



Daily Energy Report - Thursday, February 6, 2014

Highlights

Prices, 2/05/14 Close

- Brent crude oil spot: **\$106.81/bbl** wk chg: **-\$2.02** yr chg: **-\$10.23**
- WTI crude oil spot: **\$97.40/bbl** wk chg: **+\$0.07** yr chg: **+\$0.72**
- Gasoline retail (AAA): **\$3.27/gal** wk chg: **-\$0.01** yr chg: **-\$0.28**
- Natural gas spot (HH): **\$8.12/MMBtu** wk chg: **+\$2.89** yr chg: **+\$4.78**

EIA Scheduled Releases

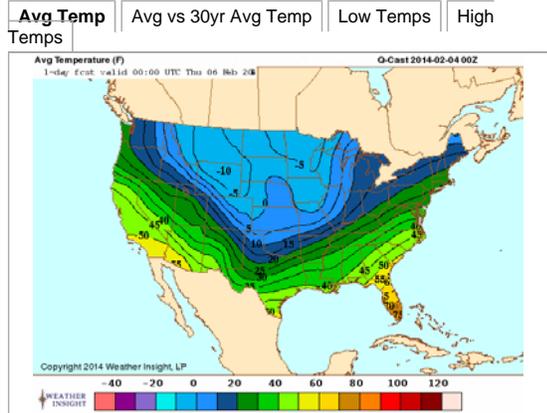
- WNGSR (10:30 am ET) / NGWU (2:30 pm ET)
- Weekly Coal Production
- Angola Country Analysis Brief

Comments:

Forecasts for the water supply at nearly every major water gauge in the states of California and Nevada were less than half of average seasonal norms as of February 5. Read more...

After reaching a record high on January 27, the U.S. average retail price for propane fell 11.9 cents over the following week to \$3.89 a gallon on February 3. That's still the second-highest propane price ever recorded in EIA's weekly heating fuel cost survey. The price for heating oil increased 6.5 cents to a record \$4.24 a gallon.

Today's Weather Maps (click map to enlarge)



Daily Prices

Wholesale Spot Petroleum Prices, 2/05/14 Close

Product	Area	Price	%Chg*
Crude Oil (\$/barrel)	WTI	97.40	+0.2
	Brent	106.81	-0.2
	Louisiana Light	102.80	+0.6
Gasoline (RBOB) (\$/gallon)	NY Harbor	2.63	+1.3
	Gulf Coast	2.57	+1.4
	Los Angeles	2.77	+1.3
Heating Oil (\$/gallon)	NY Harbor	3.03	-0.8
	Gulf Coast	2.73	-3.6
	3:2:1 Crack Spread (\$/barrel)	Gulf Coast (LLS)	9.62
Low-Sulfur Diesel (\$/gallon)	NY Harbor	3.38	-0.2
	Gulf Coast	2.89	-0.1
	Los Angeles	2.92	-0.1
Propane (\$/gallon)	Mont Belvieu, TX	1.58	+0.6
	Conway, KS	1.70	-6.6

Retail Petroleum Prices (AAA), 2/05/14 (\$/gallon)

Regular Gasoline	U.S. Average	3.27	-0.1
Diesel	U.S. Average	3.92	+0.1

Financial Indicators, 2/05/14 Close

	Price	%Chg*
Commodity Price Index	4764.66	+0.1
S&P 500 Index	NA	NA
U.S. Dollar Exchange Rate Index	81.05	-0.1

Prompt-Month Energy Futures, 2/05/14 Settlement

Product	Price	% Chg*	Vol	Prior Day Open Int
Crude Oil (\$/barrel) - Nymex Mar	97.38	+0.2	249	284
Gasoline-RBOB (\$/gallon) - Nymex Mar	2.64	+1.5	61	91
Heating Oil (\$/gallon) - Nymex Mar	3.00	+0.5	62	92
Natural Gas (\$/million Btu) - Nymex Mar	5.03	-6.4	266	268
Coal (\$/ton) - Nymex Mar	56.30	-0.1	< 1	< 1
Ethanol (\$/gallon) - CBOT Mar	1.89	+0.7	< 1	2

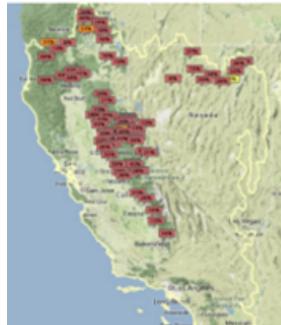
Select Spot Prices for Delivery Today

Region	Natural Gas (\$/million Btu)		Electricity (\$/MWh)		Spark Spread (\$/MWh)
	Price	% Chg*	Price	% Chg*	
New England	24.50	+24.0	224.50	+29.1	53.00
New York City	16.00	+57.8	161.05	+89.6	49.05
Mid-Atlantic	9.00	+43.4	124.77	+72.4	61.76
Midwest	22.81	+165.7	109.41	+93.5	0.00
Louisiana	8.12	+40.5	143.25	+162.8	86.45
Houston	11.42	+89.8	185.00	+216.2	105.06
Southwest	24.65	+221.0	171.50	+133.3	0.00
Southern CA	21.22	+159.7	130.69	+70.2	0.00
Northern CA	24.55	+203.2	134.98	+67.9	0.00
Northwest	24.52	+191.8	218.00	+111.7	46.37

*Percent changes based on daily settlement price from previous business day. Sources: CME Group, Thomson Reuters, SNL Energy, AAA Fuel Gauge Report

Current drought reduces hydro generation forecast for California

California Nevada River Forecast Center water supply forecast



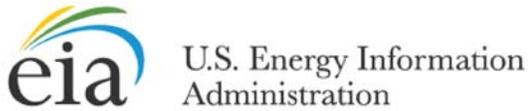
Source: EIA, based on the California Nevada River Forecast Center
Principal contributor: M. Tyson Brown Read more...

Weekly Petroleum Stocks & Days of Supply

Product	Stocks (Million Barrels)		% Change		
	01/31/14	Week	Year	5-Yr Avg	
Crude Oil	358.1	+0.1	-3.7	+3.0	
Gasoline	235.0	+0.2	+0.4	+1.7	
Distillate	113.8	-2.0	-12.2	-22.9	
Jet Fuel	36.2	-3.6	-7.4	-12.8	
Propane	30.8	-2.6	-43.8	-27.3	

Product	Days of Supply (Days)		% Change		
	01/31/14	Week	Year	5-Yr Avg	
Crude Oil	23.3	+1.9	-8.7	-4.7	
Gasoline	28.4	-0.3	+2.1	+4.4	
Distillate	28.5	-7.7	-22.1	-27.5	
Jet Fuel	25.2	-3.0	-12.3	-17.8	
Propane	19.1	+3.7	-43.3	-28.1	

Source: EIA, Petroleum Navigator.

