

Wind and Solar Curtailment March 31, 2019

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 congestion³.
2. Economic - System: Market dispatch of generators with economic bids to mitigate system-wide oversupply⁴.
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.

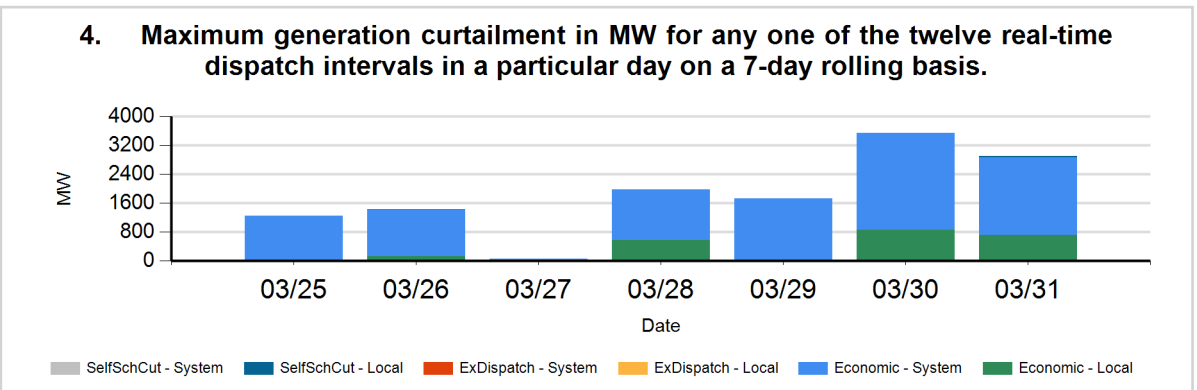
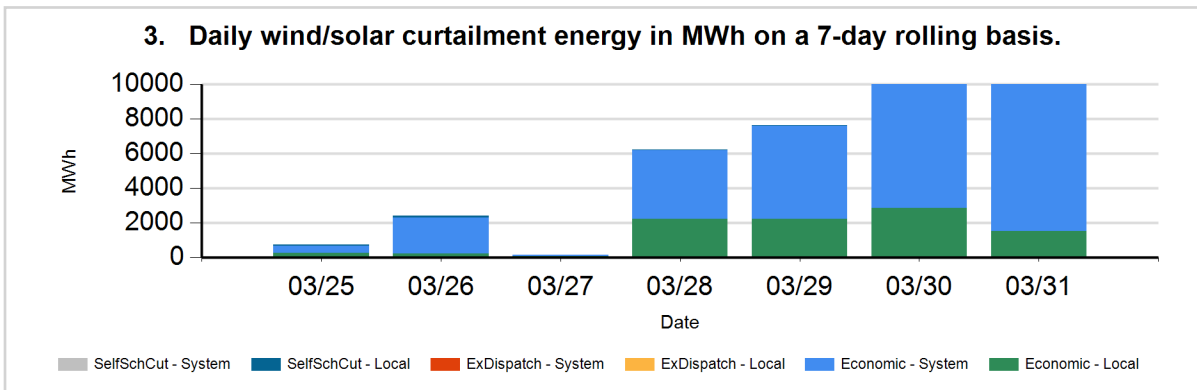
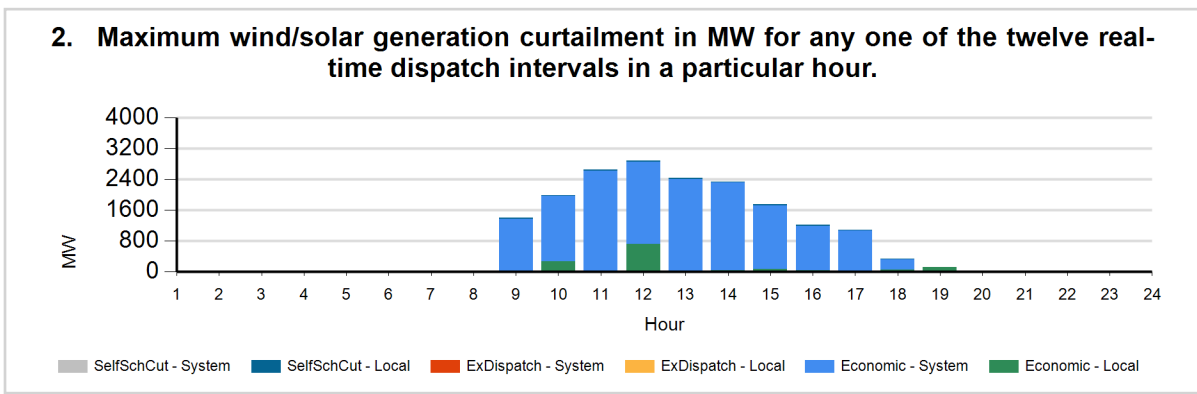
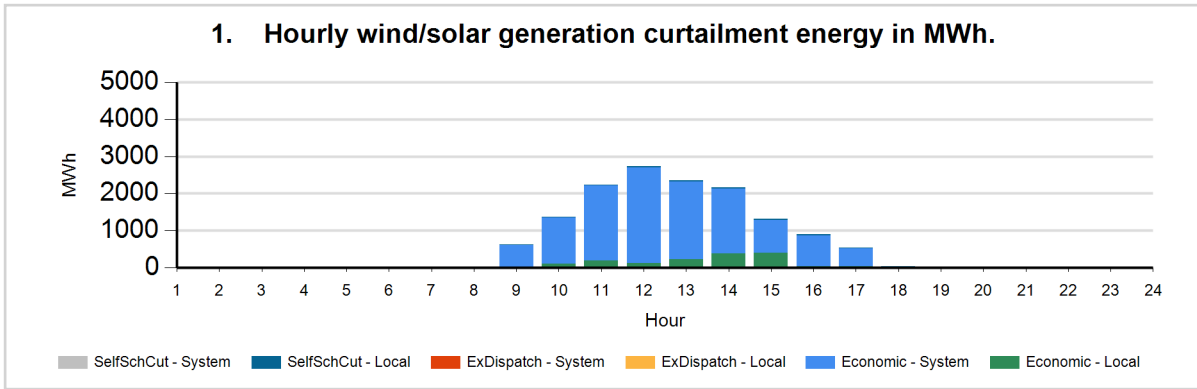
¹Only wind and solar resources can be reported in this manner because these resources have a forecast. Curtailment is defined as the difference between actual production and the forecast when actual production is less than the forecast.

