

The Siemens logo is displayed in a white box in the top right corner of the main image. It consists of the word "SIEMENS" in a bold, teal, sans-serif font.

Stadtwerke Peine

Dynamic low-voltage load distribution

[siemens.com/mac-ioe](https://www.siemens.com/mac-ioe)

Upgrading for a sustainable future

Due to the expansion of renewable energies and the market inroads being made by e-mobility, existing low-voltage grids are facing a new challenge with regard to load distribution. Stadtwerke Peine, a municipal utility company in Lower Saxony, Germany, is one of the power providers looking for a solution. To ensure that power grids can be operated safely and cost effectively in the future – using sustainable concepts and without requiring significant grid expansion – the impact of these developments needs to be analyzed and understood.

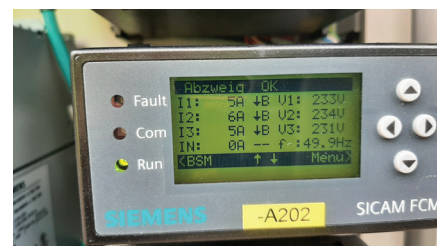
At Stadtwerke Peine, four secondary substations have been digitally upgraded and connected to the Siemens MindSphere cloud solution and SICAM Navigator:

- one compact transformer substation with four low-voltage branches
- one tower substation with four low-voltage branches
- one walk-in transformer substation with six low-voltage branches and
- one compact transformer substation with four low-voltage branches

The cloud connection brings greater transparency to low-voltage grids. This is a vital factor for private prosumers, and particularly important in view of the steady rise of e-mobility.

“To enable the sustainable expansion of e-mobility, we are collaborating with Siemens on a concept to dynamize low-voltage grids. This will ensure we can create a future-proof low-voltage distribution grid.”

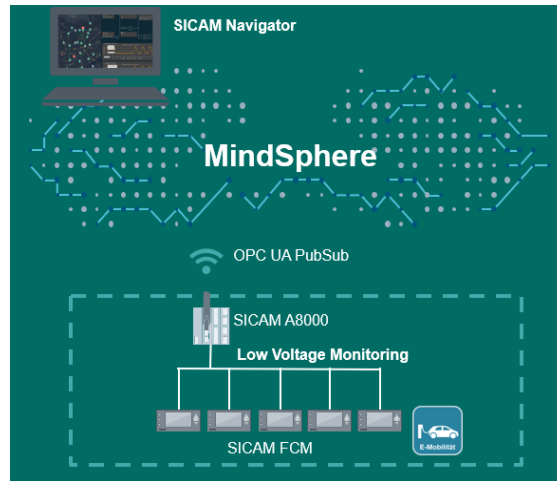
Frank Bode – Bereichsleiter Netzbetrieb (Division Manager, Grid Operations)
Stadtwerke Peine GmbH - Germany



The implemented SICAM FCM

Stadtwerke Peine working with Siemens to achieve its objectives

Comprising the SICAM A8000, SICAM FCM and the Grid Diagnostic Suite with the SICAM Navigator, the integrated Siemens solution brings a whole range of benefits. These include the online availability of measured data in real time – viewable from any location on a smartphone, tablet or PC. Targeted workforce management results in efficient grid management and a smaller number of grid outages. The SICAM Navigator supports the control center by providing additional measurement data and information from the low-voltage grid, forming the basis for dynamic low-voltage management and related analyses. Optimizing load redistribution in the supply grid ensures that Stadtwerke Peine is equipped for a sustainable future.

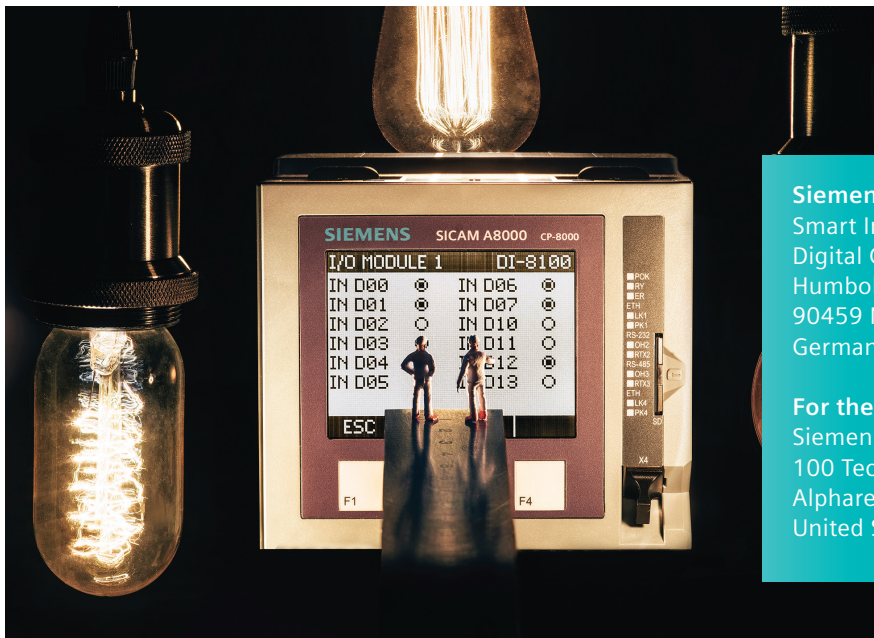
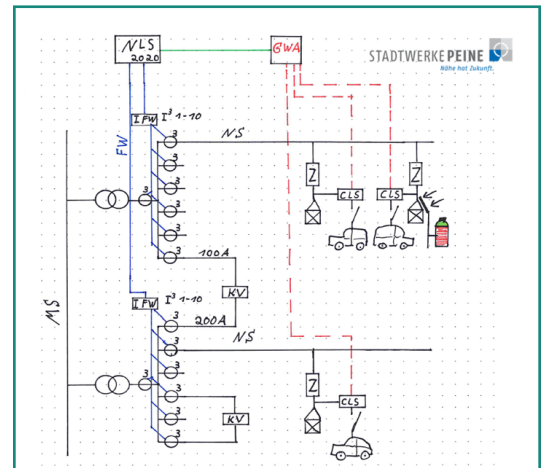


Benefits and features

- Integration and fulfillment of e-mobility supply needs
- Optimized load redistribution and transparency thanks to online monitoring of the supply grid
- Reduction of CO2 through integration of renewable energies
- Detection of current or voltage anomalies
- Availability of data from any location thanks to grid transparency
- Simple integration of system solution into existing systems

Looking to the future

The future is looking bright for Stadtwerke Peine. Moving forward, the aim is to enable dynamic grid control for low voltages on the basis of SICAM Navigator and the currently implemented solution. Demand-driven, dynamic grid control, online monitoring of load distribution and operation centers of all kinds are only a few of the possible models that could be implemented at Stadtwerke Peine with the aid of Siemens technology.



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