NORTHWEST ENERGY EFFICIENCY TASKFORCE REPORT AND RECOMMENDATIONS FOR THE EXECUTIVE COMMITTEE'S CONSIDERATION

DRAFT -- May 2009

Contents

I. Executive Summary – Under Development

The Executive Summary will focus on the recommendations and action plan.

II. Introduction

The push for energy efficiency in the Pacific Northwest is facing an unprecedented opportunity and a significant challenge. With load growth, increasing fuel costs, the rising expense of siting and building new generating and transmission resources, combined with increasing climate-change concerns, it is clear that energy efficiency must be the region's top priority to meet the growing demand for energy.

The opportunity for greater energy efficiency would appear to be good news for a region that has dedicated itself to energy efficiency and conservation. The Pacific Northwest has at least 30 years of experience putting efficiency policies and measures to work and collaborating to balance the needs of the environment with the region's economic health. That experience has demonstrated that energy efficiency continues to be the cheapest and most abundant new energy resource.

But ironically, the Pacific Northwest's impressive energy efficiency accomplishments also mean we face an increasing challenge to keep the savings coming. Building an energy efficiency "power plant" is no different than building a typical electric generation resource. It requires ongoing efforts to analyze, design, construct, market, operate and maintain the systems that provide energy efficiency benefits and to continuously improve these systems over time.

That is what the Northwest Energy Efficiency Task Force (NEET) process is all about. For the past year, this partnership of utilities, government agencies, industry leaders, legislators, community action groups, consultants, educators, environmental advocates and others has developed recommendations to expand energy efficiency in the Northwest. Building on its substantial investment and legacy of experience, the region is well-positioned to take on an increased commitment to energy efficiency.

The vision statement for NEET reads:

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

Climate change issues, along with an increased need to stimulate the economy and accelerate the creation of more local jobs, have bolstered an already strong case for energy efficiency. Efficiency is the most economic and environmentally effective option available for meeting the Northwest's growing demand for energy.

The idea for NEET was born out of the belief that collaboration offers the best opportunity for accelerating the acquisition of energy efficiency in the Northwest. Through NEET, regional leaders explored how various entities can best work together to leverage their individual efforts. The process has resulted in a detailed roadmap for achieving higher levels of efficiency in the future.

The following report is both a summary of the first phase of NEET work and a call to action for the next. It is an appeal to interests in the Pacific Northwest to work together and put efficiency first as we meet our energy needs. The recommendations that follow point the way toward an energy future that nurtures a healthy environment and supports a robust regional economy.

Sidebar: In this report, *energy efficiency* includes both increasing the efficient use of electrons and energy-producing fuels, as well as using less energy overall. The Northwest Power and Conservation Council's power plan defines conservation as the more efficient use of electricity, but it is sometimes taken to mean using less energy overall. In any case, both the efficient use of electricity and using less to produce the same result are the goals of the NEET effort.

III. The Case for Energy Efficiency

The 1980 Pacific Northwest Electric Power Planning and Conservation Act (Act) catapulted the region into a leadership role with conservation and energy efficiency. The Act created the Northwest Power and Conservation Council (Council) and mandated regional power planning. Among its other major provisions, the Act called on the Pacific Northwest to develop regional programs related to energy conservation.

Congress backed up its words by specifying that the first priority for resource acquisition in the Northwest be given to conservation, followed by renewable resources. Congress ensured conservation would be given preferential treatment by defining cost-effectiveness differently for conservation. The Act requires that when the Bonneville Power Administration (BPA) adds resources, conservation be given an advantage in terms of cost-effectiveness over other choices.

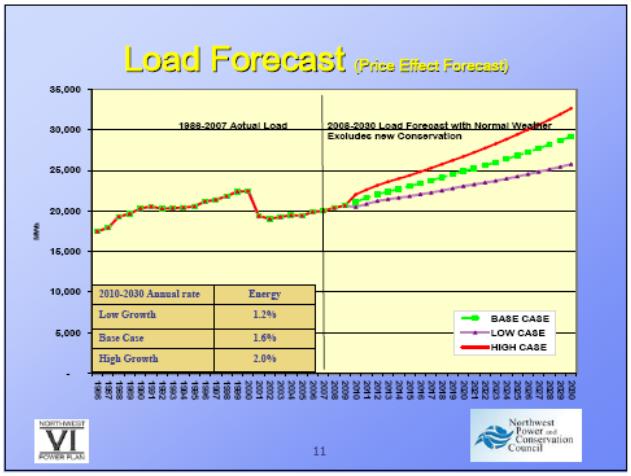
As a result, the Northwest Power Act set in motion an ambitious, on-going effort in the region to use electricity efficiently and wisely. In its implementation, the Act has also nurtured a regional ethic that views the conservation of electricity as a societal good and the responsible thing to do.

Load Growth Signals Need for New Resources

The need for new resources in the Northwest is driven by load growth. While current conditions suggest a slowdown in economic activity and energy consumption, loads in

the region are still expected to increase at a moderate pace and to pick up steam again in 2010.

According to estimates prepared by the Northwest Power and Conservation Council for its Sixth Power Plan, due to be completed before the end of 2009, the region could see load growth of about 1.3 percent annually over the next 20 years. Despite the effects of the economic downturn, load growth in the region is expected to be fueled by a growing population, expanding numbers of electronic devices and the potential for the increasing electrification of the transportation sector.



Prior to new conservation initiatives, demand is expected to grow by about 260 average megawatts per year from 2010 to 2030. This is about equal to the output of a new combined-cycle natural-gas power plant, as typically operated, or 813 megawatts of wind-farm capacity each year.

Utilities are looking for ways to meet load, and they are finding no bargains today when it comes to building generation. The graph below tells the story looking toward 2020, when the low-cost generating options are projected to be around $100 per megawatt, not including the additional expense of a potential carbon tax. The Council's analyses indicate a carbon tax could significantly add to the cost of electricity by 2015. As the costs of generating resources increase, so do opportunities for cost-effective energy efficiency.

INSERT GRAPH on Resource Costs

Efficiency is the lowest-cost resource option to meet increasing energy loads. It can also provide additional benefits in terms of greater system reliability, a hedge against risk, peak load reduction, and a decrease in the Northwest's carbon footprint. Ultimately, it saves money for all consumers by slowing the need to build costly new generating plants and lowering the energy bills of those who conserve.

Sidebar:
The past few years have introduced new environmental and operational considerations to the complexities of developing generating resources. Among them, power from fossil fuels is subject to growing environmental limits and prohibitions in the West, and there is a significant potential that federal and/or state lawmakers will impose new taxes on carbon emissions.

While wind power is an attractive no-emissions renewable option, it cannot alone provide reliable electric service. Wind is an energy resource that does not add capacity — the ability to meet peak loads — to the generating system. From a system operations standpoint, the natural variability of wind means other resources must be available for backup. The capacity of the hydro system to provide backup is nearly tapped out, which means additional natural-gas fired plants or other flexible resources will be needed for that purpose.

Identifying Available Energy Efficiency Opportunities

In its Fifth Power Plan, completed in 2004, the Council estimated there were about 2,800 average megawatts of cost-effective (less than 2.4 cents per kilowatt-hour) conservation that could be acquired over the next 20 years. The Council's 2004 Resource Action Plan called on the region to acquire a minimum of 700 megawatts of efficiency from 2005 to 2009, and the Northwest is on the path to reach, if not exceed, that goal.

The Council is currently developing its Sixth Power Plan. According to preliminary estimates, there are about 5,500 average megawatts of cost-effective conservation available, the lion's share of which is available at much lower cost than renewable resources, coal and gas-fired generation. According to the Council's projections, nearly 4,200 megawatts could be acquired at less than five cents per kilowatt-hour; 4,500 at less than six cents, and 5,500 at less than eight cents. In addition, the graph shows efficiency is available from all customer groups.

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The Council has evaluated the savings potential in hundreds of end uses. So far, the Council's Sixth Power Plan seems likely to focus on commercial lighting, distribution system efficiency, changing business practices, residential water heating, appliances and electronics, and industrial efficiency improvements as the source of most of the savings. The NEET work groups offered a number of recommendations, detailed later in this report, that address how we might accelerate that acquisition.

