

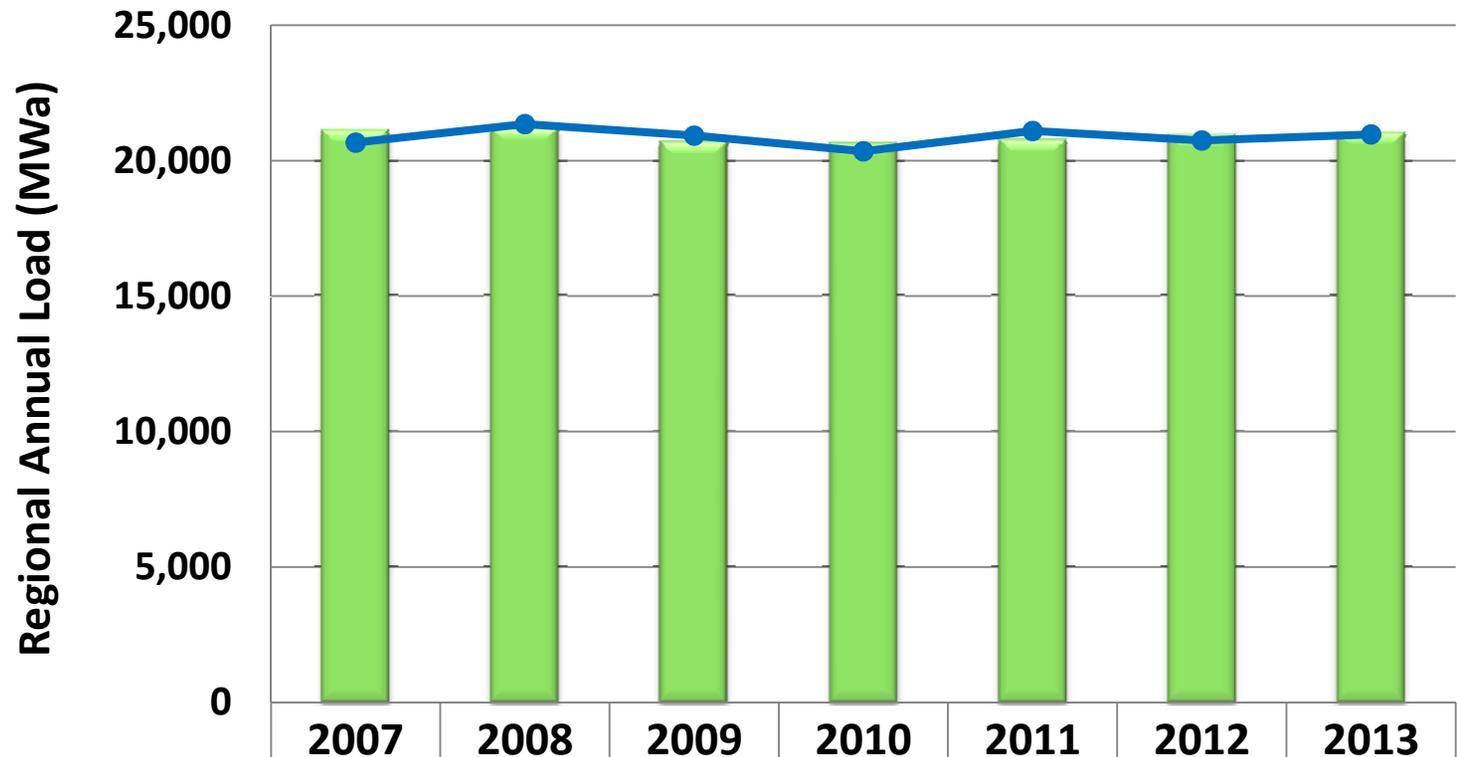
Forecast Hourly Loads in 2020 for Regional Adequacy Assessment

