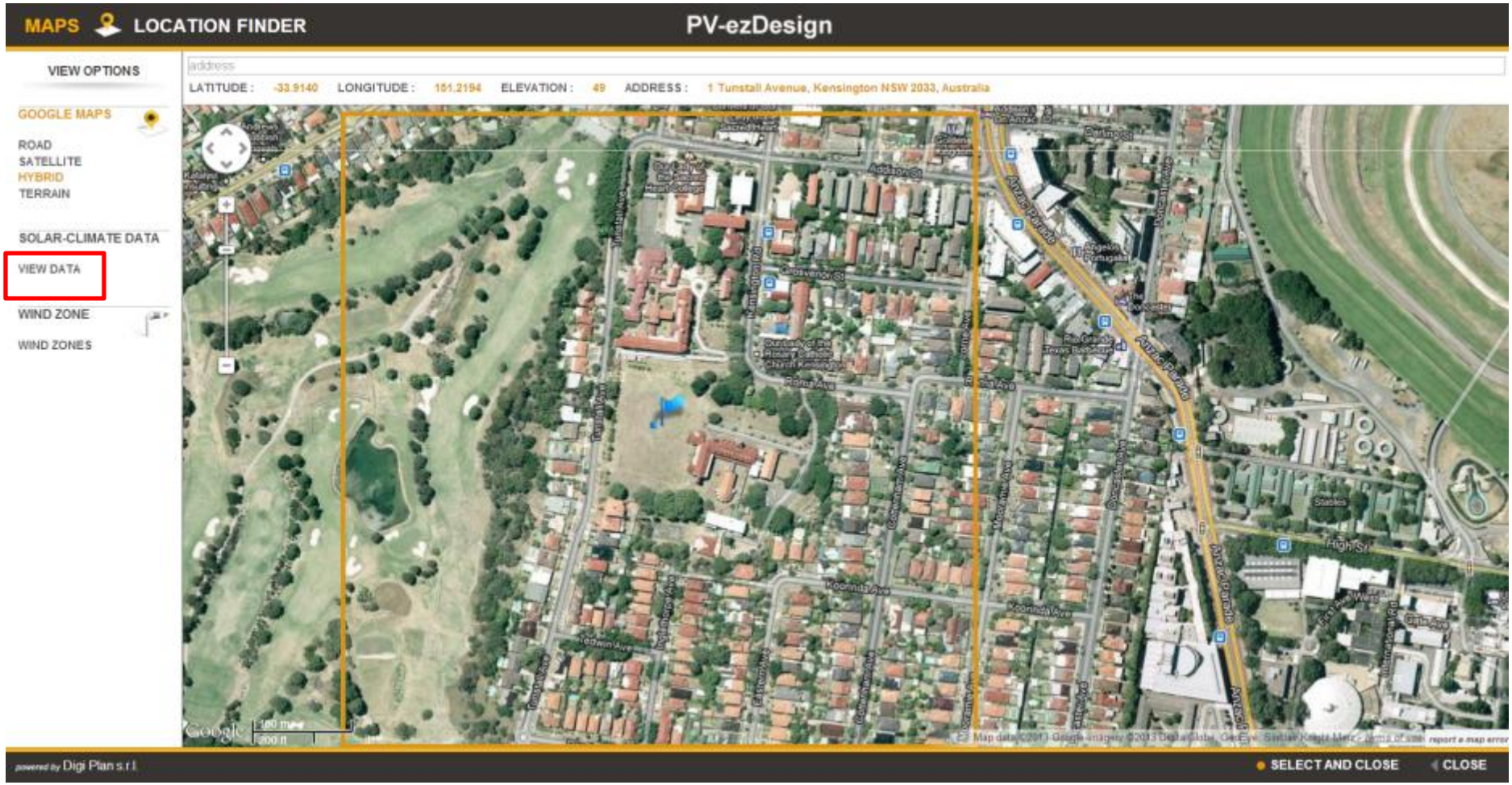
Irradiation and Production reporting

Irradiation data

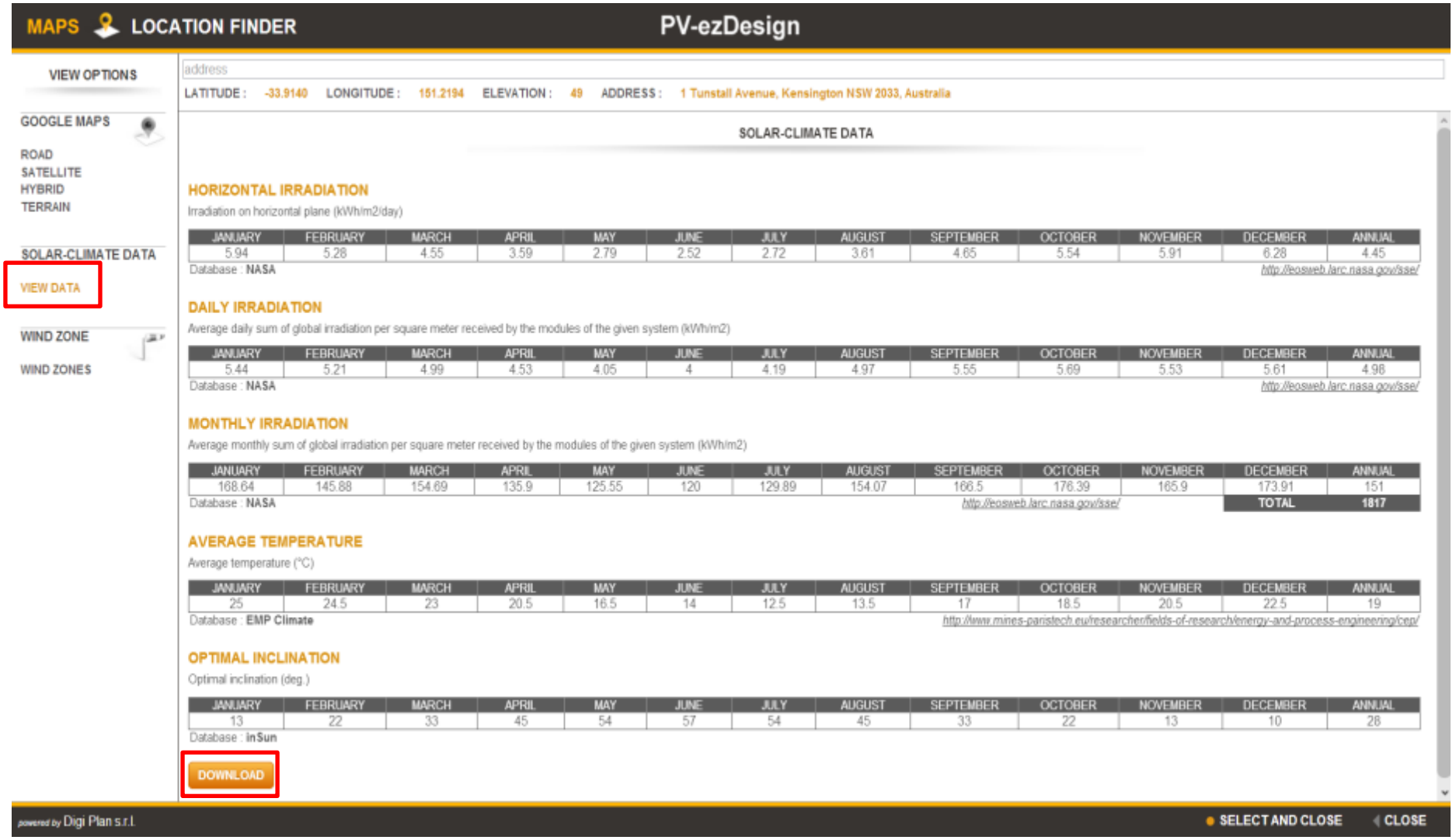
The irradiation results in the report are the irradiation on the inclined plane and horizontal irradiation can be viewed based on the following steps:

