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October 8, 2019

DECISION MEMORANDUM

TO: Council members

FROM: Jennifer Light
Regional Technical Forum Manager

SUBJECT: Council approval of 2020 RTF Work Plan and Budget, Charter, and RTF PAC Nominations

PROPOSED ACTION: Staff is seeking Council decision on three items: (1) Approval of the 2020 RTF Work Plan and Budget, (2) Approval of updates to the RTF Charter, and (3) Appointment of new member organizations to the RTF Policy Advisory Committee.

SIGNIFICANCE: The RTF works on a calendar year. Under the RTF Charter, the Council has authority for approving the RTF's work plan and budget, with input from the RTF Policy Advisory Committee and any interested parties. Staff is seeking approval of the 2020 Work Plan and Budget to allow sufficient time for contracting in advance of 2020. Additionally, to reflect the proposed expanded scope, as supported by the RTF funders, staff is seeking Council approval of updates to the RTF charter and the appointment of new member organizations to the RTF Policy Advisory Committee.

BUDGETARY/ECONOMIC IMPACTS

While the RTF is primarily funded by regional utilities, the Council does contribute staff time in the form of an RTF Assistant, technical support from Power Division staff, and finance, legal, and administrative support. The Council also provides office and meeting space and supports website maintenance.

BACKGROUND

The Council chartered the RTF as an advisory committee to the Council in 1999, in response to the 1996 Congressional mandate and recommendations from the 1997 Comprehensive Review of the Northwest Energy System. The Congressional mandate directed Bonneville Power Administration and the Council to convene a regional technical forum to develop consistent standards and protocols for verification and evaluation of energy savings, in consultation with all interested parties,” and the directive further stated that the RTF’s services should be available to all Northwest utilities. Since 1999, the RTF workload has grown, as has the budget. In 2010, the Northwest Energy Efficiency Taskforce recommended that the RTF operations and budget be reviewed by a high-level committee to improve the operations of the RTF and to put it on a stable long-term funding basis. In response, the Council chartered the RTF Policy Advisory Committee (PAC) as an advisory committee to the Council, which has advised the Council on funding and policy related matters and worked to secure stable funding for the RTF.

2019 marks the last year of the current funding agreements for the RTF. Over the past year, the RTF PAC has worked to develop new five-year funding agreements. The focus of this work was identifying necessary funding to support the core work of the RTF. In addition, as part of the funding agreement development and in response to stakeholder input, the RTF PAC explored options for expanding the work to estimating energy savings for natural gas efficiency measures. The RTF PAC agreed to funding levels to support this work and a funding allocation strategy to share the costs between electric and gas funders for dual fuel work. The RTF PAC also agreed to allocate three percent of the budget to support demand response activities. Based on these efforts, the PAC recommended a \$1.8 million budget for 2020, escalating to \$1.99 million by 2024 to account for inflation. The PAC also supported using the NEEA funding allocation methodology to determine RTF funder contributions. Finally, the RTF PAC agreed to managing the next cycle as a five-year budget, where unspent funds can be rolled over to a future year to complete RTF work. Annual approval of the work plan will still be necessary.

Based on these efforts, staff is seeking approval of the following three items:

1. Council approval of the 2020 Work Plan and Budget

The proposed 2020 work plan and budget represents the first year of the new five-year agreement. A draft work plan was presented to the RTF in June 2019, which initiated a 30-day stakeholder comment period. Staff received comments from the Washington Utility and Transportation Commission. These comments focused on seeking clarity in the work plan and did not provide any recommended changes to funding levels or emphasis. Based on these comments and the work of the RTF PAC, staff developed a final proposed 2020 work plan and budget. The RTF PAC met on September 11 to finalize funding agreement terms and review the work plan. A positive recommendation from the RTF PAC is included in the Council packet. At its September 24 meeting, the RTF adopted the work plan with recommendation of approval.

2. Council adoption of the updates to the RTF Charter

The new five-year funding agreements include funding for two new RTF functions. The first is the development of energy efficiency savings for natural gas measures. The second is analysis on demand response potential for technologies that provide both energy efficiency and demand response. Staff is proposing updates to the RTF charter to reflect this expanded scope, as well as editorial updates for consistency with other charters. The RTF PAC reviewed and accepted the proposed changes to the charter. The RTF unanimously adopted these changes in September.

3. Council appointment of new RTF PAC members

As outlined in its charter, the membership of the RTF PAC consists of Bonneville, investor-owned and customer-owned utilities that are direct funders of the RTF, an indirect RTF utility funder, Energy Trust of Oregon, public interest members, the Northwest Energy Efficiency Alliance, the four state public utility commissions, and the Council. For the 2020-2024 funding cycle, four new utilities have agreed to support the RTF. Per the charter, member organizations are to be appointed by the Council. Therefore, staff is seeking appointment of the following organizations:

- Cascade Natural Gas
- Chelan County PUD
- NW Natural
- PacifiCorp-ID (Rocky Mountain Power)

Consistent with the terms of the charter, following Council appointment of the above listed organizations, the PAC Co-Chairs will appoint representative members from the member organizations.

ANALYSIS

The \$1.8 million budget is adequate to support the level of RTF work expected to be feasible for the upcoming year. The RTF is currently operating at \$1.88 million, and as of September 30, has allocated 95% of its budget (or \$1.79 million). The funding level of \$1.8 million was developed based on a bottom up analysis based on past spending trends and anticipated work needs.

ATTACHMENTS

Proposed 2020 Business and Operating Plan

Proposed Detailed 2020 RTF Work Plan (excel) is available at this link:

<https://nwcouncil.box.com/s/uufe22oryolvtg97wapocsoi04k3qr5e>

Recommendation Memo from the RTF Policy Advisory Committee

Proposed RTF Charter



**Regional
Technical Forum**

Regional Technical Forum 2020-2024 Business Plan

**Proposed for RTF and RTF Policy Advisory Committee Consideration
September 2019**

Proposed

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 work flow and conduct technical analysis. This document describes the RTF's role, funding, operations and staffing, and planned activities for the 2020-2024 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 availability 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;
- Tracking regional progress toward the achievement of the region's conservation targets by collecting and reporting on regional research findings and energy savings annually.

