

# System Condition Update

## Spring Operations Review Forum Regional Conference Call

**June 10, 2011**

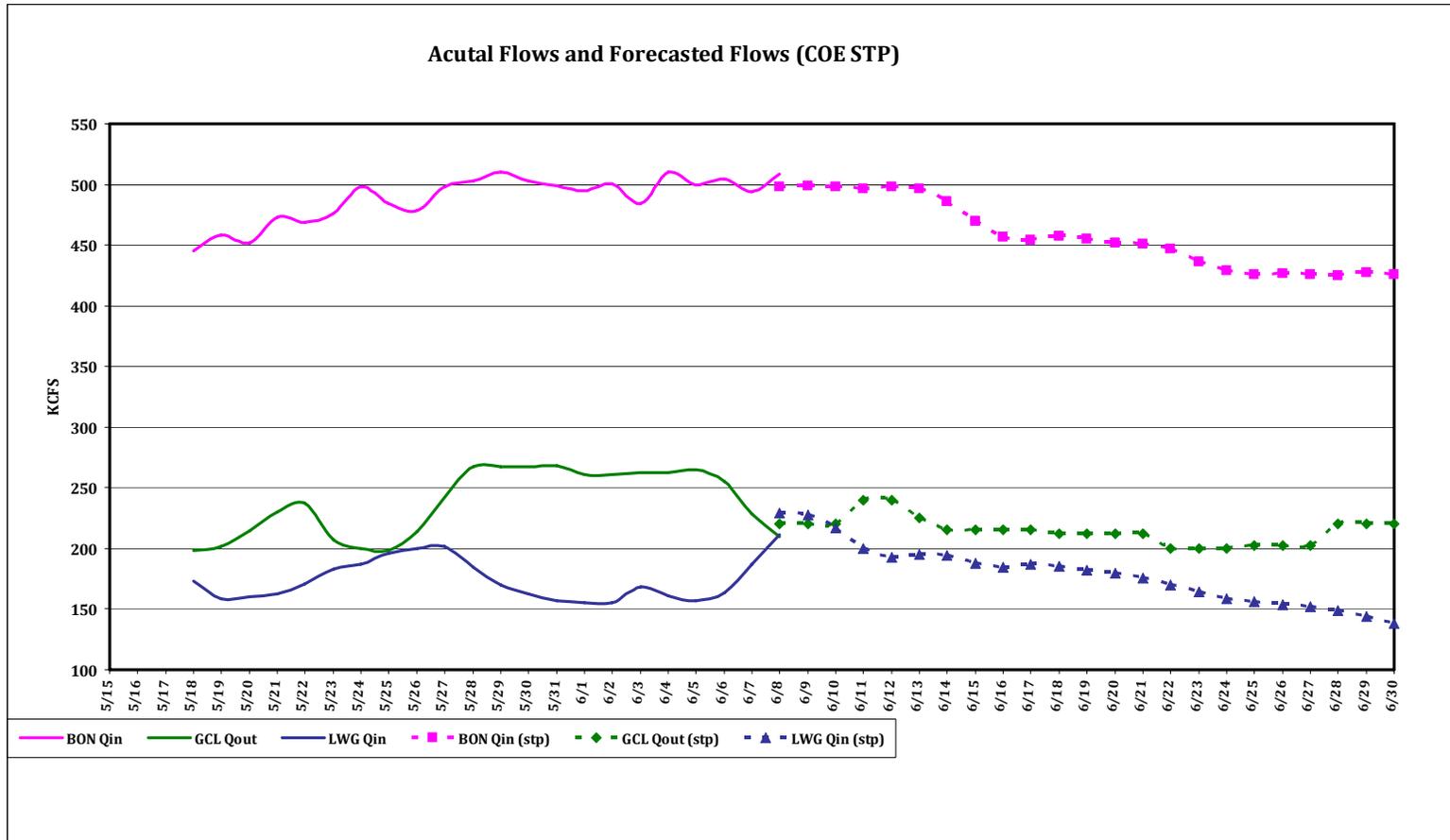
**1:00 – 2:00 p.m.**

To participate in the call please dial: **(877) 322-9654**

When prompted, enter access code: 328457



# Hydro Operations Update



# Hydro Operations Update

The Corps of Engineers (COE) requested that Bonneville outflows be regulated to within 1 foot of flood stage (16-17 feet measured at Vancouver).

