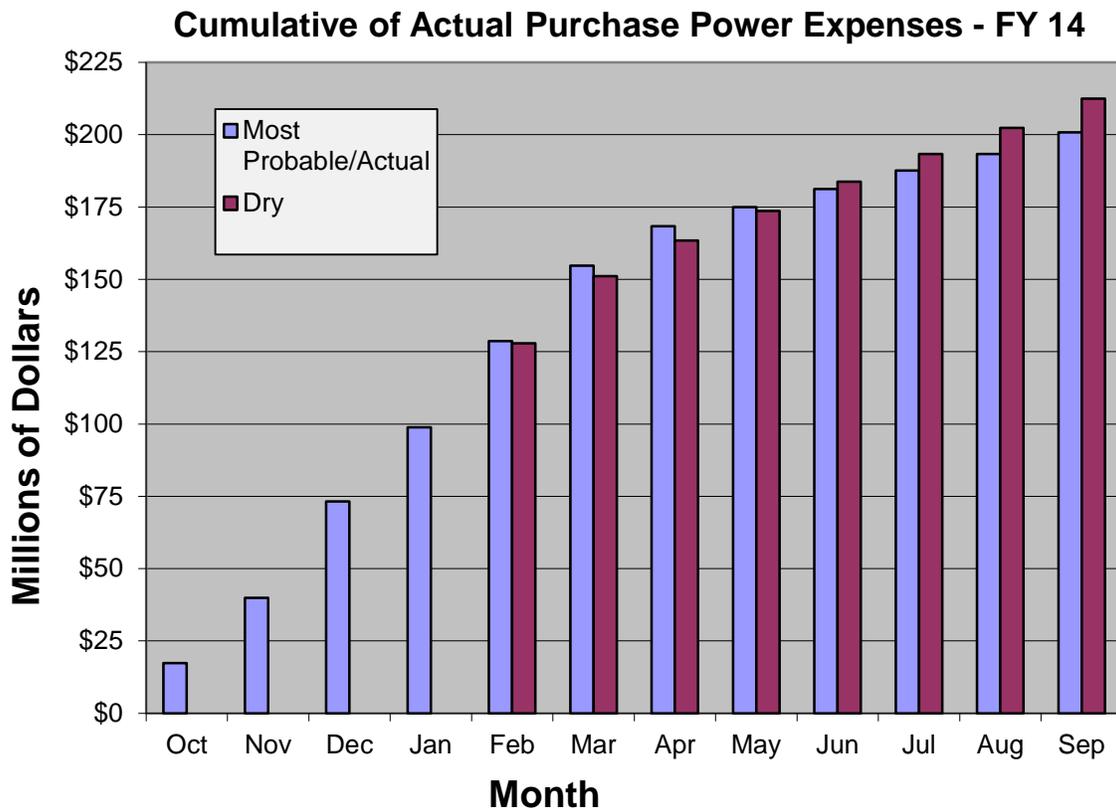


Hydro Conditions and Purchase Power Monthly Outlook February 2014

Western Summary

- The most probable forecast of net generation for FY 2014 is 22,266 gigawatt-hours (GWh) or 82 percent of average. October through January generation was 73 percent of average.
- The lower level forecast of generation for FY 2014 is 21,257 GWh or 73 percent of average.
- The amount of power purchased for FY 2014 is expected to range between 4,214 and 4,505 GWh.
- The average price for purchase power across all hydro projects and off-peak and on-peak periods is expected to be \$48/megawatt-hours (MWh). This price compares to \$45/MWh last year.
- Purchase power expenses for FY 2014 are forecast to range between \$201 and \$213 million – compared to \$182 million in FY 2013.
- The most probable forecast of October through January purchase power expenses is \$99 million¹ – compared to \$74 million for the same period last year.



¹ At this time, actual Western-wide purchase power expenses are not available for January due to the lack of certain Western Regional data.

Upper Great Plains Region

Storage: The anticipated inflow for the April through July period is forecast to be 1,570.5 thousand acre-feet (kAF) or 91 percent of the 30 year average. Based upon the current water supply forecast, releases out of Canyon Ferry to the Missouri River below Holter Dam will be maintained near 3,100 cubic feet per second. Streamflows into Bighorn Lake during January were 92 percent of average. On February 1, the NRCS measured the snow water content of the mountain snowpack in the Bighorn Basin at 109 percent of average. Based on the February 1 water supply forecast and the planned releases out of Boysen and Buffalo Bill Reservoirs, the April-July runoff into Bighorn Lake is expected to equal 1,140,000 acre-feet (107 percent of average).

