

# **KEY STATISTICS**

### Peaks for May 2019



28,635 MW

Peak demand May 13

Previous month: 31.195 MW



7,073 MW

Peak served by renewables May 6

> Previous month: 6.510 MW



11,358 MW

Solar peak May 4

Previous month: 11.275 MW



5,309 MW

Wind peak May 8

Previous month: 5.174 MW

#### Historical stats & record peaks



11,358 MW

Solar peak **NEW!** May 4, 2019 at 1:10 P.M.

Previous record: 11,275 MW on April 17, 2019



5,309 MW

Wind peak **NEW!** May 8, 2019 at 3:21 P.M.

Previous record: 5,193 MW on June 8, 2018



Demand served by renewables April 20, 2019 at 12:40 P.M.

> Previous record: 73.9% on May 26, 2018



50,270 MW

Peak demand luly 24, 2006 at 2:44 P.M.



Previous peak demands: 50,116 MW on September 1, 2017 at 3:58 p.m. 48,615 MW on August 31, 2007 at 3:27 p.m.

## **Energy Imbalance Market**





Q1 2019 AVOIDED CURTAILMENTS

52,254 MWh

TOTAL ISO GHG SAVINGS

346,649 mTCO<sub>2</sub>

from avoided curtailment since Nov 2014

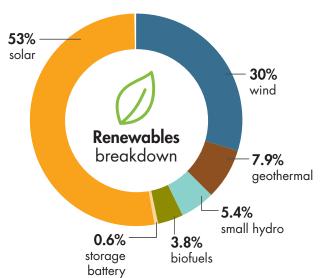


# KEY STATISTICS

#### **Demand & resources** (as of 6/01/2019)

Resource adequacy net qualifying capacity (NQC) = 49,544 MW Does not include current outages

#### Renewable resources (as of 6/01/2019)



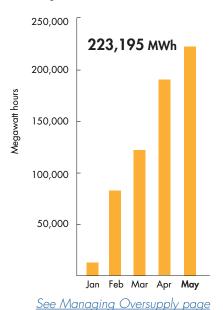
	Megawans
🌣 Solar	11,949
⇒ Wind	6,714
≋ Small hydro	1,229
₩ Geothermal	1,785
♣ Biofuels	878
Storage battery*	136
TOTAL	22,691

Meaawatts

See Today's Outlook

NOTE — 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 stand-alone and hybrid units.

## Key curtailment totals



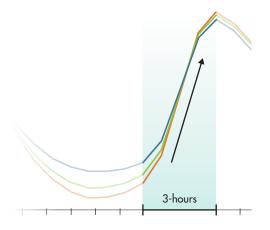
# Steepest ramp: 3-hour max

As daily demand for energy increases and solar generation decreases, grid operators must call on flexible resources to meet the upward ramp in demand. For more on ramping, visit here.

15,639 MW RECORD! Jan 1 starting at 2:25 p.m. 14,630 MW Feb 11 starting at 3:05 p.m.

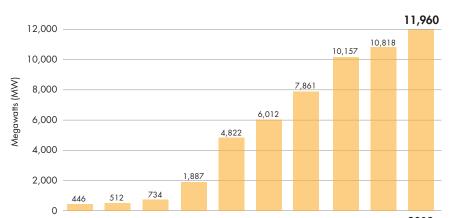
15,070 MW Mar 17 starting at 4:07 p.m.

13,177 MW Apr 20 starting at 4:49 p.m.





# **NEW!** Installed solar growth



# **KEY STATISTICS**

### Annual peak demand

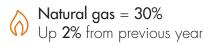
**46,427 MW** Jul 25, 2018 at 5:33 p.m.

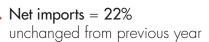
**50,116 MW** Sep 1, 2017 at 3:58 p.m.

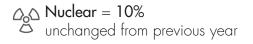
**46,232 MW** Jul 27, 2016 at 4:51 p.m.

**47,358 MW** Sep 10, 2015 at 3:38 p.m.

### NEW! 2018 Energy use (as percentage of total resources available)

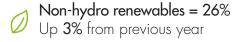




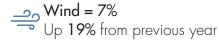




Total hydro = 10% Down 7% from previous year











#### Other facts

- 30 million consumers
- Serve ~80% of California demand
- Serve ~33% of WECC demand
- MWh of load served for 2018 = 232.9 million
- Total estimated wholesale cost of serving demand in 2018 = \$10.8 billion or about \$50/MWh\*
- Total estimated wholesale cost of serving demand in 2017 = \$9.4 billion or about \$42/MWh\*
- 1 MW serves about 750-1,000 homes (1 MWh = 1 million watts used for one hour)
- 17 participating transmission owners
- 27,285 (or about 26,000) circuit miles of transmission
- 214 market participants
- MWh of market transactions for 2018 = 32,635 (2017 = 31,208)
  - Daily average electricity delivered for 2018 = 222.8M MWh
- 9,696 pricing nodes for ISO & all EIM entities as of Apr. 4, 2018. ISO has 4,119 pricing nodes
- Western EIM has 9 active participants serving customers in 8 states (as of April 2019)

<sup>\*</sup>Note higher cost mostly due to higher natural gas prices. After normalizing for natural gas prices and greenhouse gas compliance costs, total wholesale energy costs increased by about 4 percent.