The DLMS **Generic Companion Profiles (GCPs)** represent the next stage of compatibility, designed to simplify operations and ensure seamless integration across devices and systems. The EVCS GCP offers a **standardized framework for data exchange from Smart Meter to Electric Vehicle Charging Stations** (EVCS). This profile provides an industry-standard implementation of DLMS/COSEM, ensuring interoperability across devices at the edge. By adopting the DLMS EVCS GCP, organizations can **enhance the efficiency of their smart charging solutions while leveraging important information available within the Smart Meter to better manage grid congestion.**

EVCS (EV Charging Station) GCP Overview

The **EVCS GCP** leverages **real-time smart meter data**, as well as **power related information provided by DSOs**, enabling digital integration of electric vehicle supply equipment with the smart metering infrastructures. Designed for seamless information exchange and straightforward integration between smart meters and EV charging stations, the profile ensures reliable and secure access to Smart Meter data, unlocking unprecedented grid friendly smart charging potential.

Addressing Industry Challenges with EVCS GCP

Both the electric vehicle charging industry and grid operators face challenges resulting from the installation of large loads into portions of the network not initially designed to accommodate them. Developing custom solutions for each region leads to increased complexity, higher costs, and extended time-to-market. The EVCS GCP streamlines this process by providing a standardized, off-the-shelf solution, eliminating the need for market-specific implementations and reducing operational overhead. while leveraging the installed base.

KEY BENEFITS

Interoperability Guarantee: Ensures seamless compatibility between smart meters and EV charging stations, allowing for plug-and-play functionality without integration hurdles.

Secure Smart Meter Data Access: Leverages the industry proven DLMS/COSEM protocol for secure and reliable data exchange, ensuring confidentiality and system integrity.

Data Empowerment: Provides real-time insights into available power, grid voltage, and energy consumption, and access to DSO curtailment information, enabling intelligent charging decisions and grid-responsive operation.

Easy Implementation: Utilizes standardized smart meter ports (P1 according to DLMS Green Book and IEC 62056-7-5), simplifying installation without requiring additional infrastructure modifications.

Future-Ready Design: Supports value-added services such as dynamic subscription schemes, enabling flexible charging operations based on real-time power availability.

Highlighting the Main Use Cases

1 Device Commissioning

Secure onboarding and configuration of EV chargers

2 Initial Installation of Security Credentials

Ensuring secure data access and integrity

3 Charger-to-Vehicle Connection

Facilitating efficient communication between charging stations and electric vehicles

4 Dynamic Power Management

Adapting power distribution for overload protection, peak shaving, and grid stabilization

5 Chain2 Support

Reduces data package size using compact data objects, enabling multi-purpose server ports and ensuring correct interpretation with periodic descriptor messages.