

FCRPS System Operations and Capacity

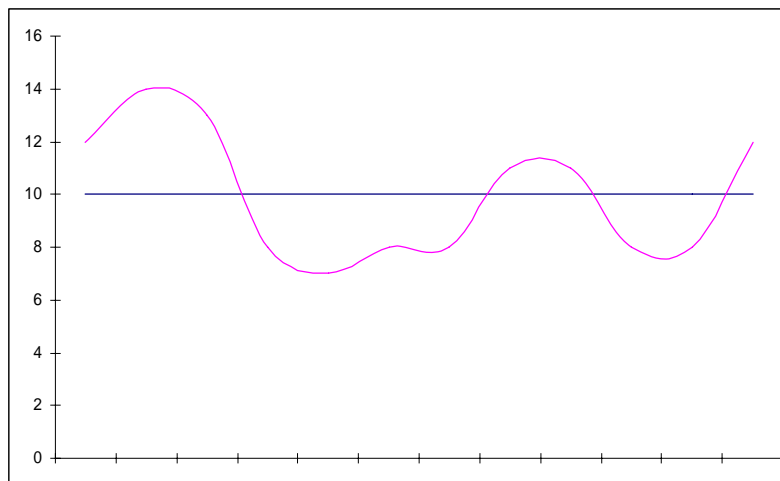
Bonneville Power Administration
February 28, 2007 Workshop Handout
Updated February 27, 2007

For Regional Dialogue Discussion
Purposes Only -- Pre-decisional



Regional Dialogue Landscape

- Post-2011 rights are based on net requirements and high water marks that are defined on an average annual energy basis.
- BPA is not defining rights based on capacity [the maximum rate of delivery during some period].



Capacity is becoming a significant issue for customers because:

- Understanding critical to Region building correct set of new resources to meet peak
- Necessary to integrate new resources and meet variable load
- Understanding resource adequacy implications
- Important to optimize market participation
- Necessary to define the “load following” product
- Necessary to assure no costs shifts among customers



Understanding the Capacity Attributes of Products Critical to BPA because...

- Critical to Region building correct set of new resources to meet peak
- Defines resource adequacy implications
- System capacity dedicated to Canadian Entitlement obligations
- Non-power operations have significant capacity impacts and may have additional impacts in the future
- Capacity impacts of loads have increased
- Discretionary rights to use the system have expanded
- Transmission Services re-dispatch may consume capacity
- Transmission constraints strand capacity
- Intermittent resource integration capacity implications



The Current Capacity Situation

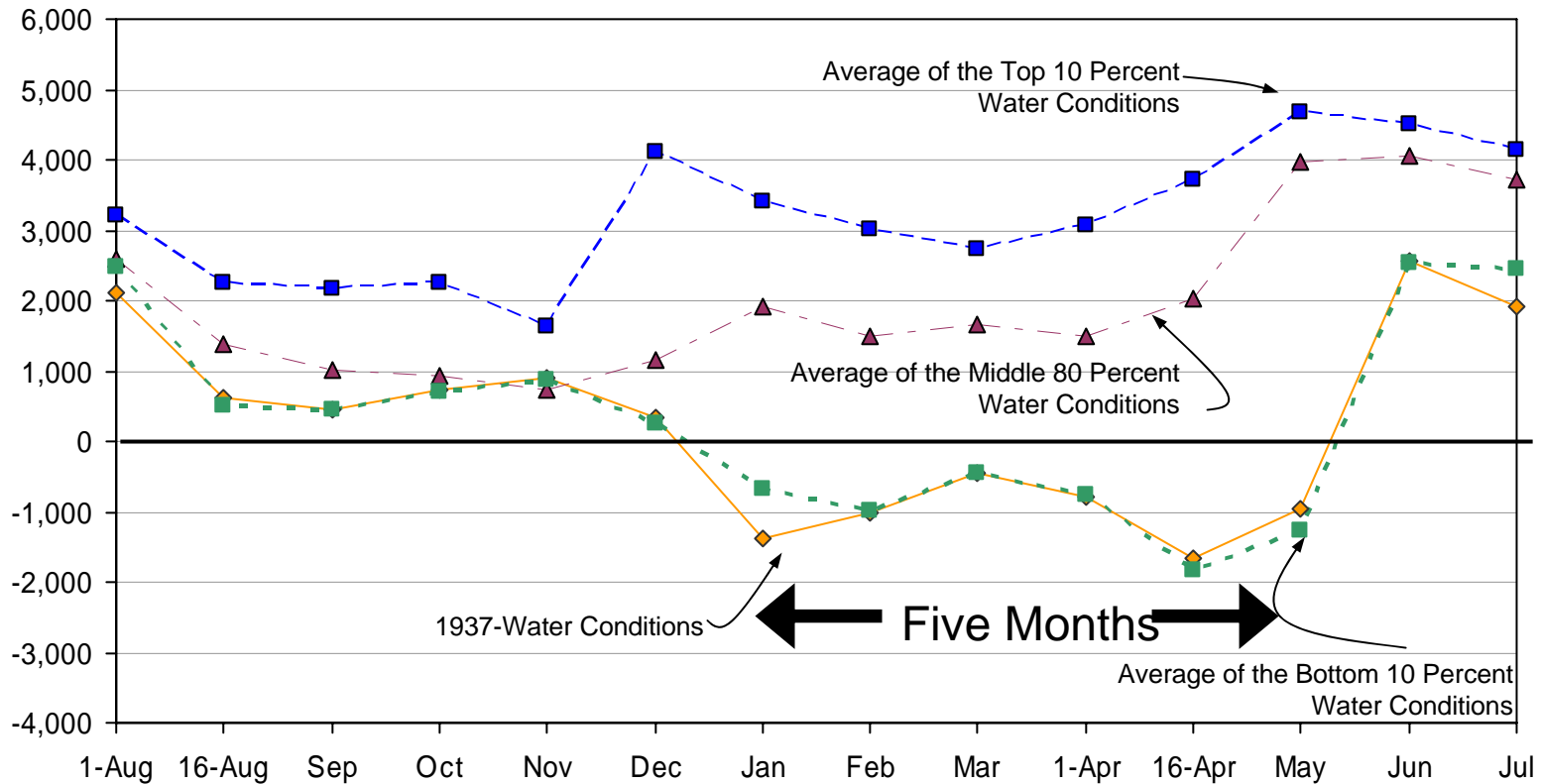
BPA long term projections show deficits in 1 hour and 120 hour peaking capacity in 2007 and into the future for January through May under adverse water conditions.

This means that if we had a lower decile water condition, then we would be forced to rely on being able to buy from the market on critical peak hours in order to meet PF load.



2006 White Book

Potential Variability of 120-Hour Capacity Federal Surplus/Deficit Projections Utilizing Differing Water Conditions For OY 2007



Operational Constraints

- Target elevations and flows
- Tailwater constraints
- Restricted Operating Range/Minimum Operating Pool
- Spill
- Unit Outages
- Ramping limits
- Reverse Load Factoring
- Peak efficiency limits
- Upstream project operation (Federal and Non-Fed)
- Voltage Support Requirements

Capacity Decisions are Interdependent

- Capacity is generally water constrained, particularly when region is stressed
- Project position and relationships within the FCRPS is critical to planning use in RT, DA, or further out