1. Go back to main page and click on "MAPS"



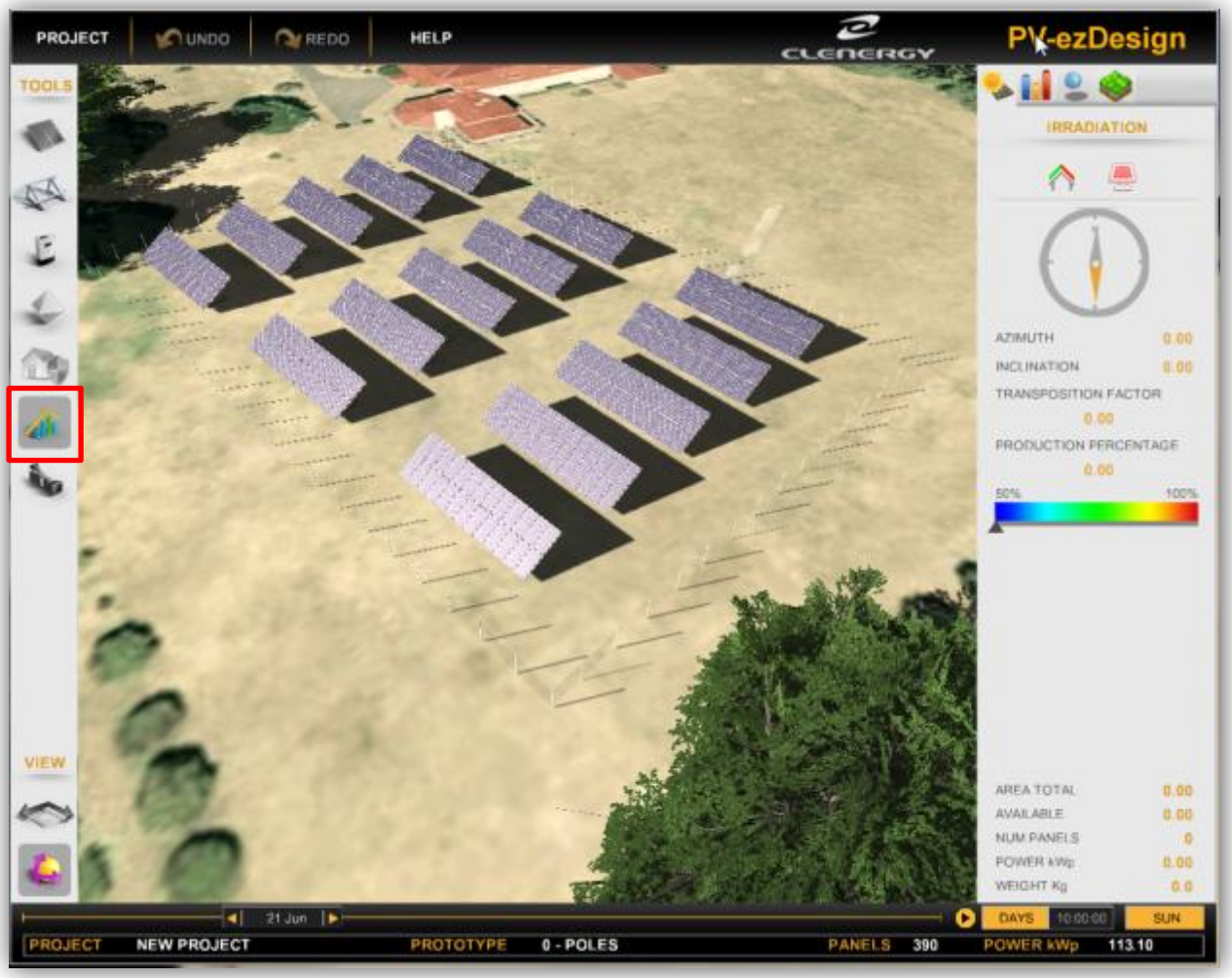
After clicking on Maps, it will turn to this page, shown as above:

2. Click on "VIEW DATA"



All the irradiation analysis results are given and this report can be downloaded as PDF format.

