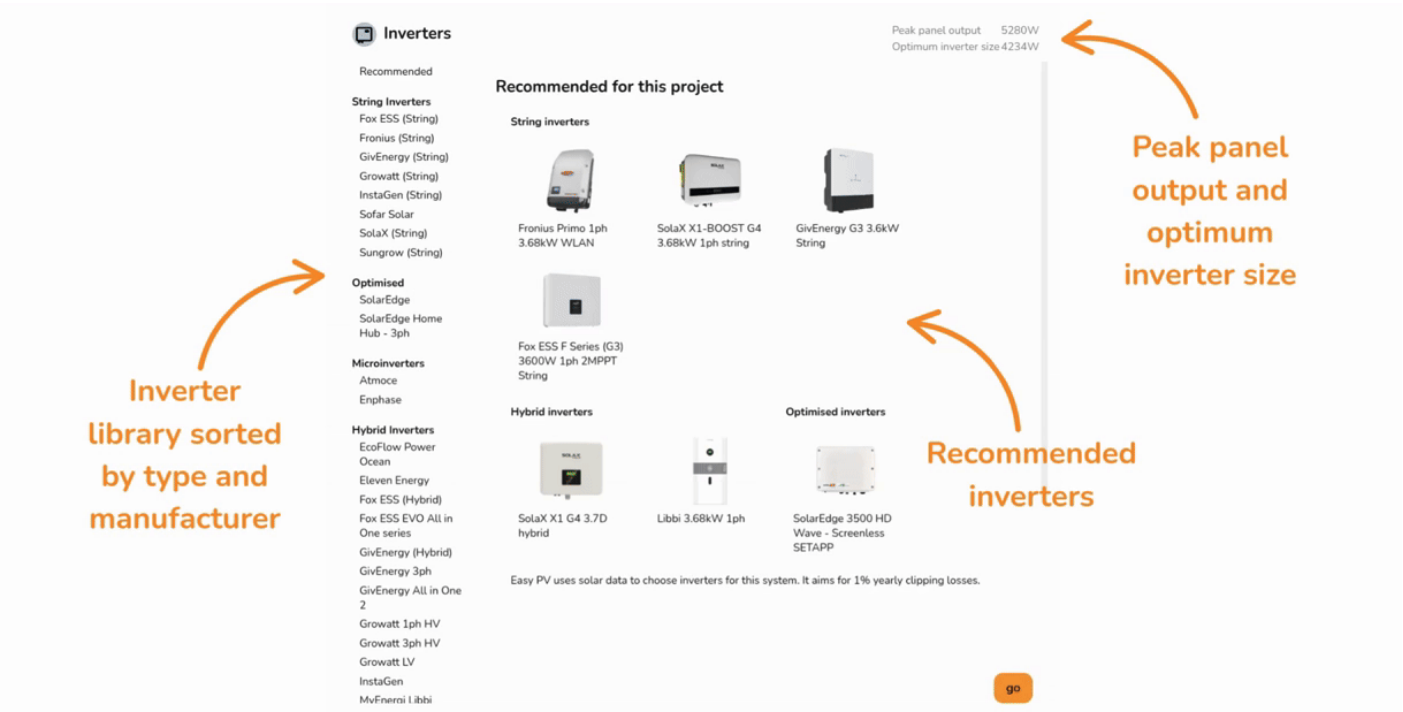
Inverter task

In this task you select **the inverter** and **batteries** you'd like to use and **how many panels to allocate to each MPPT**. You can also choose whether you want to include **optimisers**.

Choosing an inverter



> **Can't find what you're looking for?** See how to add custom inverters.

When you open the inverter task, a menu will pop up with the following information:

- **Inverter recommendations**: Recommended based on array size, number of MPPTs and cost. Choose from string, hybrid, optimised inverters.
- **Peak panel output and optimum inverter size**: The installed capacity of the system and optimum inverter size based on solar data for project location.
- **List of inverter manufacturers**: List of all inverter manufacturers stocked by Midsummer, sorted by type.

If you select a manufacturer from the list on the left, you can then:

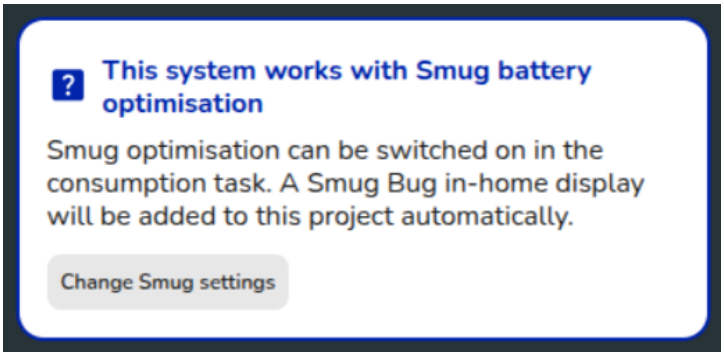
- Choose between **single phase** and **three phase** inverters for that manufacturer.

