

## Wind and Solar Curtailment May 13, 2018

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.

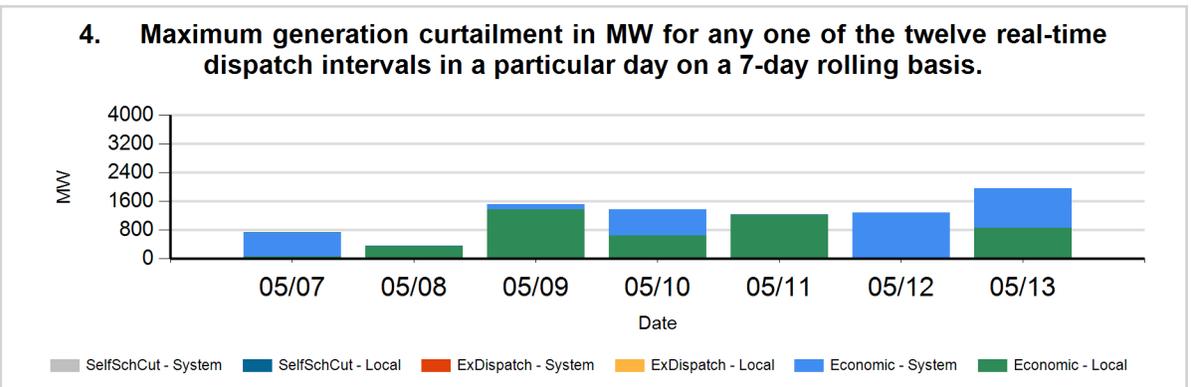
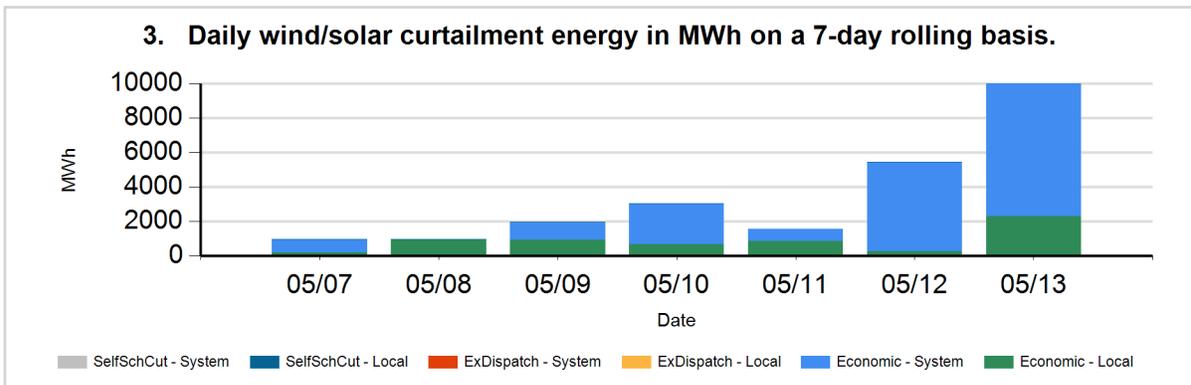
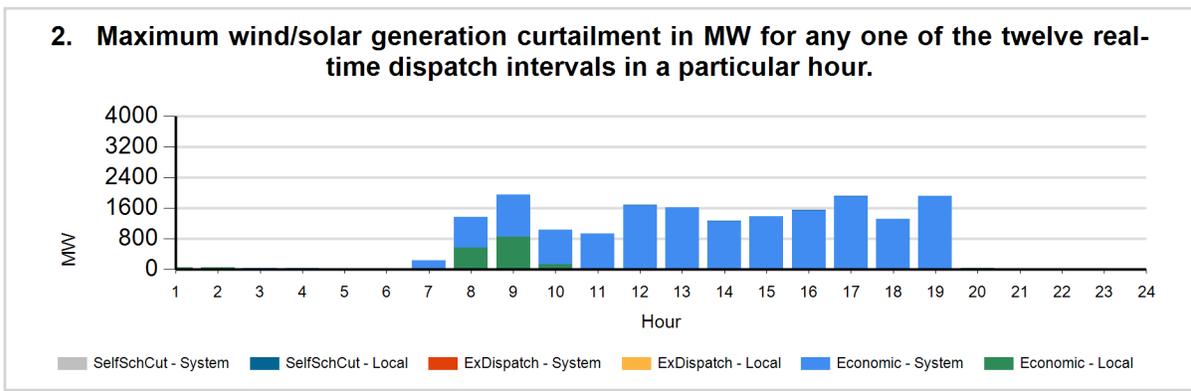
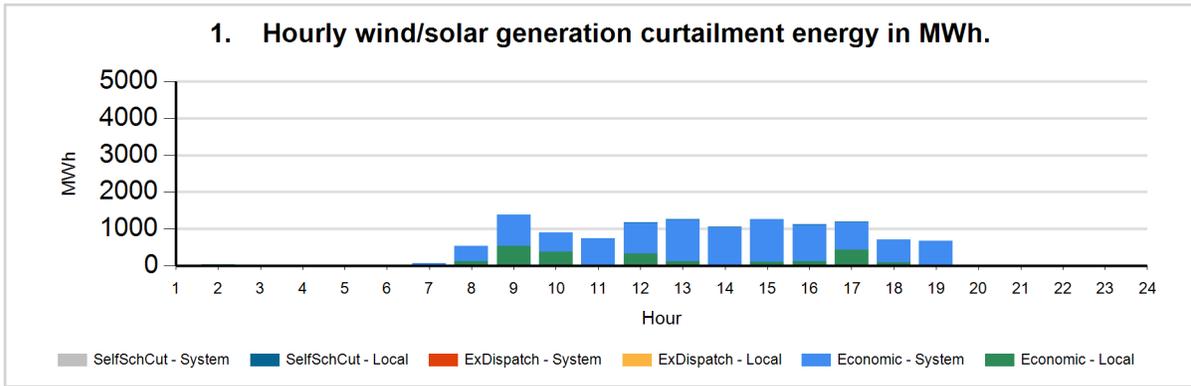
<sup>1</sup>Only wind and solar resources can be reported in this manner because these resources have a forecast. Curtailment is defined as the difference between actual production and the forecast when actual production is less than the forecast.

