

PNW Resource Adequacy Steering Committee Meeting

**November 30, 2005
NWPPC Offices, Portland, OR**

Tentative Agenda

10:00 – 10:15

Introduction

- Finalize notes from October 26 Steering Committee Meeting
- **Goals for Meeting:**
 - Affirmation that Technical Committee is on Right Track in formulating the Regional Resource Adequacy Metrics and Targets
 - Discussion & Direction for Technical Committee on Regional Assessment Mechanism

10:15 – 11:15

Technical Committee Presentation

11:15 – 12:00

Check in on Regional Energy & Capacity Metrics and Targets

12:00 – 1:00

LUNCH

1:00 – 2:30

Discussion of possible Mechanisms to allow for Regional Resource Adequacy Assessments

2:30 - 3:00

Direction for Technical Committee and Next Steps

3:00

Schedule next meeting and Adjourn

Resource Adequacy Principles:

1. It is important to have a regional resource adequacy metric and target.
 - a. Develop metric and target that shapes WECC's energy assessment.
2. We should develop mechanism to assess whether regional RA metric and target is met.
 - a. One basic mechanism is a reporting process to get data from individual load serving entities for regional assessment.
 - b. This allows region-wide transparency and allows individual utilities to assess themselves with respect to their position in the Region.
3. There should be some mechanism reasonably to assure that the regional metric and target will be met going forward.
4. Don't trample on jurisdiction of states or prerogatives of individual utilities in planning and acquiring resources to meet load.

Technical Committee Synopsis

November 18, 2005

- **Energy Metric and Target**

- Embodies Decisions Reached at October 26 Steering Committee Meeting

- Methodology to link probabilistic assessment with deterministic annual load resource balance assuming some level of winter surpluses from out-of-region
- Energy target defined by adverse or critical hydro and normal load conditions

- **TECHNICAL COMMITTEE RECOMMENDATION**

- Energy metric & target should be an annual load resource balance = zero with hydro defined under critical water conditions and the **INITIAL** out-of-region spot market availability defined as 1500 aMW with up to 3,000 MW available in any one hour
- Recommended metric & target equivalent on an LOLP basis with annual load resource balance assuming 85th percentile water & no out-of-region spot market availability



Comparison of “Old” and “New” Load Resource Balance Calculation

“Old” Annual LR Balance

RESOURCES:

Hydro energy under critical water
Thermal power plant energy
Other renewable energy
Firm contractual energy
 Σ =TOTAL RESOURCES

LOADS:

Total average regional load 1/
 Σ (**Resources-Loads**) ≥ 0

1/ under temperature neutral conditions, which equates to 1 in 2 load forecast

“New” Annual LR Balance

RESOURCES:

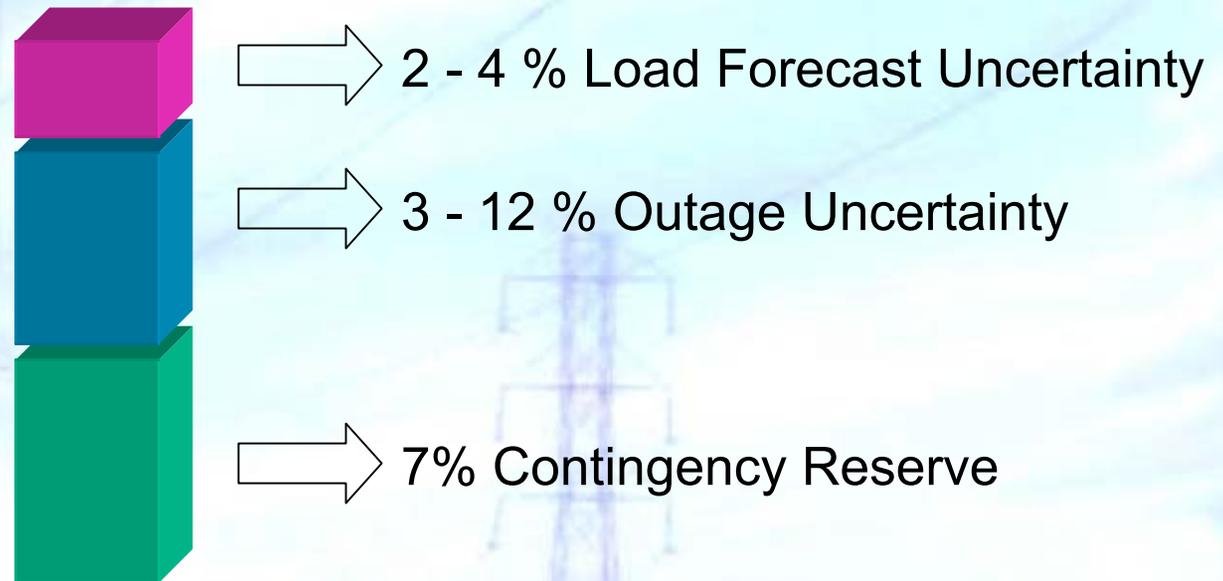
Hydro energy under critical water
Thermal power plant energy
Other renewable energy
Firm contractual energy
Out-of-Region Spot Market
 Σ =TOTAL RESOURCES

