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May 29, 2008

MEMORANDUM

TO: Council Members

FROM: Terry Morlan

SUBJECT: Briefing by PNUCC on their Northwest Regional Forecast

Dick Adams, the Executive Director of the Pacific Northwest Utilities Conference Committee (PNUCC) will discuss its Northwest Regional Forecast (NRF) of Loads and Resources. The NRF, as well as Bonneville's White Book, has been around longer than the Council. Before the Power Act was passed, they were both used extensively to aid in resource acquisition planning.

Each year the region's utilities report their forecasted loads and resources to the PNUCC. This information is compiled into the NRF, which shows existing resources, resources under construction, and additional planned resources. This resource data is compared to forecasted loads for the aggregate of regional utilities to determine the load resource balance in future years.

Before the advent of more formal electricity trading markets and the presence of independent power producers, the NRF would have performed a similar role to the Regional Resource Adequacy Standard recently adopted by the Council. Today they are quite different. The NRF counts only owned or contracted utility resources under critical water, whereas the Resource Adequacy Standard includes uncontracted independent power generators, hydro generation in excess of critical levels, and recognition of potential imports and exports from outside the region.

As a result of these differences, the NRF will typically show a smaller regional surplus, or a larger regional deficit, than the assessment under the Regional Resource Adequacy Standard. The NRF reflects the position of utilities in the region, whereas the Resource Adequacy Standard reflects the entire regional electricity market.

The Regional Resource Adequacy Standard also reflects a different planning criterion. It represents a threshold for physical adequacy, that is, for keeping the lights on. The NRF reflects prudent utility planning, which implicitly includes considerations of cost and rate stability. The NRF criterion is more similar to the Council's plan, which insures against large price risks by providing a higher level of adequacy than a purely physical standard like the Regional Resource Adequacy Standard would provide.

2008 Northwest Regional Forecast

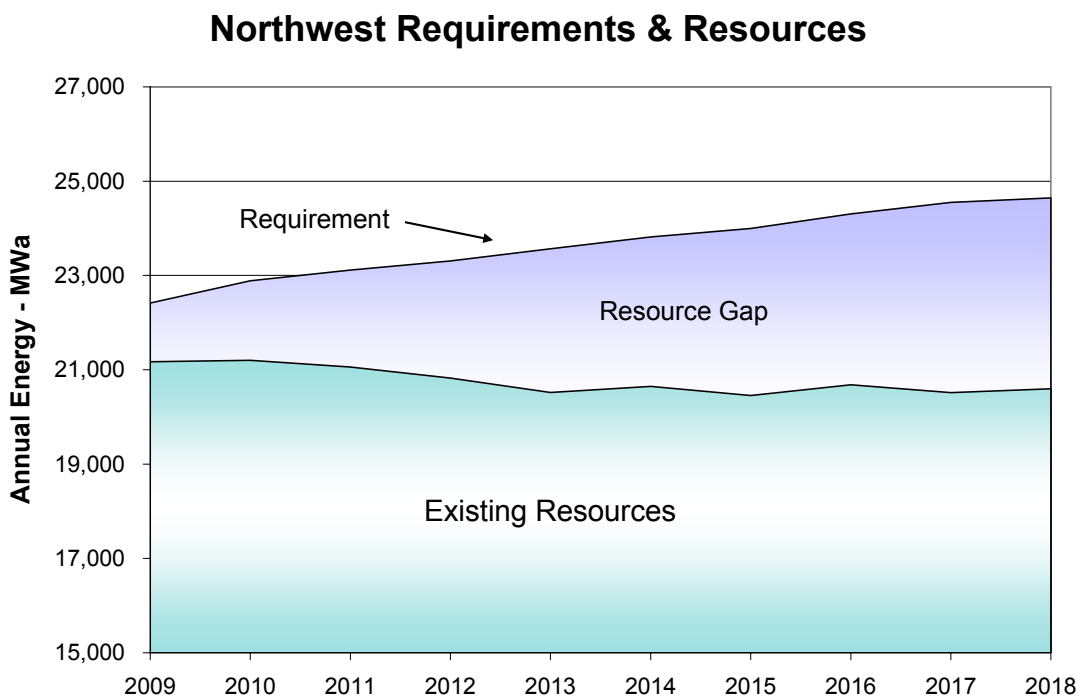
Executive Summary

A high level of interest revolves around the Northwest electric power system as state and federal leaders implement and consider new initiatives to change utilities' requirements for acquiring resources to meet their customers' demands. Utilities contribute information each year to the *Northwest Regional Forecast* to shed light on the regional electric loads and resources picture. This PNUCC report presents an updated picture of the Northwest utilities' need to acquire power in the next decade with an assessment of the sum of individual utilities' projected electric loads and generating resources.

The results of this year's analysis shows that utilities are planning to acquire significant resources in the next five years to meet the projected need.

Northwest Needs to Acquire

The sum of utilities' loads and existing resources result in a regional deficit in 2009 of 1,200 MWa increasing to just over 3,000 MWa in five years. Forecasted loads are projected to grow at about 250 MWa annually while firm regional imports are expected to decrease by more than 800 MWa in the five year horizon contributing to the growing resource gap. Utilities' plans for meeting this resource gap are highlighted next.

