

## Wind and Solar Curtailment April 13, 2022

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.

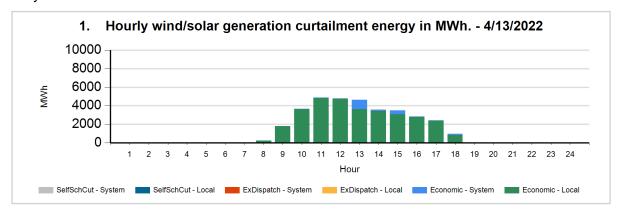
<sup>2</sup>The Renewables Watch report provides daily actual renewable production within the ISO grid. It is available at: <a href="http://www.caiso.com/green/renewableswatch.html">http://www.caiso.com/green/renewableswatch.html</a>.

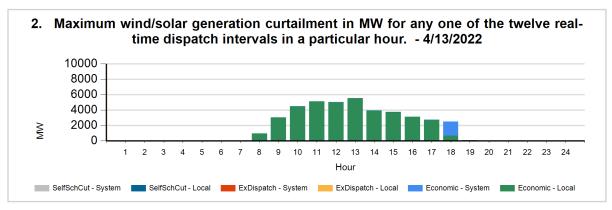
<sup>3</sup>Congestion occurs when available, least-cost energy cannot be delivered to some loads because transmission facilities do not have sufficient capacity to deliver the energy.

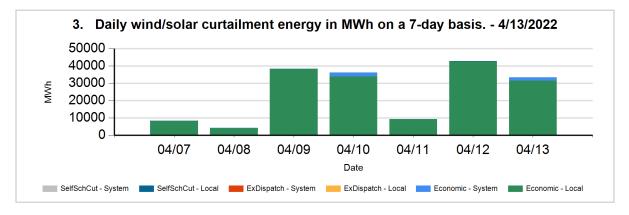
For more information on oversupply conditions, please see: <a href="https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables">https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables</a> FastFacts.pdf

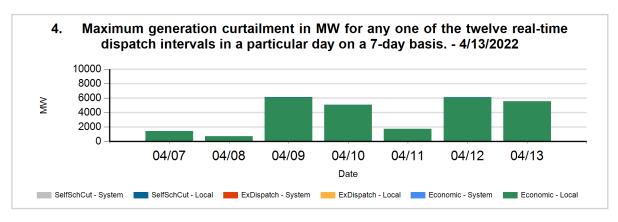


The following charts show the daily and 7-day wind and solar curtailment by category, if any.



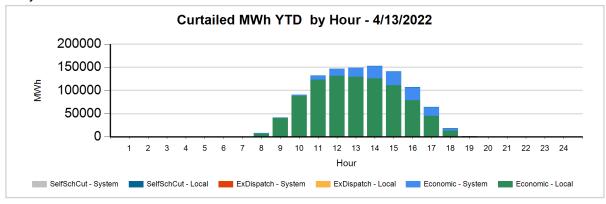




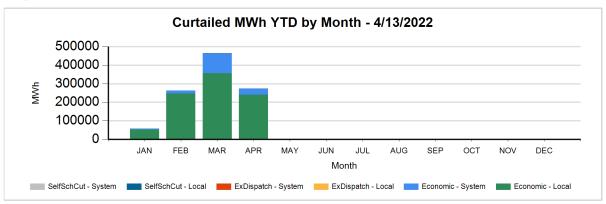




The following charts show hourly year to date wind and solar curtailment by category, if any.



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



TYPE	YTD CURTAILED MWH - 4/13/2022
LocalEconomic	894,704
LocalSelfSchCut	3,959
SystemEconomic	157,018
TOTAL	1,055,682



