

Wind and Solar Curtailment March 31, 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.

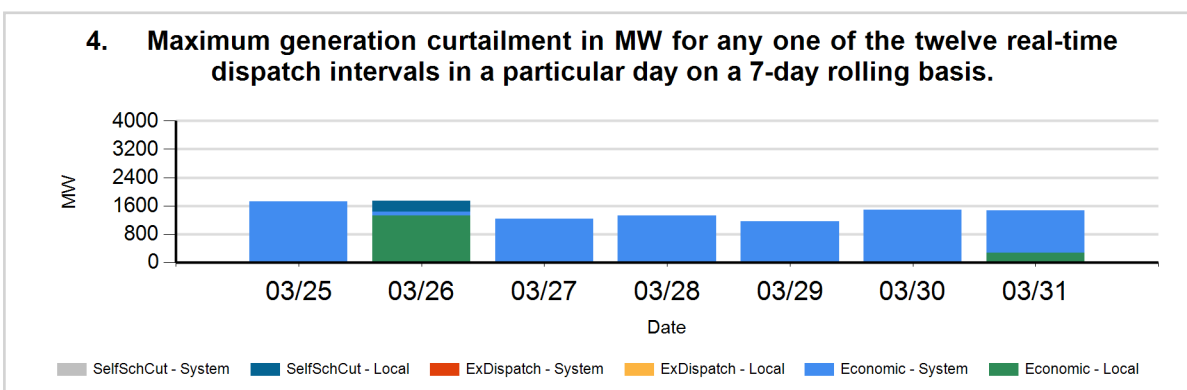
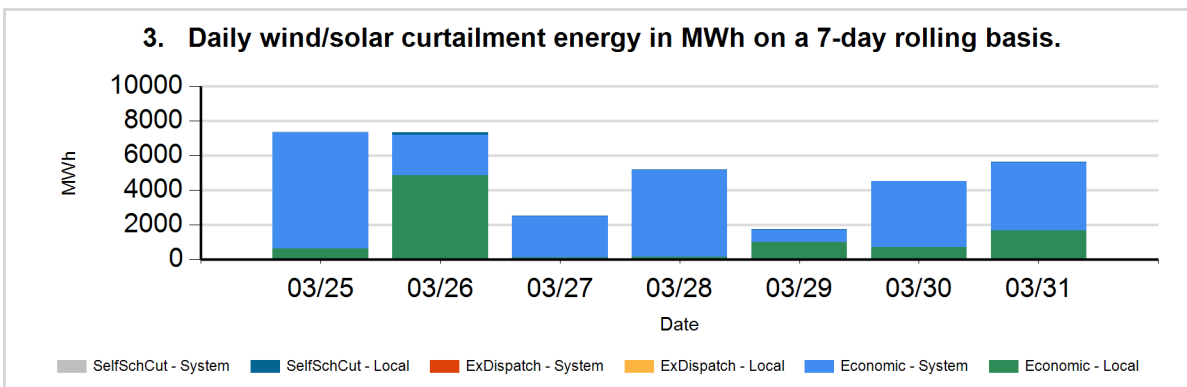
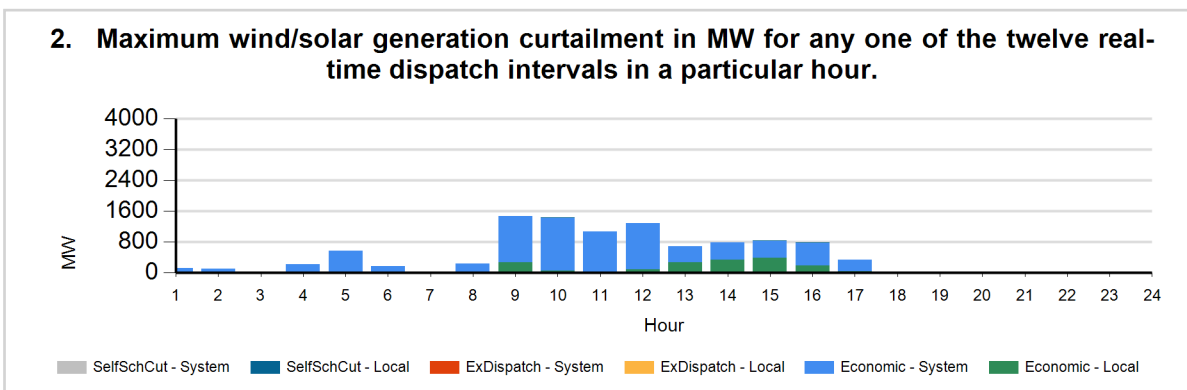
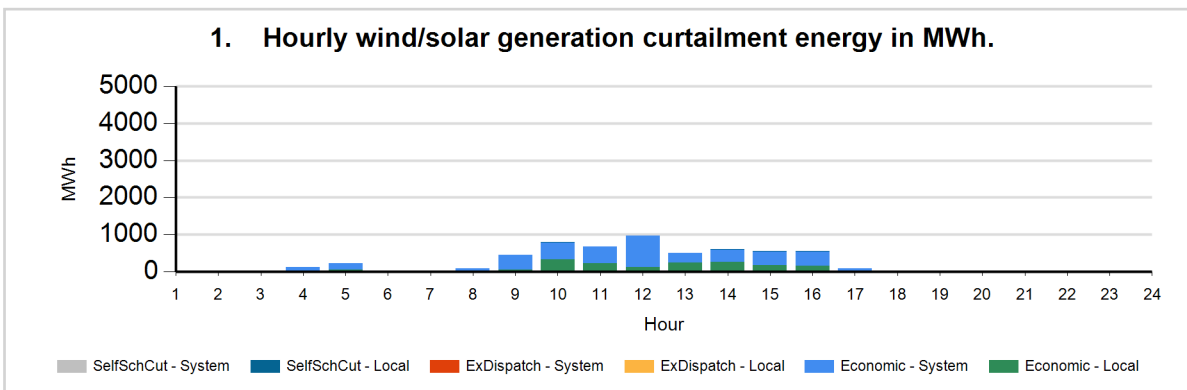
¹Only wind and solar resources can be reported in this manner because these resources have a forecast. Curtailment is defined as the difference between actual production and the forecast when actual production is less than the forecast.

