

## Wind and Solar Curtailment April 29, 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.

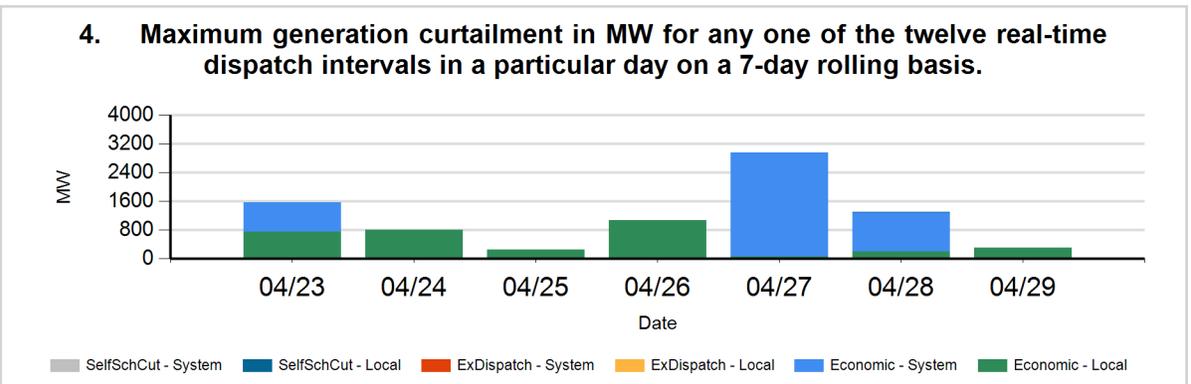
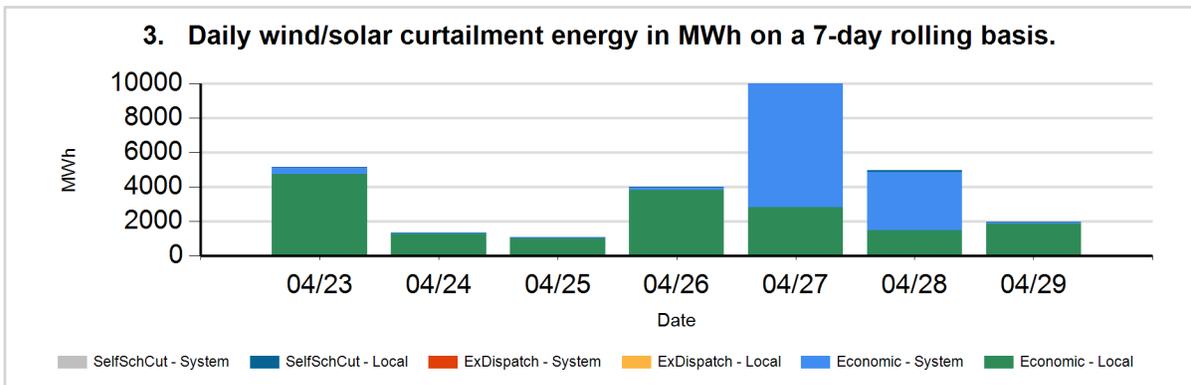
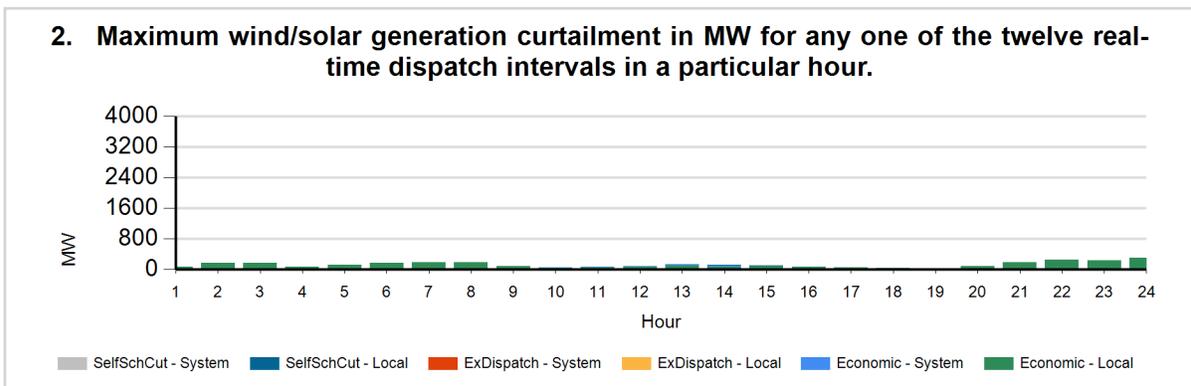
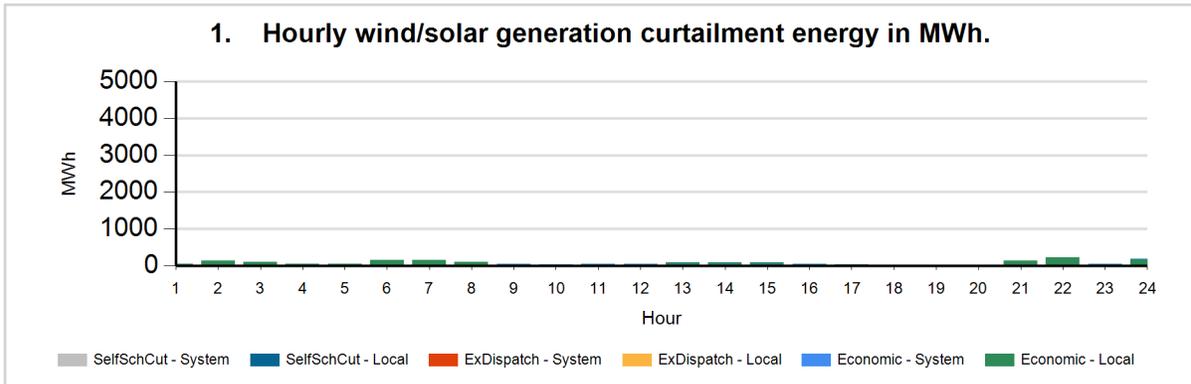
<sup>1</sup>Only wind and solar resources can be reported in this manner because these resources have a forecast. Curtailment is defined as the difference between actual production and the forecast when actual production is less than the forecast.

