Wind and Solar Curtailment February 28, 2017

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[4].
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.

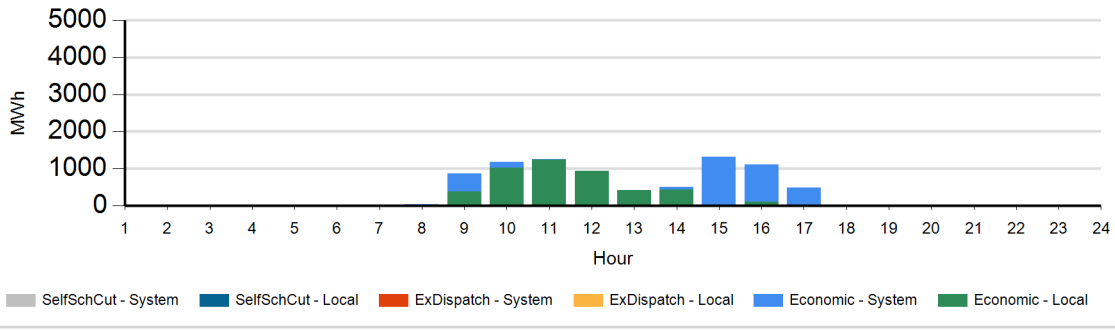
[2]The Renewables Watch report provides daily actual renewable production within the ISO grid. It is available at: http://www.caiso.com/green/renewableswatch.html.

[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.

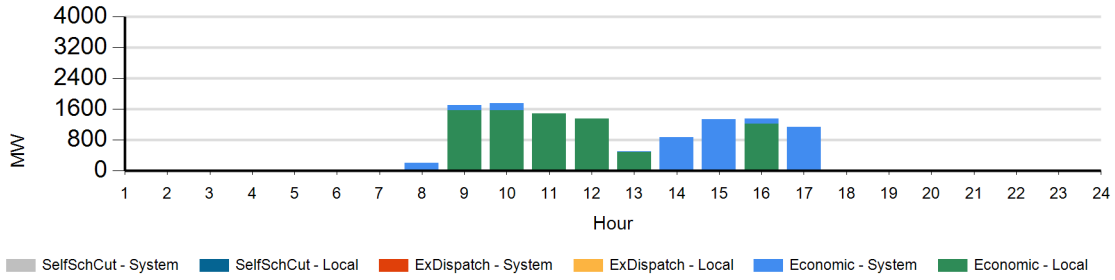
[4]For more information on oversupply conditions, please see: https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables_FastFacts.pdf

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

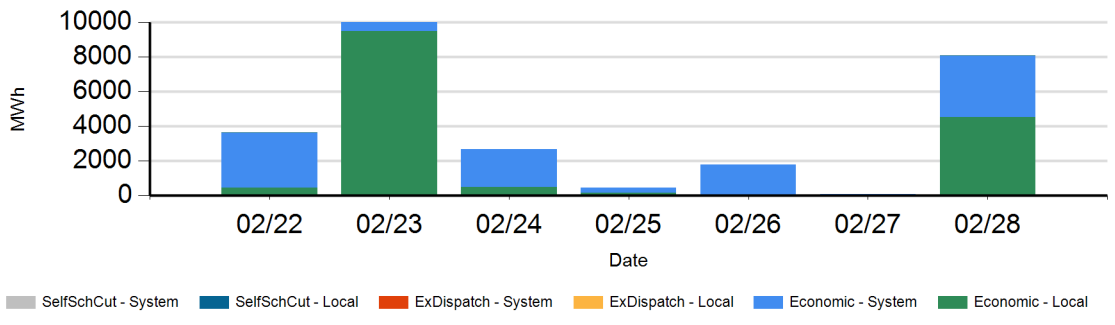
1. Hourly wind/solar generation curtailment energy in MWh.



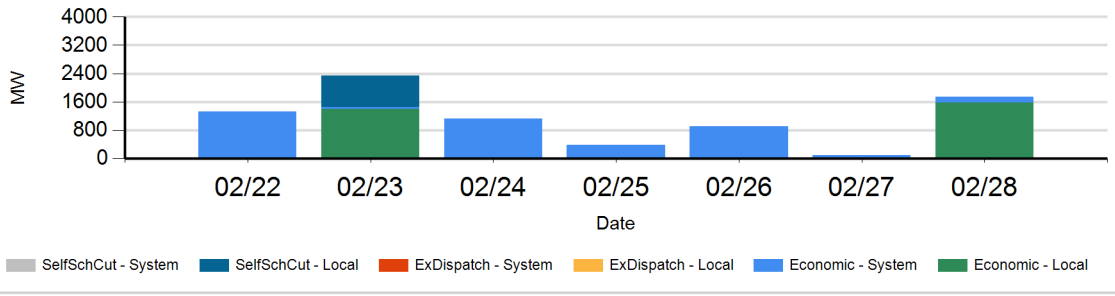
2. Maximum wind/solar generation curtailment in MW for any one of the twelve real-time dispatch intervals in a particular hour.



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.



Data used to produce hourly charts

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
02/28	8	Economic	Local	SOLR	5	
02/28	8	Economic	System	SOLR	14	123
02/28	8	Economic	System	WIND	12	77
02/28	9	Economic	Local	SOLR	288	1227
02/28	9	Economic	Local	WIND	90	341
02/28	9	Economic	System	SOLR	428	129
02/28	9	Economic	System	WIND	54	9
02/28	10	Economic	Local	SOLR	856	1193
02/28	10	Economic	Local	WIND	164	381
02/28	10	Economic	System	SOLR	156	160
02/28	10	Economic	System	WIND	7	9
02/28	11	Economic	Local	SOLR	1079	1127
02/28	11	Economic	Local	WIND	154	357
02/28	11	Economic	System	SOLR	0	
02/28	11	SelfSchCut	Local	SOLR	5	
02/28	12	Economic	Local	SOLR	848	1113
02/28	12	Economic	Local	WIND	77	241
02/28	13	Economic	Local	SOLR	393	461
02/28	13	Economic	Local	WIND	28	33
02/28	13	Economic	System	SOLR	0	2
02/28	14	Economic	Local	SOLR	404	
02/28	14	Economic	Local	WIND	21	
02/28	14	Economic	System	SOLR	72	849
02/28	14	Economic	System	WIND	2	24
02/28	15	Economic	System	SOLR	1232	1261
02/28	15	Economic	System	WIND	77	80
02/28	16	Economic	Local	SOLR	90	1078
02/28	16	Economic	Local	WIND	12	146
02/28	16	Economic	System	SOLR	964	127
02/28	16	Economic	System	WIND	47	2
02/28	17	Economic	System	SOLR	433	1006
02/28	17	Economic	System	WIND	55	133
02/28	18	Economic	System	SOLR	1	2

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.