

Wind and Solar Curtailment April 28, 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.

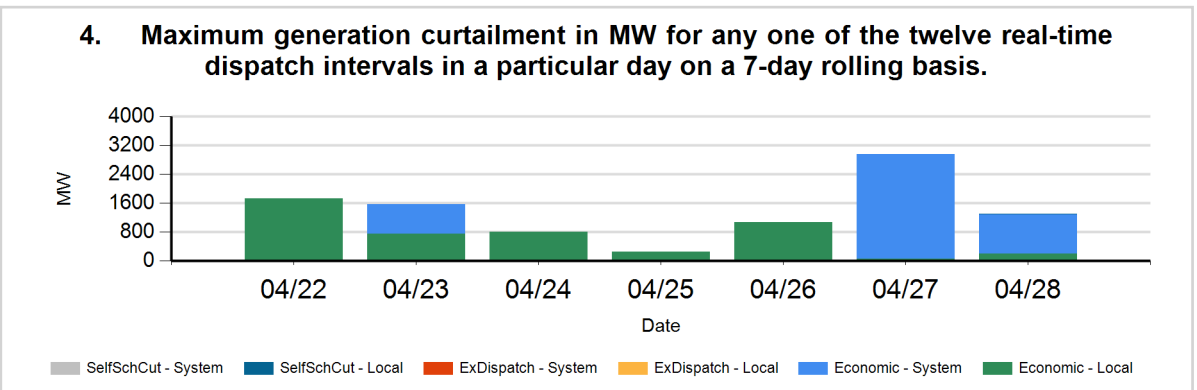
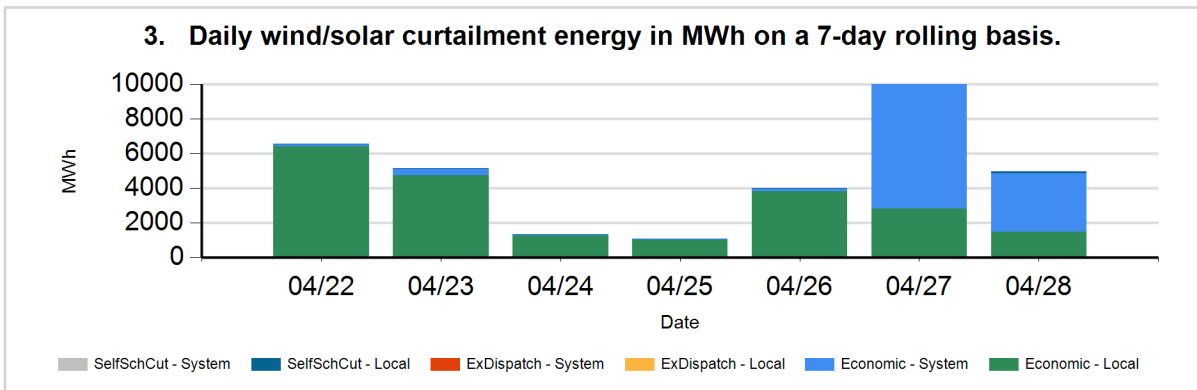
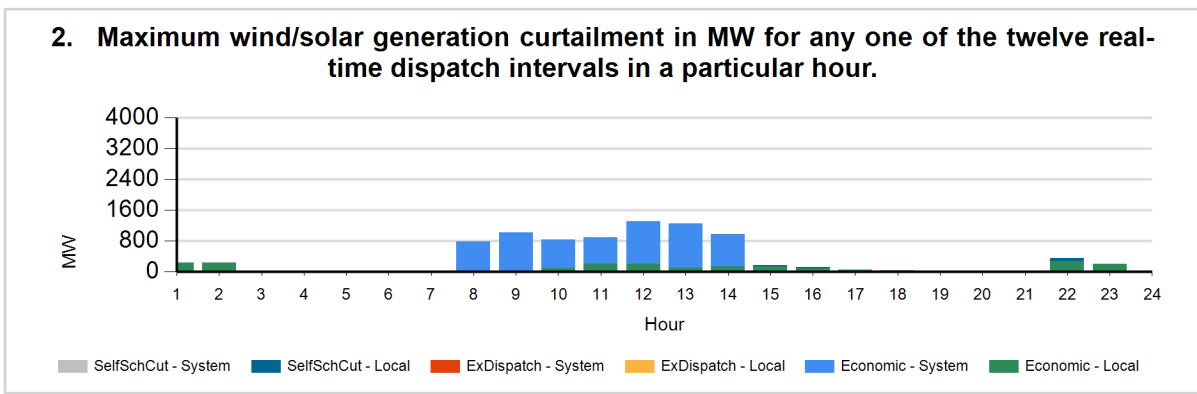
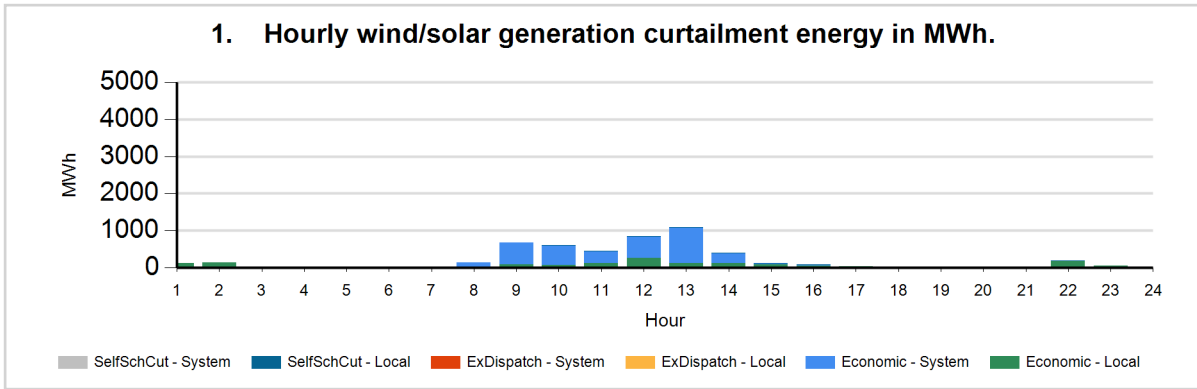
¹Only wind and solar resources can be reported in this manner because these resources have a forecast. Curtailment is defined as the difference between actual production and the forecast when actual production is less than the forecast.