- Vancouver flood stage is equivalent to about 495-505 kcfs discharge at Bonneville dam.
- Discharges from Grand Coulee/Chief Joseph (GCL/CHJ) need to balance flows on the Lower Snake in order to meet a flow objective at Bonneville.
  - In other words, as Lower Snake flows recede, GCL/CHJ flows need to increase (and vice versa).
- Since the maximum turbine discharge is about 160 kcfs at GCL and 175 kcfs at CHJ, the resulting generation needs to be fairly flat across the day to minimize total dissolved gas.
- River Forecast Center June Final Water Supply Forecast is 141 million acre feet
  - 3 MAF increase from June Early Bird
  - 8 MAF increase from May Mid-Month
  - 13 MAF increase from May Final

# Hydro Operations Update

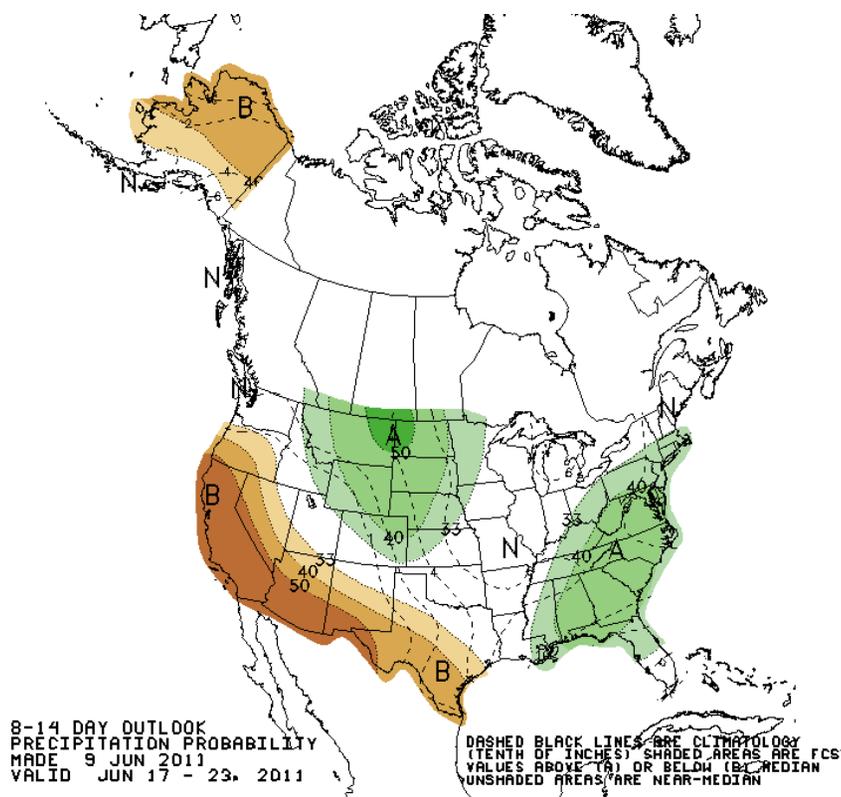
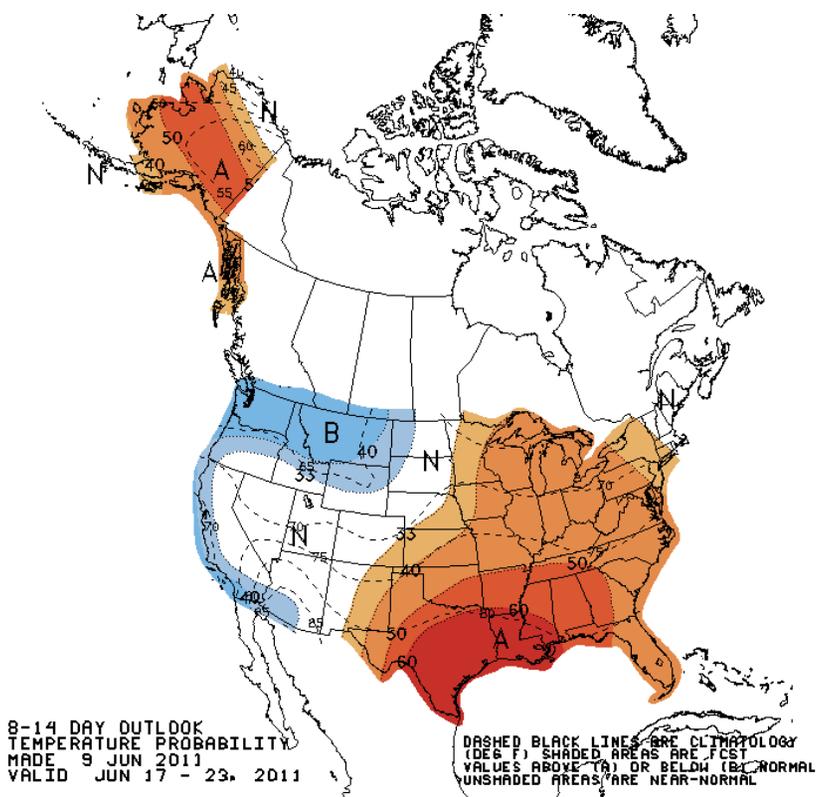
## Overgeneration conditions in the Northwest