<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>.

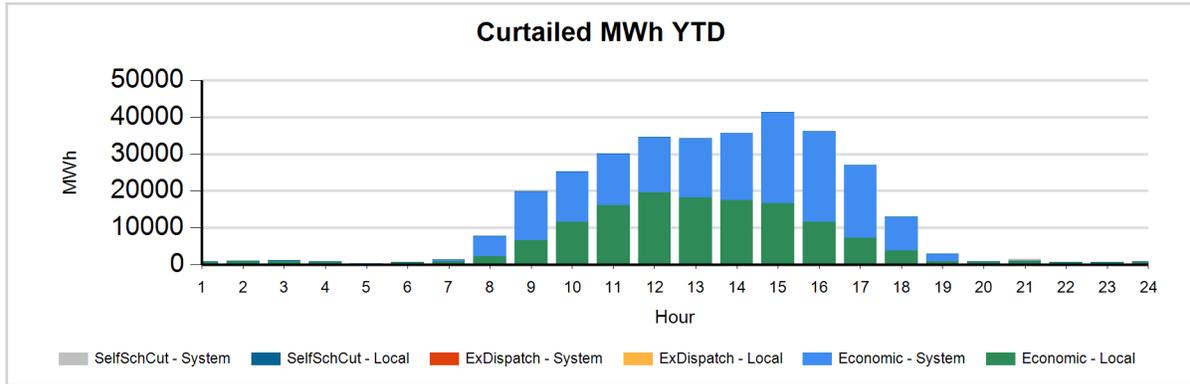
<sup>3</sup>Congestion occurs when available, least-cost energy cannot be delivered to some loads because transmission facilities do not have sufficient capacity to deliver the energy.

