Northwest Power and Conservation Council

September 13, 2006

DECISION MEMORANDUM

TO: Council Members

FROM: Wally Gibson

SUBJECT: Council Release of Draft Resource Adequacy Implementation Plan

PROPOSED ACTION:

The Staff proposes that the Council release the draft Resource Adequacy Implementation Plan (attached) for public comment. A six-week comment period ending on October 25 would include a period for comment at the October Council meeting in Helena and would allow for staff preparation of response to comments and a Council decision at the November Council meeting in Coeur d'Alene. This schedule is consistent with Bonneville's Regional Dialogue decision process.

SIGNIFICANCE:

Adoption of the proposed implementation plan would be the second important step in the region's progress toward ensuring resource adequacy. The first step was the Council's adoption in May of the energy adequacy standard. The third, which is close to completion, is the development of the capacity standard. The implementation plan proposed here is the key linkage between concept and action. The plan describes the role the Council will take and the actions it expects from others in the region.

BUDGETARY/ECONOMIC IMPACTS:

There are no budget impacts. All activities would be included in normal staff work.

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BACKGROUND:

In the Fifth Power Plan, the Council adopted Action Item ADQ - 1 "Establish regional and West-wide reporting standards for the assessment of adequacy." The attached implementation plan addresses that item by describing some of the data that is to be reported (leaving further details to be developed by the Resource Adequacy Forum [Forum] Technical Committee) and the process by which those data would evaluated.

The Fifth Power Plan also included Action Item ADQ - 2 "Carry out a process to establish adequacy standards." The implementation plan is, as noted above, the second of the three key pieces in getting to that goal.

ANALYSIS:

The Forum consisted of a Technical Committee and a Steering Committee, the latter co-chaired by Chairman Karier and Paul Norman from Bonneville. The Steering Committee, consisting of a range of policy-level people from the region, oversees the work of the Technical Committee and took the lead in the development and review of the proposed implementation plan. The Implementation plan went through a thorough development process including several drafts and extensive discussion by the Steering Committee, which has recommended it to the Council for release for public comment and adoption.

The document describes 1) data submittal, relying on the current process for data submittal to PNUCC for the Northwest Regional Forecast, 2) assessment of the regional results against the adopted energy standard and the to-be-adopted capacity standards by PNUCC and by the Council, and 3) a set of steps for highlighting potential problems as they are revealed by the assessment. The levels of public response to the assessment will be related to the level of seriousness of the potential problems.

ALTERNATIVES:

The Council could send the proposal back for further review by the Resource Adequacy Steering Committee. The Staff does not recommend this, because it has already had thorough review by that group, which has recommended it to the Council for wider release and comment.

ATTACHMENTS:

Draft "Pacific Northwest Resource Adequacy Implementation Plan."

TABLES, GRAPHS, CHARTS, OTHER GRAPHICS:

None

Pacific Northwest Resource Adequacy Implementation Plan

INTRODUCTON

This paper describes the role the Council will take and the Council's expectations of the roles others will take in the Pacific Northwest Resource Adequacy Implementation Plan. It includes current expectations about the outcome of Bonneville's Regional Dialogue process, recognizing that those discussions are not yet complete.

BACKGROUND

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 (FERC), "to conduct periodic assessments of the reliability and adequacy of the bulk-power system in North America." The North American Electric Reliability Council (NERC), which was certified as the ERO on July 20, 2006, is in the process of developing a standard for resource adequacy assessments. FERC said in its final rule on implementation of the ERO provisions of the legislation that it intends to require the ERO to make recommendations where entities are found to have inadequate resources following the assessments.

In the West, the Western Electricity Coordinating Council (WECC) is developing guidelines to recommend appropriate methodologies for assessing resource adequacy. Although the NERC and WECC efforts act as drivers, momentum is also building within the region for a regional resource adequacy 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 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 standard, which is the first step to achieving resource adequacy.

APPROACH

Utility 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 for load growth. Currently the utilities with responsibility for procuring resources to meet their load obligation report their forecasted loads and resources to PNUCC. This approach proposes to continue using PNUCC and its

Northwest Regional Forecast (NRF) as the vehicles for reporting. Aside from possible refinements in data definitions and development of protocols for any new data, this reporting process would involve little change from current practice, except for those utilities that are newly assuming independent resource procurement responsibility. The NRF currently uses a five-year planning horizon, which would be maintained for this purpose. Reporting is central to the proposed implementation process and relies on full participation by the utilities, their regulators and local boards, and Bonneville. Bonneville contracts would not require that its customer utilities develop resources to meet adequacy standards, but they would require that utilities who do not rely on Bonneville to meet their load growth to report their load and resource data for this assessment.

