

Wind and Solar Curtailment May 14, 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.

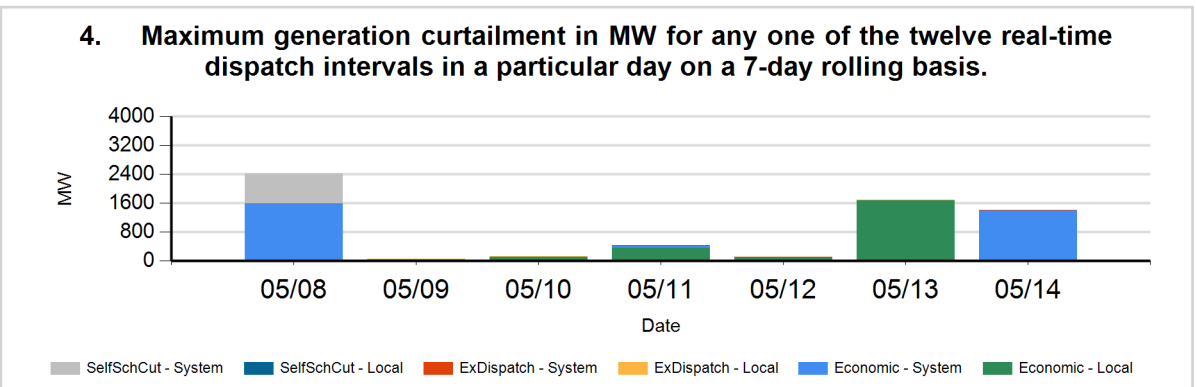
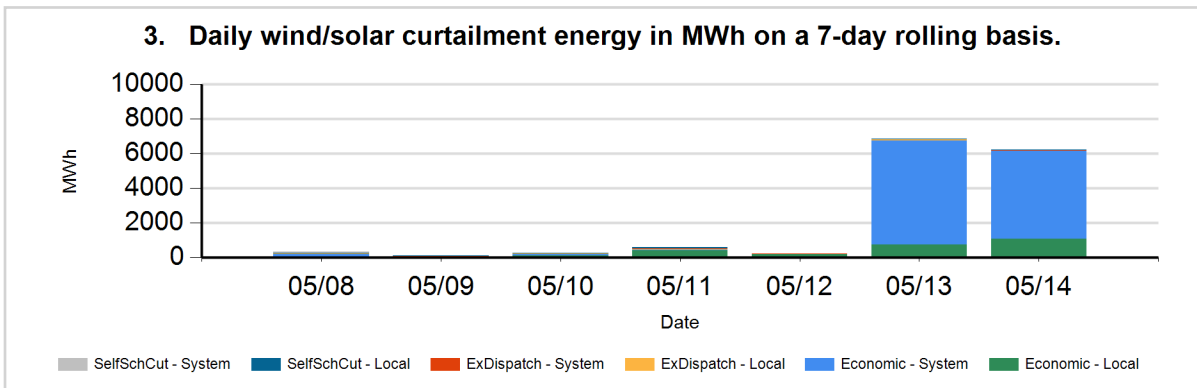
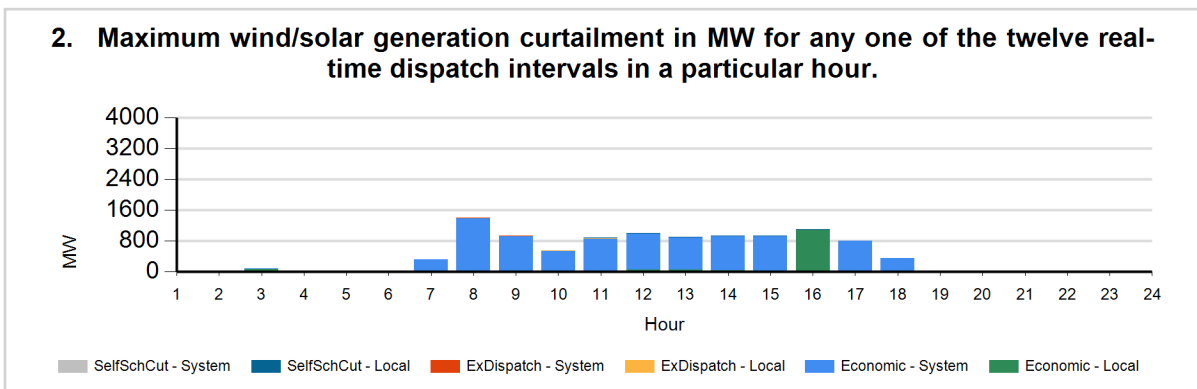
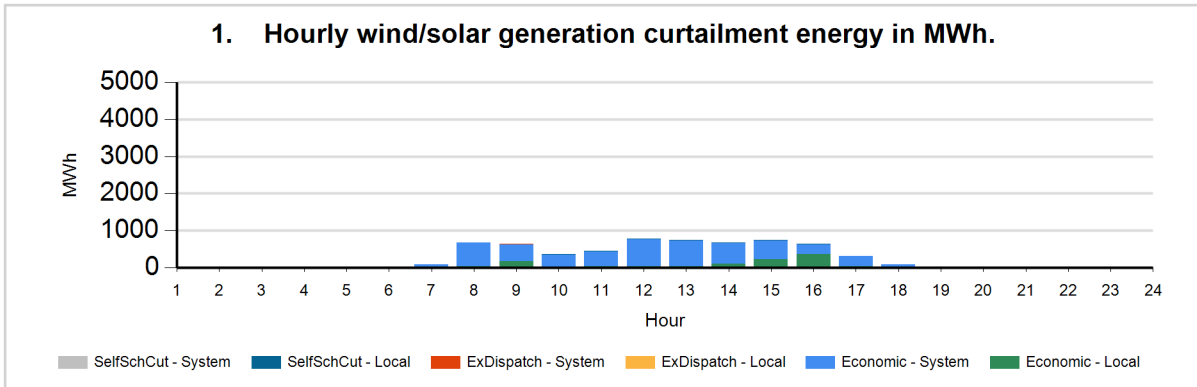
¹Only wind and solar resources can be reported in this manner because these resources have a forecast. Curtailment is defined as the difference between actual production and the forecast when actual production is less than the forecast.

