Using SolarEdge systems in PV*SOL Expert 6.0 and later versions

1. Background

In **PV*SOL Expert 6.0** and later versions you have the ability to model the performance of SolarEdge power optimisers and string inverters. However, unlike other systems, PV*SOL Expert 6.0 can't help as much with the design of the Solar Edge system and is limited to modelling its performance.

2. How does PV*SOL do this?

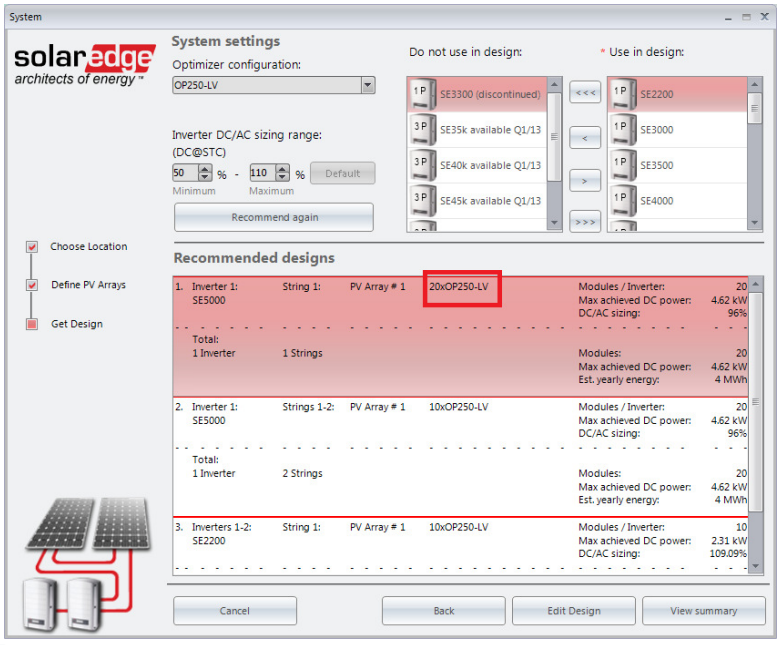
When you select a SolarEdge power optimiser from the inverter selection database, you are actually selecting the combined characteristics of the power optimiser and a SolarEdge inverter. PV*SOL uses the efficiency curve of a default SolarEdge inverter rather than an individual model. There is an inherent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

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

3. How to model a SolarEdge system in PV*SOL

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 power optimisers (as illustrated in the red box in the diagram below):



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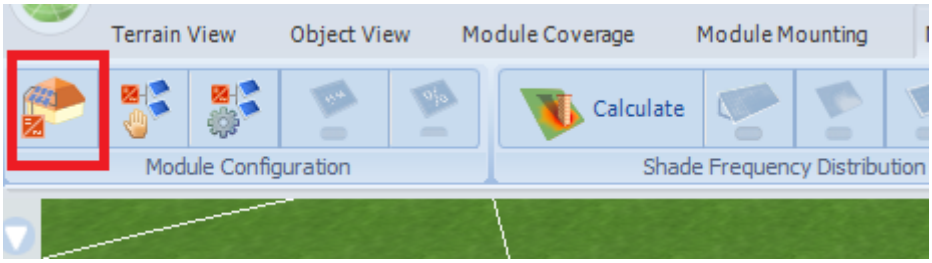
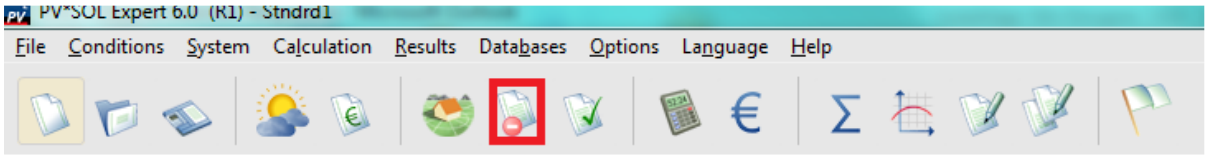
Keeping the Solar Edge dialogue open, now start a 3D project in PV*SOL Expert. Once you have placed your PV modules, click on 'Configure all Unconfigured Modules in this Area' as you would normally.

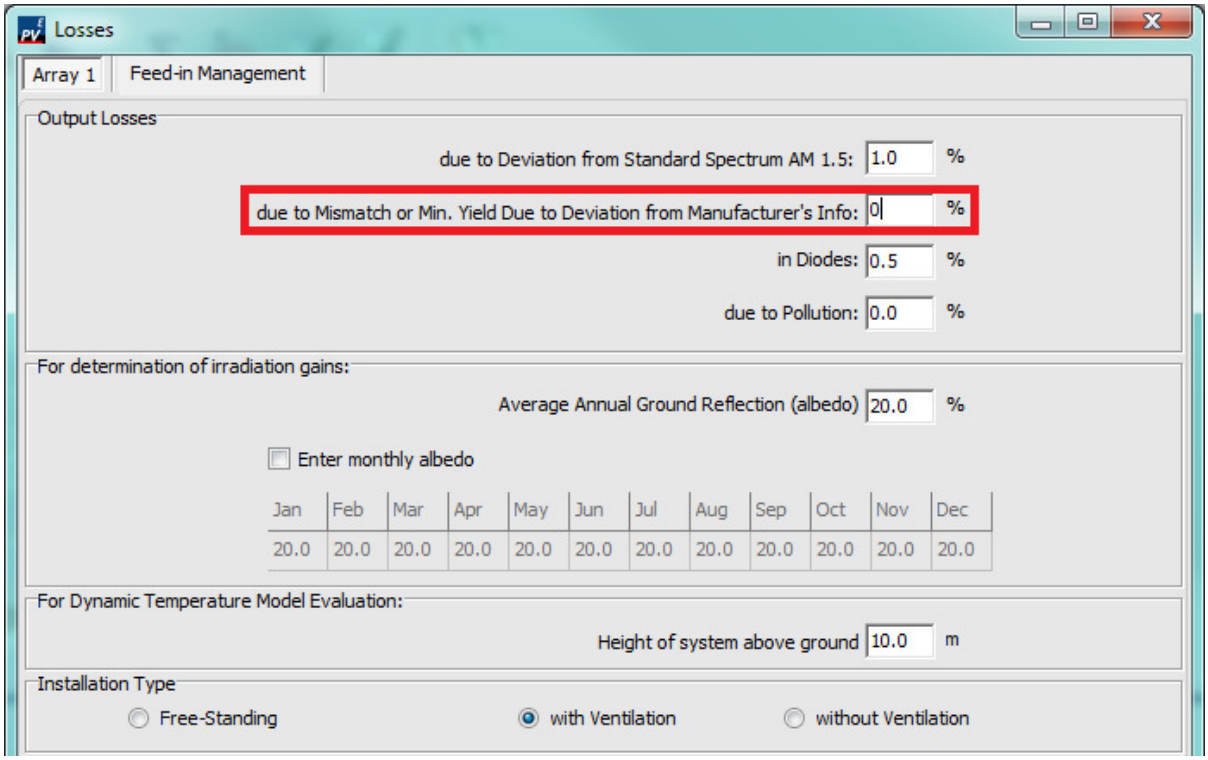


Select the Power Optimiser type and number as noted from the SolarEdge Site Designer software from the inverter selection dialogue. These are chosen as if they are inverters.

The final step is to click on the 'Losses' dialogue back in the main part of the program:



Now set the '[Output Losses] due to Mismatch or Min. Yield Due to Deviation from Manufacturer's Info' to 0:



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