

## Wind and Solar Curtailment April 19, 2020

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.

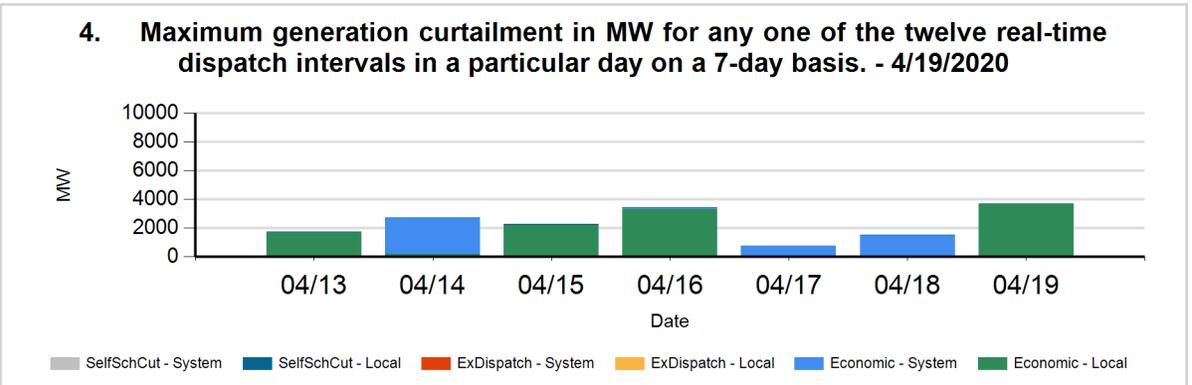
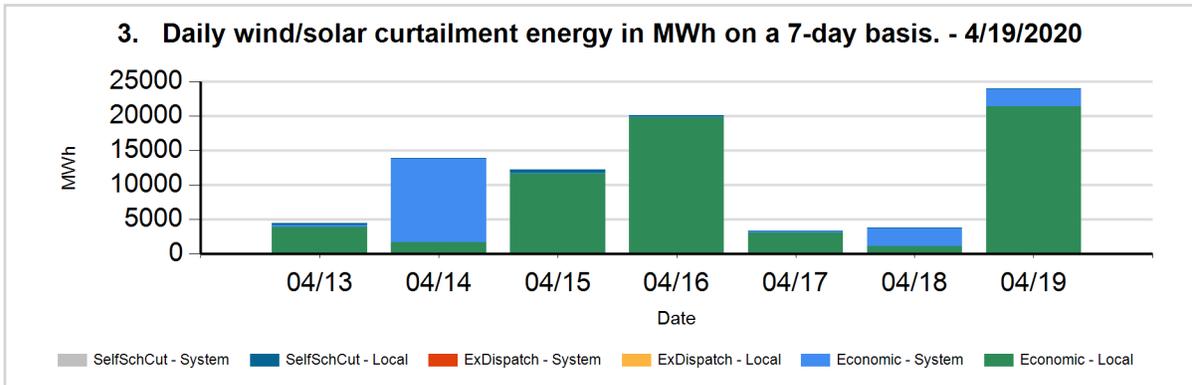
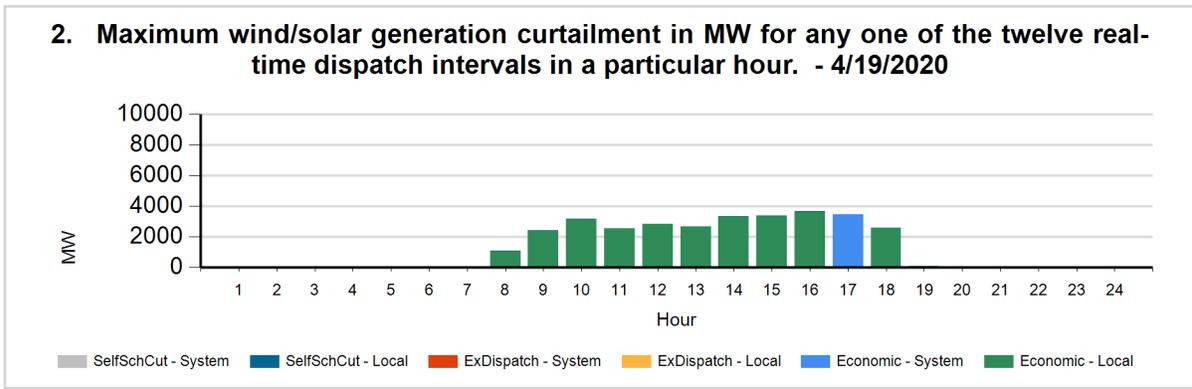
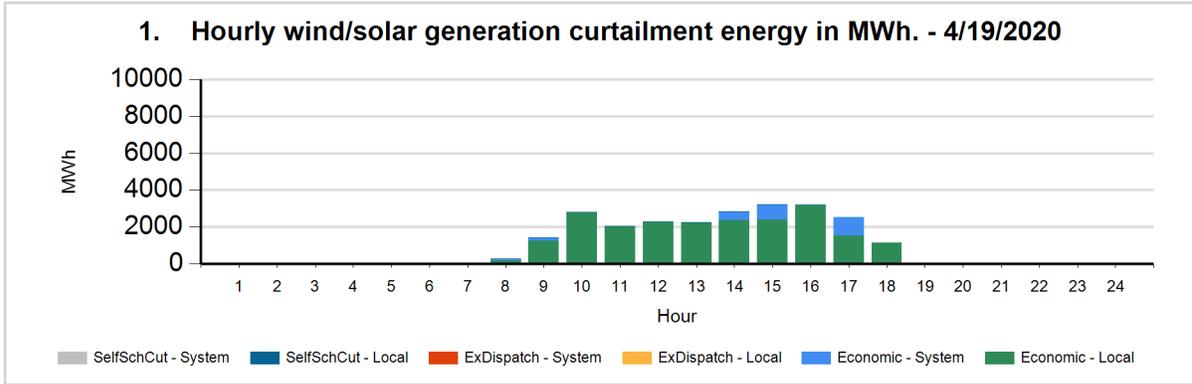
<sup>1</sup>Only wind and solar resources can be reported in this manner because these resources have a forecast. Curtailment is defined as the difference between actual production and the forecast when actual production is less than the forecast.