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
03/31	1	Economic	System	WIND	16	108
03/31	2	Economic	System	WIND	9	105
03/31	3	Economic	System	WIND	2	22
03/31	4	Economic	Local	WIND	8	
03/31	4	Economic	System	WIND	105	220
03/31	5	Economic	Local	WIND	58	
03/31	5	Economic	System	WIND	158	566
03/31	6	Economic	System	WIND	23	160
03/31	8	Economic	Local	SOLR	0	
03/31	8	Economic	Local	WIND	19	
03/31	8	Economic	System	SOLR	34	147
03/31	8	Economic	System	WIND	27	76
03/31	9	Economic	Local	SOLR	45	220
03/31	9	Economic	Local	WIND	8	45
03/31	9	Economic	System	SOLR	346	1169
03/31	9	Economic	System	WIND	45	37
03/31	10	Economic	Local	SOLR	309	45
03/31	10	Economic	Local	WIND	19	
03/31	10	Economic	System	SOLR	403	1316
03/31	10	Economic	System	WIND	53	72
03/31	10	SelfSchCut	Local	SOLR	4	6
03/31	11	Economic	Local	SOLR	197	21
03/31	11	Economic	Local	WIND	27	
03/31	11	Economic	System	SOLR	410	982
03/31	11	Economic	System	WIND	42	66
03/31	12	Economic	Local	SOLR	69	21
03/31	12	Economic	Local	WIND	53	59
03/31	12	Economic	System	SOLR	814	1159
03/31	12	Economic	System	WIND	39	43

03/31	13	Economic	Local	SOLR	171	180
03/31	13	Economic	Local	WIND	72	79
03/31	13	Economic	System	SOLR	240	418
03/31	13	Economic	System	WIND	17	9
03/31	14	Economic	Local	SOLR	162	230
03/31	14	Economic	Local	WIND	96	110
03/31	14	Economic	System	SOLR	334	430
03/31	14	Economic	System	WIND	14	9
03/31	14	SelfSchCut	Local	SOLR	2	
03/31	15	Economic	Local	SOLR	105	316
03/31	15	Economic	Local	WIND	74	72
03/31	15	Economic	System	SOLR	370	422
03/31	15	Economic	System	WIND	5	12
03/31	15	SelfSchCut	Local	SOLR	4	12
03/31	16	Economic	Local	SOLR	107	120
03/31	16	Economic	Local	WIND	38	64
03/31	16	Economic	System	SOLR	388	584
03/31	16	Economic	System	WIND	7	9
03/31	16	SelfSchCut	Local	SOLR	6	6
03/31	17	Economic	Local	SOLR	15	36
03/31	17	Economic	System	SOLR	73	282
03/31	17	Economic	System	WIND	5	11
03/31	17	SelfSchCut	Local	SOLR	0	

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.