Regional Technical Forum 2025-2029 Business Plan

Final Approved November 5, 2024

Introduction

The Regional Technical Forum (RTF) is an advisory committee to the Northwest Power and Conservation Council (Council). The RTF meets monthly to review analysis and make decisions on methodologies for estimating energy efficiency savings and demand response impacts. The RTF is supported by Council staff and outside contractors that manage the workflow and conduct technical analysis. This document describes the RTF's role, funding, operations and staffing, and planned activities for the 2025-2029 period.

Role of the RTF

The RTF was formed in 1999 as an advisory committee to the Council in response to a directive from Congress (1996) and the 1996 Comprehensive Review of the Northwest Energy System. The primary roles of the RTF have been, and continue to be:

- Developing and maintaining a readily accessible list of eligible conservation resources, the estimated lifetime costs and savings associated with those resources, and the estimated regional power system value associated with those savings;
- Establishing a process for updating the list of eligible conservation resources as technology and standard practices change, and an appeals process through which utilities, trade allies, and customers can demonstrate that different savings and value estimates should apply;
- Developing a set of protocols by which the savings and system value of conservation resources should be estimated with a process for applying the protocols to existing or new measures;
- Assisting the Council in assessing: 1) the current performance, costs and availably of new conservation technologies and measures; 2) technology development trends; and 3) the effect of these trends on the future performance, cost and availability of new conservation resources; and
- Tracking regional progress toward the achievement of the region's conservation targets by collecting and reporting on regional research findings and energy savings annually.

During the 2020-2024 funding cycle, the RTF expanded its core mission to include:

- Development and maintenance of a list of natural gas and dual fuel energy efficiency resources, including methodologies for estimating lifetime energy savings and costs associated with those resources, and a process for updating those estimates as technology and standard practices change.
- Conducting technical analysis on technologies that provide both energy efficiency and demand response potential to assist the Council in assessing the technical potential of the technologies.

In the 2025-2029 funding cycle, the RTF core mission was further expanded to include:

- Performing research on the identified research objectives of RTF Planning measures with the intention of reducing all or a portion of the uncertainty of these measures.

Funding

The RTF is funded by Bonneville, the Energy Trust of Oregon, investor-owned utilities, and large generating public utilities in the region. The RTF Policy Advisory Committee (RTF PAC) established funding levels for 2025-2029 based on the planned activities described in the following sections. The proposed funding levels for the five-year period is $11,295,300, starting with $2.1 million in 2025 and increasing annually at 3.5% to account for inflation. The five-year funding period provides a level of consistency to ensure the long-term goals of the RTF are sufficiently supported, while providing flexibility to meet regional needs on an annual basis.

The RTF PAC agreed to manage the funding as a five-year budget, by applying any unspent and unallocated funds from previous years to later years. At the end of the five-year period, any unspent funds will be credited back to the funders.

As in the previous funding cycles the RTF PAC agreed to use the:

- Allocation method developed by the Northwest Energy Efficiency Alliance (NEEA) for funding.
- Following methodology for sharing costs across the electric and gas utility funds:
    - Electric ratepayer dollars are allocated to work that is intended to solely support electric demand side management programs (ex: electric-only energy efficiency measures and demand response)
    - Gas ratepayer dollars are allocated to work that is intended to solely support natural gas programs (ex: gas-only efficiency measures)
    - Costs will be shared for work that is intended to support all ratepayers (ex: dual fuel measures, tool development, and overhead) with 75 percent allocated to electric ratepayer dollars and 25 percent to gas ratepayer dollars

For the 2025-2029 funding cycle, in addition to the Demand Response budget for specific analysis around DR products, the RTF PAC agreed to use some demand response funds when analyzing energy efficiency measures that also provide demand response potential (i.e., flexible measures). This funding would come from electric ratepayer dollars, allocating 75 percent to energy efficiency dollars and 25 percent to demand response.

