Working breakfast with the European Parliament

Policy recommendations



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Address premature defects & decommissioning

Early failure and repowering are the main reasons for untimely decommissioning of solar panels

- Introduce routines and incentive schemes to prevent early decommissioning
- Enable viable operation in post-feed-intariff periods
- Address suboptimal operations and maintenance



Enhance design for circularity and recovery of critical raw materials

Presently solar panels and EV batteries are not designed for repair and recycling

- Support R&D in this area
- Impact of emerging EU product policies
- Waste legislation supporting the capture of critical raw materials



Support preparation for reuse

Guidelines and standards for preparation for reuse of solar panels are lacking

- Adopt guidelines and standards for preparation of reuse
- Stimulate R&D efforts in automation of logistics, repair, testing and certification of used solar panel modules
- Develop guidelines for the decommissioning of solar panel installations, to ensure the quality and integrity of decommissioned modules



Establish data collection and sharing procedures

There is a need for better identification and tracking of modules

- Establish a value chain database to store relevant information
- Make sure manufacturers disclose information
- Support R&D on the impact of different databases, information-sharing practices, and digital technologies



Address legal-administrative barriers for product-service-systems

Service-based business models experience various types of challenges

- Addressing these barriers will require amendments in specific national and subnational legislation
 - High cost for cadastre registry to secure ownership rights
 - Regulatory issues for solar-powered charging for urban micro-mobility providers



Investigate feasibility of reuse in underexplored EU market segments

In developed high-income countries, new solar energy systems remain the preferred choice

- Explore and test the viability of secondlife PV systems in a range of untested markets, such as:
 - Commercial and public sector
 - Agrivoltaics
 - Floating PV
 - Off-grid applications
 - EU countries with middle income levels



Investigate feasibility of reuse in non-EU countries

In developed high-income countries, new solar energy systems remain the preferred choice

 Explore responsible deployment of second-life solar panels in low-income countries that are characterized by lacking access to grid electricity and energy poverty, but often good solar energy potential



EU battery regulation proposal and standardization for reuse of electric vehicle batteries cack of policy on EV battery reuse

- hinders the market for second-life batteries
- New battery regulation is anticipated to support repurposing and development of the market for second life batteries
- Complemented by the adoption of standards
 - IEC 63330 Requirements for reuse of secondary batteries
 - IEC 63338: General guidance for reuse of



Strengthen public perception of circular solar panels and EV batteries

Public perception towards second-life products is not well-developed yet

- Green public procurement could strengthen public perception
- Incentive schemes to encourage reuse of solar panels
- Environmental awards for best practices



Research agenda for a circular solar PV and EV battery sector

- Further develop models to estimate resource and product flows
- Assess emerging solar energy and EV battery technologies from a circularity perspective
- Assess socio-economic and environmental benefits of different circularity strategies
- Investigate the opportunities and implications of new organizational collaborations for circularity





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