Using *SolarEdge* systems in PV*SOL

Relates to: PV*SOL premium 7.0

Last Updated: 13th July 2014

Scope of this Document:

In PV*SOL you have the ability to model the performance of *SolarEdge* power optimisers and string inverters. However, unlike for other inverters, the configuration has to be first achieved via the manufacturer's software then replicated in PV*SOL to allow the physical module layout, performance comparison and yield estimation to be analysed.

1. Introduction

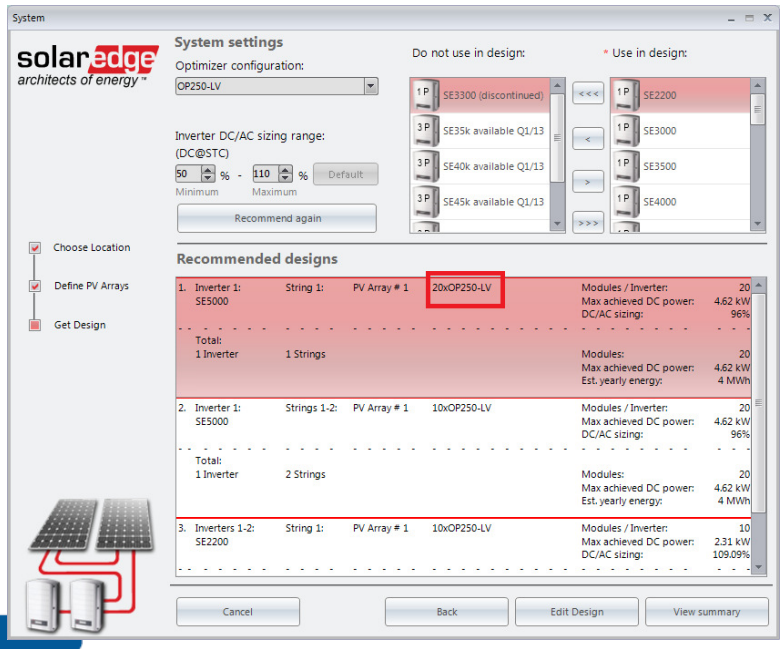
When you select a *SolarEdge* power optimiser from the inverter selection database, you are actually selecting the combined characteristics of the power optimiser and a *SolarEdge* inverter. PV*SOL uses the efficiency curve of a default *SolarEdge* inverter rather than an individual model. There is an inherent margin of error of up to 0.4% with this form of modelling which is generally considered acceptable. Note the margin of error in modelling can be higher depending on the accuracy of site measurements and other assumptions.

The 3D mode of PV*SOL premium should be used to model *SolarEdge* systems as it is only in 3D that you get sufficient performance of individual PV modules with variations in irradiance & temperature.

2. How to model a *SolarEdge* system in PV*SOL premium

Firstly you need to design and size the system. For this we recommend using *SolarEdge*'s free *SolarEdge* 'Site Designer' software. To download the *SolarEdge* software please see their website: http://www.solaredge.com

Once installed, follow the on-screen instructions to design the system and note the number and type of proposed power optimisers (as illustrated in the red box in the diagram below):



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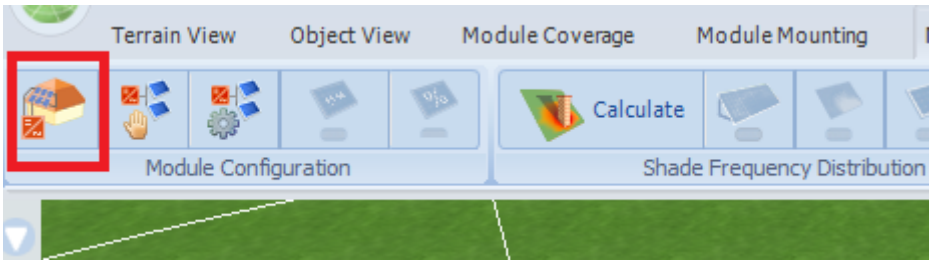
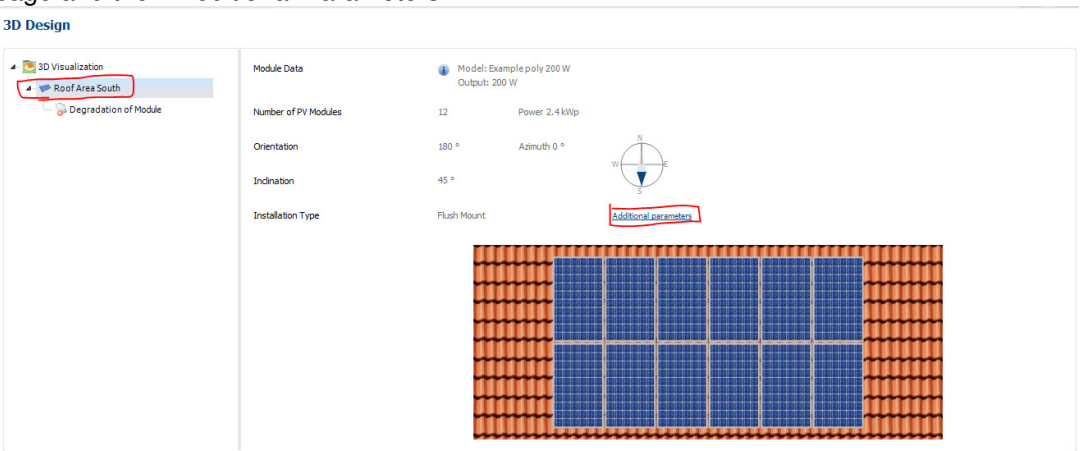
Keeping the *SolarEdge* 'Site Designer' dialogue open, now open a 3D project in PV*SOL. Once you have placed your PV modules, click on 'Configure all Unconfigured Modules in this Area' as you would normally using the highlighted icon in the screenshot below.

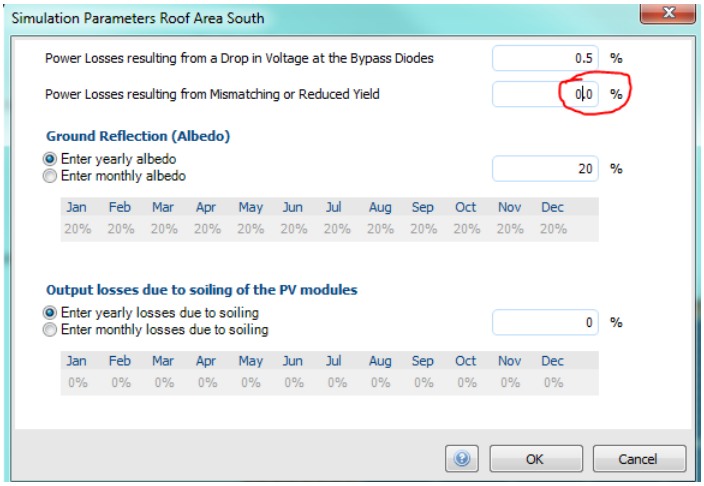


In the PV*SOL inverter selection dialogue, select the Power Optimiser type and number as noted from the *SolarEdge* 'Site Designer' software. These are chosen as if they are inverters.

The last step is to eliminate any mismatch losses, as they are negated by the *SolarEdge* power optimisers. To do this, navigate to the main part of PV*SOL, click on your array on the 3D Design page and then 'Additional Parameters':



You can then set the 'Power Losses resulting from Mismatching or Reduced Yield' to 0% as indicated below:



Make further adjusments as usual in PV*SOL to mimic the site and then proceed to simulate as normal. ENDS.

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