The resulting funding shares are as follows:

Table 1: Funding Shares and Five-year Contribution

Organization	Funding Share	Total Five-year Contribution
Bonneville Power Administration	29.32%	$3,311,500
Energy Trust of Oregon	21.96%	$2,480,900
Puget Sound Energy	18.69%	$2,110,700
Idaho Power Company	7.69%	$868,500
Avista Corporation, Inc.	7.00%	$790,900
Seattle City Light	2.62%	$296,000
PacifiCorp (Washington)	2.05%	$232,100
Cascade Natural Gas	1.92%	$216,800

PacifiCorp (Idaho)	1.70%	$191,700
NorthWestern Energy	1.68%	$189,400
PUD No 1 of Clark County	1.16%	$131,100
Chelan County PUD	0.82%	$92,900
Tacoma Power	0.76%	$85,600
NW Natural	0.68%	$77,100
Portland General Electric	0.66%	$74,500
Snohomish County PUD	0.53%	$60,100
PacifiCorp (Oregon)	0.50%	$56,100
Eugene Water & Electric Board	0.19%	$21,000
PUD No 1 of Cowlitz County	0.07%	$8,400
Total	100%	$11,295,300

In addition to the agreed to funding for this work plan cycle, the RTF PAC decided to rollover carryover funds that were not spent or returned from the early years of the RTF prior to the implementation of formal funding agreements. The carryover funding from previous cycles totals $173,504.95. The RTF PAC agreed to apply these funds to the 2025-2029 funding cycle and will be applied in future years of the cycle to either make the budget whole pending finalization of all funding agreements or to expand the work of the RTF in this funding cycle. The work plan and business plans will be updated annual to reflect decisions made regarding the application and use of these carryover funds.

Operations and Staffing

The RTF is an advisory committee consisting of 20-30 voluntary members. The Council appoints the membership every three years to ensure a fair balance in technical expertise for successful completion of the work plan. The RTF as a body meets approximately once a month either in person for a full-day meeting at the Council's main office in Portland, OR or via webinar in two half-day meetings.

To reduce the burden placed on the voluntary members, the RTF budget supports funding for one full-time manager and contracted technical support. The RTF Manager is a Council employee whose responsibility is to oversee day-to-day operation of the RTF. This includes developing and managing work plans, managing contracts and reporting, and interfacing with the Council. Approximately 8 percent of the RTF budget goes to this function in 2025.

The largest portion of the budget (around 59 percent in 2025) supports a team of dedicated contract analysts that conduct the bulk of technical analysis on behalf of the RTF. The RTF transitioned to this team approach from one-off contracts as a way of ensuring greater consistency in analysis across work products and providing flexibility in workflow for achieving annual work plan goals. The 2025 funding levels are sufficient to support up to eight contract analysts.

The remaining 33 percent of the budget is set aside for specific contracts in support of work plan goals. This work generally falls into one of the following categories: 1) contracting with a firm to

act as a third party for quality control review, 2) supporting members attendance at meetings, and 3) expanding the technical capabilities of the team for specific projects or tool development.

Council Contribution

In addition to the funding described above, the Council contributes staff time and office, as well as providing meeting space, technology resources, and website support to the RTF. From a staffing perspective, the Council contributes staff to operation, coordination, technical analysis, contracting and legal assistance, and other administrative tasks. These staff contributions are estimated in the table below. The exact estimates will be updated annually to reflect the previous year's rollover of funds, application of carryover from previous cycles, and any shifts across categories.

Table 2: Annual Funding Levels with Council Contribution

	2025	2026	2027	2028	2029
Contract RFP	$742,100	$583,700	$778,500	$849,000	$706,000
Contract Analyst Team	$1,202,200	$1,425,900	$1,304,700	$1,259,300	$1,525,900
RTF Manager	$162,000	$170,500	$173,200	$182,100	$185,200
Annual Funder Contribution Total	**$2,106,300**	**$2,180,100**	**$2,256,400**	**$2,335,400**	**$2,417,100**
Council Staff Contribution	$204,900	$212,100	$219,500	$227,200	$235,200

Activities and Budget

The specific tasks contained in this business plan are driven by existing measure work, anticipated growth for new measure requests, and expectations for future analysis tied to regional research or planning efforts. The specific work in any calendar year is largely driven by the existing measure needs and any requests received from parties within the region, primarily utilities, Bonneville, the Energy Trust of Oregon, NEEA, and Council staff. The RTF solicits topics from stakeholders through an annual request as part of the work planning and through open solicitation via an online form for proposing new measures. Each year, the RTF typically adjusts the allocation of resources among the categories in its work plan based on requests received, proposals, and the pace of multi-year projects. The RTF notifies the Council and its funders of all significant reallocation of resources or priorities. Table 3 provides an overview of the anticipated allocation of work for the 2025-2029 business plan cycle, and Table 4 provides a detailed breakdown of activities for 2025. Annual changes in Table 3 budgets represent anticipated shifts in work between measure analysis and other analytical support through tools and regional coordination, or adjustments based on roll over unspent funds from previous years. More details on those shifts are provided below.