<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)

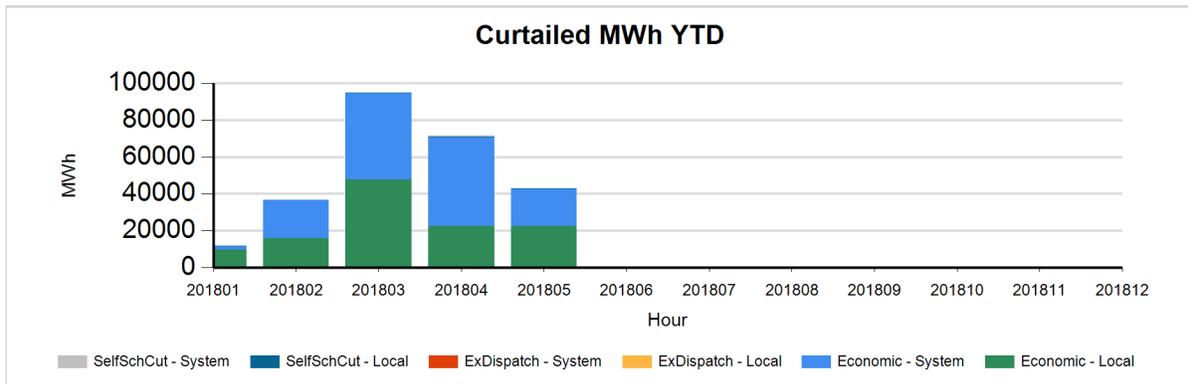
The following charts show the daily and 7-day rolling wind and solar curtailment by category, if any.



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	140,589
LocalSelfSchCut	1,370
SystemEconomic	175,893
SystemSelfSchCut	493
<b>TOTAL</b>	<b>257,945</b>

**Data used to produce hourly chart**

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
05/13	1	Economic	Local	WIND	18	46
05/13	2	Economic	Local	WIND	27	48
05/13	3	Economic	System	WIND	11	36
05/13	4	Economic	System	WIND	7	37
05/13	7	Economic	System	SOLR	55	203
05/13	7	Economic	System	WIND	11	37
05/13	8	Economic	Local	SOLR	116	573
05/13	8	Economic	System	SOLR	398	761
05/13	8	Economic	System	WIND	22	39
05/13	9	Economic	Local	SOLR	532	858
05/13	9	Economic	System	SOLR	819	1058
05/13	9	Economic	System	WIND	33	32
05/13	10	Economic	Local	SOLR	374	130
05/13	10	Economic	System	SOLR	502	880
05/13	10	Economic	System	WIND	14	24
05/13	11	Economic	Local	SOLR	7	9
05/13	11	Economic	System	SOLR	714	898
05/13	11	Economic	System	WIND	22	33
05/13	12	Economic	Local	SOLR	327	7
05/13	12	Economic	System	SOLR	831	1650
05/13	12	Economic	System	WIND	13	21
05/13	12	SelfSchCut	Local	SOLR	2	4
05/13	13	Economic	Local	SOLR	113	5
05/13	13	Economic	System	SOLR	1098	1544
05/13	13	Economic	System	WIND	49	62
05/13	14	Economic	Local	SOLR	4	5
05/13	14	Economic	System	SOLR	1036	1240
05/13	14	Economic	System	WIND	16	22
05/13	14	SelfSchCut	Local	SOLR	1	2
05/13	15	Economic	Local	SOLR	105	3
05/13	15	Economic	System	SOLR	1121	1354

05/13	15	Economic	System	WIND	27	23
05/13	16	Economic	Local	SOLR	119	4
05/13	16	Economic	System	SOLR	983	1509
05/13	16	Economic	System	WIND	24	31
05/13	16	SelfSchCut	Local	SOLR	2	2
05/13	17	Economic	Local	SOLR	409	2
05/13	17	Economic	System	SOLR	726	1778
05/13	17	Economic	System	WIND	32	142
05/13	17	SelfSchCut	Local	SOLR	1	1
05/13	18	Economic	System	SOLR	595	1252
05/13	18	Economic	System	WIND	28	61
05/13	19	Economic	System	SOLR	583	1544
05/13	19	Economic	System	WIND	89	375
05/13	20	Economic	Local	WIND	9	37
05/13	21	Economic	Local	WIND	2	10
05/13	22	Economic	Local	WIND	3	15
05/13	23	Economic	Local	WIND	1	6

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).