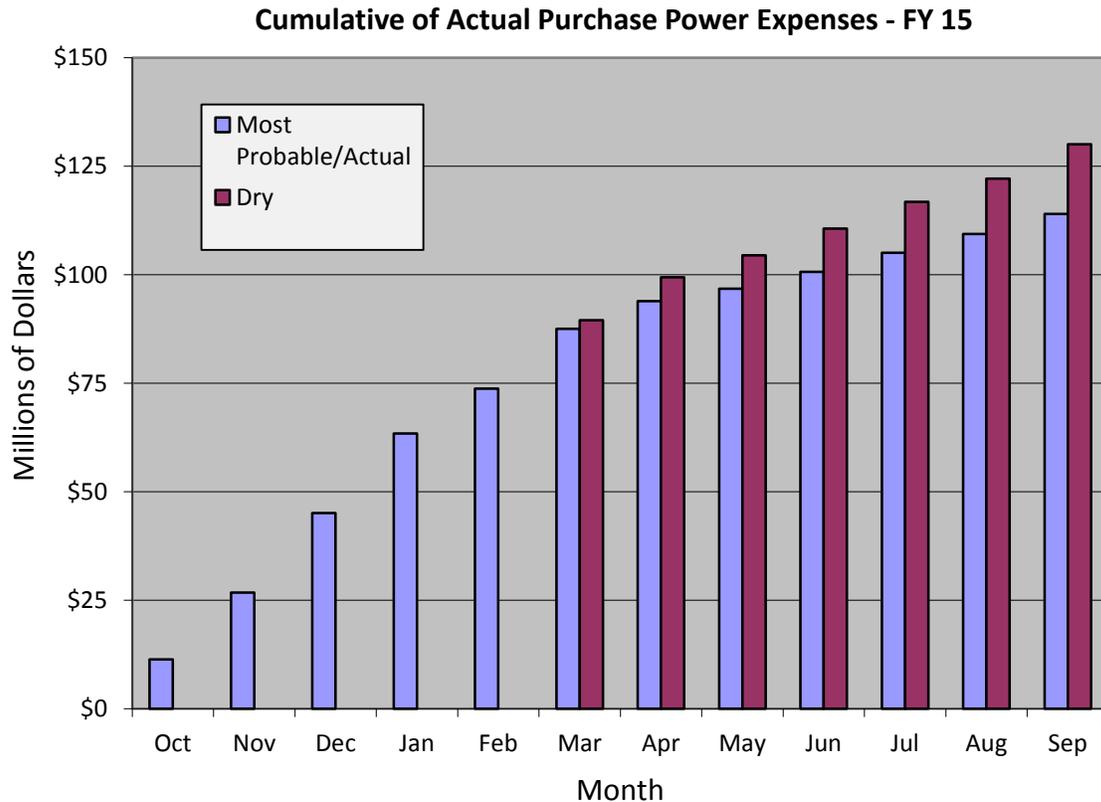


Hydro Conditions and Purchase Power Monthly Outlook March 2015

Western Summary

- The most probable forecast of net generation for fiscal year (FY) 2015 is 25,134 gigawatt-hours (GWh) or 95 percent of average. October through February generation was 95 percent of average.
- The lower level forecast of generation for FY 2015 is 23,915 GWh or 91 percent of average.
- The amount of power purchased for FY 2015 is expected to range between 2,131 and 2,644 GWh.
- The average price for purchase power across all hydro projects and off-peak and on-peak periods is expected to range between \$49/megawatt-hour (MWh) and \$53/MWh for FY 2015 – compared to an actual average price of \$50/MWh for FY 2014.
- Purchase power expenses for FY 2015 are forecast to range between \$114 and \$130 million – compared to actual purchase power expenses of \$226 million in FY 2014.
- October through February purchases totaled \$74 million – compared to \$142 million for the same timeframe the year before.



Upper Great Plains Region

Corps of Engineers Report: Runoff for February was 2 million acre-feet (MAF) or 186 percent of normal. Temperatures were warmer than normal in Montana and Wyoming which caused some early melting of the accumulated snowpack. The March 2015 forecast runoff is 24.6 MAF, slightly below the average of 25.2 MAF. System storage increased slightly to 57.1 MAF, above February's 56.5 MAF. This is still slightly above the Base Flood Control level of 56.1 MAF. The Corps is forecasting a full navigation season with no spring pulse this year.

Snowpack: As of March 1, 2015, the snowpack at Yellowtail was 96 percent of normal while Canyon Ferry dropped to 88 percent. The main stem snowpack dropped to 88 percent above Fort Peck and 98 percent on the reach from Fort Peck to Garrison. Warm temperatures in early March melted most of the snow that had accumulated on the plains.

Canyon Ferry: As of March 8, 2015, reservoir storage at Canyon Ferry was 1,515.0 thousand acre-feet (kAF) and the active conservation pool was 80.1 percent full. The anticipated inflow for the April-July spring runoff period is forecast to be 1530.2 kAF or 90 percent of the 30-year average.