- There was insufficient demand for the resulting generation in light load hours offered at zero cost, so the following steps were implemented to meet the flow objective:
  - DSO 216 INC reserves reduced to 400 MW and DEC reserves reduced to 300 MW
  - Spill up to Level 1 Spill (120% TDG system-wide)
  - Implement Environmental Displacement/Redispatch
  - Continue to spill up to higher Spill Levels
- Environmental Displacement/Redispatch
  - All thermal generation within BPA's balancing authority was displaced to their minimum generation first
  - ER implemented daily (with the exception of 5/25 and 6/9) since 5/18. These actions have displaced 63,680 MW-hrs of wind generation during this period.
- 12-hour average TDG levels are 120% or higher across the FCRPS as measured in the tailrace
  - Use of Environmental Displacement/Redispatch was effective in minimizing the amount of TDG in the system
  - Links to TDG data can be found on BPA's Overgeneration webpage or the TMT website

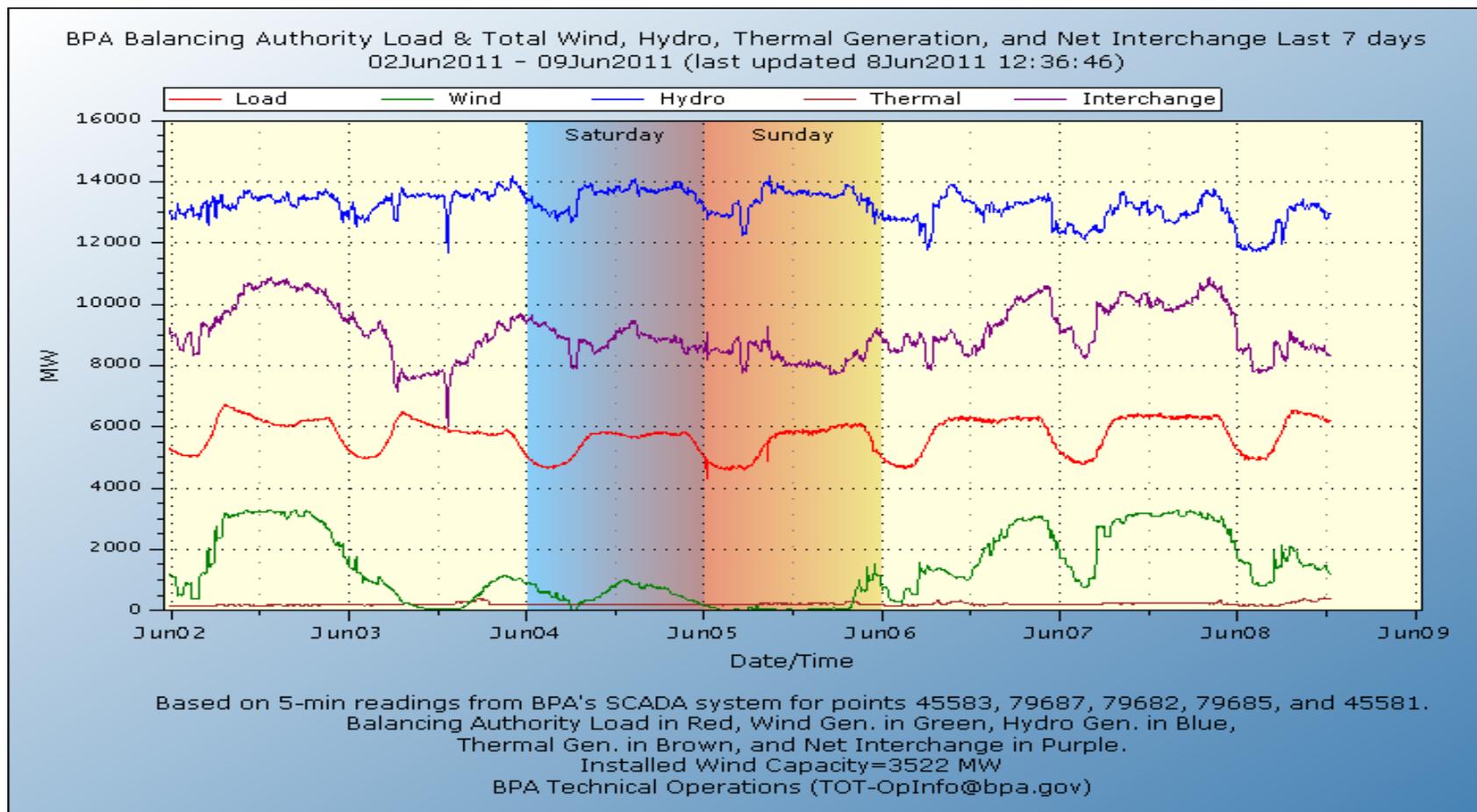
# Actions to manage overgeneration

- Since Sat (5/21) we have successfully acquired 11,991 MWh of load under a spill agreement with the Mid-C.
- Positioning Banks Lake to have the maximum amount of pump load available during May and June.
