Wind and Solar Curtailment December 16, 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.
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.

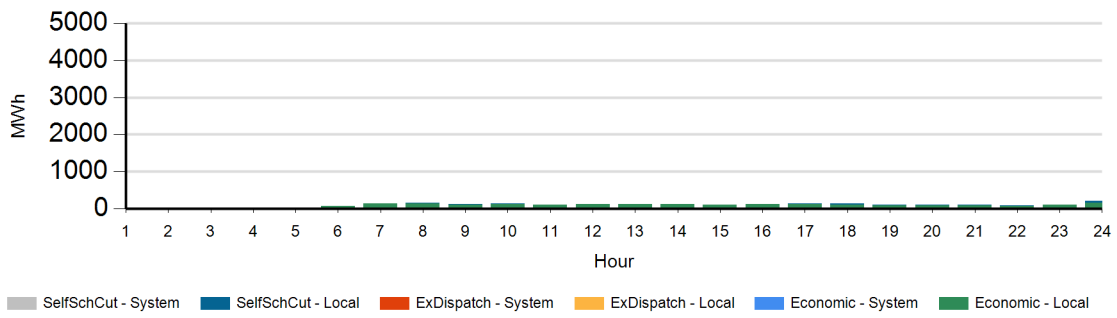
[2]The Renewables Watch report provides daily actual renewable production within the ISO grid. It is available at: http://www.caiso.com/green/renewableswatch.html.

[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.

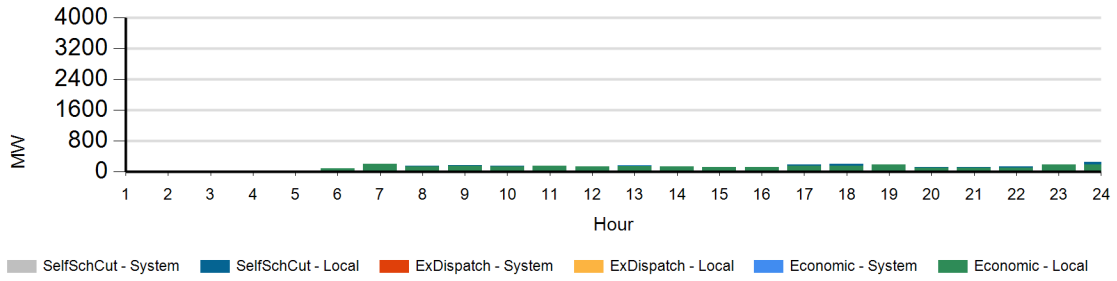
For more information on oversupply conditions, please see:
https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables_FastFacts.pdf

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

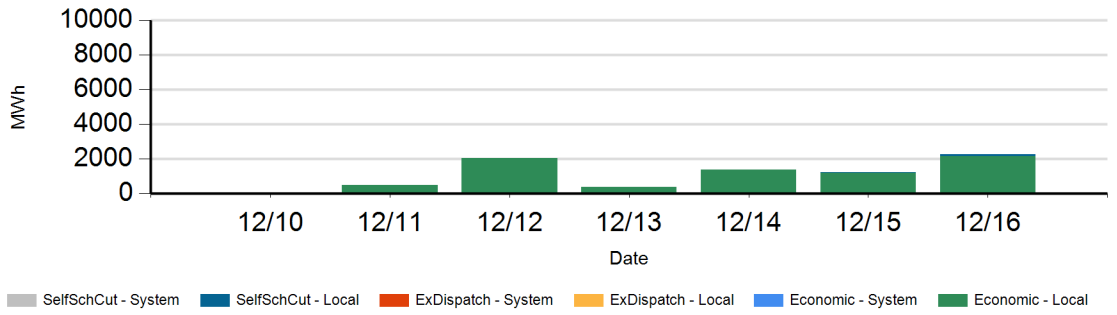
1. Hourly wind/solar generation curtailment energy in MWh.



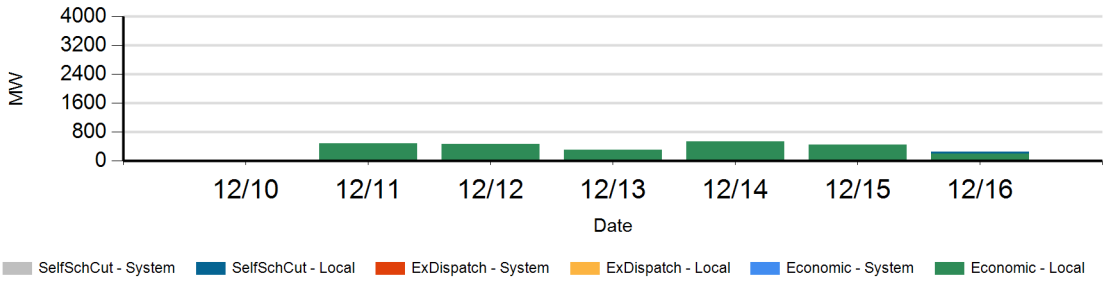
2. Maximum wind/solar generation curtailment in MW for any one of the twelve real-time dispatch intervals in a particular hour.



