

Application Note – Advanced Power Charts (Reactive Power and Power Factor) in the Monitoring Platform

Version History

- Version 1.0 (July 2019) – Initial release

Introduction

To improve grid stability, many electric utilities are requiring control of inverter's active and reactive power by various mechanisms. To align the system power control equipment needs and utility regulations, the SolarEdge monitoring platform provides visibility to advanced power charts including reactive power and power factor measurements.

To learn about the available advanced power configuration options in the inverters and adjust these settings if such changes are required click [here](#).

Advanced Power Charts Availability

The advanced power charts are available for the inverter level only in sites with three phase inverters SE12.5K – SE100K, and supported on both inverters with display and inverters with SetApp configuration; firmware version 3.18xx and above is required for inverters with a display. To download the latest firmware version, go to: <https://www.solaredge.com/service/firmware>.

Generate Advanced Power Charts

To access reactive power and power factor charts:

1. Log in to the monitoring platform (<https://monitoring.solaredge.com>) using your user name and password.
2. Click on a site to access its dashboard.
3. Click the **Charts** icon.
4. Select an inverter or multiple inverters and check the **power factor** or **reactive power** checkboxes.
5. The charts for the set date range will appear.

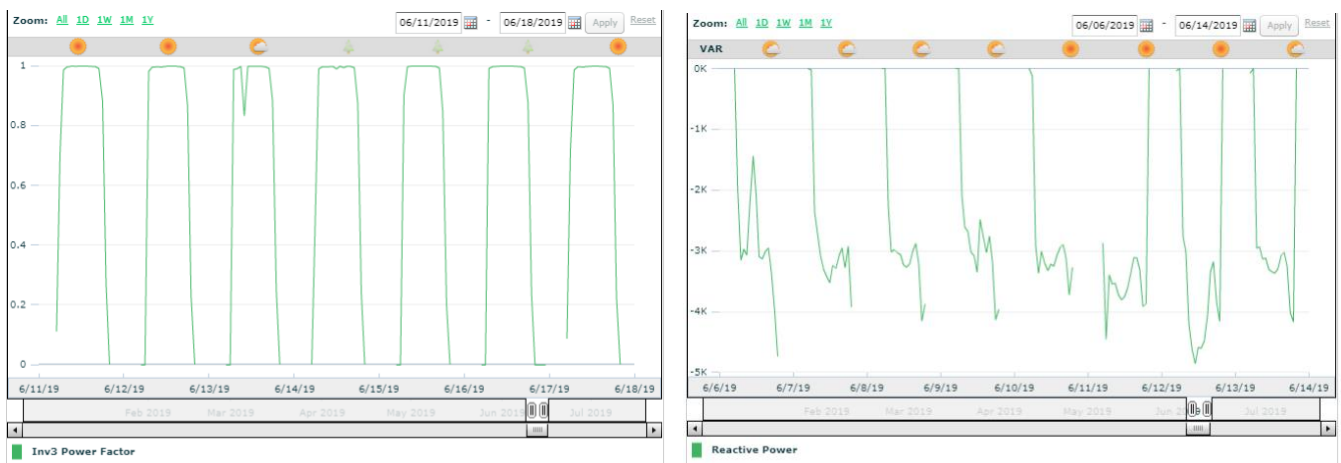


Figure 1: Advanced power Charts Example (Left: Power Factor, Right: Reactive Power)

Frequently Asked Questions

Q: Why do the power factor equal 0?

A: The charts are calculated only for dates starting August 2019, other historical data is not available. In this case, the value of past dates will appear as 0.

Q: Why is there reactive power after the CosPhi is set to 1?

A: Usually, if the CosPhi is configured to 1, it's expected that the reactive power value will be 0. However, due to the existence of harmonic distortions, the reactive power may be larger than 0 even when the CosPhi was set to 1.

Q: Can I view the advanced power charts for the entire site?

A: Currently, the advanced power charts can only be generated for inverters and not for the entire site.

Q: Why are the power factor values not constant, even though I've configured it to be constant?

A: This can happen when the inverter's power output is low and certain distortions might be spotted with the configured CosPhi.