Table 3: Strategic Plan Funding, by high level category, excluding Council contributions

	2025	2026	2027	2028	2029
Measure Analysis	$1,064,000	$1,241,500	$1,197,000	$1,104,000	$1,381,300

Tools and Regional Coordination	$398,000	$224,900	$374,500	$545,500	$357,000
Demand Response*	$76,200	$131,000	$93,400	$70,000	$52,800
Planning Measure Research	$50,000	$51,800	$53,600	$55,500	$57,400
RTF Management/ Administration	$518,100	$530,900	$537,900	$560,400	$568,600
Total	**$2,106,300**	**$2,180,100**	**$2,256,400**	**$2,335,400**	**$2,417,100**

*Note this reflects demand response only work and additional work related to flexible measures that offer both energy efficiency and demand response potential is captured in the measure analysis work, when there is a directly associated energy efficiency measure.

Table 4: Proposed 2025 Budget Levels

Category	Contract RFP	Contract Analyst Team and RTF Manager	Total Funder Contribution	Council Contribution	% of total
Existing Measure Maintenance	$745,400	$2,236,200	$2,981,600	$139,100	26%
New Measure Development	$141,400	$1,799,800	$1,941,200	$26,350	17%
Standardization of Technical Analysis	$50,000	$1,015,000	$1,065,000	$1,500	9%
Tool Development	$313,600	$226,900	$540,500	$45,550	5%
Regional Coordination	$680,000	$679,400	$1,359,400	$236,850	12%
Demand Response	$264,700	$158,700	$423,400	$38,500	4%
Planning Measure Research	$241,300	$27,000	$268,300	$30,000	2%
Regional Conservation Progress	$334,200	$0	$334,200	$236,500	13%
RTF Meeting Support	$894,700	$550,000	$1,444,700	$75,000	3%
RTF Management	$39,000	$898,000	$937,000	$269,550	8%
Total	**$3,704,300**	**$7,591,000**	**$11,295,300**	**$1,098,900**	**100%**

Measure Analysis

Approximately 53 percent of the five-year budget is anticipated to directly support measure analysis. This includes maintenance of the existing measure library, the addition of new measures, and activities associated with ensuring consistency in analysis approach across the entire suite of measures.

Existing Measure Maintenance

About half of the measure analysis work is focused on maintaining existing RTF measures. The pace of existing measure review and update is driven by the sunset dates (i.e., date the RTF needs to review the measure) of measures. The RTF assigns sunset dates that range from one

to five years based on the specific circumstances of a measure. For example, the RTF typically applies shorter sunset dates for measures in markets that are changing rapidly to keep pace with that change, whereas it applies longer sunset dates to more stable markets and measures. Other factors that will impact sunset dates are anticipated updates to Federal or state codes and standards, updates to ENERGY STAR® specifications, or anticipation of new data. The number of anticipated measures sunsetting or otherwise requiring review in any given year of the funding cycle ranges between 22 and 32 measures.

The 2025 work plan assumes updates to 25 of its existing measures. This is driven by the sunset date of 13 electric measures (of which 6 include a DR component), 3 gas measures, and 9 dual fuel measures (of which 2 include a DR component). The work includes measure review and update by the contract analyst team and quality control/quality assurance review by an outside contractor.

New Measure Development

The region's utilities have continued to highlight that a key value the RTF provides is developing measures to allow for continued opportunities, particularly small and emerging opportunities to support new programs and future efficiency goals. To support this need, the RTF is allocating approximately 32 percent of its five-year budget to assessing new measure opportunities. The estimate of new measure work varies each year, with the anticipation of between two and nine new measures annually, which is consistent with past funding cycles. The exact number of measures in any given year is highly uncertain, as it is driven primarily by regional needs.

The 2025 work plan assumes the development of up to four new measures. In 2024, the RTF completed a new electric measure scan which will help to potentially expand its queue of new electric, dual, and gas fuel measures for future development. The focus of these new measures will likely be on electric or dual fuel opportunities, as 2024 focused on development of a new gas measure for commercial rooftop units. The estimated new measures also include an assumption of focused work around providing guidance for reliable savings estimation of complex programs, such as deep energy retrofits in commercial buildings or commercial strategic energy management.

Support of Small and Rural Utilities

The RTF allocates a portion of its new measure development to support the needs of the region's small and rural utilities. For 2025, this effort will be fully supported through one contract analyst's time. The work includes supporting a standing subcommittee that meets quarterly to discuss the applicability of existing RTF measures to small and rural utilities and explores potential refinements to measures to better meet their specific needs. This work also includes the development of new measures of specific interest to small and rural utilities that might not otherwise get developed for the RTF.

