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June 5, 2018

MEMORANDUM

TO: Council Members

FROM: Jennifer Light and Garrett Herndon

SUBJECT: Regional Technical Forum 2017 Annual Report

BACKGROUND:

Presenter: Jennifer Light and Garrett Herndon

Summary: The Regional Technical Forum (RTF) submits its 2017 Annual Report to the Council as a means to inform Council members of the activities undertaken by the RTF over the course of the previous year, and to provide an update of ongoing work to date in the current calendar year. In 2017, the RTF continued to foster regional collaboration, refine its core functions, and investigate where it will be most useful next.

This past year the RTF improved its existing work products and advanced new ones. The RTF updated a number of its analyses in response to the latest data and evolving program needs. Examples of this were updates to residential lighting measures as federal standards shifted future potential savings estimates, and as market data came to light that better informed these estimates. Additionally this past year the RTF put forward measures responsive to shifting program methods, such as a measure for non-residential lighting delivered through midstream channels.

Moreover, 2017 was a year marked by improved transparency and communication efforts for the RTF. The RTF made a conscious effort this past year to publish more articles for public consumption, easing the

explanation of complex concepts often employed at the RTF, and allowing more opportunity for additional context of RTF decision making. Additionally, the RTF published a number of foundational informational videos on the web to introduce a broader audience to the RTF's work. These efforts are essential to the RTF remaining a transparent and public resource for the region that is fueled by stakeholder participation.

The RTF also made great strides in advancing an improved understanding of new concepts for the organization in 2017. The year marked the continuation of an effort spurred from the Seventh Power Plan to examine the quality of capacity savings calculations from RTF measures. The RTF, working with a contractor, developed a framework for evaluating these calculations and the load shapes that they depend on, and a series of memos detailing these evaluations were started. Also, the RTF examined its potential role with regards to demand response, investigating where it could serve to provide the most value to the region. Going forward, the RTF looks to build upon this work and continue to act as a valuable resource to stakeholders across the northwest.

Relevance: The RTF is an advisory committee to the Council, funded by Bonneville, Energy Trust of Oregon, regional utilities, and Council in-kind support.

Workplan: A.1.4. Conservation, Continue to lead the Regional Technical Forum and engage in the development and approval of measure savings estimates and protocols.

Background: Per its charter, the RTF is required to publish an Annual Report by mid-year. The 2017 Annual Report provides work highlights and financials for the 2017 calendar year. It also provides a preview of progress made to date in 2018. The annual report will be provided to the Council at its June meeting and made available on the RTF website.

Regional Technical Forum 2017 Annual Report

June 2018 Council Meeting Portland, Oregon



Formation of the RTF

- In 1996 Congress directed the Council and Bonneville to create a regional technical forum
- Focus on regionally consistent evaluation standards for energy efficiency
- Council created the RTF in 1999

Senate Report, Energy & Water Development Appropriations Act of 1996 (11/27/95)

BONNEVILLE POWER ADMINISTRATION FUND

The Bonneville Power Administration is the Federal electric power marketing agency in the Pacific Northwest, a 200,000-square-mile service area that encompasses Oregon, Washington, Idaho, western Montana, and small portions of adjacent Western States in the Columbia River drainage basin. Bonneville markets hydroelectric power from 20 Corps of Engineers and Bureau of Reclamation projects, as well as thermal energy from non-Federal generating facilities in the region. Bonneville also markets and exchanges surplus electric power internationally over the Pacific Northwest-Pacific Southwest Inter tie with California, and in Canada over interconnections with utilities in British Columbia.

Bonneville constructs, operates and maintains the Nation's largest high-voltage transmission system, consisting of 14,800 circuits of transmission line and 350 substations with an installed capacity of 25.7 gigawatts.

Public Law 92-464, the Federal Columbia River Transmission System Act of 1974, placed Bonneville on a self-financed basis. With the passage in 1982 of Public Law 97-661, the Pacific Northwest Electric Power Planning and Conservation Act, Bonneville's responsibilities were expanded to include meeting the net firm load growth of the region, investing in cost-effective, renewable energy conservation, and acquiring generating resources to meet these requirements.

Borrowing authority.—A total of \$3,782,000,000 has been made available to Bonneville as permanent borrowing authority. Each year the Committee reviews the budgeted amounts Bonneville plans to use of this total and reports a recommendation on those borrowing requirements. For fiscal year 1996, the Committee recommends an additional increment of \$18,000,000 to new borrowing authority, the same as the budget request, for transmission system construction, system replacement, energy resources, fish and wildlife, and capital equipment programs.

The Committee continues to support the concept of financing a portion of capital investments from revenues and alternatives such as the use of bond-proceeds financing to extend the availability of the current total borrowing authority. The Committee programs that the entire budget authority requested in this report for the future, including additional funds to replenish Bonneville's borrowing authority, will be very difficult.