Yellowtail: As of March 8, 2015, reservoir storage at Yellowtail was 897.3 kAF and the active conservation pool was 87.9 percent full. Streamflows into Bighorn Lake during January were 159 percent of average. On March 1, the Natural Resources Conservation Service measured the snow water content of the mountain snowpack in the Bighorn Basin at 94 percent of average. Based on the March 1 water supply forecast and the planned releases out of the Boysen and Buffalo Bill Reservoirs, the April-July runoff into Bighorn Lake is expected to equal 1,065.6 kAF or 99 percent of average.

Generation: The six main stem power plants generated 637 GWh of electricity in February.

Purchase Power: UGPR is entering the spring months of the generating season and with loads decreasing, prices are expected to be in the low \$20s for off-peak power and the mid \$30s for on-peak power.

Rocky Mountain Region

The Loveland Area Projects (LAP) reside in both the Upper Missouri and Upper Colorado basins. Hydrologic conditions can vary from one river basin and watershed to another. The three LAP watersheds are the Bighorn River Basin in Wyoming, the North Platte River Basin in Colorado and Wyoming, and the headwaters of the Colorado River Basin in Colorado.

Moderate drought conditions have returned to the Colorado River headwaters above Lake Powell and the extreme upper headwaters above Kremmling that supply the Colorado-Big

Thompson Project (CBT) are trending toward drought. The snowpack was well below average in the North Platte Basin above Seminoe Dam, near average in the Upper Colorado River headwaters above Kremmling, and above average in the Bighorn Basin above Yellowtail Dam at the beginning of the month. Reservoir inflows have been well above average since September due to good precipitation this fall and winter. The overall LAP reservoir storage at the end of February was above average with gains in all three basins since the end of last February. The latest National Weather Service forecast indicates April through June temperatures will more likely be above average in western Wyoming and just as likely to be above as below average in eastern Wyoming and Colorado. The same forecast indicates precipitation will more likely be above average in southern Wyoming and Colorado and just as likely to be above as below average in northern Wyoming. Reclamation is forecasting reservoir inflows to be well below average in the North Platte Basin, near average in the Bighorn Basin, and above average for the CBT.

LAP Water Conditions At-A-Glance									
	Reservoir Storage 1,000 acre-feet			Snowpack inches snow water equivalent			Most Probable Reservoir Inflow 1,000 acre-feet (April - July)		
	end of February	average	% of average	beginning of March	average	% of average	March forecast	average	% of average
	CBT	807.9	639.9	126%	387.3	390.1	99%	637.0	599.0
North Platte	1,670.3	1,420.0	118%	296.0	381.0	78%	400.0	694.0	58%
Bighorn	2,034.8	1,737.3	117%	311.1	294.0	106%	1,315.0	1,321.1	100%
TOTAL	4,513.0	3,797.2	119%	994.4	1,065.1	93%	2,352.0	2,614.1	90%
Net At Plant Generation Projections (GWh)									
	Most Probable Case median inflow			Reasonable Minimum Case lower decile inflow			Reasonable Maximum Case upper decile inflow		
	March projection	average	% of average	March projection	average	% of average	March projection	average	% of average
	Winter 14-15	534.4	718.0	74%	521.7	718.0	73%	536.6	718.0
Summer 15	1,374.4	1,217.8	113%	1,113.6	1,217.8	91%	1,479.0	1,217.8	121%
TOTAL 2015	1,908.8	1,935.8	99%	1,635.3	1,935.8	84%	2,015.6	1,935.8	104%

The winter season generation is expected to be about 74 percent of average and seasonal energy purchases have been arranged to support LAP firm electric service commitments. CBT Adams Tunnel imports from the west slope and associated generation will be well below normal this winter because the east slope storage space is limited after low water demands last year. Winter reservoir releases and associated generation in the North Platte Basin will be typical of recent operations and the release from Bighorn Lake via the Yellowtail power plant is above average under the latest Bighorn Lake operating criteria. The upcoming summer LAP generation is projected to be between 84 percent and 104 percent of average at this time.

Colorado River Storage Project Management Center

The total storage volume for the CRSP main stem reservoirs is 16.043 MAF, which is about 52 percent of the total main stem reservoir storage capacity. Main stem reservoir inflows for the most recent historical month (February 2015) were about 114 percent of average. Lake Powell elevation currently is about 3,592 feet, 108 feet from maximum reservoir level, and about 102 feet from the minimum generation level. Based on the current forecast, the March 24-Month study projects Lake Powell elevation will end the water year near 3,596 feet with approximately 11.376 MAF in storage (47 percent capacity). A lack of storms in the Colorado River Basin thus far this year has lowered the inflow estimates for the April to July runoff period to about 70 percent of average.

Based on the most probable inflow forecast, estimated SLCA/IP net generation for FY 2015 is 4,993 GWh as compared to 5,571 GWh based on the long-term historical average generation.

Purchase power availability in the region is good and prices are low for this time of year. Firming purchases for the last month have been averaging in the mid to upper \$20s off-peak and mid \$30s on-peak.