<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>.

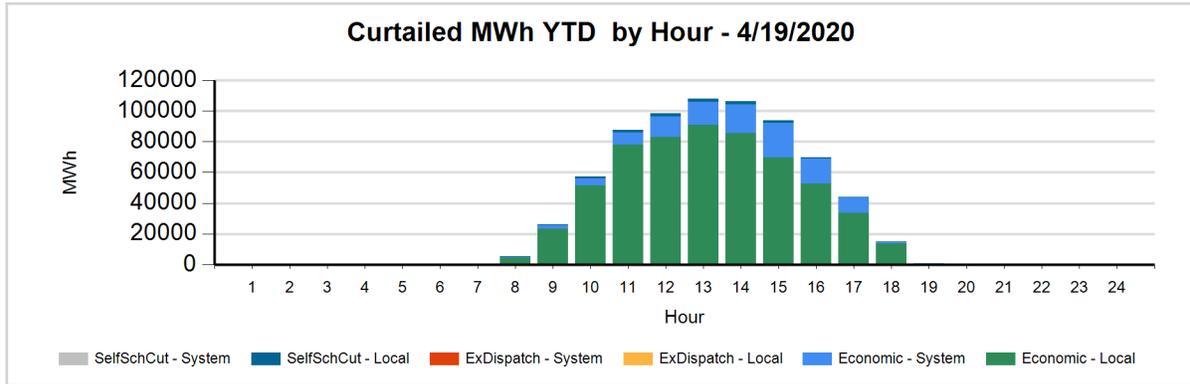
<sup>3</sup>Congestion occurs when available, least-cost energy cannot be delivered to some loads because transmission facilities do not have sufficient capacity to deliver the energy.

