Wind and Solar Curtailment May 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 why[1]. This report should be read in the context of the Renewables Watch report for a more complete understanding of both renewable curtailment and generation[2].

Wind and solar curtailments are grouped into the following categories:

1. Economic - Local: Market dispatch of generators with economic bids to mitigate local congestion[3].
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.

[1]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.

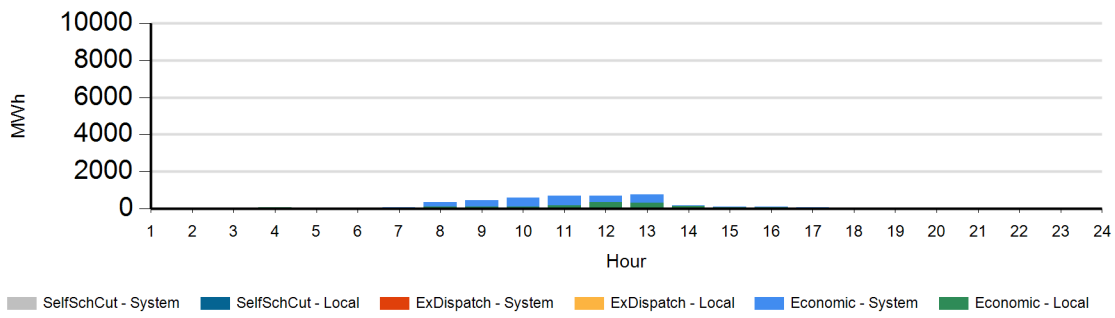
[2]The Renewables Watch report provides daily actual renewable production within the ISO grid. It is available at: http://www.caiso.com/green/renewableswatch.html.

[3]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.

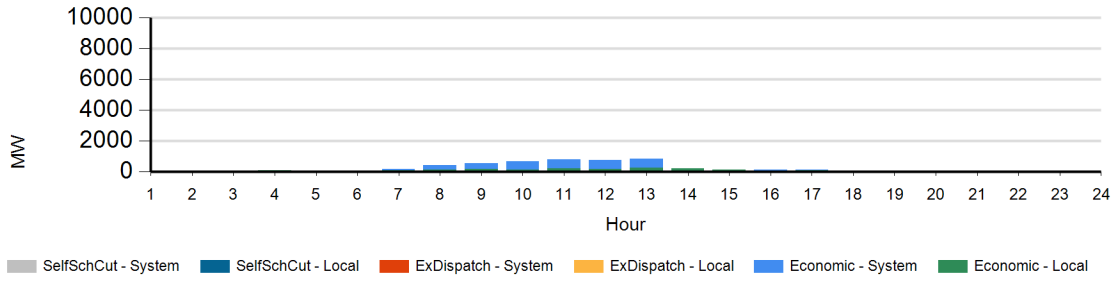
For more information on oversupply conditions, please see:
https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables_FastFacts.pdf

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

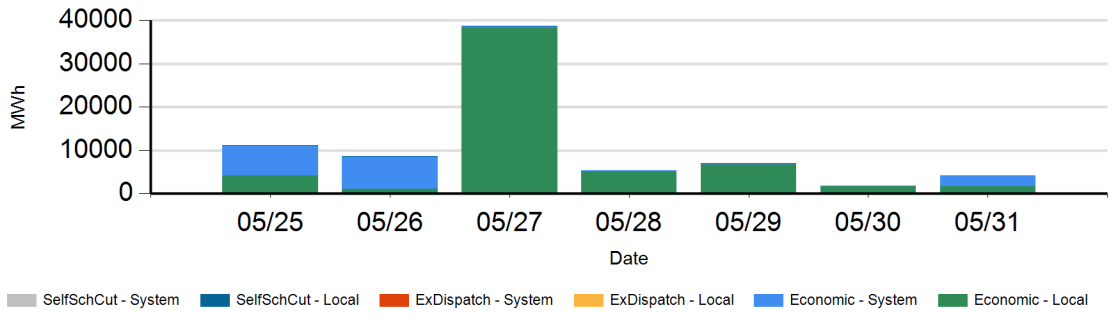
1. Hourly wind/solar generation curtailment energy in MWh.



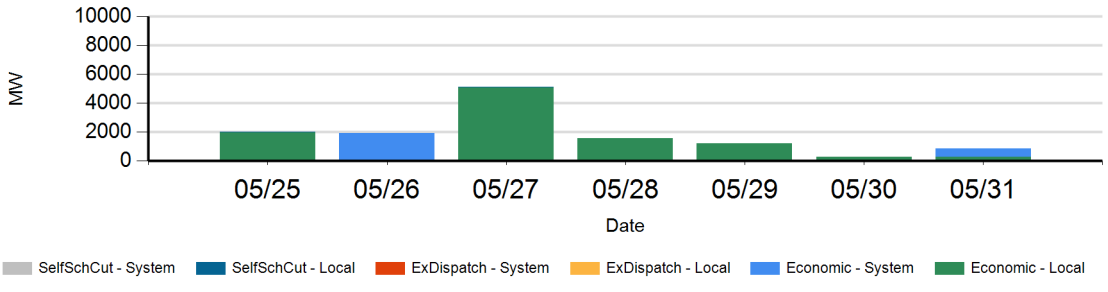
2. Maximum wind/solar generation curtailment in MW for any one of the twelve real-time dispatch intervals in a particular hour.



