

## Wind and Solar Curtailment June 05, 2019

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 congestion<sup>3</sup>.
- 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.

<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.

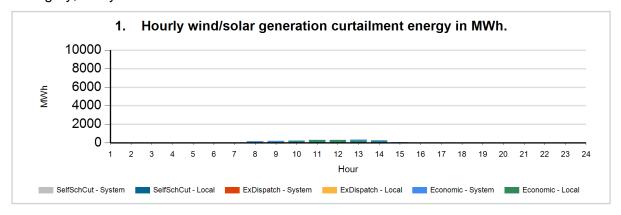
<sup>2</sup>The Renewables Watch report provides daily actual renewable production within the ISO grid. It is available at: <a href="http://www.caiso.com/green/renewableswatch.html">http://www.caiso.com/green/renewableswatch.html</a>.

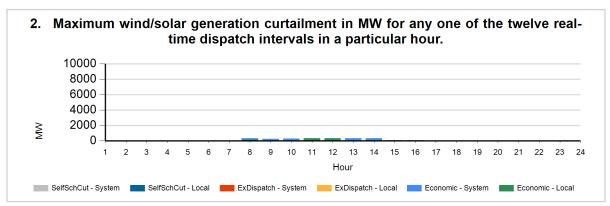
<sup>3</sup>Congestion occurs when available, least-cost energy cannot be delivered to some loads because transmission facilities do not have sufficient capacity to deliver the energy.

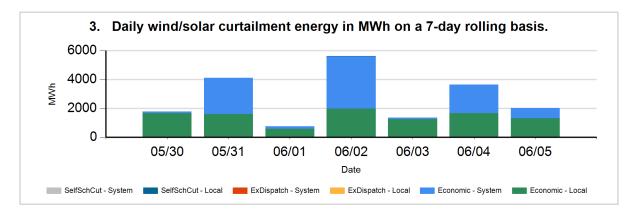
For more information on oversupply conditions, please see: <a href="https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables">https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables</a> FastFacts.pdf

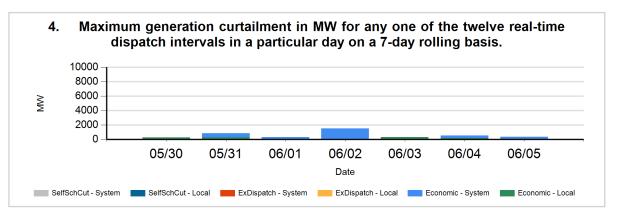


The following charts show the daily and 7-day rolling wind and solar curtailment by category, if any.



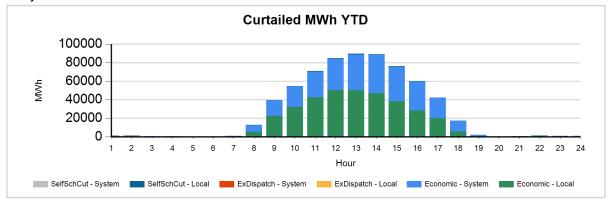




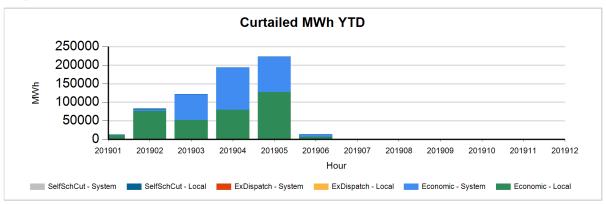




The following charts show hourly year to date wind and solar curtailment by category, if any.



The following charts show monthly year to date wind and solar curtailment by category, if any.



TYPE	YTD CURTAILED MWH
LocalEconomic	352,126
LocalSelfSchCut	5,724
SystemEconomic	290,302
TOTAL	648,152



## Data used to produce hourly chart

DATE	HOU R	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
06/05	6	Economic	System	SOLR	1	9
06/05	7	Economic	System	SOLR	17	45
06/05	8	Economic	Local	SOLR	60	162
06/05	8	Economic	System	SOLR	98	172
06/05	9	Economic	Local	SOLR	55	18
06/05	9	Economic	System	SOLR	150	213
06/05	10	Economic	Local	SOLR	157	29
06/05	10	Economic	System	SOLR	96	247
06/05	11	Economic	Local	SOLR	273	337
06/05	12	Economic	Local	SOLR	285	320
06/05	13	Economic	Local	SOLR	209	55
06/05	13	Economic	Local	WIND	1	2
06/05	13	Economic	System	SOLR	121	284
06/05	14	Economic	Local	SOLR	165	66
06/05	14	Economic	Local	WIND	3	2
06/05	14	Economic	System	SOLR	113	268
06/05	15	Economic	Local	SOLR	47	58
06/05	15	Economic	Local	WIND	3	6
06/05	16	Economic	Local	SOLR	28	39
06/05	16	Economic	Local	WIND	1	11
06/05	16	Economic	System	SOLR	16	22
06/05	17	Economic	Local	SOLR	14	37
06/05	18	Economic	Local	SOLR	8	10
06/05	18	Economic	System	SOLR	14	21
06/05	19	Economic	System	SOLR	5	13
06/05	20	Economic	System	SOLR	2	12
06/05	22	Economic	Local	WIND	1	7

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 Short-Term Forecasting at ShortTermForecasting@caiso.com.