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

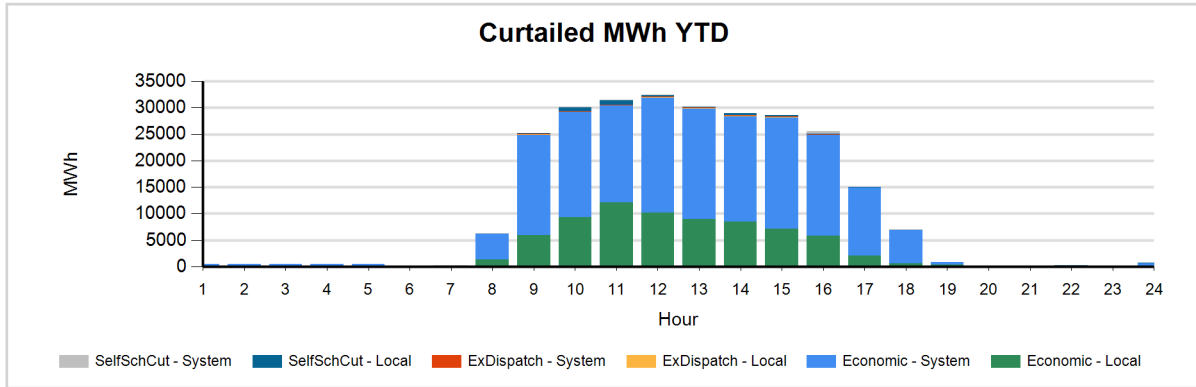
³Congestion occurs when available, least-cost energy cannot be delivered to some loads because transmission facilities do not have sufficient capacity to deliver the energy.

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

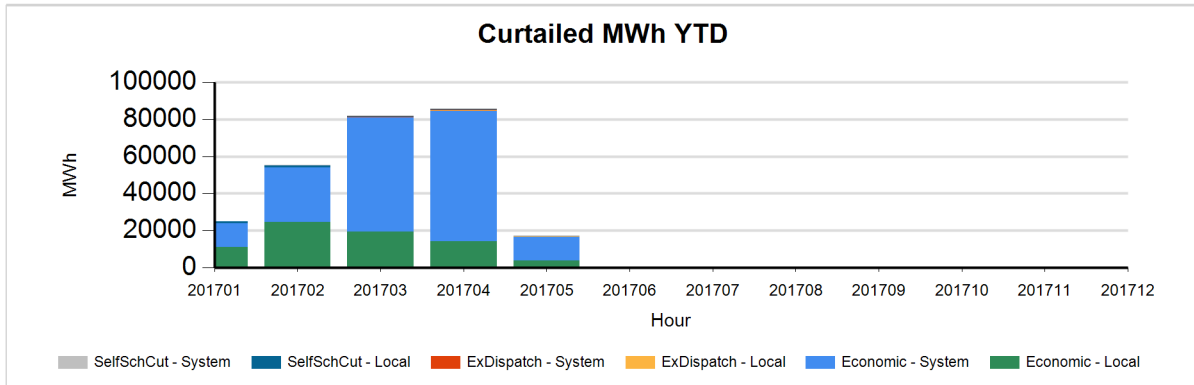
The following charts show the daily and 7-day rolling wind and solar curtailment by category, if any.