- Moved non-essential generator and transmission maintenance outages out of May and June.
- Coordinated light load hour spill on Willamette projects.

# Weather and Streamflow



# Balancing Authority Load and Total Wind, Hydro, and Thermal Generation



# Transmission Updates

## ■ COI N>S

- 6/5 to 6/24: 4500 MW due to BPA Big Eddy-Ostrander 1 500kv line and Ostrander-Troutdale 1 500kv line
- 6/10 to 6/11: 4225 MW due to CISO – Round Mountain CB 292
- 6/12 to 6/18: 4100 MW due to CISO-Los Banos-Midway 2 500kV Line Series Cap Bank 4 @ Gates
- 6/14 to 6/16: 4025 MW due to CISO-Malin-Round Mountain 1 500kV Series Capacitor at Round Mountain

## ■ PDCI N>S

- 2990 MW : Studied at rated capacity for various outages over next seven days

## ■ NI S>N

- 1950 MW: Studied at or near rated capacity for various outages over next seven days.

# Transmission Updates

- **COI + PDCI (N to S) Capacity Utilization (05/09– 06/07)**

  - All Hours: 74.9%

  - Heavy Load Only: 76.4%

  - Light Load Only: 73.0%

- **Northern Intertie (S to N) Capacity Utilization (05/09– 06/07)**

  - All Hours: 41.7%

  - Heavy Load Only: 32.2%

  - Light Load Only: 53.5%

  - \*\*\*\*\* Many hours in previous seven days with actual NI flows N to S\*\*\*\*\*

