Working With Max Demand Export Data

Overview

As of firmware version 3.1.10, the eGauge supports rolling max demand exports through the CSV export function built into the main graph page. These exports contain a rolling average over the past X minutes with a data point presented at the interval requested when creating the export.

Many utilities bill based on rolling max demand averages in additional to total kWh consumption. While it's possible to obtain a rolling max demand average using minute-granular data from a meter, the process is involved and the data overhead is quite large (data for every minute over the period must be downloaded, then the user must calculate a set of rolling averages for each interval, and record the maximum average for an interval). For example, a rolling max demand export over the past 30 days would return 2880 data points (one point every fifteen minutes), while a minute-granular export for the same period would contain 43200 data points (one point every minute).

eGauge Systems cannot assist with utility reconciliation or questions about the billing process used by a specific utility. You'll need to reach out to your utility for assistance with this.

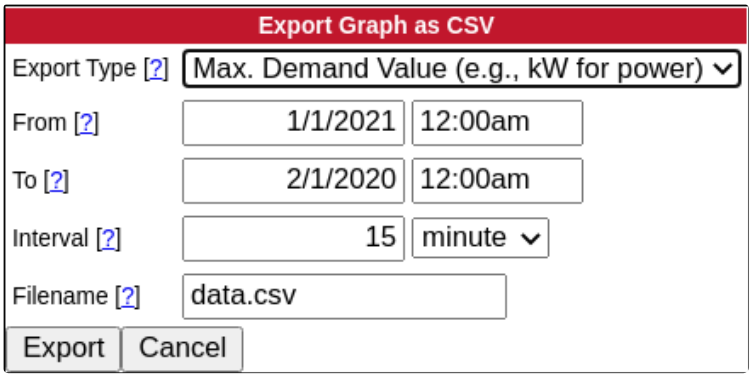
Verifying Settings

The max demand export calculates a rolling average which is X minutes long. X is defined by the value selected for "Length of a demand interval" under **Settings -> Preferences**.

This value can be adjusted in one minute increments, from 15 to 60 minutes. Your utility should make their demand interval public (although it may be necessary to contact the utility directly to get this information). eGauge Systems cannot advise as to the correct value to select for this option.

Performing An Export

To perform a max demand export, use the dropdown menu in the top left corner of the main graph page. The export window should look something like the following image. Note that the export type is set to "Max. Demand Value" and the interval is set to 15 minutes.



The export interval setting **is not the same as the length of a demand interval setting**. The former determines how often a data point is returned (eg, one data point for every 15 minute period) while the latter determines the length of the demand interval (eg, how many data points are included when calculating an average).

In other words, a single data point in a max demand export can be described as "the average peak demand over the past N minutes for the time period from XX:XX to YY:YY with a data point every Z minutes", where N is the "Length of a demand interval" setting, XX:XX is the starting time of the export, YY:YY is the ending time of the export, and Z is the export interval.

Example Data

In the example below, two data sets were obtained from the same meter. The first data set (columns A and B) is a minute-granular average value export. The second data set (columns G and H) is max demand data from the same period, with a 15 minute demand interval and a 15 minute export interval.