## Data used to produce hourly chart

04/13     2     Economic     Local     WIND     1       04/13     2     Economic     System     WIND     2     22       04/13     3     Economic     Local     WIND     0     0       04/13     4     Economic     Local     WIND     3     9       04/13     4     Economic     System     WIND     1     1       04/13     5     Economic     Local     WIND     0     1       04/13     6     Economic     System     WIND     0     0       04/13     6     Economic     Local     WIND     0     0       04/13     6     Economic     System     WIND     0     0       04/13     8     Economic     Local     WIND     1     6       04/13     8     Economic     Local     WIND     1     2       04/13     9     Economic     Local     WIND     1     5       <	DATE	HOU R	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
04/13     2     Economic     System     WIND     2     22       04/13     3     Economic     Local     WIND     0     8       04/13     4     Economic     System     WIND     0     9       04/13     4     Economic     Local     WIND     1     9       04/13     5     Economic     System     WIND     0     1       04/13     5     Economic     Local     WIND     0     0       04/13     6     Economic     System     WIND     0     0       04/13     6     Economic     Local     WIND     0     0       04/13     6     Economic     Local     WIND     1     6       04/13     8     Economic     Local     WIND     1     2       04/13     9     Economic     Local     WIND     1     2       04/13     10     Economic     Local     WIND     1     1 <td>04/13</td> <td>1</td> <td>Economic</td> <td>Local</td> <td>WIND</td> <td>6</td> <td>11</td>	04/13	1	Economic	Local	WIND	6	11
04/13     3     Economic     Local     WIND     2     8       04/13     3     Economic     System     WIND     0     0       04/13     4     Economic     Local     WIND     3     9       04/13     4     Economic     System     WIND     1     1       04/13     5     Economic     Local     WIND     0     0       04/13     6     Economic     Local     WIND     0     0       04/13     6     Economic     Local     WIND     0     0       04/13     6     Economic     Local     SOLR     238     944       04/13     8     Economic     Local     WIND     1     2       04/13     9     Economic     Local     WIND     1     2       04/13     9     Economic     Local     WIND     4     5       04/13     10     Economic     Local     WIND     17     85 <	04/13	2	Economic	Local	WIND	1	
04/13     3     Economic     System     WIND     0       04/13     4     Economic     Local     WIND     3     9       04/13     4     Economic     System     WIND     1     1       04/13     5     Economic     Local     WIND     0     0       04/13     6     Economic     Local     WIND     0     0       04/13     6     Economic     Local     WIND     0     0       04/13     6     Economic     Local     WIND     1     6       04/13     8     Economic     Local     WIND     1     2       04/13     8     Economic     Local     WIND     1     2       04/13     9     Economic     Local     WIND     4     5       04/13     10     Economic     Local     WIND     17     85       04/13     10     Economic     Local     WIND     17     85	04/13	2	Economic	System	WIND	2	22
04/13     4     Economic     Local     WIND     3     9       04/13     4     Economic     System     WIND     1     1       04/13     5     Economic     Local     WIND     2     10       04/13     6     Economic     System     WIND     0     0       04/13     6     Economic     Local     WIND     1     6       04/13     6     Economic     Local     SOLR     238     944       04/13     8     Economic     Local     SOLR     238     944       04/13     8     Economic     Local     WIND     1     2       04/13     9     Economic     Local     SOLR     1792     3042       04/13     10     Economic     Local     WIND     4     5       04/13     10     Economic     Local     WIND     17     85       04/13     11     Economic     Local     WIND     4 <td< td=""><td>04/13</td><td>3</td><td>Economic</td><td>Local</td><td>WIND</td><td>2</td><td>8</td></td<>	04/13	3	Economic	Local	WIND	2	8
04/13     4     Economic     System     WIND     1       04/13     5     Economic     Local     WIND     2     10       04/13     5     Economic     System     WIND     0     0       04/13     6     Economic     Local     WIND     1     6       04/13     8     Economic     Local     SOLR     238     944       04/13     8     Economic     Local     WIND     1     2       04/13     8     Economic     Local     WIND     1     2       04/13     9     Economic     Local     WIND     4     5       04/13     9     Economic     Local     WIND     4     5       04/13     10     Economic     Local     WIND     17     85       04/13     10     Economic     Local     WIND     4     14       04/13     11     Economic     Local     WIND     131     150 <t< td=""><td>04/13</td><td>3</td><td>Economic</td><td>System</td><td>WIND</td><td>0</td><td></td></t<>	04/13	3	Economic	System	WIND	0	
04/13     5     Economic     Local     WIND     2     10       04/13     5     Economic     System     WIND     0     0       04/13     6     Economic     Local     WIND     1     6       04/13     8     Economic     System     WIND     1     6       04/13     8     Economic     Local     SOLR     238     944       04/13     8     Economic     Local     WIND     1     2       04/13     9     Economic     Local     WIND     1     2       04/13     9     Economic     Local     WIND     4     5       04/13     10     Economic     Local     WIND     17     85       04/13     10     Economic     Local     WIND     17     85       04/13     11     Economic     Local     WIND     1     14       04/13     11     Economic     Local     WIND     13     150<	04/13	4	Economic	Local	WIND	3	9
04/13     5     Economic     System     WIND     0       04/13     6     Economic     Local     WIND     0       04/13     6     Economic     System     WIND     1     6       04/13     8     Economic     Local     SOLR     238     944       04/13     8     Economic     Local     WIND     1     2       04/13     9     Economic     Local     SOLR     1792     3042       04/13     9     Economic     Local     WIND     4     5       04/13     10     Economic     Local     WIND     17     85       04/13     10     Economic     Local     WIND     17     85       04/13     11     Economic     Local     WIND     4     14       04/13     11     Economic     Local     WIND     131     150       04/13     11     Economic     Local     WIND     17     61	04/13	4	Economic	System	WIND	1	
