, review and revision as needed of the cost and savings associated with new or existing energy efficiency measures, technologies and practices.
2. Development, review and revision as needed of measurement and verification protocols to estimate savings from new or existing energy efficiency measures, technologies and practices
3. Development, review and revision as needed of program specifications.
4. Identification of the need for, and the scope of, evaluations or research and demonstration activities to improve energy savings estimates.

The RTF identified a number of specific issues that it believes should be addressed during the coming year fall within these four activity categories. Table 2 shows the major task or work elements that the RTF expects to comprise its “core functions” during fiscal year 2006. Since the

RTF members are volunteers and the amount of time Council (and Bonneville) staff can devote to supporting the work of the RTF is limited, Table 2 also shows the estimated budget needed to cover consultant services to carry out each task.

As can be seen from a review of Table 2 about 70 percent of the RTF's anticipated expenditures in Fiscal 2006 will be for tasks directed at improving the accuracy of savings estimates.<sup>7</sup> One of the major goals of this work is to develop the measurement and verification protocols for evaluating technologies or programs that are or may soon be implemented in the region, such as the Energy Smart Grocery program. In other cases, such as the Commercial Packaged Roof Top Air Conditioning, the goal of the work is to determine what steps are needed to move this measure from "resource potential" to "program implementation."

Task/Work Element	Estimate Budget	Share of Total
Review Savings Estimates for Regional Utility/SBC Program Initiatives	\$ 50,000	17%
Federal Energy Act Implications for Measure Savings/Program Design	\$ 10,000	3%
Technology Reviews, Evaluation and/or Research and Demonstration Scoping		
Commercial Packaged Roof Top Air Conditioning	\$ 25,000	
Evaporator Fan Control - M&V Protocol Development and Field Testing	\$ 15,000	
Energy Smart Grocer Program Evaluation SOW Development	\$ 10,000	
New Commercial Construction Baseline and M&V Protocol Development	\$ 50,000	
Pre-Rinse Spray Head Measure Savings Evaluation SOW Development	\$ 10,000	
Reserve for Other Technologies Based on Regional Request/Petitions	\$ 50,000	
	<b>Sub-Total</b> \$ 160,000	53%
Member Special Project Support	\$ 40,000	13%
Regional Conservation Progress Tracking	\$ 25,000	8%
Meetings	\$ 15,000	5%
	<b>Total</b> \$ 300,000	100%

Nearly twenty percent of the RTF's budget is expected to be used to review savings estimates from existing utility/system benefits charge administrator programs. A little less than ten percent of the RTF's expenses are anticipated to be used to cover the cost of establishing a regional conservation tracking process that include all utility and Bonneville activities and expenditures. The primary cost of this task is the modification of the Internet-based Planning, Tracking and Reporting system.<sup>8</sup>

Slightly less than 15% of the RTF's budget is expected to be allocated to compensating RTF members when they are asked to devote significant additional time to RTF work tasks and/or when they would not otherwise be compensated by their employer for participation in RTF work. For

<sup>7</sup> Approximately 17% is allocated to reviewing utility/SBC administrator savings estimates and an additional 53% is set aside for technology reviews and evaluation.

<sup>8</sup> See The Fifth Northwest Electric Power and Conservation Plan, Executive Summary. Action Item CNSV-8, p41.

example, some RTF members are private consultants who are willing to provide *pro bono* time to serve on the RTF. However, they are not able to allocate 10 - 20 additional hours to a detailed revision of technical specifications or technology review.

**Future Funding:** The RTF's Estimated Budget for fiscal year 2006 is significantly above its average annual expenditures during prior fiscal years. There are two reasons for this. First, during the past two fiscal years (2004 and 2005) Council staff members supporting the RTF were heavily engaged in the development of the Council's 5th Power Plan. This severely limited the amount of time they could devote to RTF activities, including the scoping and management of technical consultant contracts. Second, in order to achieve the conservation targets in the Council's 5<sup>th</sup> Plan, the level of conservation acquisition in the region must increase. Consequently, the RTF anticipates an increase in the demand for its services, particularly those focused on the identification and scoping of program impact evaluations.

