

## Wind and Solar Curtailment April 20, 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.

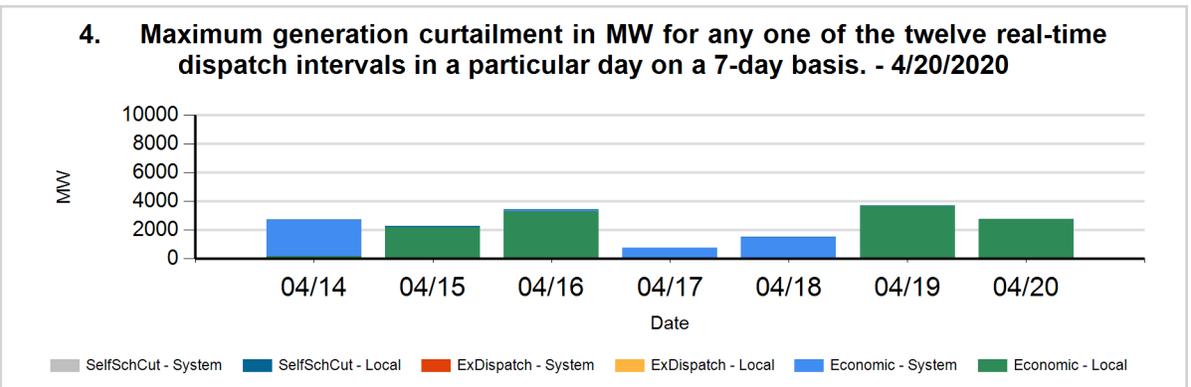
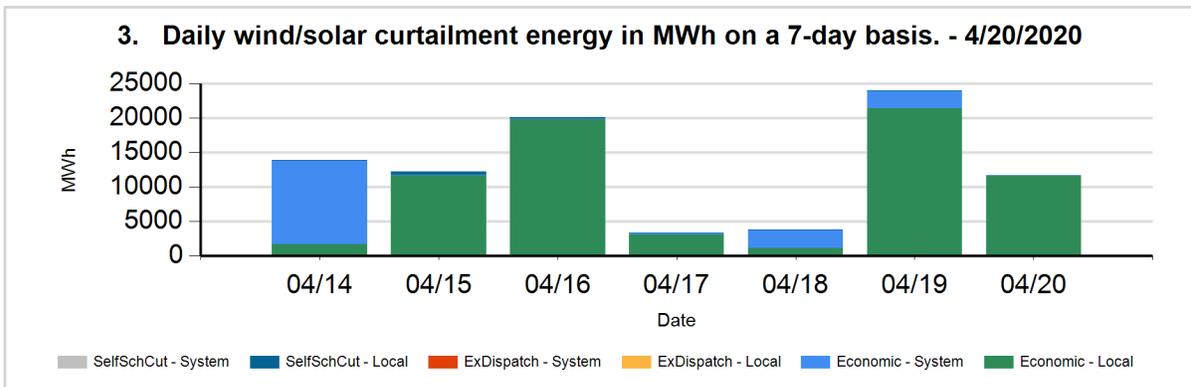
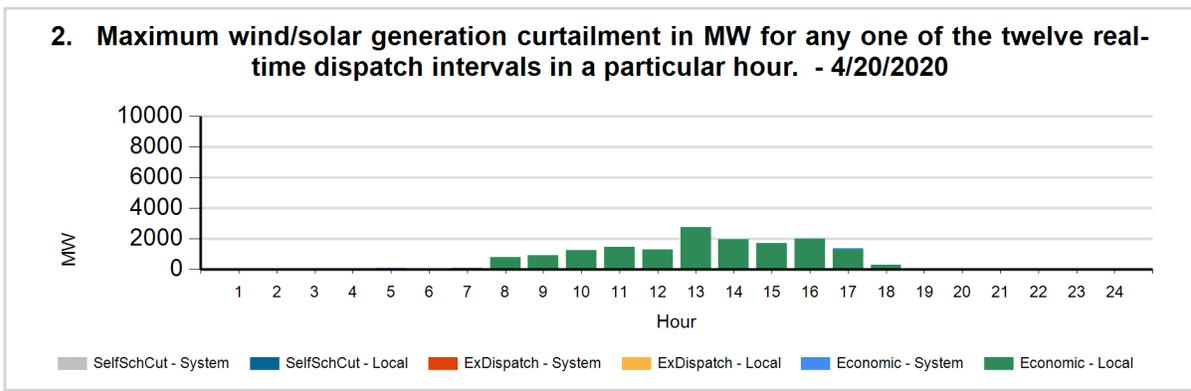
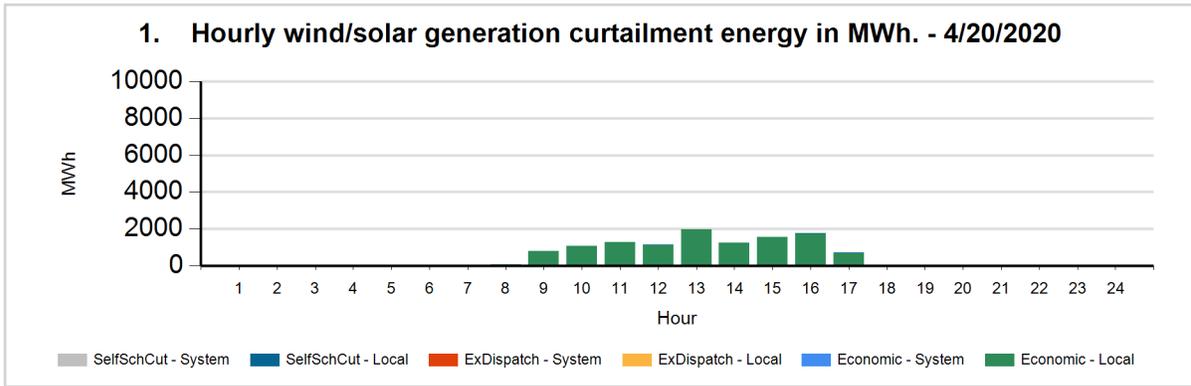
<sup>2</sup>The Renewables Watch report provides daily actual renewable production within the ISO grid. It is available at: <http://www.caiso.com/green/renewableswatch.html>.