04/13     6     Economic     Local     WIND     0       04/13     6     Economic     System     WIND     1     6       04/13     8     Economic     Local     SOLR     238     944       04/13     8     Economic     Local     WIND     1     2       04/13     9     Economic     Local     SOLR     1792     3042       04/13     9     Economic     Local     WIND     4     5       04/13     10     Economic     Local     SOLR     3659     4411       04/13     10     Economic     Local     WIND     17     85       04/13     10     Economic     Local     WIND     17     85       04/13     11     Economic     Local     SOLR     4738     4958       04/13     11     Economic     Local     WIND     13     150       04/13     12     Economic     Local     SOLR     4759     4	04/13	5	Economic	Local	WIND	2	10
04/13     6     Economic     System     WIND     1     6       04/13     8     Economic     Local     SOLR     238     944       04/13     8     Economic     Local     WIND     1     2       04/13     9     Economic     Local     SOLR     1792     3042       04/13     9     Economic     Local     WIND     4     5       04/13     10     Economic     Local     SOLR     3659     4411       04/13     10     Economic     Local     WIND     17     85       04/13     10     Economic     System     WIND     4     14       04/13     11     Economic     Local     SOLR     4738     4958       04/13     11     Economic     Local     WIND     131     150       04/13     12     Economic     Local     SOLR     4759     4997       04/13     12     Economic     Local     WIND	04/13	5	Economic	System	WIND	0	
04/13     8     Economic     Local     SOLR     238     944       04/13     8     Economic     Local     WIND     1     2       04/13     9     Economic     Local     SOLR     1792     3042       04/13     9     Economic     Local     WIND     4     5       04/13     10     Economic     Local     WIND     17     85       04/13     10     Economic     Local     WIND     4     14       04/13     10     Economic     System     WIND     4     14       04/13     11     Economic     Local     WIND     131     150       04/13     11     Economic     Local     WIND     1     1       04/13     11     Economic     System     WIND     1     1       04/13     12     Economic     Local     WIND     17     61       04/13     12     Economic     System     WIND     4	04/13	6	Economic	Local	WIND	0	
04/13     8     Economic     Local     WIND     1     2       04/13     9     Economic     Local     SOLR     1792     3042       04/13     9     Economic     Local     WIND     4     5       04/13     10     Economic     Local     WIND     17     85       04/13     10     Economic     System     WIND     4     14       04/13     11     Economic     Local     SOLR     4738     4958       04/13     11     Economic     Local     WIND     131     150       04/13     11     Economic     Local     WIND     1     1       04/13     11     Economic     System     WIND     1     1       04/13     12     Economic     Local     WIND     17     61       04/13     12     Economic     System     WIND     4     3       04/13     12     Economic     System     WIND     52 <td>04/13</td> <td>6</td> <td>Economic</td> <td>System</td> <td>WIND</td> <td>1</td> <td>6</td>	04/13	6	Economic	System	WIND	1	6
04/13     9     Economic     Local     SOLR     1792     3042       04/13     9     Economic     Local     WIND     4     5       04/13     10     Economic     Local     SOLR     3659     4411       04/13     10     Economic     Local     WIND     17     85       04/13     10     Economic     System     WIND     4     14       04/13     11     Economic     Local     SOLR     4738     4958       04/13     11     Economic     Local     WIND     131     150       04/13     11     Economic     System     WIND     1     1       04/13     12     Economic     Local     SOLR     4759     4997       04/13     12     Economic     Local     WIND     17     61       04/13     12     SelfSchCut     Local     SOLR     1       04/13     13     Economic     Local     WIND     52	04/13	8	Economic	Local	SOLR	238	944
04/13     9 Economic     Local     WIND     4     5       04/13     10 Economic     Local     SOLR     3659     4411       04/13     10 Economic     Local     WIND     17     85       04/13     10 Economic     System     WIND     4     14       04/13     11 Economic     Local     SOLR     4738     4958       04/13     11 Economic     Local     WIND     131     150       04/13     11 Economic     System     WIND     1     1       04/13     12 Economic     Local     SOLR     4759     4997       04/13     12 Economic     Local     WIND     17     61       04/13     12 Economic     System     WIND     4     3       04/13     12 SelfSchCut     Local     SOLR     1       04/13     13 Economic     Local     WIND     52     135       04/13     13 Economic     System     SOLR     996       04/13 <td< td=""><td>04/13</td><td>8</td><td>Economic</td><td>Local</td><td>WIND</td><td>1</td><td>2</td></td<>	04/13	8	Economic	Local	WIND	1	2
04/13     10     Economic     Local     SOLR     3659     4411       04/13     10     Economic     Local     WIND     17     85       04/13     10     Economic     System     WIND     4     14       04/13     11     Economic     Local     SOLR     4738     4958       04/13     11     Economic     Local     WIND     131     150       04/13     11     Economic     System     WIND     1     1       04/13     12     Economic     Local     SOLR     4759     4997       04/13     12     Economic     Local     WIND     17     61       04/13     12     Economic     System     WIND     4     3       04/13     12     SelfSchCut     Local     SOLR     3574     5401       04/13     13     Economic     Local     WIND     52     135       04/13     13     Economic     System     SOLR <td>04/13</td> <td>9</td> <td>Economic</td> <td>Local</td> <td>SOLR</td> <td>1792</td> <td>3042</td>	04/13	9	Economic	Local	SOLR	1792	3042