- View the **output loss percentage** for each inverter, which you can use to choose an appropriately sized inverter.

Once selected, you'll see the **specs for the inverter** and **Midsummer stock and price information** on the left. Click on the Midsummer box to view the full listing with datasheets, warranty and more.

Click go in the bottom right once you've chosen your inverter to add it to the project.

> **Tip**: Connect your Midsummer Wholesale account for accurate pricing. Not registered? Sign up here.



You will be notified of the inverter's Smug compatibility and given the option of changing your Smug settings.

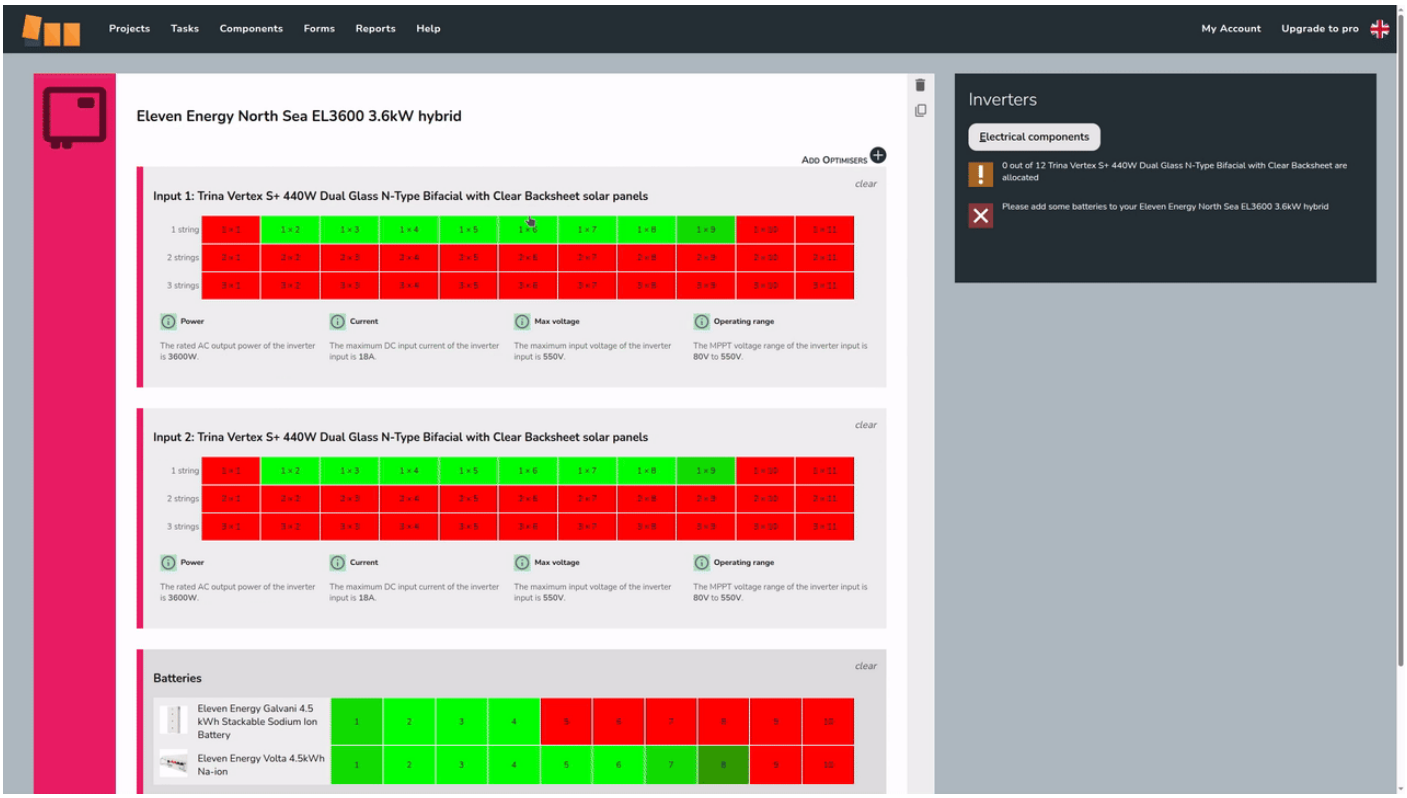
> If you wish to benefit from **Smug smart battery optimisation**, choose a Smug-compatible inverter at this stage. Click here to find out more about Smug optimisation.

Panel allocation

Once you've chosen your inverter, the next step is to **select how many panels you want for each MPPT**. If the inverter was from the recommended section, this step will be completed for you.