PNUCC and Council Assessments: 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 assessments for the planning years, five and three years out, would be of most consequence for the region. The results of these "bottoms-up" assessments could then be compared with the Council's "top-down" regional assessments in order to validate the assessments, or, in the case of discrepancies, either inform quality control checks of the data to further refine the assessments in the future or highlight differences in assumptions. Some differences in assumptions e.g., about capacity factors of wind generation, might provoke additional research, while others could be the result of policy or regulatory decisions.

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" (winter out-of-region spot market purchases plus hydro flexibility) and the regional uncontracted IPP generation in the regional totals, as described in the energy metric and target adopted by the Council.

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 warning signal to the region about potential upcoming adequacy problems.

Indicators of Resource Adequacy Levels: The section below describes in more detail a "green light, yellow light, red light" approach to regional adequacy assessment and describes actions to be taken with each outcome.

The description refers both to a physical standard, the target adopted by the Council, and to an economic standard, a target that provides more resources than simply enough to avoid loss of load. The Council's economic target developed in the Fifth Power Plan is an example of a possible economic standard. Developed by analyzing the exposure of the Northwest power system to a large variety of risks, including the risk of high market

prices, such as were experienced in 2000-01, this target would give the region approximately an additional 3,000 MW of resources, above the level that would be developed pursuant to the target adopted in the adequacy standard.

An alternative economic standard could be when the region as a whole begins to show reliance on the extra-regional spot market and the uncontracted IPP generation within the region.

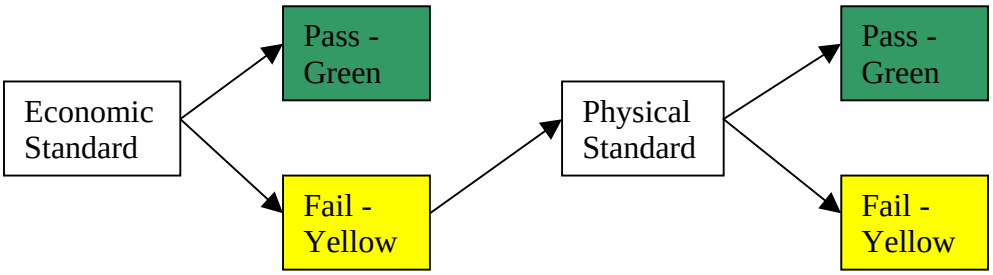
The approach is summarized in the following table:

How / When	Economic Standard		Physical Standard	
	Pass	Fail	Pass	Fail
5th Year Out	Green	Yellow	Green	Yellow
3rd Year Out	Green	Yellow	Green	***RED***

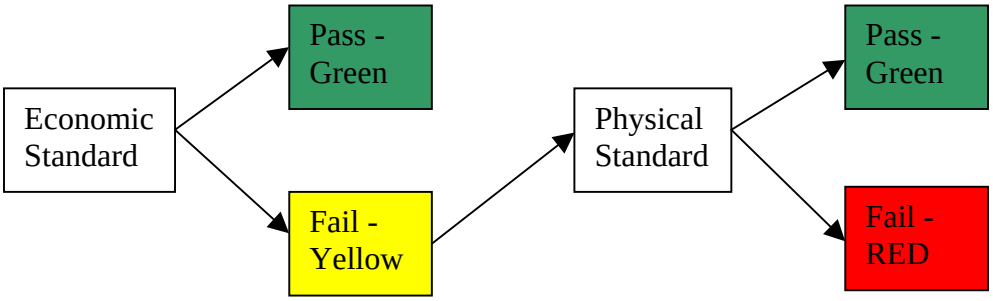
A green light would trigger an acknowledgement that the region is on track. The yellow and red lights would be used to trigger different regional actions.

The process can also be described by the following flow charts:

Fifth Year-Out Assessment:



Third Year-Out Assessment:



Council Actions, Yellow Light: Since the yellow light would indicate a kind of early warning, a regional report could be issued by the Council. It would be presented at a Council meeting and public comment would be taken. This report would emphasize that the region is potentially entering a more serious situation and encourage utilities with load service responsibilities to take action. This report would not single out individual utilities. The Council could also convene a regional meeting to discuss the results of the assessment.

