Wind and Solar Curtailment March 30, 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.

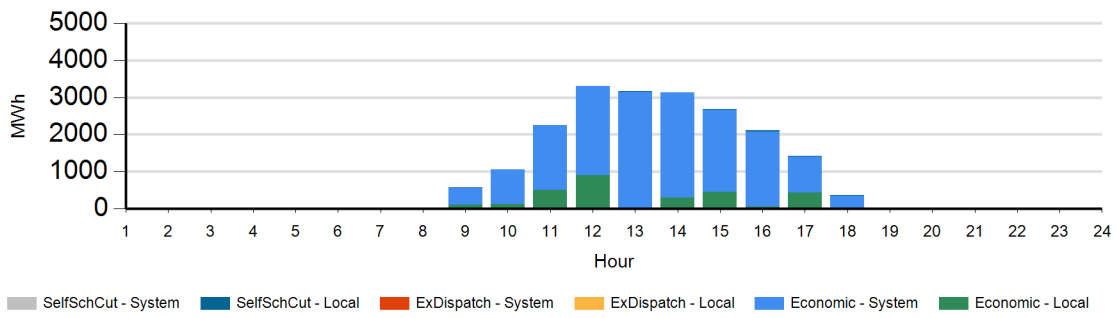
[2]The Renewables Watch report provides daily actual renewable production within the ISO grid. It is available at: http://www.caiso.com/green/renewableswatch.html.

[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.

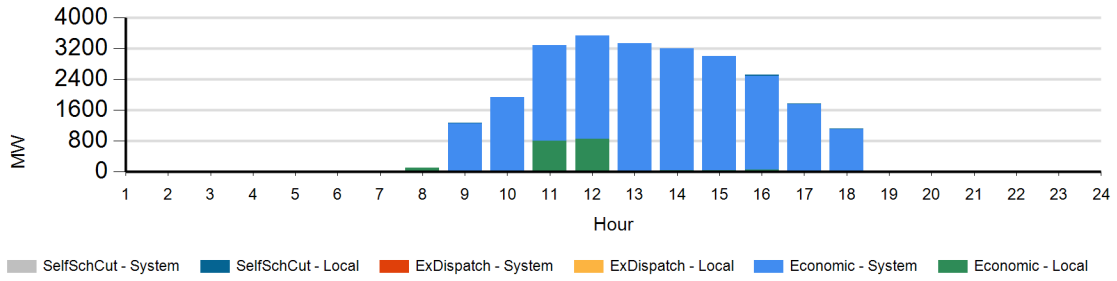
For more information on oversupply conditions, please see: https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables_FastFacts.pdf

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

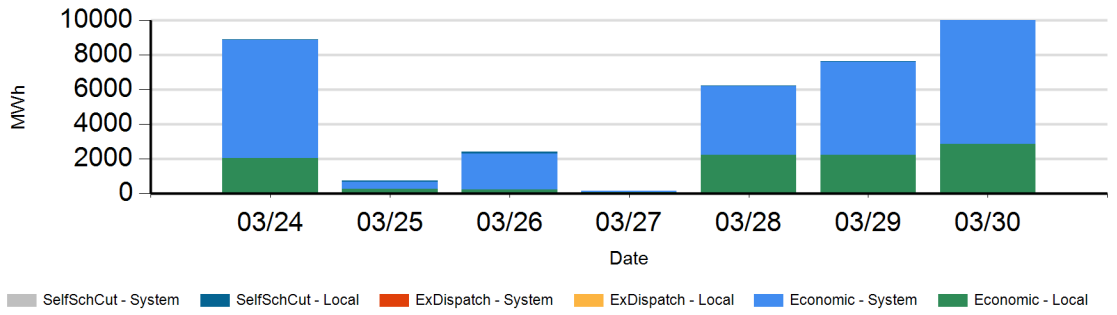
1. Hourly wind/solar generation curtailment energy in MWh.



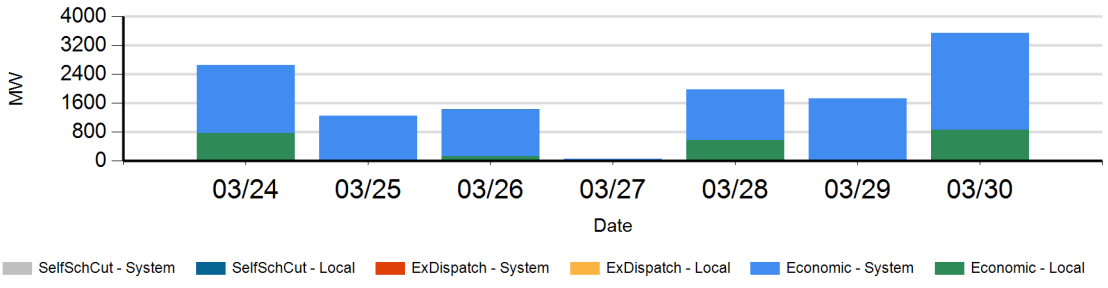
2. Maximum wind/solar generation curtailment in MW for any one of the twelve real-time dispatch intervals in a particular hour.