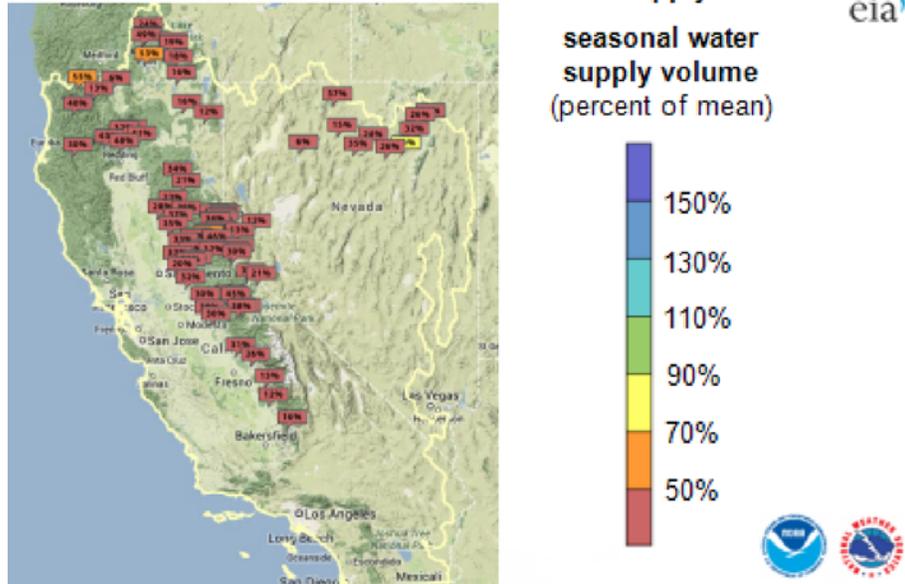


Today in Energy

February 6, 2014

Current drought reduces hydro generation forecast for California

California Nevada River Forecast Center water supply forecast



Source: U.S. Energy Information Administration, based on the [California Nevada River Forecast Center](#)

Note: Forecasts as of January 22, 2014.

Note: [Click to enlarge.](#)

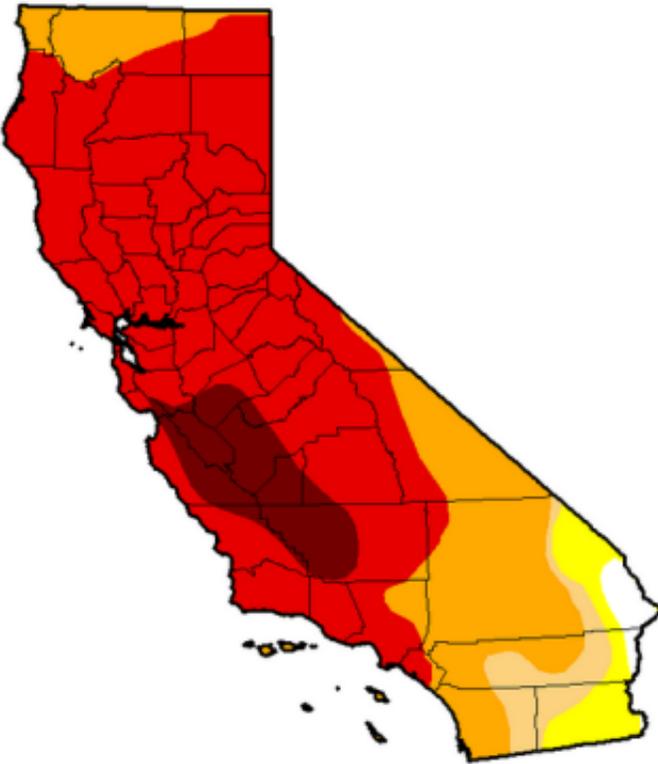
Forecasts for the water supply at nearly every major water gauge in the states of California and Nevada were less than half of average seasonal norms as of February 5. The water supply situation has not materially improved since the governor of California declared a state of emergency on January 17. Several dry years have left California dealing with low water supply. The driest December on record has resulted in nearly 60% of the state now classified as being in a condition of extreme drought, the second-worst category in the U.S. drought monitor index.

U.S. drought monitor – California



January 28, 2014

Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	1.43	4.39	4.27	22.78	58.36	8.77
Last Week 1/21/2014	1.43	4.39	4.27	27.21	62.71	0.00
3 Months Ago 10/29/2013	2.66	1.36	11.86	72.77	11.36	0.00
Start of Calendar Year 1/1/2014	2.61	3.14	6.71	59.94	27.59	0.00
Start of Water Year 10/1/2013	2.63	1.42	11.83	72.77	11.36	0.00
One Year Ago 1/29/2013	34.20	18.62	25.62	21.57	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Anthony Artusa
NOAA/NWS/NCEP/CPC



<http://droughtmonitor.unl.edu/>

Source: U.S. Department of Agriculture [Drought Monitor](#)

According to the [California Department of Water Resources](#), snowpack (an indication of how much water will be available to fill reservoirs and power hydroelectric generators throughout the year) in the northern Sierra Nevada range is about one-fifth of normal for the hydrological year that runs from October 2013 through September 2014.

