

Workgroup #1

Measuring What Matters -- Looking ahead, what data must we have to succeed?

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Background

The Northwest Energy Efficiency Taskforce was established with the following purpose:

Significantly advance the region's energy efficiency achievement through greater regional collaboration, commitment, customer involvement, and pursuit of the most cost-efficient program strategies.

Workgroup #1 was tasked with defining the fundamental data needed in order to have credibility when offering new measures and tracking the accomplishments of existing programs.

The Importance of Data to Energy Efficiency

Although it often gets second priority compared to day-to-day program operations, data collection and analysis is the foundation to successfully increasing the region's energy efficiency. Accurate data are needed to forecast future energy demand, which in turn drives the need for new resources, one of which is energy efficiency. Energy efficiency is built upon, driven by, and evaluated through data.

Historically, the region made significant investments in the 1980s and early 1990s to collect the data needed to support the energy efficiency efforts of the day. However, since the mid-1990s era of deregulation, there has been little regional effort to collect the necessary data in any kind of a coordinated fashion. While this ad-hoc approach may have been adequate (and in some cases may still be appropriate), there are good reasons to question whether it is the best approach as the region moves into a world of significantly ramped up energy-efficiency efforts. Without accurate data, the region stands to miss both the need for new resources and the potential of energy efficiency. Without accurate data, large energy-efficiency programs may continue to spend regional resources in markets that may no longer need additional support. Without accurate data, the region may miss market trends that drive new load growth. Without accurate data, the promise of energy efficiency as the region's resource of choice will not reach its full potential.

Context

This document is based on several key assumptions with relation to data requirements and collection efforts:

- **Regional versus Local Data:** This document assumes that regional data sets will be aggregated from local data in a way that allows for statistical validity at either level depending on the funds available and the need for granularity. Local utilities may still need to carry out some research activities on their own to address issues that are unique to their business.
- **Energy Data versus Electric Energy Data.** Given the multi-fuel nature of the energy markets in the Northwest, it is no longer sufficient to simply collect data about electric end-uses. This document assumes that data will be collected on all fuels appropriate to the questions at hand, including, but not limited to, natural gas. It is also worthy to note that the data collected under the banner of energy efficiency may also support data needs for demand response and load management.

- Frequency of Data Collection. This document also assumes that the data collection efforts described here are repeated on an on-going basis and at a frequency that will capture key market trends.

This recommendation from NEET Workgroup #1 will illustrate the following:

- Entities that need data
- Job functions/roles that require data
- Purpose for the data (i.e. questions to be answered by the data)
- Ways that the data are acquired
- Recommendations for what data needs to be collected, and how, in order to maximize the quality of the information to the most people, and minimize the costs.

Using the expertise in the region, and aware of the current state and future data requirements for planning, implementing and evaluating of efficiency resources, workgroup # 1 has developed the following set of preliminary recommendations. These recommendations will be presented to a wider regional audience in the following months and coordinated with the recommendations from other workgroups.

Summary of Recommendations

1. An entity (or entities) with dedicated funds to plan and coordinate data acquisition for the region is needed. Governance of the responsible entity would be designed to ensure that the goals and objectives of the participating organizations are met. Funding for the organization would need to support multi-year commitments that are necessary due to the long-term nature of some studies. Roles would include:
 - a. Develop and coordinate implementation of a regional research and data collection plan that identifies specific projects, schedules, and costs consistent with b – f below
 - b. Prioritize the need for data (e.g., Will it significantly impact a large current resource? Will it impact a large share of the dollars spent? Does it affect many utilities?)
 - c. Decide the most appropriate and cost-effective way to acquire data (e.g., studies, purchase of existing database)
 - d. Ensure statistical validity of studies both at the regional level and the local level as appropriate
 - e. Leverage regional clout to get data that is unavailable to individuals (e.g., gas usage, load shapes)
 - f. Oversee the operation of the clearinghouse (see item 3 below)
2. Coordinate research so data sets from different time frames and utilities or states can be aggregated to the regional level and can be compared across utility, state, and region. Coordination should provide benefits to all parties in the form of economies of scale or extension to additional geography and should address the following:
 - a. Establishing a common set of definition for sectors/end-uses/measures/methodologies
 - b. Timing/periodicity of research
 - c. Questions
 - d. Sample design
 - e. Cost share principles
 - f. Common metrics (benchmark metrics)

3. Create a dedicated clearinghouse so that data are more readily available to a wide audience. This could include:
 - a. Survey forms, data definition, methodology approach
 - b. Current regional/state/utility economic forecasts
 - c. Current regional/state/utility load forecasts (electric/gas)
 - d. Current fuel price forecasts
 - e. Reports and databases from past studies
 - f. Ongoing baselines that are found in the market
 - g. Incremental costs as they change
 - h. Savings estimates for energy and non-energy benefits
 - i. Evaluated results and measure data from other parts of the country
 - j. Lessons learned from program delivery problems and successes
 - k. Data and reports need to be made available via the web and other electronic formats

4. Commit to funding, resources, and a regular routine of regional data collection to minimize costs and maximize value. Following are examples and representative costs of what we think are sample activities and data that are needed.
 - a. Building characteristics studies: every 5 years, including characteristics, EUIs, and billing analysis (cost of each Residential \$2M, Commercial \$3M, Industrial \$1M, Irrigation TBD, Infrastructure TBD, End Use load data TBD)
 - b. Cost data:
 - i. Systematic cost reviews of existing measures should be conducted every 5 years at an approximate budget of \$1 – \$2 million
 - ii. Annual cost assessments of new/emerging technologies at an approximate cost of \$300,000/year
 - c. Evaluation: All stakeholders in the region need to be committed to using quality evaluation and paying for it. Where appropriate local evaluation efforts will be coordinated. The funding of regional evaluations is estimated at \$2 million a year.
 - d. Market characterizations: \$2.5 million/year. (Allocate at least 1 percent of the regional efficiency spending--currently estimated at over \$250 million--to conduct this type of market research on an ongoing basis to ensure that Northwest key markets are adequately characterized with up-to-date information in order to allow efficiency efforts to be targeted effectively.)
 - e. Develop a common set of questionnaires \$100,000

5. Directly address policy issues that affect the cost and need for data
 - a. What level of precision is needed for each data type before you can move forward?
 - b. Regulatory and cost recovery mechanisms need to recognize the value of data collection efforts and allow for cost recovery.

Future Steps

- Review draft recommendations across workgroups.
- Conduct a survey of all NEET members on the draft recommendations for workgroup #1.
- Develop a more detailed recommendation covering requirements, functionality, and governance of the new organization.
- Develop a more detailed recommendation on budget (cost estimates both full and incremental).
- Further discuss the specific role of existing regional organizations i.e. RTF, NEEA, to see if existing organizations fit the bill.
- Explore the role of state programs.