Massoud Jourabchi
RAAC Steering Committee Meeting
November 17, 2014

Today's Topics

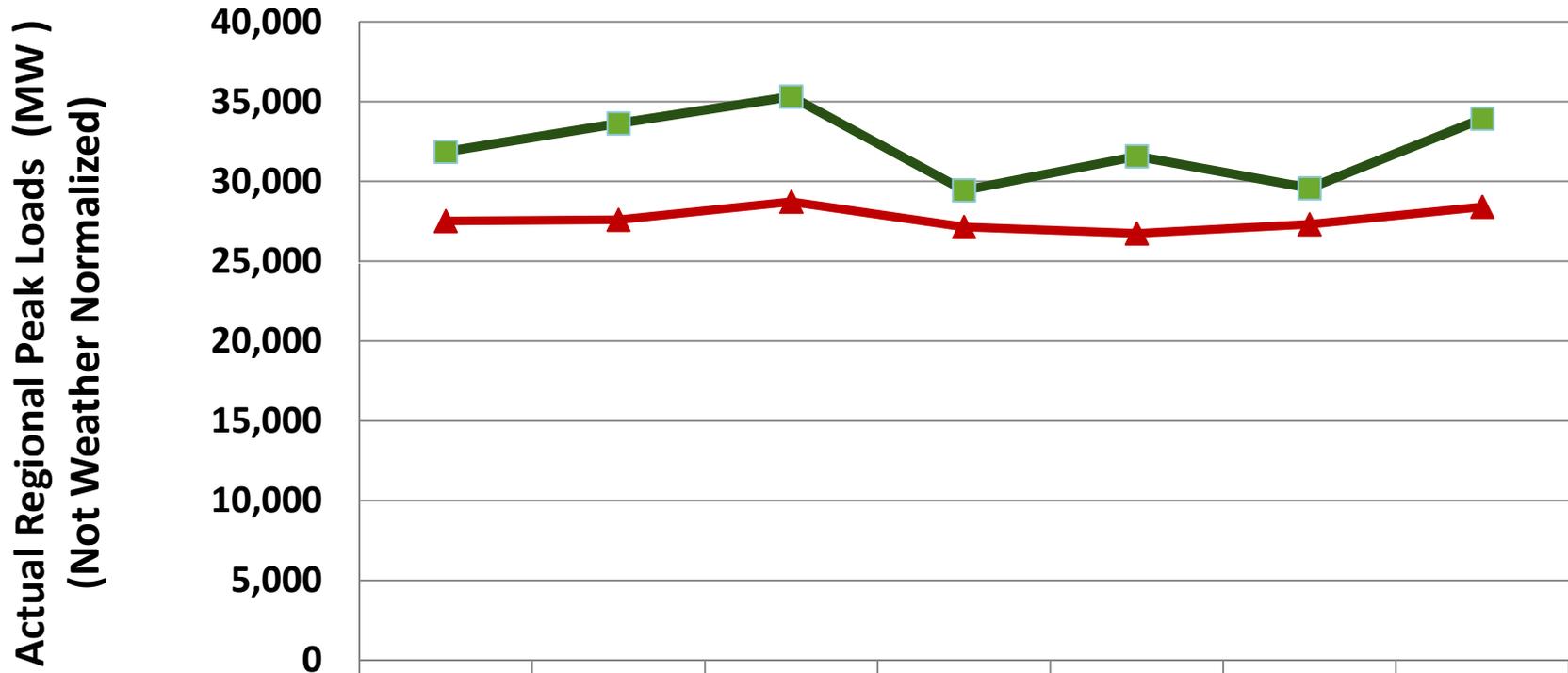
- **Actual and Weather-Normalized Loads for 2007-2013**
- **Hourly Load Forecast for 2020**
- **Comparison to NRF**
- **Southern Idaho Loads**

