

## Wind and Solar Curtailment April 16, 2020

This report is produced daily to provide a detailed accounting of the wind and solar renewable generation that was curtailed and the reasons why¹. This report should be read in the context of the Renewables Watch report for a more complete understanding of both renewable curtailment and generation².

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.
- 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.

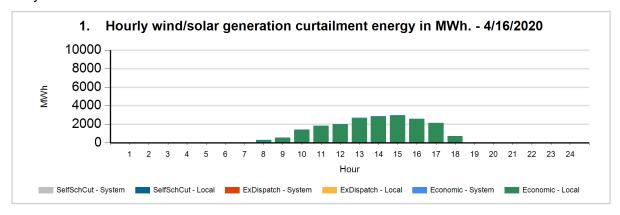
<sup>2</sup>The Renewables Watch report provides daily actual renewable production within the ISO grid. It is available at: <a href="http://www.caiso.com/green/renewableswatch.html">http://www.caiso.com/green/renewableswatch.html</a>.

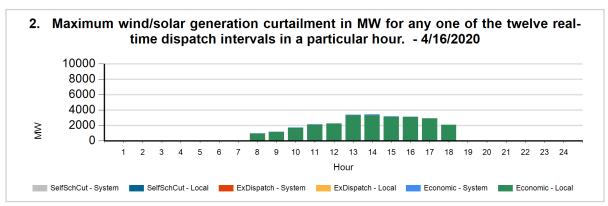
<sup>3</sup>Congestion occurs when available, least-cost energy cannot be delivered to some loads because transmission facilities do not have sufficient capacity to deliver the energy.

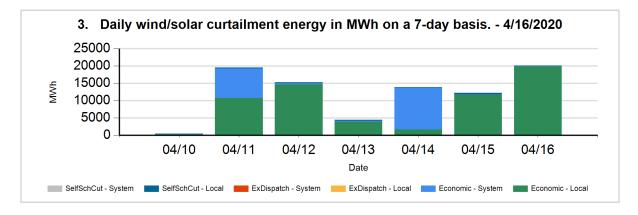
For more information on oversupply conditions, please see: <a href="https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables">https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables</a> FastFacts.pdf

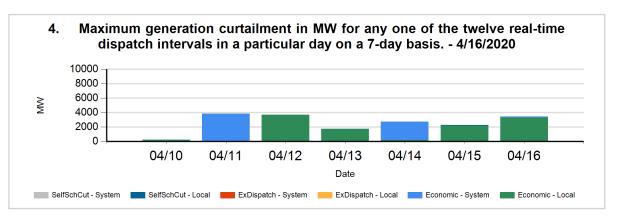


The following charts show the daily and 7-day wind and solar curtailment by category, if any.



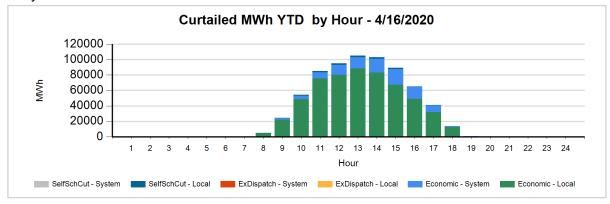




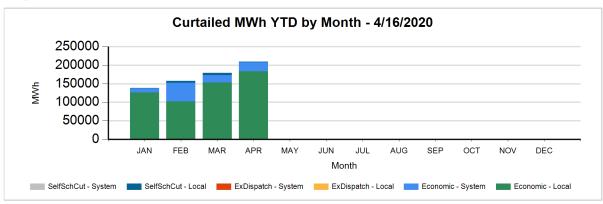




The following charts show hourly year to date wind and solar curtailment by category, if any.



The following charts show monthly year to date wind and solar curtailment by category, if any.



TYPE	YTD CURTAILED MWH - 4/16/2020		
LocalEconomic	564,667		
LocalSelfSchCut	12,877		
SystemEconomic	106,032		
TOTAL	683,576		



## Data used to produce hourly chart

DATE	HOU R	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
04/16	7	Economic	Local	SOLR	1	
04/16	7	Economic	System	SOLR	2	20
04/16	8	Economic	Local	SOLR	274	928
04/16	8	Economic	Local	WIND	1	
04/16	8	Economic	System	SOLR	6	
04/16	8	SelfSchCut	Local	SOLR	13	38
04/16	9	Economic	Local	SOLR	522	1153
04/16	9	Economic	Local	WIND	1	11
04/16	9	SelfSchCut	Local	SOLR	27	3
04/16	10	Economic	Local	SOLR	1407	1644
04/16	10	SelfSchCut	Local	SOLR	22	50
04/16	11	Economic	Local	SOLR	1806	2095
04/16	11	Economic	Local	WIND	7	9
04/16	11	SelfSchCut	Local	SOLR	16	38
04/16	12	Economic	Local	SOLR	1976	2249
04/16	12	Economic	Local	WIND	25	4
04/16	12	SelfSchCut	Local	SOLR	19	
04/16	13	Economic	Local	SOLR	2606	3239
04/16	13	Economic	Local	WIND	41	39
04/16	13	Economic	System	SOLR	14	95
04/16	13	SelfSchCut	Local	SOLR	18	8
04/16	14	Economic	Local	SOLR	2745	3247
04/16	14	Economic	Local	WIND	53	54
04/16	14	Economic	System	SOLR	30	63
04/16	14	SelfSchCut	Local	SOLR	36	38
04/16	15	Economic	Local	SOLR	2815	2986
04/16	15	Economic	Local	WIND	115	103
04/16	15	Economic	System	SOLR	24	59
04/16	15	SelfSchCut	Local	SOLR	23	37
04/16	16	Economic	Local	SOLR	2513	2984
04/16	16	Economic	Local	WIND	93	144



04/16	16	Economic	System	SOLR	2	
04/16	16	SelfSchCut	Local	SOLR	0	
04/16	17	Economic	Local	SOLR	2050	2764
04/16	17	Economic	Local	WIND	79	141
04/16	18	Economic	Local	SOLR	719	2051
04/16	18	Economic	Local	WIND	8	27
04/16	24	Economic	Local	WIND	1	9

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.