

## Wind and Solar Curtailment May 20, 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.

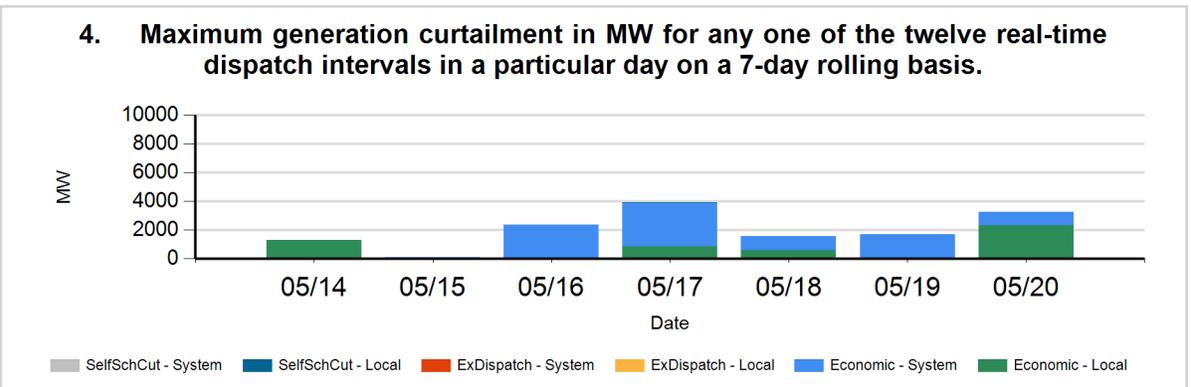
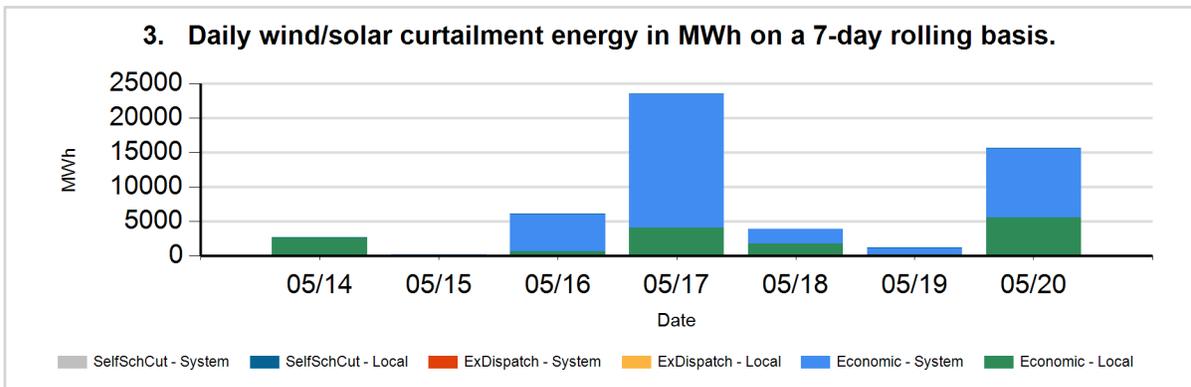
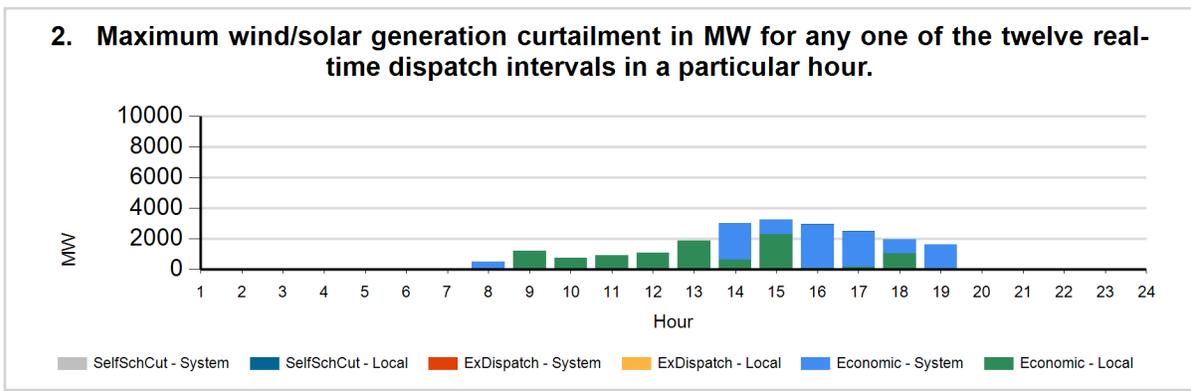
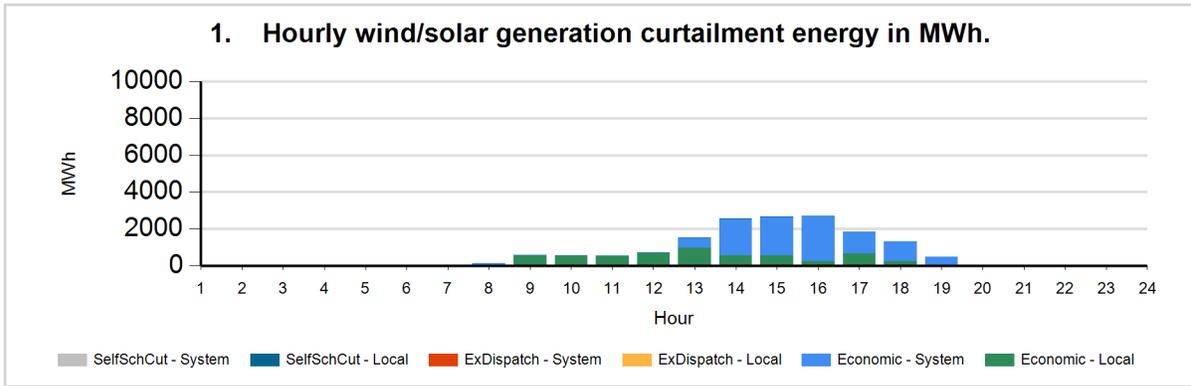
<sup>2</sup>The Renewables Watch report provides daily actual renewable production within the ISO grid. It is available at: <http://www.caiso.com/green/renewableswatch.html>.