Actual and Weather Normalized Annual Energy Loads



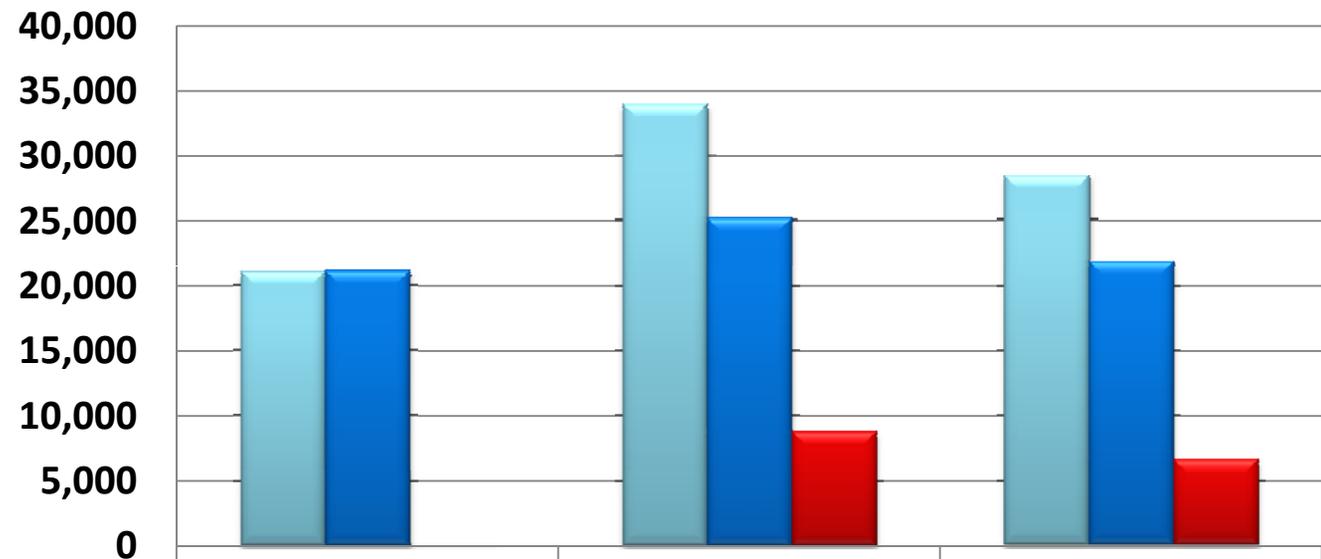
Load After Adj for temp	21,152	21,219	20,704	20,640	20,791	20,972	21,051
Actual Load	20,666	21,350	20,925	20,348	21,096	20,747	20,971

Actual Winter and Summer Peak Loads



■ Winter Peak MW	31,855	33,633	35,316	29,440	31,577	29,570	33,930
▲ Summer Peak MW	27,521	27,595	28,728	27,148	26,737	27,317	28,410

For 2013, Actual and Weather Normalized Energy and Peak Loads



	Energy MWa	Winter Peak MW	Summer Peak MW
2013 Actual	20,971	33,930	28,410
2013 Weather Normalized	21,051	25,186	21,824
Difference	(80)	8,744	6,586

