Peaks for July 2019

43,198 MW
Peak demand
July 24
Previous month: 42,739 MW

14,613 MW
Peak served by renewables
July 15
Previous month: 14,014 MW

11,473 MW
Solar peak
July 2
Previous month: 11,363 MW

5,034 MW
Wind peak
July 1
Previous month: 5,293 MW

Historical stats & record peaks

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.

Western Energy Imbalance Market (EIM) benefits [Read ISO EIM Benefits Report Q2 here]

**ECONOMIC**
2019 Q2 benefits: $86 million
Total benefits: $736.26 million since 2014 launch

**ENVIRONMENTAL**
Q2 avoided curtailments: 132,937 MWh
Q2 ISO GHG savings: 56,897 mTCO₂
Total ISO GHG savings: 403,546 mTCO₂ from avoided curtailment since 2014
Equivalent to removing emissions from 84,844 passenger cars
**Demand & resources (as of 8/01/2019)**

Resource adequacy net qualifying capacity (NQC) = **52,122 MW**

*Does not include current outages*

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**Renewable resources (as of 8/01/2019)**

![Renewables breakdown](image)

<table>
<thead>
<tr>
<th>Renewable Type</th>
<th>Megawatts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar</td>
<td>12,072</td>
</tr>
<tr>
<td>Wind</td>
<td>6,714</td>
</tr>
<tr>
<td>Small hydro</td>
<td>1,229</td>
</tr>
<tr>
<td>Geothermal</td>
<td>1,785</td>
</tr>
<tr>
<td>Biofuels</td>
<td>878</td>
</tr>
<tr>
<td>Storage battery*</td>
<td>136</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>22,814</strong></td>
</tr>
</tbody>
</table>

*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.*

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**Key curtailment totals**

<table>
<thead>
<tr>
<th>Date</th>
<th>Megawatt hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>20,819 MWh</td>
</tr>
</tbody>
</table>

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](#).

- **RECORD!** 15,639 MW
  - Jan 1 starting at 2:25 p.m.
- 10,981 MW
  - Jul 8 starting at 4:37 p.m.
- 12,744 MW
  - Jun 9 starting at 4:11 p.m.
- 12,611 MW
  - May 5 starting at 4:27 p.m.
- 13,177 MW
  - Apr 20 starting at 4:49 p.m.

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See [Managing Oversupply page](#)

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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
• 25,715 (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)

*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.