

## Wind and Solar Curtailment November 27, 2016

This report is produced daily to provide a detailed accounting of the wind and solar renewable generation that was curtailed and the reasons why<sup>1</sup>. This report should be read in the context of the Renewables Watch report for a more complete understanding of both renewable curtailment and generation<sup>2</sup>.

Wind and solar curtailments are grouped into the following categories:

1. Economic - Local: Market dispatch of generators with economic bids to mitigate local congestion<sup>3</sup>.
2. Economic - System: Market dispatch of generators with economic bids to mitigate system-wide oversupply<sup>4</sup>.
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.

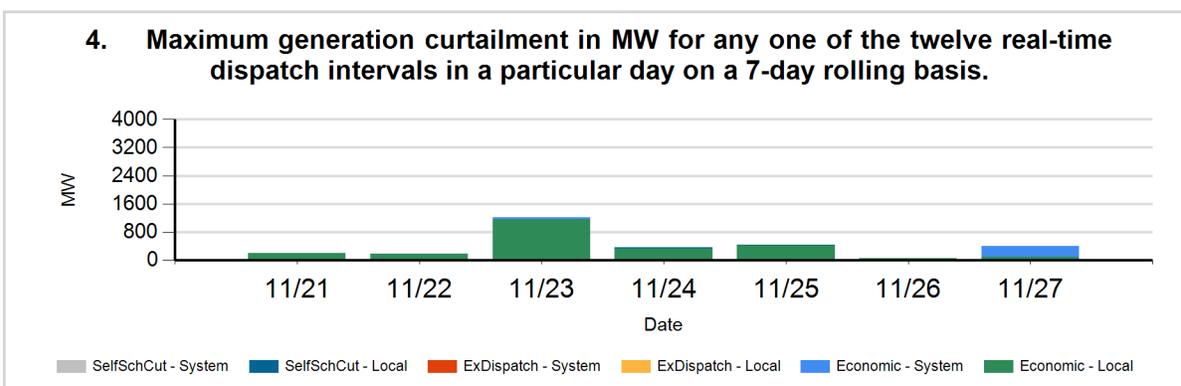
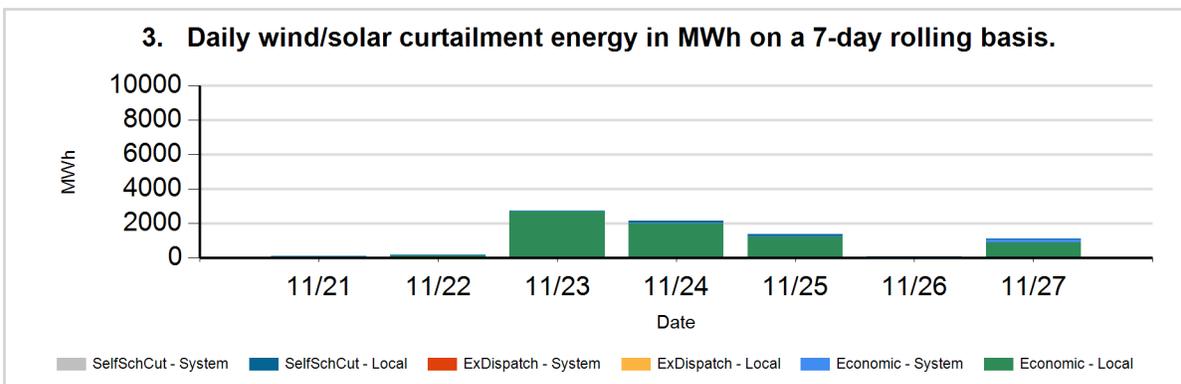
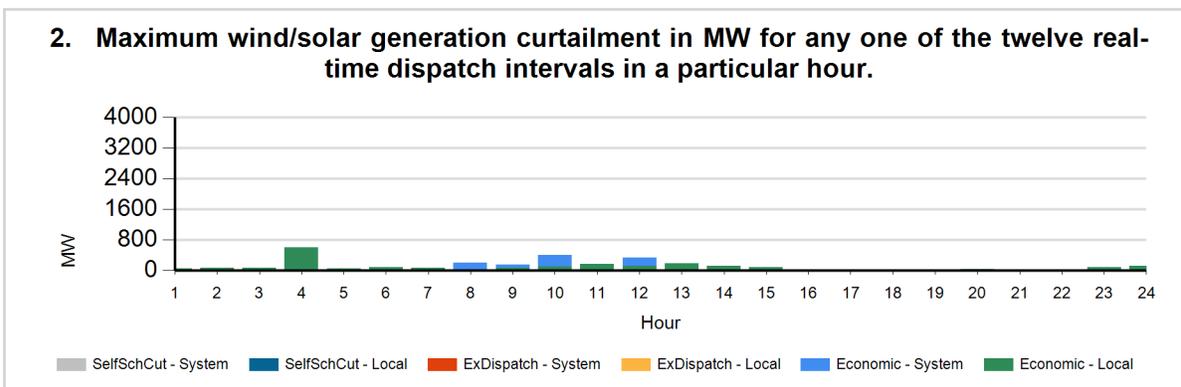
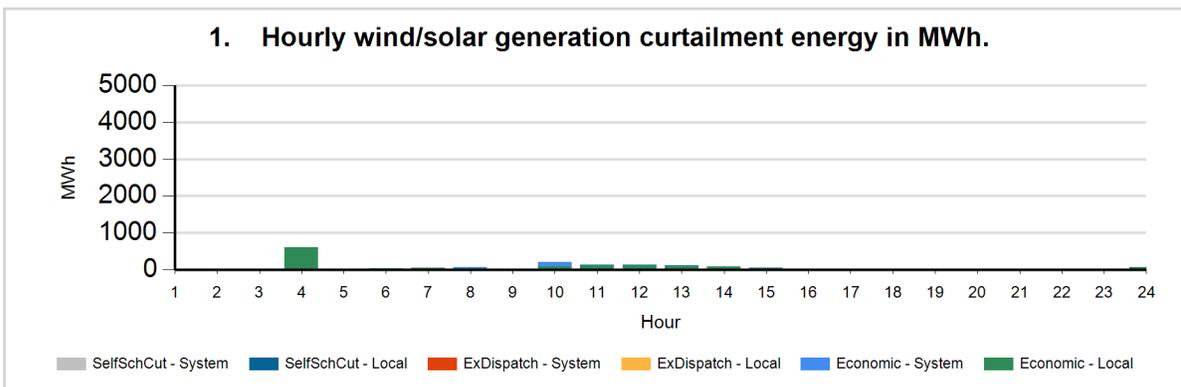
<sup>1</sup>Only wind and solar resources can be reported in this manner because these resources have a forecast. Curtailment is defined as the difference between actual production and the forecast when actual production is less than the forecast.