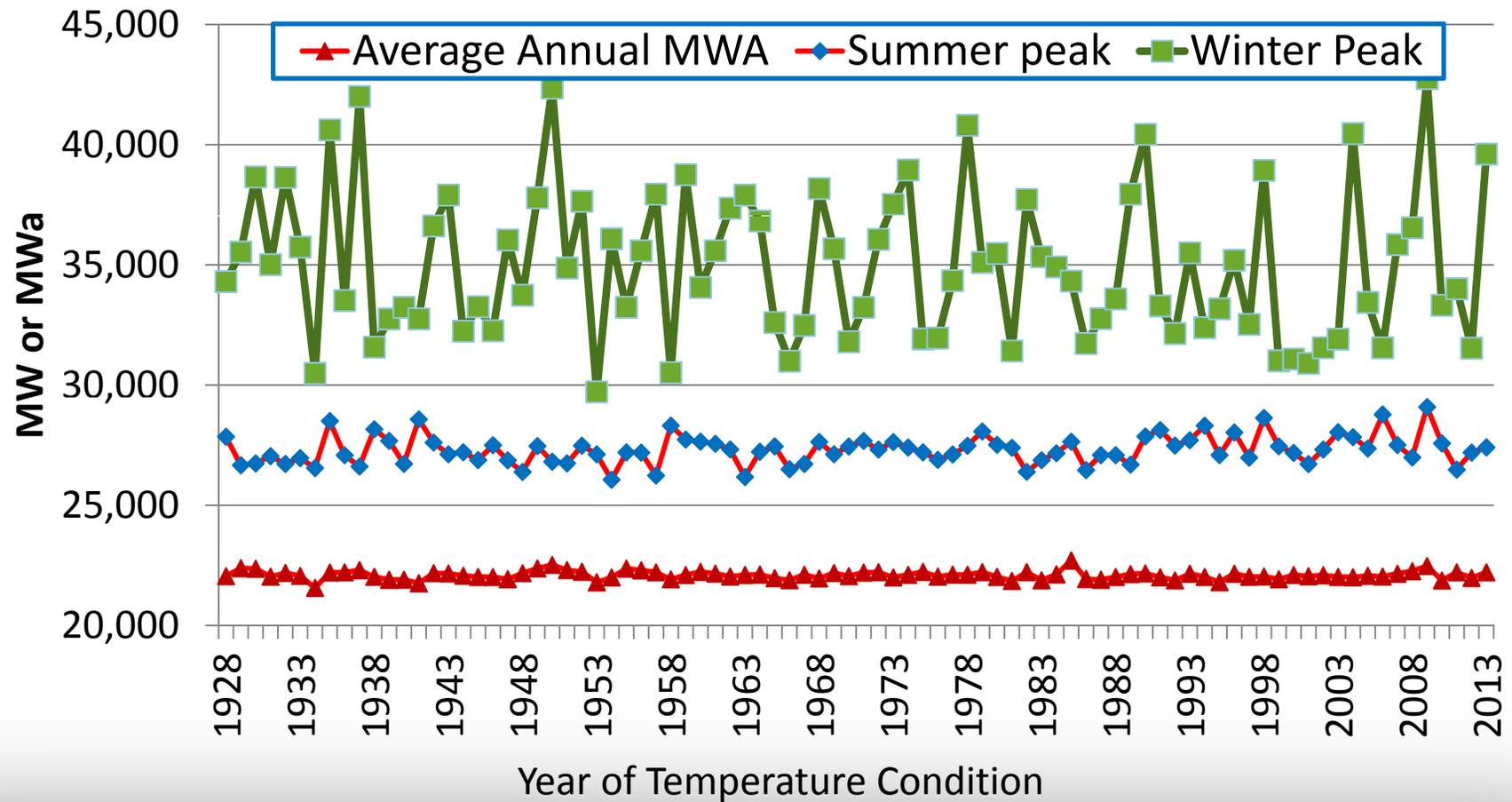
Resource Adequacy Assessment Load Forecast Inputs

- 86 forecasts of hourly regional loads for 2020 operating year (Oct '19 to Sep '20)
- Each forecast reflects daily average temperatures for years 1929-2013
- Forecasts for are net of Sixth Power Plan energy efficiency targets

