PNW Resource Adequacy Forum

Small Group Description of Proposed Resource Adequacy Implementation Approach

INTRODUCTON

Steering Committee Principles

The Steering Committee set out four principles early in its deliberation. The last three of the four dealt with application of regional Resource Adequacy (RA) metrics and targets to individual utilities:

- We should develop mechanisms to assess whether regional RA metrics and targets are met.
  - One mechanism is a reporting process to get data from individual load serving entities for regional assessments.
  - This allows region-wide transparency and allows individual utilities to assess themselves with respect to their position in the Region.
- There should be some mechanism reasonably to assure that the regional metrics and targets will be met going forward.
- Don't trample on the jurisdiction of states or prerogatives of individual utilities in planning and acquiring resources to meet load.

Successful implementation of the proposed approach assumes that the PNW RA Forum (Forum) has reached agreement on both energy and capacity metrics and targets that are deemed to satisfy an acceptable loss-of-load probability target on a regional basis.

PROPOSED APPROACH

Regional Awareness of Resource Adequacy Framework: There are a number of national, west-wide, regional and state efforts currently underway, which have thrust resource adequacy into the limelight. The Energy Policy Act of 2005 mandates the Electric Reliability Organization (ERO), established by the act to implement mandatory reliability standards for the bulk-power system under the purview of the Federal Energy Regulatory Commission, "to conduct periodic assessments of the reliability and adequacy of the bulk-power system in North America." The North American Electric Reliability Council (NERC), the ERO heir apparent, is in the process of developing a standard for resource adequacy assessments.

In the West, the Western Electricity Coordinating Council (WECC) is developing guidelines to recommend appropriate methodologies for assessing RA. Although the NERC and WECC efforts act as drivers, momentum is also building within the region for a regional RA standard through the Forum and the resurgence of Integrated Resource Plans (IRPs). In fact, the state of Washington recently passed legislation requiring all large electric utilities, both public and private, to prepare IRPs. Utilities, state regulators

and the elected boards of public utilities are all explicitly examining strategies for planning resources to meet load. The efforts described above, the active participation by the utility and state regulatory communities in the Forum and the proposed adoption of an energy metric and target for the region by the Council all serve to elevate the electricity industry's awareness of the regional RA standard, which is the first step to achieving resource adequacy.

Reporting: Utilities, other than those that have chosen in advance to put their entire load on Bonneville, would report their load and resource forecasts annually to some regional entity. Bonneville would report for all the utilities that have chosen it as their ongoing resource supplier. Currently the utilities with responsibility for procuring resources to meet their load obligation report their forecasted loads and resources to PNUCC, which would be a good candidate for this role in the future. Aside from refinements in data definitions, this reporting process would involve little change from current practice, except for those utilities that are newly-assuming independent resource procurement responsibility. The PNUCC's Northwest Regional Forecast (NRF) currently uses a five-year planning horizon, which could be maintained for this purpose.

Assessment: The results of this reporting would be used in an assessment, in which the regional totals would be checked against the regional energy and capacity metrics and targets. This assessment would be done in the first instance by PNUCC. The assessment for the planning year, tentatively three years out, would be of most consequence for the region. The results of this "bottoms-up" assessment could then be compared with the Council's "top-down" regional assessment in order to validate the assessments, or, in the case of discrepancies, inform quality control checks of the data to further refine the assessments.

At this stage, the results of the assessment(s) would be depicted on an aggregated basis, as is currently done in the NRF. Utilities would be able to compare their resource strategies for meeting load obligations to the regional resource adequacy situation and adjust their plans accordingly. The regional assessment(s) would include the "planning adjustment" (market purchases plus hydro flexibility) and the regional uncontracted IPP generation in the regional totals, assuming the energy metric and target are adopted by the Council in their current form.

Highlighting how much the region is relying on the external spot market or on uncommitted regional IPP generation, compared to the amounts included in the currently proposed standard would provide a kind of "yellow light" signal to the region about potential upcoming adequacy problems.

If the assessment shows that the region appears to be meeting the targets for the planning year, nothing more would need to be done. If the assessment indicates that that region as a whole is falling below the targets, individual utilities that are disproportionately relying on the market would be highlighted. "Falling below the targets" would most likely show up in this assessment as more net reliance on the out-of-region market, by the aggregate of the utilities, than is contemplated in the regional target.

An example showing how this calculation could be done is shown in Table 1 below. The mechanics of a calculation like this, as well as potential alternatives, focusing on PNUCC's NRF, could be elaborated by a small group and brought back to the next steering committee meeting.

Table 1 - Example Application

	Region	Utility Total	Utility A	Utility B
Load	1000	1000	500	500
Hydro - critical	500	500	300	200
Firm resources	200	200	0	200
Planning Adj.	100 Target	200	150	50
Uncontracted	100 Target	100	50	50
Total resources	900	1000	500	500
Balance	-100	0	0	0

In this example, the sum of the utilities' planned spot market purchases is larger than the regionally adopted target, with a disproportionate reliance on this resource by Utility A. Since the region as a whole is not meeting the adequacy target, Utility A would be highlighted in some sort of regional assessment and report. This report would not provide detailed information regarding Utility A's loads and resources, but rather just point out the magnitude of its dependence on the market in terms of the percentage of total resources the market represents.

While this would not necessarily lead to further action, it would make clear the utilities that are deliberately going short in a time frame when the region appears likely to be resource deficient according to the established metrics and targets.

What happens if a problem shows up in actual operations?: Because of the variation in water conditions the Northwest experiences, prospective (planning) inadequacy will not necessarily turn into inadequacy in actual operations. However, should the region be inadequate on a near-term planning basis (too short a timeline for construction of new resources), utilities that are short, for whatever reason, would face the market price consequences of their actions

Bonneville expects to negotiate contracts with its public agency customers that will establish sufficient notice provisions that customers either make an election to (1) purchase load following power products from BPA or (2) fixed amounts of power that do not follow load and prohibits last minute changes to place load on Bonneville. The details of this relationship (amounts of power to be provided by Bonneville, notice periods, etc.) will have to be worked out in the contract discussions between Bonneville and its power customers.

It is also important to remember that, just as conditions could turn out in an operating year to be better than expected, they could also turn out to be worse. The planning metrics and targets are established based on a five percent LOLP, which means that they are not intended to protect against all possible outcomes. There will be some circumstances in which, even if utilities meet the planning criteria, they could face high market prices or even potential load curtailments.

The proposed metric allows for drafting below refill curves during high load periods to meet load with the expectation that runoff as well as balancing purchases will enable reservoirs to fill to targeted elevations. This "hydro flexibility" represents a significant contribution to reducing LOLP from the region's hydro resources and does not involve the declaration of a power emergency. Bonneville does not believe that a contingency option involving the declaration of a hydro emergency under the provisions of the Biological Opinion is an appropriate resource adequacy planning option and such a contingency is not part of the proposed metric. If in the course of actual operations, in the event the declaration of a power emergency is contemplated, Bonneville will, in coordination with the other FCRPS Action Agencies (COE and BOR), coordinate through the established Regional Forum process as provided in the Biological Opinion.

NOTE:

NWEC objects to the language in the paragraph above and believes that there ought to be financial penalties on utilities or Bonneville if Bonneville is forced to declare a hydro emergency because of utility inaction.
