

Economic Forecasting Analysis for Solar Photovoltaic Application

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Abstract : Economic development with population growth is leading to a continuous increase in energy demand. At the same time, growing global concern for the environment is driving to decrease the use of conventional energy sources and to increase the use of renewable energy sources. The objective of this study is to present the market trends of solar energy photovoltaic technology over the world and to represent economics methods for PV financial analyzes on the basis of expectations for the expansion of PV in many applications. In the course of this study, detailed information about the current PV market was gathered and analyzed to find factors influencing the penetration of PV energy. The paper methodology depended on five relevant economic financial analysis methods that are often used for investment decisions maker. These methods are payback analysis, net benefit analysis, saving-to-investment ratio, adjusted internal rate of return, and life-cycle cost. The results of this study may be considered as a marketing guide that helps diffusion of using PV Energy. The study showed that PV cost is economically reliable. The consumers will pay higher purchase prices for PV system installation but will get lower electricity bill.

Keywords : photovoltaic, financial methods, solar energy, economics, PV panel

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