



Invited Speaker

Stéphane Dätwyler Duarte

Strategic Development Manager
Romande Energie, Switzerland

Operating and planning Distribution Grids in the next decade (G0703)

Talk Title

Operating and planning Distribution Grids in the next decade: Dynamic Tariffs, Flexibility Products, Voltage Control and DSO–TSO Coordination

Biography

Strategic Development Manager by Romande Energie, with over 10 years of experience in the energy sector, covering both transmission and distribution power grids. Coming from system operations, with hands-on experience as a System Operator (dispatching) for a TSO and as an Operations Engineer within a DSO control center. Specialized in grid modernization, system operations, flexibility integration and dynamic grid tariffs. Strong background in leading cross-functional projects and coordinating multiple stakeholders.

| Abstract

The increasing penetration of distributed energy resources, electrification of end uses and decentralised flexibility is transforming the operation of distribution grids. Distribution System Operators (DSOs) are evolving from passive asset management towards an active system operation role, requiring new operational tools, market-based mechanisms and closer coordination with Transmission System Operators (TSOs)

This presentation provides an integrated overview of dynamic grid tariffs, flexibility products, voltage control and DSO–TSO coordination in the operation of modern distribution grids. It highlights how these elements are closely interconnected and why they must be addressed within a coherent operational framework rather than in isolation.

Dynamic grid tariffs are presented as a lever for implicit flexibility, reflecting local grid constraints and guiding customer behaviour. The presentation then explores how explicit flexibility products can complement tariff signals to support congestion management, voltage control and peak reduction. Particular attention is given to operational prerequisites such as grid observability, data availability, forecasting and activation processes.

Voltage control is discussed as a key operational challenge in active distribution grids, especially in systems with high photovoltaic penetration. The presentation concludes with a focus on DSO–TSO coordination, underlining the importance of clear roles, interfaces and information exchange to ensure secure and efficient system operation.