

## Wind and Solar Curtailment February 16, 2019

This report is produced daily to provide a detailed accounting of the wind and solar renewable generation that was curtailed and the reasons why<sup>1</sup>. This report should be read in the context of the Renewables Watch report for a more complete understanding of both renewable curtailment and generation<sup>2</sup>.

Wind and solar curtailments are grouped into the following categories:

1. Economic - Local: Market dispatch of generators with economic bids to mitigate local congestion<sup>3</sup>.
2. Economic - System: Market dispatch of generators with economic bids to mitigate system-wide oversupply<sup>4</sup>.
3. SelfSchCut - Local: Market dispatch of self-schedules to mitigate local congestion.
4. SelfSchCut - System: Market dispatch of self-schedules to mitigate system-wide oversupply.
5. ExDispatch - Local: Exceptional dispatch to mitigate local congestion.
6. ExDispatch - System: Exceptional dispatch to mitigate system-wide oversupply.

Note: Amounts smaller than 1 MW are filtered out for simplicity. Such small curtailments are occasionally observed when forecasts are lower than Pmin when market will de-commit the unit and send the 0 MW dispatch.

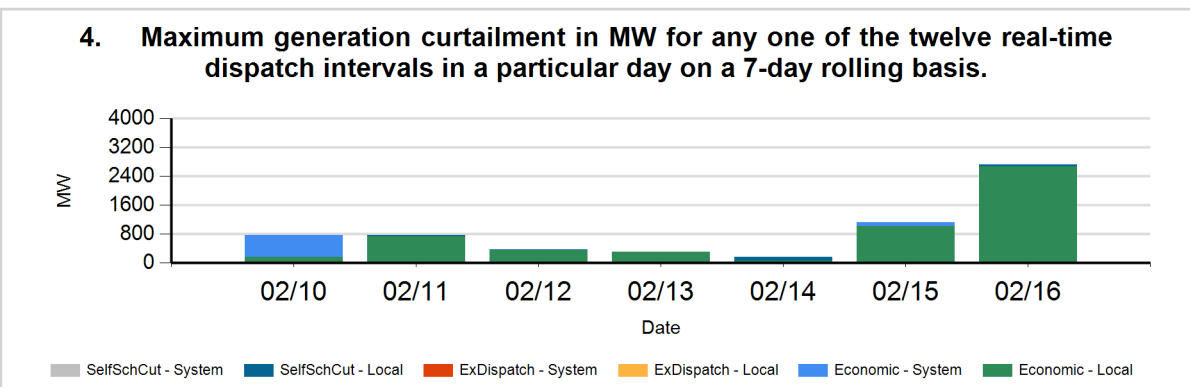
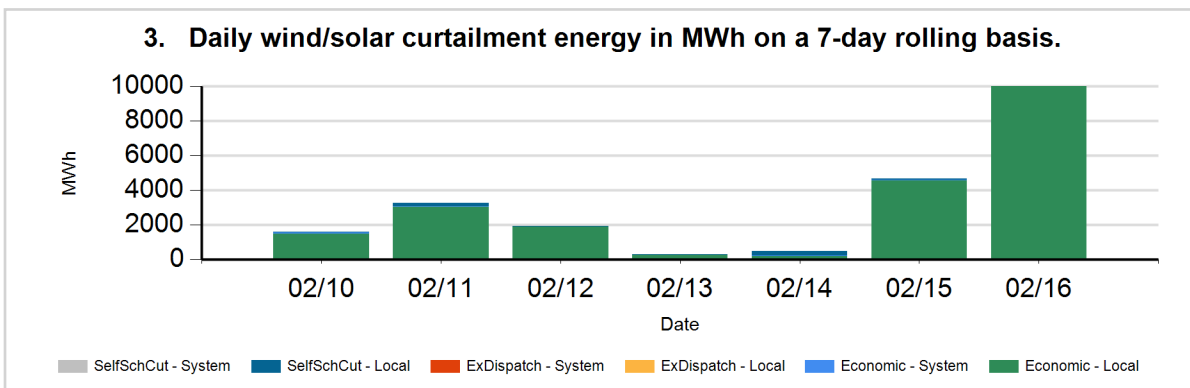
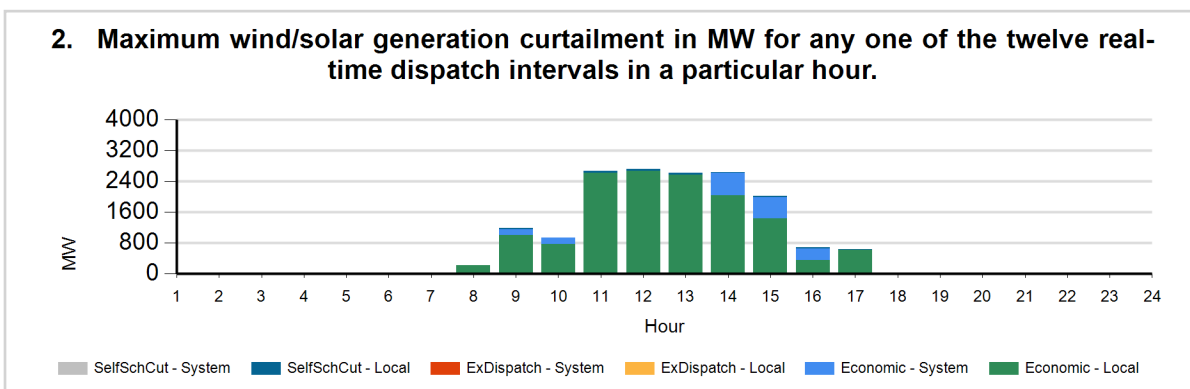
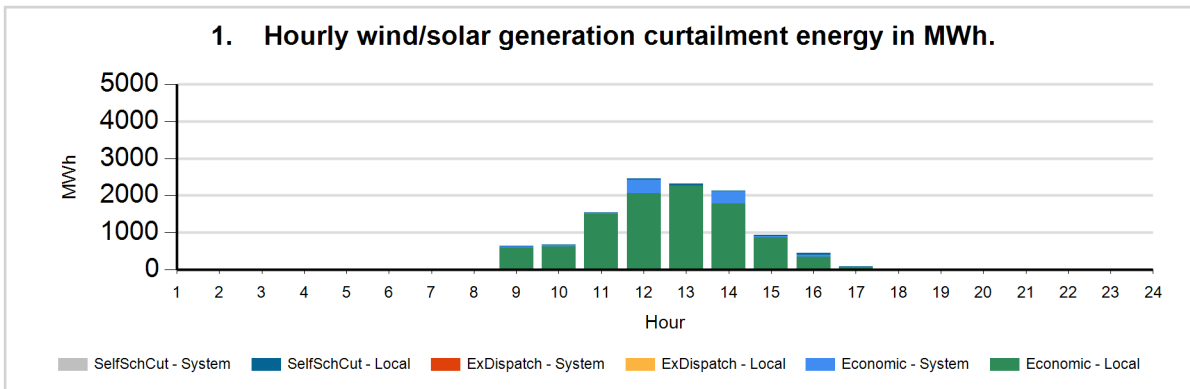
<sup>1</sup>Only wind and solar resources can be reported in this manner because these resources have a forecast. Curtailment is defined as the difference between actual production and the forecast when actual production is less than the forecast.