- **Montana-PNW Average Utilization (05/09– 06/07)**

  - All Hours: -102 MW

  - Heavy Load Only: -239 MW

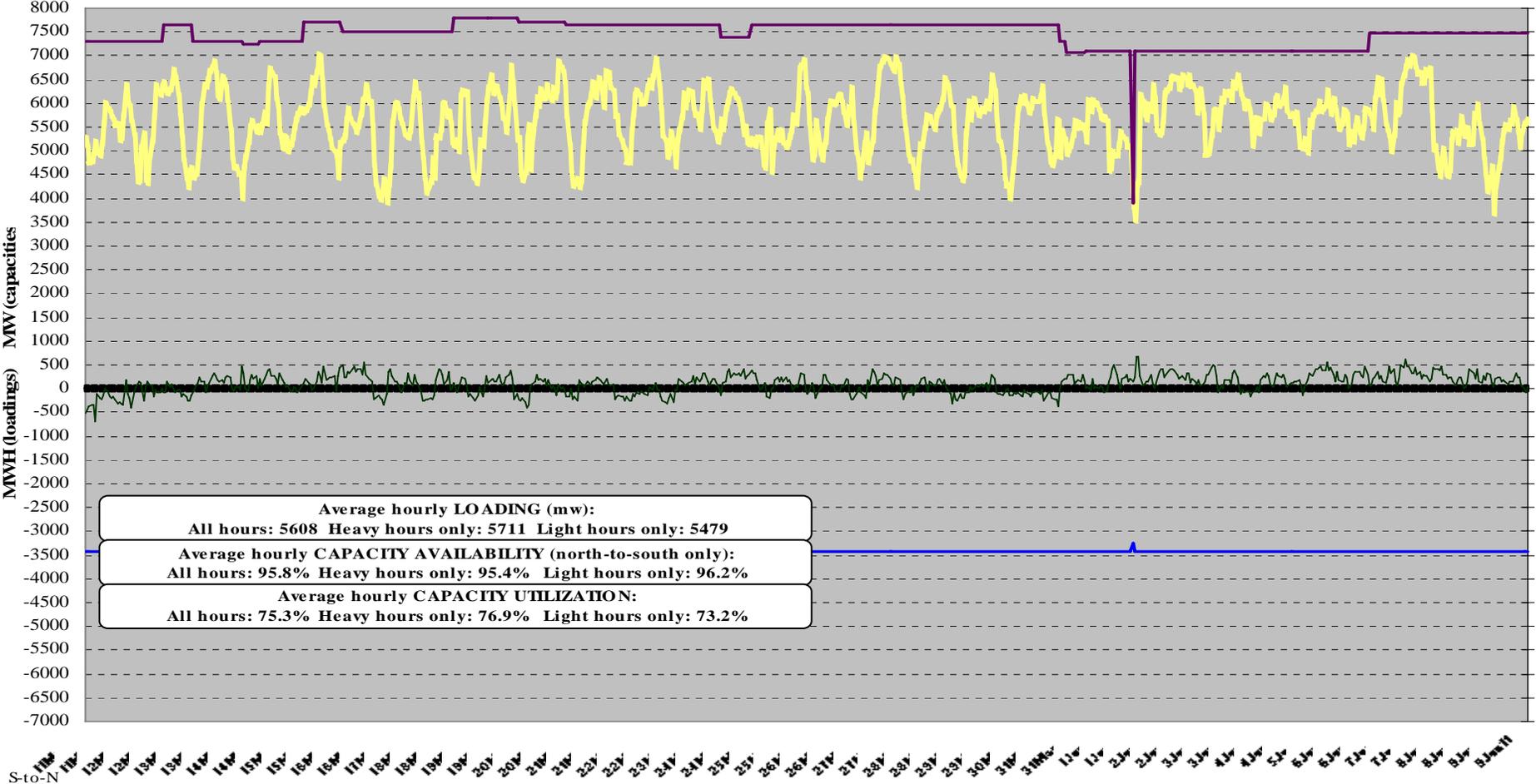
  - Light Load Only: 60 MW

  - \*\*\*The PNW is a net importer of energy from Montana\*\*\*

## AC+DC INTERTIE AVAILABILITY & UTILIZATION: 11MAY11 - 09JUN11 (30 days)

### ACTUAL LOADINGS and CAPACITIES, BY HOUR

— AC+DC ACTUAL (380002+368002)     
 — AC+DC CAPACITY: N to S (Scheduling Limit,598995+598998)  
— AC+DC CAPACITY: S to N (Scheduling Limit,598997+598994)     
 — LOOP FLOW at MALIN (599980)