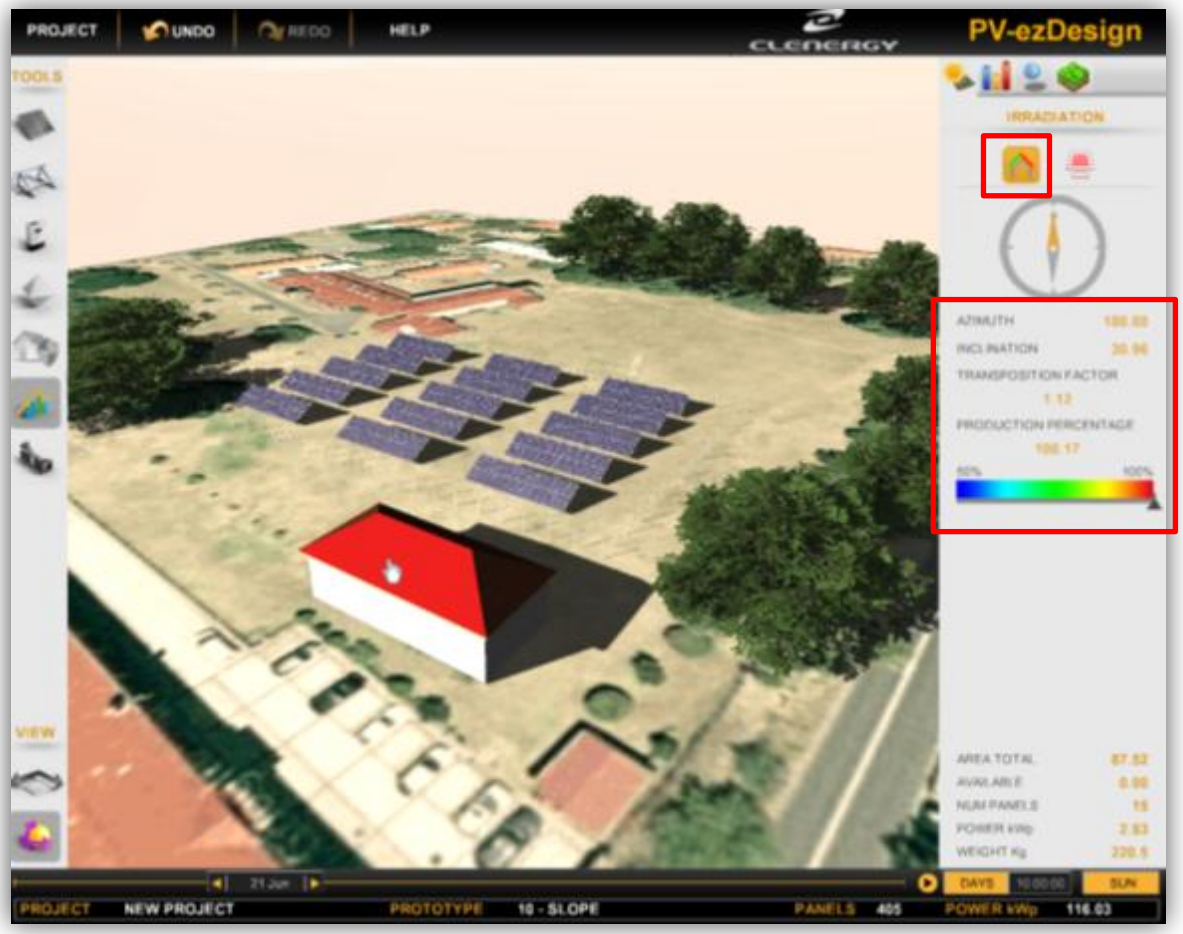
Irradiation analyse



- After completing your design, click on "ANALYZE". The irradiation menu will be shown on the right.

: Slope selection. It used for a face of a pitch roof and the irradiation data for the selected roof will be given by clicking on this icon.

: Panel selection. Click on the panels no matter which racking system they are using and the irradiation data is able to be given.



: Slope selection

Click on "Slope selection" and then select the slope that you are looking for.

The panels will be hidden temperately if you select the slope where you installing the system.

To quit this mode, click on "slope selection" again.

