Wind and Solar Curtailment April 08, 2018

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.

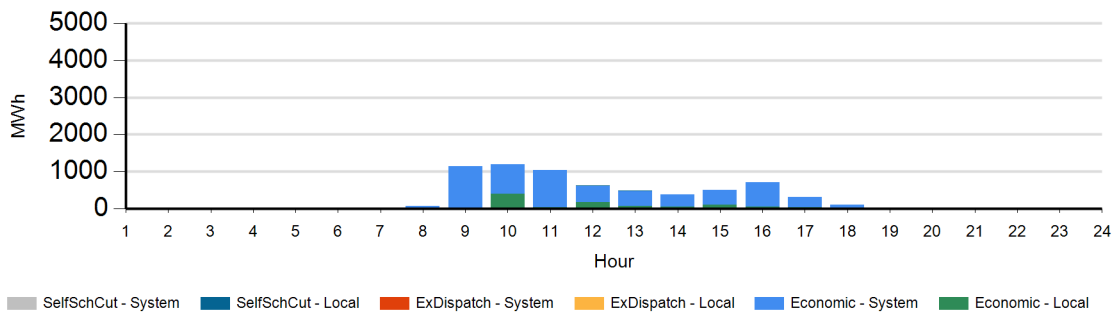
[2]The Renewables Watch report provides daily actual renewable production within the ISO grid. It is available at: http://www.caiso.com/green/renewableswatch.html.

[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.

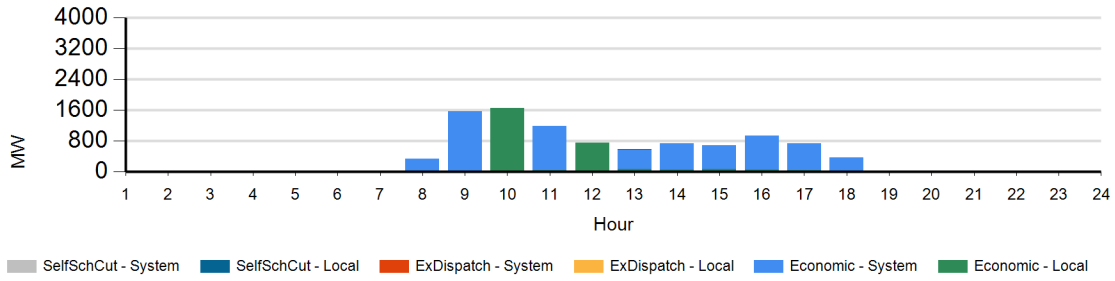
For more information on oversupply conditions, please see:
https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables_FastFacts.pdf

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

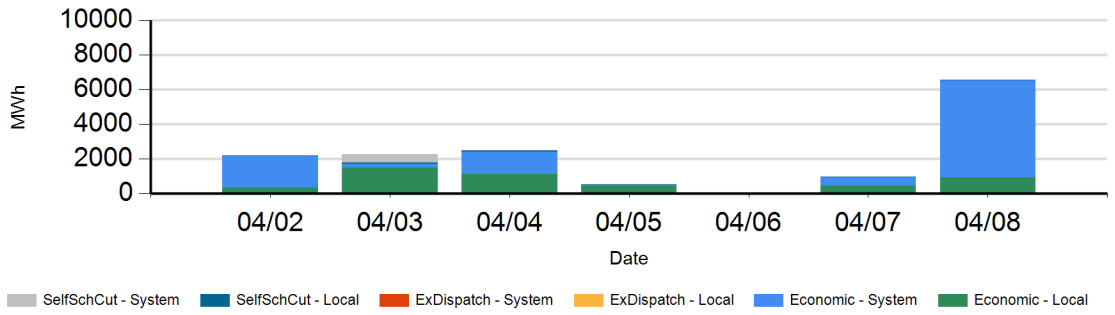
1. Hourly wind/solar generation curtailment energy in MWh.



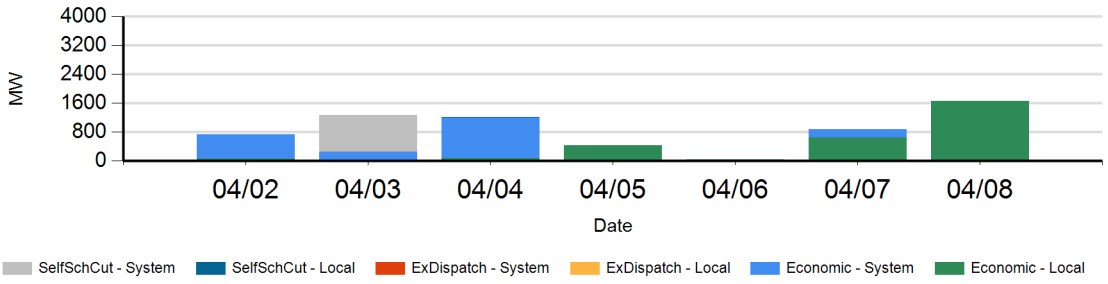
2. Maximum wind/solar generation curtailment in MW for any one of the twelve real-time dispatch intervals in a particular hour.