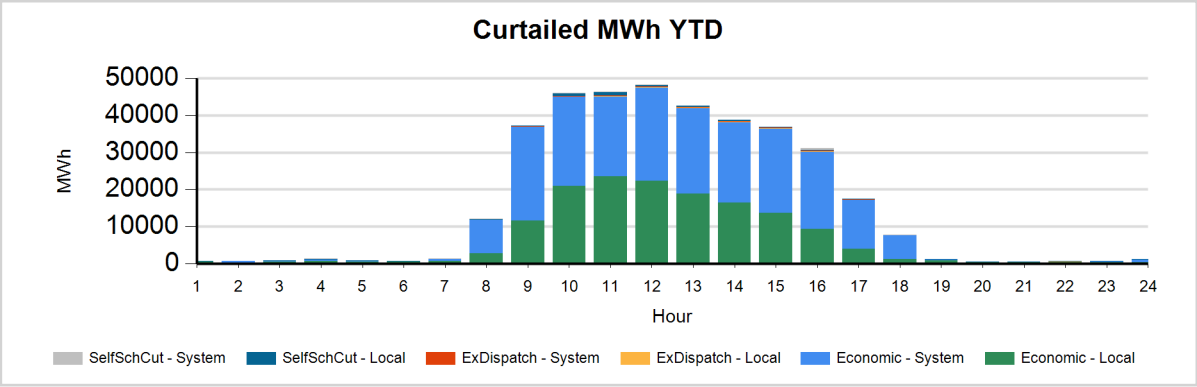
3. Daily wind/solar curtailment energy in MWh on a 7-day rolling basis.



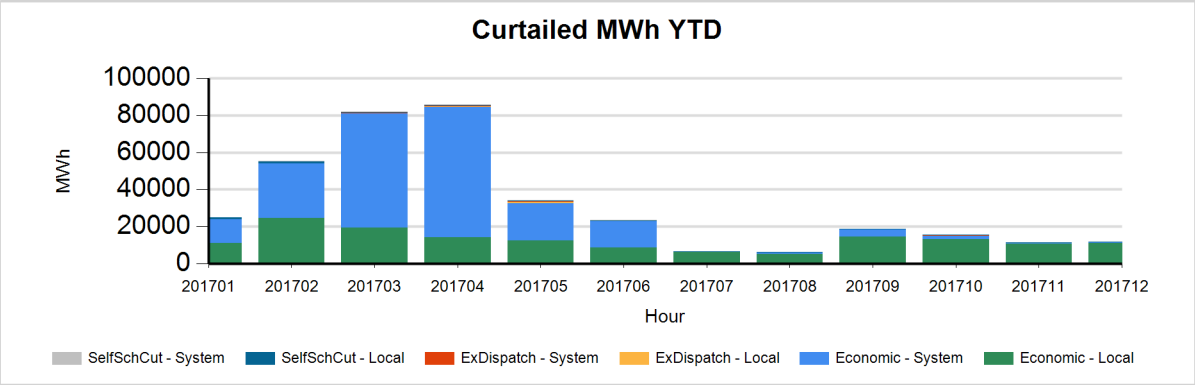
4. Maximum generation curtailment in MW for any one of the twelve real-time dispatch intervals in a particular day on a 7-day rolling basis.



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	150,763
LocalExDispatch	1,491
LocalSelfSchCut	4,076
SystemEconomic	217,718
SystemExDispatch	551
SystemSelfSchCut	828
TOTAL	375,427

California ISO

Data used to produce hourly chart

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
12/16	6	Economic	Local	WIND	74	88
12/16	7	Economic	Local	WIND	142	190
12/16	8	Economic	Local	WIND	147	150
12/16	8	SelfSchCut	Local	SOLR	0	0
12/16	8	SelfSchCut	Local	WIND	1	7
12/16	9	Economic	Local	WIND	112	148
12/16	9	SelfSchCut	Local	WIND	3	13
12/16	10	Economic	Local	SOLR	0	1
12/16	10	Economic	Local	WIND	138	149
12/16	10	SelfSchCut	Local	WIND	1	7
12/16	11	Economic	Local	SOLR	0	
12/16	11	Economic	Local	WIND	101	146
12/16	12	Economic	Local	SOLR	1	
12/16	12	Economic	Local	WIND	110	129
12/16	13	Economic	Local	SOLR	9	54
12/16	13	Economic	Local	WIND	119	111
12/16	13	Economic	System	SOLR	0	4
12/16	14	Economic	Local	WIND	117	124
12/16	15	Economic	Local	WIND	108	114
12/16	16	Economic	Local	WIND	112	120
12/16	17	Economic	Local	WIND	135	150
12/16	17	SelfSchCut	Local	WIND	7	26
12/16	18	Economic	Local	WIND	109	148
12/16	18	SelfSchCut	Local	WIND	20	50
12/16	19	Economic	Local	WIND	107	179
12/16	19	SelfSchCut	Local	WIND	1	
12/16	20	Economic	Local	WIND	100	100
12/16	20	SelfSchCut	Local	WIND	5	13
12/16	21	Economic	Local	WIND	100	100
12/16	21	SelfSchCut	Local	WIND	4	14
12/16	22	Economic	Local	WIND	72	100

12/16	22	SelfSchCut	Local	WIND	5	31
12/16	23	Economic	Local	WIND	96	174
12/16	24	Economic	Local	WIND	150	185
12/16	24	SelfSchCut	Local	WIND	54	57