In the top right you can see **how many panels you need to allocate**. On each inverter you will see the **different combinations** that can be allocated to each string. Once the right number of panels have been allocated, a green tick will appear.

Multiple string arrangements are typically possible. Below shows an example with 12 panels, selecting 1x6 (1 string of 6 panels) to each MPPT and then 1x4 and 1x8:



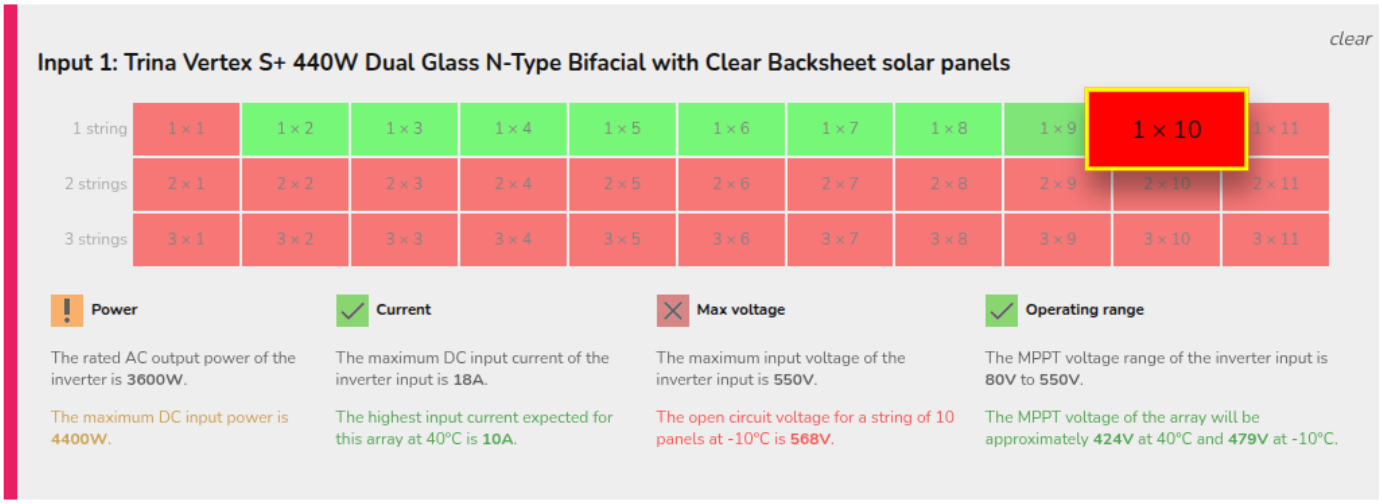
Electrical compatibility

The number of viable MPPTs will vary depending on the the inverter and the panels chosen. For each MPPT, some options will show in **red**, indicating the arrangement does not pass the electrical checks, and others in **green**, indicating the arrangement does pass all the electrical checks Easy PV is doing.

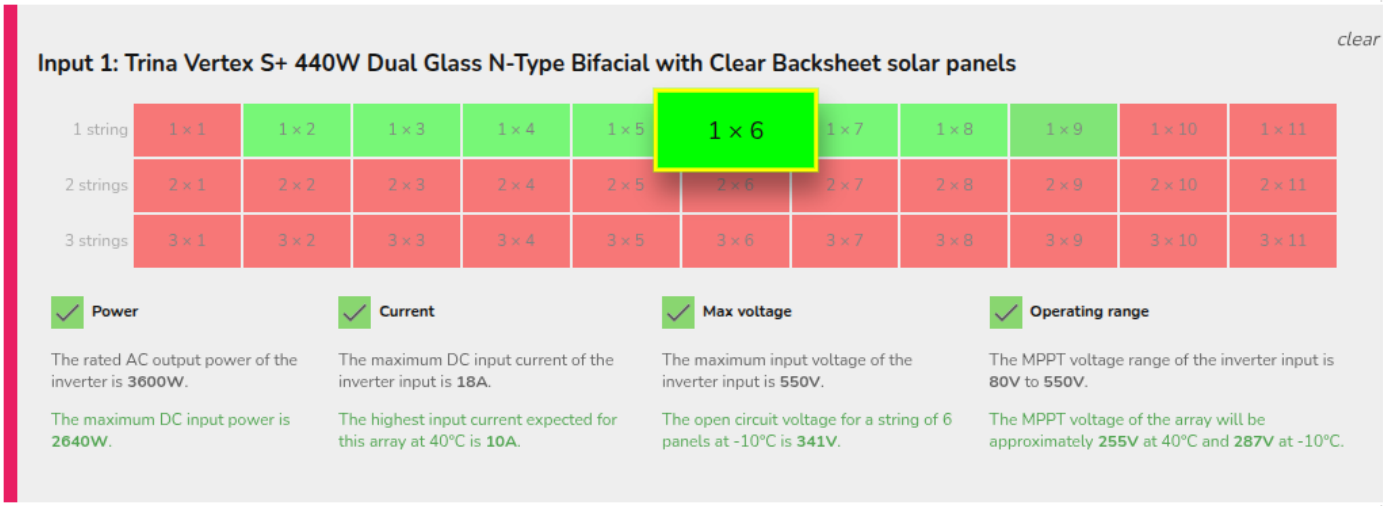
Electrical compatibility information for the selected arrangement is shown below the stringing options. This indicates which limiting factors (power, current, max voltage, operating rage) for that MPPT are met or exceeded.