<sup>2</sup>The Renewables Watch report provides daily actual renewable production within the ISO grid. It is available at: <http://www.caiso.com/green/renewableswatch.html>.

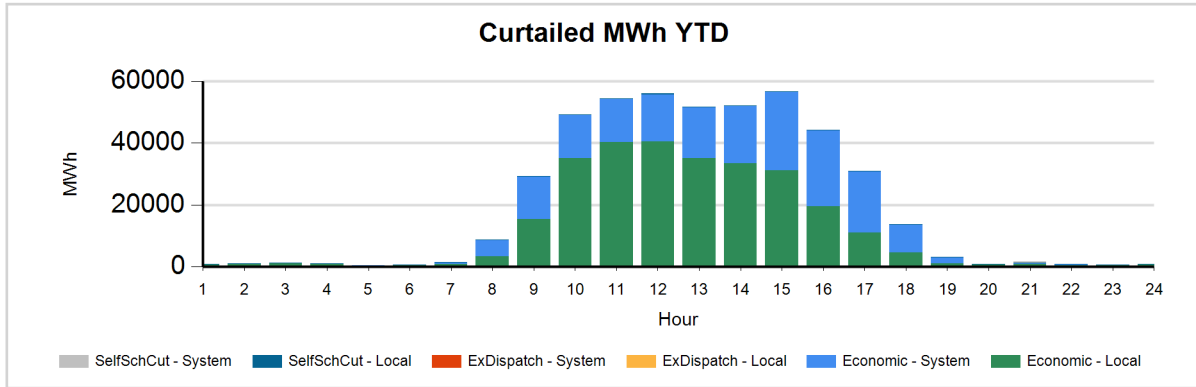
<sup>3</sup>Congestion occurs when available, least-cost energy cannot be delivered to some loads because transmission facilities do not have sufficient capacity to deliver the energy.