For the 2020-2024 funding cycle, the RTF will expand upon its core mission to include:

- Developing and maintaining a list of natural gas 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

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 2020-2024 based on the planned activities described below in



more detail. The proposed funding level for the five-year period is \$9,461,300, starting out at \$1.8 million in 2020 and increasing annually at 2.5% to account for inflation. The five-year funding period provides a level of consistency to ensure 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 use the allocation method developed by the Northwest Energy Efficiency Alliance (NEEA) for funding. The RTF PAC further agreed to the 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

The resulting funding shares are as follows:

Table 1: Funding Shares and Five-Year Contribution

Organization	Proposed Funding Share	Total 5-Year Contribution
Bonneville Power Administration	30.03%	\$2,841,100
Energy Trust of Oregon	22.54%	\$2,132,800
Puget Sound Energy	18.99%	\$1,796,500
Idaho Power Company	7.54%	\$713,300
Avista Corporation, Inc	6.78%	\$641,400
PacifiCorp (Washington)	2.08%	\$197,200
PacifiCorp (Idaho)	1.78%	\$168,200
NorthWestern Energy*	1.70%	\$161,000
Seattle City Light	2.86%	\$270,800
PUD No 1 of Clark County	1.02%	\$96,800
Tacoma Power	0.77%	\$73,200
Snohomish County PUD	0.54%	\$51,400
Eugene Water and Electric	0.17%	\$16,500
Chelan County	0.81%	\$76,700
PUD No 1 of Cowlitz County	0.15%	\$14,500
Cascade Natural Gas	1.66%	\$157,000
NW Natural	0.56%	\$52,900
Total	100.00%	\$9,461,300

*NorthWestern Energy share adjusted to 52% of NEEA allocation share.



Operations and Staffing

The RTF is an advisory committee consisting of 20-30 voluntary members. The Council appoints the membership 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 for a full-day meeting at the Council’s main office in Portland, OR.

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, developing quarterly and annual reports, and interfacing with the Council. Approximately 10 percent of the RTF budget goes to this function.

The largest portion of the budget (around 70 percent) 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 work flow for achieving annual work plan goals. The 2020-2024 funding levels are sufficient to support up to six contract analysts annually.

The remaining 20 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 and meeting space to the RTF. From a staffing perspective, the Council contributes a full time RTF assistant who provides day to day support of the operations, as well as a portion of others’ time to support technical analysis, contracting and legal assistance, and other administrative tasks. These staff contributions are estimated in the table below.

Table 2: Annual Funding Levels

	2020	2021	2022	2023	2024
Contract RFP	\$433,000	\$431,600	\$412,900	\$440,500	\$436,000
Contract Analyst Team	\$1,193,000	\$1,235,200	\$1,295,400	\$1,310,500	\$1,358,700
RTF Manager	\$174,000	\$178,200	\$182,800	\$187,400	\$192,100
Annual Funding	\$1,800,000	\$1,845,000	\$1,891,100	\$1,938,400	\$1,986,800
Council Staff Contribution	\$185,600	\$190,300	\$195,000	\$199,900	\$204,900



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 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 2020-2024 business plan cycle, and Table 4 provides a more detailed breakdown of activities for 2020. As shown in Table 3, the annual changes in budget represent shifts in work between measure analysis and other analytical support through tools and regional coordination. This section provides more detail on the proposed activities for 2020 and how those activities fit into the longer-term five-year business plan.

Table 3: Annual Funding, by high level category, excluding Council contribution

Subtotal Funders	2020	2021	2022	2023	2024
Measure Analysis	\$971,000	\$916,400	\$883,600	\$928,400	\$1,029,800
Tools and Regional Coordination	\$275,000	\$360,800	\$425,500	\$413,500	\$345,400
Demand Response	\$50,000	\$51,200	\$52,500	\$53,800	\$55,200
RTF Management	\$504,000	\$516,600	\$529,500	\$542,700	\$556,400
Total	\$1,800,000	\$1,845,400	\$1,891,100	\$1,938,300	\$1,986,800



Table 4: Proposed 2020 Budget Levels

Category	Contract RFP	Contract Analyst Team Manager	Total Funders	Council Contribution	% of total
Existing Measure Maintenance	\$92,000	\$345,000	\$437,000	\$9,700	24%
New Measure Development	\$44,000	\$220,000	\$264,000	\$4,400	15%
Standardization of Technical Analysis	\$40,000	\$230,000	\$270,000	\$1,500	15%
Tool Development	\$0	\$120,000	\$120,000	\$16,500	7%
Regional Coordination	\$0	\$155,000	\$155,000	\$22,000	9%
Demand Response	\$40,000	\$10,000	\$50,000	\$10,000	3%
Regional Conservation Progress	\$50,000	\$0	\$50,000	\$45,000	3%
RTF Meeting Support	\$163,000	\$113,000	\$276,000	\$10,000	15%
RTF Management	\$4,000	\$174,000	\$178,000	\$66,500	10%
Total	\$433,000	\$1,367,000	\$1,800,000	\$185,600	100%

Measure Analysis

Approximately 50 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 measure suite.

Existing Measure Maintenance

One half of the measure analysis work is focused on the maintenance of existing measures. The pace of existing measure review and update is driven by the sunset dates 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, where as 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 sunseting or otherwise requiring review in any given year of the funding cycle ranges between 16 and 26 measures. This assumption is in line with the 2015 to 2018 funding cycle, during which time the number of existing measures considered in any year ranged from 15 to 30.