Budget revenues and verification.—The Committee expects Bonneville to adhere to the borrowing authority utilization recommendations by the Congress and promptly inform the Committee of any significant circumstances which would necessitate approval for Bonneville to stabilize borrowing authority in excess of such amounts.

Payment.—During fiscal year 1996, Bonneville plans to pay the Treasury \$765,000,000, of which \$200,000,000 is to repay principal on the Federal investment in these facilities.

Limitation on direct loans.—Language was requested permitting Bonneville to make direct loans—language not in excess of \$20,000,000. The Committee has an interest in providing such authority that no new direct loans be made in fiscal year 1996.

Regional technical forum on conservation program evaluation and verification.—Bonneville's retention of conservation is intended to allow utilities to develop and implement conservation strategies that are better tailored to their local situations. As a consequence, the Northwest can anticipate a more diversified approach to conservation evaluation. With this diversification comes the need to develop regionally consistent evaluation standards and protocols for assessing the energy savings produced by these more varied programs, and ensuring that the region continues to meet the Northwest Power Planning Council's targets for securing cost-effective conservation. In order to facilitate development of such standards and protocols, Bonneville and the Northwest Power Planning Council should promptly convene a regional technical forum as a conservation program evaluation and verification. The forum's membership should include individuals with technical expertise and experience in conservation program planning, implementation, and evaluation. Its services should be available to all Northwest utilities, and its immediate priority should be to develop consistent standards and protocols for verification and evaluation of energy savings, in consultation with all interested parties. By developing standards and protocols of generalized applicability, the forum should be able to improve program quality and reduce program costs.

Renewable energy.—The Committee has been interested in Bonneville's efforts to support the development of renewable energy in the Pacific Northwest. Given Bonneville's mission, it is important for Bonneville to play a leadership role in ensuring that renewable energy is included in the mix of the region's resources. The Committee understands that Bonneville is developing a green power product to market the power from renewable resources. The Committee expects that Bonneville will be aggressive in these marketing efforts. The Committee understands that Bonneville is reevaluating its current portfolio of renewable resources and urges Bonneville to support renewable resource development. The Committee supports the efforts of Bonneville and the project developers to bring the costs of the proposed projects.

Residential energy.—The Committee is concerned that in the recently proposed rate case for the Bonneville Power Administration, there is a proposal to reduce rates for public power and direct service loadings but substantially increase the cost of power exchanged with some residential customers of investor-owned and utility-owned utilities. The Committee has been told that this increase in residential rates results from the implementation of a change in the Pacific Northwest Electric Power Planning and Conservation Act. It has been suggested by some that the increase has been applied inequitably, while others argue that it has been applied properly. The Committee would be greatly interested if the provision has been applied unfairly or inappropriately. Bonneville is directed to provide the Committee with an explanation and justification of its proposal at the earliest possible date.

Senate Report, Energy & Water Development Appropriations Act of 1996



About the RTF

- Composed of individuals with technical expertise in planning, implementation, and evaluation
- Creates estimates used in program planning and evaluation through non-biased expertise, public processes, and transparent methods
- Is data driven and develops work products in response to regional interest and need
- Conducts annual survey of regional conservation progress from regional efficiency efforts

Annual Report Overview

Highlights from 2017

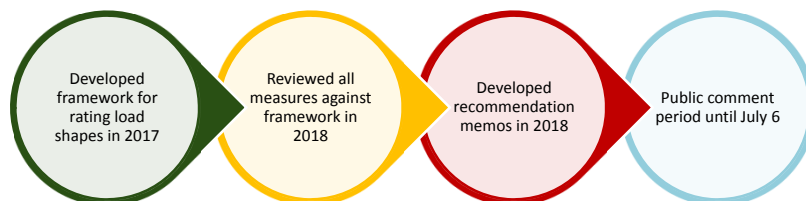
- Reviewing measure suite to determine the reliability of our capacity benefit estimates
- Enhancing measure library in concert with market research
- Improving RTF transparency through new platforms

Progress in 2018

- Development of new measures
- Ensuring symmetrical treatment of costs and benefits

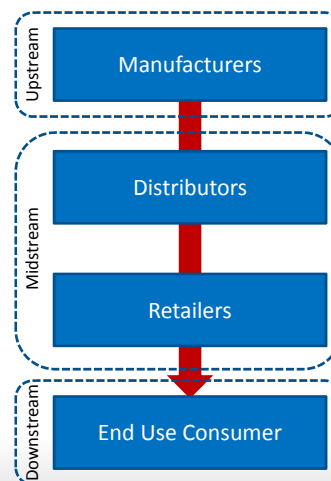
The Capacity Contribution of Efficiency

Seventh Plan, ANLYS-10: Include reliability of capacity savings estimates in RTF guidelines.