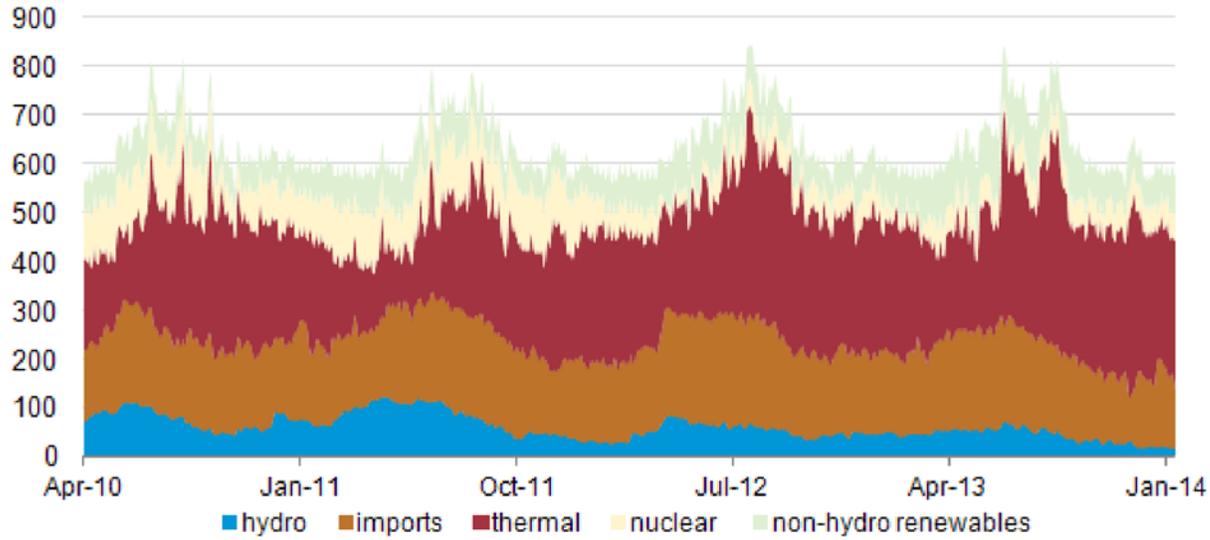
Almost 14% of the nation's hydroelectric generating capacity is concentrated in California. Since 1989, hydroelectric dams have accounted for varying portions of electricity generated within California, from 11% in 1992 (reflecting a low water year) to a high of 28% in 1995 (a high water year). The chart below also shows the level of California hydro output in the service territory of the California Independent System Operator (CAISO), the electric grid operator for most of the state since 2010. As shown, hydro generation during the past two summers was well below levels attained in the summers of 2010 and 2011. Hydro output peaks in the spring and early summer as melted snow flows through the river basins. Overall demand for electricity, however, peaks slightly later, at the height of summer, when air conditioners are running most often.

Absent output from in-state hydroelectric resources, CAISO has tended to import more power from neighboring regions as well as increase output from thermal sources of generation. Much of the imported power comes from hydroelectric dams located in the Pacific Northwest, which is also experiencing low water supply. Tomorrow's Today in Energy article will provide details of the latest Pacific Northwest water supply forecast.

Daily generation on the California Independent System Operator service area



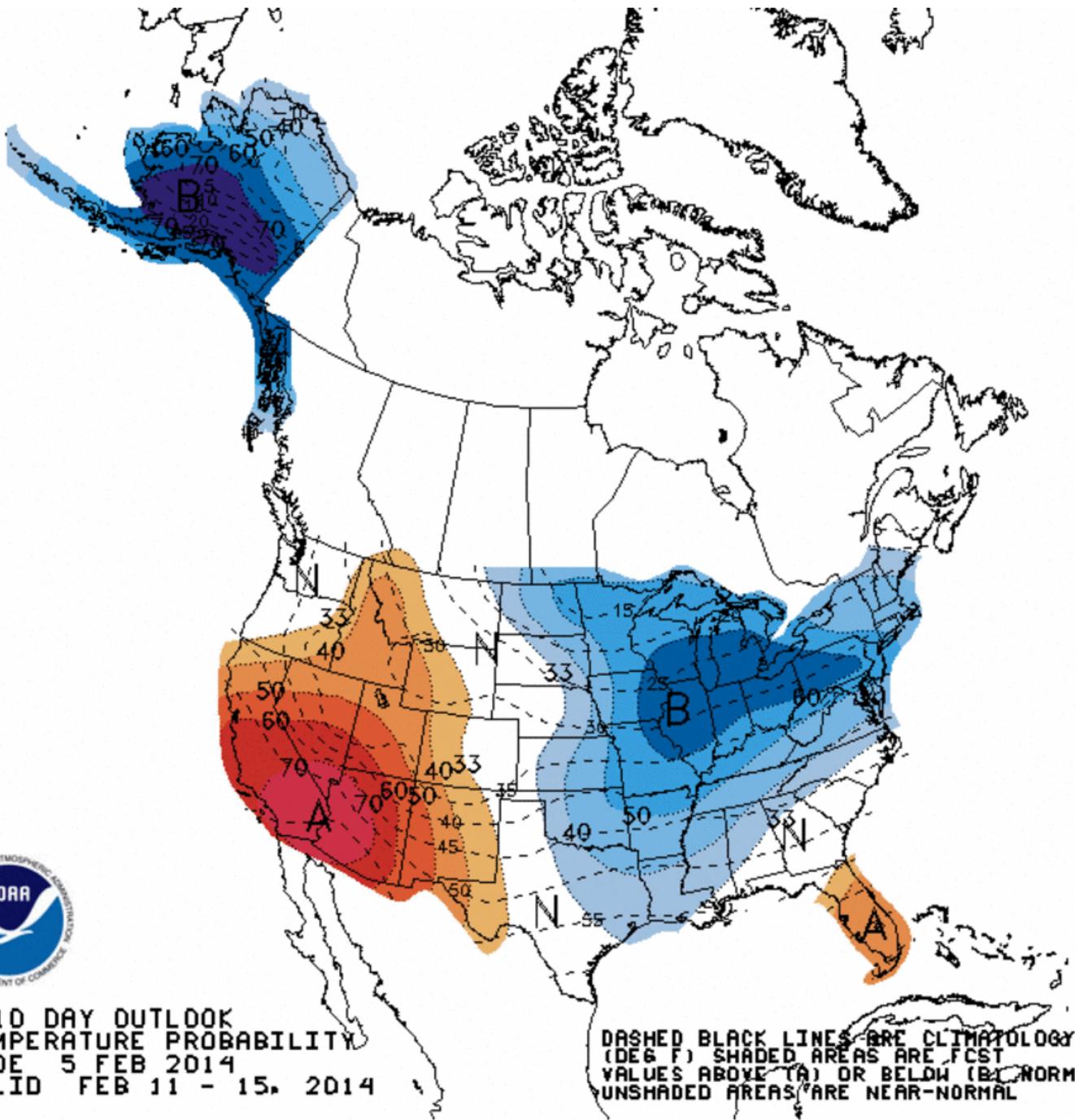
gigawatthours



Source: U.S. Energy Information Administration based on the CAISO Daily Renewables Watch

Note: Data above are the five-day, rolling average summation of hourly output.