The 2020 work plan assumes updates to 23 of its existing measures. The majority of these measures (21) are slated to sunset in 2020 and will require the RTF to reconsider the measure. This includes 10 dual fuel measures for which the RTF will develop robust electric and natural gas savings estimates. In 2020, the RTF is also expected to update two dual fuel measures that the RTF considered in 2019, focusing on adding in the natural gas savings estimates.



New Measure Development

The RTF is continually seeking ways to provide value to the region's utilities. As efficiency programs are successful in transforming markets, emerging technologies are going to be important for meeting future efficiency goals. To support this need, the RTF is allocating approximately 15 percent of its budget to assessing new measure opportunities. The estimate of new measure work varies each year, with the anticipation of between six and nine new measures annually. The exact number of measures in any given year is highly uncertain, as it is driven primarily by utilities' needs. For reference, the RTF developed between two and nine new measures in any given year of the 2015 to 2019 funding cycle.

The 2020 work plan assumes development of eight new measures. The primary driver for this assumption is that the ongoing work on the Council's 2021 Regional Power Plan, which is likely to identify a handful of fruitful measures for the RTF to consider. The work plan also assumes that the RTF will continue to focus on identifying opportunities to support more complex efficiency opportunities, such as whole building performance or behavior programs. The number of new measures drops off in the middle years of the funding cycle, increasing again in 2024 as the Council starts to launch efforts on the ninth Power Plan. The RTF also anticipates working on six new gas-only measures during the 2020 to 2024 cycle. This work will primarily take place in 2022 and 2023, allowing time for the RTF to build up any analytical tools necessary to support this work and for the natural gas efficiency programs to prioritize measure opportunities.

Standardization of Technical Analysis

The RTF has made attempts over the last several years to improve the consistency of its analysis across measures. Key to this was the development of Operative Guidelines and the establishment of a dedicated contract analyst team to perform the majority of the technical analysis. As part of the 2020 to 2024 funding cycle, the RTF is allocating approximately 15 percent of its budget to ensuring thorough and consistent analysis across all its categories.

The largest portion of this work is to support coordination and review across the contract analyst team. This work primarily takes place in the weekly contract analyst team meeting, during which the team reviews each other's analysis, develops recommendations to the RTF for consideration, and explores new analytical techniques.

Another piece of this work is the maintenance of the RTF Operative Guidelines and its Standard Information Workbook. For the 2020 to 2024 funding cycle, the RTF anticipates two updates to each of these products. The first set will take place in 2020 and will focus on making enhancements to the Guidelines and Standard Information Workbook, with a focus on ensuring both products effectively support natural gas measures. The RTF anticipates another update to the Guidelines in 2022 to ensure they are keeping pace with RTF analytical work. The RTF also anticipates another update to the Standard Information Workbook in 2023 in advance of the Council's ninth Power Plan.

Support of Small and Rural Utilities

The RTF allocates a small portion of its new measure development (\$40,000 annually) to support the needs of region's small and rural utilities. This includes a portion of one contract analyst's time to support a standing subcommittee that discusses 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.

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 2020 to 2024 funding cycle, the RTF is allocating approximately 7 percent of its budget to this function. The annual funding level varies, as much of the work is tied to other regional efforts. 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. The focus for 2020 will be to make enhancements to ProCost in support of natural gas efficiency measure assessment. A small portion of budget is also allocated to any other enhancements required for 2021 Power Plan analytics. The ProCost work is anticipated to pick up again in 2021, after completion of the regional power plan. At this time, the RTF will be responsible for incorporating the 2021 Power Plan findings into ProCost and will reevaluate the cost-effectiveness of all measures with respect to those findings. ProCost maintenance will drop off somewhat in 2022 and 2023, with another uptick in 2024 as the Council starts to prepare for its ninth regional power plan.

Building Simulation Models

The RTF uses building simulation models for estimating energy savings in residential and commercial buildings. Currently, the RTF uses SEEM¹ for modeling residential single family, manufactured homes, and low-rise multifamily buildings and uses EnergyPlus² to model commercial buildings. Much of the efforts in 2020 through 2024 are focused on ensuring that these models are well calibrated to the region's building stock. Earlier on in the five-year period, the RTF will focus more on its EnergyPlus models, leveraging the latest NEEA Commercial Building Stock Assessment. In the latter portion of the funding cycle, the RTF will shift to making updates to its residential building model in alignment with the next NEEA Residential Building Stock Assessment.

The RTF has also allocated some funding to explore alternative modeling tools and/or enhancements to existing tools that might improve its assessment of energy efficiency and

¹ The Simplified Energy Enthalpy Model (SEEM) is developed and maintained by Ecotope. More information, and the latest version of SEEM, can be found on the RTF's website: <https://rtf.nwcouncil.org/simplified-energy-enthalpy-model-seem>.

² EnergyPlus is a whole building energy simulation program developed by the Department of Energy. The RTF uses and adapts the building prototype models to better reflect buildings in the Pacific Northwest, based on regional data from NEEA's Commercial Building Stock Assessment.



demand response savings, with a focus on residential opportunities. This work is anticipated to take place in 2020 and 2021.

Another component of building simulation is using weather files to represent weather sensitive loads. For its 2021 Power Plan, the Council is exploring opportunities to enhance existing weather files to better reflect future weather resulting from climate change. The RTF has allocated some funding in 2022 and 2023 to further expand this work to improve the RTF's analysis of weather dependent measures. This work is also expected to support the Council's ninth Power Plan efforts.

Regional Coordination

The RTF does not have funding for the primary research required to inform its savings analysis. Rather, the RTF relies on Bonneville, NEEA, the Energy Trust, the region's utilities, and others to conduct this primary research. The RTF has allocated approximately 12 percent of its 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 work flow varies to better coordinate with regional efforts, while also providing a balance in the RTF work load when there are fewer measures requiring updates or development.