<sup>4</sup>For more information on oversupply conditions, please see: [https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables\\_FastFacts.pdf](https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables_FastFacts.pdf)

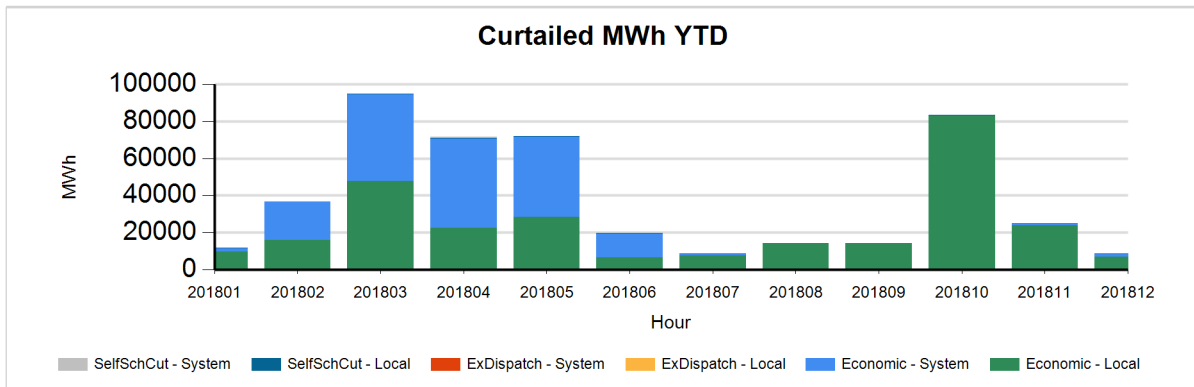
The following charts show the daily and 7-day rolling wind and solar curtailment by category, if any.



The following charts show hourly year to date wind and solar curtailment by category, if any.



The following charts show monthly year to date wind and solar curtailment by category, if any.



TYPE	YTD CURTAILED MWH
LocalEconomic	279,577
LocalSelfSchCut	1,784
SystemEconomic	179,189
SystemSelfSchCut	493
<b>TOTAL</b>	<b>516,015</b>

**Data used to produce hourly chart**

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
02/16	8	Economic	Local	SOLR	14	168
02/16	8	Economic	Local	WIND	4	43
02/16	9	Economic	Local	SOLR	536	951
02/16	9	Economic	Local	WIND	50	43
02/16	9	Economic	System	SOLR	33	137
02/16	9	Economic	System	WIND	2	16
02/16	9	SelfSchCut	Local	SOLR	11	35
02/16	10	Economic	Local	SOLR	592	733
02/16	10	Economic	Local	WIND	27	40
02/16	10	Economic	System	SOLR	33	157
02/16	11	Economic	Local	SOLR	1474	2566
02/16	11	Economic	Local	WIND	46	61
02/16	11	SelfSchCut	Local	SOLR	17	49
02/16	12	Economic	Local	SOLR	2021	2607
02/16	12	Economic	Local	WIND	44	61
02/16	12	SelfSchCut	Local	SOLR	36	47
02/16	13	Economic	Local	SOLR	2206	2508
02/16	13	Economic	Local	WIND	61	68
02/16	13	SelfSchCut	Local	SOLR	48	44
02/16	14	Economic	Local	SOLR	1729	2001
02/16	14	Economic	Local	WIND	59	35
02/16	14	Economic	System	SOLR	308	543
02/16	14	Economic	System	WIND	3	37
02/16	14	SelfSchCut	Local	SOLR	30	24
02/16	15	Economic	Local	SOLR	829	1414
02/16	15	Economic	Local	WIND	29	19
02/16	15	Economic	System	SOLR	35	423
02/16	15	Economic	System	WIND	11	135
02/16	15	SelfSchCut	Local	SOLR	29	35
02/16	16	Economic	Local	SOLR	335	324
02/16	16	Economic	Local	WIND	15	19

02/16	16	Economic	System	SOLR	39	226
02/16	16	Economic	System	WIND	7	76
02/16	16	SelfSchCut	Local	SOLR	50	38
02/16	17	Economic	Local	SOLR	79	607
02/16	17	Economic	Local	WIND	3	4
02/16	17	SelfSchCut	Local	SOLR	2	22

The information contained in this report is preliminary and subject to change without notice. No inference, decision or conclusion should be made based on the information in this report or any series of these reports. All values are hourly average unless otherwise stated. Questions about this report should be directed to Hong Zhou at [hzhou@caiso.com](mailto:hzhou@caiso.com).