

ETIP PV parallel event at EU PVSEC 2024- Main takeaways

Co-shaping the European PV R&I priorities: A basis for the new Co-programmed Partnership (26/09/2024- Vienna, Austria)

ETIP PV organized the event to present the Co-programmed partnership in establishment phase with the European Commission and to open the floor for the discussion with the audience on how to prioritise the PV R&I topics for the upcoming HE calls.

Key suggestions will be considered as the basis of the Co-programmed partnership Strategic R&I Agenda for PV:

- Industrialisation of Innovation

1. **Bridging Early and Advanced TRL Stages:** Close the gap between lower TRL research and mass production
2. **Funding Leadership by Industrial Players:** Allocate funding to existing industrial players and startups, to lead production-oriented processes.
3. **Sectoral Engagement:** Actively engage with related industries (like semi-conductors and automation) to help energy transition goals, in upcoming calls.
4. **ESG Compliance:** Introduce Environmental, Social, and Governance (ESG) compliance as a criterion for project selection.
5. **Barriers Identification** to reach high TRL levels, even within projects starting from low TRL stages.
6. **Performance Evaluation:** Conduct strict assessments after one year, excluding underperformers.
7. **IP Protection Clarity:** Ensure intellectual property rights are clearly defined and protected in innovative projects.
8. **Integrated PV Standards:** Analyze existing standards for IPV, aiming at simplification
9. **Simplification of the process for industrialisation** by small companies and startup
10. **Segmented Product Lifetime Requirements:** Define lifetime standards for different IPV product segments, as requirements may vary.
11. **Early Machine Maker Involvement:** Include machinery producers in early TRL stages through advisory roles to foster relevant innovations.
12. **Digitalisation for Flexible Production:** Implement digital tools to enable flexible, cost-efficient production, benefiting IPV initiatives.

- Supporting Market uptake with Grid Integration

1. **Data Sharing and Cyber-Security:** Emphasis on secure, efficient data exchange.
2. **Profitable Investments and Grid Balance:** Exploiting PV for profitable investments and balance of the grid.
3. **Enhanced Grid-PV Connection:** Improving synergy between grid and PV in the project.
4. **Data Standardisation**
5. **Inverters Role and Services:** Expanding inverter role to support the grid.
6. **Regulatory Adaptation for Profitability:** Aligning market rules to improve PV investment returns and grid performance.
7. **Large-Scale Grid:** Developing industry-level hubs for large PV systems.
8. **DC Grids for Integration:** Advancing DC grid solutions for heat pumps, solar mobility, and industrial use.
9. **Virtual Power Plants:** Defining limits and storage requirements.
10. **Interoperability:** How to ensure operation?

- Prioritising technology innovations

1. **Integrated PV focus:** Emphasise IPV as a core innovation
2. **Area-Optimised IPV:** Integrated PV without specific land allocation.
3. **Bottom-up approach:** Consider boundaries of application, not only PV performance.
4. **Customised-PV** to meet the requirements of each application and how PV can fit them.
5. **Versatile Production:** Make pilot lines more adaptable and test new concepts effectively.
6. **Market-Driven Innovation:** Prioritise innovations that address market gaps, not just mainstream technology.
7. **Stability as Criteria:** not only focus on performance and efficiency, as main driver.
8. **Materials:** Consider recyclability and the matter of critical raw materials like silver from the design stage.
9. **Scale-Up Challenges:** Address the lack of large-scale pilot lines in Europe, essential for proving bankability from intermediate TRLs to production.
10. **Gap of Wafers:** Address the wafer gap development in Europe, especially from sustainability aspect
11. **Needed Pilot Lines:** Support manufacturers in the pilot lines' approach involving end-users.
12. **Biodiversity Considerations:** Evaluate PV impact on biodiversity and integrate flexibility in production to accommodate varied environments and needs

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