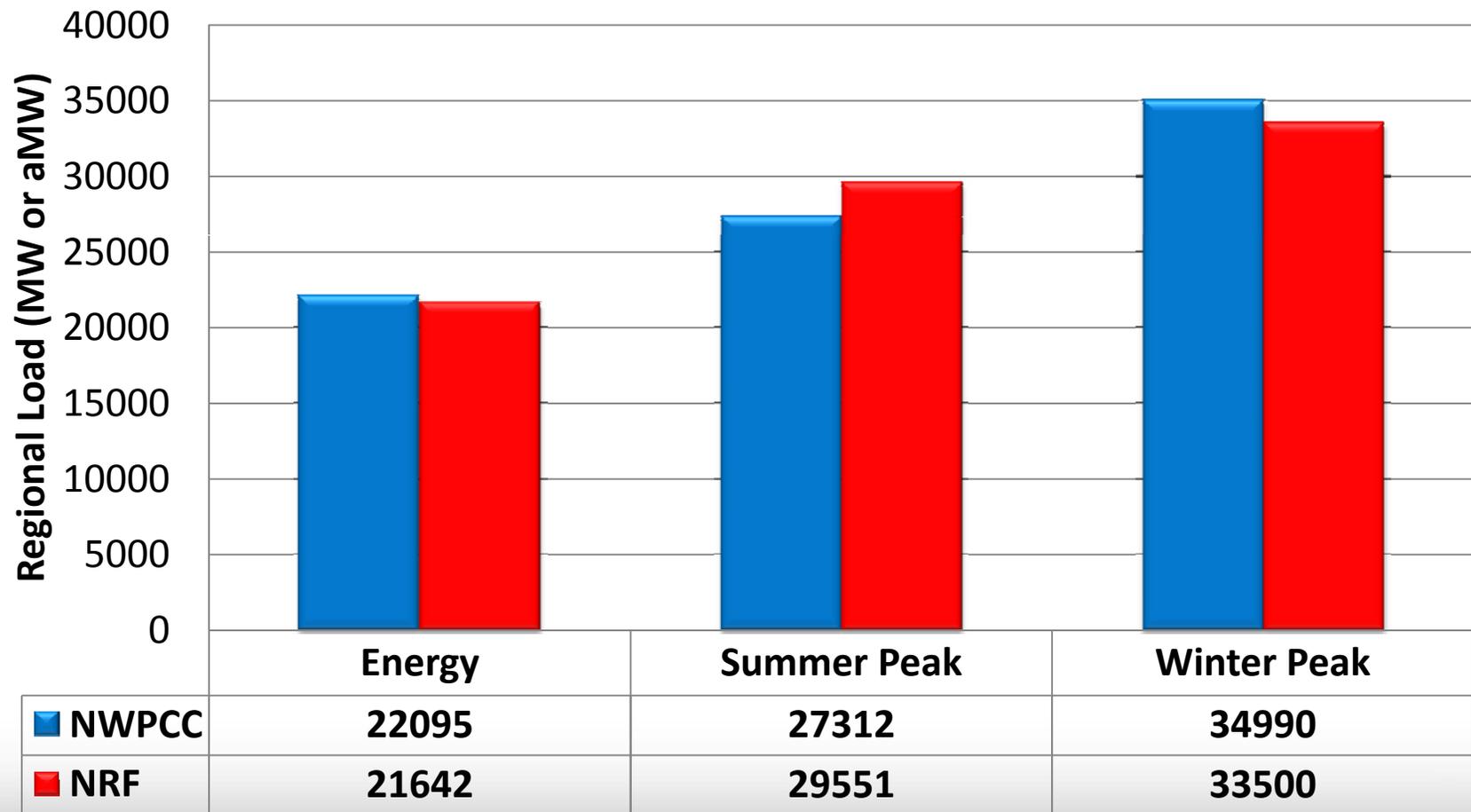
Proposed Regional Annual Load Forecast for 2020

Average Energy and Peak Loads

Across 86 Weather Years



Forecast 2020 Loads vs. NRF Forecast (Average Temperatures)