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

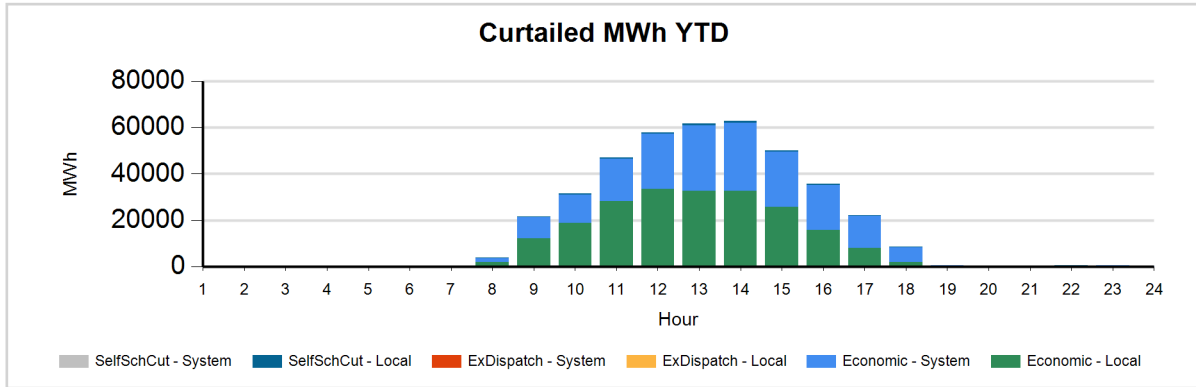
³Congestion occurs when available, least-cost energy cannot be delivered to some loads because transmission facilities do not have sufficient capacity to deliver the energy.

