

**EVENT DAY 3: 02 MARCH 2023 (THURSDAY)  
12TH EU - INDIA SMART GRID WORKSHOP**

**In collaboration with European Union**



**SMART SOLUTIONS FOR RENEWABLES INTEGRATION**

**Part A: Session 1- BRIDGE Projects; Session 2 - Curtain Raiser Smart Grid Observatory**

**Venue & Time**

Venue	Regency 1&2
Time	India 10:30 ~ 13:30

**Session Background**

ISGF and DG ENERGY office of the European Union launched EU-India Smart Grid Workshop series in 2015 and have held 11 workshops till 2022. Since 2018 a Regulatory Track was added in this workshop series in collaboration with Florence School of Regulation (FSR). The EU-India High-Level Platform on Smart Grids, chaired by Florence School of Regulation-FSR Global with the support of ISGF and Comillas University was established in 2020 under the EU-India Clean Energy and Climate Partnership (CECP) to support faster replication and roll out of smart grids in India. The platform through its first year of activity aimed at identifying smart grid projects to be considered as use cases from Europe and India to facilitate knowledge sharing between experts drawn from industry, academia, utilities and policymakers.

Europe has implemented several successful projects at scale for grid integration of renewable energy sources (RES) in different EU member states in the recent past; and many of these projects are relevant in the Indian context. India has about 150 GW of RES in its generation capacity mix which is expected to be 500 GW by 2030. IEA estimates Indian power system to have up to ±85% flexibility by 2040 which is a tall task to meet. Several of the projects executed under the BRIDGE program of the EU have successfully demonstrated and deployed flexibility solutions such as energy storage systems (ESS), virtual power plants (VPP), smart microgrids, grid integration of electric vehicles and other behind the meter resources at grid scale which are very relevant for the Indian power sector.

**EU – INDIA Smart Grid Projects**

This edition of the EU-India workshop will present and discuss some of the select successful smart grid projects executed in Europe under the BRIDGE program as well as the offshore wind energy projects. European Union (EU) and India have been working on a common agenda of clean energy and energy security. The partnership between the two regions has matured from workshops to collaborative smart grid projects in India. This started with first project – “iElectrix” awarded to Tata Power Delhi Distribution Limited (one of the distribution utilities in Delhi capital region) and Enedis, France in the year 2019. The project aimed at assessing the role of local distributed energy resources in increasing the consumption of renewable energy and improving the resilience of the energy system. The project was commissioned in March 2022. Further, a call for collaborative projects jointly funded by EU and India was issued in the year 2020 under Horizon 2020 program and subsequently two projects were awarded in 2021: E-Land Projects with BSES Yamuna Limited (one of the distribution utilities in Delhi capital region), in partnership with Smart Innovation Norway; and with Enedis. The Energy Community and Social Innovations being encouraged for new stakeholders to invest in the energy sector. This encompasses electricity generation, consumption, and various electricity sharing mechanisms. End-users, municipalities, and SMEs can participate actively in the development of renewable energy projects as well as the deployment of new energy services, flexibility services, or energy sharing schemes that are socially innovative. An Energy Community's fundamental feature is that it brings together players participating in a localized energy project or actors with a shared field of interest who are engaged on a wider scope.

**Why a ‘Smart Grid Observatory’ for India?**

The EU-India High-Level Platform on Smart Grids, with inputs from 30 key senior experts from the Indian and the European power sector identified and analysed select smart grid use cases both in the European and Indian context by conducting cost-benefit analysis and scalability and replicability analysis. The outcome yielded in a handbook on replication and implementing smart grid solutions in India. As a follow up, the high-level platform intend to initiate the development of a ‘**Smart Grid Observatory**’ for India.

As new technologies and solutions are being implemented in the energy sector, it is important for us to learn from the experiences, and check how they can be implemented effectively across India. In order to do that, we must first collate data, analyse it using robust methodologies and then share that knowledge with relevant stakeholders for quicker uptake of smart grid solutions. The observatory needs to be setup as an independent platform, in collaboration with multiple stakeholders and the function of such an observatory would include data analytics, research frameworks and analysis and institutional engagements.

#### Discussion Points

1. Launching the Smart Grid Observatory
2. Innovative smart grid projects and experience sharing
3. How to establish fruitful collaboration projects between India and the EU
4. Policy and Regulatory Challenges for Flexibility Solutions
5. Addressing the Next Steps in the Green Energy Transition of India
6. Introduction to Select Projects under BRIDGE Program Relevant in the Indian Context
7. Innovation and Business Models and in Flexibility Solutions
8. Regulatory Challenges for Flexibility Solutions

10:30 ~ 11:00	<b>Inaugural Session</b> <b>Welcome Address: ISGF</b> <b>Inaugural Address: TBC</b>
11:00 ~ 11:30	<b>Session 1: Curtain Raiser of Smart Grid Observatory</b>  <b>Welcome Address: Jean-Michel Glachant</b> , Principal Advisor FSR Global Florence School of Regulation  <b>Opening Remarks: Matthieu Craye</b> , International Relations Officer, DG ENER, European Commission  <b>Presenting the Smart Grid Observatory for India: Swetha Ravi Kumar</b> , Head of FSR Global, Florence School of Regulation  <b>Open discussion with the audience</b> <ol style="list-style-type: none"> <li>1. <b>The Way Forward: Matthieu Craye</b>, International Relations Officer, DG ENER, European Commission</li> </ol>
11:30 ~ 12:15	<b>Session-2: EU – India Smart Grid Demonstration Projects</b>  <b>Chair and Moderator: Thomas N. Mikkelsen</b> , BRIDGE - Head of Joint Communication Task Force  <b>Topics:</b> <ol style="list-style-type: none"> <li>1. <b>ELAND and iElectrix Projects</b> - What did we learn and how to continue the collaboration</li> </ol> <b>Speakers:</b> ELAND Project - <b>Sunil Sharma</b> , BSES iElectrix Project - <b>Pierre-Jacques le Quellec</b> , Enedis iElectrix Project - <b>G Ganesh Das</b> , Tata Power  <b>2. The Role of Local Energy Systems</b> SUSTENANCE Project - <b>Zakir Hussain Rather</b> , IIT-Bombay  <b>3. Combing Energy Vectors</b> Re-Empowered Project - <b>Nikos Hatziaargyriou</b> The Road to a Green Energy Transformation in India - <b>Ramit Debnath</b> , Cambridge University
12:15 ~ 13:20	<b>Session-3: Flexibility through Smart Grids</b>  <b>Chair: Suman Sharma</b> , MD, Solar Energy Corporation of India Limited* <b>Moderator: Swetha Ravi Kumar</b> , Head of FSR Global, Florence School of Regulation  <b>Panel on Potential Avenues for India</b> <ol style="list-style-type: none"> <li>1. State of Play in the EU: <b>Patrick Clerens</b>, EASE</li> <li>2. State of Play in India: <b>Ravi Kadam</b>, CERC</li> <li>3. Challenges in Integration and Uptake: <b>Ganesh Das</b>, Tata Power</li> <li>4. StoREin Project – Focus and Pipeline: <b>Bernard</b>, GIZ</li> </ol>

13:20 ~ 13:30

**Key Takeaways and Next Steps**

**Edwin Koekkoek**, First Counsellor Energy and Climate Delegation of EU to India

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