

PacifiCorp 2013 Stress Factor Analysis Assumptions

Docket No. 11-035-200

1. Monthly Firm Peak Demands

Assumptions:

- Historical jurisdictional load
 - Pacific Prevailing Time
 - Includes impact of interruptible customers and Class 1 DSM programs
 - Excludes BPA Southeast Idaho load
- Forecast jurisdictional load
 - June 2013 forecast
 - Does not include impact of interruptible customers or Class 1 DSM programs
- Long-term wholesale contracts and exchanges
 - Hourly historical data used to determine deliveries at monthly coincident peak
 - Forecast deliveries from GRID
- Interruptible load
 - Historical events from curtailment logs
 - Forecast curtailment
 - Capacity for operating reserve spread across all hours
 - Historical 5 year average used to determine monthly economic curtailment
 - Monsanto hourly economic curtailment assigned to highest load hours in month
 - US Magnesium hourly economic curtailment subject to hourly and seasonal constraints consistent with contract
- Class 1 DSM
 - Historical reported curtailment
 - Forecast curtailment
 - Class 1 DSM programs assumed to be energy neutral within a month
 - Irrigation
 - Monthly peak reduction forecast based on historic average percent of participating loads expected to be running in June, July, and August
 - Offsetting energy take assumed to occur before and after event
 - Cool Keeper
 - Monthly peak reduction forecast based on percent of participating load and average impact per participant expected realized at temperatures at or above 97 degrees in July, adjusted for average temperature difference in June and August
 - Offsetting energy take assumed to occur after event

2. Probability of Contribution to Peak (1)

Assumptions: Formulas applied to data from part 1, consistent with parameters of part 2

3. Probability of Contribution to Peak (2)

Assumptions: Formulas applied to data from part 1, consistent with parameters of part 3

4. Monthly Reserve Margins

Assumptions:

- Thermal resource capacity at monthly peak = nameplate capacity - derated capacity - planned outage
 - Derated capacity = thermal nameplate capacity * Equivalent Outage Rate (EOR) %
 - EOR calculated using 48-month historical average ending Dec 2012
 - Planned outage schedule from 2013 Integrated Resource Plan (IRP)
 - Retirement of existing units:
 - Naughton 3 shut down December 2014, gas conversion online June 2015
 - Carbon 1 and 2 decommissioned April 2015
- Hydro resource capacity at monthly peak
 - Run of river generation based on 30-year median annual energy
 - Hourly generation pulled from GRID
 - Storage units capacity from GRID
 - Klamath units removed December 2019
 - Douglas-Wells MidColumbia contract expires August 2018
- Wind resource capacity at monthly peak
 - Hourly wind generation from GRID
 - Annual, monthly, diurnal wind energy equal to 50% probability (P50) forecast
 - Hourly wind energy shaped to 2011 actual output, adjusted so total output remains equal to P50 forecast

5. Cost of Peak Resources

Assumptions:

- Market prices from September 2013 Official Forward Price Curve (OFPC)
- Cost of simple cycle and combined cycle combustion turbines consistent with 2013 IRP
 - SCCT Frame "F" x 1 – 4,250'
 - CCCT Dry "J", Adv 1x1 – 5,050'
 - Natural gas costs updated for September 2013 OFPC