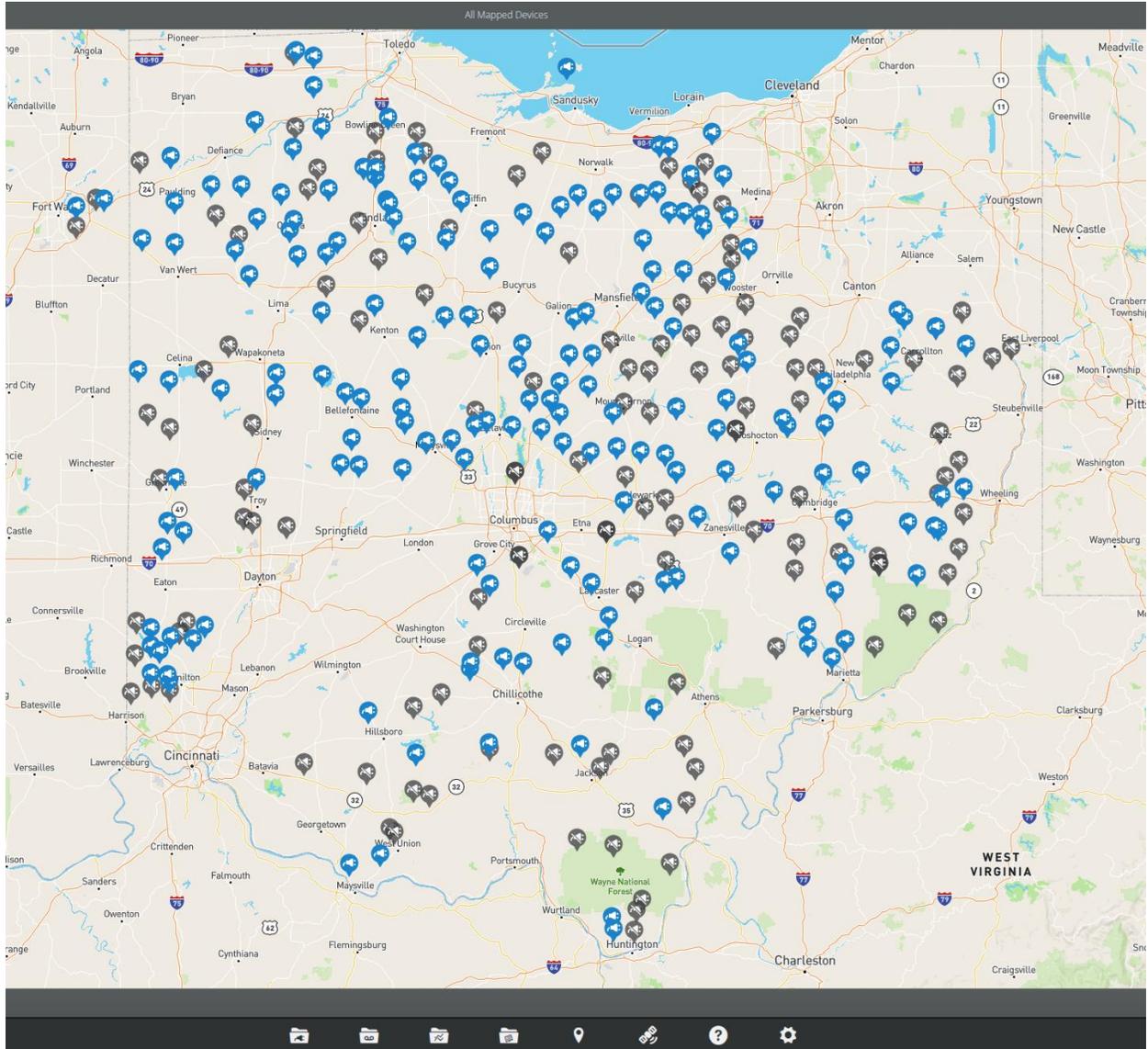


Power Monitors, Inc.: RFI Response

5) Example of the interactive map interface in PQ Canvass showing the device status for all units currently deployed for a single utility:



Blue = within programmed thresholds and online

Black = Offline

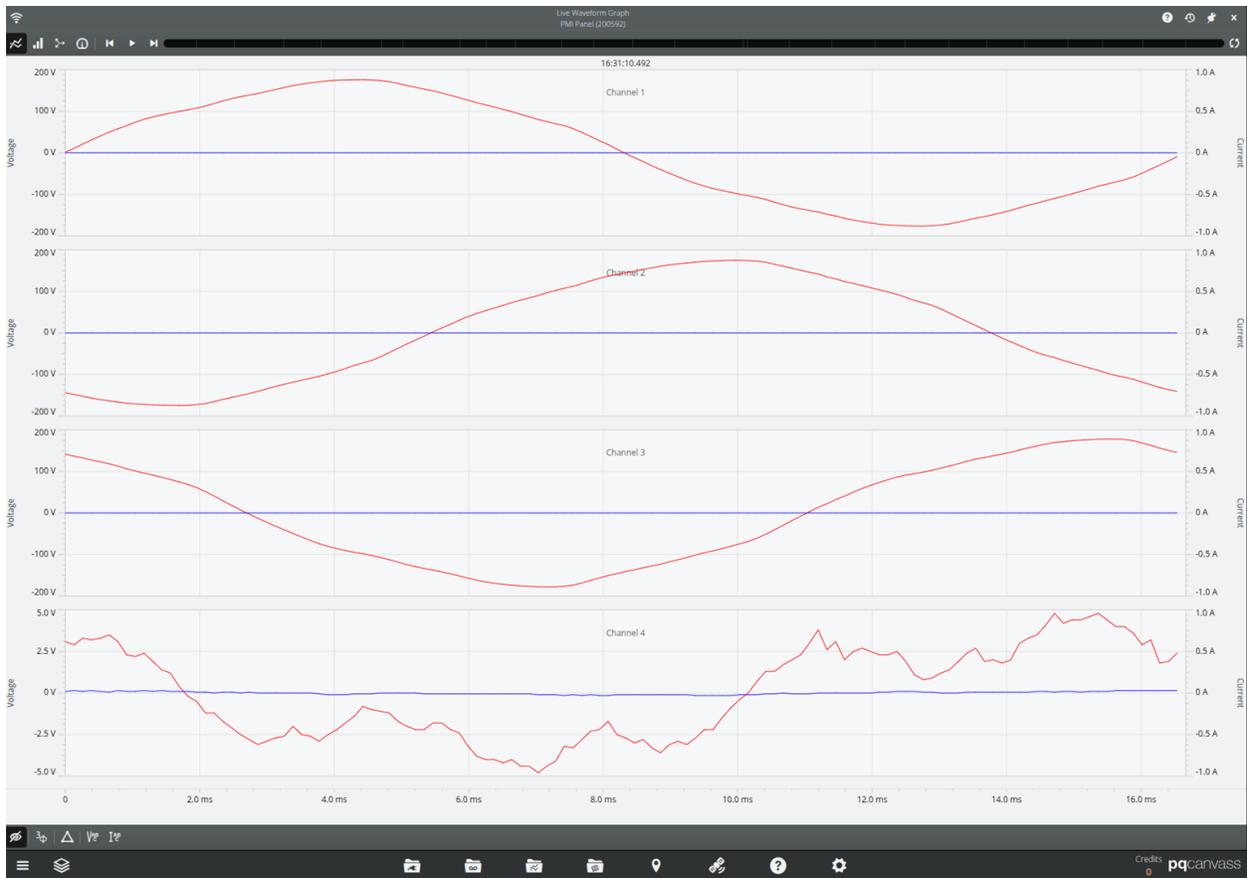
Orange = outside of user-defined thresholds (in "alert state")

Hovering over a device shows the current status, user-defined label and serial number. Clicking on the device launches a data inspection windows where the user can request realtime, streaming readings or look at historical data.

7) Extensive information about each device in PQ canvass can easily be retrieved and viewed within the application by clicking on the device in the map:



Additionally, PQ Canvass allows users to easily retrieve live realtime waveforms and live meter readings from PMI devices:



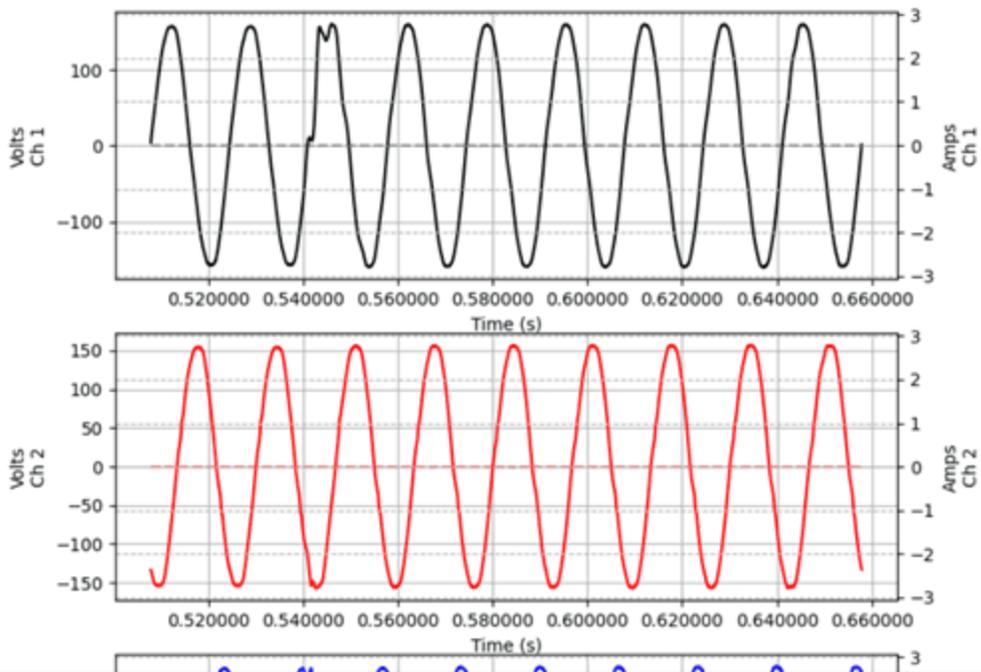
	Ch 1	Ch 2	Ch 3	Ch 4
RMS Voltage	120.5 V	120.6 V	121.0 V	2.8 V
RMS Current	0.0 A	0.0 A	0.0 A	0.0 A
Real Power	0.00 kW	0.00 kW	0.00 kW	0.00 kW
Voltage THD	4.4%	3.5%	5.1%	44.8%
Current THD	0.0%	0.0%	0.0%	44.3%
Voltage Phase Angle	0°	241°	121°	134°
Current Phase Angle	90°	90°	90°	100°
Voltage Crest Factor	1.46	1.45	1.47	0.00
Current Crest Factor	0.00	0.00	0.00	0.00
Current K-Factor	0.00	0.00	0.00	45.17
Symmetrical Components		Voltage		Current
Positive Magnitude		120.57 V		0.00 A
Negative Magnitude		0.74 V		0.00 A
Zero Magnitude		0.51 V		0.00 A
Positive Phase		-89°		0°
Negative Phase		151°		0°
Zero Phase		-162°		0°
Unbalance		0.62%		0.00%

13) Example of our near-realtime email based alerting:

Waveform Capture for Cocoplum 3266 (SN: 300746)

02-04-2023 10:29:20.507942090 EDT

Device Label Cocoplum 3266
Device Serial Number 300746
Type Voltage Percentage
Cycle Number 30
Trigger Channel 3
GPS Lock Yes
Distribution List gps waveforms



Additionally, PQ Canvass can provide substation health reports showing weekly user-configurable health scores.

WARNING: Fault with no downstream protection found at Homeland Feeder 8661 Phase B, duration 50 cycles
WARNING: Fault with no downstream protection found at Homeland Feeder 8662 Phase B, duration 82 cycles
WARNING: Fault with no downstream protection found at Homeland Feeder 8662 Phase B, duration 52 cycles
WARNING: Fault with no downstream protection found at Homeland Feeder 8664 Phase B, duration 37 cycles
WARNING: Fault with no downstream protection found at Homeland Feeder 8664 Phase C, duration 38 cycles
WARNING: Fault with no downstream protection found at Homeland Feeder 8669 Phase A, duration 31 cycles
WARNING: Fault with no downstream protection found at Homeland Feeder 8669 Phase B, duration 39 cycles
WARNING: Fault with no downstream protection found at Homeland Feeder 8669 Phase B, duration 48 cycles

This chart compares the reporting period 2023-05-14-2023-05-21 to the reporting period 2023-05-07-2023-05-14.