04/13     10     Economic     Local     WIND     17     85       04/13     10     Economic     System     WIND     4     14       04/13     11     Economic     Local     SOLR     4738     4958       04/13     11     Economic     Local     WIND     131     150       04/13     11     Economic     System     WIND     1     1       04/13     12     Economic     Local     SOLR     4759     4997       04/13     12     Economic     Local     WIND     17     61       04/13     12     Economic     System     WIND     4     3       04/13     12     SelfSchCut     Local     SOLR     1       04/13     13     Economic     Local     SOLR     3574     5401       04/13     13     Economic     Local     WIND     52     135       04/13     13     Economic     System     WIND     21	04/13	9	Economic	Local	WIND	4	5
04/13     10     Economic     System     WIND     4     14       04/13     11     Economic     Local     SOLR     4738     4958       04/13     11     Economic     Local     WIND     131     150       04/13     11     Economic     System     WIND     1     1       04/13     12     Economic     Local     SOLR     4759     4997       04/13     12     Economic     Local     WIND     17     61       04/13     12     Economic     System     WIND     4     3       04/13     12     SelfSchCut     Local     SOLR     1       04/13     13     Economic     Local     SOLR     3574     5401       04/13     13     Economic     Local     WIND     52     135       04/13     13     Economic     System     SOLR     996       04/13     13     Economic     System     WIND     21	04/13	10	Economic	Local	SOLR	3659	4411
04/13     11     Economic     Local     SOLR     4738     4958       04/13     11     Economic     Local     WIND     131     150       04/13     11     Economic     System     WIND     1     4759     4997       04/13     12     Economic     Local     WIND     17     61       04/13     12     Economic     System     WIND     4     3       04/13     12     SelfSchCut     Local     SOLR     1       04/13     13     Economic     Local     SOLR     3574     5401       04/13     13     Economic     Local     WIND     52     135       04/13     13     Economic     System     SOLR     996       04/13     13     Economic     System     WIND     21       04/13     14     Economic     Local     SOLR     3397     3884	04/13	10	Economic	Local	WIND	17	85
04/13     11     Economic     Local     WIND     131     150       04/13     11     Economic     System     WIND     1       04/13     12     Economic     Local     SOLR     4759     4997       04/13     12     Economic     Local     WIND     17     61       04/13     12     Economic     System     WIND     4     3       04/13     12     SelfSchCut     Local     SOLR     1       04/13     13     Economic     Local     SOLR     3574     5401       04/13     13     Economic     Local     WIND     52     135       04/13     13     Economic     System     SOLR     996       04/13     13     Economic     System     WIND     21       04/13     14     Economic     Local     SOLR     3397     3884	04/13	10	Economic	System	WIND	4	14
04/13     11     Economic     System     WIND     1       04/13     12     Economic     Local     SOLR     4759     4997       04/13     12     Economic     Local     WIND     17     61       04/13     12     Economic     System     WIND     4     3       04/13     12     SelfSchCut     Local     SOLR     1       04/13     13     Economic     Local     SOLR     3574     5401       04/13     13     Economic     Local     WIND     52     135       04/13     13     Economic     System     SOLR     996       04/13     13     Economic     System     WIND     21       04/13     14     Economic     Local     SOLR     3397     3884	04/13	11	Economic	Local	SOLR	4738	4958
04/13   12 Economic   Local   SOLR   4759   4997     04/13   12 Economic   Local   WIND   17   61     04/13   12 Economic   System   WIND   4   3     04/13   12 SelfSchCut   Local   SOLR   1     04/13   13 Economic   Local   SOLR   3574   5401     04/13   13 Economic   Local   WIND   52   135     04/13   13 Economic   System   SOLR   996     04/13   13 Economic   System   WIND   21     04/13   14 Economic   Local   SOLR   3397   3884	04/13	11	Economic	Local	WIND	131	150
04/13   12   Economic   Local   WIND   17   61     04/13   12   Economic   System   WIND   4   3     04/13   12   SelfSchCut   Local   SOLR   1     04/13   13   Economic   Local   SOLR   3574   5401     04/13   13   Economic   Local   WIND   52   135     04/13   13   Economic   System   SOLR   996     04/13   13   Economic   System   WIND   21     04/13   14   Economic   Local   SOLR   3397   3884	04/13	11	Economic	System	WIND	1	
04/13     12     Economic     System     WIND     4     3       04/13     12     SelfSchCut     Local     SOLR     1       04/13     13     Economic     Local     SOLR     3574     5401       04/13     13     Economic     Local     WIND     52     135       04/13     13     Economic     System     SOLR     996       04/13     13     Economic     System     WIND     21       04/13     14     Economic     Local     SOLR     3397     3884	04/13	12	Economic	Local	SOLR	4759	4997
04/13     12     SelfSchCut     Local     SOLR     1       04/13     13     Economic     Local     SOLR     3574     5401       04/13     13     Economic     Local     WIND     52     135       04/13     13     Economic     System     SOLR     996       04/13     13     Economic     System     WIND     21       04/13     14     Economic     Local     SOLR     3397     3884	04/13	12	Economic	Local	WIND	17	61
04/13     13 Economic     Local     SOLR     3574     5401       04/13     13 Economic     Local     WIND     52     135       04/13     13 Economic     System     SOLR     996       04/13     13 Economic     System     WIND     21       04/13     14 Economic     Local     SOLR     3397     3884	04/13	12	Economic	System	WIND	4	3
04/13     13 Economic     Local     WIND     52     135       04/13     13 Economic     System     SOLR     996       04/13     13 Economic     System     WIND     21       04/13     14 Economic     Local     SOLR     3397     3884	04/13	12	SelfSchCut	Local	SOLR	1	
04/13     13 Economic     System     SOLR     996       04/13     13 Economic     System     WIND     21       04/13     14 Economic     Local     SOLR     3397     3884	04/13	13	Economic	Local	SOLR	3574	5401
04/13     13 Economic     System     WIND     21       04/13     14 Economic     Local     SOLR     3397     3884	04/13	13	Economic	Local	WIND	52	135
04/13	04/13	13	Economic	System	SOLR	996	
	04/13	13	Economic	System	WIND	21	
04/13	04/13	14	Economic	Local	SOLR	3397	3884
	04/13	14	Economic	Local	WIND	35	29



