

## Wind and Solar Curtailment July 04, 2023

This report is produced daily to provide a detailed accounting of the wind and solar renewable generation that was curtailed and the reasons why<sup>1</sup>. This report should be read in the context of the Renewables Watch report for a more complete understanding of both renewable curtailment and generation<sup>2</sup>.

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<sup>4</sup>.
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.

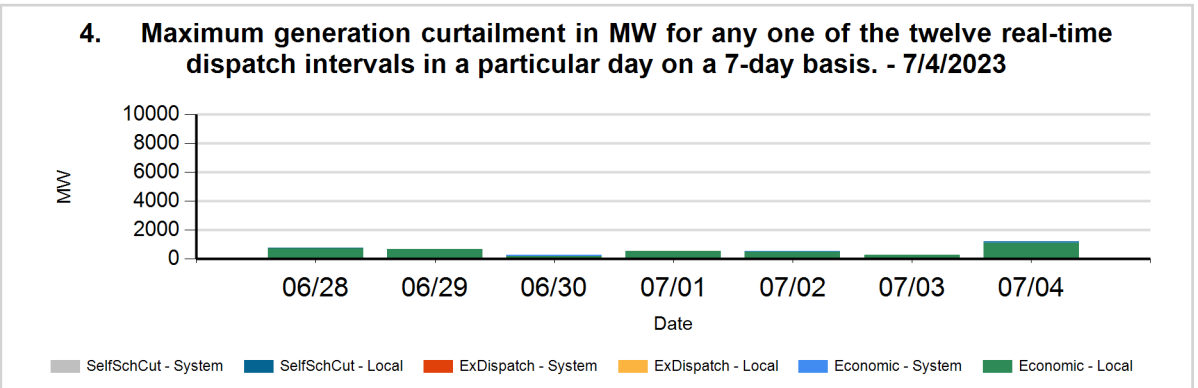
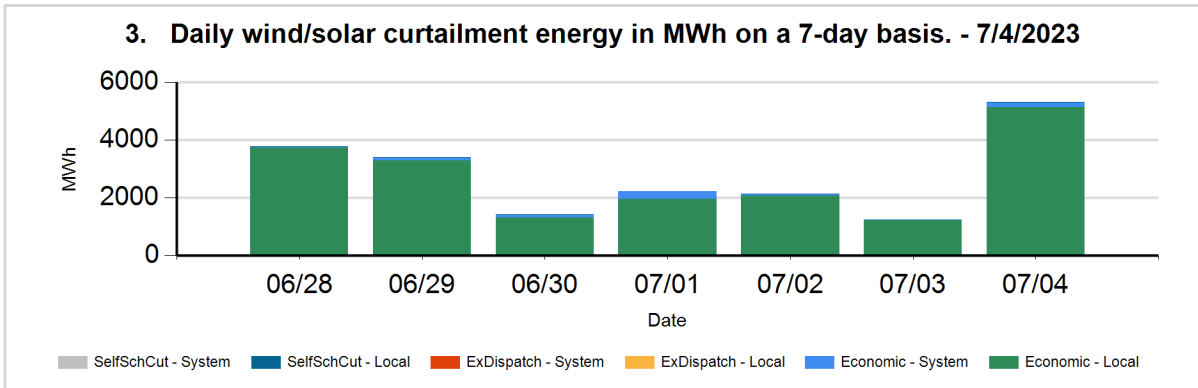
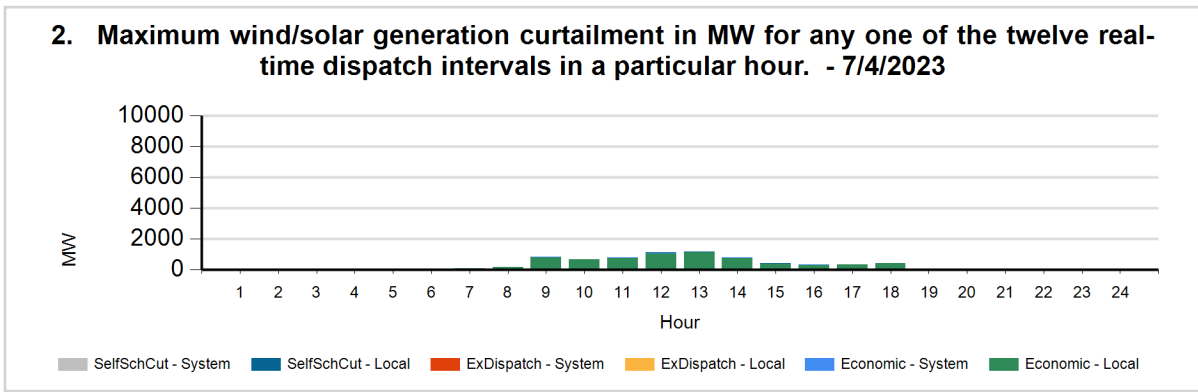
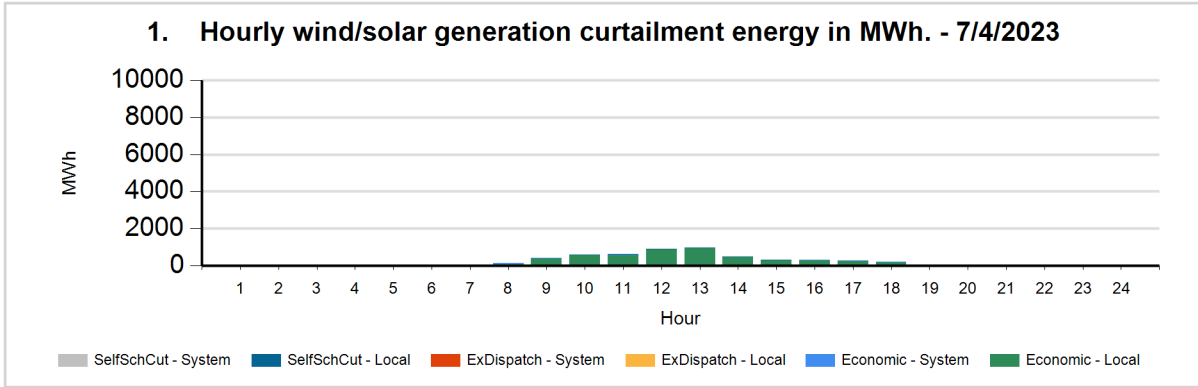
<sup>2</sup>The Renewables Watch report provides daily actual renewable production within the ISO grid. It is available at: <http://www.caiso.com/green/renewableswatch.html>.