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

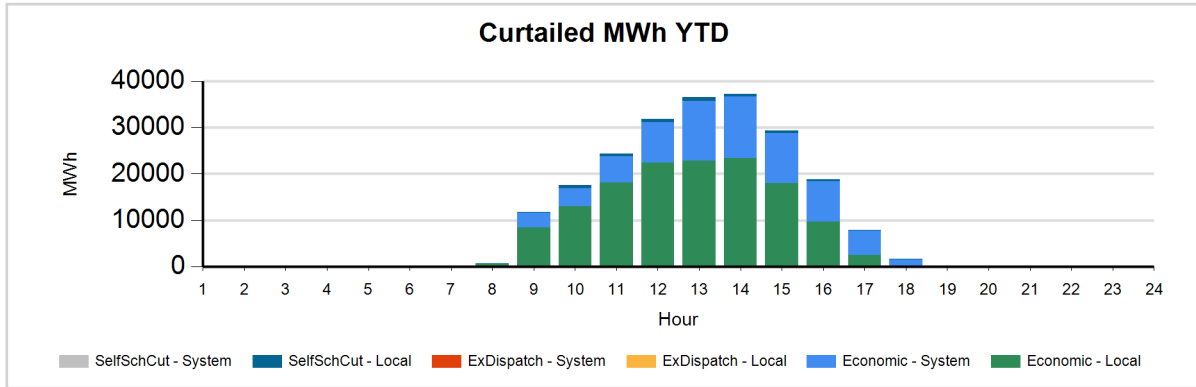
³Congestion occurs when available, least-cost energy cannot be delivered to some loads because transmission facilities do not have sufficient capacity to deliver the energy.