	113	SOLR	System	4 Economic	14	04/13
33	13	WIND	System	4 Economic	14	04/13
	3	SOLR	Local	4 SelfSchCut	14	04/13
3648	3013	SOLR	Local	5 Economic	15	04/13
88	54	WIND	Local	5 Economic	15	04/13
	417	SOLR	System	5 Economic	15	04/13
	9	WIND	System	5 Economic	15	04/13
1	0	SOLR	Local	5 SelfSchCut	15	04/13
3057	2785	SOLR	Local	6 Economic	16	04/13
71	26	WIND	Local	6 Economic	16	04/13
	14	SOLR	System	6 Economic	16	04/13
	9	WIND	System	6 Economic	16	04/13
2718	2373	SOLR	Local	7 Economic	17	04/13
36	49	WIND	Local	7 Economic	17	04/13
11	4	WIND	System	7 Economic	17	04/13
646	786	SOLR	Local	8 Economic	18	04/13
19	28	WIND	Local	8 Economic	18	04/13
1793	149	SOLR	System	8 Economic	18	04/13
38	3	WIND	System	8 Economic	18	04/13
93	21	SOLR	Local	9 Economic	19	04/13
	4	SOLR	System	9 Economic	19	04/13
	0	WIND	Local	3 Economic	23	04/13
6	1	WIND	System	3 Economic	23	04/13

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.