



Workshop

Integration of E-Mobility into Energy System

11 April 2024, 15:00-18:00 CEST
Geneva and online

Electrification of mobility will have as high impact on the design and operation of the electric grid as it will have on transportation systems themselves. Electric loads will grow significantly and fuel sources will be strained as we swap out petroleum-based fuels for electricity. In addition, chargers themselves represent large, undiversified loads and potential cyberattack surface.

The location and operation of electrical vehicle (EV) chargers (private or public) need to be integrated with grid and resource planning, and a greater emphasis should be placed on cybersecurity. This will be particularly true of co-located public chargers, charging infrastructure to support medium and heavy-duty trucking, and any implementation of Vehicle to Grid (V2G) approaches.

As a result, ensuring a balanced integration of electric mobility calls for collaboration and information sharing between governments, electricity and transport sector experts, and other stakeholders active in the related areas.

United Nations Economic Commission for Europe (UNECE) addresses this issue and contributes to the analysis and the assessment of the degree of integration of e-mobility into energy system, and on the impact that it has on the electricity system design and operations.

Agenda

The Workshop on Integration of E-Mobility into Energy System will be held in **Geneva (Palais des Nations) and online** on **11 April 2024 from 15:00 to 18:00 CEST**. The format of the event is hybrid (in-person and online). Working language of the workshop is English.

The workshop is meant to identify the current “state of affairs” relative to e-mobility/electric grid integration and identify gaps where the UNECE’s Expert Groups could make a meaningful difference.

The event objective is to discuss the following:

- Requirements for power generating resources to displace direct combustion of petrol-based fuels to electric power;
- Potential risks to the electric grid;
- Technical aspects of grid friendly EVs charging behaviours and vehicle to grid integration;
- Challenges in managing the transition to avoid adverse impacts on reliability of electricity systems;
- Necessity for cross-sectoral coordination to ensure power system resilience and security.

Integration of E-Mobility into Energy System

15.00-15.10 Introduction

Ms. Nadejda Khamrakulova, Secretary, UNECE Group of Experts on Cleaner Electricity Systems

Mr. Igor Litvinyuk, Secretary, UNECE Group of Experts on Energy Efficiency

Mr. Gianluca Sambucini, Secretary, UNECE Group of Experts on Renewable Energy

15.10-15.30 UNECE activities related to e-mobility

Mr. Jim Robb, Chair, UNECE Group of Experts on Cleaner Electricity Systems

Mr. Stefan Buettner, Chair, UNECE Group of Experts on Energy Efficiency

Mr. Kostiantyn Gura, Chair, UNECE Group of Experts on Renewable Energy

Ms. Els de Wit, Chair, UNECE Working Party on Transport Trends and Economics (WP.5)

15.30-16.30 Session I: Effective management of EV charging demand

Moderator: *Mr. Stefan Buettner, Chair, UNECE Group of Experts on Energy Efficiency*

15:30-15:45 Setting the scene:

Ms. Susanne Koblitz, Independent Expert EV Charging Technology, Germany

Mr. Vladimir Budinsky, Vice-President, EURACOAL

Mr. Furugzod Usmonov, Energy Expert, Tajikistan

15:45-16:30 Open discussion

16.30-17.30 Session II: Challenges of integration of e-mobility into electricity system

Moderator: *Mr. Jim Robb, Chair, UNECE Group of Experts on Cleaner Electricity Systems*

16:30-16:45 Setting the scene:

Ms. Britta Gross, Director of Transportation, EPRI

Mr. Olivier Augé, Head of Engineering, Transports Publics Genevois, Switzerland

Mr. Bendik Nybakk Torsæter, Research Manager, SINTEF Energy Research, Norway

16:45-17:30 Open discussion

17.30-18.00 Future work of UNECE Groups of Experts on integration of e-mobility into energy system

Mr. Jim Robb, Chair, UNECE Group of Experts on Cleaner Electricity Systems

Mr. Stefan Buettner, Chair, UNECE Group of Experts on Energy Efficiency

Mr. Kostiantyn Gura, Chair, UNECE Group of Experts on Renewable Energy

18.00 Closing of workshop