

# FINAL

## Resource Adequacy Technical Committee Meeting

September 22, 2006 – 9:30 a.m. to 2:30 p.m.

### Notes

**ATTENDEES:** John Fazio, Mary Johannis, Chris Robinson, Steve Weiss, Stefan Brown, Malcolm McCay, Tom Haymaker, Rod Noteboom and Wally Gibson  
**PHONE ATTENDEES:** Clint Kalich, Becky King, Howard Schwartz and Kieran Connolly

#### I Synopsis of August 29<sup>th</sup> Steering Committee Meeting

Mary Johannis and John Fazio provided an overview of the 8/29 Steering Committee Meeting, at which the Steering Committee asked for the following action items before they are able to make a decision on the pilot capacity standard:

- West-wide analysis of what happened on July 24<sup>th</sup> and an estimate of what probability of temperature event July 24 constitutes on a west-wide basis.
- Examination of the reserve component of the capacity standard to account for forced outages; 6% may not be sufficient to cover the single largest contingency plus a reasonable level of forced outages.
- Recommendation from Technical Committee on how to count the uncontracted IPP capacity toward meeting the summer capacity target.

#### II Presentation of the Proposed Pilot Capacity Standard & Decisions by Technical Committee

##### A Building Block Approach to Capacity Targets (Planning Reserve Margins)

John presented a PowerPoint on the proposed Pilot Capacity Standard. Using a building block approach, the suggested components of the capacity planning reserve margin are:

- **Operating reserves** (this was formerly referred to as contingency reserves, but renamed operating reserves to reflect the regulating reserves sub-component of this component)
  - The suggested value for this component is 6%, which is based on the 5%/7% WECC contingency reserve requirement for hydro and thermal resources, respectively, and the fact that the regional resource capacity mix is about 50% hydro and 50% thermal.
- **Replacement Reserves** (this was formerly referred to as the supplemental reserves, but renamed to be consistent with WECC terminology)
  - The Council-suggested value for this component is 5% (this approximately equates to the loss of CGS, i.e. the loss of the single largest unit) in the summer and zero % in the winter because there is more opportunity to obtain replacement reserves in the winter than in the summer. Clint Kalich pointed out that the suggested division between winter and summer equates to counting on the

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availability of significantly more than 3,000 MW of out-of-region surplus capacity to the PNW in the winter. Mary stated that the inclusion of replacement reserves seems questionable given that the availability of contingency reserves for the sustained peaking capacity duration of period of 10 hours per day over 5 days should also cover replacement reserves. Malcolm McCay suggested that there may be more forced outages in extreme temperature events in the summer time.

**Action Item:** Council and BPA staff will research whether forced outages in summer heat waves are indeed higher than during normal periods.

- There was agreement that the increased opportunity to obtain replacement reserves in the winter should be counted on the resource side; the replacement reserve percentage in the winter should actually reflect what is needed for replacement reserves. The group agreed to 3% and 4% in the winter and summer to reflect the largest single contingency.
- Steve Weiss suggested that this component should perhaps reflect load forecast error, but Wally Gibson stated that the temperature component should take care of load forecast error.
- **Adverse Temperature**
  - The suggested values for this component are 19% in the winter and 6% in the summer.

The initial planning reserve margin targets based on the building block approach are 25% for the winter and 17% for the summer. After rethinking the replacement target, the targets selected by the Technical Committee to recommend to the Steering Committee are 28% for the summer and 21% for the winter, respectively.

## B Definition of an Extreme Temperature Event

John reviewed the temperature deviations between expected conditions and a 1 in 20 year event both for the summer and winter seasons. The group discussed the large temperature deviation between the expected and the 1 in 20 year event in the winter for the month of December. The increased load associated with the winter planning event results in a 19% value for this component. This appears very high, given that total planning reserve margins for the one hour peak load around the country generally range from 9% to 20%. However, Wally pointed out that the expected temperatures in other parts of the country, e.g. New York, may be closer to extreme temperature conditions. Clint pointed out that the temperature deviations for the Region is about 50% higher than for the Avista system. This means that the warmer temperature areas of the regions have much larger temperature swings than the colder temperature areas. **Action Item:** Stefan Brown suggested recalculating the temperature deviations on Slide 10 using the sustained peaking duration of 50 hours versus the average daily temperatures upon which the current slide is based.

## C Treatment of uncontracted IPP capacity

The Council's analysis now assumes 50% of uncontracted IPP capacity is available to the Region in the summer. This is different than the suggestion to the Steering Committee at their last meeting to not count uncontracted IPP capacity toward the meeting resource

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adequacy needs in the PNW due to the competition for this capacity with California. The change in the Council's suggested approach is the result of additional analyses by Council and BPA staff. Rod Noteboom asserted that uncontracted IPP generation should not be counted toward meeting either winter or summer capacity adequacy needs until this capacity is secured by long-term contracts. There was significant discussion regarding the amount of uncontracted IPP generation, which can be assumed to be available to the PNW. Kieran Connolly discussed a construct he created, which shows on the order of 1000 MW of uncontracted IPP capacity is not deliverable to California, which means that it is available to the PNW. The group agreed (with Rod dissenting) that the "land-locked" uncontracted IPP generation should be counted as being available to the PNW in the summer time. A placeholder value of 1000 MW is assumed; however, an asterisk will be placed by this value to indicate the need for further analysis.

## D Treatment of the out-of-region spot market supply

John reminded the group that the energy standard already recognizes the benefits of interconnection with the rest of the West in the winter time, when the PNW is peaking, but not the rest of the West. Therefore, the winter capacity metric should recognize the same benefit. The summer capacity metric does not include this benefit because the assumption is that there is no surplus out-of-region capacity in the summer when the entire Western Interconnection is peaking.

## E Incremental Hydro Peaking Capacity During Heat Waves and Cold Snaps

John briefly described that the inclusion of incremental sustainable hydro peaking capacity in the calculation of capacity adequacy for summer and winter is a conservative assumption based on the study of sustainable winter hydro capacity available to meet cold snap loads and the actual FCRPS sustainable capacity made available to meet July 24<sup>th</sup> loads.

## F LOLP (Statistical) Approach to Capacity Targets

John described his preliminary capacity LOLP methodology. The results of these analyses indicate summer and winter PRMs ranging from 19 to 21% and 22-25%, respectively. Although the winter PRM is lower and the summer one is higher, there appears to be a fairly good correlation between the LOLP and building block approaches in defining capacity targets for the PNW.

### **III Technical Committee Work Plan and Schedule Next Meeting**

The next meeting is scheduled for October 20, 2006 from 9:30 a.m. to 2:30 p.m. at the Council's Offices. A key topic of discussion will be the reporting process.