

SUCCESS STORY

Successful Securing of Smart Meter PKI Certificates from the SM-PKI Sub-CA with Schleupen and Securosys

Background

In order to better monitor the energy transition in Germany, smart meters have been introduced as local data and control nodes within an intelligent energy grid. This path was initiated by the law on the Digitization of the Energy Transition (Gesetz zur Digitalisierung der Energiewende, GDEW) to promote more efficient and sustainable energy use. To meet the requirements enforced by this GDEW, the Smart Meter PKI was established which has been a requirement since October 1, 2023, for encrypting and signing messages in the German electricity market via the AS4 protocol. However, implementing these demanding requirements necessitates a robust security solution.

Implementation

The collaboration between Schleupen and Securosys plays a key role in securing and managing the security certificates from the Smart Meter PKI. Schleupen, a renowned software provider in the energy sector, relies on the proven Hardware Security Modules (HSM) from Securosys to store the key material for the certificates used in the AS4-supported transmission of market messages in accordance with regulatory requirements.

Thanks to the integration of Securosys' HSM, including remote management of the keys via the Decanus Terminal, Schleupen can protect the security certificates of the Smart Meter PKI at the highest level and ensure a secure and reliable infrastructure. Securosys' HSMs act as multifunctional digital key vaults that control the generation, management, and access to keys. Within the HSM, sensitive security certificates are securely stored and managed to prevent unauthorized access. The Decanus Terminal remotely enables efficient monitoring and maintenance of the HSMs to ensure smooth operation and optimal performance.

The success of this partnership lies in the effective implementation of a secure infrastructure for the Smart Meter PKI certificates. Through the collaboration between Schleupen and Securosys, the stringent regulatory requirements are fully met, allowing Schleupen's customers to operate their businesses securely and in compliance with the law.

Schleupen's expertise in the energy sector and Securosys' outstanding know-how in security technology have created an innovative solution that paves the way for a smart and secure energy world.

Law on the Digitization of the Energy Transition (GDEW)

For more information about the Law on the Digitization of the Energy Transition (GDEW), visit:



Certificate Policy of the Smart Metering PKI Root CA

The requirements for the security infrastructure can be found at:



About Schleupen SE

Founded in 1970, Schleupen SE has approximately 560 employees and generated 82.7 million euros revenue in 2023. Their largest business unit, „Energy and Water Management,” counts more than 300 utility companies as customers. In the energy sector, Schleupen is one of the few software providers with a comprehensive solution that covers billing, market communication, energy logistics, finance, and operational planning of all resources in network operations. Already more than 15,500 users work with this solution. The software offering is complemented by extensive IT services, ranging from on-site services to handling individual business processes to fully taking over the entire IT infrastructure in the Schleupen Cloud. On the ICT platform for Smart Meter Gateway Administration, 130 municipal utilities with more than 3 million conventional meters are ready to transition to smart metering systems.

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