Research Coordination

The RTF's contract analysts are expected to coordinate with regional entities to help inform regional research. This 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. In preparation for the third Residential Building Stock Assessment, the RTF will allocate resources to providing recommendations to NEEA on future data needs and research design considerations based on lessons learned to date.

Market Analysis Review

The RTF, Council, and efficiency programs rely on market intelligence to inform baselines and program design. Over the last several years, Bonneville and NEEA have dedicated more resources to studying markets. During the 2020 through 2024 business cycle, the RTF will allocate resources to increased engagement in this research. The goal of this effort is to understand available data, provide recommendations on data analysis, weigh in on uncertainty around market factors, and support estimation of total market consumption.

In addition, a portion of the budget is allocated to understanding and supporting sub-regional market data analysis, as data are available and the need arises from regional utilities.



Savings Shape Development

Over the last few years, the region has increased its focus on understanding when energy efficiency measures save energy to inform how energy efficiency can provide capacity benefits. The RTF reviewed its existing load profiles to understand the relative quality of profiles and where better data are needed to improve our understanding of the timing of savings. The region has also launched residential and commercial end use metering studies to collect more data on energy use. In this business plan, the RTF has allocated resources to using the results of the end use metering studies (and other data sources as available) to develop end use load profiles and measure savings shapes. The bulk of this work is anticipated to occur in the latter half of the funding cycle, as the data come in and in preparation for the Council's ninth 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 on energy efficiency measures. Most of this work is directly tied to the Council's power planning efforts. The Council's 2021 Power Plan is anticipated to be completed in early 2021. To that end, the bulk of the analytical work on energy efficiency will be complete by the start of 2020. The RTF has allocated some time in 2020 to support any additional analytical work required as the Council finishes the development of energy efficiency supply curves. Direct Council planning support then tapers off in 2021 and 2022, ramping up again towards the last two years of the funding cycle as the Council starts preparing for its ninth power plan.

In addition to supporting power planning analysis, the RTF has often been called upon to conduct technical studies on energy efficiency. For the 2020 to 2024 funding cycle, the RTF has allocated funding to support such a study. The anticipated timing is in the middle years of the funding cycle, after completion of the 2021 Power Plan. The specifics of any study are to be defined by the Council and/or other stakeholders.

Demand Response

The RTF has allocated 3 percent of its budget annually to support technical analysis on demand response technologies. The RTF will specifically look at 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 one input, of many, into Council and utility demand response supply curves.

The work in the 2020 to 2024 funding cycle builds upon the RTF's scoping effort in 2019. In 2020 and 2021, the focus of the work is on enhancing the RTF's analytical capabilities, including exploring enhancements to existing building simulation models or alternative modeling approaches. In the middle portion of the funding cycle, the demand response efforts are expected to build on the analysis around end use profiles, to help inform current timing of end use loads for the technologies of interest. The final two years of the funding cycle will focus on updates to the RTF's 2019 analysis, leveraging these new analytical tools and profiles.



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 the energy efficiency savings and expenditures from the previous year. The 2020 to 2024 funding cycle allocates \$50,000 annually, plus inflation, to contract out the data collection and analysis. This budget assumes that the RTF Manager, in coordination with the RTF Assistant and other Council staff, will be responsible for compiling the results into a final report for the Council.

RTF Management

The final 25 percent of the budget is allocated to management of the RTF, including support for RTF meetings and the RTF Manager.

Meeting and Member Support

The RTF meets approximately monthly for a one-day meeting at the Council offices. It is at these meetings where the formative work of the RTF occurs. Given the importance of these meetings, the RTF allocates approximately 15 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 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, as well as phone lines and web conferencing. 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.

Management and Administration

The final 10 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.



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October 8, 2019

MEMORANDUM

TO: Council Members

FROM: Patrick Oshie, Co-Chair, RTF Policy Advisory Committee
Cory Scott, Co-Chair, RTF Policy Advisory Committee

SUBJECT: Recommendation for approval of the RTF 2020 Work Plan and Budget

The RTF Policy Advisory Committee (RTF PAC) recommends approval of the 2020 RTF Work Plan and Budget. This work plan and budget reflect a scope of work and level of effort that was agreed to by all funders and supported through a new five-year funding agreement for 2020 to 2024.

The majority of the work plan focuses on the core strength of the RTF over the past 20 years: developing electric energy efficiency savings estimates and methodologies for use in efficiency program planning and evaluation. In addition, the RTF PAC supported expanding the scope of the RTF to include (1) analysis of natural gas energy efficiency savings from dual fuel and natural gas technologies and (2) the assessment of demand response potential from technologies that provide both energy efficiency and demand response. The RTF PAC agrees that the funding levels are appropriate and sufficient to support the work of the RTF in fulfilling its directive and meeting the needs of the regional utilities.

The RTF PAC appreciates the opportunity to offer this recommendation to the Council and respectfully requests the Council's approval of the RTF 2020 Work Plan and Budget.

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Charter of the Regional Technical Forum of the Northwest Power and Conservation Council

Official Designation: This advisory committee will be known as the Northwest Power and Conservation Council's Regional Technical Forum (RTF).

1. Background: In 1995, the Bonneville Power Administration (Bonneville) began to shift responsibility for financing and acquiring conservation savings to its utility customers to reduce Bonneville's costs and to allow utilities to better tailor their conservation programs to local situations. Congress recognized that this shift would likely result in a more diversified approach to conservation acquisition across the region. Consequently, in 1996 Congress directed Bonneville and the Council to convene a regional technical forum to develop consistent evaluation standards and protocols for assessing energy savings and ensuring that the region continues to meet the Council's targets for securing cost-effective conservation. Congress further recommended that the forum's membership include individuals with technical expertise and experience in conservation program planning, implementation and evaluation, and that the forum's services be made available to all utilities in the Northwest. Senate Report 104-120- Energy and Water Development Appropriations Bill, 1996.