IV. Planning that Puts Energy Efficiency First

The Council's first Northwest Power and Conservation Plan in 1983 focused on changing building codes to capture energy savings. The target in the plan was for the region to adopt the Council's Model Conservation Standards (MCS) within 20 years. By the mid-1990s, the entire region had adopted the MCS, which represented a 40 percent energy savings over the codes in effect at the time. The success of the MCS signaled the readiness with which citizens of the Northwest would embrace energy efficiency.

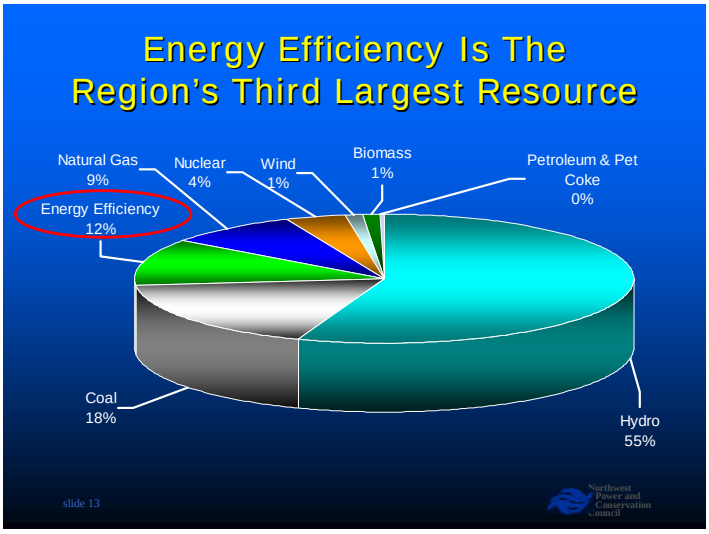
BPA, utilities, and others throughout the Northwest have offered energy efficiency programs and encouraged customers to take advantage of efficiency initiatives. The

emphasis on efficiency during the 1980s and 1990s led to a novel concept for its time: Conservation is equivalent to generation as a means of providing electricity to serve customer needs, and it is a resource that is typically purchased from customers. Efficiency has the added advantage of being a no-fuel, no-emission and low-cost alternative.

Energy efficiency also helps stimulate the economy by creating local jobs and lowering energy bills for homes, businesses and government entities. Studies show that efficient well-ventilated spaces cut absenteeism and increase job productivity. Efficient buildings also offer better temperature control and ventilation, and as a result, they house healthier people, according to the U.S. Centers for Disease Control.

Efficiency Achievements

The Northwest has made remarkable achievements in conservation and energy efficiency over the past 30 years. Since the Council's first power plan in 1983, the region has acquired over 3,600 average megawatts of conservation at an average cost of 3 cents per kilowatt-hour. This is equal to the current electricity consumption of the entire state of Idaho, plus western Montana. As illustrated on the chart below, energy efficiency is now the third largest resource in the region and lags only hydro and coal.



The graph below presents the region's considerable year-by-year cumulative conservation savings since 1980. The pace of conservation acquisition in the Pacific Northwest was 130 to 150 average megawatts per year between 2001 and 2006.

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In 2007, the region set a one-year record for energy efficiency achievement, with a gain of 200 average megawatts (aMW) or 1,750 million kilowatt-hours (kWh). This record,

which is detailed in the graph below, occurred despite the fact the Northwest has already gathered much of the "low-hanging fruit."

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Significant energy efficiency savings have accrued in all of the following areas:

- Manufactured housing
- Weatherization
- Electric water heaters
- Refrigerators and freezers
- Dishwashers, clothes washers and dryers
- Lighting (residential, commercial and industrial)
- Heating and cooling equipment
- Irrigation
- Industrial processes

Starting with the Model Conservation Standards, upgrading codes and providing incentives and tax credits have boosted energy efficiency in the Northwest. From the beginning, building codes were the cornerstone of the region's energy efficiency efforts. It was more effective and cost efficient to use codes to build energy efficiency into structures rather than have to retrofit them later.

Nationally, the Energy Policy Act of 2005 established new federal efficiency standards and required updating standards for a number of products. In December 2007, Congress passed the National Energy Security and Independence Act, which also established new efficiency standards and updated existing standards for appliances and equipment.

At the state level, Oregon and Washington have adopted equipment efficiency standards in line with federal law. Washington requires large utilities to prepare resource plans that include conservation and to acquire all cost-effective conservation, defined in the same way as in the Council's plan.

Oregon recently implemented a revised residential building code to boost conservation acquisition and improve energy efficiency in new homes. Idaho and Montana are considering updates to state residential and commercial energy codes as part of the normal cycle of revising codes. In Washington, a major advance in energy efficiency is anticipated in its current energy code revision cycle for 2009 and 2010. Many cities and counties in the Northwest have also joined in the pursuit of energy efficiency.

There is no shortage of activity to promote energy efficiency in the Northwest and it appears to be working. Rather than rest on its laurels, the Northwest has decided to do more.

To avoid the risk of a slowdown at a time when energy costs are rising, leaders in the Northwest's electric utility and efficiency communities are determined to expand the

region's commitment to efficiency and increase awareness, knowledge and enthusiasm for the next generation of measures and activities. NEET aims to tap into the zeal for environmental stewardship and to champion energy efficiency as the greenest of the 21st century "fuels." In other words, the Northwest is looking to maintain its position at the vanguard of energy efficiency across the nation.

V. The NEET Mission and Work Groups

Changes in the Northwest's energy outlook spurred the NEET effort. As described above, climate change, growth, resource costs, state mandates and increased interest among utilities for ramping up effective programs, all played a role in shaping NEET.

In addition, the public expects government agencies and utilities to address environmental issues such as climate change and to press for energy independence for the United States. Energy efficiency can play a leading role in meeting these challenges.

Another important realization was at the heart of NEET. While the region has amassed a solid and impressive record of accomplishments with energy efficiency, there is no room for complacency. The Northwest was an energy efficiency pioneer and led the way with innovative building codes and widespread promotion of technology like the compact fluorescent light bulb (CFL), which is now commonplace in the region's households and businesses.

Since the region has already chalked up considerable achievement, we need new ideas and momentum to accelerate the acquisition of energy efficiency. Simply put, we have got to get more energy efficiency faster.

Sidebar:
Customers of BPA have yet another reason to take a heightened interest in energy efficiency. The 20-year power-sale contracts customers signed in 2008 are based on tiered rates and a presumption BPA will no longer acquire new resources and meld the costs with those of the low-cost federal hydro system. Under the contracts, if a utility purchases power from BPA beyond its original allotment, it will pay full cost.

This new relationship means more BPA customers will likely consider acquiring their own resources to meet load growth. The lowest-cost and most advantageous alternative, in most cases, is energy efficiency. In addition, many utilities in the region are subject to state laws that require renewables and energy efficiency to be a major part of their resource mix and to be the preferred resource when new supply is needed.

The Northwest's energy community has a long history of working collaboratively on issues like energy efficiency, and NEET is modeled on previous efforts. The taskforce brought together a group of high-level leaders to explore opportunities to foster greater regional cooperation in energy efficiency programs, share and learn from current energy efficiency experiences, and raise the general awareness about the benefits of conservation and efficiency.

In April 2008, a number of utility executives sent a letter to Western governors, other utilities, and policy makers calling for greater collaboration on energy efficiency. The letter said, to achieve the vision of a clean energy future, "we will need to rethink and retool our energy supply." It summoned others to work "to maximize the benefits of energy efficiency, advanced metering technologies and other demand-side programs."

NEET answers that call to action.

The NEET effort convened an executive committee of 30 senior-level representatives from utilities, state government, electricity customers, public interest advocates, industry and energy efficiency specialists. Council member Tom Karier of Washington, PacifiCorp CEO Pat Reiten and BPA Administrator Steve Wright chaired the committee. A list of the executive committee members is attached.

Six work groups open to all interested parties and co-chaired by energy experts were formed to focus on specific topic areas. Time and commitment were essential to the success of NEET, and the executive committee and work group members gave generously of both.

