

Wind and Solar Curtailment February 19, 2020

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.
- Economic System: Market dispatch of generators with economic bids to mitigate systemwide 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.

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.

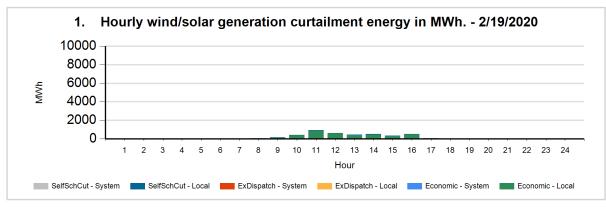
²The Renewables Watch report provides daily actual renewable production within the ISO grid. It is available at: <u>http://www.caiso.com/green/renewableswatch.html</u>.

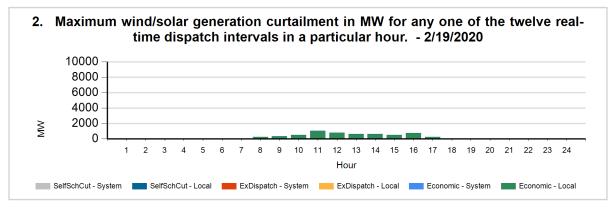
³Congestion occurs when available, least-cost energy cannot be delivered to some loads because transmission facilities do not have sufficient capacity to deliver the energy.

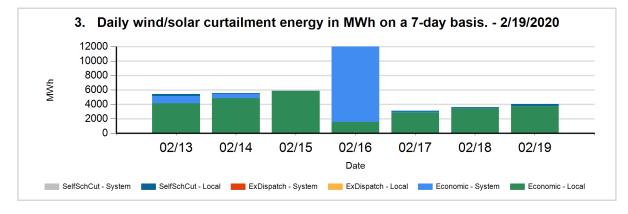
For more information on oversupply conditions, please see: <u>https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables_FastFacts.pdf</u>



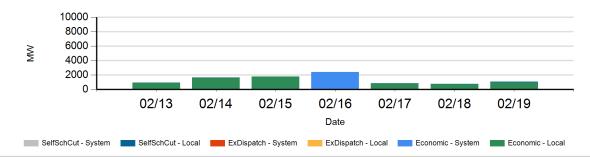
The following charts show the daily and 7-day wind and solar curtailment by category, if any.





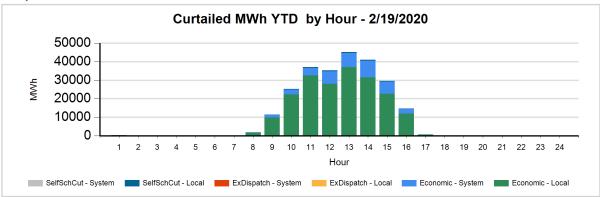


4. Maximum generation curtailment in MW for any one of the twelve real-time dispatch intervals in a particular day on a 7-day basis. - 2/19/2020

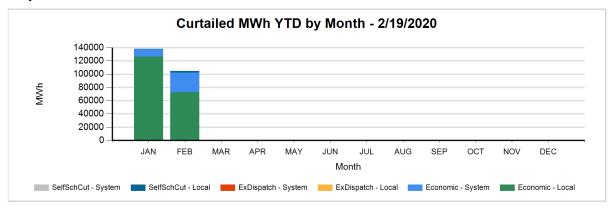




The following charts show hourly year to date wind and solar curtailment by category, if any.



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



TYPE	YTD CURTAILED MWH - 2/19/2020
LocalEconomic	198,932
LocalSelfSchCut	2,811
SystemEconomic	40,963
TOTAL	242,707



Data used to produce hourly chart

DATE	HOU R	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
02/19	7	Economic	Local	SOLR	1	8
02/19	8	Economic	Local	SOLR	51	250
02/19	8	Economic	Local	WIND	0	1
02/19	8	Economic	System	SOLR	5	
02/19	9	Economic	Local	SOLR	142	314
02/19	9	Economic	System	SOLR	2	
02/19	9	SelfSchCut	Local	SOLR	15	33
02/19	10	Economic	Local	SOLR	379	448
02/19	10	SelfSchCut	Local	SOLR	46	49
02/19	11	Economic	Local	SOLR	878	987
02/19	11	SelfSchCut	Local	SOLR	48	50
02/19	12	Economic	Local	SOLR	578	748
02/19	12	Economic	Local	WIND	1	
02/19	12	SelfSchCut	Local	SOLR	47	45
02/19	13	Economic	Local	SOLR	374	589
02/19	13	Economic	Local	WIND	4	
02/19	13	Economic	System	SOLR	5	
02/19	13	SelfSchCut	Local	SOLR	50	50
02/19	14	Economic	Local	SOLR	458	579
02/19	14	SelfSchCut	Local	SOLR	49	50
02/19	15	Economic	Local	SOLR	296	460
02/19	15	Economic	Local	WIND	0	
02/19	15	Economic	System	SOLR	19	
02/19	15	SelfSchCut	Local	SOLR	34	47
02/19	16	Economic	Local	SOLR	500	742
02/19	16	Economic	Local	WIND	0	
02/19	16	SelfSchCut	Local	SOLR	6	8
02/19	17	Economic	Local	SOLR	65	227
02/19	17	Economic	Local	WIND	0	
02/19	24	Economic	Local	WIND	7	12



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.