	A	B	C	D	E	F	G	H
1	Minute-granular data			Rolling average from minute-granular data			Max Demand data	
2								
3	Date & Time	Usage [kW]		Average from	Rolling Average		Date & Time	Usage [kW]
4	2021-01-28 13:59:00	55.089283333		13:45-14:00	56.7900211111		2021-01-28 14:00:00	56.7900009
5	2021-01-28 13:58:00	56.49275		13:44-13:59	56.5595088889		2021-01-28 13:45:00	52.3419991
6	2021-01-28 13:57:00	56.900633333		13:43-13:58	56.2174022222		2021-01-28 13:30:00	54.0769997
7	2021-01-28 13:56:00	57.765366667		etc	55.8321444445		2021-01-28 13:15:00	51.6069984
8	2021-01-28 13:55:00	60.395766667			55.4234922222		2021-01-28 13:00:00	48.5709991
9	2021-01-28 13:54:00	56.6279			54.9259544444		2021-01-28 12:45:00	48.7529984
10	2021-01-28 13:53:00	57.475966667			54.6246155555		2021-01-28 12:30:00	47.9659996
11	2021-01-28 13:52:00	57.564466667			54.2360833333		2021-01-28 12:15:00	49.1230011
12	2021-01-28 13:51:00	58.2063			53.8801266666		2021-01-28 12:00:00	49.1749992
13	2021-01-28 13:50:00	55.730083333			53.2236766666		2021-01-28 11:45:00	53.9049988
14	2021-01-28 13:49:00	55.256983333			52.6654633333		2021-01-28 11:30:00	56.8689995
15	2021-01-28 13:48:00	54.837833333			52.0963011111		2021-01-28 11:15:00	57.1749992
16	2021-01-28 13:47:00	52.859533333			51.6740511111		2021-01-28 11:00:00	54.1669998
17	2021-01-28 13:46:00	61.186466667			51.6769844444			
18	2021-01-28 13:45:00	55.460983333		13:30-13:45	51.5543422221			
19	2021-01-28 13:44:00	51.6316		13:29-13:44	51.2030555555			
20	2021-01-28 13:43:00	51.36115		13:28-13:43	51.0654799999			
21	2021-01-28 13:42:00	51.121766667		etc	50.9269777777			
22	2021-01-28 13:41:00	51.635583333			50.7804288888			
23	2021-01-28 13:40:00	52.9327			50.7078866666			
24	2021-01-28 13:39:00	52.107816667			50.4607111111			
25	2021-01-28 13:38:00	51.647983333			50.6825277777			
26	2021-01-28 13:37:00	52.225116667			50.5729288889			
27	2021-01-28 13:36:00	48.35955			50.5417255555			
28	2021-01-28 13:35:00	47.356883333			51.1233977777			
29	2021-01-28 13:34:00	46.71955			51.6241911111			
30	2021-01-28 13:33:00	48.504083333			51.9212866666			
31	2021-01-28 13:32:00	52.903533333			52.0759266666			
32	2021-01-28 13:31:00	59.346833333			52.2548322222			
33	2021-01-28 13:30:00	50.191683333		13:15-13:30	51.6948977778			
34	2021-01-28 13:29:00	49.567966667		13:14-13:29	52.2043133334			
35	2021-01-28 13:28:00	49.283616667		13:13-13:28	52.4247444445			
36	2021-01-28 13:27:00	48.923533333		etc	53.0138922222			
37	2021-01-28 13:26:00	50.54745			53.3614977778			
38	2021-01-28 13:25:00	49.225066667			53.5938622223			
39	2021-01-28 13:24:00	55.435066667			53.9187677778			
40	2021-01-28 13:23:00	50.004			53.7153766667			
41	2021-01-28 13:22:00	51.757066667			54.0772077778			
42	2021-01-28 13:21:00	57.084633333			53.8461433333			
43	2021-01-28 13:20:00	54.868783333			53.5020177778			
44	2021-01-28 13:19:00	51.175983333			53.1382655556			
45	2021-01-28 13:18:00	50.823683333			53.3412022223			
46	2021-01-28 13:17:00	55.587116667			53.3585811112			
47	2021-01-28 13:16:00	50.947816667			52.6938211112			
48	2021-01-28 13:15:00	57.832916667			52.3805677779			

Column E contains a rolling 15 minute average calculated from the minute granular data in column B (the "Length of a demand interval" value). The blue outlines represent 15 minute intervals (the export interval value).

The colored values in column E are the highest value peak) for each 15 minute interval (one per blue box). They are color coded to tie to the same values in the max demand data (column H). Note that these aren't perfect matches - the process used by the eGauge is slightly different, so there will be small differences due to rounding and granularity.

Please visit kb.egauge.net for the most up-to-date documentation.