Principal contributor: M. Tyson Brown



6-10 DAY OUTLOOK
 TEMPERATURE PROBABILITY
 MADE 5 FEB 2014
 VALID FEB 11 - 15, 2014

DASHED BLACK LINES ARE CLIMATOLOGY (DEG F) SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL UNSHADED AREAS ARE NEAR-NORMAL

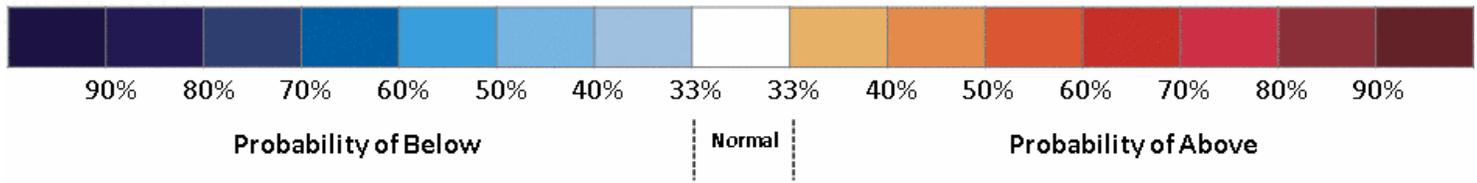


Figure 1. Stocks of Crude Oil by PAD District, June 2012 to Present

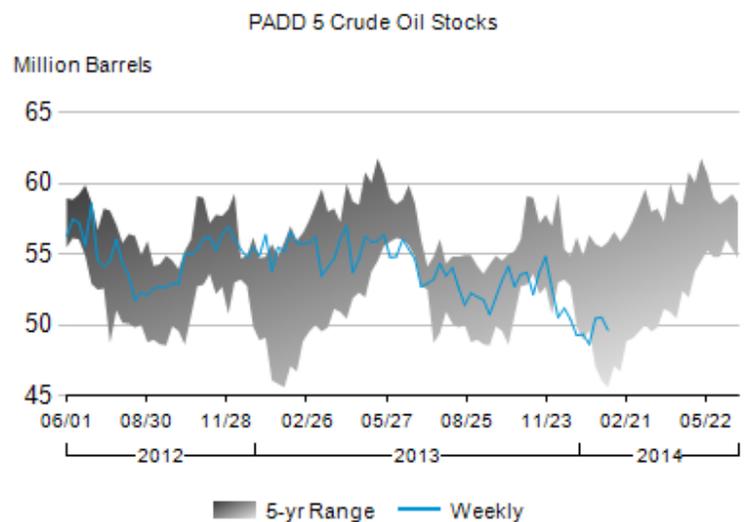
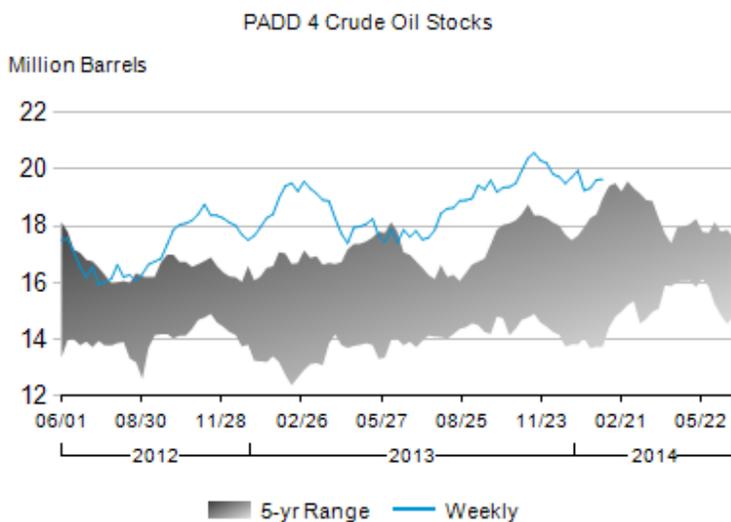
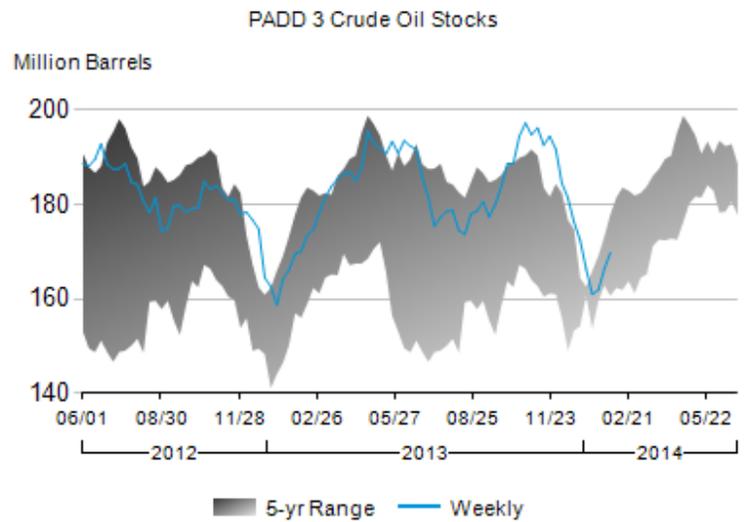
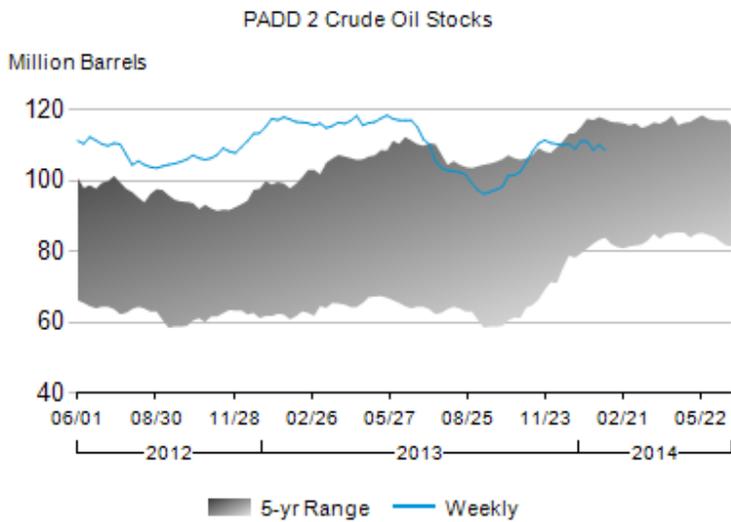
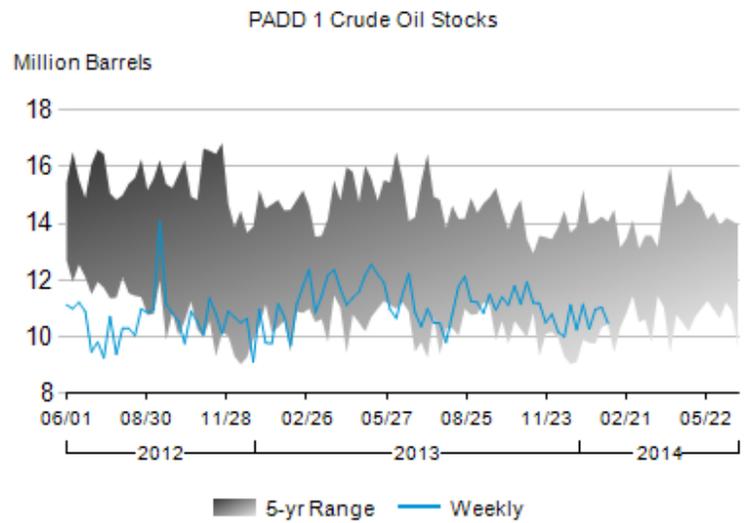
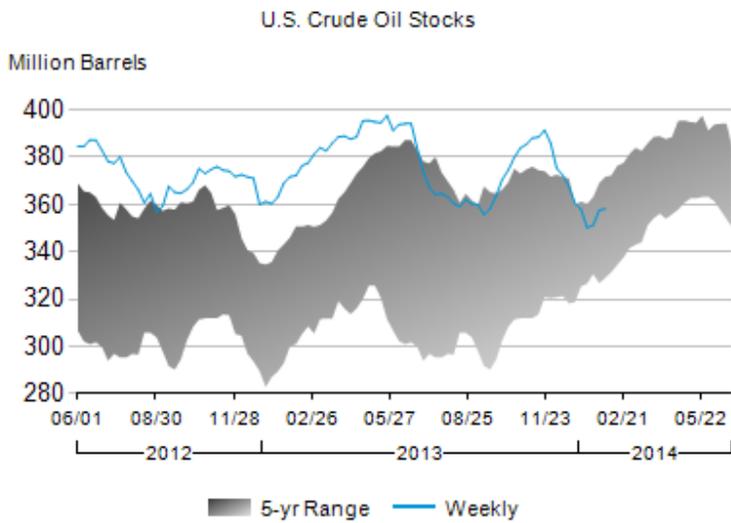