The executive committee first met in June 2008 to discuss and approve a work plan to guide the taskforce activities. In October, there was a second executive committee meeting at which the work group co-chairs offered detailed mid-term reports. In between meetings, the work groups investigated their topics and developed recommendations.

The NEET work groups discussed opportunities to accelerate energy efficiency acquisition and developed short and long-term recommendations. After presenting their recommendations and gathering comments from the executive committee in October, the work groups prioritized and finalized a list of recommended actions for the region. These were delivered December 15.

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When NEET was formed, governors in the Northwest backed its mission and pledged their support. According to Oregon's Governor Ted Kulongoski, "*It is imperative that the region collaborate on ways to tap more efficiency, to spur the introduction of new energy-efficient technologies, and to step up the pace of existing efficiency programs.*"

Washington's Governor Christine Gregoire endorsed NEET by pointing to the need for cost-effective resources. "*Regionally coordinated actions to preserve and enhance the value of our collective power supply have benefited us all. Energy efficiency is the lowest cost and lowest risk resource and we need to continue our efforts to ensure that it remains a regional priority.*"

Brian Schweitzer, the governor of Montana, weighed in to support NEET by saying, "*Energy efficiency has proven to be the region's lowest cost and lowest risk resource and should continue to remain the region's highest priority.*"

Idaho's Governor C. L. "Butch" Otter supported NEET, stating that "*Long-term competitively priced energy supplies are critical to the well-being and future of Idaho and the region. The continued pursuit of cost effective conservation and energy efficiency helps to maintain electric rates at competitive levels while also providing local jobs. I am confident that this collaborative effort will help the various regional entities to work together to better leverage our individual efforts.*"

NEET Work Groups

Issues for NEET to consider were gathered over several months of meetings with utilities and energy efficiency professionals. Like other resources, energy efficiency must be "built," and while the tools and materials are obviously different than for a conventional project, there must be information, materials, technology, skilled workers and institutional arrangements that facilitate construction.

The issues identified for the work groups are building blocks for the energy efficiency power plant. They provide answers to such questions as:

- How do we better understand the cost-effective conservation potential?
- How do we fill the pipeline with new technologies such as compact fluorescent light bulbs that have been highly successful?
- Are there opportunities to operate energy efficiency programs on a regional basis to take advantage of synergies and economies of scale?
- Are there regional marketing opportunities that would accelerate adoption of energy efficiency measures?
- What can be done to assure there is an adequate workforce to implement new technologies and a robust program?
- Are there regional policy issues and institutional arrangements that should be addressed to accommodate and support an accelerated energy efficiency effort?

In the end, the executive committee grouped the issues into six topics, each of which was assigned to a NEET work group. While there was some overlap in the topics, an attempt was made to avoid redundancy and give each of the following work groups a discrete assignment.

Work Group 1: Measuring What Matters
Work Group 2: Emerging Solutions and Technologies
Work Group 3: High Impact Energy Efficiency Initiatives
Work Group 4: Marketing and Public Awareness
Work Group 5: Building the Energy Efficiency Workforce
Work Group 6: Governance and Energy Efficiency Policies

The work groups were open to broad participation and each had anywhere from 45 to 70 people signed up as members.

VI. Work Group Assignments and Summary of Recommendations

The work groups' first task was to research the issue area, determine whether the information available was sufficient for further discussion and developing actions and, if not, to lay out steps and timelines to acquire the needed information. From this groundwork, the groups moved on to the heavy lifting: developing strategies and shaping recommendations.

The work group assignments and recommendations are summarized below. The full text of each work group report is contained in the Appendices, along with a list of all members of each group.

Work Group 1: Measuring What Matters

Co-Chairs

Massoud Jourabchi, Northwest Power and Conservation Council
John Kaufmann, Oregon Department of Energy
Mary Smith, Snohomish County Public Utility District

Assignments

Data collection and analysis is the foundation for successful energy efficiency programs. Without accurate data, the region could miss opportunities and market trends that drive new load growth, make expenditures where they are no longer needed, and fail to reach the full potential of energy efficiency as the region's resource of choice.

Work Group 1 answered the fundamental question: Looking ahead, what data must we have to succeed? In its first task, the work group tackled a list of questions to determine whether existing data is current, sufficient and useful in the areas of customer characteristics, energy consumption, end-use load shape, market characteristics, energy efficiency technology and behavior change savings and cost.

The work group considered whether a regional approach to acquiring data is appropriate, and if so, what the approach should be. They discussed the role of the Regional Technical Forum (RTF)[1] and its current level of support; provided background on the different state programs that promote energy efficiency; and identified opportunities for synergies in developing a coordinated state approach to building codes, code enforcement and product standards.

[1] The RTF is a standing advisory committee to the Northwest Power and Conservation Council, convened in 1999 to develop standardized protocols for verifying and evaluating conservation savings. It provides BPA and the region's utilities with a wide range of technical and analytical support.

Summary of Work Group 1 Recommendations

Energy efficiency is built upon, driven by, and evaluated through data. Without accurate data, utilities, states and policy makers cannot gauge the impact of energy efficiency measures or make the strategic decisions needed to determine how best to deliver reliable energy savings to customers and avoid new expensive generation facilities.

Today, regional utilities spend an estimated $5 million a year collecting and evaluating data. This is a significant reduction from the region's investment in data collection and coordination in the 1980s and 1990s. By taking a coordinated approach to gathering real-time feedback on areas such as energy use, technical performance, customer needs and behaviors, the region would be better able to leverage those resources to meet anticipated ramped-up energy efficiency demand and maximize the delivery of cost-effective energy efficiency efforts for the region. States could also use this information for developing building codes and product standards and for monitoring progress towards climate-change targets.

Work Group 1 recommends creating and funding a regional long-term, coordinated and fuel-neutral data initiative to develop common survey and evaluation tools, as well as provide dedicated staff to track and manage the region's energy efficiency data for national, regional and local uses.

The work group also recommends the creation of a web-based data clearinghouse where all parties can engage and simplify the sharing of information. This effort would be initiated by conducting an independent evaluation of current data collection efforts by the Regional Technical Forum and the Northwest Energy Efficiency Alliance (NEEA) to determine program effectiveness, find synergies and develop an implementation plan with dedicated long-term funding and staffing recommendations.

The effort would also include developing a business plan for the creation of the data clearinghouse. A second phase of the project would focus on implementation of the coordinated function and clearinghouse for 2010 and beyond to advance success in the region's energy efficiency acquisition.

Work Group 2: Emerging Solutions and Technologies

Co-Chairs

Bob Balzar, Seattle City Light
Susan Hermenet, NEEA

Assignments

Work Group 2 explored a question essential to delivering ongoing efficiency programs in the region: How can we keep the pipeline full of energy efficiency innovations for use in the Pacific Northwest? A key to the assignment was discerning what research, development and demonstration (RD&D) on new energy efficiency technologies is available to the region and if/how the RD&D is used.

Early on, workgroup members realized the need to get down to basics, including a common definition of RD&D. They established a subgroup to provide a definition that would help scope a regional funding effort and organized their inquiry into three sections: premises, RD&D stages and RD&D scope.

The work group conducted a survey to assess current RD&D within and outside the region that could be beneficial for efficiency, as well as to explore potential future topics for RD&D and types of infrastructure to coordinate and implement RD&D efforts. A subgroup developed selection criteria for identifying emerging technologies and exploring market and development issues.

Summary of Work Group 2 Recommendations

The Northwest needs to develop a continuous pipeline of commercially available new technologies, practices and solutions to continue to advance energy efficiency efforts in the region. Significant investments in this area have not been made for the last 15 years, and the region has instead focused on the near term, with measures such as compact fluorescent light bulbs and energy efficient clothes washers and windows. While it has been successful, this approach is no longer able to meet the increased demand for more cost-effective energy efficiency measures and delivery.

Work Group 2 recommends that the region adopt a "pooling" approach to fund efforts for the development of longer-term emerging energy efficiency technologies and solutions. This would provide a way for more technologies and solutions to become commercially viable faster and have increased impact. By pooling research and development funds, the region could better coordinate, focus, diversify and leverage funds.