<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>.

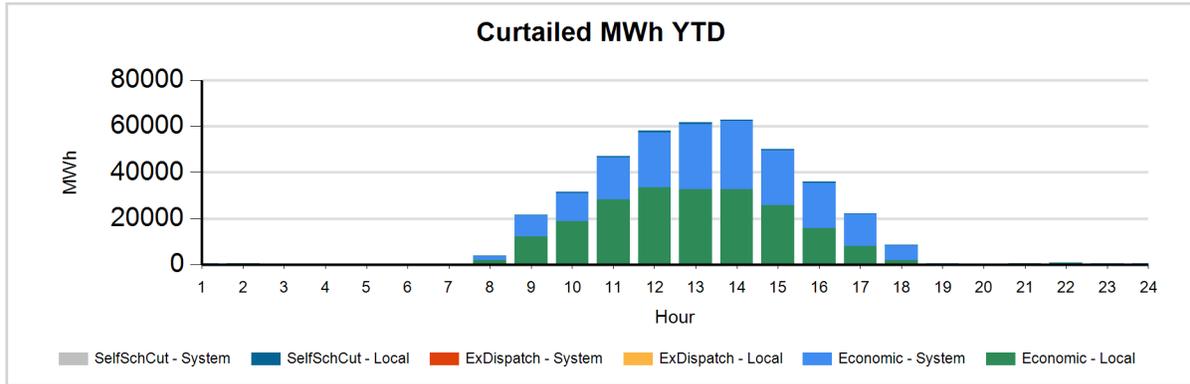
<sup>3</sup>Congestion occurs when available, least-cost energy cannot be delivered to some loads because transmission facilities do not have sufficient capacity to deliver the energy.

<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)

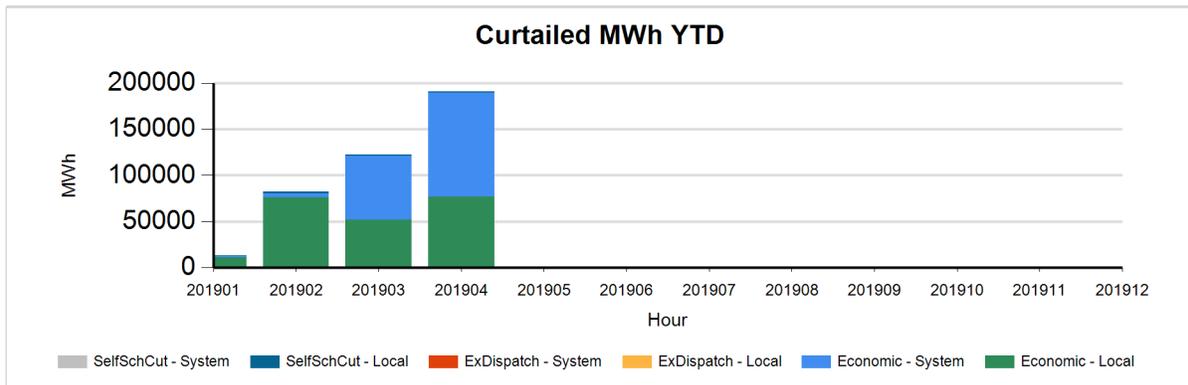
The following charts show the daily and 7-day rolling wind and solar curtailment by category, if any.



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	215,541
LocalSelfSchCut	5,431
SystemEconomic	187,297
TOTAL	408,269

Data used to produce hourly chart

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
04/29	1	Economic	Local	WIND	43	70
04/29	2	Economic	Local	WIND	131	165
04/29	3	Economic	Local	WIND	110	158
04/29	4	Economic	Local	WIND	45	62
04/29	5	Economic	Local	WIND	42	121
04/29	6	Economic	Local	WIND	148	166
04/29	7	Economic	Local	WIND	149	176
04/29	8	Economic	Local	WIND	90	185
04/29	9	Economic	Local	SOLR	11	10
04/29	9	Economic	Local	WIND	35	68
04/29	10	Economic	Local	SOLR	24	22
04/29	10	Economic	Local	WIND	5	27
04/29	10	Economic	System	SOLR	3	3
04/29	11	Economic	Local	SOLR	43	49
04/29	11	Economic	System	SOLR	7	17
04/29	12	Economic	Local	SOLR	45	61
04/29	12	Economic	System	SOLR	13	20
04/29	13	Economic	Local	SOLR	69	102
04/29	13	Economic	System	SOLR	23	28
04/29	14	Economic	Local	SOLR	61	69
04/29	14	Economic	System	SOLR	24	32
04/29	14	SelfSchCut	Local	SOLR	5	9
04/29	15	Economic	Local	SOLR	73	95
04/29	15	SelfSchCut	Local	SOLR	4	4
04/29	16	Economic	Local	SOLR	54	68
04/29	17	Economic	Local	SOLR	36	49
04/29	18	Economic	Local	SOLR	15	28
04/29	19	Economic	Local	SOLR	0	1
04/29	20	Economic	Local	WIND	12	73
04/29	21	Economic	Local	WIND	139	188
04/29	22	Economic	Local	WIND	228	247
04/29	23	Economic	Local	WIND	47	231
04/29	24	Economic	Local	WIND	186	296

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).