No matter which selection you use, please remember to quit this mode, otherwise the colour shown on the roof and panel will still be there.

: Panel selection

Click on “Panel selection” first and then select the panel that you are looking for. The analysis result will be provided.

Please be aware that the production percentage depends on the azimuth and inclination angle. The number of panel per array and the height of system will not affect the irradiation results.

If you want to check the production percentage of the array installed in a different angle, please choose a new array instead of rotating or duplicating the original one as it will give you a same result.

- Definition of Transposition Factor:

  FT is a dimensionless quantity given by the ratio between the incident solar energy over a differently oriented and inclined plane (the reference yield Y_r) and the solar energy incident on the horizontal plane (the ground reference yield Y_{rg}):

  $$TF = \frac{Y_r}{Y_{rg}}$$

  It describes the higher amount of energy which is possible to receive with a modules orientation and inclination different than respect to the horizontal position.

Output analyses

A report illustrating a comparison between the designed system and optimal condition in terms of global irradiation and electricity production can be given by clicking on "PVGIS ENERGY".

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Used for Ground mounting system;

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Used for SolarRoof system;

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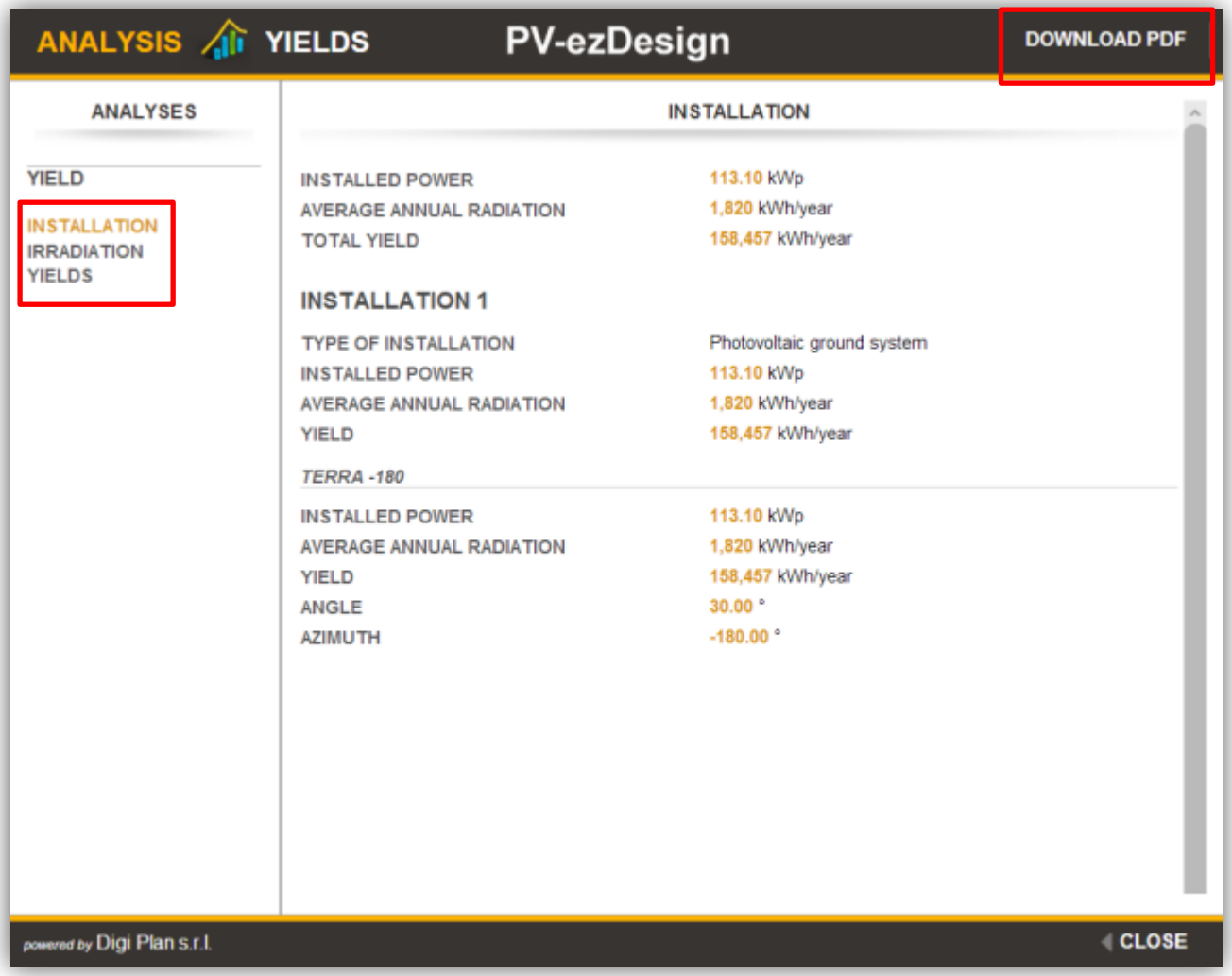
Used for the particular slope of SolarRoof system.