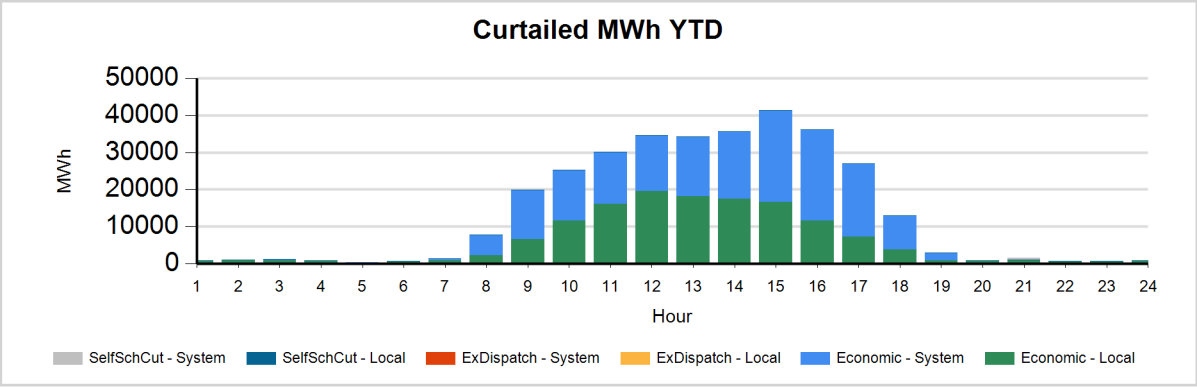
3. Daily wind/solar curtailment energy in MWh on a 7-day rolling basis.



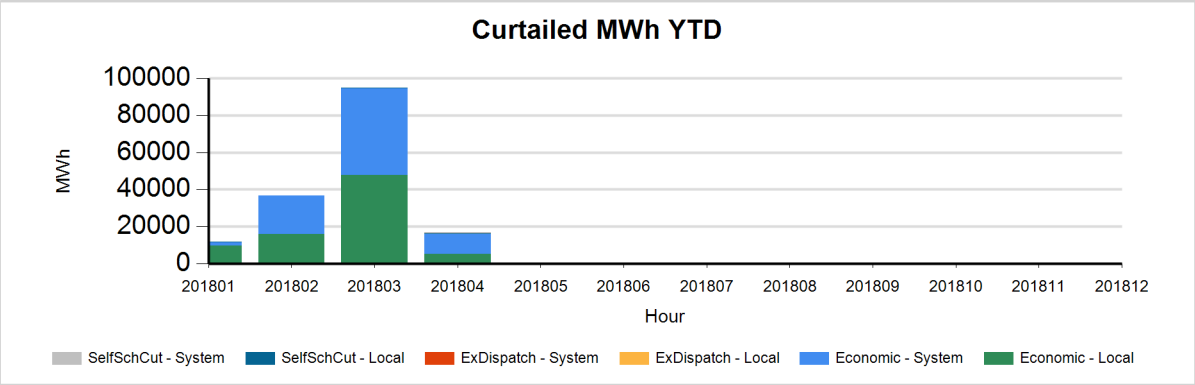
4. Maximum generation curtailment in MW for any one of the twelve real-time dispatch intervals in a particular day on a 7-day rolling basis.



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	140,589
LocalSelfSchCut	1,370
SystemEconomic	175,893
SystemSelfSchCut	493
TOTAL	160,319

California ISO

Data used to produce hourly chart

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
04/08	8	Economic	System	SOLR	60	289
04/08	8	Economic	System	WIND	6	45
04/08	9	Economic	Local	SOLR	0	1
04/08	9	Economic	System	SOLR	1041	1397
04/08	9	Economic	System	WIND	103	173
04/08	10	Economic	Local	SOLR	371	1559
04/08	10	Economic	Local	WIND	21	97
04/08	11	Economic	Local	SOLR	36	30
04/08	11	Economic	System	SOLR	992	1085
04/08	11	Economic	System	WIND	11	61
04/08	12	Economic	Local	SOLR	171	750
04/08	12	Economic	Local	WIND	1	4
04/08	13	Economic	Local	SOLR	72	72
04/08	13	Economic	System	SOLR	408	492
04/08	13	Economic	System	WIND	3	13
04/08	13	SelfSchCut	Local	SOLR	1	7
04/08	14	Economic	Local	SOLR	57	55
04/08	14	Economic	System	SOLR	319	679
04/08	14	Economic	System	WIND	1	2
04/08	15	Economic	Local	SOLR	103	64
04/08	15	Economic	System	SOLR	398	611
04/08	15	Economic	System	WIND	3	2
04/08	16	Economic	Local	SOLR	51	54
04/08	16	Economic	System	SOLR	642	867
04/08	16	Economic	System	WIND	16	8
04/08	17	Economic	Local	SOLR	24	28
04/08	17	Economic	System	SOLR	283	699
04/08	17	Economic	System	WIND	4	8
04/08	18	Economic	Local	SOLR	7	7
04/08	18	Economic	System	SOLR	92	366

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 Hong Zhou at hzhou@caiso.com.