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# REFUdesign – PV Plant Design Tool

**D**esign plays a pivotal role for any PV plant. A good design can lead to high revenue generating solar plants whereas an improper sizing of the system could lead to a non-profitable investment.

A designer should be able foresee and optimize the configuration & sizing in such a manner that the design turns out to be a green signal for the investor.

REFU Sol has come up with a solution which will provide a complete string sizing to the customers. We have launched an online string sizing tool – REFUdesign – being our first web application.

The aim of this application is to provide our customers (solar power professionals, plant designers and solar plant installers) the possibility to design their PV plants with REFU Sol inverters to finally find the optimum configuration for their plant to be built. The application will provide a user-friendly interface providing possibilities to technically check the different components of the plant. It will also contain a database for nearly all available modules but also allows the customer to enter and customize modules which are not yet available in the database.

The first version of the REFUdesign application will only provide basic functionality but of course the application supports worldwide locations. After a configuration has been finalized end customers will have the possibility to request an offer from REFU Sol for the inverters chosen in the configuration. Solar plant installers can also use this feature to prepare and write offers to their customers.

#### The KEY FUNCTIONS of the tool are:

##### Online Web Application

The user needs an internet connection and log on to [www.refudesign.com](http://www.refudesign.com)

The following domains have already been acquired by us :

[www.refudesign.net](http://www.refudesign.net)  
[www.refudesign.eu](http://www.refudesign.eu)  
[www.refudesign.de](http://www.refudesign.de)  
[www.refudesign.info](http://www.refudesign.info)  
[www.refudesign.org](http://www.refudesign.org)

##### Available in 5 languages (de, en, it, es, fr)

German

English (UK, U.S.)

Italian

Spanish  
French

##### Support of imperial and metric units

##### Login with REFUlog user data

It is possible for REFUlog users to use their credentials also for the REFUdesign application therefore the users and database table in REFUlog database should be used for the REFUdesign application. Newly created users in REFUdesign will also be stored in the corresponding REFUlog database table. On the Register page a message is displayed informing the user that he can use his REFUlog credentials for REFUdesign.

It is possible that many different users log in to and use the application at the same time. Authentication for users is needed but will be adapted from REFUlog. User and account management, registering, user validation and logging in will also be adapted from REFUlog.

Customization with company logo or photo\*

The registered user can upload a picture of the company or the site to make the design look more realistic and easily identifiable.



#### About REFUdesign

With REFUdesign you can design the perfect configuration for your PV system online—with access to an extensive database of modules. The modules will connect to the inverters automatically. Efficient, fast, and reliable.

#### Register

As a registered user, you will have access to additional functions free of charge:

- Individualize your design output with your own picture or logo
- Save your designed projects as templates
- Insert your own module data

By the way, if you have already registered for REFUlog, you can simply use your REFUlog user data to sign up.

Design your PV system

Register

#### Comprehensive online module database

Input of missing panels\*

Extension of module database

#### Project list for saving PV systems\*

The details of all the projects designed will be stored as a list in the database which can be filtered and sorted with the help of various columns. This feature will be active for registered users only.

The Save\* button will help the user create a list in the database.

#### PDF report for PV systems\*

As mentioned earlier, after a configuration has been finalized end customers will have the possibility to request an offer from REFU Sol for the inverters chosen in the configuration. Solar plant installers can also

use this feature to prepare and write offers to their customers.

This feature is accessible to registered users only.

On clicking the PDF button, the data entered on the main page will be converted into a pdf and a download dialog is opened and file can be read with the help of a PDF reader.

#### Online quotation request

The Get a Quote\* button will be used for this feature. Once clicked it will generate a PDF and attached to a mail, it will be sent to REFU Sol contact person.

Therefore, REFUdesign not only enables online designing of PV systems but provides an elucidated justification for:

- String Sizing
- Optimal combination of Inverters
- Defining alternative system configuration for comparison
- Creating the module database, if the desired product is not found.

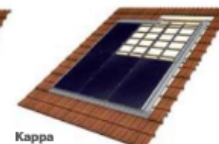
Being the first web tool for REFU Sol, it is launched with all the basic features a designer needs to verify before the finalization of the project.

The advanced version will be released very soon with enhanced features offering detailed parametric calculations which will not only provide better understanding to the client but also help in finalization of the best possible design.

■ ■ ■



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\* Intersolar Europe, 19 – 21 June 2013  
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San Francisco, US, Booth 9523

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