

Bruce A. Measure  
Chair  
Montana

Rhonda Whiting  
Montana

W. Bill Booth  
Idaho

James A. Yost  
Idaho



Tom Karier  
Washington

Phil Rockefeller  
Washington

Bill Bradbury  
Oregon

Joan M. Dukes  
Oregon

September 1, 2011

## MEMORANDUM

**TO:** Power Committee

**FROM:** Massoud Jourabchi

**SUBJECT:** Comparison of Regional Load Forecasts

Regional loads for 2010 were estimated at 19,500 MWa, with a winter peak of 28,000 MW and a summer peak of 26,000 MW. Compared to year 2009, regional loads were lower by about 1,100 MWa, winter and summer peaks were lower by 7,000 MW and 2,000 MW respectively. Factors contributing to the downward pressure on loads in 2010 were; warmer winter and cooler summer temperatures and slow economic recovery.

Preliminary data from Energy Administration Information shows that regional energy consumption for the first four months of 2011 increased by about 5% compared to the same period in 2009. The largest increase was in industrial sales, while residential and commercial demands are still depressed.

For 2012-2019, Council staff compared the aggregation of utility forecasts presented in PNUCC's NRF 2011 and Bonneville's draft White Book 2011 (at this writing the 2011 White Book is in draft form) with the Council's Sixth Power Plan forecast and the Council's short-term forecast. Analysis shows almost all the regional forecasts expect small load growth for the next few years, with some load recovery post 2015.

In reviewing the NRF and draft White Book forecasts, it became clear that the conservation methodology and savings are not represented in these forecasts in a consistent manner. By year 2020, NRF analysis includes about 1,700 MWa of conservation and the draft White book considers about 90 MWa of conservation. The Council's Sixth Power Plan conservation targets by 2020 are about 2,900 MWa. Consistent treatment of conservation resources in load forecasts is an issue worth further clarification with respective organizations compiling the NRF and White Book regional forecasts.

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# COMPARISON OF REGIONAL LOAD FORECASTS

NRF 2011 WHITE BOOK 2011\* AND THE SIXTH PLAN

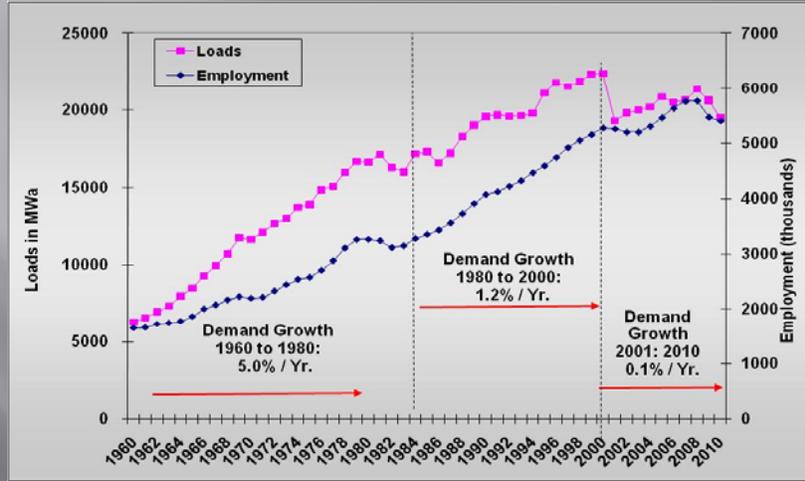
Massoud Jourabchi

\*As of this presentation White Book 2011 is in draft form

## Today's meeting covers

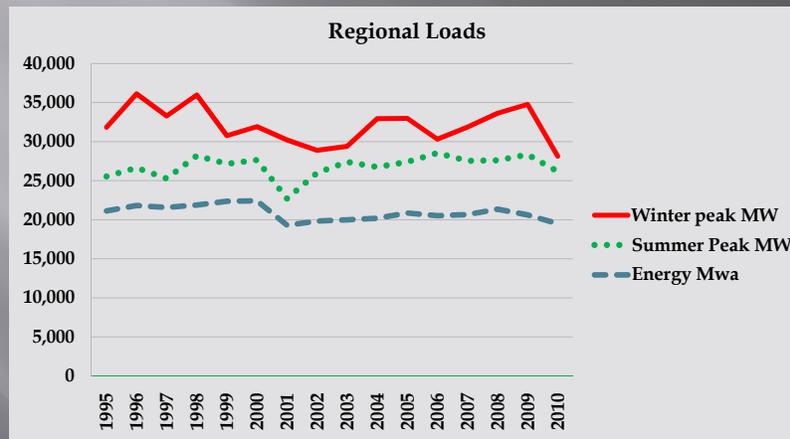
- ▣ Comparison of actual and 6<sup>th</sup> plan loads for 2010.
- ▣ Comparison of key drivers of the 6<sup>th</sup> plan & actual
- ▣ Comparison of load forecasts 2012-2019

## Historic Perspective on Loads and Employment



## 2010 Regional Loads

not adjusted for weather show their largest drop since 2001



Regional loads dropped by about 5% from 2009 to 2010.

