

April 2018

Peaks for April


Peak demand **30,486 MW**
April 9

 Renewables serving peak
6,142 MW April 1

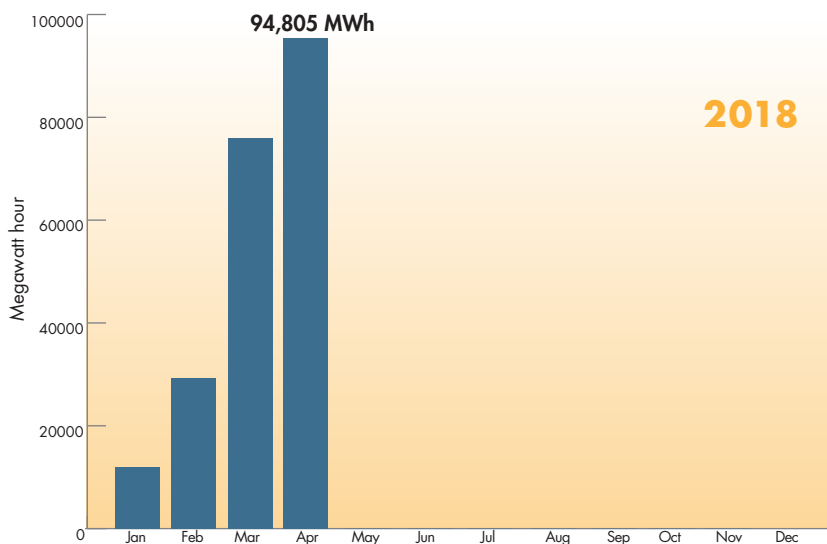
Percentage of renewables serving peak
25% April 1

Solar & wind **14,228 MW**
April 27

 Peak solar **10,539 MW**
April 27

 Peak wind **4,496 MW**
April 1

Key curtailment totals



Avoided curtailments due to EIM

2015 - 2017 **EIM**
222,657
metric tons

[Click here](#) for EIM quarterly benefits reports

[Click here](#) for more information on managing oversupply

Good facts

Renewables served **72.7%** of demand
on April 28, 2018 at 1:25 p.m.

Previous milestones

70.5% - February 18, 2017 at 2:09 p.m.

67.2% - May 13, 2017 at 2:55 p.m.

65.2% - April 24, 2017 at 2:53 p.m.



Solar served **61.4%** of demand
April 8, 2018 at 1:07 p.m.



Wind served **22.8%** of demand
April 1, 2018 at 3:47 a.m.

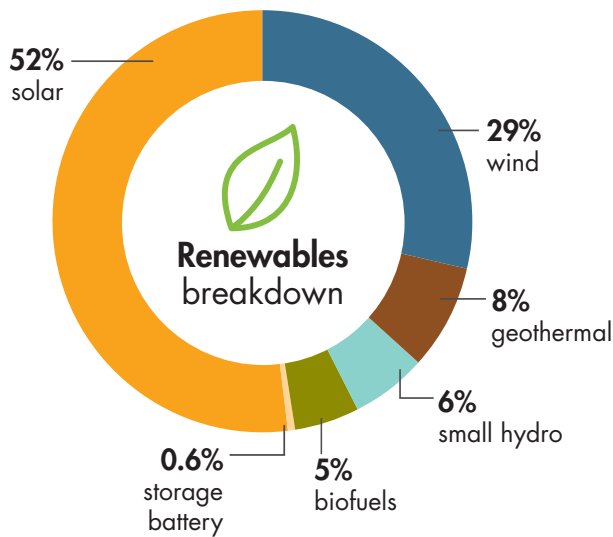


Demand & resources *(as of 05/01/2018)*

Resource adequacy net qualifying capacity (NQC) = **52,932 MW**

Does not include current outages

Installed renewable resources *(as of 05/01/2018)*



	Megawatts
Solar	11,439
Wind	6,295
Small hydro	1,238
Geothermal	1,790
Biofuels	997
Storage battery	134*
TOTAL	21,893

[Click here](#) 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 [OASIS](#) under "Atlas Reference".

**Includes 20 MW of storage integrated with power plants*

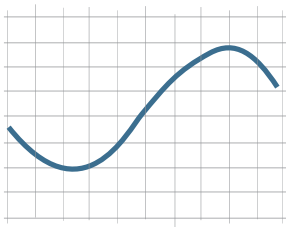
Record peaks

SOLAR
10,625 MW
 May 7, 2018, 12:22 a.m.

WIND
4,985 MW
 May 16, 2017, 5:26 p.m.

PREVIOUS SOLAR RECORD **10,586 MW** set on May 4, 2018, 11:24 a.m.

Season peak demand



2017	50,116 MW
2016	46,232 MW
2015	47,358 MW
2014	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.

[Click here](#) to see historical peak demand


2016 Energy use as percentage of total resources available


 **Natural gas = 32%**
Down **40%** from previous year


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


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


 **Net imports = 28%**
Unchanged from previous year

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

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

 **Nuclear = 8%**
About the same from previous year

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

 **Total hydro = 10%**
Up **5%** from 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
- 9,696 Pnodes (pricing nodes) (ISO & all EIM entities as of Apr. 4, 2018) ISO only Pnodes = 4,119
- Serve ~80% of California demand
- ISO serves ~33% of WECC demand
- 197 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).*

*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.

California Independent System Operator