Example: passed and failed check

Not electrically viable: with this arrangement, the max voltage for the MPPT is exceeded:



Electrically viable: with this arrangement, all checks on power, current, max voltage and operating range have passed:

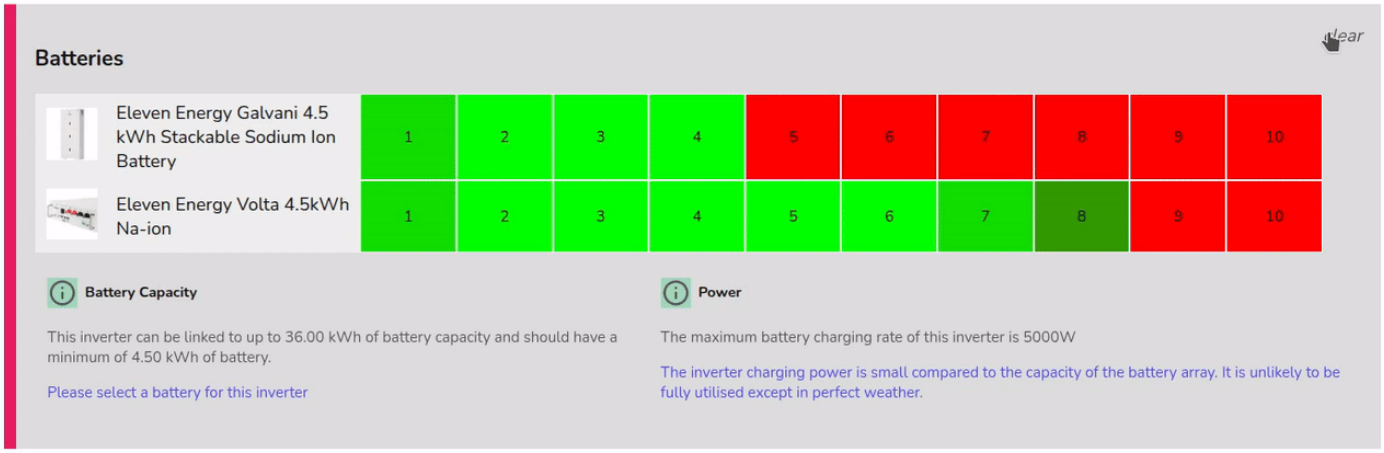


Panel allocation is then completed in the Performance task.

Adding battery storage

You can add battery storage to **hybrid** or **AC-coupled inverters**. In each case, you will see a list of compatible batteries for that inverter, with the options most suitable for the system shown in green. Darker green options are compatible but may not be optimal.

When you make a selection, warnings about the battery capacity and maximum battery charge rate will display below to help in choosing an appropriate size.



> **Battery only**: On every project, you will need either a string or hybrid inverter as battery only projects are not yet supported. If you have an AC inverter, you will also need a string inverter.

> **Looking to add batteries later?** You can skip adding a battery to a hybrid inverter if the plan is to install one at a later date. Simply add the inverter and don't select a battery. A warning will appear when going to the Electrical task, just click **OK** to continue.

Additional options

- **Delete inverter**
  This is in the top right of each inverter.
- **Clone inverter**
  This is in the top right of each inverter. Cloning will also copy stringing arrangements.
- **Add Optimisers +**
  This is to the top right of the first MPPT on compatible inverters. After adding, select from the drop-down which optimiser you want to use. This will add **one optimiser per panel**.
- **Add PV Inverter or Battery Storage System +**
  Click this to add another inverter. This is to the bottom right of the last inverter. This will re-open the inverter selection menu.

> **Note**: Using optimisers or microinverters will also mean you need to manually allocate panels in the Performance task.

Still Need Help?

- **Related FAQs:** Check out our Panels, Inverter and Electrical FAQs for answers to common questions
- **More guides**: Take a look at the Inverter task, Electrical task and Performance task guides
- **Live training:** Book onto a live demo session to see this feature in action

Contact Support: If you've got further questions, get in touch with our support team at **help@easy-pv.co.uk** (UK) or **help@easy-pv.ie** (IE). *If you are experiencing a bug, to help us look into your issue faster, please include the email address of your account, the name of the project and screenshots of any unexpected behaviour.*

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