

India-EU Clean Energy and Climate Partnership (CECP)

Event on complementing the grid with decentralized solar energy: how to support solar entrepreneurship

WSDS, 11 February 2019, India Habitat Centre

At the World Sustainable Development Summit (WSDS) 2019 a 2 hours **EU-TERI-ISA-EIB** event on Decentralized Solar Energy was organized. In the scenario of a rapidly expanding grid which needs to deal with increasingly distributed renewable energy generation and energy storage, decentralized renewable solutions are expected to play an important complementary and supporting role. Some facts mentioned in the session:

- The Govt. of India in April 2018 announced 100% village electrification. The Govt. of India launched Saubhagya scheme in September 2017 to achieve the goal of universal household electrification and only 28,000 households (.01%) are left to be electrified out a total of 21,30,36,453 households across India (as per Saubhagya dashboard, Ministry of Power).
- A market opportunity of more than \$ 50 billion exists for clean energy innovations to power livelihoods in rural India, with a majority of this in India's farm sector, as per report published by the Council on Energy, Environment and Water (CEEW).

The event aimed at deliberating upon the potential and challenges of decentralized solar energy interventions and identifying options for supporting emerging decentralized solar energy entrepreneurs.

Short summary of the session

- The session **was introduced by Mr. Amit Kumar**, Senior Director, TERI, welcoming the speakers and audience and conveying the message that India is moving fast towards 100% household electrification, with a future role for decentralized renewable energy systems. **Mr. Edwin Koekkoek**, Counsellor, Energy and Climate Action, Delegation of the EU to India, informed the audience about the concrete activities between the EU and India under the Clean Energy and Climate Partnership (CECP), about the **new 3 year CECP project** and about the joint declaration signed between the International Solar Alliance (ISA) and the EU at COP24 in Katowice. **Ms. Mohua Mukherjee**, Programme Ambassador, ISA, welcomed the participants and welcomed the partnership with the EU and with the European Investment Bank (EIB).
- The **panel discussion** that then took place was moderated by **Dr. Arunabha Ghosh**, Founder-CEO of the Council on Energy, Environment and Water (CEEW). He described the importance of energy access for households and communities and its contribution to meeting the sustainability goals. The moderator first gave the floor to **Dr. Donal Cannon**, Head of Regional Representation for South Asia, EIB, while highlighting that grid vs. decentralized renewable energy is an artificial debate. They will co-exist.
- The Panelist **Dr. Donal Cannon** informed that the EIB last year has invested almost \$ 20 billion in climate action projects. He presented a scenario in which the grid will have millions of generation points and millions of points of storage, effectively making grid a marketplace to buy and sell power. Boosted by a drastic fall in the costs of solar and storage, decentralized solutions are bound to have a bright future. It is important to provide support to solar entrepreneurs through access to low cost international finance and through technical assistance.
- The panelist **Mr. Piyush Mathur**, Chief Executive Officer, Simpa Networks elaborated on the evolution of Simpa networks since it started in 2013. He considered access to finance to be the biggest barrier, which is why they opted for a pay as you go mechanism (consumers do not pay any upfront cost, however have monthly instalments or energy charges) particularly for cooperative owned projects.



This project is funded
by the European Union



- The panelist **Ms. Mohua Mukherjee** considered that the increasing demand for appliances (driven by saubhagya scheme) coupled with the recent availability of solar appliances that can power motors particularly for fans and pumps would play a key role in developing a decentralized renewable energy ecosystem. Cooling of food and vaccines to prevent spoilage through storage chambers/containers is an important example.
- The panelist **Mr Dhruva Purkayastha**, Director, US-India Clean Energy Finance, Climate Policy Initiative, stated that the grids have always been one-way and weren't designed to be distributed; however the issues of mobility has come in and storage shall be a key constituent to the grid in future. In his opinion, there is need for agriculture focused rural income generation business models particularly for applications like pumps, oil milling, solar spinning yarns, chippers, etc.
- The panelist **Mr Debajit Palit**, Director & Senior Fellow, Rural Energy and Livelihoods Division, TERI highlighted that decentralized renewable energy should not be looked at as merely a village electrification solution but as a solution to further contribute to access, power quality, reliability and affordability. To ensure business certainty, decentralized renewable energy systems will likely complement the grid while keeping the price low.
- The panelist **Mr Vinay Rustagi**, Managing Director, Bridge to India stated that the way distribution companies currently function will pose barriers to decentralized renewable energy. There is a need for regulation supporting pay as you go models and peer to peer trading. Mr. Rustagi concluded by saying that there is a need to blend grant and debt financing, wherein the grant can absorb the credit risk; hence the domestic banks have some level of guarantee to mobilise finance.

Based on the panel discussion and the discussion with the audience the **main findings** can be summarized as follows:

- While grid might become a marketplace for buying and selling power, power distribution and aggregation will provide newer opportunities for local entrepreneurs including households and enterprises.
- In the future, decentralized energy solutions will play a complementary role by enabling distribution companies to enhance the share of renewables and by playing a supplementary role in remote regions / areas.
- There is a need for adaptive business models and innovative technology solutions. Finance and institutional capacity building will play a crucial role in furthering the penetration of decentralized solutions.
- There is a need for regulation supporting pay as you go models and peer to peer trading.
- Both the grid and decentralized systems will co-exist and remain relevant in both rural and urban markets.