



WEBINAR: CONCEPT NOTE SOLAR E-MOBILITY: CHARGING FOR CHANGE

Theme

The solar-electric mobility integration enables greater penetration of both clean technologies. The EV deployment can achieve its full GHG emission mitigation potential if the vehicles and battery swap stations are charged through decarbonized electricity grid or renewable energy sources. The global solar and EV markets are growing at a fast pace due to governments trying to achieve climate goals. However, solar-powered EV charging stations and battery swap centers are still at the initial stage of evolution owing to some technical and regulatory challenges.

Large-scale uptake of solar energy in the electric mobility sector requires a convergence of multiple stakeholders like federal and state electricity regulatory bodies, government nodal agencies for the power, transport, urban local bodies and renewable energy sectors, electric utilities (DISCOM), charging station developers and operators (CSO), battery swapping-station developers and operators, fleet operators, private e-vehicle owners along with solar and automotive OEMs, onto a common platform. Since each country has its own laws related to electricity generation, transmission and distribution, the challenges encountered in the integration of solar energy with the EV sector are also specific.

There are several advantages of powering EVs through solar. For instance, the overall longer-term cost of solar integrated EV charging is less than procuring electricity via grid. Solar e-mobility also allows for better control of solar energy and enables EV batteries to function as energy storage for grid services. In this webinar, issues faced by the utilities, regulators and operators in various scenarios and countries, for example, charging through

solar sourced via open access and on-site PV, will be discussed. The discussions will include aspects related to battery stack management at the solar-powered swapping centers and end-user convenience. This stakeholder engagement will also cover a few select case studies and business models related to various operational design options like grid-connected solar-EV charging stations with and without batteries, and standalone solar integrated charging stations.

Expected outcomes

- I. Learning economic viability aspects and industry perspective through select case studies and business models
- II. Review of technical, policy and regulatory challenges encountered by the stakeholders
- III. Recommendations proposed by each category of the stakeholder community
- IV. Building consensus on the Way Forward steps

Target audience

Charging and battery swap station operators and developers, EVSE industry, automotive OEMs, electric utilities and regulators, government nodal agencies for transport, renewable energy, Urban Local Bodies and power sectors, fleet operators, ISA member countries representatives.

Webinar set-up

Format: Two sessions and a panel discussion (30 min each, Q &A after each session)

Duration: 2 hours

Technology: Video conferencing via Zoom