<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.

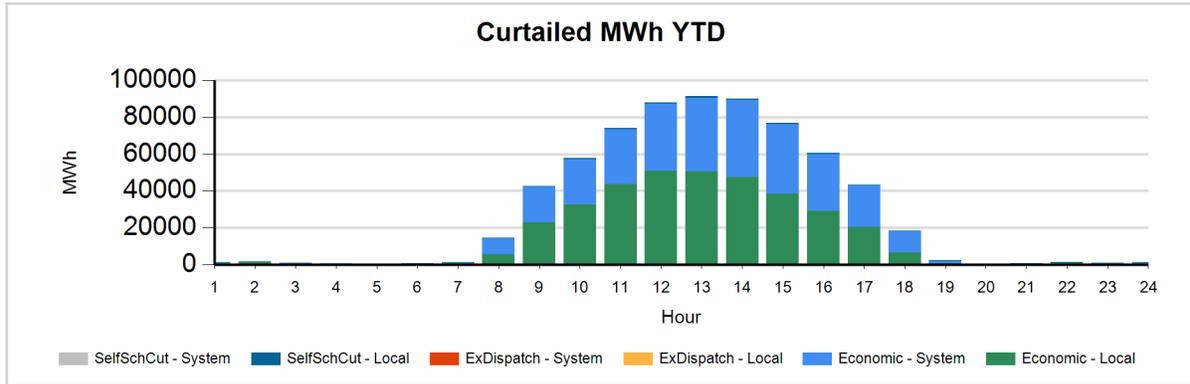
<sup>4</sup>For more information on oversupply conditions, please see:

[https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables\\_FastFacts.pdf](https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables_FastFacts.pdf)