Standardization of Technical Analysis

The RTF strives to ensure consistency and standardization across all aspects of its technical analysis work. This is achieved through two primary efforts: 1) maintenance of resources providing guidance (Operative Guidelines) or standardization of analysis (Standard Information Workbook), and 2) providing time for the dedicated team of contract analysts who provide the majority of the technical analysis to meet weekly to collaborate and coordinate. Given the

importance of this function, the 2025-2029 funding cycle has allocated approximately 18 percent of its five-year budget to ensuring thorough and consistent analysis across all of its work.

As the Standard Information Workbook is anticipated to be updated in 2024, the 2025 work plan does not account for any time spent revising this resource. The 2025 budget for this category will be focused on the contract analyst team coordination and review and update of the RTF Operations and Procedures Manual.

Tool Development

The RTF maintains a handful of tools to support measure development, including its cost-effectiveness tool (ProCost) and building simulation models to estimate energy savings. For the 2025 to 2029 funding cycle, the RTF is allocating approximately 5 percent of its five-year budget to this function. The annual funding level varies, as much of the work is tied to other regional efforts, including the Council's power planning cycle. Additionally, the RTF will spend more time on tool development when there are fewer measures requiring update or development.

ProCost

The RTF uses and maintains the Council's cost-effectiveness tool. Given this, the ProCost development work is closely tied to the Council's regional planning cycles. In the 2025 work plan, the RTF assumes minimal updates as the Council prepares the next power plan, since many updates to support that work occurred in 2024.

Building Simulation Models

The RTF uses building simulation models for estimating energy savings in residential and commercial buildings. The RTF uses two front end tools to model commercial and residential buildings, including the Residential Energy Efficiency and Demand Response (REEDR) tool for modeling residential single family and manufactured homes and ModelKit to model commercial buildings. Both REEDR and ModelKit use EnergyPlus, which is a whole building energy simulation program developed by the Department of Energy. From 2022-2024, the RTF spent significant focus on the development of these front-end modeling tools as well as aligning these to energy consumption data from the Pacific Northwest. In 2025, the RTF anticipates minor updates to its building simulation models as these tools are used more regularly in measure work throughout the year.

Regional Coordination

The RTF primarily relies on primary research conducted by regional entities, including Bonneville, NEEA, the Energy Trust, the region's utilities, and others to inform its savings analysis. To support this regional research, the RTF allocates approximately 12 percent of its five-year budget to coordinating with those regional entities to help inform research, identify opportunities to leverage that research for RTF analysis, and connect RTF analysis to regional efforts. As with its tool development efforts, the annual workflow varies to better coordinate with regional efforts, while also providing a balance in the RTF workload when there are fewer measures requiring updates or development.

Research Coordination and Market Analysis

The RTF, Council, and efficiency programs rely on research, data collection, evaluations, and market intelligence to inform efficiency measures development. To support this effect, the RTF's contract analysts are expected to coordinate with regional utilities, Bonneville, NEEA, and other groups supporting regional goals. This work includes working with specific utilities on defining upcoming research needs that might support RTF measure development and discussing the outcomes of the research to inform measure analysis. As directed by interested research funders, the contract analysts can support coordination of joint research projects funded by utilities in support of RTF analysis.

The RTF also allocates a portion of contract analyst time to help inform regional studies, such as the NEEA stock assessments and Bonneville's market studies. The RTF supports contract analyst time for engagement in the Residential Building Stock Assessment and Commercial Building Stock Assessment work groups, which provides guidance throughout the design and implementation of the study. The RTF contract analysts also participate in Bonneville and NEEA groups studying markets with the goal to understand available data, provide recommendations on data analysis, weighing in on uncertainty around market factors, and support estimation of total market consumption. The 2025 work plan assumes the same level of participation and budget as previous years to engage in this regional work.

Savings Shape Development

The region has continued to highlight the importance of understanding the capacity benefits of energy efficiency measures and time of use to inform demand response opportunities, particularly leveraging regional data. The RTF continues to maintain a savings shapes library during the measure update and development process, but periodically deeper analysis and work is needed to support this effort. The 2025-2029 business cycle assumes some work annually toward this effort, with larger updates occurring later in the business cycle.

For 2025, the work plan assumes a minimal budget in this area, as the RTF made progress in this area during 2024 as part of the preparations for the next power plan.

