University of Cyprus
PV Technology

PV-net metering

<u>Press release:</u> Research in PV at the University of Cyprus wins 1st prize at the 29th European PV solar energy conference and exhibition (EUPVSEC)

A team from the FOSS Research Centre of Sustainable Energy of the University of Cyprus (UCY) has won the top prize at the biggest conference for photovoltaics (PV) in Europe, the 29th European PV Solar Energy Conference and Exhibition (EU-PVSEC) which took place between 22 and 26 Sep. 2014 in Amsterdam, Netherlands.

The paper entitled "Robust Principal Component Analysis for Computing the Degradation Rates of Different Photovoltaic Systems" by Andreas Kyprianou, Alexander Phinikarides, George Makrides and George E. Georghiou has won the best visual presentation award in the field of Operations, Performance and Reliability of Photovoltaics. The most outstanding visual presentations have been awarded from over 1500 scientific papers, based on the quality of the contents reported and on the quality of the presentation. The paper deals with the accurate estimation of the degradation rate of PV systems which is still a very controversial issue in the operation of PV systems due to the lack of an established definition of PV degradation rate and methodology for its estimation. The importance of the work lies in recognizing the dominant features of the performance ratio time series of photovoltaic systems of different technologies and mitigating the effects that the uncertainty component imparts on them, thereby enabling a new definition and estimation of degradation rates.

The award comes at a time where the PV community has started to recognize the importance of multidisciplinary research and particularly research in the field of degradation and in grid and market integration. These issues are of prime importance to Europe and in particular to countries in the Sunbelt Mediterranean region some of which, such as Cyprus, have already overcome PV grid parity. There is a dire need to set the appropriate policy mechanisms and framework in these countries in order to facilitate the optimum integration of renewables and in particular PV technologies in their energy mix. The UCY has focused its efforts towards this direction through coordinating the European project PV-NET which targets effective PV energy integration in the Mediterranean through optimization of smart net metering initiatives involving pilot implementation. In this project, prosumers from 3 different Mediterranean countries become actively involved in the study of net metering schemes for household purposes. This pilot activity results in vital data generation (consumption, generation, environmental data) to be utilized in the project for developing an optimized net metering tool customized to the needs and particularities of each participating country.

In conclusion, this award signifies the recognition of the high quality work undertaken at UCY in a field of very timely as well as long-term importance for the south Mediterranean region. Furthermore, this constitutes a direct recognition of the high international standards maintained in the PV research conducted at UCY and highlights the capabilities of the group and the country as a whole, through work such as the PV-NET, to contribute to the European and the global PV sector.

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