LOADS:

Total average regional load 1/
 Σ (**Resources-Loads**) ≥ 0

Example of Capacity Metric & Target: California's Resource Adequacy Requirement

CA Planning Reserve Margin Requirement = 15 – 17 % ^{1/}



^{1/} Based on Characterization by Phil Pettingill of CAISO at 8/10/04 WECC Resource Adequacy Work Group Meeting

Capacity Metric Options

Option	Load	Hydro	Imports	Target
1. Planning Reserve Margin	Normal Cold snap simulated to determine sustained hydro peaking capacity	Sustained hydro peaking capacity under 50 Water Conditions; Need to select target water condition	Allowed	Total Capacity needs to cover peak load + planning reserves
2. Capacity De-rate	Normal Cold snap simulated to determine sustained hydro cap reduction	Sustained hydro capacity reduction under 50 Water Conditions; Need to select target water condition	Allowed	De-rated Capacity needs to = or > Peak Load
3. Operational Capacity	Normal	Operational hydro capacity under 50 Water Conditions; Need to select target water condition	Allowed	Hydro Operational Capacity + De-rated Capacity needs to = or > Peak Load

Technical Committee Synopsis

November 18, 2005

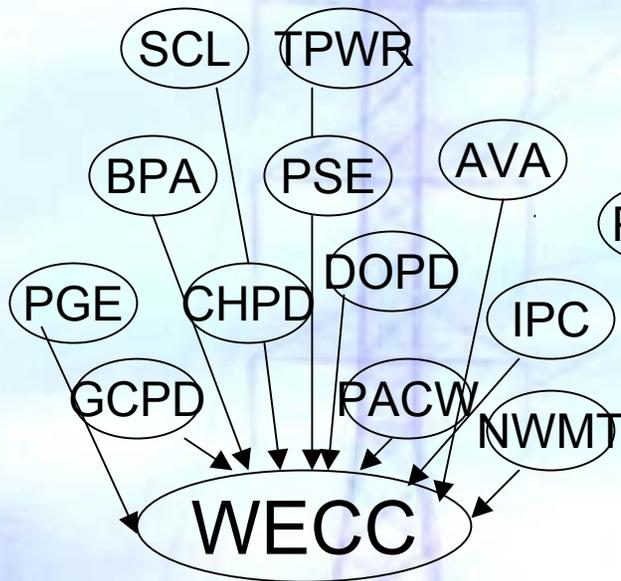
- Direction from Steering Committee is that capacity metric for hydro should be in terms of sustained peaking capability
- Technical Committee is not yet ready to recommend capacity metric and target because the three options presented all require sophisticated hourly models to determine sustained hydro peaking capacity
- Technical Committee is investigating simplified approach that could be done using spreadsheet methods

Regional Resource Adequacy Assessment Mechanisms

- **Reporting Process Considerations:**
 - **Who Reports?**
 - All Load Serving Entities?
 - Or, would BPA report on behalf of its full requirements customers?
 - **With whom would Reports be filed? A neutral third party?**
 - NWPCC?
 - NWPP?
 - **How would reporting on PNW Resource Adequacy mesh with WECC Loads and Resources Reporting?**
 - Reporting done by control areas now
 - Reporting on LSE level being explored

