

## **Title:** Evaluating the value of distributed generation

**Date & Time:** Friday, 4<sup>th</sup> November 2022 4:00-5:00pm

### **Context**

The transition of power sector from conventional sources to renewable resources is critical to be on the path to reduce carbon emission and achieve the targets set in line with the Paris Agreement. India has set a target of reducing its emission intensity of the GDP by 45% along with an increase in the non-fossil fuel based generation of 500GW by 2030. Furthermore, Tamil Nadu has set a target of adding 20GW of solar energy system by 2030, predominantly through distributed energy resources (DER).

Distributed renewable energy sources (DER) such as solar and battery energy storage are expected to play an increasingly important role in the power sector. Determining the most appropriate interconnection points of DER in the distribution network will therefore become a critical task for the electricity utility of the future.

SOLVA is a web-based tool with the aim to assist grid operators in assessing the network and societal value of DER. The network benefits are achieved by estimating the potential avoided (distribution, transmission & generation) cost of introducing DER in the network, while societal benefits include the potential avoided emission costs with the integration. SOLVA allows users to,

- Undertake a DT/Feeder/Substation level power flow analysis.
- Evaluate the network benefits and social benefits for distributed solar and energy storage.
- Identify system sizes and dispatch strategies to optimize the value of distributed solar and energy storage.

### **Objective**

The objective of the session was to introduce Solva tool to sector experts and engage with them to get feedback on the methodology and further developments for the tool

### **Focus areas**

This session was intended to present the tool and provide instructions through sample simulation with further discussions on the achieved results. The methodology adopted to determine the benefits (network & societal) was also presented to sector experts to gain critical insights. The session provided participants with instructions to be able to simulate scenarios and estimate the overall benefits of integrating DER in the power network.

### **Key takeaways**

1. Methodology to determine the VODER (Value of distributed energy resources).
2. The tool can be used by multiple stakeholders to determine impact of DER on the distribution network and establish the network and societal benefit of the DER integration.
3. The tool could help decision makers to identify optimum systems for respective power networks

### **Agenda**

Time	Activity	Facilitator
4:00pm – 4:10pm	Introduction	Martin Scherfler
4:10pm – 4:40pm	Presentation	Frano D'Silva
4:40pm – 4:55pm	Q & A	Martin Scherfler
4:55pm – 5:00pm	Session closing	Martin Scherfler

### **Contact**

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