Solar Photovoltaic (PV) Energy

Photovoltaic transformers use photoelectric effect, when the solar radiation energy is transformed into electric energy missing the intermediate stage of obtaining thermal energy. The sun radiation transforms into constant current in photoelectric cells, and its value depends on the sun radiation flow.

Usually, such an exemplary system for a house has 1.5 – 3 kW peak power. Each 1 kWp may produce up to 1500 kWh per year, if it is not shaded and is directed to the South under 22^o – 55^o. The complete system installed on the roof of a residential building may annually produce 2250 – 4500 kWh electric energy. The solar PV plant is composed of modules of different size and power, which makes their installation possible on roofs of different shapes. For instance, a 3 kWp power system (may be composed of 12 modules of 250 W power) may take $20m^2$ (each module is approximately 1.6 m^2) and on average it may produce 375 kWh electric energy per month. As to the current tariffs (September 2016), the payback period for such technologies is 10 years on average, while the operating lifetime is more than 30 years.

You may visit Armenian Green Technologies Center in order to obtain information on the design of solar energy systems and selection of equipment, suppliers, financial resources, exploitation, as well as for maintenance and installation.

Address: Gyumri city, Karen Demirchyan 3/14

Telephone: +374 93 22 12 03, +374 77 99 34 77

E-mail: greentech.arm@gmail.com

Website: http://agtc.am

This publication has been produced with the assistance of the European Union and Austrian Development Cooperation. The content of this publication is the sole responsibility of “Hilfswerk Austria International” and ”Armenian Green Technologies Center” and can in no way be taken to reflect the views of the European Union or Austrian Development Cooperation.