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

<sup>3</sup>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.

<sup>4</sup>For more information on oversupply conditions, please see: [https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables\\_FastFacts.pdf](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
11/27	1	Economic	Local	WIND	8	49
11/27	2	Economic	Local	WIND	22	63
11/27	3	Economic	Local	WIND	21	68
11/27	4	Economic	Local	WIND	50	50
11/27	5	Economic	Local	WIND	15	44
11/27	6	Economic	Local	WIND	35	80
11/27	7	Economic	Local	WIND	48	73
11/27	8	Economic	Local	WIND	31	
11/27	8	Economic	System	WIND	40	201
11/27	9	Economic	Local	WIND	9	63
11/27	9	Economic	System	WIND	6	77
11/27	10	Economic	Local	WIND	81	99
11/27	10	Economic	System	WIND	122	297
11/27	11	Economic	Local	WIND	127	168
11/27	11	Economic	System	WIND	1	
11/27	12	Economic	Local	WIND	113	108
11/27	12	Economic	System	WIND	23	220
11/27	13	Economic	Local	SOLR	1	2
11/27	13	Economic	Local	WIND	124	180
11/27	13	Economic	System	WIND	2	
11/27	14	Economic	Local	SOLR	1	
11/27	14	Economic	Local	WIND	90	117
11/27	14	Economic	System	SOLR	0	
11/27	15	Economic	Local	SOLR	10	15
11/27	15	Economic	Local	WIND	32	64
11/27	15	Economic	System	SOLR	0	
11/27	15	SelfSchCut	Local	SOLR	1	
11/27	16	Economic	Local	SOLR	1	6
11/27	16	Economic	Local	WIND	1	16

11/27	16	Economic	System	SOLR	1	
11/27	17	Economic	System	SOLR	0	2
11/27	19	Economic	Local	WIND	1	5
11/27	20	Economic	Local	WIND	4	25
11/27	22	Economic	Local	WIND	3	12
11/27	23	Economic	Local	WIND	7	79
11/27	24	Economic	Local	WIND	61	107

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](mailto:hzhou@caiso.com).