

## KEY STATISTICS

### Peaks for November 2019



**29,818 MW**

Peak demand  
November 18

Previous month:  
33,487 MW



**4,013 MW**

Peak served by renewables  
November 25

Previous month:  
7,564 MW



**9,083 MW**

Solar peak  
November 1

Previous month:  
10,504 MW



**4,275 MW**

Wind peak  
November 25

Previous month:  
4,677 MW

### Historical stats & records



**11,473 MW**

Solar peak  
July 2, 2019 at 12:53 P.M.

Previous record:  
11,435 MW on July 1, 2019



**5,309 MW**

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

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



**78%**

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  
July 24, 2006 at 2:44 P.M.

Next highest:  
50,116 MW on September 1, 2017



**15,639 MW**

Steepest ramp over 3-hour period  
January 1, 2019 at 2:25 P.M.

Next steepest:  
15,070 MW on Mar 17, 2019 at 4:07 p.m.

### Western Energy Imbalance Market (EIM) benefits [Read ISO EIM Benefits Report Q3 here](#)

#### ECONOMIC

2019 Q3 benefits:  
**\$64.81 million**

Total benefits:  
**\$801.07 million**  
*since 2014 launch*

#### ENVIRONMENTAL

Q3 avoided curtailments:  
**33,843 MWh**

Q3 ISO GHG savings:  
**14,485 mTCO<sub>2</sub>**

Total ISO GHG savings:  
**418,031 mTCO<sub>2</sub>**  
*from avoided curtailment since 2014*

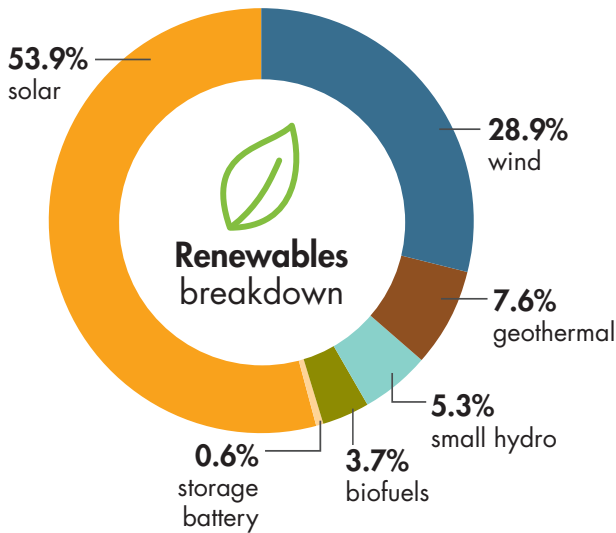
Equivalent to removing emissions  
from **87,889** passenger cars

## KEY STATISTICS

### Demand & resources (as of 12/01/2019)

Resource adequacy net qualifying capacity (NQC) = **46,308 MW**  
*Does not include current outages*

### Renewable resources (as of 12/01/2019)



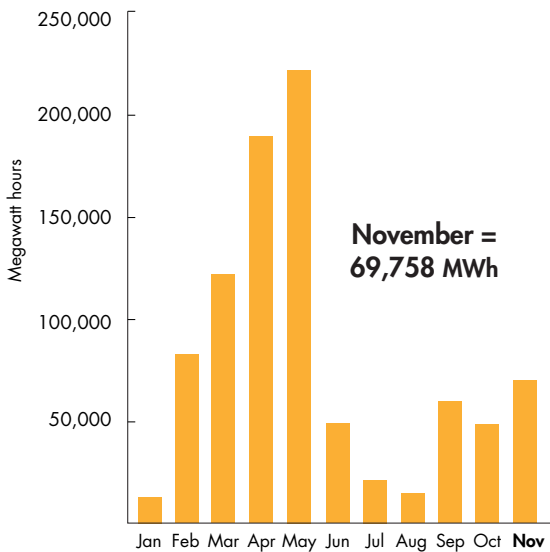
	Megawatts
Solar	12,697
Wind	6,796
Geothermal	1,785
Small hydro	1,244
Biofuels	880
Storage battery*	136
<b>TOTAL</b>	<b>23,538</b>

[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.