A survey conducted by the work group, found research and development budgets in the region ranged from $5,000 to $40 million dollars a year for utilities and other regional entities. Many people expect RD&D funding to increase in their organizations. The work group recommends designating a currently existing regional entity to become the central coordinator to leverage RD&D efforts within the region and beyond. Governed by a regional board, this entity would administer the funds and facilitate the development of a diversified and balanced emerging energy efficiency technology portfolio.

The work group envisions that a standard screening criteria would be used to select the top fuel-neutral RD&D priorities and projects for the region. The criteria would screen for technical promise, regional implications and market promise. The work group stressed that it is critical for the region to adopt a long-term view and commitment to this effort in lieu of today's measurement paradigm, which is based purely on cost effectiveness and cost-benefit tests.

The work group evaluated the entities that might handle the RD&D administration effort and determined that the NEEA and the BPA were the two primary contenders. If the executive committee supports the "pooling" recommendation and decides to centralize this effort with one of these entities, the next step would be to develop a business plan

outlining implementation needs for five years and expected return on investment for funders.

Additional Note:
Following the release of the work group's December 15 report, BPA announced that it is undertaking a revision of its technology road maps for each item in the agency's energy efficiency RD&D portfolio. BPA is looking to pursue several advanced technologies and will screen and analyze them through its technology road-mapping process to find the most promising ones for implementation.

BPA seeks to make the revisions collaboratively and to use the process to complement the NEET proposals. Because this effort will be on a fast track, BPA will issue an invitation to all interested entities to participate in the process. The invitation is attached to the Work Group 2 information in the appendix.

Work Group 3: High Impact Energy Efficiency Initiatives

Co-Chairs

Stan Price, Northwest Energy Efficiency Council
John Savage, Commissioner, Oregon Public Utility Commission

Assignments

The task for Work Group 3 was to identify the components that make up a successful energy efficiency program. The work group's primary question was: What elements underpin high-impact energy efficiency initiatives for business, homeowners and vulnerable customers? This work group also took on the issue of how the region should address energy efficiency across multiple fuels, i.e., electricity, natural gas and offer efficiency programs that are fuel neutral.

The work group examined current best practices and benchmarking criteria that are relevant for Northwest energy efficiency programs and explored innovations that could be used to deliver services and make energy efficiency programs more consistent and simple.

Work Group 3 organized itself into three subgroups and each explored the issues in the context of one customer sector: residential, commercial, and industrial loads. Each subgroup evaluated information from experts about how to accelerate conservation, identified opportunities for significant savings in each sector and barriers to achieving them and prioritized new initiatives.

Summary of Work Group 3 Recommendations

Work Group 3 identified two primary paths to significantly accelerate energy efficiency acquisition in the region. First, find ways to improve the design and delivery of existing programs by focusing primarily on building long-term relationships in key customer markets. Second, target new energy-saving opportunities or implement regionally

coordinated programs. The work group came up with more than 30 ideas for new or expanded efforts. They prioritized them to focus on those that could offer a sustained, regionally coordinated effort.

To make this happen, the work group recommends establishing a regional energy efficiency forum that would bring together staff from utilities, energy efficiency organizations, state and local governments, BPA and interested stakeholders to develop regional initiatives, coordinate implementation and delivery approaches, and foster best practices. Interaction among these entities currently takes place, but in a fragmented and informal manner. A forum chartered for this purpose could formalize interaction among entities with the goal of enhancing regional collaboration. The work group recommends establishing a leadership-level group to help advance best practices in the region, as well as to make dedicated funding and forum staffing a reality.

The work group also recommends several initiatives for specific customer groups. For residential and commercial customers, one work group recommendation is to develop a regional program to manage "plug-load" for home and office electronic equipment with advanced standards, improved labeling and intelligent load control. Among the proposals for commercial and industrial customers, the work group recommends expanding programs for building performance to include developing best practices for high-performing building operations, and teaming up with business partners outside the utility industry and with trade groups.

Work Group 4: Marketing and Public Awareness

Co-Chairs

Erin Holland, Edelman
Teri Duncan, PECI

Assignments

Work Group 4 tackled the question: What is the role of marketing in fostering an energy efficient economy? The work group considered whether a coordinated effort would enhance the success of the region's energy efficiency programs, whether there would be advantages to unified energy efficiency messages across the region, and whether coordinating efforts could leverage resources, be more effective and reduce costs.

The tasks for Work Group 4 included surveying utilities' market and customer research, determining who funds public awareness and education efforts to promote energy efficiency, and reviewing existing marketing efforts and gauging their effectiveness.

Work Group 4 focused on two areas: 1) integrating and leveraging existing research and identifying gaps where new research is needed and 2) developing a strategic approach to a regional marketing effort.

Summary of Work Group 4 Recommendations

To build a regional communications effort, work group members agreed that consistent messages and marketing among energy efficiency providers across the region would significantly contribute to increasing the delivery of energy efficiency. Establishing a formal mechanism to better coordinate existing marketing efforts, as well as develop new channels of information, would benefit the region and local utility efforts.

The work group focused on strategies to change behavior and bolster local energy efficiency programs. The strategies the work group developed are aimed at capitalizing on what has already been learned about customer behavior, conducting new research to improve insights, and developing a means to add a regional outreach effort to individual messaging efforts. The ultimate goal is to find ways to make energy efficiency as normal an everyday activity as recycling and not littering.

The work group recommends creating a coordinating council of utilities, businesses, state and governmental organizations, and others to oversee the development of a regional communication and public awareness framework. The first phase of this effort would be to evaluate current research, followed by conducting new research to better identify what motivates consumers to be more efficient. The research would be used to create a regional outreach effort to promote increased energy efficiency behavior in the Northwest and reduce energy use.

The work group came to the conclusion that "none of us can do it as effectively or as cost-efficiently alone as we can do it regionally." The synergies from coordinated efforts would help reduce consumer confusion, extend the reach of communications and messages and help activate social channels that are currently not being used to promote energy efficiency. The work group recommendations reflect a desire to find ways to better manage costs, as well as provide consumers with a clear call to action to contact their local utility/energy organization for help in addressing energy efficiency needs.

Work Group 5: Building the Energy Efficiency Workforce of the Future

Co-Chairs

Pat Egan, Pacific Power
Phil Jones, Commissioner, Washington Utilities and Transportation Commission
Cal Shirley, Puget Sound Energy

Assignments

Work Group 5 took on the issue of keeping another kind of energy efficiency resource in the pipeline for the future: the human resource. The Work Group 5 question was: Facing today's demographics, how do we create systems that build and sustain energy efficiency talent to meet needs today and in the future? In other words, with retirements in the energy industry estimated to be 50 percent over the next five years, how do we develop and maintain an energy efficiency workforce?

The work group delved into the types of skills needed for energy efficiency jobs and whether there are post high-school programs to educate them. They looked beyond traditional educational formats and considered training and demonstration centers that can pass along needed education. The work group focused its effort on a literature review, which provided considerable information and led to the following recommendations.

Summary of Work Group 5 Recommendations

To advance the development of an energy efficiency workforce, Work Group 5 recommends the region conduct a professional assessment to define and segment energy efficiency from other green economy jobs, establish skill standards and identify job classifications that can be used region wide. In addition, the work group recommends that a clearinghouse be created to make available to a broad audience study data, best practices in recruitment and retention, and job openings across the region. This would help employers, education experts, and training organizations and potential job candidates understand and address the workforce issue with a common viewpoint and language.

The work group also determined the region needs a strategic coordinating body to partner with other entities and advise on training opportunities and curriculum to assure quality programs are developed and industries' needs are met. Work Group 5 recommends that the Center of Excellence for Energy Technology at Centralia College (Washington), which has already demonstrated expertise in the electrical energy sector, be expanded to apply its expertise and consult on a regional basis for program development and coordination. Because the need is so immediate for workforce coordination, Work Group 5 recommends these preliminary steps be undertaken within four months.