Figure 2. Stocks of Total Motor Gasoline by PAD District, June 2012 to Present

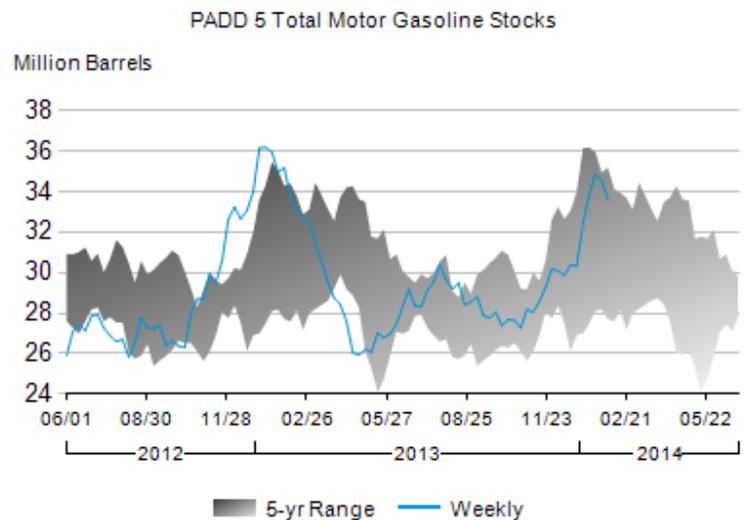
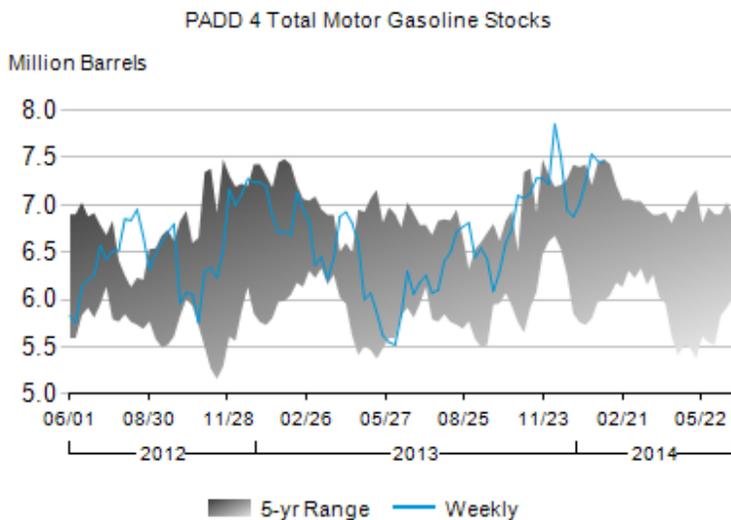
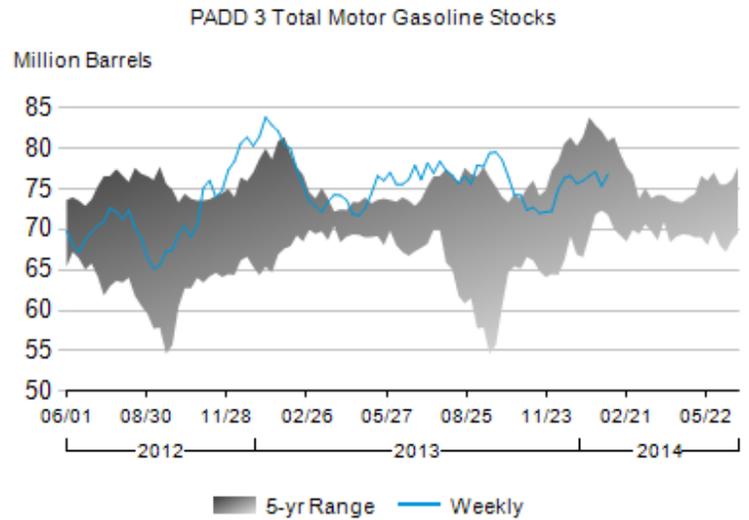
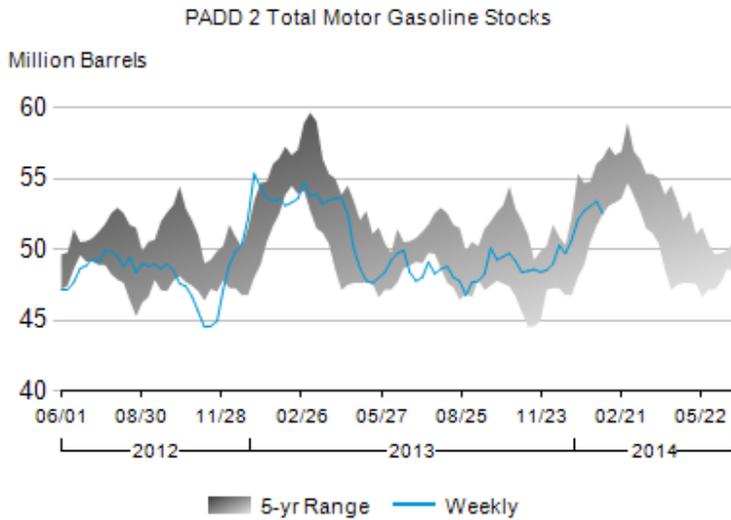
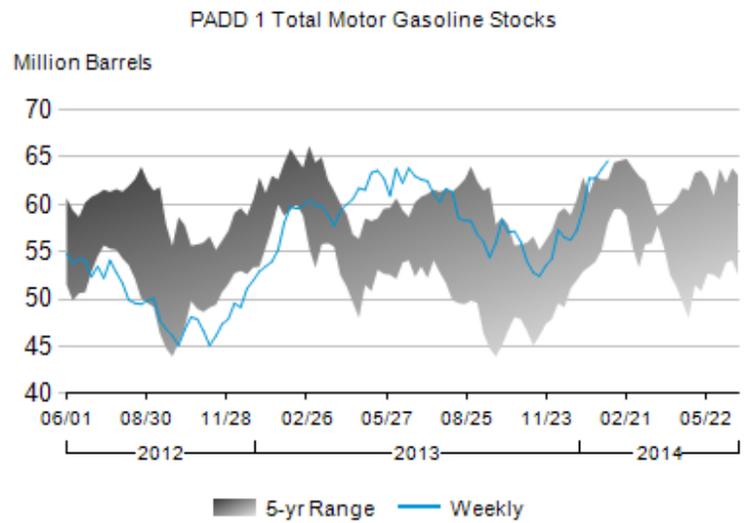