Substation	Feeder	Phase	Health		Prefaults		Faults		% Time in Interruption		THD		Unbalance		PF	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
	6762	B	11	77	10	0	9	0	0%	0%	41.29%	45.71%	0.00%	0.00%	0.00	0.00
	6762	C	33	72	4	0	7	0	0%	0%	57.37%	54.94%	0.00%	0.00%	0.00	0.00
	6762	A	41	66	2	0	6	0	0%	0%	67.61%	66.08%	0.00%	0.00%	0.00	0.00
	6767	A	26	55	3	0	7	0	0%	0%	88.74%	88.29%	0.00%	0.00%	0.00	0.00
	6767	B	36	66	4	0	6	0	0%	0%	63.37%	66.07%	0.00%	0.00%	0.00	0.00
	6767	C	48	56	3	1	4	1	0%	0%	68.42%	71.02%	0.00%	0.00%	0.00	0.00
	6763	B	41	60	3	2	6	1	0%	0%	59.12%	57.93%	0.00%	0.00%	0.00	0.00
	6763	A	57	55	5	2	1	1	0%	0%	67.94%	66.37%	0.00%	0.00%	0.00	0.00
	6763	C	70	67	0	0	2	1	0%	0%	57.48%	55.01%	0.00%	0.00%	0.00	0.00
	8662	B	46	50	0	0	4	0	0%	0%	99.99%	100.00%	0.00%	0.00%	0.00	0.00
	8662	A	50	50	2	0	2	0	0%	0%	100.00%	100.00%	0.00%	0.00%	0.00	0.00
	8662	C	56	50	0	0	2	0	0%	0%	100.00%	100.00%	0.00%	0.00%	0.00	0.00
	6764	A	47	66	5	0	3	0	0%	0%	67.63%	66.02%	0.00%	0.00%	0.00	0.00
	6764	B	51	71	3	0	4	0	0%	0%	59.03%	57.80%	0.00%	0.00%	0.00	0.00
	6764	C	70	72	0	0	2	0	0%	0%	57.48%	55.00%	0.00%	0.00%	0.00	0.00
	8663	B	49	47	1	1	3	0	0%	0%	98.61%	99.19%	0.00%	0.00%	0.00	0.00
	8663	A	67	50	0	0	0	0	0%	0%	98.61%	99.19%	0.00%	0.00%	0.00	0.00
	8663	C	67	47	0	1	0	0	0%	0%	98.61%	99.19%	0.00%	0.00%	0.00	0.00
	8669	C	53	54	2	0	2	1	0%	0%	90.31%	80.62%	0.00%	0.00%	0.00	0.00
	8669	B	57	50	1	0	2	2	0%	0%	87.22%	78.35%	0.00%	0.00%	0.00	0.00
	8669	A	63	47	0	1	1	1	0%	0%	95.89%	88.42%	0.00%	0.00%	0.00	0.00
	8661	A	58	29	0	2	0	0	0%	0%	94.72%	99.20%	29.67%	30.22%	0.00	0.00
	8661	C	58	25	0	0	0	2	0%	0%	94.72%	99.20%	29.67%	30.22%	0.00	0.00
	8661	B	73	55	0	0	1	2	0%	0%	34.66%	39.12%	29.67%	30.22%	0.00	0.00
	6363	C	59	0	0	0	1	0	100%	100%	100.00%	100.00%	0.00%	0.00%	6.00	6.00
	6363	B	94	99	0	0	1	0	0%	0%	0.31%	0.31%	0.00%	0.00%	0.00	0.00
	6363	A	96	99	1	0	0	0	0%	0%	0.31%	0.30%	0.00%	0.00%	0.00	0.00
	7665	C	59	62	1	1	4	3	0%	0%	52.48%	39.14%	0.00%	0.00%	0.00	0.00
	7665	B	68	65	0	1	1	0	0%	0%	73.16%	63.54%	0.00%	0.00%	6.00	6.00

15) Example of Merlin auto-flagging invalid waveform captures:

The screenshot displays the Guardian+ web interface for a power monitoring report titled "Guardian+_25109_03-14-2022_(1).nsf". The browser address bar shows the URL "pqcanvass.powermonitors.com/?type=1&id=13150&tab=ai_overview". The interface includes a navigation menu with "Overview", "Recording", and "Info" tabs, and a "Severity" indicator showing 0 Low, 5 Moderate, and 10 High. A left sidebar lists "Report Sections" including Disclaimer, Executive Summary, High Severity Captures, Compliance Summary, Attribution, Summary Of All Captures, Patterns And Likely Origins, Closely Spaced Multi Trigger Events, Junk Waveforms (highlighted), and Steady State Trends. The main content area shows the "Junk Waveforms" section with a text description: "A subset of captures (notably #[6,8,9,12,14,18,25,28,38]) display isolated one-sample spikes or notches on a single voltage channel that create unrealistically high crest factors near 2 pu without corresponding RMS movement or consistent current behavior; these have been treated as recorder artifacts rather than physical disturbances and excluded from compliance and root-cause conclusions, though they slightly reduce overall data quality and warrant awareness when aggregating transient counts." Below this is the "Steady State Trends" section, which states: "Steady-state RMS voltages are very stable across all captures, remaining around 121–122 V on both legs (approximately 1.01–1.02 pu), well within ANSI C84.1 Range A and within the 0.90–1.10 pu band commonly used in IEEE 1159 and ITC for acceptable long-duration service; there is no evidence in these windows of sustained under- or overvoltage. Voltage THD is consistently in the mid-single-digit range (about 4–5 percent) when the monitored service is lightly loaded (for example #[3,13,24,44]) and rises toward roughly 7–10 percent on V2 for several cycles when the high-crest-factor load on I2 conducts strongly (for example #[27,29,30]), then returns toward the 4–5 percent baseline once the pulse ends. This pattern appears repeatedly over the multi-day monitoring period and suggests a combination of feeder-wide harmonic background plus incremental distortion".

See attached: merlin_brochure.pdf

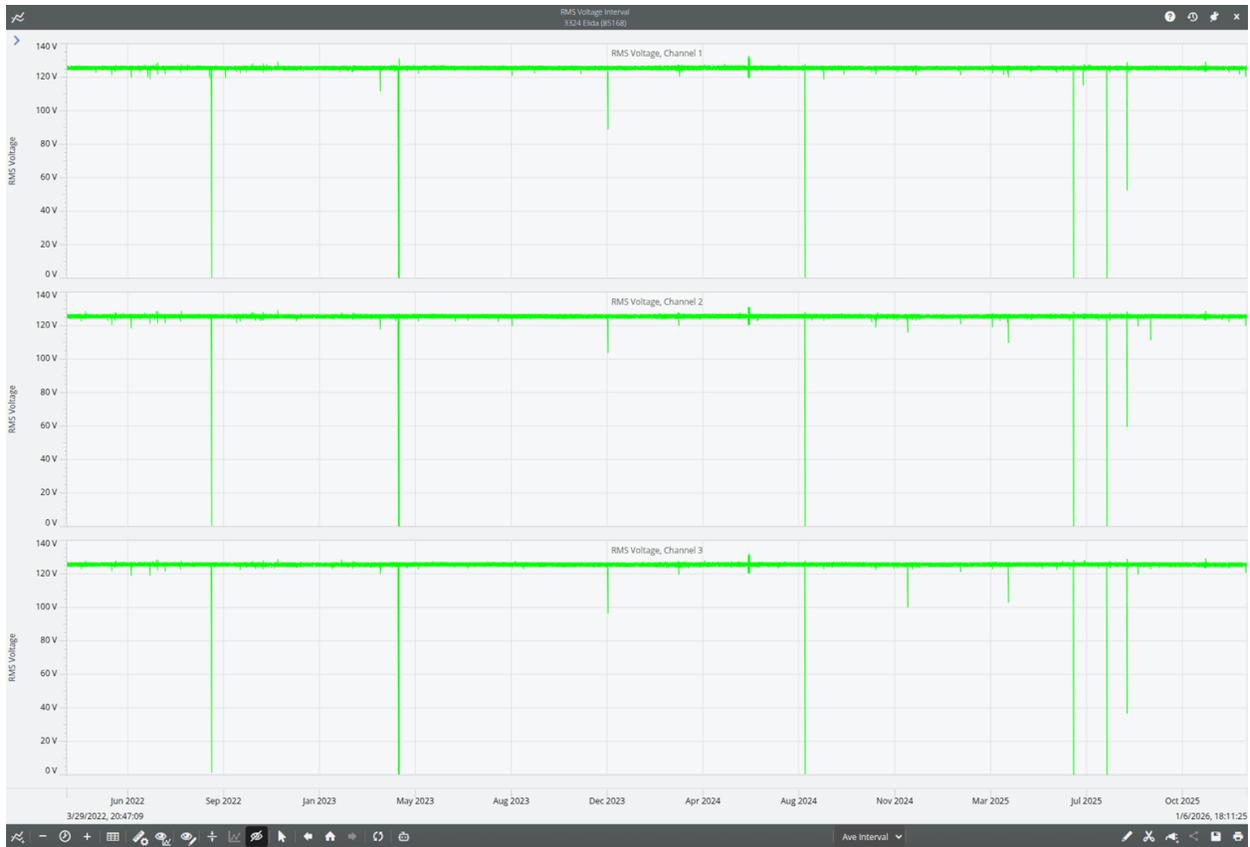
See attached: meet_merlin.pdf

16) See attached: pq_manual.pdf

See attached: pq_quickstart_guide.pdf

See attached: ipsec_vpn.pdf

19) As an example, here is a PMI device showing over 3 years of continuous 1 second RMS voltage for 3 channels:



25) See attached: qualys_scan.pdf

29) See attachments for #25 for example scans.