Work Group 6: Rethinking Governance and Energy Efficiency Policies

Co-Chairs

Michael Early, Industrial Customers of Northwest Utilities
Sara Patton, NW Energy Coalition

Assignments

Regulation and institutional arrangements can either enhance or act as a barrier to carrying out public policies aimed at energy efficiency. The task for Work Group 6 was to consider how the current systems of governance and regulation could be reshaped to promote an energy efficient future. In particular, the question was: How do we optimize the alignment of regulatory practice with public policy goals?

The work group divided its tasks into four major areas of focus: direct application renewables; load management/smart grid; cost effectiveness and decoupling and cost recovery for investor-owned utilities for energy efficiency-related programs that don't necessarily show quantified savings (such as marketing). For direct application

renewables, such as residential solar panels and other distributed generation, the work group looked at how to translate the current widespread public interest in these technologies into policies that encourage widespread deployment and leverages energy efficiency improvements.

The work group investigated the link between valuing capacity and the cost effectiveness of load management/smart grid technologies. With cost effectiveness as a key element in governance and regulation of most energy efficiency programs offered by utilities, Work Group 6 considered new ways to look at that topic. The "decoupling" inquiry explored whether current statutory and regulatory structures strike the right balance between shareholder and customer interest in acquiring conservation.

The work group also reviewed program policies, many of which were developed 20 years ago, when the region had much less experience with energy efficiency.

Work Group 6 divided itself into four subgroups:

- Program Policies (dealing with cost effectiveness and cost recovery policies)
- Load Management and Smart Grid
- Direct Application Renewables
- Decoupling

Summary of Work Group 6 Recommendations

The Work Group 6 participants agreed that changes in policies on a broad variety of issues is necessary to drive forward a new generation of energy efficiency efforts and lay the foundation for green jobs, a healthy economy and addressing climate concerns.

For program policies, the work group's primary recommendation calls for changes in rules and regulations on how energy efficiency is determined to be cost effective. The work group proposes that energy efficiency measures be bundled together at the project level (home, building, facility) as opposed to the level of an individual measure. Under such a scenario, a utility would determine the cost effectiveness for a bundle of energy efficiency options. The work group believes this would result in greater consumer participation in energy efficiency and help increase low-income weatherization efforts. The subgroup also recommends that the region create a "cost effectiveness handbook for dummies" written for non-technical policymakers, trade allies, program participants and utility managers to promote consistency among tests of cost effectiveness.

The subgroup on direct application renewables recommends that direct applications such as solar be considered in the bundling proposal.

Other proposed policies address commercial building retrofits where it is recommended that existing HVAC operating conditions should be considered as baseline instead of building energy codes or standards and a recommendation that policies and regulatory practices should encourage and support utility use of nontraditional marketing activities.

A subgroup gathered information on national and regional efforts relating to load management and smart grid technology. The members determined that greater analysis and research is needed on this subject and recommended the region coordinate and create a forum to share information, experience and coordinate analysis on technologies and applications.

The decoupling subgroup evaluated the pros and cons of decoupling and recommends a pilot program be initiated with a publicly owned utility to test mechanisms and determine the potential for savings.

VII. NEET's Overarching Themes

While the work groups were successful in identifying a number of specific actions supportive of greater energy efficiency, they also served another critical role. From the intense work group activity, certain themes emerged that were both important to individual work group topics as well as more universally applicable to several or all of the others. Those common themes surfaced in many of the work groups, and it became apparent they were likely key elements in the region's ability to unleash greater long-term energy efficiency achievement. These "overarching themes" are discussed below.

1. Using Regional Collaboration to Strengthen Energy Efficiency Achievement

The Taskforce began with the stated purpose of identifying energy efficiency activities and policies that are best accomplished through a regional collaborative effort. NEET assumed there were elements of energy efficiency that could be accomplished at the local utility level, but that would be more effective (both from an achievement and cost perspective) with a coordinated regional approach. Utilities and others could take advantage of the regionally developed work product and apply it at the local level. In the course of the work group activities, these assumptions were tested and were strongly confirmed.

This theme is certainly not novel to NEET. The Northwest's power community has a long history of using collaborative efforts to address issues. Examples include the market transformation efforts of NEEA, the wind issues addressed by the Northwest Wind Integration Action Plan, the Regional Dialogue conducted by BPA, and the regional planning function of the Northwest Power and Conservation Council.

Experienced as we are at regional collaboration, the NEET work groups reminded us of the important role that working together can play in improving most elements of the region's ongoing energy efficiency efforts.

2. Achieving the Benefits of Collaboration Requires a Special Effort

The Taskforce effort was based on the principle that through collaborative efforts, the region could find ways, both old and new, to continue to achieve greater levels of energy efficiency. Collaboration is not necessarily easy, and during the course of the work group deliberations, it was often mentioned in concert with other similar terms such as coordination and cooperation. While similar, each of these terms entail a different level of communication, trust and effort.

When entities coordinate with one another, each entity pursues its own objectives. Organizations communicate with each other and may modify their work to avoid conflicts, overlap or gaps, with an understanding it is mutually beneficial to do so. The primary focus is on the success of each organization's individual efforts.

When entities cooperate with each other, each entity has its own objectives but is also pursuing a common goal or purpose. The cooperation can be as simple as being more efficient in allocating resources. Entities may work together so that each can obtain its own objectives in a way that also achieves the common goal.

When entities collaborate, they work together toward a common goal or result. Entities participate through a defined process that involves both coordination and cooperation at a higher level, and their efforts are more interdependent. The focus is on achieving a common goal or result that would not likely be accomplished by any one organization working alone.

It is important for the achievement of the region's energy efficiency goals that we continue to seek truly collaborative approaches. Much of what the region calls collaboration is, in fact, cooperation or coordination. While the differences are subtle, they are important since collaboration involves a much greater level of communication, effort and trust. The potential results in terms of significant innovation and heightened achievement make the effort required for collaboration worthwhile.

3. Creating a Structured Regional Forum to Ensure Regional Collaboration is Realized

Regional collaboration will not happen in a vacuum. All of the work groups voiced a strong desire to have a structured approach that will facilitate ongoing collaboration and information sharing.

Historically, energy efficiency practitioners in the Northwest have been a relatively small tight-knit group, which naturally facilitated collaboration and information sharing. In the 1990s, low electricity prices led to a reduction in the overall energy efficiency effort. At the same time, increased competition caused utilities to communicate less about their programs.

While this has begun to change in the last few years, the work group recommendations clearly reflect a strong desire for more formalized ongoing regional collaboration. This is hardly surprising as the region strives to significantly ramp up its energy efficiency

achievements. With the Northwest's increased focus and reliance on energy efficiency, more people, resources, ideas and information are working in these efforts and even more will become involved in the future.

One of the many reasons for the work groups' success in formulating recommendations is the enthusiasm many members have for the chance to share information and ideas with others. This is the foundation of regional collaboration: individual interaction with others in pursuit of a common goal. The opportunity for a structured, albeit informal, process to capture and focus this collaborative spirit will be a vital building block for an increasingly robust energy efficiency effort in the region.

4. Promoting Greater Understanding and Use of the Behavioral Aspects of Energy Efficiency

Energy efficiency is simple. Getting people to recognize and act on it is complex. As a resource, energy efficiency is very different from other utility generating resources. One of the key differences is the role of the consumer. By nature, energy efficiency is bought from a multitude of individual consumers. For 30 years, the Northwest's energy efficiency efforts have focused on encouraging consumers to purchase or install more energy efficient products. We have labeled these products as measures, and the encouragement has come in the forms of financial incentives provided by the utilities and/or the government (e.g., tax credits).

This "measures and incentive" approach has worked well, evidenced by the 3,500 aMW of energy efficiency achieved in this region since 1981. While this basic approach will continue to be the foundation for future programs, a number of work groups identified the key role that individual and group behaviors will likely play in spurring greater energy efficiency in the future.

There are two compelling reasons to promote the behavioral aspects of energy efficiency. The first is to enhance what is already being done in existing programs. It is a necessary complement in many ways to the approach being taken in the Northwest. For example, since we pay for the cost of a measure, shouldn't we also have mechanisms in place to ensure the measure is installed and operated in a way that best maintains the energy efficiency that was purchased? Designing and implementing an operations and maintenance program at a large industrial facility or commercial building is one of many examples of ways to align behavior with gaining energy efficiency. Such programs are beginning to be offered in the Northwest and more will be considered in the future.