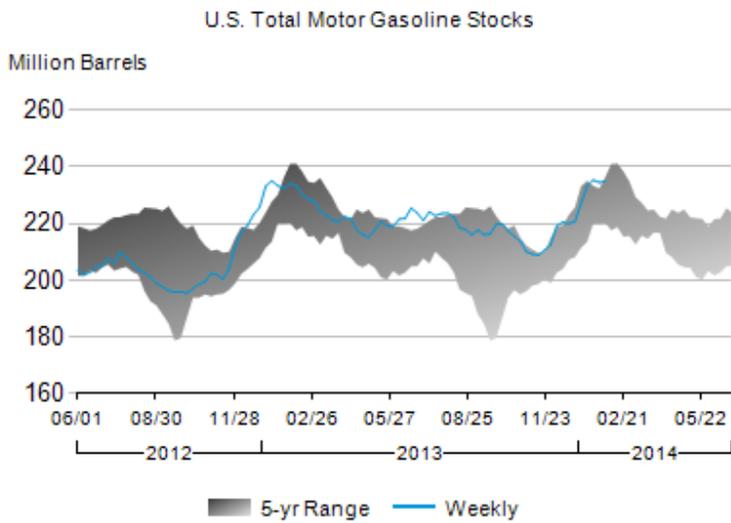
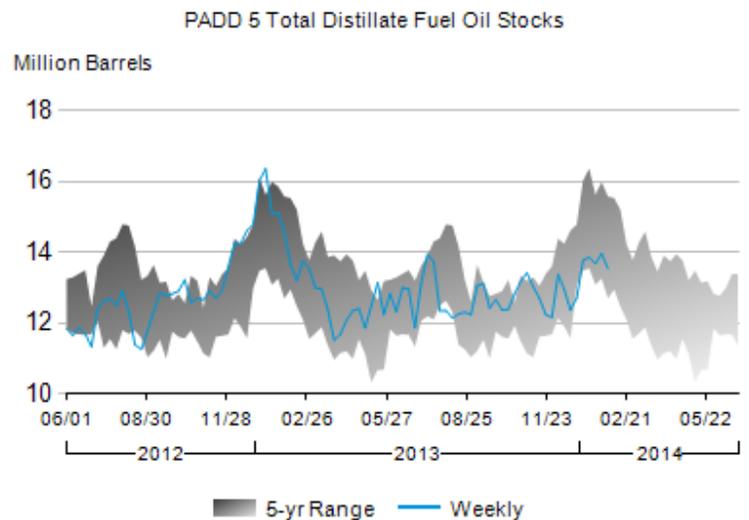
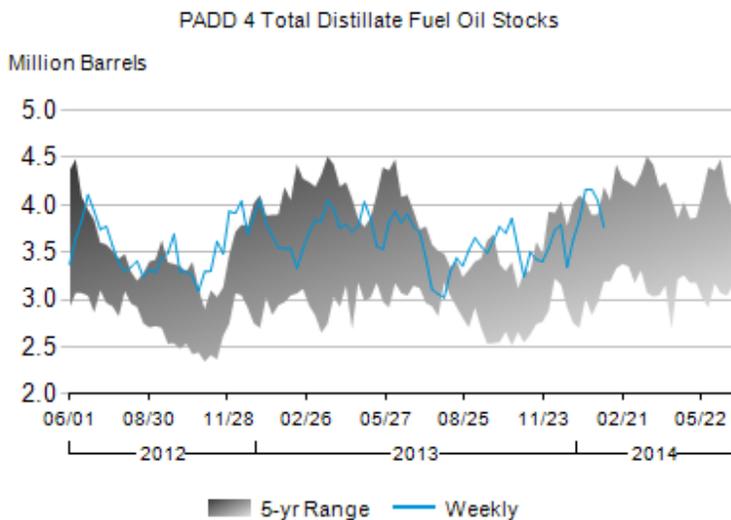
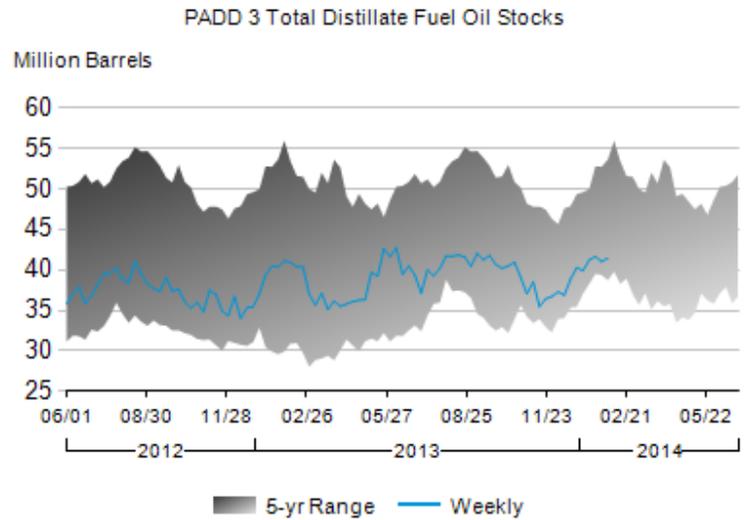
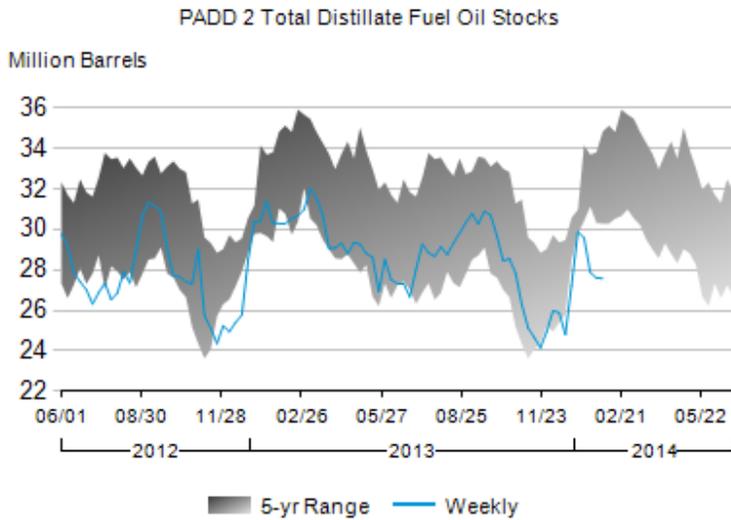
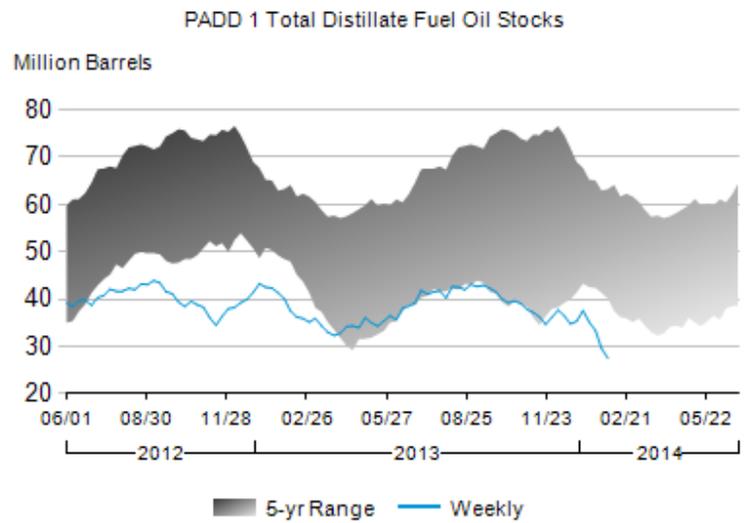
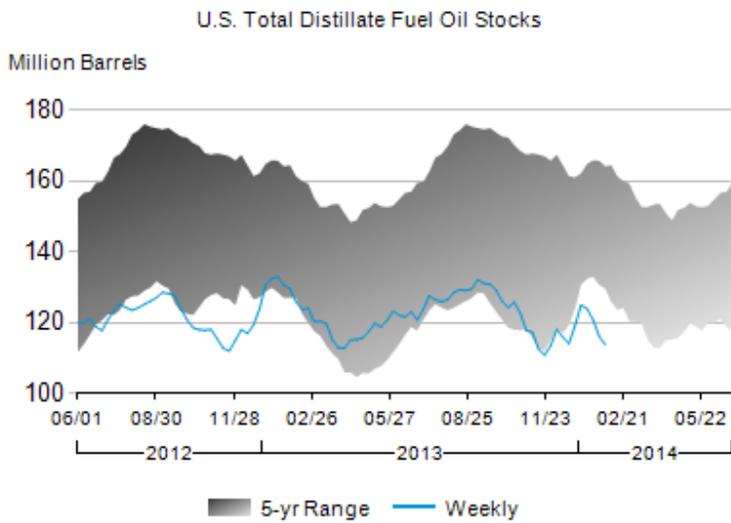