The 1996 Comprehensive Review of the Northwest Energy System (Comprehensive Review) recommended that the technical forum should, in addition to the Congressional directives, 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 forum review the region's progress toward meeting its conservation and renewable resource goals at least every five years and communicate to appropriate decision-makers any resulting recommendations for improving the effectiveness of the region's conservation and renewable resource programs.

In February 1999, Bonneville's Administrator requested the Council also task the forum with providing specific recommendations to Bonneville to assist it in implementing a conservation and renewable rate discount.

In April 1999, the Council voted to charter the Regional Technical Forum (RTF) as an advisory committee to the Council.

2. Authority: The RTF is established as part of a network of advisory committees satisfying the Council's obligation under the Pacific Northwest Electric Power Planning and Conservation Act (Act) to establish a voluntary scientific and statistical advisory committee to assist in the development, collection, and evaluation as is relevant to the Council's development of a regional conservation and electric power plan, and pursuant to the Council's authority to establish such other voluntary advisory committees as it determines are necessary or appropriate to assist it in carrying out its functions and responsibilities. P.L. 96-501, 16 U.S.C. § 839 et seq, Section 4(c). Under Section 4(a)(4) of the Act, the terms of the Federal Advisory Committee Act, 5 U.S.C. Appendix I, section 1-14, apply, to the extent appropriate, to the Council's advisory committees.

3. Objectives and Scope of Activity:

Consistent with the Congressional directive calling for the establishment of a regional technical forum, the RTF shall advise the Council during the development and implementation of its power plan.

Activities of the RTF will include:

- 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, cost and availability 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;
- Tracking regional progress toward the achievement of the region's conservation targets by collecting and reporting on regional research findings and energy savings annually;
- 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.

Additionally, consistent with the Congressional directive to make the RTF's services available to all Northwest utilities and pursuant to direction from stakeholders, the RTF

shall extend its analysis to include natural gas and dual fuel measures, and bring consistency, rigor and process to natural gas savings estimation in the region.

- Developing and maintaining a list of natural gas 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.

4. Official to Whom the Advisory Committee Reports: The Regional Technical Forum will report to the Executive Director of the Council.

5. Authority of the Advisory Committee: The Regional Technical Forum will serve in an advisory capacity only. Neither the Regional Technical Forum nor its' members are authorized to make statements or commitments on behalf of the Council.

6. Work Plans and Estimated Annual Operating Budget: In carrying out the above objectives and activities, the RTF shall develop annual work plans and multi-year business plans. Additionally, the RTF shall make budget recommendations to the Council based on the RTF work plans. The RTF recommended work plans and budgets, along with any significant modifications the RTF may make to the work plans or budgets throughout the course of the fiscal year shall be approved by the Council, with input from the RTF Policy Advisory Committee.

The RTF is funded by Bonneville Power Administration, investor-owned utilities, the Energy Trust of Oregon, and customer-owned utilities in the region. In addition, the Council contributes staff, management and meeting support to the RTF.

7. Appointment of Advisory Committee Members and Staff:

Voting Members. Approximately every three years, the Council, in consultation with the Chair of the Power Committee and Director of the Power Division, will appoint RTF voting members. In appointing voting members, the Council will ensure that membership is fairly balanced in terms of technical expertise, sector experience, technology focus, policy experience and institutional experience for both electric and natural gas efficiency. The process for nomination and selection of RTF voting members shall be described in the RTF bylaws.

The state utility regulatory commissions from Idaho, Montana, Oregon and Washington shall be offered the opportunity to participate as *Ex Officio* non-voting members of the RTF or to serve as voting members at their discretion.

The RTF shall have a minimum of twenty (20) and a maximum of thirty (30) voting members.

Non-voting Members. The Director of the Council's Power Division, in consultation with the Chair of the Power Committee, may appoint corresponding members, ex officio members, and interested parties as non-voting members of the RTF.

Staff. The Director of the Council's Power Division will designate members of the Council's staff to attend meetings of the RTF and serve as staff to the RTF.

8. Rules: The advisory committee rules approved and adopted by the Council on March 17, 1982, as amended from time to time, will apply to the RTF.

By-laws: The RTF shall develop by-laws and amend them from time to time. Adoption or amendment of by-laws requires the affirmative vote of a two-thirds majority of the voting members of the RTF and subsequent Council approval.

The RTF may also develop and publish an operations manual if experience demonstrates such a document would promote the RTF's goals and objectives.

Conflict of Interest: The RTF shall abide by the RTF Conflicts of Interest Policy at all times.

9. Chair:

(A) The Council, in consultation with the Chair of the Power Committee and Director of the Power Division, shall appoint an RTF Chair.

(B) The Chair may be called upon to report to the Executive Director of the Council on appropriate matters, including the RTF's progress on its work plan and responsibilities.

(C) The Chair will preside over RTF meetings, ensure that detailed minutes of such meetings are prepared and submitted to the Executive Director of the Council in a timely manner, and maintain communication between the RTF and the Council and the RTF Policy Advisory Committee as necessary.

(D) The Chair is a voting member of the RTF. The Chair shall vote only in cases where his/her vote will affect the result, i.e. the Chair can vote either to cause or to block the attainment of the necessary sixty percent or two-thirds vote.

10. Vice-Chair:

(A) The Council, in consultation with the Chair of the Power Committee and Director of the Power Division, shall appoint an RTF Vice-Chair.

(B) The Vice-Chair will perform the duties of the Chair of the Regional Technical Forum in the absence of that Chair and such other duties as the Chair may assign.

(C) The Vice-Chair is a voting member of the RTF.

11. Voting:

Unless otherwise specified in this Charter or the RTF by-laws, an affirmative vote of at least sixty (60) percent of the voting members participating in a vote but no less than forty (40) percent of the total number of RTF voting members shall be the action and decision of the RTF.