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

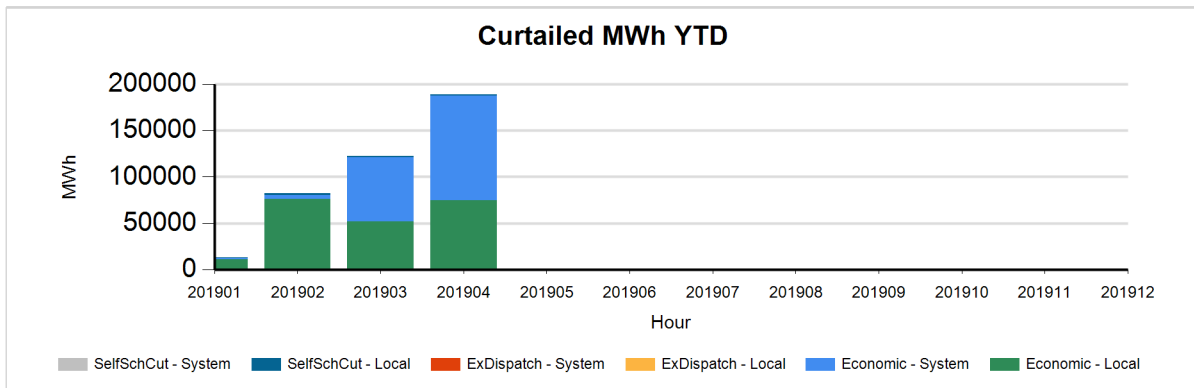
The following charts show the daily and 7-day rolling wind and solar curtailment by category, if any.



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	213,682
LocalSelfSchCut	5,421
SystemEconomic	187,205
TOTAL	406,308

Data used to produce hourly chart

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
04/28	1	Economic	Local	WIND	111	226
04/28	2	Economic	Local	WIND	142	229
04/28	8	Economic	System	SOLR	141	785
04/28	8	Economic	System	WIND	3	4
04/28	9	Economic	Local	SOLR	89	22
04/28	9	Economic	System	SOLR	562	971
04/28	9	Economic	System	WIND	28	30
04/28	10	Economic	Local	SOLR	73	76
04/28	10	Economic	System	SOLR	513	757
04/28	10	Economic	System	WIND	13	4
04/28	11	Economic	Local	SOLR	126	193
04/28	11	Economic	System	SOLR	302	672
04/28	11	Economic	System	WIND	1	2
04/28	11	SelfSchCut	Local	SOLR	12	19
04/28	12	Economic	Local	SOLR	253	194
04/28	12	Economic	System	SOLR	576	1092
04/28	12	Economic	System	WIND	3	3
04/28	12	SelfSchCut	Local	SOLR	13	14
04/28	13	Economic	Local	SOLR	114	103
04/28	13	Economic	System	SOLR	972	1136
04/28	13	Economic	System	WIND	3	3
04/28	14	Economic	Local	SOLR	122	126
04/28	14	Economic	System	SOLR	267	842
04/28	14	Economic	System	WIND	2	3
04/28	14	SelfSchCut	Local	SOLR	8	2
04/28	15	Economic	Local	SOLR	96	135
04/28	15	SelfSchCut	Local	SOLR	19	28
04/28	16	Economic	Local	SOLR	68	77
04/28	16	SelfSchCut	Local	SOLR	15	33
04/28	17	Economic	Local	SOLR	27	43
04/28	18	Economic	Local	SOLR	16	27

04/28	19	Economic	Local	SOLR	0	1
04/28	22	Economic	Local	WIND	175	257
04/28	22	SelfSchCut	Local	WIND	18	89
04/28	23	Economic	Local	WIND	52	204
04/28	24	Economic	Local	WIND	2	14

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.