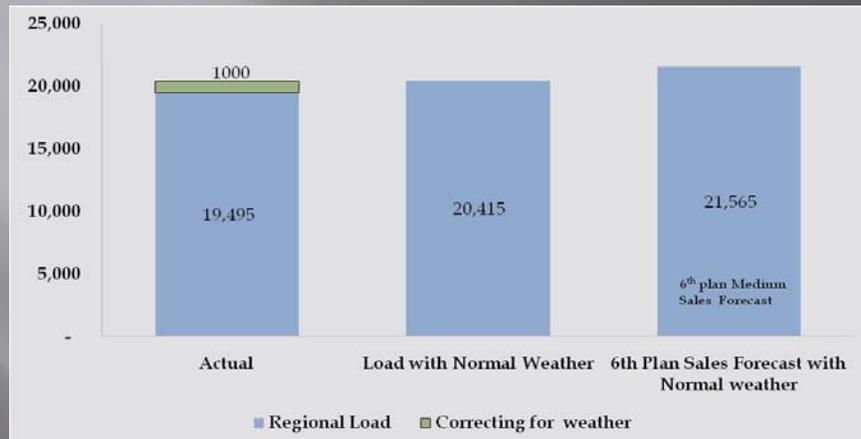
## Key Drivers were significantly lower in 2010

- Slower Economic Recovery than assumed in 6<sup>th</sup> Plan medium case forecast
  - Residential Sector (new home starts) were lower ~40%
  - Non-farm employment was lower by ~ 3%

### Milder than Normal Temperature conditions

- Cooling requirements were 15% below normal
- Heating requirements were 2% below normal

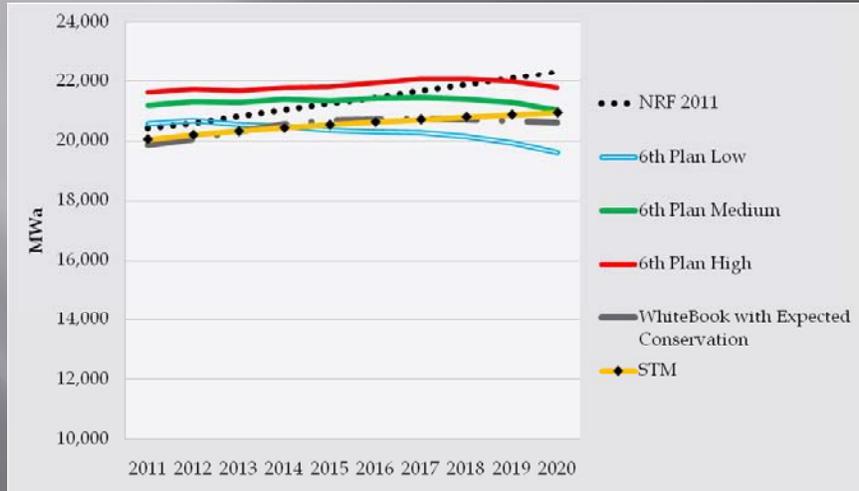
## Weather played a key role in keeping downward pressure on 2010 loads



Weather adjusted loads are 5% lower than medium 6<sup>th</sup> Plan Sales forecast.

## Comparison of Forecasts

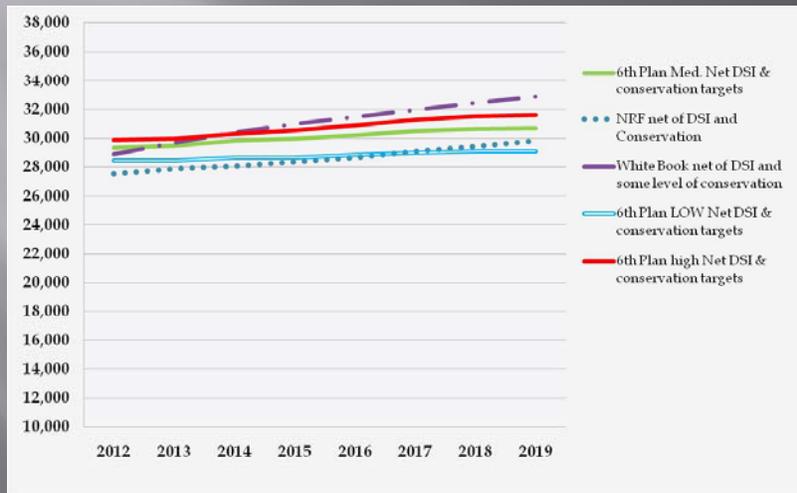
### Fairly flat load growth expectations (under normal weather, net of DSI and Conservation)



