NOS 2010 Cluster Study Methodology, v. 2

Introduction

BPA will analyze three scenarios as the basis for the NOS 2010 Cluster Study, as described below. This update clarifies that this document describes how assumptions are reached for purposes of conducting the cluster study, and that BPA is in no way attempting to direct generation owners as to how to operate their generation. It also removes an erroneous statement that the high wind scenario utilized a different load level.

1) Base scenario – This scenario will study the following combination of generation and load conditions:

- BPA Power Services provided high FCRPS generation output defined by a single annual dispatch of the FCRPS at the 95th percentile,
- Moderate wind generation output (60% of transmission service request and/or reservation demand),
- Low to moderate thermal output based on thermal generation dispatch sequence assumptions, and
- Forecasted peak load (based on one in two non-coincidental peak).

2) High wind scenario – This scenario will study an alternate combination of generation conditions:

- BPA Power Services provided high FCRPS defined by a single annual dispatch of the FCRPS at the 95th percentile,
- High wind generation output (100% of transmission service request demand (if possible*),
- Low to moderate thermal generation output based on thermal generation dispatch sequence assumptions, and
- Forecasted peak load (based on one in two non-coincidental peak).

*This scenario needs to include enough thermal generation for the powerflow analysis to provide reasonable output. If additional thermal generation is needed in this scenario, east-side wind generation will be turned down.

3) No wind scenario – This scenario will study a third combination of generation and load conditions:

- Modified BPA Power Services high FCRPS**,
- Zero wind generation, and
- Moderate thermal output based on thermal generation dispatch sequence assumptions, and
- Forecasted peak load (based on one in two non-coincidental peak).

**For the hydro dispatch in this scenario, model high Grand Coulee and Chief Joe Columbia River generation. Lower Columbia River and Snake River generation will be modeled at minimum operating levels.

Thermal Generation Dispatch Study Sequence

The Tiers indicate generation groups that, for study purposes will be assumed to be re-dispatched to balance NW area generation and load. The Tier sequence was based on age of the plant, heat rate, and past operation. The sequence within a Tier may change for seasonal power flow studies.

Tier	Generation
I	**Cherry Point Refinery**
I	**Beaver Generation**
I	**Whitehorn Power Station**
I	**Avista Rathdrum CT**
I	**Frederickson Generating Station**
I	**Fredonia**
I	**Klamath Expansion (Peaking)**
I	**Northeast Combustion Turbine**
I	**Kettle Falls Generating Station**
I	**Big Hanaford Centralia**
II	**Klamath Cogeneration Project**
II	**Tenaska Ferndale Cogen Station**
II	**Encogen Generating Station**
II	**Sumas Cogeneration**
II	**River Road Generating Plant**
II	**March Point Cogen**
II	**Hermiston Generating Plant**
II	**Hermiston Energy Center Cogen**
II	**Frederickson I**
II	**Lancaster (Rathdrum Generating Station)**
II	**Coyote Springs Power Station**
II	**Coyote Springs II**
II	**Goldendale Energy Center**
II	**Port Westward Generating Station**
II	**Chehalis Generating Facility**
II	**Mint Farm Energy Center**
III	**Centralia G2 Centralia**
III	**Boardman**
IV	**Centralia G1 Centralia**
IV	**Jim Bridger**
IV	**Colstrip**
V	**Columbia Generating Station**

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