Voting by proxy shall not be permitted.

A voting member may abstain from a vote. An abstention will not be counted as a “yes” or “no” vote. A voting member who abstains from a vote is not counted as “participating in a vote.”

“Voting members” are persons appointed by the Council pursuant to Section 7 of this Charter.

12. Meetings:

Regular Meetings. The Chair of the RTF, after consultation with the Director of the Power Planning Division or his designee, will call meetings as necessary. It is estimated that RTF meetings will occur at approximately monthly intervals.

The RTF will provide remote access to its meetings through such means as live webinars and/or conference calls. In recognition of the inherent difference between in-person and remote attendance, RTF meetings will be conducted in a manner that facilitates active engagement and participation by remote access attendees.

Special Meetings. Special meetings may be called by the RTF Chair. RTF members may request the RTF Chair call a special meeting.

All meetings will be open to the public, unless closed pursuant to 5 U.S.C. §552b(c). Timely notice of meetings, including agendas, will be provided. Interested persons may attend RTF meetings and appear before or file statements with the RTF, subject to such reasonable rules as the Council may prescribe.

13. Duration: The RTF will serve as a standing advisory committee to the Council, unless terminated in accordance with the Federal Advisory Committee Act.

14. Amendment: This Charter may only be amended with the approval of two-thirds of the voting members of the RTF and subsequent Council approval.

This revised Charter for the RTF was approved and adopted at a duly noticed meeting of the Northwest Power and Conservation Council on September 18, 2019.



DRAFT

2020 RTF Work Plan and Budget, RTF Charter, and RTF PAC Appointments

**October 16, 2019
Council Meeting
Seattle, WA**

Seeking Council Decision

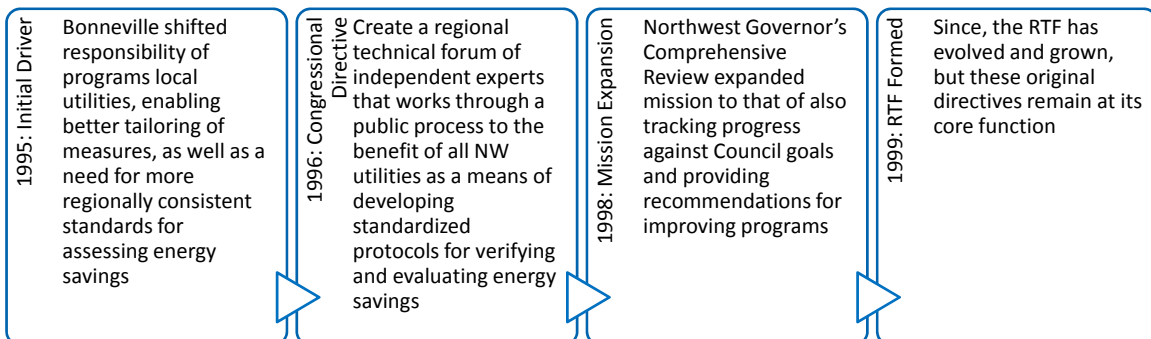
**2020 RTF Work
Plan and Budget**

**Updates to RTF
Charter**

**Appointment of
RTF PAC Member
Organizations**

2020 RTF WORK PLAN AND BUDGET

Development of the RTF



Current Charter

Develop and maintain measure library with savings, lifetime costs, and estimated value to power system

Establish a process for updating list of resources and an appeals process for demonstration of different values

Develop set of protocols by which savings and system value should be estimated

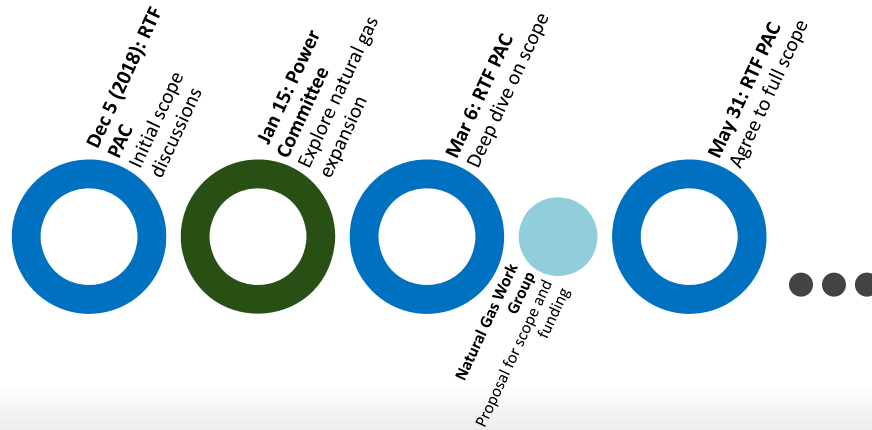
Assist the Council in assessing measures, technology development trends, and effect of trends on future performance and availability of resources

Track regional progress toward meeting Council targets annually

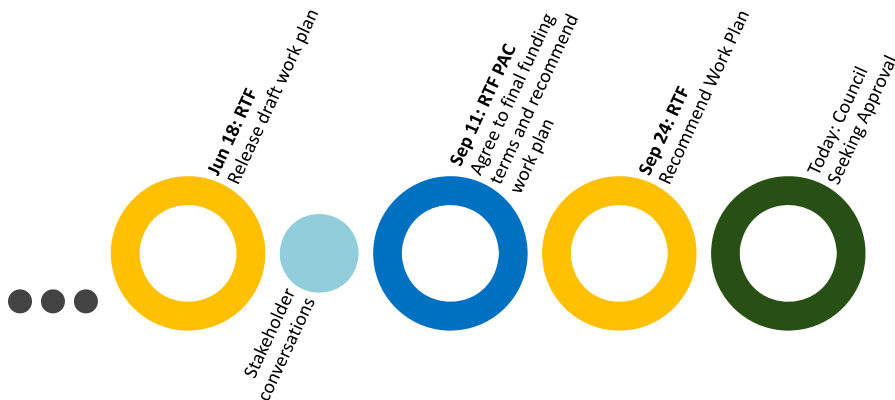
Values of the RTF

- **Leverages the work across the region to reduce the individual burden on any one utility**
- **Brings together thirty, unbiased, technical experts to analyze the data and provide recommendations**
- **Uses a public process to bring transparency, as well as additional ideas and expertise, to the analysis**
- **Removes some of the friction between utilities and regulators when estimating and claiming savings**

