

INFORPV

Innovative Forecasting PV Energy Yield Solution for Sustainable Large Scale Deployment

Project Duration: 08.2017 to 07.2019

Initial report submitted: 04.2018

Summary

A main challenge in the scope of ensuring large scale deployment and sustainability of photovoltaic (PV) systems is to improve the accuracy of production forecasting for both large and small systems in high concentrations on the distribution grid. Accurate point and aggregated PV production forecasts are major themes of the research roadmap of many international taskforces and are also in line with the objectives of the Solar Europe Industry Initiative (SEII) for accurate energy yield forecasting, increased flexibility of the power system and deployment.

It is with this background that the INFORPV project has been initiated to enable large scale deployment of PV systems through accurate production forecasting and active grid management, in countries with a high solar resource and a potentially significant PV share of small capacity systems.

In particular, the project aims to develop a forecasting solution with improved accuracy for point and aggregated forecasts. The solution will be benchmarked and validated in Israel and Cyprus through a network of ground meteorological stations and monitored PV systems. The end-product will be an innovative PV production forecasting system that will provide to distribution system operators (DSO) an accurate forecast for PV systems connected at any grid location with a target root mean square error (RMSE) accuracy of less than 5 % for single plants and less than 4.5 % at a regional level for both day-ahead and hour-ahead forecasts. The accurate forecasts will be incorporated into a developed distributed grid management system that will also act as the buffer between PV systems and the grid, contributing supportive grid stability functions and enabling large scale deployment.

Finally, the project is based on a collaboration of five (5) experienced partners that will greatly assist in materialising its objectives and generating a commercial product that will enhance the competitiveness of their research institutions and industries.

Project consortium

Coordinator and contact details:

Full name of organisation:	M.G.Lightning Electrical Engineering (MGL)
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Participating countries and financing:

Country	Number of organisations involved	Project costs in EUR	Public funding in EUR
Israel	2	346'484	173'242
Cyprus	3	190'830	175'000
<i>Total</i>	<i>5</i>	<i>537'314</i>	<i>348'242</i>

Funding agencies involved and contracts

Funding Agency	Contract N° and Title
Ministry of Energy & Water Resources - Israel	Innovative Forecasting PV Energy Yield Solution for Sustainable Large Scale Deployment -216-11-031
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Research Promotion Foundation - Cyprus	KOINA/SOLAR-ERA.NET/1215/02
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