<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.

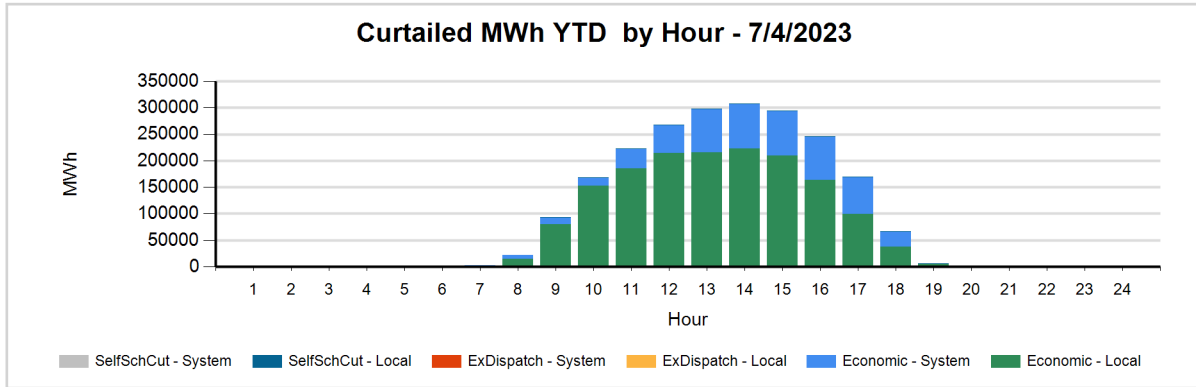
<sup>4</sup>For more information on oversupply conditions, please see:

[https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables\\_FastFacts.pdf](https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables_FastFacts.pdf)

