

MONTHLY STATS

January 2018

Peaks for January

Peak demand 29,914 MW January 29



Renewables serving peak 6,006 MW lanuary 19

Percentage of renewables serving peak **21.2%** January 19 - 20

Solar & wind 9,986 MW January 20

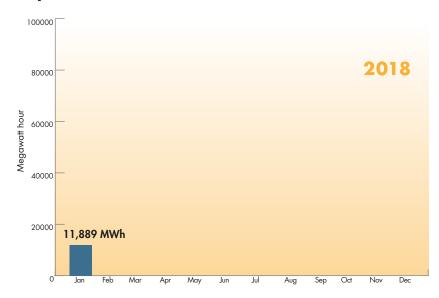


Peak solar **8,151 MW** January 21



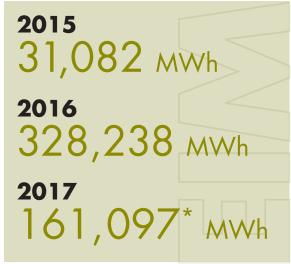
Peak wind **4,048 MW**January 19

Key curtailment totals



<u>Click here</u> for more information on managing oversupply

Avoided curtailments due to EIM



Click here for EIM quarterly benefits reports *Corrected 2017 avoided curtailment

Good facts

Renewables served 67.2% of demand 58.7% of demand = solar & wind on May 13, 2017 at 2:55 p.m.

Previous milestones

65.2% - April 24, 2017 at 2:53 p.m. 56.7% - March 23, 2017 at 11:23 a.m.



Solar served **47.2**% of demand May 14, 2017 at 1:07 p.m.



Wind served **22.4%** of demand March 31, 2017 at 3:17 a.m.

California Independent System Operator

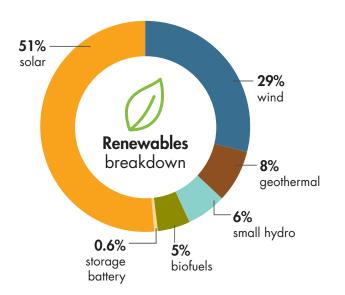


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Demand & resources (as of 02/07/2018)

Resource adequacy net qualifying capacity (NQC) = 49,076 MW Does not include current outages

Installed renewable resources (as of 02/07/2018)



	Megawans
☆ Solar	11,187
⊸ Wind	6,296
Small hydro	1,370
Geothermal	1,790
Biofuels	997
Storage battery	136*
TOTAL	21,776

Megawatts

<u>Click here</u> for Today's Outlook

NOTE — Reporting Net Dependable Capacity only (numbers are rounded). Only fully commercial units are counted, not partials or test energy, as reported via the Master Generating File and captured in the Master Control Area Generating Capability List found on <u>OASIS</u> under "Atlas Reference".

Record peaks





PREVIOUS SOLAR RECORD 9,892 MW set on May 19, 2017, 1:15 p.m.

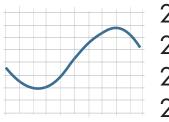
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^{*}Includes 20 MW of storage integrated with power plants



MONTHLY STATS

Season peak demand



50,116 MW 46,232 MW 47,358 MW 45,089 MW

SEPTEMBER 1, 2017, 3:58 P.M.

JULY 27, 2016, 4:51 P.M.

SEPTEMBER 10, 2015, 4:53 P.M.

SEPTEMBER 15, 2014, 4:53 P.M.

<u>Click here</u> to see historical peak demand

2016 Energy use as percentage of total resources available



Natural gas = 32% Down 40% from previous year



Net imports = 28% Unchanged from previous year



 $\triangle \triangle$ Nuclear = 8%

About the same from previous year



Total hydro = 10% Up 5% from previous year



Non-hydro renewables = 20% Up 18% from previous year



Solar increased 32% and accounted for 9% of total system energy



Wind increased 12% and accounted for 6% of total system energy



96 Geothermal decreased 8% and provided almost 5% of total system energy



Biofuels = 2% of total system energy, a slight decrease compared to previous year

Other mostly evergreen facts

- 30 million California consumers
- 1 MW serves about 750-1,000 homes
- 25,685 (or about 26,000) circuit miles of transmission
- 8,397 Pnodes (pricing nodes) (ISO & all EIM entities as of Jan. 5, 2017) ISO only Pnodes = 4,116
- Serve ~80% of California demand
- ISO serves ~33% of WECC demand
- 192 market participants
- 17 participating transmission owners
- Market transactions for 2016 = 29,651 (2015 = 27,488) daily average
- MWh of demand served for 2016 = 237M MWh, ~1.25% lower than 2015 (239.6M in 2015)
- Total estimated wholesale cost of serving demand in 2016 = \$7.4 billion or about \$34 MWh (down ~9% from \$8.3 billion/\$37MWh in 2015; \$12 billion in 2014/\$52 MWh).*

California Independent System Operator

^{*}Note — This is lowest nominal cost since 2008 — mostly due to lower natural gas prices. After normalizing for natural gas prices and greenhouse gas compliance costs, total wholesale energy costs decreased by about 4 percent.