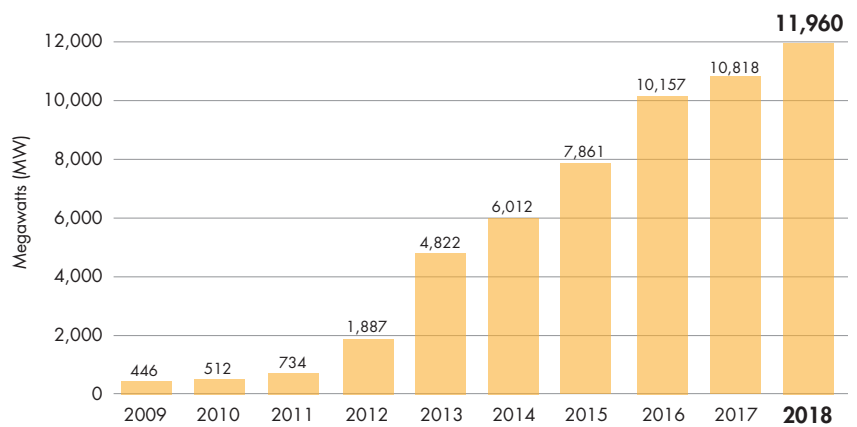
### Wind and solar curtailment totals

For more on oversupply, [visit here](#).

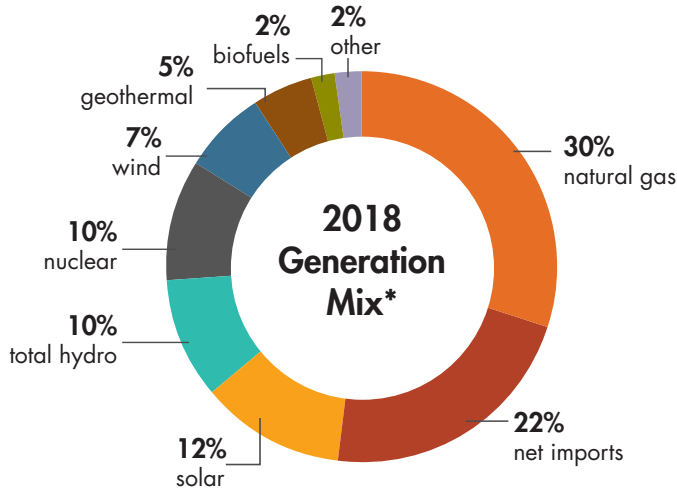


### Installed solar growth

Solar capacity growth in the California ISO balancing area. Stay informed on how we are greening the grid [here](#).



## KEY STATISTICS



\*Approximate percentages based on 2018 average hourly generation (MWh) from the [2018 Annual Report on Market Issues and Performance](#)

### Annual peak demand










**2019:** 44,301 MW  
Aug 15 at 5:50 p.m.

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

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

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

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

 <b>Natural gas = 30%</b> Up 2% from previous year	 <b>Total hydro = 10%</b> Down 7% from previous year	 <b>Wind = 7%</b> Up 19% from previous year
 <b>Net imports = 22%</b> unchanged from previous year	 <b>Non-hydro renewables = 26%</b> Up 3% from previous year	 <b>Geothermal = 4%</b> , Down 2% from previous year
 <b>Nuclear = 10%</b> unchanged from previous year	 <b>Solar = 12%</b> Up 9% from previous year	 <b>Biofuels = 2%</b> , a slight increase 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)
- 18 participating transmission owners
- 25,715 (or about 26,000) circuit miles of transmission
- 217 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
- RC West is the reliability coordinator for 41 entities across 14 western states and northern Mexico

\*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.