

W. Bill Booth  
Chair  
Idaho

James A. Yost  
Idaho

Tom Karier  
Washington

Dick Wallace  
Washington



Bruce A. Measure  
Vice-Chair  
Montana

Rhonda Whiting  
Montana

Melinda S. Eden  
Oregon

Joan M. Dukes  
Oregon

May 28th, 2008

## MEMORANDUM

TO: Power Committee

FROM: Massoud Jourabchi

SUBJECT: Short-term demand forecast for 2011 and 2013

In order to assess regional adequacy of resources, an hourly forecast for operating years 2011 and 2013 was produced. This forecast was calibrated to the long-term demand forecasting model and compared with other regional forecasts.

**Background:** In order to assess adequacy of resources to meet regional load, staff developed an hourly model to forecast regional loads three and five years into the future. This model is capable of forecasting loads under normal, as well as a wide range of historic, weather conditions. The model produces two sets of forecasts for use in resource adequacy analysis; an annual energy forecast including all hours in the year, and a sustained peaking period forecast that only counts load occurring during the *sustained-peak period*. The sustained-peak period is defined to be the highest 6 hours per day over 3 consecutive days (18 hours in total). Both forecasts are based on normal weather.

**Update on Forecast:** The latest electricity figures reported by the Energy Information Administration (EIA) indicate that regional loads were nearly flat in 2007, growing only about 60 MWa from 2006, an annual growth rate of 0.3%. The commercial and residential sectors grew slightly, and the industrial sector declined. Our current projection for 2008 through 2013 anticipates loads growing at an average annual rate of less than 1.8%, or about 400 MWa per year, after 2009.

**Comparison to Other Forecasts:** Two other regional forecasts produced by BPA and PNUCC were compared to the Council's forecast. These forecasts are generally close to the Council's projected load forecast, and the disparity is even less once adjustments for known differences between these forecasts are made. Differences are due to the treatment of conservation resources and Direct Service Industries (DSI, referred to as non-utility industrial loads in the NRF). In the Council's model, the impact of conservation is included more explicitly, whereas BPA projections and the utility level load forecasts that PNUCC receives from utilities for net load exclude some implicit amount of conservation from loads. Also, the treatment of DSI loads causes a difference in the load projections. The Council and BPA projections include loads for the DSIs as part of regional loads, while PNUCC projections do not because their focus is on utility loads - so 530 MWa of DSI loads is netted out of their projections.



# Short-term demand Forecast

## 2008 Resource Adequacy Analysis

June 10, 2008

### Background

- Forecasts hourly regional loads 3 & 5 years into the future.
- Used for resource adequacy early-warning system
- Produces forecasts for normal weather
- As well as forecasts under different weather conditions



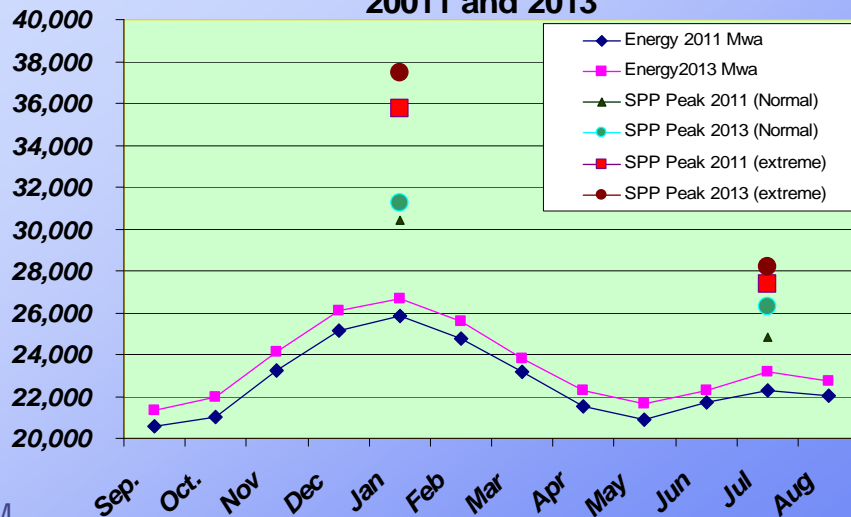
## 2008 Load forecast for Resource Adequacy

- Normal weather peak load during sustained peaking period for:  
January and July 2011 and 2013
- Weather normalized energy for
  - 2011 operating year
  - 2013 operating year



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### Regional Load forecast for Operating Years 2011 and 2013



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## Comparison to other Regional Forecasts

- Other Forecasts
  - PNUCC
    - Utility Load Focus
    - Aggregation of utility's voluntary submittals
  - BPA white book
    - Regional Load Focus
    - Based on Internal and external forecasts

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## Reasons for Differences in Load

	White book	NRF	Council
Scope	Regional-Aggregation	Utility - Aggregation	Regional Sustained peaking Period
Future Conservation Resources	Implicit and Explicit	Not Explicit	Explicit
DSI/ Open access Customers	Included	Excluded	Included

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