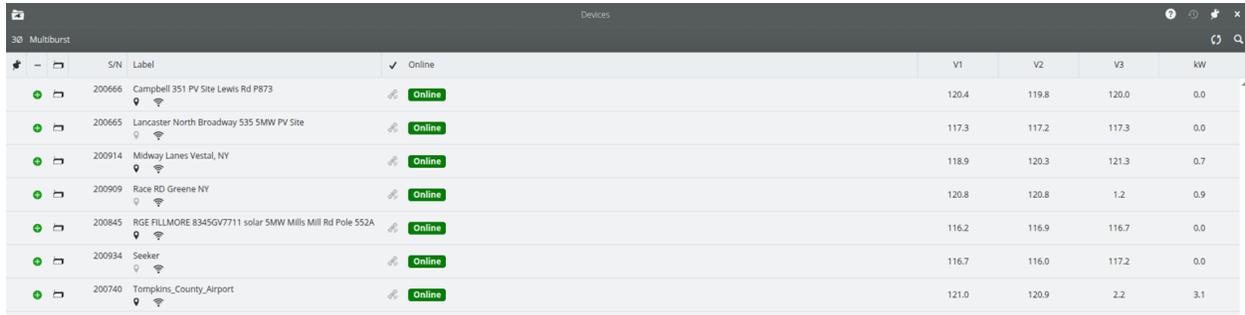
43) See attached: merlin_brochure.pdf

See attached: zcard-merlin.pdf

Visit: <https://pqcanvass.powermonitors.com/demo/> to sign up for a free PQ Canvass and Merlin demo

47) See attached: 2025 Survey Report.pdf

50) PQ Canvass provides a dashboard showing current device status (online, offline, in alert, alert state, GPS lock for PMI GPS-enabled devices, latest voltage readings and total real power).



The screenshot shows a web application window titled "Devices" with a dark header. Below the header is a table with columns for S/N, Label, Online status, V1, V2, V3, and kW. Each row represents a device, with a green dot and "Online" text indicating its status. The table contains 8 rows of data.

S/N	Label	Online	V1	V2	V3	kW
200666	Campbell 351 PV Site Lewis Rd P873	Online	120.4	119.8	120.0	0.0
200665	Lancaster North Broadway 535 5MW PV Site	Online	117.3	117.2	117.3	0.0
200914	Midway Lanes Vestal, NY	Online	118.9	120.3	121.3	0.7
200909	Race Rd Greene NY	Online	120.8	120.8	1.2	0.9
200845	RGE FILLMORE 8345GV7711 solar 5MW Mills Mill Rd Pole 552A	Online	116.2	116.9	116.7	0.0
200934	Seeker	Online	116.7	116.0	117.2	0.0
200740	Tompkins_County_Airport	Online	121.0	120.9	2.2	3.1

53) PQ Canvass can be customized per user allowing selection of timezone and many other items:

User Preferences

Display

Starting Page Help Center ▼

Date & Time

Time Zone America/New York ▼

Day Light Savings

Map

Position Auto ▼

Graphs

Show Beyond 51st Harmonic

Color Scheme ProVision ▼

Legends Follow Cursor ▼

Accessibility

UI Size Small ▼

Smart Tags

Sort Recordings

Reports

IEEE 519 Standard 2022 ▼

PQDIF

RMS Window Period Continuous ▼

Waveform Grouping Window 60 ▼

RMS Size Cycle ▼

Data Source Name Recorder Name ▼

Notifications

Plaintext Alerts

 Save Preferences

58) See response to question 5 to see a graphical display of many hundreds of devices plotted on a map. See response to question 19 for a 1-second RMS average voltage graph for 3 channels of voltage over the course of 3 years.

60) Merlin, PMI's AI PQ analysis system provides overviews and detailed analysis covering myriad PQ topics and PQ data records and sources. Merlin can reduce the average amount of time spent on a PQ investigation from hours to just minutes.