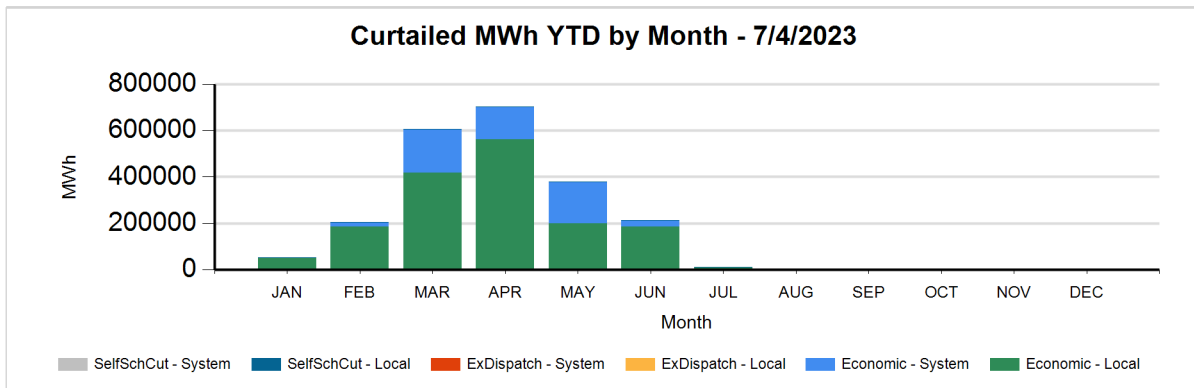
The following charts show the daily and 7-day wind and solar curtailment by category, if any.



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 - 7/4/2023
LocalEconomic	1,605,022
LocalSelfSchCut	902
SystemEconomic	565,038
<b>TOTAL</b>	<b>2,170,963</b>

**Data used to produce hourly chart**

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
07/04	1	Economic	Local	WIND	7	10
07/04	2	Economic	Local	WIND	9	10
07/04	3	Economic	Local	WIND	9	9
07/04	4	Economic	Local	WIND	9	9
07/04	5	Economic	Local	WIND	8	9
07/04	6	Economic	Local	WIND	9	9
07/04	7	Economic	Local	SOLR	17	58
07/04	7	Economic	Local	WIND	8	11
07/04	7	Economic	System	SOLR	0	
07/04	8	Economic	Local	SOLR	62	161
07/04	8	Economic	Local	WIND	9	11
07/04	8	Economic	System	SOLR	53	
07/04	9	Economic	Local	SOLR	366	735
07/04	9	Economic	Local	WIND	33	64
07/04	9	Economic	System	SOLR	29	10
07/04	10	Economic	Local	SOLR	494	597
07/04	10	Economic	Local	WIND	65	65
07/04	10	Economic	System	SOLR	9	
07/04	10	Economic	System	WIND	1	
07/04	10	SelfSchCut	Local	SOLR	1	
07/04	11	Economic	Local	SOLR	537	705
07/04	11	Economic	Local	WIND	61	77
07/04	11	Economic	System	SOLR	1	4
07/04	11	SelfSchCut	Local	SOLR	3	
07/04	12	Economic	Local	SOLR	826	1064
07/04	12	Economic	Local	WIND	69	28
07/04	12	Economic	System	SOLR	7	2
07/04	12	SelfSchCut	Local	SOLR	5	12
07/04	13	Economic	Local	SOLR	887	1090
07/04	13	Economic	Local	WIND	62	61
07/04	13	Economic	System	SOLR	4	

07/04	13	Economic	System	WIND	7	10
07/04	13	SelfSchCut	Local	SOLR	9	14
07/04	14	Economic	Local	SOLR	428	713
07/04	14	Economic	Local	WIND	31	67
07/04	14	Economic	System	SOLR	1	
07/04	14	Economic	System	WIND	10	5
07/04	14	SelfSchCut	Local	SOLR	4	
07/04	15	Economic	Local	SOLR	304	374
07/04	15	Economic	Local	WIND	3	7
07/04	15	Economic	System	SOLR	0	
07/04	15	Economic	System	WIND	10	15
07/04	15	SelfSchCut	Local	SOLR	2	2
07/04	16	Economic	Local	SOLR	281	300
07/04	16	Economic	Local	WIND	7	3
07/04	16	Economic	System	WIND	6	13
07/04	17	Economic	Local	SOLR	267	306
07/04	17	Economic	Local	WIND	12	16
07/04	17	Economic	System	WIND	2	
07/04	18	Economic	Local	SOLR	181	377
07/04	18	Economic	Local	WIND	14	16
07/04	18	Economic	System	SOLR	2	
07/04	18	Economic	System	WIND	1	
07/04	19	Economic	Local	SOLR	9	33
07/04	19	Economic	Local	WIND	14	16
07/04	19	Economic	System	WIND	1	
07/04	20	Economic	Local	WIND	12	14
07/04	21	Economic	Local	WIND	10	10
07/04	22	Economic	Local	WIND	6	10
07/04	23	Economic	Local	WIND	7	7
07/04	24	Economic	Local	WIND	6	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](mailto:ShortTermForecasting@caiso.com).



California ISO