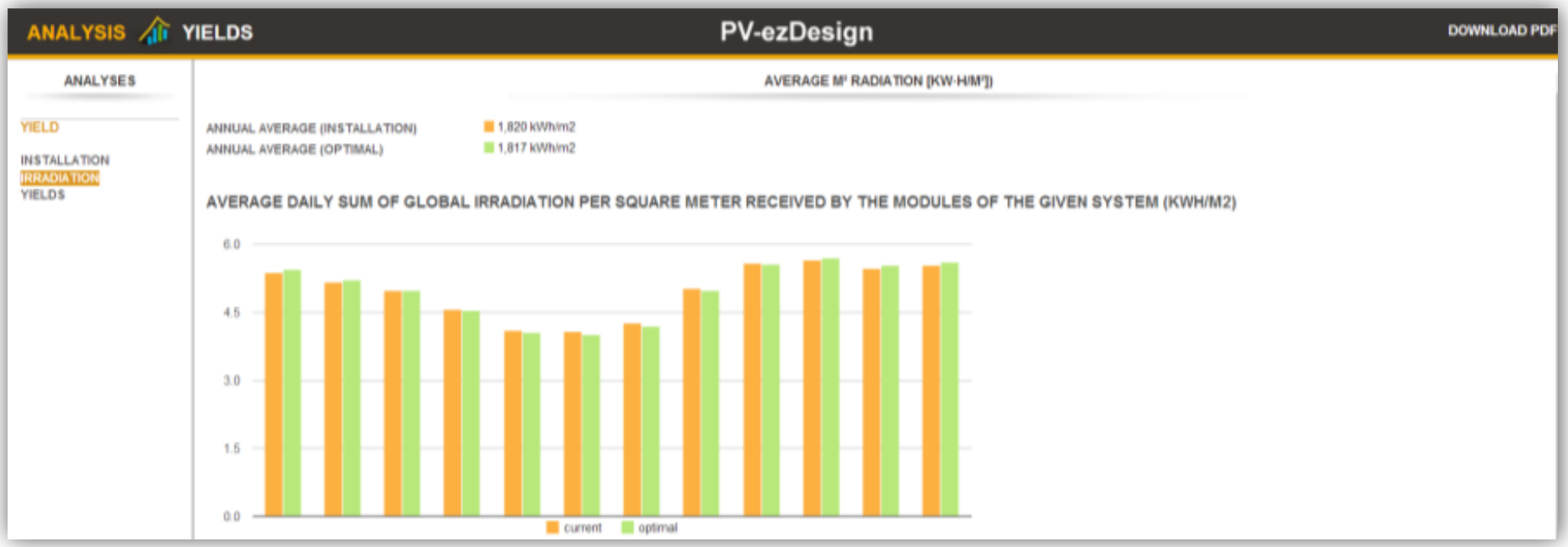


In this case, Ground mounting system acts as an example. Therefore,

Click on "GROUND PROD" and the analysis page shall be shown as this picture.

On the left, three results are able to be viewed separately. You can also click on "DOWNLOAD PDF" at the top-right corner to export a full report.

Irradiation report on the panels



Production report of the system