

# Electric energy systems

**In the future, many of the things we think of as pure drivers of power consumption – including buildings, sites, and regions – will also be producers of electric power that are connected in decentralized networks. Our aim is to accompany you on your way to the future, helping you to plan for and exploit the advantages of local power production, optimized energy systems, and electromobility. In doing so, we'll take a cross-sector approach that integrates electric power and thermal systems to secure resilient and profitable solutions.**

Our intelligently managed solutions enable you to increase your supply security as you create carbon-neutral sites that secure and increase in the value of your real-estate portfolios.

## **Services centering on integrated energy systems**

Our many years of experience encompass:

- Qualitative and quantitative analysis of electric energy systems (status analyses, technical due diligence)
- Assessment of energy-supply systems
- Assessment of measures to increase energy efficiency
- Cost-benefit analysis for renewal projects
- Technology consulting
- Calls to tender for engineering projects
- General management of projects in the area of electric power systems
- Quality assurance/controlling
- Assessment of electromagnetic compatibility (EMC)

## **Network solutions for greater efficiency**

All manner of sites should be prosumers, that is, they should not just consume but also produce energy in decentralized networks. This is best achieved with the introduction of cross-sector (electricity+) energy systems, or microgrids. This is why we support developers, architects, and real-estate companies at home and abroad in the following areas:

- Photovoltaics-based power production
- Optimizing energy consumption via microgrids, making power produced by your own building available to neighboring buildings
- Charging infrastructure for electric vehicles, ideally allowing for the use of

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- vehicle batteries in times of energy scarcity (vehicle-to-grid, V2G)
  - Connecting up with district heating networks for heat and hot water (energy network)
  - Increasing your annual performance factor via decentralized heat pumps (HPs)
  - Securing energy supply via cross-sector solutions