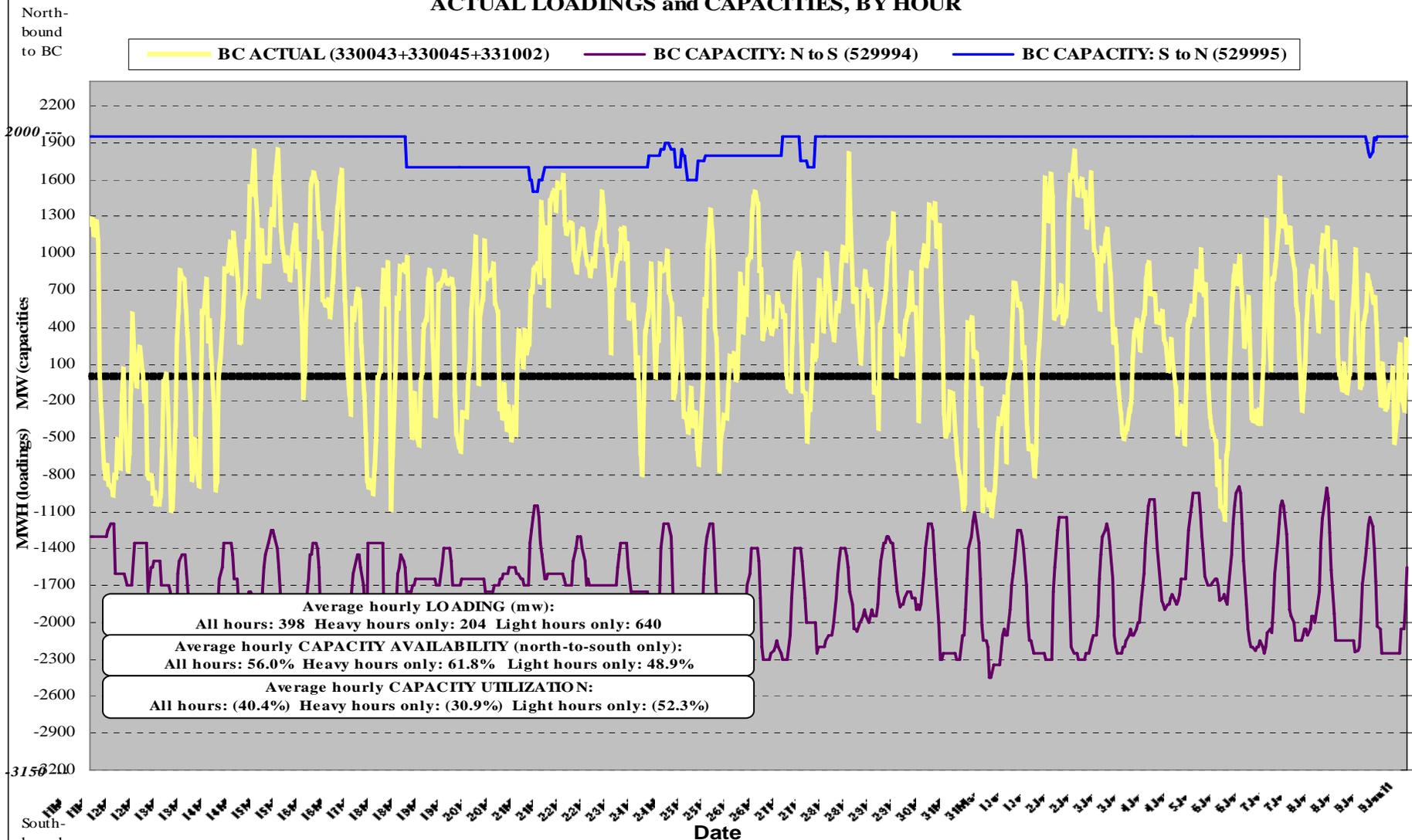


capacity availability = actual capacity/rated capacity, capacity utilization = actual loading/actual capacity  
 Source: Hourly data via RODS; Capacities are those at COB or NOB and reflect total path scheduling limit

Actuals may exceed scheduling limit as long as conditions remain within North-of-John-Day vs. COI & PDCI operating nomogram limits

**BC INTERTIE (WEST+EAST) AVAILABILITY & UTILIZATION: 11MAY11 - 09JUN11 (30 days)**

**ACTUAL LOADINGS and CAPACITIES, BY HOUR**



capacity availability = actual capacity/rated capacity, capacity utilization = actual loading/actual capacity  
 Source: Hourly data via RODS; Capacities are those as recorded by and used for scheduling, and are based on electrical limits, not considering Intertie ownership shares; Rated capacities labeled as -3150 (N-S) and 2000 (S-N)

# Contact Information

- To discuss commercial operations, please contact Alex Spain at (503) 230-5780, [ajspain@bpa.gov](mailto:ajspain@bpa.gov).
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- Overgeneration Web site:  
<http://www.bpa.gov/corporate/AgencyTopics/ColumbiaRiverHighWaterMgmt/>