

Wind and Solar Curtailment December 14, 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.

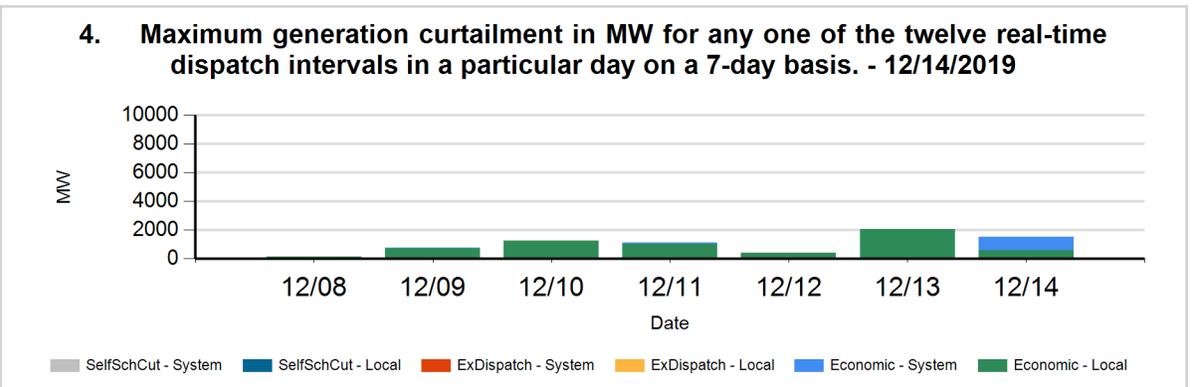
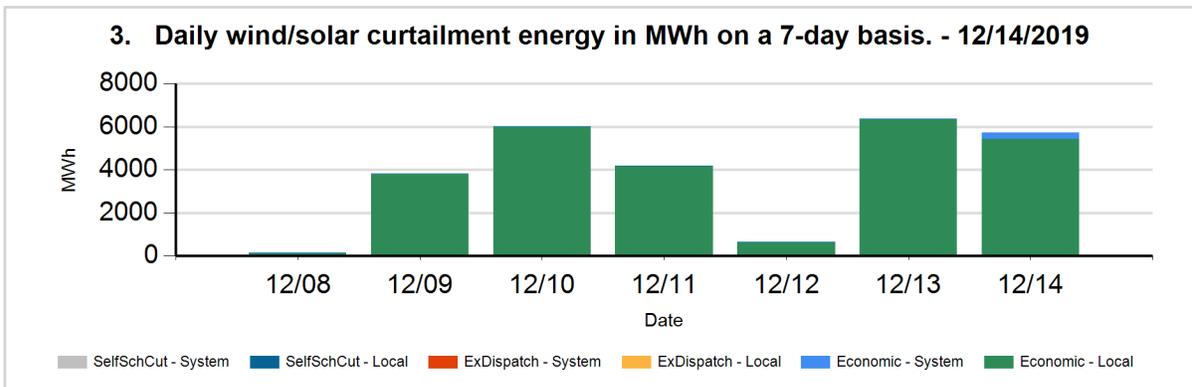
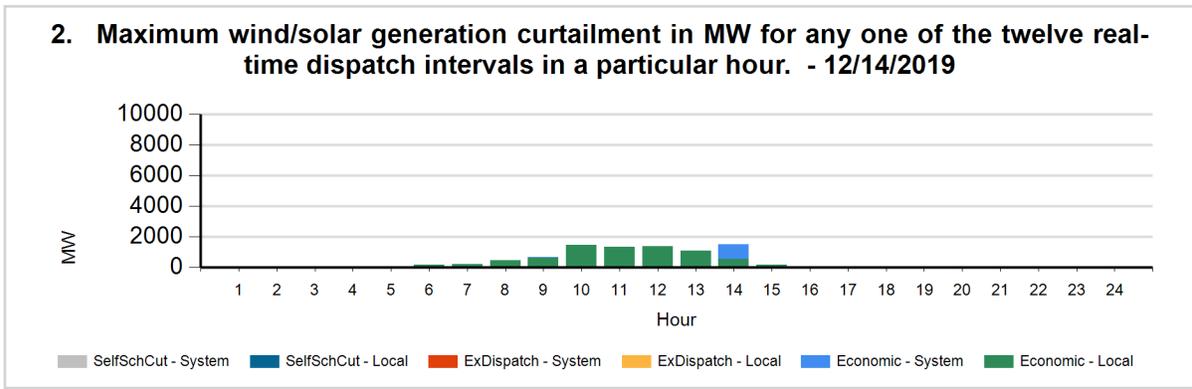
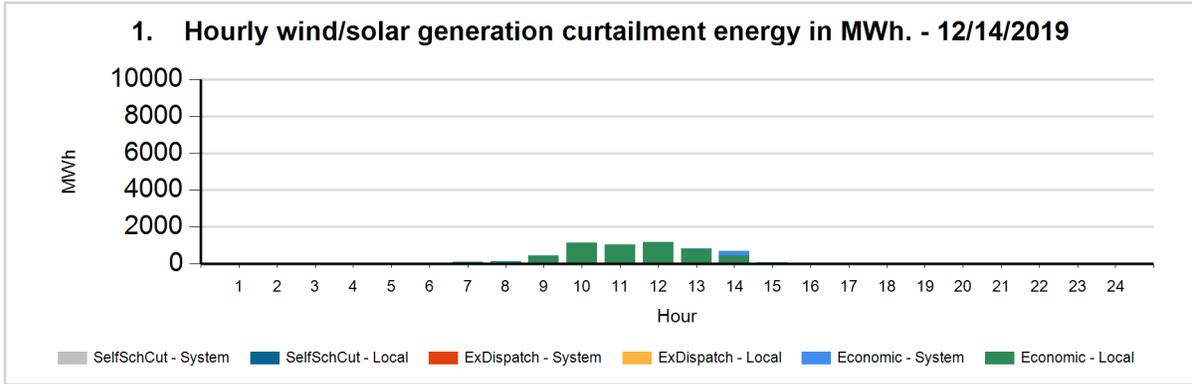
¹Only wind and solar resources can be reported in this manner because these resources have a forecast. Curtailment is defined as the difference between actual production and the forecast when actual production is less than the forecast.

