

Wind and Solar Curtailment March 23, 2017

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.

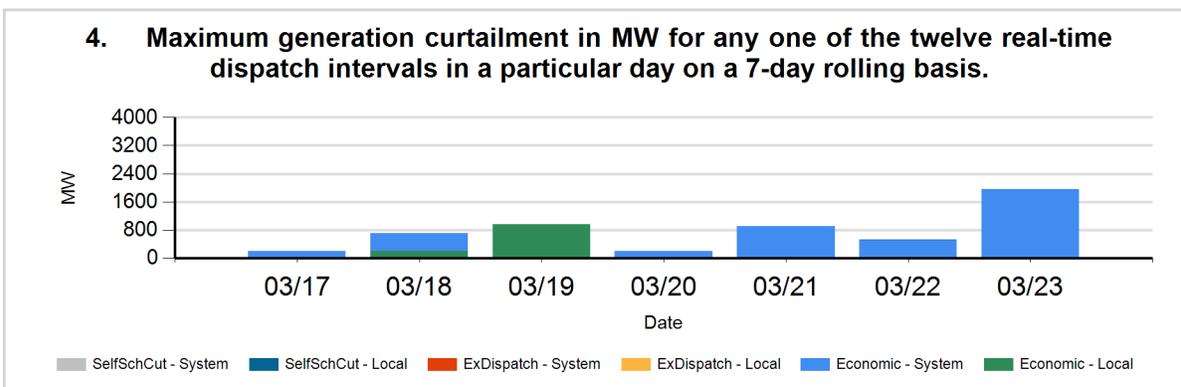
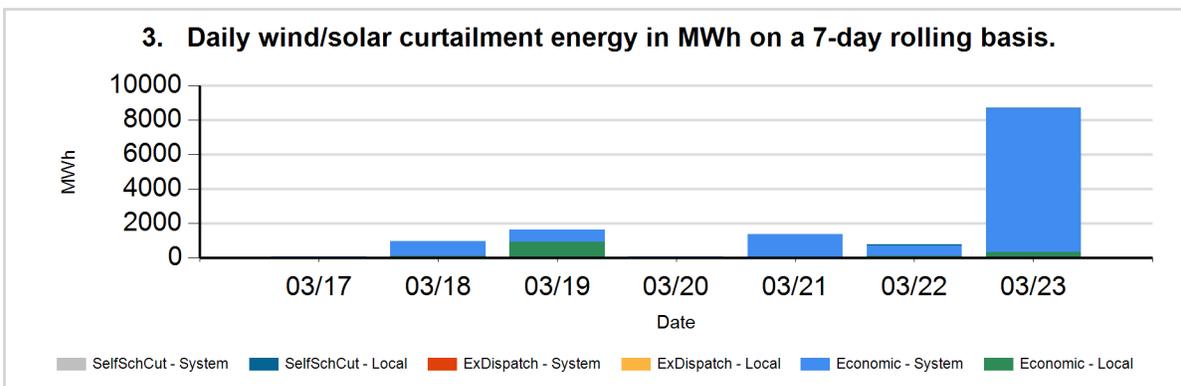
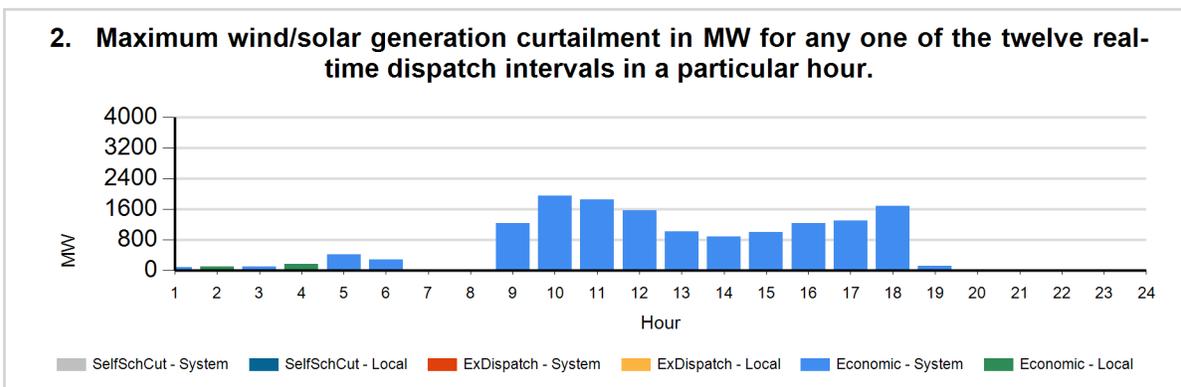
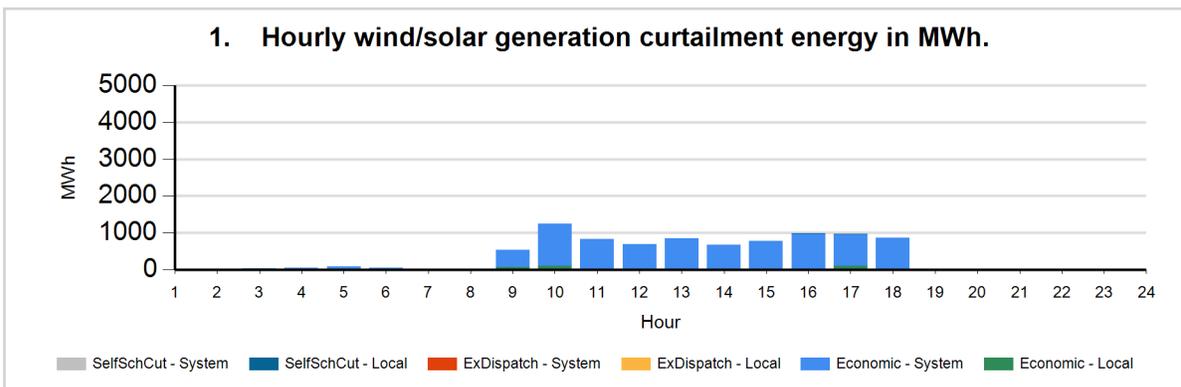
¹Only wind and solar resources can be reported in this manner because these resources have a forecast. Curtailment is defined as the difference between actual production and the forecast when actual production is less than the forecast.