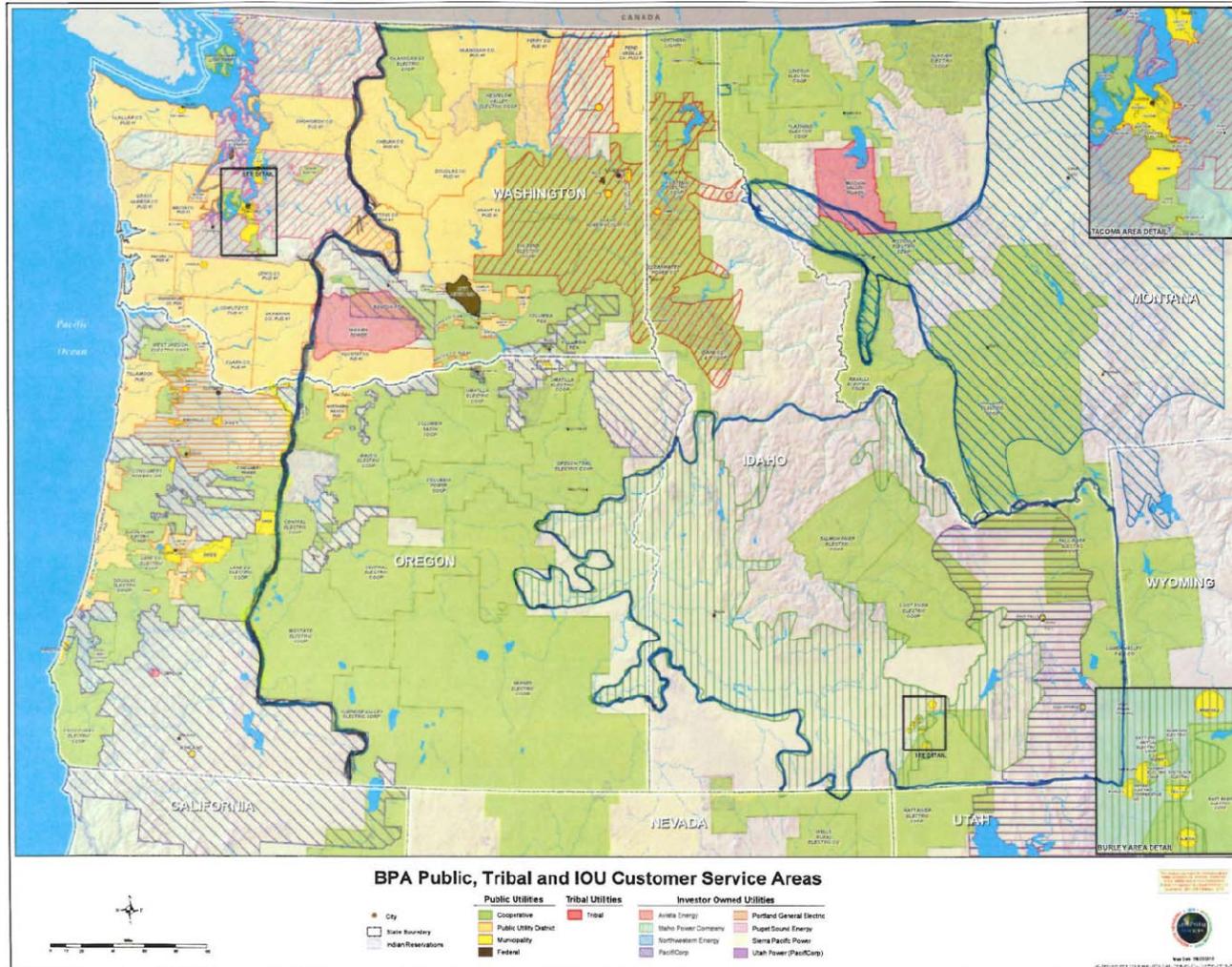


Improvements for the Regional Adequacy Assessment Load Forecast

- **Southern Idaho is modeled specifically**
 - Idaho Power + PacifiCorp East + BPA
- **Washington and Oregon loads will be divided into two zones:**
 - Western Washington and Western Oregon
 - Eastern Washington and Eastern Oregon