Council Plan and Other Regional Support

Being an advisory committee to the Council, one of the roles of the RTF is to provide technical support and analysis of energy efficiency measures and demand response technologies. Most of this work is directly tied to the Council's power planning efforts, but also includes support following the plan to conduct studies or further analysis to support implementation of the power plan and future planning analysis. The Council anticipates the next power plan will be released in late 2026. Therefore, the 2025-2029 business plan anticipates increased support with the technical analysis to support plan development in 2025 for the ninth power plan and 2029 for the tenth power plan. Additionally, there is anticipated support in 2027-2029 to focus on implementation of the power plan.

Demand Response

The RTF has allocated 6 percent of its budget to support technical analysis on demand response technologies. In the previous funding cycle, the RTF PAC expanded the RTF's scope to include demand response technical analysis. The focus has been on technologies that provide both energy efficiency and demand response opportunities, as a way of leveraging the

RTF's existing knowledge and thinking about these opportunities holistically. The RTF analysis will focus on technical considerations of the technologies, estimating the technical, per unit demand impact potential for technologies, absent any specific product design considerations. The purpose of this work is to be an input, of many, into Council and utility demand response supply curves.

The work in the 2025 to 2029 funding cycle builds upon the RTF's previous work on demand response and will focus on enhancing the RTF's analytical capabilities, maintaining modeling tools for demand response, and regional support. In 2025, the demand response work will focus on updating the existing demand response technologies and development of shapes for common demand response program types.

Planning Measure Research

As the region relies on energy efficiency as a resource, the RTF categorizes its unit energy savings measures into one of three categories (Proven, Planning, and Small Saver) based on the uncertainty and technical potential in the region. Measures categorized as Planning are not considered reliable by the RTF but have sufficient energy savings potential to justify additional research that could reduce the uncertainty and increase reliability. All RTF Planning measures have an associated Research Strategy that provides research objectives for the region to consider as research is done on these measures. To claim RTF savings for a Planning measure, the RTF guidelines require that utilities either undergo a full impact evaluation or complete the research strategy. Long-term completing the research and enabling a measure to become Proven will reduce the evaluation burden on individual utilities.

To further support the reliability of RTF measures, the RTF PAC expanded the RTF's scope for the 2025-2029 cycle to include research for RTF Planning measures. Projects selected will be based on current research objectives of active RTF Planning measures. This budget will not be used to explore new potential measures to add to the RTF portfolio or research projects recommended by the RTF or regional stakeholders. Planning measure research represents two percent of the five-year budget, and additional unspent or unallocated funding from previous years in the cycle may be used to enable the RTF to take on larger research objective projects.

In 2025, the RTF will focus on one project to address the research objectives of a current RTF Planning measure(s). This project will be approved by the RTF PAC, who will take into consideration project recommendations from the RTF and stakeholders during the RTF work plan comment period.

RTF Management

The final 24 percent of the budget is allocated to management of the RTF, including support for RTF meetings and the RTF Manager. This also includes management of the Council's Regional Conservation Progress survey.

Regional Conservation Progress Report

Per its charter, one of the roles of the RTF is to track the region's progress against the Council's power plan targets for energy efficiency. This is done through the annual Regional Conservation Progress (RCP) survey and report. Every year, the RTF collects data from Bonneville, Energy Trust, NEEA, and the region's utilities on energy efficiency savings and expenditures from the

previous year. The 2025 to 2029 funding cycle allocates about $62,000 annually, plus inflation, to contract out the data collection and analysis. This budget assumes that the RTF Manager, in coordination with other Council staff, will be responsible for compiling the results into a final report for the Council.

Meeting and Member Support

The RTF meets approximately monthly for a one-day meeting. It is at these meetings where the formative work of the RTF occurs. Given the importance of these meetings, the RTF allocates approximately 13 percent of its budget to supporting this function. The most significant portion of this budget is ensuring that all the members and contract analysts are able to attend and participate in the monthly meetings in person. As noted above, the RTF members serve in a voluntary capacity. To ensure that all members can attend the meeting in person, the RTF supports travel costs and participation for some of the members. Additionally, several of the contract analysts have traditionally lived outside of Portland. Part of the contract costs for these analysts includes the travel and time for attending the RTF meetings.

The RTF also allocates a small portion of the budget to contract out for meeting minute services. Each of these components is important to ensuring that the RTF meetings are publicly available, including to those that are unable to travel or attend a specific meeting.

The 2025 budget assumes that RTF meetings will be a mix of virtual and in person meetings.

Management and Administration

The final 8 percent of the RTF annual budget goes to support RTF management and administration. This is primarily the support of the RTF Manager, who provides the day-to-day management of the RTF. This budget also includes any potential travel to Council meetings and relevant conferences.