<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)

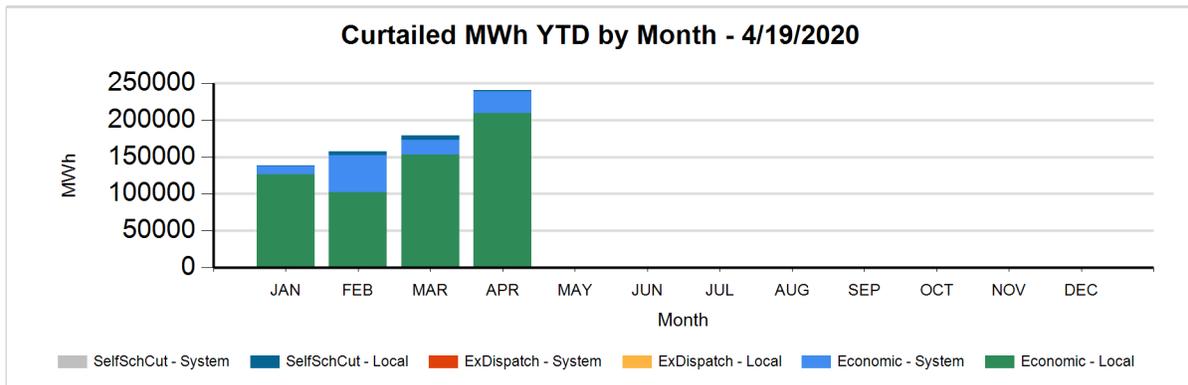
The following charts show the daily and 7-day wind and solar curtailment by category, if any.



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 - 4/19/2020
LocalEconomic	590,201
LocalSelfSchCut	13,002
SystemEconomic	111,491
<b>TOTAL</b>	<b>714,694</b>

**Data used to produce hourly chart**

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
04/19	7	Economic	Local	SOLR	3	14
04/19	7	Economic	System	SOLR	0	
04/19	8	Economic	Local	SOLR	147	1039
04/19	8	Economic	Local	WIND	5	28
04/19	8	Economic	System	SOLR	112	
04/19	8	Economic	System	WIND	4	
04/19	8	SelfSchCut	Local	SOLR	8	30
04/19	9	Economic	Local	SOLR	1228	2388
04/19	9	Economic	Local	WIND	16	21
04/19	9	Economic	System	SOLR	145	
04/19	9	Economic	System	WIND	5	
04/19	9	SelfSchCut	Local	SOLR	15	10
04/19	10	Economic	Local	SOLR	2736	3082
04/19	10	Economic	Local	WIND	55	64
04/19	10	SelfSchCut	Local	SOLR	12	10
04/19	11	Economic	Local	SOLR	2013	2496
04/19	11	Economic	Local	WIND	12	44
04/19	11	SelfSchCut	Local	SOLR	2	
04/19	12	Economic	Local	SOLR	2254	2804
04/19	12	Economic	Local	WIND	21	49
04/19	12	Economic	System	SOLR	8	
04/19	12	SelfSchCut	Local	SOLR	5	
04/19	13	Economic	Local	SOLR	2212	2592
04/19	13	Economic	Local	WIND	31	58
04/19	13	SelfSchCut	Local	SOLR	4	
04/19	14	Economic	Local	SOLR	2316	3230
04/19	14	Economic	Local	WIND	34	86
04/19	14	Economic	System	SOLR	453	6
04/19	14	Economic	System	WIND	10	
04/19	14	SelfSchCut	Local	SOLR	8	2
04/19	15	Economic	Local	SOLR	2362	3299

04/19	15	Economic	Local	WIND	37	83
04/19	15	Economic	System	SOLR	796	
04/19	15	Economic	System	WIND	15	2
04/19	15	SelfSchCut	Local	SOLR	5	11
04/19	16	Economic	Local	SOLR	3135	3573
04/19	16	Economic	Local	WIND	64	98
04/19	16	Economic	System	WIND	1	4
04/19	16	SelfSchCut	Local	SOLR	0	3
04/19	17	Economic	Local	SOLR	1487	11
04/19	17	Economic	Local	WIND	30	
04/19	17	Economic	System	SOLR	981	3307
04/19	17	Economic	System	WIND	42	137
04/19	18	Economic	Local	SOLR	1129	2559
04/19	18	Economic	Local	WIND	10	19
04/19	19	Economic	Local	SOLR	12	87

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).