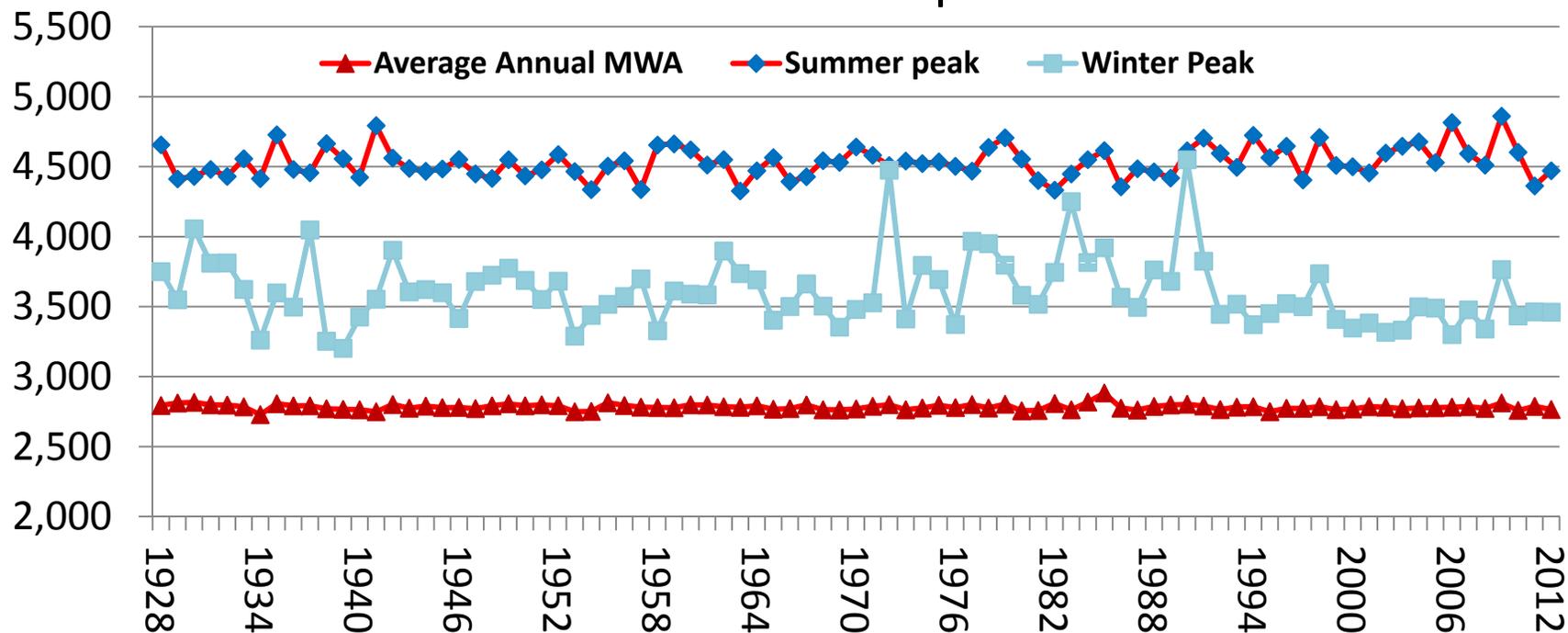
PacifiCorp, BPA, and Idaho Power provided hourly load data

Enhancements Planned for RAA Load Forecast



2020 Southern Idaho Load Forecast

With 86 Years of Temperature Conditions



Range of Forecast	Low	Average	High
Summer Peak	4,327	4,535	4,861
Winter Peak	3,202	3,611	4,549
Annual MWA	2,728	2,784	2,883

Key Points

- Weather normalized annual energy loads (after energy efficiency) are forecast to grow by 0.48%/year for 2014 – 2020
- Proposed range of peak loads in 2020
 - Winter 30,000 - 43,000 MW
 - Summer 26,000 - 29,000 MW