

2024 ETIP PV Annual Conference

Digitalised and responsive PV: the Driver of the Grid and Market evolution

The 2024 edition of the annual ETIP PV Conference took place on May 22 and 23 in Brussels, gathering over 100 participants per day, the event focused on the crucial topic of Digitalised and responsive PV: the Driver of the Grid and Market evolution. Across 5 sessions, 23 speakers & session chairs – from academic and industrial backgrounds - explored the increasingly structuring role that photovoltaics technologies are playing in the European electricity network and discussed how Research & innovation allow PV systems to evolve and become an asset when it comes to flexibility and grid stability.

Key messages on the role of PV in the electricity system

Overall, the conference highlighted several key messages on the role of PV in the electricity system:

- PV systems are taking responsibility as they move into the role of cornerstone of the energy system, transitioning towards delivering flexibility, dispatchability and other options to grid operators and asset owners.
- The electricity market regulatory framework plays a crucial role in enabling the deployment of PV and PV flexibility. As the market rules are adapted to incentive PV plants as flexible actors, the role of new actors becomes crucial in enabling the continued development and evolution of PV in Europe, for instance DSO which regulate local grids where most decentralised PV is installed.
- To enable the new role and responsibilities that PV systems must now assume, digitalisation is the recurring answer. Around digitalisation, the conference pointed that to a large degree, remaining challenges relate to trust, standardisation (for instance when it comes to data flows) and regulations (with the notable topic of cybersecurity and reliability of systems)/ While technical innovation continues to open a wider array of possibilities for PV, non-technical constraints slow down the uptake of digital solutions.
- Energy communities are emerging as an increasingly strong pillar of the energy system, being an attractive model in various European markets. However, for these structures are not necessarily built around providing flexibility to the grid. There, finding the right models to maintain the attractiveness, value and interest of energy communities, while enabling the electricity system to tap into the flexibility resource they can represent is a key challenge to be solved in the short term.

The Conference Chair Venizelos Efthymiou: *“Technology is ready to respond to Terawatt Era of RE and work on flexibility. Energy communities are a central element of evolution of end-users committed and contributing to the energy transition. Having a smart solution implemented in the right environment of regulations and policies will result in an optimal evolution of Energy communities”.*

ETIP PV Chair, Rutger Schlatmann concluded: *“PV has come a long way, shifting from a focus on reducing cell costs to becoming a major component of the energy transition. As PV plays an increasingly important role in the energy system, it must take on greater responsibility, particularly regarding grid integration and end-of-life management. Ensuring low-cost electricity while addressing grid integration and social issues is essential for the sustainable development of PV technology.”*

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