As of February 20, 2014, the storage level at [Canyon Ferry](#) was 1,453,782 acre-feet and the active conservation pool is 78.8 percent full. Storage at [Yellowtail](#) is 890,663 acre-feet and the active conservation pool is 87.3 percent full.

COE: Continued cold weather throughout the system prevented the COE from decreasing Gavins Point releases to minimum so far this winter. Ice formation has caused lower levels at reaches near Sioux City. Lower levels have increased generation throughout the system for the month of February. The reaches below Oahe have also experienced icing causing a damming effect that increases water levels. Reaches around Bismarck are frozen over and remain that way. Runoff is now estimated to be 106 percent of normal. Forecast energy was raised to 8,404 GWh, up somewhat from last month. The average is 10,027 GWh.

Snow pack: The January 1 forecasted runoff for calendar year 2014 is 26.1 million acre-feet (MAF). This runoff would be 104 percent of normal runoff.

FY Generation: The six main stem power plants generated 564 million kilowatt-hours (kWh) of electricity in January. Total energy production for 2014 is forecasted to be 8,404 GWh, up from 7,564 forecasted in December. The long-term average is approximately 10 billion kWh.

Purchased Power: The extreme cold weather experienced lately has somewhat abated and prices have come back to normal. With the COE releases being down, purchased power is the rule of thumb with prices dropping back to normal winter prices.

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.

The LAP area is essentially drought free. The overall LAP reservoir storage at the end of February was below average with gains in the Colorado-Big Thompson Project (CBT) and significant losses in the North Platte Basin since the end of last February. The snowpack was above average starting the month and remains so as of this writing. The spring snow melt runoff is forecast to be above average for the CBT and Bighorn Basin and below average for the North Platte Basin. The latest National Weather Service forecast indicates March through May temperatures and precipitation will just as likely be above average as below average in Northern Colorado and Wyoming.

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 January	average	% of average	beginning of February	average	% of average	February forecast	average	% of average
CBT	597.4	616.1	97%	283.2	229.7	123%	668.0	588.0	114%
North Platte	992.6	1,419.0	70%	264.0	231.7	114%	700.0	750.0	93%
Bighorn	1,972.6	1,769.8	111%	250.7	226.1	111%	1,432.6	1,318.4	109%
TOTAL	3,562.6	3,804.9	94%	797.9	687.5	116%	2,800.6	2,656.4	105%
Net At Plant Generation Projections (GWh)									
	Most Probable Case median inflow			Reasonable Minimum Case lower decile inflow			Reasonable Maximum Case upper decile inflow		
	February projection	average	% of average	February projection	average	% of average	February projection	average	% of average
Winter 13-14	521.8	718.0	73%	521.3	718.0	73%	548.4	718.0	76%
Summer 14	1,288.6	1,217.8	106%	999.4	1,217.8	82%	1,483.6	1,217.8	122%
TOTAL 2014	1,810.4	1,935.8	94%	1,520.7	1,935.8	79%	2,032.0	1,935.8	105%

The winter season generation is expected to be about 73 percent of average and seasonal energy purchases have been arranged to support LAP firm electric service commitments. There was an additional extended CBT outage due the flooding in September. Reclamation drained Lake Estes and curtailed all imports through Adams Tunnel through early December to allow for the removal of sediment and debris washed into the Lake by the flood. Imports resumed in mid-December and heavier Adams Tunnel imports later in the winter will shift normal October and November CBT generation into February and March. There will also be minimum reservoir releases and associated generation in the North Platte Basin due to depleted reservoir storage.

The upcoming summer season generation is expected to fall between 80 percent and 120 percent of average and, as of now, there is no curtailment of Adams Tunnel imports and associated CBT generation planned for late summer as a means to improve water clarity in Grand Lake.

Colorado River Storage Project Management Center

The total storage volume for the CRSP main stem reservoirs is 14,071,000 acre-feet, which is about 45 percent of the total main stem reservoir storage capacity. Main stem reservoir inflows for the most recent historical month (January, 2014) were about 78 percent of average. Lake Powell elevation currently is about 3,577 feet, 123 feet from maximum reservoir level, and about 87 feet from the minimum generation level.