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

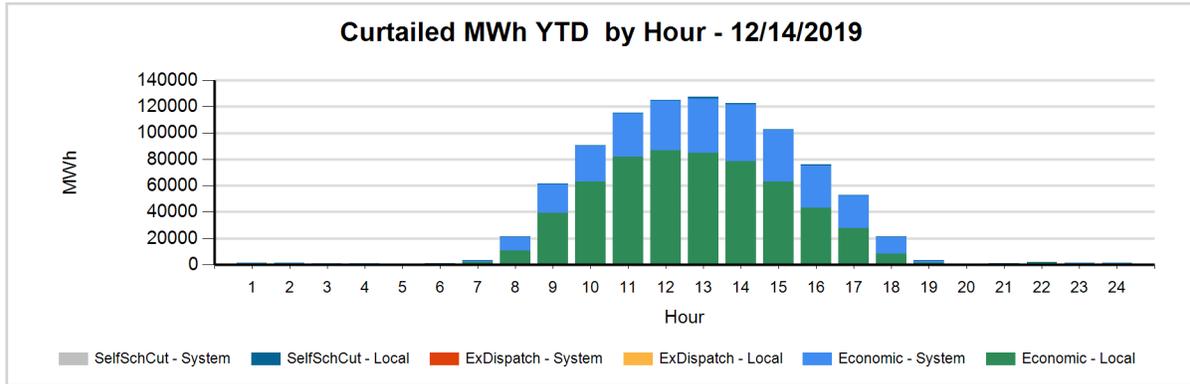
³Congestion occurs when available, least-cost energy cannot be delivered to some loads because transmission facilities do not have sufficient capacity to deliver the energy.

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

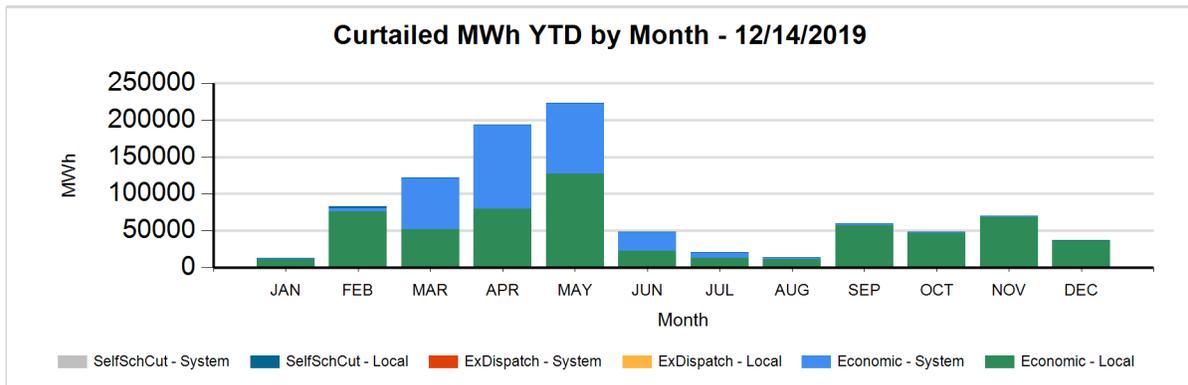
The following charts show the daily and 7-day wind and solar curtailment by category, if any.



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 - 12/14/2019
LocalEconomic	600,450
LocalSelfSchCut	6,379
SystemEconomic	326,640
TOTAL	933,470

Data used to produce hourly chart

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
12/14	4	Economic	Local	WIND	3	33
12/14	6	Economic	Local	WIND	43	181
12/14	7	Economic	Local	SOLR	5	11
12/14	7	Economic	Local	WIND	102	206
12/14	8	Economic	Local	SOLR	92	300
12/14	8	Economic	Local	WIND	53	134
12/14	9	Economic	Local	SOLR	307	509
12/14	9	Economic	Local	WIND	113	138
12/14	9	Economic	System	SOLR	12	24
12/14	10	Economic	Local	SOLR	994	1271
12/14	10	Economic	Local	WIND	154	172
12/14	11	Economic	Local	SOLR	880	1163
12/14	11	Economic	Local	WIND	159	162
12/14	12	Economic	Local	SOLR	999	1198
12/14	12	Economic	Local	WIND	179	174
12/14	13	Economic	Local	SOLR	721	934
12/14	13	Economic	Local	WIND	104	167
12/14	14	Economic	Local	SOLR	414	509
12/14	14	Economic	Local	WIND	34	38
12/14	14	Economic	System	SOLR	233	910
12/14	14	Economic	System	WIND	16	39
12/14	15	Economic	Local	SOLR	51	130
12/14	15	Economic	Local	WIND	26	34
12/14	18	Economic	Local	WIND	1	7

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.



California ISO