The second is to use behavioral elements to nudge consumers in the direction of energy efficiency so they identify themselves as people who are committed to energy efficiency and are therefore more willing to participate in energy efficiency programs. Using public awareness and social marketing efforts to emphasize easily accomplished behavioral change (i.e., turning out lights when they aren't needed) gives consumers a way to take immediate action and reap the rewards, both financial and psychological. Encouraging

these behavior changes can also align utilities with their customers' interest in actively and immediately addressing climate change.

Embedding the behavioral aspects of energy efficiency at the program level brings with it several challenges. How will it be measured? Is it persistent? How will it be counted? Is it energy efficiency or is it conservation, in the sense of using less? These and similar questions are all valid and worthy of more exploration.

5. Counting and Crediting Energy Efficiency

The pursuit of energy efficiency in the Northwest has moved through several phases in the past 30 years. While it was identified as a preferred resource in the Northwest Power and Conservation Act, many questioned whether a number of small, discrete measures would actually operate as a resource.

Initially, energy efficiency was also seen as a flexible resource that could be ramped up and down, depending on the energy situation in the region. It was slowed when the region found itself in an energy surplus and a period of sustained low prices, and it picked back up in response to escalating energy prices and periods of power shortages. But this "roller coaster" approach has impaired the ability of the energy efficiency infrastructure to perform at a consistently high level.

The region is now in a period when energy efficiency counts, and it is therefore counted. The concept of counting energy efficiency involves three different metrics: goals, measurement, and verification and crediting.

The Northwest does not lack energy efficiency goals. Washington's I-937 initiative establishes goals for large investor-owned and consumer-owned utilities in that state. There are energy efficiency goals in the Energy Trust of Oregon's contract with the Oregon Public Utility Commission and BPA has committed to achieving the goals established in the Council's Power Plan. The newly signed long-term power sales contracts between BPA and its consumer-owned utility customers also incorporate energy efficiency goals. Other utilities, such as Puget Sound Energy, include penalty and incentive provisions as part of their rate structures.

Energy efficiency is typically counted using well-established measurement and verification methodologies. In some cases, relatively common and uniform measures are "deemed" to provide a certain amount of savings. In other instances, counting is accomplished by determining energy usage before and after an energy efficiency measure installation. Both of these methods serve to ensure that efficiency is actually gained, and they help to confirm that efficiency is, in fact, an energy resource.

Counting has several potential ramifications. First, the adoption of promising new approaches to energy efficiency could be slowed if there are any questions as to whether the resulting savings will count towards a specific goal. There simply may be less margin for experimentation and risk. Second, as the region's energy efficiency efforts evolved

from being primarily measure-focused to incorporating the softer science of behavior change, special efforts to determine how to measure and verify behaviorally induced energy efficiency will take on increased importance.

The "who" in crediting energy efficiency is also a factor in the counting challenge, especially as it relates to regional collaborative activities. Utilities may be unwilling to pool their energy efficiency resources to support joint actions unless they can be assured that they get to claim a proportionate share of any energy efficiency that results.

Measurement, verification and counting of energy efficiency play a critical role in ensuring a reliable and credible energy efficiency resource. As energy efficiency efforts evolve, the region will need to guard against letting the desire for precise measurement towards mandated goals stand in the way of pursuing results that may be both abundant and low cost.

6. Recovering Energy Efficiency Costs

At least four work groups raised the issue of cost recovery for energy efficiency-related expenditures. Historically, regulatory commissions have been cautious in their approach to cost recovery for energy efficiency, and recovery has typically focused on short-term efforts and results.

The NEET work groups identified a range of activities that are likely to be needed to support high levels of energy efficiency, both in the short and long term. This may be especially true for collaborative efforts in the region. Examples of these activities include long-term regional RD&D for new technologies; supporting development of the energy efficiency workforce; education, marketing and public awareness; and innovative program development. Utilities may be hesitant to devote resources to these efforts unless they are reasonably assured of recovering the costs.

7. Realigning Institutional Roles While Maintaining Customer Relationships

NEET is focused on regional collaboration to secure greater amounts of energy efficiency. The Northwest is favored with a number of institutions that have strong energy efficiency credentials. These include institutions that have a regional footprint (e.g., Council, BPA and NEEA); those that have a unique energy efficiency role and structure (Energy Trust of Oregon); and those that act throughout the region (e.g., Washington State University Energy Extension Program, U.S. Department of Energy and national energy laboratories). In addition, individual utilities have a serious interest in gaining the benefits of regional collaboration and energy efficiency, while also maintaining and building relationships with their customers in order to serve them better.

Throughout the work group process, two themes surfaced regarding institutions. The first is the need to differentiate between regional collaboration in the development of new programs and supportive activities (data, RD&D and marketing) on one hand, and the

delivery of programs to customers at the local level on the other. As mentioned earlier, the work groups identified many areas in which regional collaboration would be a benefit and would enhance the working relationships between a local utility and its customers. In fact, there is an assumption that new collaborative activities will enhance the ability of utilities to provide a broader range of services to local customers.

The second institutional theme relates to which of three regional entities are best suited to spearhead the collaboration and carry out the various efforts outlined in this report. Some of the work group reports identify the pros and cons of one entity or another. Given the number and types of tasks identified in the NEET recommendations, all of the regional entities have important roles to fill. As the collaborative projects evolve and mature, the region will have future opportunities to assure the institutional roles are appropriately structured.

VIII. Executive Committee Recommendations and Next Steps

The NEET Executive Committee built on the work groups' analytical and deliberative efforts to formulate its strategy and recommendations for action. The Executive Committee consolidated the work group recommendations, weaving in the overarching themes and incorporating recent developments on energy efficiency to create a set of policy-level recommendations. The recommendations highlight the many opportunities available to bolster and enhance energy efficiency efforts in the region at all phases of delivery.

The Executive Committee recommended that a management structure and resources be committed to ensuring the NEET recommendations are fully developed and implemented. This would eliminate the risk that the recommendations would stall from lack of an organized and committed follow-through plan.

In January 2009, NEEA, BPA and the Council were asked to "host" specific activities that evolved from the recommendations and create business/implementation plans for them. Each of the hosts provided an initial scoping document in early February, outlining the work and resources needed to develop 10 business/implementation plans, as requested by the Executive Committee. The reports revealed that a number of the assignments are already under way in the region. As a result, the Executive Committee decided to refine NEET's approach by acknowledging ongoing efforts while moving forward with a number of near-term actions to advance energy efficiency.

The recommendations focus on gaps identified by the NEET work groups in the region's energy efficiency infrastructure and they avoid duplicating efforts currently under way in the Northwest.

The NEET assignments proceeded under a two-part strategy:

- For assignments that were already under way, had been initiated or refined during NEET's operation, the entity carrying out the assignment was asked to meet with the appropriate NEET work group to outline a report that covered:
    - The activities undertaken to address the assignment
    - How those activities corresponded with the recommendations put forward by the relevant work group
    - The gaps that still exist between the work group recommendations and actual planned and funded activities.

- For other high-priority activity areas, there was a need for requests for proposal (RFPs) to be developed and put out for bid. The entities responsible for these activities met with the appropriate work groups to discuss their approach and to seek input and background from the work group members.

At the conclusion of this process the work groups' responsibilities were concluded. To ensure a smooth handoff from the work groups to the Executive Committee for each of the action items, a member of the NEET Executive Committee volunteered to be an liaison for each work group. The Executive Committee Liaison has played a valuable role in providing guidance and follow through on each of the ten different actions.

Actions to Enhance Energy Efficiency Achievement in the Northwest

ACTION 1 – Prepare an independent evaluation of the Regional Technical Forum (RTF) to determine how it can best meet the region's needs in data collection, analysis, evaluation and dissemination of finding.