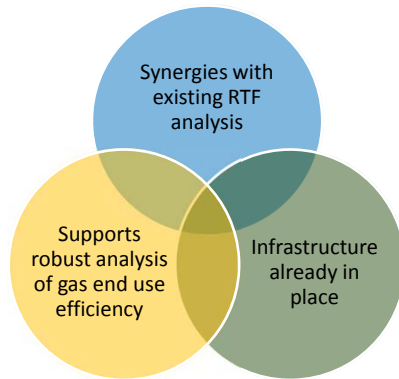
Work Plan Development Process



Work Plan Development Process



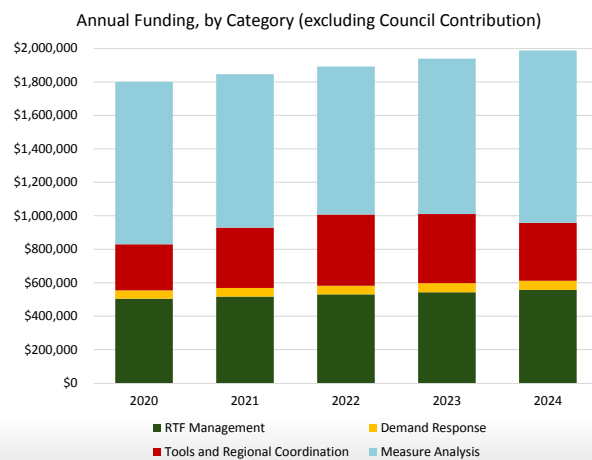
Value of Expanding to Include Natural Gas



- RTF measures that have both electric and gas savings**
- Clothes washers
 - Commercial cooking equipment
 - Showerheads
 - Aerators
 - Advanced rooftop controls
 - Connected thermostats
 - Weatherization
 - Duct sealing
 - New construction

2020-2024 Funding Levels

- Starting at \$1.8M annually with 2.5% inflation
- Sufficient budget for:
 - 6 full time contract analysts
 - ~\$400k in contract RFP funds
 - 1 RTF manager
- Represents a reasonable work flow based on past experience

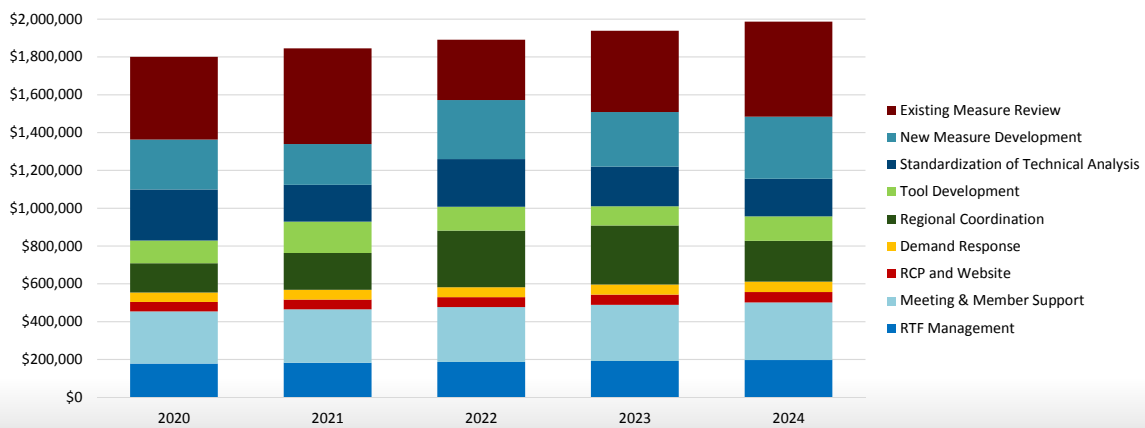


Proposed 2020 Budget

Category	Contract Analyst			Council Contribution	% of total
	Contract RFP	Team + Manager	Total Funders		
Existing Measure Maintenance	\$92,000	\$345,000	\$437,000	\$9,700	24%
New Measure Development	\$44,000	\$220,000	\$264,000	\$4,400	15%
Standardization of Technical Analysis	\$40,000	\$230,000	\$270,000	\$1,500	15%
Tool Development	\$0	\$120,000	\$120,000	\$16,500	7%
Regional Coordination	\$0	\$155,000	\$155,000	\$22,000	9%
Demand Response	\$40,000	\$10,000	\$50,000	\$10,000	3%
Website and RCP	\$50,000	\$0	\$50,000	\$45,000	3%
RTF Meeting Support	\$163,000	\$113,000	\$276,000	\$10,000	15%
RTF Management	\$4,000	\$174,000	\$178,000	\$66,500	10%
Total	\$433,000	\$1,367,000	\$1,800,000	\$185,600	100%