⁴For more information on oversupply conditions, please see: https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables_FastFacts.pdf

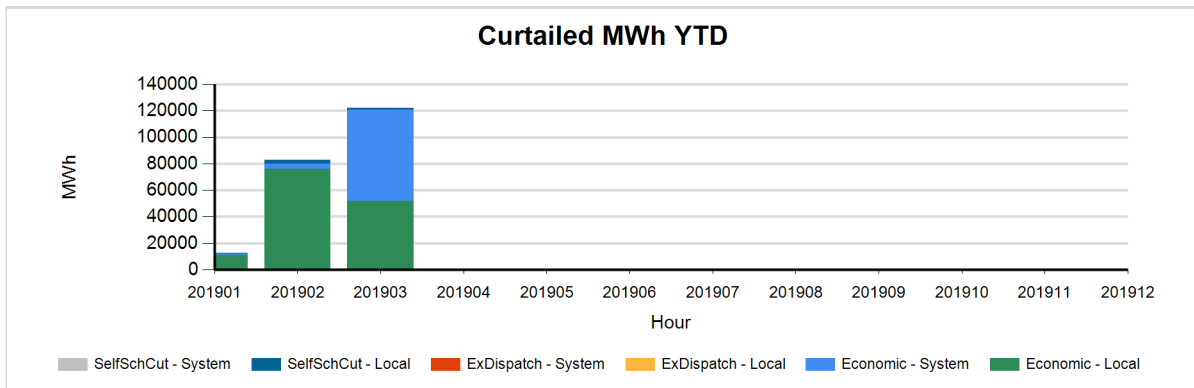
The following charts show the daily and 7-day rolling wind and solar curtailment by category, if any.



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	139,013
LocalSelfSchCut	4,594
SystemEconomic	73,993
TOTAL	217,599

Data used to produce hourly chart

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
03/31	8	Economic	System	SOLR	2	18
03/31	9	Economic	System	SOLR	618	1368
03/31	9	SelfSchCut	Local	SOLR	10	26
03/31	10	Economic	Local	SOLR	105	264
03/31	10	Economic	System	SOLR	1213	1636
03/31	10	Economic	System	WIND	23	65
03/31	10	SelfSchCut	Local	SOLR	20	23
03/31	11	Economic	System	SOLR	2000	2598
03/31	11	Economic	System	WIND	13	27
03/31	11	SelfSchCut	Local	SOLR	23	27
03/31	12	Economic	Local	SOLR	124	710
03/31	12	Economic	System	SOLR	2567	2126
03/31	12	Economic	System	WIND	11	21
03/31	12	SelfSchCut	Local	SOLR	34	34
03/31	13	Economic	Local	SOLR	215	20
03/31	13	Economic	System	SOLR	2110	2390
03/31	13	SelfSchCut	Local	SOLR	35	31
03/31	14	Economic	Local	SOLR	382	27
03/31	14	Economic	System	SOLR	1752	2284
03/31	14	SelfSchCut	Local	SOLR	28	28
03/31	15	Economic	Local	SOLR	401	64
03/31	15	Economic	System	SOLR	883	1656
03/31	15	SelfSchCut	Local	SOLR	23	27
03/31	16	Economic	Local	SOLR	34	24
03/31	16	Economic	System	SOLR	828	1146
03/31	16	Economic	System	WIND	2	22
03/31	16	SelfSchCut	Local	SOLR	26	21
03/31	17	Economic	Local	SOLR	33	13
03/31	17	Economic	System	SOLR	480	1034
03/31	17	Economic	System	WIND	2	16
03/31	17	SelfSchCut	Local	SOLR	20	18

03/31	18	Economic	Local	SOLR	7	44
03/31	18	Economic	System	SOLR	26	278
03/31	18	SelfSchCut	Local	SOLR	3	13
03/31	19	Economic	Local	SOLR	12	110
03/31	19	Economic	Local	WIND	0	5

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.