

PNW Resource Adequacy Forum

Small Group Description of Proposed Resource Adequacy Implementation Approach

[Material for particular attention from the Steering Committee is highlighted. Italicized material is background comment, not part of the proposal. -- WG]

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.

The Steering Committee originally considered three alternative approaches for implementation of Northwest RA targets and metrics at the individual utility level. The three approaches are the following:

- Alternative 1: Rely on public information and responsible utility management
- Alternative 2: Rely on some entity or entities to be responsible for providing the adequacy reserve, either the utilities through binding contractual or regulatory requirements (Alternative 2a), some other entity (Alternative 2b), or through a voluntary contractual mechanism similar to the Western Electricity Coordinating Council's (WECC) Reliability Management System approach (Alternative 2c)
- Alternative 3: Rely on the control areas to be responsible for providing the adequacy reserve.

After discussion of the alternatives, the Steering Committee focused on the first alternative for further attention. This paper fleshes out that alternative for further consideration. The Steering Committee also asked contingency measures to be included in this alternative, if this alternative fails to motivate the construction of sufficient resources to satisfy the regional RA metrics and targets in the assessment during the "Planning Year," i.e. the designated year, perhaps three years out, by which time a

looming regional resource deficiency should have triggered resource procurement actions on the part of individual utilities.

Key Assumptions

Successful implementation of the proposed approach assumes the following:

- 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;
- The Forum has successfully translated the Regional metrics and targets into individual RA metrics and targets, which equitably allocate the “planning adjustment” energy and capacity (if any) as well as the uncommitted within-Region market resources to the individual utilities *[Issue: We had kept this from previous versions of the paper. Is it necessary for the current approach?-- WG]*;
- The Forum has defined an appropriate planning year, perhaps three years out into the future, for which a resource adequacy assessment performed by the NWPCC, which indicates insufficient resources deliverable to load to meet the agreed-upon regional metrics and targets, triggers or has triggered actions on the part of the Region’s utilities, BPA and/or the PUCs to ensure procurement of additional resources; *[previously: “for the alternatives requiring their action.” -- WG]*
- Although the most important goal of all alternatives is to ensure resource adequacy for the Region, another important goal is to avoid mechanisms that result in overbuilding generation in the Region.

PROPOSED APPROACH: Information And Responsible Utility Management

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; thus, PNUCC would be a good candidate for this role in the future. This reporting process involves 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. The assessment for the planning year would be of most consequence for the Region. This assessment would be done in the first instance by PNUCC. At this stage the public assessment would be done on an aggregated basis, as is currently done in the NRF.

Utilities would be able to see how they look in the context of the regional resource adequacy situation and adjust their plans accordingly. Independent analysis of loads, e.g., the Council's, and of resource availability could be brought to bear in this assessment as well.

If the assessment shows that the region appears to be meeting the targets, 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 missing the target could be highlighted. While this would not necessarily lead to further action, it would make clear the utilities that are deliberately going short in a timeframe when the Region appears likely to be resource deficient according to the established RA metrics and targets. At this point, the Region could elect to implement the contingency measures described further on in this paper.

What happens as a problem approaches?: Because of the variation in water conditions the Northwest experiences, prospective (planning) inadequacy will not necessarily turn into inadequacy in real time. However, should the region be inadequate on a near-term 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. Public customers of Bonneville, who had chosen not to rely on Bonneville for full service of their load obligation, would face overrun penalties in their power rates, if they chose to return to Bonneville for load service beyond their contracted amounts. This assumes that the details of the relationship (amounts of power under contract, notices, etc.) have already been worked out in the contract discussions between Bonneville and its power customers.

The power rate penalty should be set at something above the market price for the replacement power that Bonneville would have to acquire on the short-term or spot market to serve the overrun amounts. Bonneville's current imbalance penalty for real-time requirements, which is administered through the TBL, is 125 percent of a representative spot market index value, which would be appropriate to use in this case as well. A sliding scale between market prices plus some administrative overhead charge at one end and market prices plus a penalty charge at the other end could be applied, depending on the degree of advance notice given to Bonneville that a customer will need to exceed their contracted amount. This could be worked out in the contract discussions between Bonneville and its customers.

If BPA is forced to declare a hydro emergency to provide the power because, for instance, a sufficient supply cannot be provided by the spot market, the costs of insufficiency will be imposed on external parties, primarily fish and fish-related interests, as well as on the inadequate entity. In this case, the power rate penalty should be steeper. For instance, it could be set at 150 percent of the market price during those hours. Moreover, the revenues collected would be used for incremental fish improvements, such as the following: purchase of land, water and reduced irrigation from willing sellers; grants to non-profit habitat restoration groups such as the Oregon and the Washington Water Trusts, the Bonneville Environmental Foundation, For Sake of the Salmon, etc;

grants to CBFWA, state and tribal natural resource agencies for incremental measures above and beyond current plans. The penalty would also apply to Bonneville's PBL if the emergency was declared due to its failure to acquire sufficient resources on behalf of its load-following obligations, so as to have PBL face the same penalties as other entities.

IOUs would face market prices along with whatever rate treatment their PUCs ordered for them.

Contingency measures: The first step in deciding whether to initiate contingency measures is to reconvene the PNW Resource Adequacy Steering Committee. This Committee, which includes the Council, BPA, the Region's public and investor-owned utilities, PUCs and energy stakeholders, would decide on a plan of action to address the impending resource deficiency. This plan of action could include one, or more, of the following contingency measures, or define other measures deemed appropriate:

- Request utilities not satisfying RA metrics and targets to construct/procure firm resources
- Initiate regional demand-side management programs, which would induce electric end-users to curtail usage through financial mechanism. Funding for this program would need to be defined, in advance.
- Initiate a contingency plan, which would already need to be defined in detail re: how to finance and secure rate-recovery from construction/procurement of new firm resources. Any utility could draw upon this resource, but would need to pay a set price (or formula) worked out in advance.

[Issue: Is it consistent with the discussion about real time consequences to propose these actions be triggered three years ahead so that you never get to that real time consequence? One alternative approach to contingency measures is to wait for real time failure then decide we didn't like the outcome (including the price consequences) and then trigger the backup process for the next time. How does the Steering Committee want to approach this issue? -- WG]