Several of the work elements shown in Table 2 are directly focused on developing "work scopes" for what are likely to be much larger research or evaluation projects. These larger projects will not be funded through the RTF. It is anticipated that they will be funded on a "special subscription" basis. An example of this process is the scope of work the RTF developed for a regional heat pump evaluation. Based on a review of the level of activity and limitations of existing savings data, the RTF identified the need for an evaluation of the energy savings produced by the conversion of existing electric resistance heated homes to air source heat pumps. Using approximately \$65,000 funding for its "core activities" the RTF contracted with a consultant to develop a scope of work that included the field and laboratory testing of heat pump performance as well as an analysis of utility bills for homes that had their heating systems converted to heat pumps. Once the scope of work was completed it was shown to organizations in the region to determine if they would be interested in co-funding the full research project. Bonneville and several regional utilities subsequently funded the much larger (over \$300,000) research project.<sup>9</sup> This project's results are now being used to revise savings estimates for residential heat pumps and program protocols and specifications to assure those savings are achieved.

The Council noted in its 5<sup>th</sup> Plan that it believed developing a stable and sustainable source of funding for the RTF's activities would be in the region's interest.<sup>10</sup> To date the work of the RTF has been funded by the Council, through provision of staff support, by contributions from Bonneville, three of the region's investor owned utilities and the Energy Trust of Oregon. Although nearly all utilities have likely benefited in some way from its work, only a few have financially supported its activities directly. This fact combined with the directive from Congress that the services of the RTF are to be made available "*to all utilities in the Northwest*" seems to warrant an effort to secure a broader basis of funding.

One alternative for broadening the basis of RTF's financial support is to request funding from all utilities in the region in a manner akin to that used by the Northwest Energy Efficiency Alliance, i.e., on the basis of share of regional load. While on the surface this appears simple and equitable it has some drawbacks. First, it would be a cumbersome approach for the relatively small RTF annual budget of about \$300,000 per year. Soliciting and managing multiple small contributions through contracts or other agreements would increase the workload of Council administrative staff without necessarily resulting in any increased funding for RTF activities. A second limitation of this

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<sup>9</sup> Bonneville, the Energy Trust of Oregon, the Northwest Energy Efficiency Alliance and Idaho Power Company (through a portion of its contribution to the RTF) co-funded the project.

<sup>10</sup> See The Fifth Northwest Electric Power and Conservation Plan, Executive Summary. Action Item CNSV-3, p38.

approach is that not all utilities perceive they benefit equally from RTF activity. This perception has its basis in fact, since the RTF has historically focused much of its work on tasks to support Bonneville's programs even though just over one-third of its historical funding has come from that agency.

Rather than adopt a formal allocation schema based on share of regional load, it is proposed that the RTF establish a "subscription" system. Under this system, the "core services" of the RTF would be available to subscribing parties. Bonneville, individual utilities, joint operating agencies, system benefit charge administrators and other program funding organizations would all be offered the opportunity to subscribe.<sup>11</sup> To ensure administrative simplicity there would be a minimum annual subscription fee of \$5000. Larger fees would be established for those entities, such as Bonneville, that rely on the RTF more directly for program support or that agree to rely on RTF work as part of a regulatory agreement, such as Puget Sound Energy. In consultation with the RTF, Council staff would periodically review and revise these fees depending on the work plan of the RTF and how larger entities were using the services of the RTF. Multiple-year subscriptions would be available to minimize administrative overhead and to facilitate work plan management.

In addition to its "core services" the RTF intends to continue to develop work produces such as work scopes for program evaluations, research and demonstration projects and other activities that are of interest to its subscribers. However, funding for the implementation of these projects would be solicited separately.

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<sup>11</sup> Utilities who are currently receiving all of their power from Bonneville would not be asked to subscribe, nor would utilities whose energy efficiency programs are being operated by a separate system benefits charge administrator.



## Regional Technical Forum

### Regional Technical Forum Proposed Business Operating Plan and Funding Mechanism

May 9, 2006



### 5th Plan Set Forth Two Tasks Related to Regional Technical Forum

- “. . . establish a mechanism and funding to track and report regional conservation investments and accomplishments annually.”
- “. . . define the role, funding, and structure of the Regional Technical Forum.”