White Book 2011 is in draft form as of this presentation

## Summer peak loads growing faster

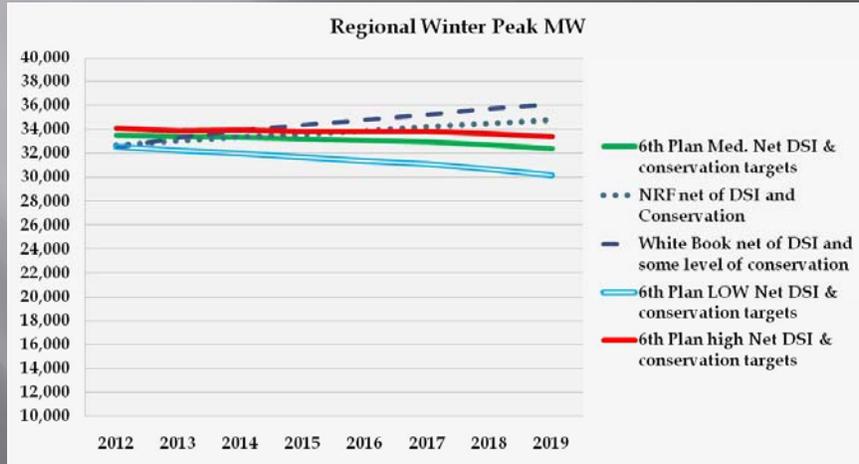
### (under normal weather, net of DSI and Conservation)



White Book 2011 is in draft form as of this presentation

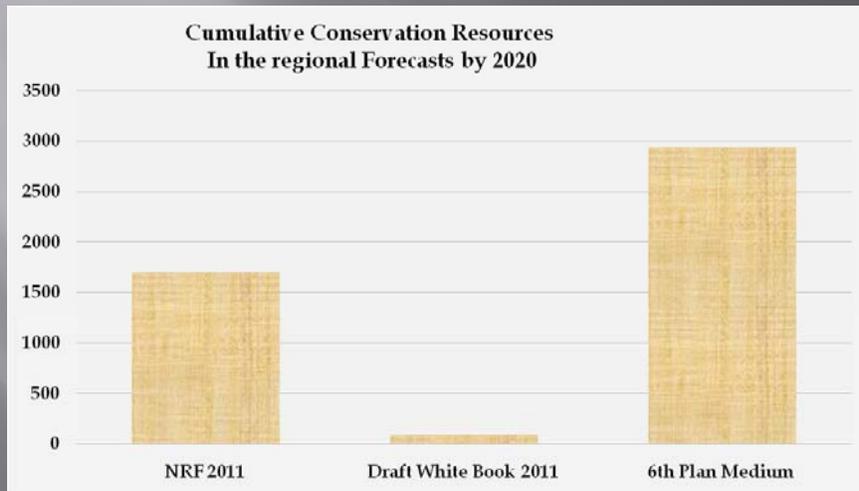
## Winter peak forecasts

(under normal weather, net of DSI and Conservation)  
key driver of peak load is weather condition



White Book 2011 is in draft form as of this presentation

## Conservation Resources have different share of load forecasts



White Book 2011 is in draft form as of this presentation

## Making a complete apples-to-apples comparison difficult

- ▣ Comparing annual and peak load forecasts on an equal footing is difficult because of differences in treatment of conservation resources:
  - Council forecasts loads with and without conservation
    - ▣ NRF only reports loads net of conservation.
    - ▣ Council's 10-year conservation target is between 2,800-3,100 MWa by 2020.
    - ▣ NRF reports a 10-year total of about 1700 MWa of demand-side management for 2012-2022 period.
    - ▣ Draft White Book reports only 100 MWa of funded programmatic conservation
    - ▣ White Book does not include unfunded conservation.

## To summarize

- ▣ Comparison of 2010 actual loads and 6<sup>th</sup> plan loads shows that after adjustment for the weather actual loads are close to the 6<sup>th</sup> plan's low load forecast.
- ▣ NRF, draft White book, as well as Council's short-term forecast expect load growth in the low to medium-low range in the next few years, reflecting continued slow economic recovery.
- ▣ Further detail on conservation achievements and targets is needed for a proper comparison between the NRF, White Book, and Council forecasts.

# Questions