

NED UNIVERSITY JOURNAL OF RESEARCH

APPLIED SCIENCES

THE ECONOMICS OF PHOTOVOLTAICS INSTALLATIONS IN GIK INSTITUTE OF PAKISTAN

Author(s): Khasan Karimov, Muhammad Abid, Sadullo Ibodovich Islomov,
Nasiba Hasanovna Karimova



Volume: **X**

No: **2**

Pages: **1 - 8**

Date: **September 2013**

Abstract:

The economics of the PV installations makes the economic assessment of the life-cycle costs, payback period and rate of return and in particular, cost of electric energy in order to compare one energy technology with another, for example, PV system with diesel generator. In this paper the economics of grid-connected PV system of power of 3.6 kW (1.341 hp), containing 151 modules, with variable inclination angles to the horizontal plane (23° , 34° and 45°) is described. Life-cycle costing approach is used for the economic evaluation of PV system in the presented study. The costs of electric energy was calculated for four modes of operation of the PV system i.e. fixed inclination of modules without batteries, variable inclination of modules without batteries, fixed inclination of modules with batteries and variable inclination of modules with batteries. It was found that the cheapest electric energy (\$0.53/kWh) (\$1908/kJ) is produced using variable inclination of modules without batteries.

For full paper, contact:

Prof Muhammad Masood Rafi

Editor-in-Chief, NED University Journal of Research

Ph: +92 (21) 99261261-8 Ext: 2413; Fax: +92 (21) 99261255

Email: NED-Journal@neduet.edu.pk

Website: <http://www.neduet.edu.pk/NED-Journal>