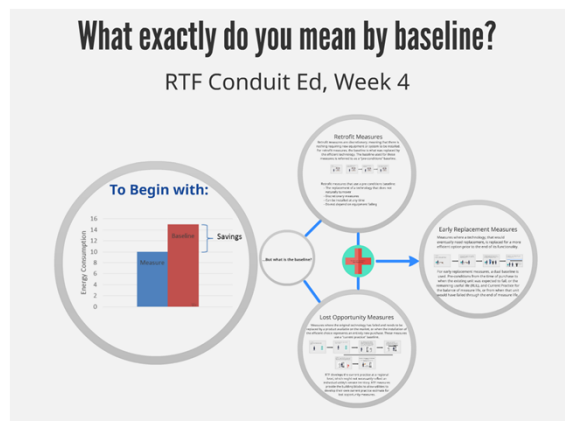
Shifting Nature of Programs

- Many RTF measures support downstream programs
- As utilities shift to midstream approaches, RTF has evolved its measure suite
- Midstream measures:
 - Require greater judgment around where efficiency ends up
 - Benefit from improved understanding of the market
- Addition of Market Analysis Subcommittee supports this shift



Enhanced Communications

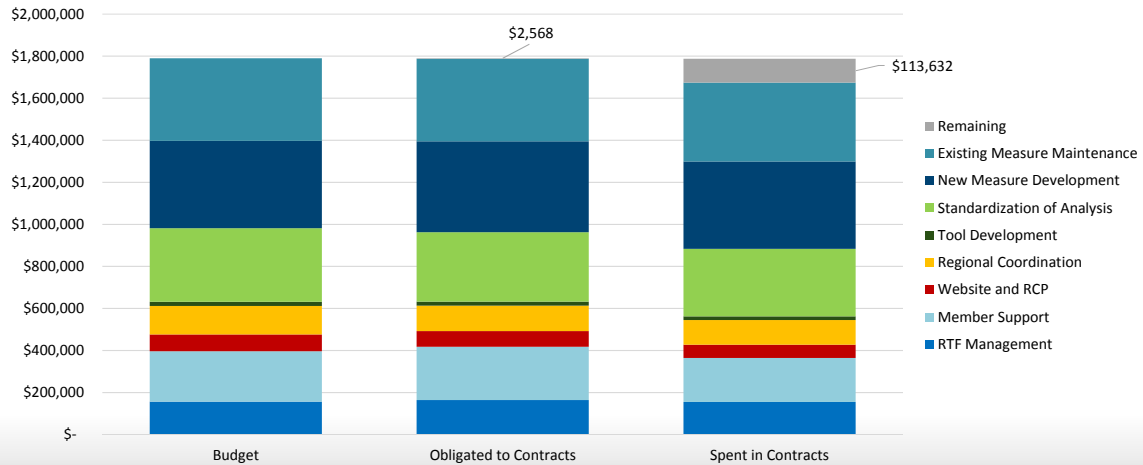
- Enhanced website for providing access to RTF analysis
- Created news items to highlight noteworthy measures or analysis
- Developed materials for communicating highly technical analysis to a broader audience



Enhanced Communications



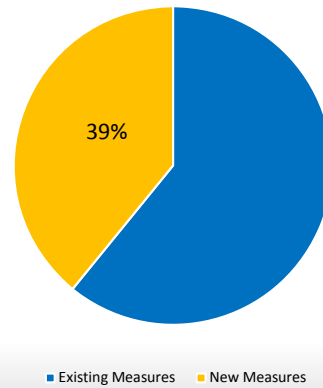
2017 Year End Financials



New Measures in 2018

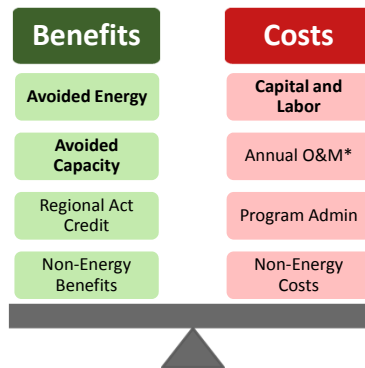
- Significant portion of measures approved in 2018 are new
- Measures cover: residential, commercial, agricultural, and small/rural
- Planning to address more new measures, including work on measuring savings from whole building approaches

Measures Updated in 2018



Ensuring Consistent Measure Analysis

- Updated Operative Guidelines which provide clarity on RTF analysis approach
- Planning to conduct a systematic review of all measures to ensure symmetrical treatment of costs and benefits



2018 Work Plan Status

