

Wind and Solar Curtailment September 23, 2016

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.

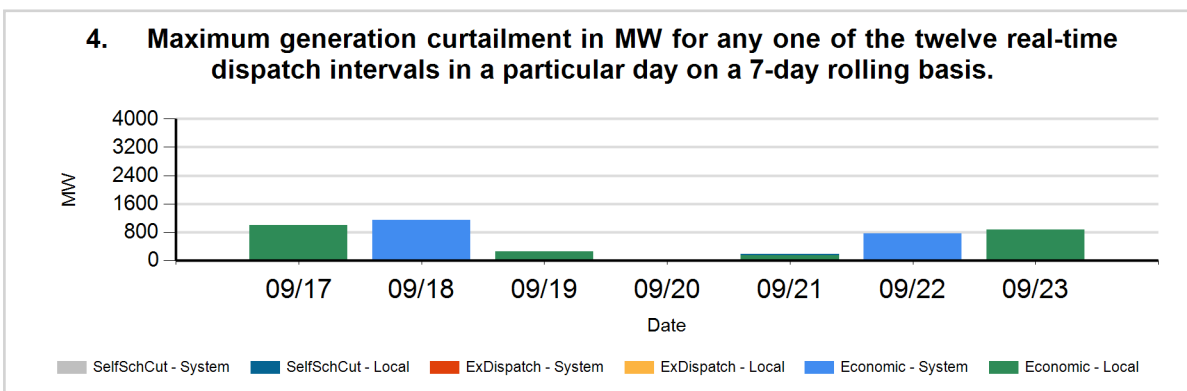
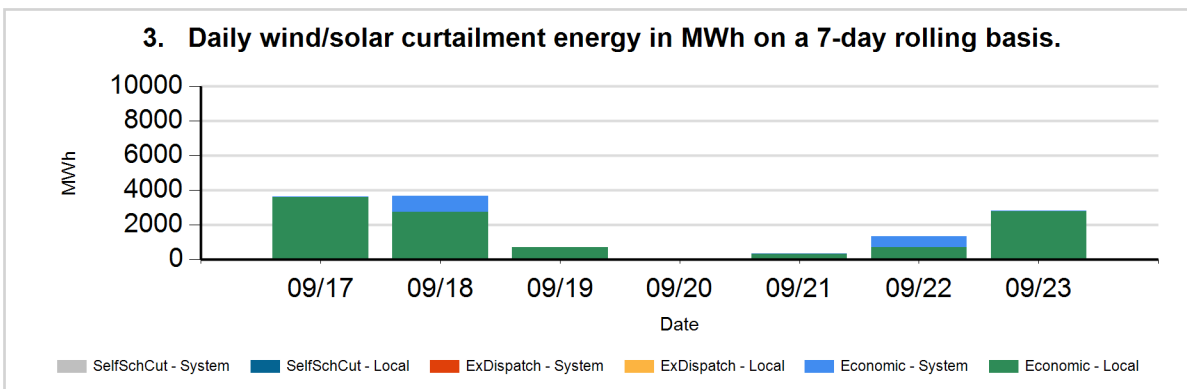
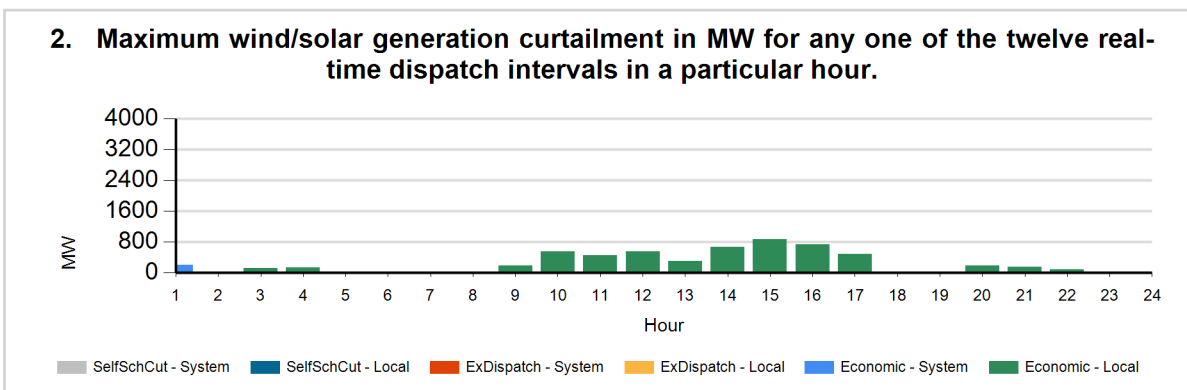
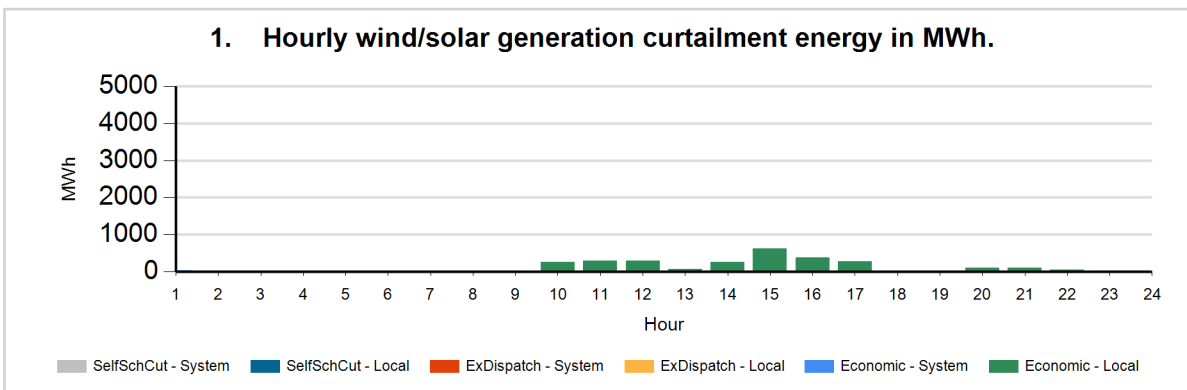
¹Only wind and solar resources can be reported in this manner because these resources have a forecast. Curtailment is defined as the difference between actual production and the forecast when actual production is less than the forecast.

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
09/23	1	Economic	System	WIND	30	200
09/23	2	Economic	Local	WIND	1	17
09/23	3	Economic	Local	WIND	23	123
09/23	4	Economic	Local	WIND	18	125
09/23	9	Economic	Local	SOLR	15	183
09/23	9	Economic	Local	WIND	1	6
09/23	10	Economic	Local	SOLR	219	475
09/23	10	Economic	Local	WIND	48	81
09/23	11	Economic	Local	SOLR	267	404
09/23	11	Economic	Local	WIND	30	37
09/23	12	Economic	Local	SOLR	210	345
09/23	12	Economic	Local	WIND	85	197
09/23	13	Economic	Local	SOLR	51	286
09/23	13	Economic	Local	WIND	21	19
09/23	14	Economic	Local	SOLR	103	439
09/23	14	Economic	Local	WIND	162	234
09/23	15	Economic	Local	SOLR	473	680
09/23	15	Economic	Local	WIND	153	191
09/23	16	Economic	Local	SOLR	264	593
09/23	16	Economic	Local	WIND	115	142
09/23	17	Economic	Local	SOLR	198	403
09/23	17	Economic	Local	WIND	85	80
09/23	20	Economic	Local	WIND	95	184
09/23	21	Economic	Local	WIND	94	145
09/23	22	Economic	Local	WIND	42	77

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.