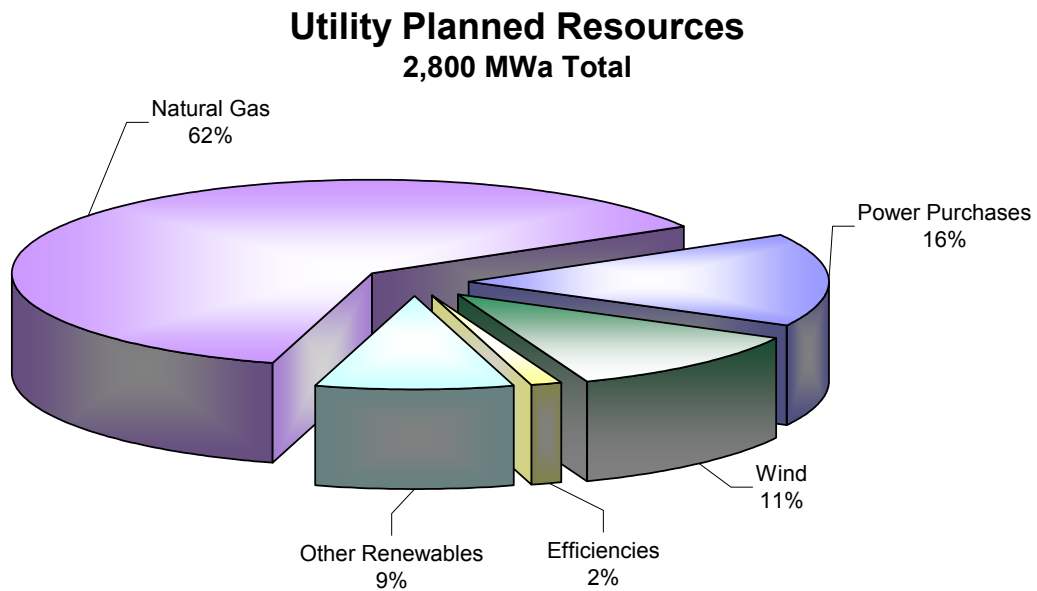


Note there is other potentially available generation not reflected in the requirements and resources pictured above. Besides power purchases from entities outside the region, there are about 4,100 MWa of additional non-firm hydropower generation available in average water conditions, another 4,000 MWa of uncommitted generation from independent power producers and almost 1,040 MWa of generation that may be available for emergencies from combustion turbines that are used by utilities for meeting peak loads.

Utilities are Taking Action

Utilities are continuing to take action to meet their growing need. This past year the region saw the completion of eight more power projects providing another 140 MWa of energy to meet the region's needs. In addition there are ten projects under construction that will provide another 370 MWa of energy to meet utilities' loads. This 510 MWa of new utility-owned generation has been included in the resource stack for this analysis.

Utilities have a number of other resource acquisitions in the works to meet the region's forecasted need. They have identified another 2,800 MWa of energy they are planning to acquire, the majority of which will be completed within the next five years. The greatest number of projects will be wind projects. However, the greatest amount of energy will come from gas-fired combustion turbines. Other renewable resources shown include small hydropower generation, solar, biomass and geothermal projects. The efficiencies noted here are thermal and hydro project improvements and upgrades.



There are 27 wind projects, ten small renewable projects and efficiency improvements and about 2,000 MWh of energy from natural gas-fired combustion turbines included in the resources that have either just been built, are under construction or are planned to be acquired. Utilities' investments in energy efficiency are not shown here. Because utilities acquire and account for conservation in various ways, potential savings from new programs have not been quantified on a regional basis.

Not included in the chart, but worth mentioning, is the Satsop Combustion Turbine, a non-utility project of 530 MW that is about to be completed in western Washington.

Different Perspectives

The Northwest Regional Forecast is an indicator of the need for regional utilities to acquire resources. It is the sum of utilities' firm loads and resources over the next 10 years and examines the resources utilities are planning to acquire to meet their projected need. As this report shows, the region does need to acquire resources and utilities are doing so.

For a different purpose, the Northwest Power and Conservation Council has adopted a Resource Adequacy Standard for the Northwest. This standard provides a minimum threshold that serves as an early warning of the region's ability to keep the lights on. The most recent version of this assessment indicates that "the region as a whole has more than sufficient resources to meet the *minimum threshold* for resource adequacy." This assessment should not be confused with the utilities' need to acquire resources.

Resource Planning is Complex

On a regional basis, the annual load/resource comparison provides a glimpse of the Northwest's power situation. However, it is not a complete picture. Utilities consider many more factors than the annual loads/resource balance to make decisions about acquiring resources.

One example of the complexity of these decisions is the significant seasonal variation of the annual load/resource picture. The annual deficit is 1,200 MWh for 2009, while the seasonal picture for that same time period shows a small deficit of 330 to 460 MWh in the spring, summer and fall and a much greater deficit of almost 2,900 MWh in the winter. Utility decisions about resource needs, among other things, will consider both the annual deficit and the seasonal variability in the deficit.