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 rolling wind and solar curtailment by category, if any.



Data used to produce hourly charts

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
03/23	1	Economic	System	WIND	6	77
03/23	2	Economic	Local	WIND	8	100
03/23	3	Economic	System	WIND	36	94
03/23	4	Economic	Local	WIND	23	165
03/23	4	Economic	System	WIND	31	
03/23	5	Economic	System	WIND	92	419
03/23	6	Economic	System	WIND	55	282
03/23	8	Economic	Local	SOLR	0	2
03/23	8	Economic	System	SOLR	0	
03/23	9	Economic	Local	SOLR	67	
03/23	9	Economic	Local	WIND	6	
03/23	9	Economic	System	SOLR	415	1162
03/23	9	Economic	System	WIND	47	71
03/23	10	Economic	Local	SOLR	99	
03/23	10	Economic	Local	WIND	6	
03/23	10	Economic	System	SOLR	930	1388
03/23	10	Economic	System	WIND	205	568
03/23	11	Economic	System	SOLR	761	1761
03/23	11	Economic	System	WIND	77	95
03/23	12	Economic	System	SOLR	608	1480
03/23	12	Economic	System	WIND	79	81
03/23	13	Economic	System	SOLR	769	952
03/23	13	Economic	System	WIND	72	71
03/23	14	Economic	Local	SOLR	0	
03/23	14	Economic	System	SOLR	601	825
03/23	14	Economic	System	WIND	75	63
03/23	15	Economic	Local	SOLR	0	
03/23	15	Economic	System	SOLR	702	933
03/23	15	Economic	System	WIND	73	70

03/23	16	Economic	Local	SOLR	6	18
03/23	16	Economic	System	SOLR	920	1163
03/23	16	Economic	System	WIND	63	60
03/23	16	SelfSchCut	Local	SOLR	2	
03/23	17	Economic	Local	SOLR	98	2
03/23	17	Economic	Local	WIND	6	
03/23	17	Economic	System	SOLR	802	1219
03/23	17	Economic	System	WIND	61	71
03/23	17	SelfSchCut	Local	SOLR	1	
03/23	18	Economic	Local	SOLR	0	
03/23	18	Economic	System	SOLR	630	1170
03/23	18	Economic	System	WIND	234	508
03/23	18	SelfSchCut	System	SOLR	0	
03/23	19	Economic	Local	SOLR	0	
03/23	19	Economic	System	SOLR	3	14
03/23	19	Economic	System	WIND	20	95

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.