The activities of Work Group 1, *Measuring What Matters*, co-chaired by Mary Smith, John Kaufman and Massoud Jourabchi, generated two NEET actions. Action 1 was to create an RFP and retain an independent contractor to analyze the role, scope, charter, function and funding of the RTF.

The RTF was formed in 1999, and its charter and activities have evolved to accommodate the changing needs of the region. This evaluation will aid the region in understanding how the RTF can best meet the region's need in data collection, analysis, evaluation and dissemination of findings. NEEA is hosting the administrative duties of managing the RFP process. A review committee, consisting of those funding the RFP and other interested Work Group 1 participants, will manage the selection process and will provide oversight during the evaluation process.

The work group participants reviewed a draft RFP seeking professional services to conduct an evaluation of the RTF. The RFP was released to the public May 8 and proposals are due May 29, with contractor selection to follow shortly thereafter. A final RTF evaluation report is due in October 2009.

The evaluation to be conducted will describe/assess the RTF's governance and staffing and the RTF's charter and current activities. It will gather regional feedback on the perceptions of the RTF's current and future role, function and value; assess the implications (a balanced assessment of benefits and risks) of expanding the RTF's mission; and provide insights/ideas for consideration. The budget for the evaluation is $75,000, and the RFP funding will be coordinated through NEET and is supplemental to NEEA's budget.

ACTION 2 – Compare how NEEA data collection efforts activities mesh with NEET report recommendations and determine gaps for future regional attention.

Work Group 1 participants received and discussed a report from NEEA which compared the recommended Work Group 1 data collection efforts to those data collection activities contained in NEEA's 2010 - 2014 Business Plan. There was also considerable discussion regarding the gaps that still exist in the region's data collection and evaluation capabilities.

The work group concluded that gaps still exist in market characterization research, cost/saving data, and program best practices and activities throughout the region. It was agreed that there is a need for a clearinghouse function that would incorporate a comprehensive and coordinated reference capability for research. As currently configured, neither the RTF nor NEEA would necessarily be the right entity to manage such a function.

The work group identified the following priorities for further regional attention:

- Coordination of utility program information
- End-use energy consumption data for all sectors
- Residential regional load shape data
- Commercial/Industrial/Agricultural segmentation and market characteristics
- The impact of behavioral information

ACTION 3 – Create a plan for how NEEA, BPA and other regional entities can best coordinate emerging technology activities to keep the pipeline full to meet future energy efficiency needs.

Work Group 2, *Emerging Solutions and Technologies*, was co-chaired by Bob Balzar and Susan Hermenet. Action 3 evolved from the work group's effort to develop a clear understanding of how NEEA, BPA and others plan to coordinate the region's emerging technology activities and collaboratively refill and maintain the region's emerging

technology pipeline for the future. Coordination and collaboration is intended to avoid duplication, identify synergies and enhance future emerging technology activities.

The Work Group 2 participants reviewed the recommendations they initially forwarded to the NEET Executive Committee. These included:

- Updating and revising existing regional energy efficiency technology roadmaps
- Creating a common definition for RD&D for the Northwest and test it with key regional entities for acceptance.
- Creating a business/implementation plan for the development of an RD&D coordinating council to create combined activity for the Northwest, including recommendations for a voluntary and staged pooling of funds and activities.
- Issues to be reviewed include recommended staff size and budget, along with scope and tasks. The plan should outline the development of separate funding efforts for electricity and gas activities, as well as demand-side management and Smart Grid activity.
- Engaging with entities outside the Northwest utility environment (such as DOE, the California PIER project, EPRI and the private sector) to gain a broader sense of what is currently in the RD&D pipeline and the status of those activities. Seek synergies for Northwest activities and co-funding opportunities where appropriate.
- Developing a standard screening criteria and process to select high-priority innovative technologies (fuel neutral) for the Northwest.
- Developing recommendations for a volunteer technical oversight board to provide advice on project selection, marketing and coordination. Include recommendations for budget support for technical consulting experts.
- Developing a business/implementation plan for a web-based information and communication platform on innovative technologies and RD&D.

BPA and NEEA made presentations on their energy efficiency emerging technology activities to the work group. The work group participants noted some potential areas of overlap and requested that BPA and NEEA work together to develop a document that outlines how BPA and NEEA would collaboratively operate their energy efficiency emerging technology activities. There was a strong interest in incorporating other interested entities in this process. BPA and NEEA developed several documents that demonstrate how these activities will mesh together and how BPA and NEEA's activities will substantially address the initial recommendations of Work Group 2.

There is one area where the BPA/NEEA approach varies from that of Work Group 2. The NEET Work Group 2 report to the Executive Committee identified a need for a regional body to manage/coordinate emerging efficiency technologies, solutions activities, and portfolios with "dedicated funding and staff" governed by a regional board. As a practical matter, there are already multiple organizations with independent emerging technologies efforts under way in the region.

While BPA and NEEA may be the two most visible efforts, there are other organizations with ongoing emerging technology activities, including but not limited to the national laboratories (e.g., Pacific Northwest National Laboratories), universities (e.g., WSU Energy Program), private companies (e.g., PECI, Ecos) and others.

Almost by definition, any full-fledged emerging technology effort will have a common need for project screening, selection and management functions. While this may appear to be redundant, each of the current efforts has unique objectives and criteria and the process must ensure emerging technology efforts address the specific needs of the stakeholders. When these efforts are coordinated effectively, they can accomplish much more than any of the efforts individually.

The joint report from NEEA and BPA focuses on the coordination of emerging technology efforts in a way that enhances these activities while minimizing duplication of efforts.

ACTION 4 – Create a forum within an existing regional entity to increase regional collaboration and help move forward new and expanded energy efficiency efforts.

Action 4 evolved from the work of Work Group 3, *High Impact Energy Efficiency Initiatives,* co-chaired by John Savage and Stan Price. Using a sector-based approach, Work Group 3 developed more than 30 ideas for new or expanded energy efficiency efforts. Among these, the work group chose the development of a regional energy efficiency forum as its top priority. Such a forum was seen as a critical mechanism to not only improve current programs, but also to move forward collaboratively on the many ideas for new or expanded energy efficiency efforts.

Action 4 aims to facilitate the creation of a regional energy efficiency forum that would be housed at NEEA for the benefit of the region. This forum would exist to facilitate energy efficiency program best practices, identify and develop potential regional initiatives, improve the design and delivery of existing programs and explore alternative delivery and implementation approaches. The forum would facilitate sharing information and experiences among the staffs from utilities, energy efficiency organizations, state and local governments, BPA and interested stakeholders. The success of the forum would depend on having dedicated funding and staff resources.

NEEA staff worked with Work Group 3 co-chairs and others to draft a plan for a long-term Regional Energy Efficiency Forum. There was strong support from the work group for the concepts outlined in the draft plan.

Several critical concepts underlie the NEEA proposal. First, while NEEA will administer the forum, achieving the forum's mission will depend on the active participation of interested stakeholders. The participants will guide the mission, structure, goals, agenda and communications. Second, NEEA's willingness to assign staff to this function and to provide funding for event and communication expenses is seen as critical to the success

of this endeavor. (Note: The funding proposed for this activity is part of NEEA's recently approved business plan and securing funding for the business plan is not yet complete.)

Work Group 3 participants had a lively discussion about the numerous opportunities such a forum would provide. While the initial focus has been on designing programs and identifying best practices, the work group also endorsed the use of the forum for facilitating collaboration on functional activities (e.g., marketing) that support energy efficiency programs. The work group discussed but did not agree on the appropriate mechanism to provide sustained technical support.

The creation and operation of the energy efficiency forum would also support other key recommendations from Work Group 3 including:

- Creating work groups focused on residential, commercial, industrial and other markets to examine strategies and opportunities, including how to follow up with program proposals for the areas highlighted in Work Group 3 sector reports.
- Outlining specific strategies for the development of high-profile demonstration projects for high-priority best practice opportunities, including but not limited to: a regional plug-load project, a commercial/industrial building operation and maintenance project, and an expansion of efforts similar to that being undertaken by the Northwest Food Processors Association.
- Developing a regional approach to evaluating the energy benefit of setting building codes based on current avoided costs and at a specified percentage above the national code level.
- Creating a subgroup which would develop a forum for state/local officials to discuss how to best implement and enforce building codes and incentives.
- Working with other West Coast entities to establish regional standards for electrical products that are more stringent than Minimum Energy Performance Standards and Energy Star.