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## Progress to Date – Regional Conservation Tracking

- RTF Online Planning, Tracking and Reporting (PTR) System has been modified to permit tracking of “utility funded” conservation activities and well as Bonneville funded activities
  - Bonneville funded this modification as part of an overall system enhancement
  - First full year of reporting - 2007
- RTF PTR System is now located on a “dedicated server” at the Council to permit additional system enhancements and facilitate data analysis

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## Progress to Date Proposed Role, Structure & Funding

- RTF Released Proposal for Review Mid-March
- Maintain current role and structure
  - Establish standardized protocols, provide technical support to regional utility and Bonneville conservation programs, track regional conservation program cost and savings
  - Members appointed by Power Division director
    - » Mostly volunteers
    - » Some members receive “honoraria” to ensure technical balance and independence
- Secure stable external funding of \$300,000/yr through subscription/sponsorship system

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## Progress to Date Comments on Proposed Role, Funding & Structure

- Comments –
  - NRDC, PSE & ODOE supports multi-year agreement among major NW utilities and BPA to fund RTF in rough proportion to load (similar to Alliance)
  - BPA requested more detail on anticipated demands on agency staff and multi-year funding expectations
  - All endorsed need for and value of RTF work

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## RTF External Financial Support – The RTF's Technical Work

- Staff support
  - Council staff time not covered by external funding
  - Bonneville provides limited technical staff support
- RTF members are volunteers
  - Some members receive “honoraria” for time spent on RTF tasks (meetings, special assignments) if not otherwise compensated by employer
- RTF retains outside consultant services when special expertise is required

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## RTF External Financial Support Income FY2001 – FY2005\*

Source	Amount
Avista	\$ 25,000
Bonneville Power Administration	\$ 188,803
Energy Trust of Oregon	\$ 50,000
Idaho Power Company	\$ 55,000
Puget Sound Energy	\$ 200,000
<b>Total Income</b>	<b>\$ 518,803</b>

\*Staff first solicited non-BPA financial support for RTF's Technical Work in November 2003

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## RTF External Financial Support Expenses FY2001 – FY2005

Activity	Amount
Member Special Project Support	\$ 30,038
Technology Reviews/Evaluations	\$ 324,098
Software Development Support	\$ 41,000
Meetings and Travel	\$ 12,834
Total Expenses	\$ 407,970
<b>Current Balance</b>	<b>\$ 110,833</b>

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## Proposed Annual RTF Budget FY2007 – FY2009

Task/Work Element	Estimated Budget	Share of Total
Review Utility/SBC Savings Estimates	\$50,000	17%
Federal Standards Implications for Measure Savings/Program Design	\$10,000	3%
Technology Reviews, Evaluation and/or Research and Demonstration Scoping	\$160,000	53%
Member & Special Project Support	\$40,000	13%
Regional Conservation Progress Tracking	\$25,000	8%
Meetings	\$15,000	5%
<b>Total</b>	<b>\$300,000</b>	<b>100%</b>

## Proposed Annual Sponsorship FY2007 – FY2009

Organization	Sponsorship	Retail Sales Share (2003)
Bonneville Power Administration	\$125,000	NA
Puget Sound Energy	\$35,000	13%
Energy Trust of Oregon	\$30,000	21%
Idaho Power Company	\$25,000	9%
Avista	\$20,000	5%
Seattle City Light	\$15,000	6.0%
Snohomish PUD	\$15,000	4.1%
Tacoma Power	\$15,000	2.8%
PacifiCorp (Outside Oregon)	\$10,000	5%
Northwestern	\$5,000	2%
EWEB	\$5,000	1.7%
<b>Total</b>	<b>\$300,000</b>	<b>70.3%</b>

## Next Steps

- Draft response to Bonneville regarding multi-year funding and staff support expectations
- “Shop” proposal to potential funding organizations to secure commitments for multi-year sponsorship
- Revise Business Operating Plan, Scope of RTF Activities and Budget Based on Response for financial support