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January 26, 2011

## MEMORANDUM

**TO:** Power Committee

**FROM:** Tom Eckman, Charles Grist & Massoud Jourabchi

**SUBJECT:** Status of Regional Planning Data Development

Action Item 21 in the 6<sup>th</sup> Plan called for the development of a regional approach to support data needs for energy efficiency. This action item was incorporated in the plan based on recommendations from the Northwest Energy Efficiency Task Force process. Staff will brief the Power Committee on the activities underway in the region to update and improve data used for energy efficiency planning and implementation. A brief summary of these activities follows.

**Residential Sector** - Since the adoption of the 6<sup>th</sup> Plan, the Northwest Energy Efficiency Alliance (NEEA) has taken the lead role for development of data to aid in regional energy efficiency planning and implementation. During 2011, NEEA will be fielding a regional survey (the Residential Building Stock Assessment - RBSA) to update data on residential sector customer characteristics and energy use. While some individual utilities have undertaken surveys of their own customers, a statistically representative sample of regional appliance saturations, heating and water heating fuels and equipment types and prevalence and use of other electricity consuming devices (especially consumer electronics) has not been done since 1992.

In order to ensure that the RBSA results represent the region it is essential that customers of both urban and rural utilities participate. Currently, NEEA and BPA are concerned that the rural utilities, particularly from eastern Oregon and Washington have not yet agreed to permit their customers participate in the survey. Council staff is working with NEEA and BPA to assist gaining broader participation and will provide an update on the status of participation across the region at the Power Committee meeting.

**Commercial Sector** - NEEA will also be taking the lead in updating the region's commercial sector data base. The schedule for the Commercial Building Stock Assessment (CBSA) calls for data collection during the 2012-2013. Planning work for this survey will commence in early 2012.

**End Use Load Research** - Both NEEA and the Regional Technical Forum (RTF) are engaged in work that may lead to the development of updated end use load shape data. NEEA, through the RBSA is planning on collecting data on end uses (such as consumer electronics) where little or no regional data currently exist. The RTF is working with staff from Puget Sound Energy (PSE) to assess the level of interest in funding projects to update a broader range of end use load shape data among the region's larger utilities and BPA.

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# Update on Regional Data Collection Initiatives

February 8, 2011

# 6<sup>th</sup> Plan Called for Expanded Regional Data Collection to Support Energy Efficiency \*

## ■ High priority data needs include:

- Residential and commercial building characteristics
- Appliance and equipment saturations
- Measured end use consumption & savings hourly load shapes
- Efficiency measure saturations
- Market/Supply Chain structure

## ■ High Priority Data Collection Process Improvements

- Establish a process for tracking of non-programmatic conservation savings
- Establish panel data for residential and small commercial end use customers
- Improve the baseline consumption and conservation potential for data centers
- Develop a common survey and data gathering instrument
- Develop the requirements for a data clearinghouse
- Establish data gathering cycles for each sector/measure
- Coordinate the data gathering implementation plan for 2010-2015

\*See Action Items Anlys 5 & 6 and Cons 21

# Status :

## Residential Characteristics

- Last assessment (PNRES92) was done in 1992
  - 20,000 + customers were surveyed via phone
  - \$2 million (1990 dollars)
  - Still used by Council forecasting and conservation, program planning
- New assessment Residential Building Stock Assessment (RBSA) now underway
  - NEEA Managing Contract (approx \$2 million in 2010 dollars)
  - Regional advisory group oversees project
  - Phone survey ~ 5,000 residential customers across region
  - On site survey of ~ 1,300 – 1,600 residences
  - Project due for completion mid-2012

# RBSA – Additional Studies

- RBSA will also include sub-metering for selected load shapes
- 100 – 120 sub metered homes:
  - Consumer electronics (funding secured)
  - Triple metering for space heating, cooling & waster heating (funding not secured)
  - Lighting (funding not secured)
- 300 – 400 homes will be tested to assess air and duct system tightness

# RBSA Project Status

- NEEA, Advisory Committee and survey contractor are finalizing the phone and on-site survey instruments
- NEEA, BPA and survey contractor are working with utilities to get permission to contact customers
  - Great cooperation from IOU/urban utilities
  - High “non-response” or refusal rate from small rural utilities

# Current Status of RBSA Survey Sites in Public Utility Service Areas

Total Public Utilities		Count	Percent of Total
	Total Public Utilities for RBSA	121	100%
	Total Public Utility SF Sites	685	100%
Recruited Public Utilities			
	Recruited Public Utilities for RBSA	67	55%
	Recruited Public Utility SF Sites	536	78%
Refused Utilities			
	Refused Public Utilities for RBSA	11	9%
	Refused Public Utility SF Sites	30	4%
No-response yet Utilities			
	No response Public Utilities for RBSA	43	36%
	No response Public Utility SF Sites	119	17%



# Status of Recruiting Efforts

- As of the end of last week 54 of the 113 public utilities (none of which were NEEA direct funders or generating utilities not included in BPA programs) have either failed to respond or have refused to participate in the RBSA.
- Eleven of the 54 (9%) have directly refused to allow calls in their service territory.
- Without explicit approval from the 43 remaining utilities it is assumed that they are not willing to let their customers to participate.
- If all the refusals and non-responses were removed from the sample about 36% of the public utility population in sample would be removed.

# Non-Responding Utilities

Utility Name	Utility Name
PUD No 1 of Benton County	City of Soda Springs
Central Electric Coop Inc	Lower Valley Energy Inc
USBIA-Mission Valley Power	Heyburn City of
Fall River Rural Elec Coop Inc	Tanner Electric Coop
PUD No 1 of Franklin County	South Side Electric, Inc
McMinnville City of	City of Troy
Vigilante Electric Coop, Inc	City of Plummer
PUD No 3 of Mason County	City of Chewelah
Umatilla Electric Coop Assn	Surprise Valley Electrification Corp.
City of Centralia	City of Cashmere
Sun River Electric Coop, Inc	East End Mutual Elec Co Ltd
United Electric Co-op, Inc	Town of Eatonville
City of Burley	City of Coulee Dam
Rupert City of	City of Albion
City of Weiser	Town of Ruston
City of Hermiston	Farmers Electric Company, Ltd
Blachly-Lane Cnty Coop EI Assn	City of Declo
Big Bend Electric Coop, Inc	Alder Mutual Light Co, Inc
Salmon River Electric Coop Inc	City of Minidoka
PUD No 1 of Ferry County	Franklin County PUD

# Commercial Building Stock Assessment

- Vendor selection by end of 2011
- Preliminary work this fall to develop questions and scope of RFP.
- NEEA budgeting for 2012/13 for CBSA

# Load Shape Research

- RBSA sub-metering for load research
  - NEEA funding confirmed for space conditioning and water heating
  - US DOE funding through PNNL for test of “non-intrusive” bill disaggregation methods will address home electronics (TV, home office, game consoles)
- Utility initiative spear-headed by staff from PSE to expand regional load research
- RTF working with regional EM&V staff to better coordinate data development at the regional level.