The forecast for the 2014 April to July water supply season for Lake Powell, issued on Feb 4th by the Colorado Basin River Forecast Center, projects that the most probable (median) unregulated inflow volume will be 7.25 MAF (101 percent of average based on the period 1981-2010). The April-July forecast increased by 440 kAF since last month. The winter snow accumulation season has tracked near average so far (currently 111 percent of median), however we are currently roughly two-thirds of the way through the snow accumulation season and there is still uncertainty regarding

the final snowpack and resulting runoff. The April-July forecast ranges from a minimum probable of 4.75 MAF (66 percent of average) to a maximum probable of 10.3 MAF (144 percent of average).

Based on that inflow forecast, estimated SLCA/IP net generation for Fiscal Year 2014 is 3,895 GWh as compared to 5,584 GWh based on the long-term historical average generation.

Estimated purchase power expenses for firming during the fiscal year 2014 are about \$59.3 million as compared to about \$17.7 million based on long-term median historical releases. Purchase power availability in the region is good and prices are somewhat higher than usual for this time of year. Firming purchases for the last month have been averaging in the upper \$30's on-peak and low \$30's off-peak, but have spiked higher during extreme cold weather events.

Desert Southwest Region

Current Aggregate Storage (Mead, Mohave & Havasu): 14.721 MAF (14.481 MAF Dec-2013), 20.960 MAF (64-Year Historical Avg).

The Lake Mead end of January 2014 elevation was 1,108.75 ft. (2.02 ft. higher than end of Dec 2013 elevation), or about 110.89 ft. below full storage elevation of 1,219.64 ft. and 58.75 ft. above the minimum generation elevation for Hoover of 1,050 ft.

Lake Mead's elevation is projected to peak at 1108.75 ft in January of WY 2014 (13.57 ft. below the WY 2013 peak elevation of 1122.32 ft.), and drop to a minimum elevation of 1083.74 ft. in September of WY 2014, a maximum fluctuation in lake elevation of 25.01 ft.

The Lake Powell operational tier for WY 2014 is currently the Mid-Elevation Release Tier. Total releases from Lake Powell are projected to average about 7.48 MAF for WY 2014 (actual of 8.232 MAF for WY 2013). The projected 2014 April – July unregulated inflow into Lake Powell is 7.25 MAF or 101 percent of average (actual of 2.56 MAF or 36 percent of average for 2013).

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 2014 precipitation is currently 103 percent of average and the snowpack is 112 percent of the 30-year (1981-2010) median.

Lower Basin Runoff: The lower basin tributary inflow into Lake Mead for January 2014 was 44 kAF. The projected side inflow into Lake Mead for WY2014 is 831 kAF which represents a 1 percent increase over last year's actual of 824 kAF, and represents 64 percent of the normal annual side inflow of 1.3 MAF.

Forecasted WY 2014 Generation: 5343 GWh compared to 5638 GWh (Historical Average). The projected Hoover and Parker-Davis generation for WY 2014 is 95 percent of the average historical generation.

Wholesale Power Market Conditions: The January market prices in the Desert Southwest averaged about \$40/MWh firm on-peak, \$34/MWh firm off-peak compared to \$43/MWh firm on-peak, \$40/MWh firm off-peak for the previous month.

Sierra Nevada Region

The total storage of the four major CVP reservoirs is 4.263 MAF, compared to 7.742 MAF last year. Accumulated inflow for the water year-to-date is 19 percent of the 15-year average for Trinity, 42 percent for Shasta, 36 percent for Folsom and 50 percent for 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. October recorded precipitation totaled 0.72 inches, or 23 percent of the monthly average. November recorded precipitation totaled 1.66 inches, or 26 percent of average. December came in at 0.92 inches, or 10 percent of average. January came in at 1.20 inches or 13 percent of its average. As of the 26th, February is at 8.40 inches or 102 percent of its average. It started raining and snowing again with storms expected throughout the weekend. The cumulative total at this time is 12.90 inches or 26 percent of the annual average. December and January are the months with the highest average, with February very close. Many are hoping for a “miracle March,” since it has the next highest average precipitation of the water year.

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 February 26, the North is at 10 percent, the Central is at 25 percent and the South is at 17 percent of this average. The Sacramento River Index forecast of water supply based upon February 1 conditions is “critical” for the 90 percent exceedence as well as the 50 percent case. Recent gains in precipitation will be reflected in the March 1 conditions forecasts.

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 91 percent of that average. Reclamation forecasts are based upon December 1 conditions, which were based upon water supply forecast of “critical” for the 90 percent exceedence and “dry” for the 50 percent exceedence. These forecasts would be 67 percent and 68 percent of this “Green Book” average net generation. Currently, Delta export pumping increases to take advantage of precipitation runoff, but drops down again as soon as Delta salinity again becomes a concern once storms have passed.