<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.

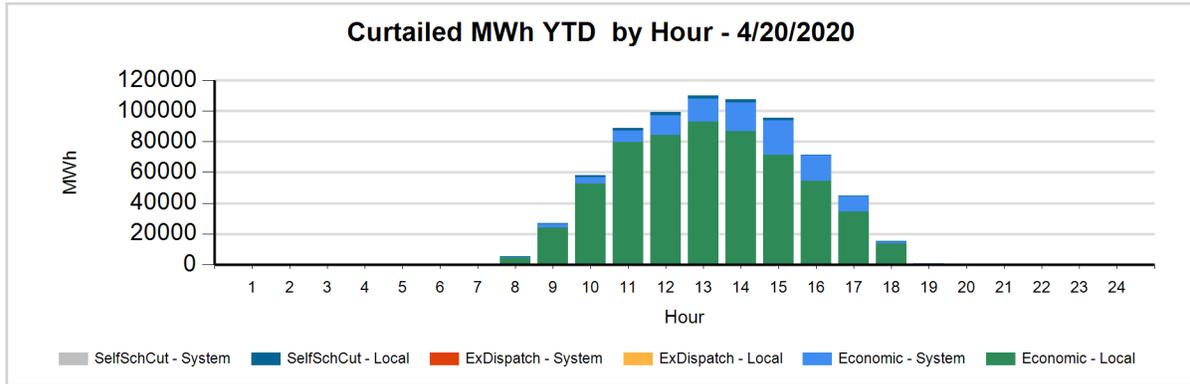
<sup>4</sup>For more information on oversupply conditions, please see:

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

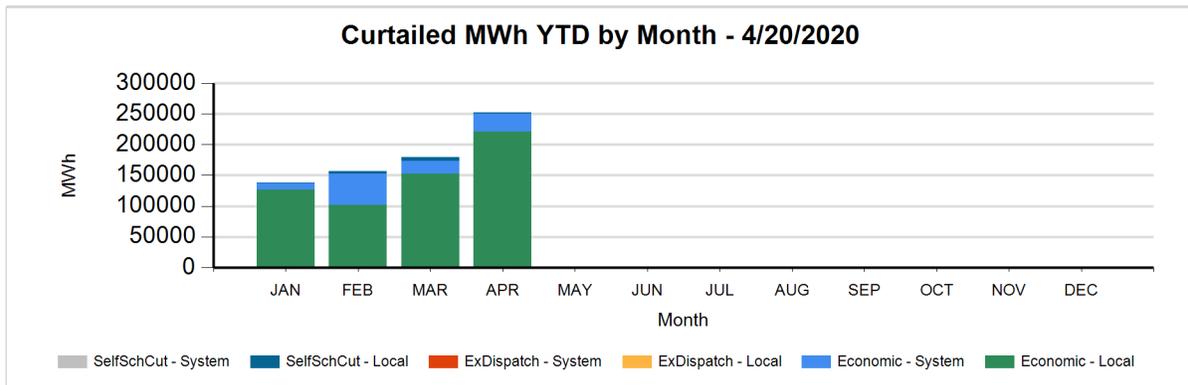
The following charts show the daily and 7-day wind and solar curtailment by category, if any.



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 - 4/20/2020
LocalEconomic	601,801
LocalSelfSchCut	13,012
SystemEconomic	111,512
TOTAL	726,326

Data used to produce hourly chart

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
04/20	5	Economic	System	WIND	8	92
04/20	7	Economic	Local	SOLR	1	
04/20	7	Economic	Local	WIND	8	98
04/20	7	Economic	System	SOLR	2	
04/20	7	Economic	System	WIND	2	
04/20	8	Economic	Local	SOLR	61	730
04/20	8	Economic	Local	WIND	6	73
04/20	9	Economic	Local	SOLR	782	782
04/20	9	Economic	Local	WIND	12	145
04/20	10	Economic	Local	SOLR	1020	1177
04/20	10	Economic	Local	WIND	56	52
04/20	11	Economic	Local	SOLR	1231	1399
04/20	11	Economic	Local	WIND	51	50
04/20	12	Economic	Local	SOLR	1085	1298
04/20	12	Economic	Local	WIND	29	
04/20	12	SelfSchCut	Local	SOLR	8	
04/20	13	Economic	Local	SOLR	1943	2721
04/20	13	Economic	Local	WIND	11	45
04/20	13	Economic	System	SOLR	0	
04/20	13	SelfSchCut	Local	SOLR	0	
04/20	14	Economic	Local	SOLR	1225	1951
04/20	14	Economic	Local	WIND	15	22
04/20	15	Economic	Local	SOLR	1546	1727
04/20	15	Economic	Local	WIND	4	
04/20	15	SelfSchCut	Local	SOLR	0	
04/20	16	Economic	Local	SOLR	1721	1730
04/20	16	Economic	Local	WIND	32	248
04/20	16	SelfSchCut	Local	SOLR	1	
04/20	17	Economic	Local	SOLR	701	1286
04/20	17	Economic	Local	WIND	14	24
04/20	17	Economic	System	SOLR	6	64

04/20	17	Economic	System	WIND	2	
04/20	18	Economic	Local	SOLR	46	293
04/20	18	Economic	System	SOLR	0	

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).