Council Actions, Red Light: For the red light, additional actions would be taken. A regional discussion would be started to understand the reasons for being in the situation triggering a red light, to determine whether sufficient actions are being taken to remedy the forecast inadequacy, and to identify additional measures needed, if any. A regional conference would be held to begin that discussion. The goal of these discussions would be to ensure that sufficient actions will be taken to avoid an actual inadequacy. If the discussions are successful, then the Council would publicly announce its conclusion that sufficient actions are being taken to address the "red light" and would monitor progress on these actions.

In the event that the Council concludes that these discussions did not succeed in providing sufficient assurance of avoiding inadequacy, further steps could be taken. One of those steps, for example, would be for the Council to report that the initial problem is not being adequately addressed. A second possible response would be for the Council to communicate directly with individual utilities, local boards or state commissions for those utilities that appeared to be disproportionately relying on uncommitted purchases. This action would ensure both that these key decision makers were aware of the potential problems and that the Council fully understood the reasons for the utilities' being in such a circumstance. The Council could also consider publicly announcing which utilities are relying disproportionately on uncommitted purchases. With these options the Council would have sufficient recourse to follow up on regional inadequacy if it were to persist.

Utility Economic Incentives for Meeting Adequacy Standards: 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 and any environmental mitigation consequences of their actions. This will provide a strong natural incentive to develop adequate resources.

Expected Bonneville Actions: Though Bonneville contracts will not require its customers to meet adequacy standards, they will reinforce this economic incentive. The Regional Dialogue discussions are not complete and Bonneville has not yet issued a final decision. Assuming, however, that discussions continue along the path they are currently on, the following is one set of probable outcomes. Bonneville expects to negotiate contracts with its public agency customers that will provide that customers either make an election to (1) purchase load-following power products from BPA or (2) take fixed amounts of power that do not follow load. Once a customer's load is

forecasted to exceed their entitlement to power at the Tier 1 rate on a three year out basis, the customer needs to decide whether to procure their own resources to meet its load growth, or to contract for power from Bonneville at the Tier 2 rate. Contracting for Tier 2 power from Bonneville would potentially include a three-year notice requirement. This requirement would make it clear that Bonneville will not provide an assured "backstop" for utilities which fail to develop their own resources. The contracts would also include affirmation by the customers that they understand the resource adequacy standards and that Bonneville would not provide short-term backup service.

The details of this relationship (amounts of power to be provided by Bonneville, 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 (guidelines to allow utilities to understand how the regional resource adequacy standards can be translated to individual utility planning criteria are slated for development in 2007), they could face high market prices or even potential load curtailments.

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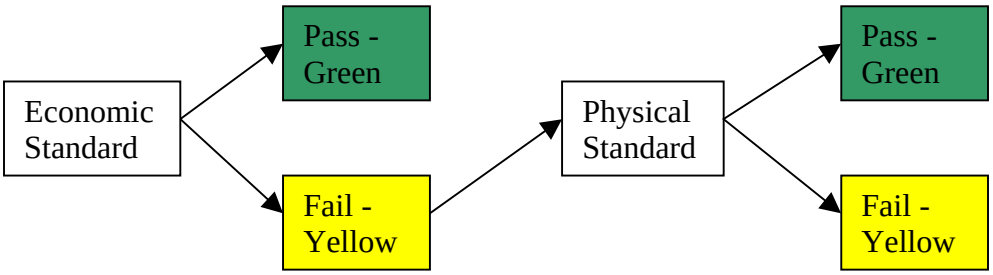

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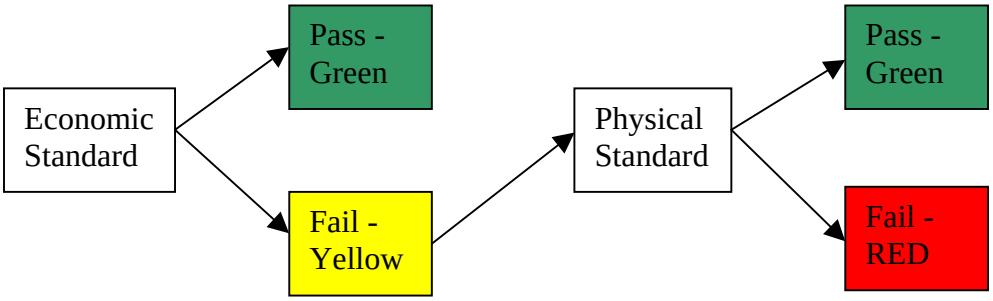

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