Desert Southwest Region

Current Aggregate Storage (Mead, Mohave & Havasu): 12.993 MAF (13.011 MAF January 2015), 20.864 MAF (65-Year Historical Average).

The Lake Mead end of February 2015 elevation was 1,088.98 feet (0.47 feet higher than end of January 2015 elevation), or about 130.66 feet below full storage elevation of 1,219.64 feet and 38.98 feet above the minimum generation elevation for Hoover of 1,050 feet.

Lake Mead's elevation peaked at 1,088.98 feet in February of water year (WY) 2015 (19.8 feet below the WY 2014 peak elevation of 1108.75 feet), and is projected to drop to a minimum elevation of 1,073.54 feet in July of WY 2015. This projected minimum elevation is below the 1,075 feet Shortage Criteria elevation. However, this does not mean that Lake Mead would be operating under Shortage Conditions for WY 2015. Lake Mead is currently operating under Normal Conditions for WY 2015. Lake Mead's elevation at the beginning of WY 2015 (October 1, 2014) was 25.4 feet lower than at the beginning of WY 2014 (October 1, 2013). There is now a 20 percent probability that Lake Mead will be operating under the Shortage Criteria for WY 2016.

The Lake Powell operational tier for WY 2015 is currently the Upper Elevation Balancing Tier. Total releases from Lake Powell are projected to average about 9.0 MAF for WY 2015 (actual of 7.48 MAF for WY 2014). These releases above the normal 8.23 MAF are characterized as "balancing releases" due to the current projection that the Lake Powell elevation will be at or

above 3,575 feet and the Lake Mead elevation will be below 1,075 feet on September 30, 2015. The projected 2015 April-July unregulated inflow into Lake Powell is 4.9 MAF or 68 percent of average (actual of 6.92 MAF or 97 percent of average for 2014).

Basin Snow Pack and Precipitation: DSW hydrology, or the Lower Colorado River Basin, is mostly dependent on the Colorado River Basin snow pack and precipitation above Lake Powell. The WY 2015 precipitation is currently 78 percent of average and the snowpack is 76 percent of average.

Lower Basin Runoff: The lower basin tributary inflow into Lake Mead for February 2015 was 89 kAF. The projected side inflow into Lake Mead for WY 2015 is 847 kAF which represents a 25.1 percent increase over last year's actual of 677 kAF, and represents 65 percent of the normal annual side inflow of 1.3 MAF.

Forecasted WY 2015 Generation: 5,101 GWh compared to 5,632 GWh (Historical Average). The projected Hoover and Parker-Davis generation for WY 2015 is 91 percent of the average historical generation.

Wholesale Power Market Conditions: The February market prices in the Desert Southwest averaged about \$21/MWh firm off-peak, \$24/MWh firm on-peak compared to \$24/MWh firm off-peak, \$26/MWh firm on-peak for the previous month.

Sierra Nevada Region

The total storage of the four major CVP reservoirs is 5.005 MAF, compared to 4.823 MAF last year. Accumulated inflow for the water year-to-date is 147 percent of the 15-year average for Trinity, 93 percent for Shasta, 60 percent for both Folsom and New Melones. None of the reservoirs is in flood control operations at this time.

The Northern Sierra Eight Station index averages slightly more than 50 inches of precipitation per water year. This water year started out with October recorded precipitation totaling 2.74 inches, which is 90 percent of the monthly average. November recorded precipitation totaled 4.35 inches, which is 70 percent of average. December recorded precipitation totaled 15.85 inches or 179 percent of average. January recorded precipitation totaled 0.28 inches or 3 percent of average. It was one of the fifth driest on record. February ended at 7.50 inches or 92 percent of its average. As of the 19th, March is at 0.51 inches or 7 percent of its average. The cumulative total at this time is 31.08 inches or 62 percent of the annual average. December and January are the months with the highest average, with February very close. Hopes for a "miracle March" have dwindled.

Water year type forecasting begins in December, but snow surveying doesn't begin until January. The snowpack is assumed to reach its peak April 1. Therefore, snow water

equivalents are reported as a percentage of this average. As of March 17, the North is at 3 percent, the Central is at 4 percent, and the South is at 4 percent of this average. The Sacramento River Index forecast of water supply based upon March 1 conditions is “critical” for both the 90 percent and the 50 percent exceedence cases.

The average projection of net generation is again taken from the latest modeling using the update to our customers’ “Green Book.” This average, at 3.34 GWh, is less than the 3.63 GWh from the CVPIA PEIS planning studies. Under the Post 2004 Marketing Plan, net generation, after Project Use load, First Preference Customer load and sub-control area reserve requirement, becomes the Base Resource which is allocated among the Base Resource, Variable Resource and Full Load Service Customers. This past fiscal year ended at approximately 60 percent of that average. Reclamation forecasts are based upon February 1 conditions, which were “critical” for the both the 90 percent and the 50 percent exceedence cases of the Sacramento River Index. These forecasts would be 52 percent and 65 percent of this “Green Book” average.