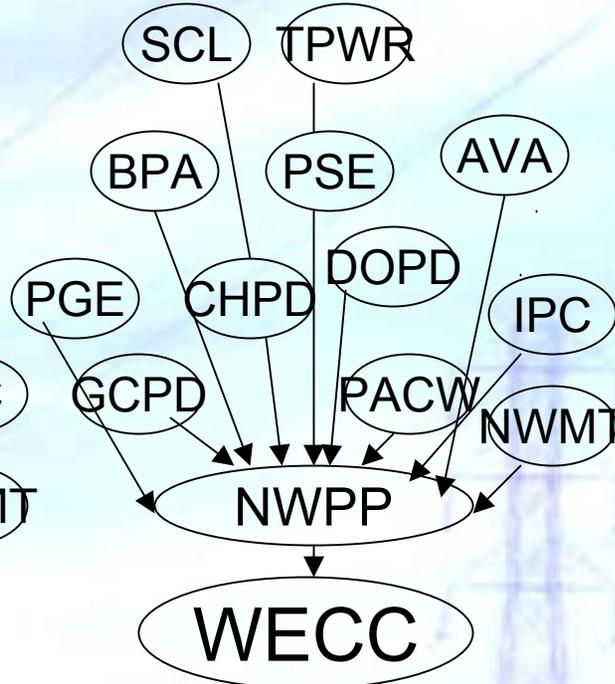
Possible Transformation of WECC Loads and Resources Reporting Process

Current Process



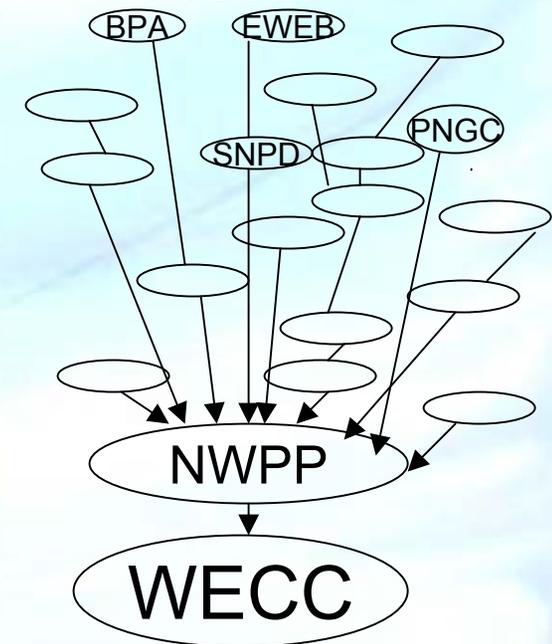
Control Areas Report to WECC

Next Year



Control Areas Report to NWPP;
NWPP provides WECC scrubbed data

Possible Future Process



LSEs Report to WECC

Possible Mesh of WECC and PNW Resource Adequacy Reporting Processes

- WECC's Resource Adequacy Work Group pointed out, "Because of the current method of collecting data from the Control Areas results in a disconnect between the parties which supply the information and those responsible for ensuring resource adequacy, a better approach would be for WECC to collect data at the LSE level."
- L&R Subcommittee includes investigating reporting at the LSE level as a work plan item
- If WECC transitions to reporting at the LSE level, the reporting for WECC and PNW Resource Adequacy could be accomplished concurrently through NWPP.

Outstanding Technical Committee Work Items

- **Energy Assessments:**
 - Establish Counting Protocols for future resources, wind energy, resources under contract and maximum out-of-region spot market availability on an individual utility basis
 - Agree on planning horizon for these assessments
 - Continue to work on benchmarking and validating LOLP Methodology by:
 - Investigating specific questions regarding how other Reliability Councils perform their LOLP/LOLE evaluations
 - Continuing benchmarking using NW analyses
 - Continue to perform analyses of out-of-region surplus capacity on a regular basis

Outstanding Technical Committee Work Items

- **Capacity Metric and Target:**
 - Investigate Avista's methodology for evaluating sustainable hydro capacity, which looks at storage, operational constraints and other factors
 - Develop options which can be evaluated using simplified methods
- **Other Items:**
 - Relate acceptable distribution outages versus generation insufficiency outages as a way of figuring out an acceptable LOLP target
 - Continue analysis of costs & benefits of different LOLP levels
 - Investigate how other Reliability Councils implement Resource Adequacy Requirements/Standards/Guidelines

Next Steps

- Additional Direction to Technical Committee
- Next Meeting?