ACTION 5 – Conduct secondary research focused on behavior change initiatives specific to consumer energy efficiency.

Action 5 came about as a result of the activities of Work Group 4, *Marketing and Public Awareness*, co-chaired by Erin Holland and Teri Duncan. There was strong support in Work Group 4 for moving forward to fund research on customer behavior to make energy efficiency a normal everyday activity, like recycling. Action 5 was to create an RFP to retain an independent contractor to review existing marketing/behavioral research associated with energy efficiency efforts**.**

To address Action 5, the work group participants reviewed and approved an RFP seeking professional services to conduct secondary research focused on behavior change initiatives specific to consumer energy efficiency. Key objectives of this research are:

1. Identify relevant current research, evaluations and behavior change initiatives:
    - Within the Northwest region

- Outside the Northwest region
- Specific to consumer energy efficiency behavior
- That could be transferable from non-energy behavior change initiatives (e.g., water conservation; recycling; health-related).

2. Summarize insights from the above studies, such as:
   - Consumer beliefs surrounding conservation vs. energy efficiency attitudes and behavior
   - Potential motivators that trigger energy efficient behavior among consumers
   - Characteristics of various demographic segments in the Northwest.

3. Identify gaps in existing research/knowledge pertaining to:
   - What we need to know to effect a change in Northwest consumers' energy efficiency behavior to reduce energy use?

4. Provide recommendations for next steps.

5. Compile lessons learned and determine what additional new research (if any) is needed to help the region collaborate on promoting energy efficiency behavior.

NEEA will administer the RFP process. The RFP was released to the public May 8 and proposals are due June 2, with contractor selection to follow shortly thereafter. A final report is due in the fall of 2009. The funding for the proposed $75,000 RFP budget is being coordinated through NEET and is supplemental to NEEA's budget.

Work Group 4 members have taken the initiative to form a regional marketing professional coordinating council. The formation of the council was the other high-priority recommendation of Work Group 4. It is expected the council will operate through the regional forum function that NEEA is forming in response to Work Group 3's recommendation.

ACTION 6 – Define and segment energy efficiency jobs from other green economy jobs, establish skill standards and identify job classifications that can be used throughout the Northwest. In addition, create a regional clearinghouse for energy-efficiency job openings.

Action 6 and Action 7 resulted from the activities of Work Group 5, Building *the Energy Efficiency Work Force of the Future,* co-chaired by Cal Shirley, Pat Egan and Phil Jones. A key challenge faced by the co-chairs is the lack of a natural hosting entity for the work-force challenges addressed by Work Group 5.

Action 6 calls for the creation of an assessment to define and segment energy efficiency jobs from other green economy jobs, establish skill standards and identify job classifications that can be used throughout the Northwest. A secondary element of Action 6 is to either identify or create a clearinghouse to share study data, best practices in recruitment and retention, and regional energy efficiency-related job openings. Action

7 is to fund the development, expansion and coordination of training programs and curriculum to meet the needs of the regional energy efficiency industry.

Action 6 is composed of two related elements: to accomplish an energy efficiency jobs assessment, there is a proposal to retain a contractor to lead a collaborative effort to manage a third-person professional assessment that will define and segment energy efficiency from other green economy jobs, establish skill standards and identify job classifications that will be referenced and used across the region. The second element is to use the energy efficiency jobs assessment as the basis for creating a clearinghouse that will make the results and findings of the assessment and other information (skill standards, defined energy efficiency job classifications, recruitment and retention best practices, and other key related information) available in the region.

ACTION 7 – Create a strategic coordinating body to partner with energy efficiency entities to increase regional coordination on energy efficiency training, educational programs, curriculum and skill standards.

Action 7 calls for creating a strategic coordinating body and governance structure to partner with other energy efficiency entities in the region to advise training and education institutions on energy efficiency skill standards and needs. This coordinating body will provide resources and information to aid the region's training and educational institutions in developing and implementing curriculum to assure quality programs are put in place to support the region's energy efficiency industry.

The co-chairs have already secured commitments of 65 percent of the estimated $125,000 budget for Action 6 and Action 7 and have developed an aggressive implementation schedule for 2009/2010.

ACTION 8 – Review regional cost effectiveness policies and create a guide to increase understanding of how cost-effectiveness rules and regulations are currently applied.

Action 8 through 10 resulted from the activities of Work Group 6, *Rethinking Governance and Energy Efficiency Policies*, co-chaired by Sara Patton and Michael Early.

Action 8 is currently being addressed by the Northwest Power Planning and Conservation's Conservation Resources Advisory Committee. At several meetings, discussions occurred on the NEET recommendations relating to cost effectiveness policies and the need for a "Guide to Cost-Effectiveness Calculations." The guide would explain cost-effectiveness for non-technical policy makers, trade allies, program participants and utility managers, as a way to increase understanding on how cost-effectiveness rules and regulations are currently applied. The consensus from the group was that many utilities and other program operators already have the flexibility to make the changes recommended by Work Group 6. There was a strong consensus that a guide would be valuable and should clearly explain:

- The statutory and economic-theory-based cost-effectiveness calculations used to produce the regional power and conservation plans.
- The general framework used by utilities and other program operators to determine cost-effectiveness of their programs and specific energy efficiency opportunities in homes, businesses, factories and farms.
- The impact of the project level bundling recommendations from the work group (for non-cost-effective, but desired energy efficiency measures, for repair measure in low-income households and for direct application renewables). This impact analysis would specify the advantages and disadvantages of bundling at the project level and, insofar as possible, suggest mechanisms that optimize advantages and/or mitigate disadvantages.

The guide could be used by utilities and other program operators that are not using all of the flexibility they have to decide whether and to what extent bundling at the project level is appropriate for their use. Utilities and other program operators that do not have the flexibility could use the guide to decide whether they want the flexibility and, if so, give them information to take to their decision makers to consider.

Production of the guide would be a one-time expenditure. It would involve hiring a contractor to work with Council staff to prepare a guide or adapt one from the National Energy Action Plan's recently developed handbook on energy efficiency cost-effectiveness, if it adequately addresses the topics to be covered. Work is under way to identify $25,000 in funding to develop the guide.

ACTION 9 – Increase regional collaboration on current programs addressing Smart Grid, load management, distribution efficiency and conservation voltage regulation.

Work Group 6 made a series of recommendations on Smart Grid and load management. The Executive Committee raised the issue of utility system efficiency and especially conservation voltage reduction. To follow up on these topics, Work Group 6 members met with BPA to understand and comment on efforts that are under way at the agency to launch a regional Smart Grid project; distribution efficiency and CVR efforts; and demand response pilots in the Northwest. BPA intends these to be collaborative efforts in the region and is actively seeking utility and vendor partners for them.

ACTION 10 – Develop a decoupling pilot program for a public power utility.

Ralph Cavanagh is in discussions with public power utilities concerning the development of a decoupling pilot project for public power. He will provide an update at the May 21 Executive Committee meeting.

Status of Action Items

Action 1 (NEEA administration of RFP on Regional Technical Forum) – ongoing, evaluation to be complete October 2009

Action 2 (NEEA update on data activities) – complete, gaps identified

Action 3 (BPA/NEEA emerging technology coordination plan) – ongoing

Action 4 (NEEA conceptual develop of regional forum function) – ongoing

Action 5 (NEEA administration of RFP on marketing research) – ongoing, evaluation to be complete October 2009

Action 6 (Develop jobs assessment, clearinghouse) – ongoing

Action 7 (Develop structure to support training/education curriculum) – ongoing

Action 8 (Council cost effectiveness policy review/guidebook) – ongoing

Action 9 (BPA/utility Smart Grid, load management, distribution efficiency program development) – ongoing

Action 10 (Identification of public power utility decoupling volunteer) – ongoing

Northwest Energy Efficiency Taskforce

The NEET Executive Committee should continue to monitor progress on the 10 actions that are ongoing or under development.