

PRESS RELEASE

New possibilities for large-scale grid integration of variable photovoltaic power

On the occasion of a joint MetaPV and IEA PVPS Task 14 workshop held in Brussels on Monday 6 May 2013, international grid specialists, distribution system operators and policy experts discussed new perspectives to increase the grid hosting capacity for distributed photovoltaic (PV) power.

Brussels, 07 May 2013. As concerns grow that increasing photovoltaic (PV) generation may cause significant bottlenecks on the low and medium voltage grids, utilities, distribution system operators and grid experts are actively looking into new tools and techniques for reinforcing grid hosting capacity in smart and cost-efficient ways and for using PV as an active supplier of local ancillary services. These experts met this week in Brussels to exchange ideas and insights on worldwide plans for smart grid integration of photovoltaics.

Different approaches are being experimented in different parts of the world to integrate PV into the grid, and "demonstration projects as well as concrete developments show that more PV, with advanced control systems, can delay or even substitute for grid reinforcements", reported Achim Woyte, R&D manager at 3E.

Meanwhile, the European energy supply landscape is shifting towards a more sustainable and renewables-based mix and policies need to be set up at European level to accompany the transformation of the power system induced by such a transformation. "The EU has the long-term policy vision, and the institutional framework in place to establish the right regulatory and infrastructure regimes. With this and the on-going efforts to drive down the costs of PV we have a strong framework for major PV development" said Tom Howes, Deputy Head of Renewable energy policy unit, DG ENER, European Commission.

Roland Bründlinger, operating agent of the IEA PVPS Task 14, pointed out that "PV systems have some unique features which have to be considered when integrating a large number of such distributed generators into the electric power system". Specific characteristics of PV technology such as variability and inverter connection, require more flexibility in the distribution and transmission systems, but also provide opportunities for grid support, especially in terms of reactive power provision. In order to achieve a cost-efficient integration of variable PV power into the grid, "standards in products need to be developed on the one hand, while network regulations must grant to PV generation a level-playing access to the grid on the other hand", said Frauke Thies, EPIA Policy Director.

The complete agenda as well as the presentations delivered during the workshop can be downloaded on www.metapv.eu.

The workshop was financed by the European Commission and organised by renewable energy consultancy and software company 3E, on behalf of the MetaPV consortium and the IEA PVPS task 14 working group, with support from EPIA.

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IEA-PVPS - Task 14

Task 14 is a collaborative R&D project conducted under the framework of the Photovoltaic Power Systems Programme of the International Energy Agency (IEA-PVPS). The main goal of Task 14 and its members from 15 countries, PV associations and the European Commission, is to facilitate the use of grid connected PV as an important source in electric power systems. The aim is to reduce the technical barriers to achieve high penetration levels of distributed renewable systems on the electric power system. Task 14 will focus on working with utilities, industry, and other stakeholders to develop the technologies and methods enabling the widespread deployment of distributed PV technologies into the electricity grids.

The MetaPV project

MetaPV is a research and demonstration project funded by the European Commission on improving grid hosting capacity for variable renewable power. It is the first practical demonstration of a European photovoltaic Smart Grid, implemented in Belgium on Infrac low and medium voltage distribution grids. MetaPV aims to assess, on a technical and financial level, the possibility of doubling grid hosting capacity for photovoltaic power, at a fraction of the cost of the cost of standard grid reinforcements, through the use of smart inverters and controls to reactive power levels.

MetaPV is a first step towards a reliable solution for PV integration, which would prove that more PV, with advanced control systems, can be a source of more stability.