Figure 3. Stocks of Distillate Fuel Oil by PAD District, June 2012 to Present



For Operating Day: Wednesday, February 05, 2014

The Renewables Watch provides important information about actual renewable production within the ISO grid as California movestoward a 33 percent renewable generation portfolio. The information provided is as accurate as can be delivered in a daily format. It is unverified raw data and is not intended to be used as the basis for operational or financial decisions.

Renewables Production

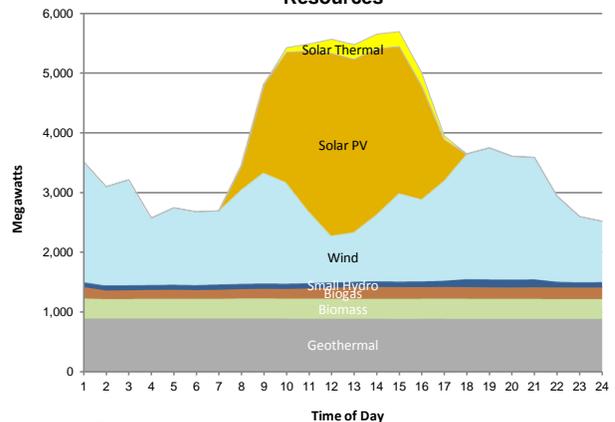
24-Hour Renewables Production

Renewable Resources	Peak Production Time	Peak Production (MW)	Daily Production (MWh)
Solar Thermal	14:50	273	1,459
Solar	11:58	3,127	20,434
Wind	18:00	2,345	35,729
Small Hydro	16:52	143	2,495
Biogas	13:48	197	4,189
Biomass	0:10	338	7,823
Geothermal	13:47	902	21,529
Total Renewables			93,658

Total 24-Hour System Demand (MWh): 602,521

This table gives numeric values related to the production from the various types of renewable resources for the reporting day. All values are hourly average unless otherwise stated. Peak Production is an average over one minute. The total renewable production in megawatt-hours is compared to the total energy demand for the ISO system for the day.