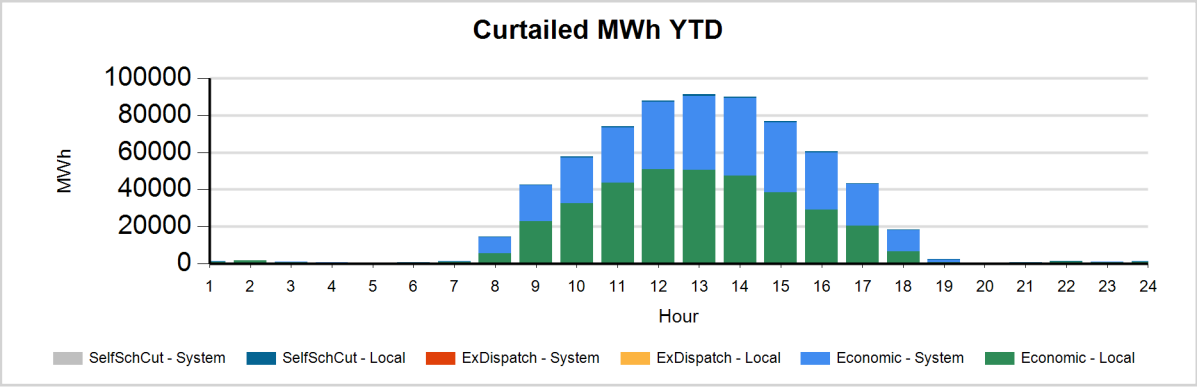
3. Daily wind/solar curtailment energy in MWh on a 7-day rolling basis.



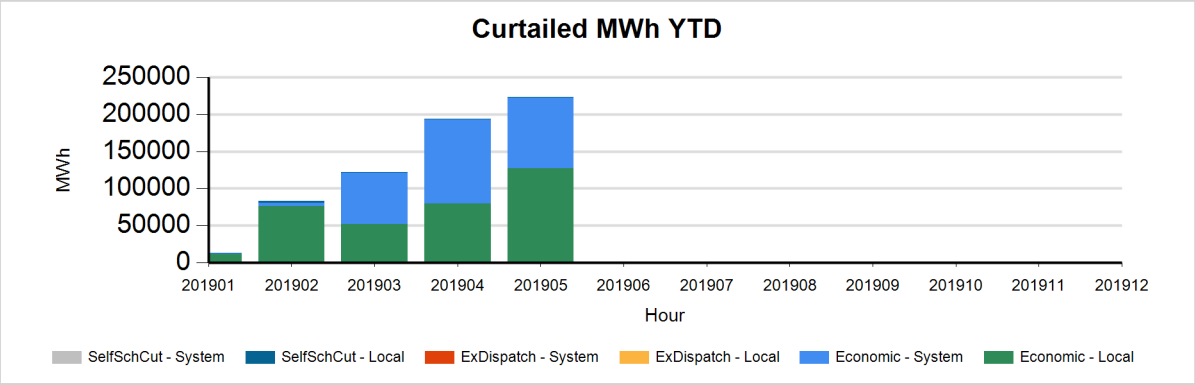
4. Maximum generation curtailment in MW for any one of the twelve real-time dispatch intervals in a particular day on a 7-day rolling basis.



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	345,318
LocalSelfSchCut	5,701
SystemEconomic	283,744
TOTAL	634,763

California ISO

Data used to produce hourly chart

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
05/31	3	Economic	Local	WIND	4	15
05/31	4	Economic	Local	WIND	63	83
05/31	5	Economic	Local	WIND	0	6
05/31	6	Economic	Local	WIND	2	15
05/31	7	Economic	Local	SOLR	35	92
05/31	7	Economic	System	SOLR	30	86
05/31	8	Economic	Local	SOLR	93	121
05/31	8	Economic	System	SOLR	252	287
05/31	9	Economic	Local	SOLR	105	162
05/31	9	Economic	System	SOLR	340	390
05/31	10	Economic	Local	SOLR	105	137
05/31	10	Economic	System	SOLR	481	518
05/31	11	Economic	Local	SOLR	161	212
05/31	11	Economic	System	SOLR	541	570
05/31	12	Economic	Local	SOLR	354	145
05/31	12	Economic	System	SOLR	351	606
05/31	13	Economic	Local	SOLR	297	260
05/31	13	Economic	System	SOLR	446	587
05/31	14	Economic	Local	SOLR	167	217
05/31	15	Economic	Local	SOLR	79	109
05/31	16	Economic	Local	SOLR	56	52
05/31	16	Economic	System	SOLR	31	48
05/31	17	Economic	Local	SOLR	62	124
05/31	17	Economic	System	SOLR	10	1
05/31	18	Economic	Local	SOLR	11	43
05/31	19	Economic	System	SOLR	4	14