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	73,052
LocalExDispatch	920
LocalSelfSchCut	3,304
SystemEconomic	187,080
SystemExDispatch	277
SystemSelfSchCut	681
TOTAL	265,313

Data used to produce hourly chart

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
05/14	2	Economic	Local	WIND	1	11
05/14	3	Economic	Local	WIND	14	70
05/14	3	Economic	System	WIND	5	10
05/14	4	Economic	Local	WIND	3	8
05/14	4	Economic	System	WIND	2	10
05/14	7	Economic	Local	SOLR	0	
05/14	7	Economic	System	SOLR	85	304
05/14	7	Economic	System	WIND	2	9
05/14	8	Economic	Local	SOLR	35	
05/14	8	Economic	Local	WIND	1	
05/14	8	Economic	System	SOLR	534	958
05/14	8	Economic	System	WIND	104	434
05/14	8	ExDispatch	Local	SOLR	0	
05/14	8	ExDispatch	System	SOLR	0	2
05/14	9	Economic	Local	SOLR	177	5
05/14	9	Economic	Local	WIND	0	
05/14	9	Economic	System	SOLR	454	923
05/14	9	Economic	System	WIND	3	0
05/14	9	ExDispatch	Local	SOLR	1	
05/14	9	ExDispatch	System	SOLR	2	2
05/14	10	Economic	Local	SOLR	8	7
05/14	10	Economic	System	SOLR	347	539
05/14	10	Economic	System	WIND	0	
05/14	10	ExDispatch	Local	SOLR	3	3
05/14	10	ExDispatch	System	SOLR	0	
05/14	10	SelfSchCut	Local	SOLR	1	
05/14	11	Economic	Local	SOLR	37	18
05/14	11	Economic	System	SOLR	403	850
05/14	11	Economic	System	WIND	0	2
05/14	11	ExDispatch	Local	SOLR	4	4
05/14	11	SelfSchCut	Local	SOLR	3	5

05/14	12	Economic	Local	SOLR	31	47
05/14	12	Economic	System	SOLR	736	942
05/14	12	Economic	System	WIND	1	2
05/14	12	ExDispatch	Local	SOLR	11	7
05/14	12	SelfSchCut	Local	SOLR	4	2
05/14	13	Economic	Local	SOLR	36	45
05/14	13	Economic	System	SOLR	693	838
05/14	13	Economic	System	WIND	0	0
05/14	13	ExDispatch	Local	SOLR	11	11
05/14	13	SelfSchCut	Local	SOLR	5	7
05/14	14	Economic	Local	SOLR	100	25
05/14	14	Economic	System	SOLR	564	897
05/14	14	Economic	System	WIND	0	1
05/14	14	ExDispatch	Local	SOLR	6	4
05/14	14	SelfSchCut	Local	SOLR	3	2
05/14	15	Economic	Local	SOLR	230	20
05/14	15	Economic	Local	WIND	0	
05/14	15	Economic	System	SOLR	505	906
05/14	15	Economic	System	WIND	0	1
05/14	15	ExDispatch	Local	SOLR	0	0
05/14	15	SelfSchCut	Local	SOLR	3	6
05/14	16	Economic	Local	SOLR	366	1097
05/14	16	Economic	Local	WIND	0	1
05/14	16	Economic	System	SOLR	269	
05/14	16	Economic	System	WIND	0	
05/14	16	ExDispatch	Local	SOLR	0	
05/14	16	ExDispatch	System	SOLR	0	
05/14	16	SelfSchCut	Local	SOLR	1	4
05/14	17	Economic	Local	SOLR	34	
05/14	17	Economic	System	SOLR	280	790
05/14	17	Economic	System	WIND	1	4
05/14	18	Economic	System	SOLR	83	355
05/14	19	Economic	System	SOLR	1	6

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.