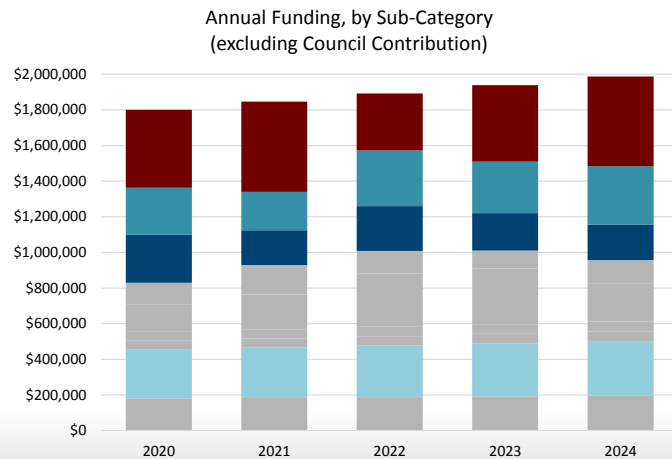
2020-2024 Sub-Category Funding

Annual Funding, by Sub-Category (excluding Council Contribution)



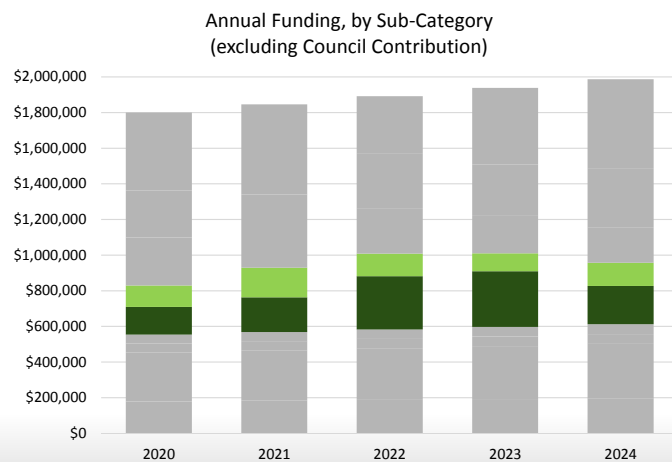
Measure Development

- Measure development represents majority of work
- 2020 work includes:
 - Establishing gas guidelines and tools
 - 23 existing measures, including gas analysis
 - 10 new measures



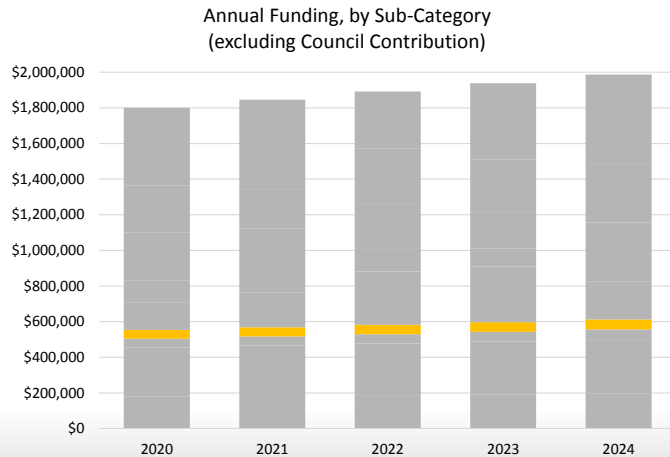
Tools and Regional Coordination

- Cross-cutting work that supports a variety of measures
- 2020 work includes:
 - Enhancing tools for gas analysis
 - Model maintenance
 - Coordination on regional research
- Balances out measure work in out years



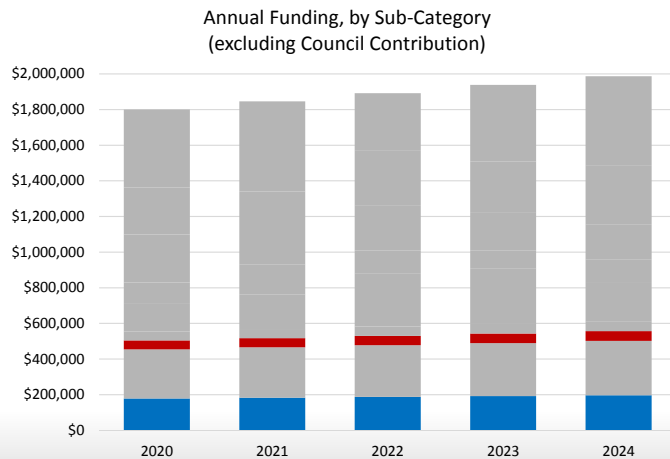
Demand Response

- 3% of budget to support demand response analysis
- Focus on technologies that provide both EE and DR
- 2020 work to enhance analytical tools, based on learning from the 2019 exploration



RTF Management and Admin

- Steady level of funding annually
- Supports
 - RTF Manager
 - Regional Conservation Progress survey



RTF CHARTER

Charter Updates for Expanded Scope

- **Proposed additions to objectives and scope of activity:**
 - **Conduct technical analysis on technologies that provide both energy efficiency and demand response**
 - **Develop and maintain a list of natural gas energy efficiency resources, including methodologies for estimating lifetime energy savings and costs**
- **Edits throughout for consistency with other charters**

Current Charter

Develop and maintain measure library with savings, lifetime costs, and estimated value to power system

Establish a process for updating list of resources and an appeals process for demonstration of different values

Develop set of protocols by which savings and system value should be estimated

Assist the Council in assessing measures, technology development trends, and effect of trends on future performance and availability of resources

Track regional progress toward meeting Council targets annually

RTF PAC APPOINTMENTS

RTF Funding Organizations

Continuing Funders:

- BPA
- Energy Trust of Oregon
- Puget Sound Energy
- Idaho Power
- Avista
- PacifiCorp (Washington)
- NorthWestern Energy
- Seattle City Light
- Clark County PUD

- Tacoma Power
- Snohomish County PUD
- Eugene Water and Electric
- Cowlitz County PUD

New Funders:

- PacifiCorp (Idaho)
- Chelan County PUD
- Cascade Natural Gas
- NW Natural

Seeking appointment of these organizations to the RTF Policy Advisory Committee