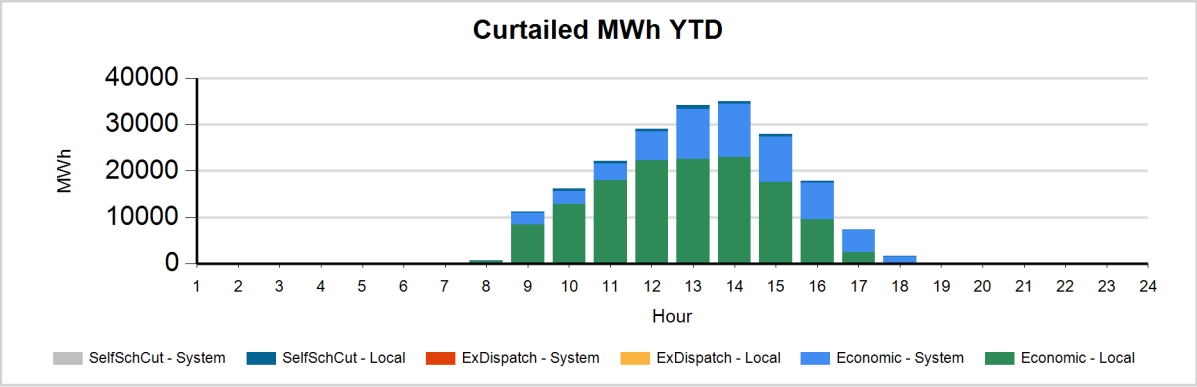
3. Daily wind/solar curtailment energy in MWh on a 7-day rolling basis.



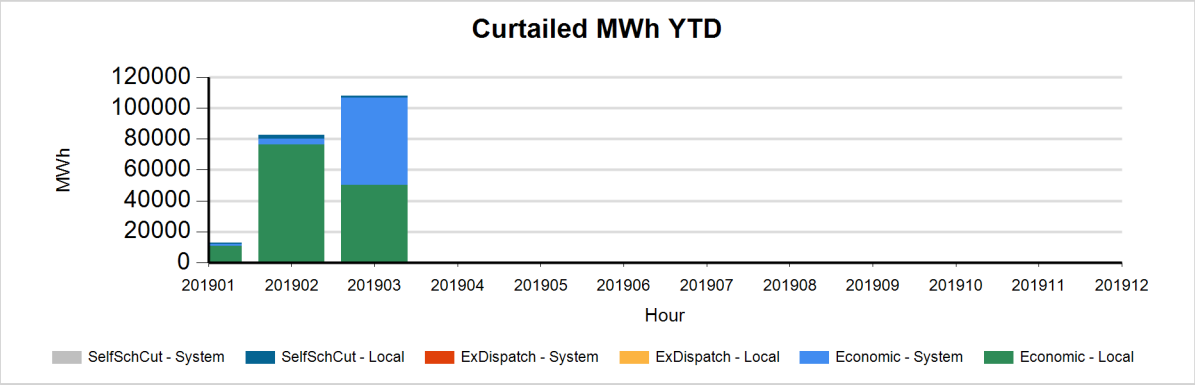
4. Maximum generation curtailment in MW for any one of the twelve real-time dispatch intervals in a particular day on a 7-day rolling basis.



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	137,502
LocalSelfSchCut	4,372
SystemEconomic	61,463
TOTAL	203,337

California ISO

Data used to produce hourly chart

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
03/30	8	Economic	Local	SOLR	21	101
03/30	9	Economic	Local	SOLR	105	11
03/30	9	Economic	System	SOLR	453	1249
03/30	9	Economic	System	WIND	2	3
03/30	9	SelfSchCut	Local	SOLR	4	11
03/30	10	Economic	Local	SOLR	123	11
03/30	10	Economic	System	SOLR	923	1914
03/30	10	Economic	System	WIND	3	6
03/30	11	Economic	Local	SOLR	497	794
03/30	11	Economic	System	SOLR	1712	2402
03/30	11	Economic	System	WIND	37	88
03/30	12	Economic	Local	SOLR	889	848
03/30	12	Economic	System	SOLR	2345	2613
03/30	12	Economic	System	WIND	65	73
03/30	13	Economic	Local	SOLR	19	22
03/30	13	Economic	System	SOLR	3087	3249
03/30	13	Economic	System	WIND	55	64
03/30	14	Economic	Local	SOLR	282	32
03/30	14	Economic	System	SOLR	2799	3116
03/30	14	Economic	System	WIND	47	55
03/30	15	Economic	Local	SOLR	444	33
03/30	15	Economic	System	SOLR	2192	2931
03/30	15	Economic	System	WIND	21	44
03/30	16	Economic	Local	SOLR	49	42
03/30	16	Economic	System	SOLR	2022	2440
03/30	16	Economic	System	WIND	8	7
03/30	16	SelfSchCut	Local	SOLR	33	36
03/30	17	Economic	Local	SOLR	419	22
03/30	17	Economic	System	SOLR	957	1701
03/30	17	Economic	System	WIND	12	24
03/30	17	SelfSchCut	Local	SOLR	24	25

03/30	18	Economic	System	SOLR	353	1102
03/30	18	Economic	System	WIND	4	8
03/30	18	SelfSchCut	Local	SOLR	3	12