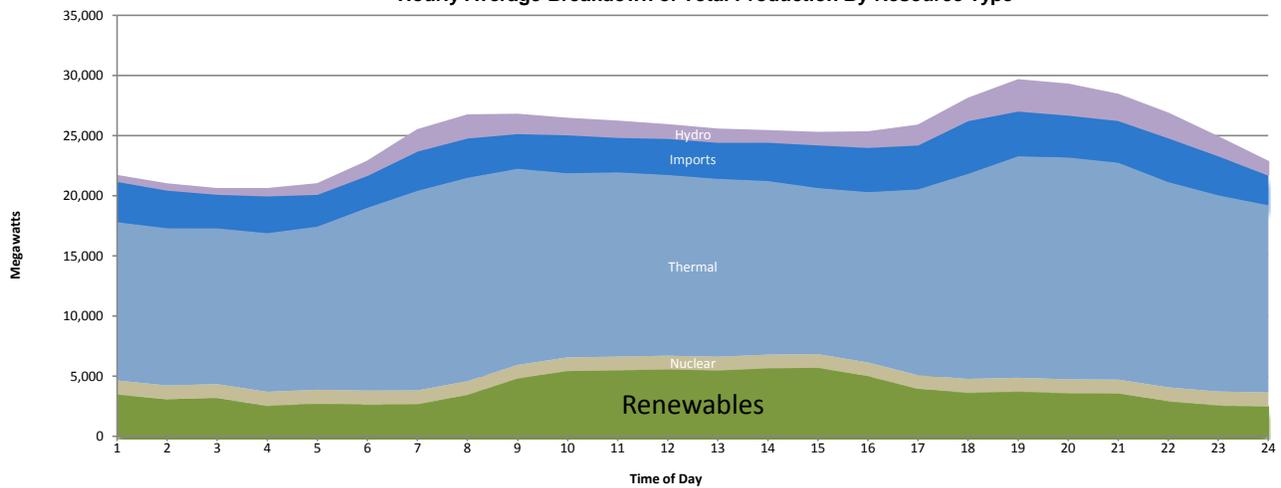
Hourly Average Breakdown of Renewable Resources



This graph shows the production of various types of renewable generation across the day.

System Peak Demand (MW)
*one minute average **29,709**
Time: 18:28

Hourly Average Breakdown of Total Production By Resource Type



This graph depicts the production of various generating resources across the day.

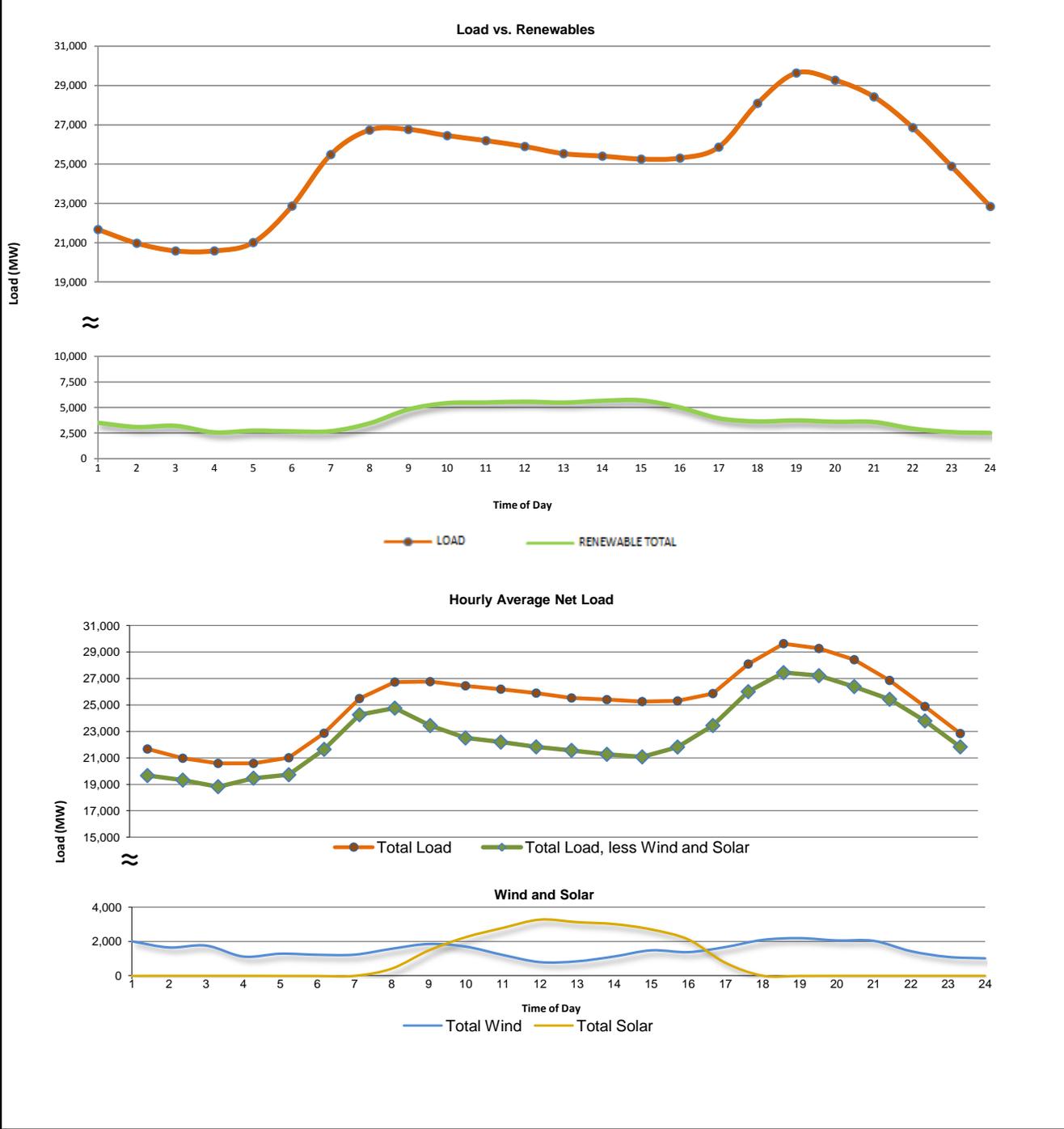
Previous Renewables Watch reports and data are available at <http://www.aiso.com/green/renewableswatch.html>

This table gives numeric values related to the production from the various types of renewable resources for the reporting day. All values are hourly average unless otherwise stated. Peak Production is an average over one minute. The total renewable production in megawatt-hours is compared to the total energy demand for the ISO system for the day. Solar PV and Solar thermal generators that are directly connected to the power grid. "Solar PV" is defined as solar generating units that utilize solar panels containing a photovoltaic material. "Solar Thermal" is defined as solar generating units that convert sunlight into heat and utilize fossil fuel or storage for production which may occur after sunset.

For Operating Day:

The first graph provided on this page shows how much energy renewable resources are contributing to the grid, and when those resources are producing their daily maximum and how that production correlates to the maximum energy demand.

Comparison to Load



The information contained in this report is preliminary and subject to change without notice. No inference, decision or conclusion should be made based on the information in this report or any series of these reports. All values are hourly average unless otherwise stated. Questions about this report should be directed to Jessica Garidel at jgaridel@caiso.com.