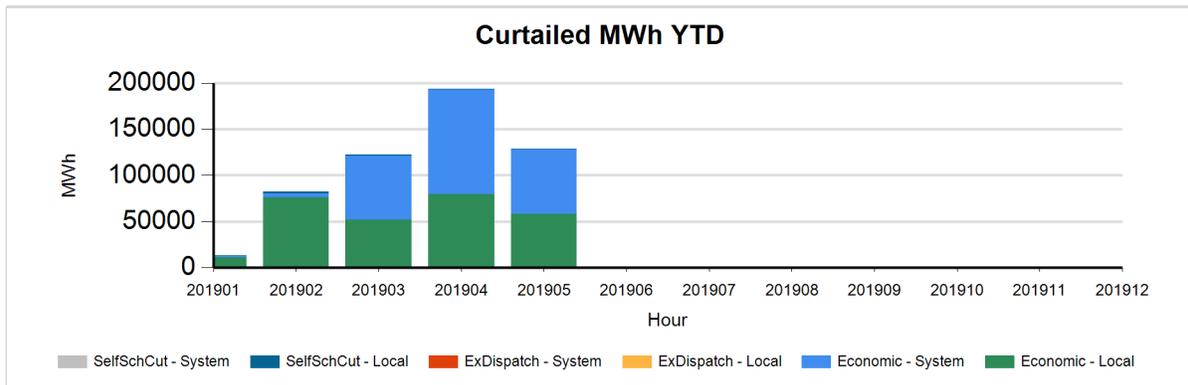
The following charts show the daily and 7-day rolling wind and solar curtailment by category, if any.



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	276,444
LocalSelfSchCut	5,622
SystemEconomic	258,400
TOTAL	540,466

**Data used to produce hourly chart**

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
05/20	8	Economic	System	SOLR	131	508
05/20	8	Economic	System	WIND	3	6
05/20	9	Economic	Local	SOLR	553	1159
05/20	9	Economic	Local	WIND	10	29
05/20	10	Economic	Local	SOLR	523	711
05/20	10	Economic	Local	WIND	15	19
05/20	11	Economic	Local	SOLR	547	916
05/20	11	Economic	Local	WIND	12	9
05/20	12	Economic	Local	SOLR	683	1087
05/20	12	Economic	Local	WIND	6	10
05/20	13	Economic	Local	SOLR	961	1885
05/20	13	Economic	Local	WIND	2	5
05/20	14	Economic	Local	SOLR	548	630
05/20	14	Economic	Local	WIND	4	2
05/20	14	Economic	System	SOLR	1995	2302
05/20	14	Economic	System	WIND	20	52
05/20	14	SelfSchCut	Local	SOLR	2	2
05/20	15	Economic	Local	SOLR	556	2234
05/20	15	Economic	Local	WIND	9	54
05/20	15	Economic	System	SOLR	2049	920
05/20	15	Economic	System	WIND	43	37
05/20	16	Economic	Local	SOLR	228	78
05/20	16	Economic	System	SOLR	2411	2795
05/20	16	Economic	System	WIND	46	66
05/20	16	SelfSchCut	Local	SOLR	2	4
05/20	17	Economic	Local	SOLR	629	169
05/20	17	Economic	System	SOLR	1145	2265
05/20	17	Economic	System	WIND	36	74
05/20	17	SelfSchCut	Local	SOLR	4	7
05/20	18	Economic	Local	SOLR	218	994
05/20	18	Economic	Local	WIND	7	43

05/20	18	Economic	System	SOLR	1051	867
05/20	18	Economic	System	WIND	42	34
05/20	19	Economic	Local	SOLR	1	6
05/20	19	Economic	System	SOLR	449	1576
05/20	19	Economic	System	WIND	16	41
05/20	21	Economic	Local	WIND	4	41
05/20	22	Economic	Local	WIND	13	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 Short-Term Forecasting at [ShortTermForecasting@caiso.com](mailto:ShortTermForecasting@caiso.com).