

VORES ELNET

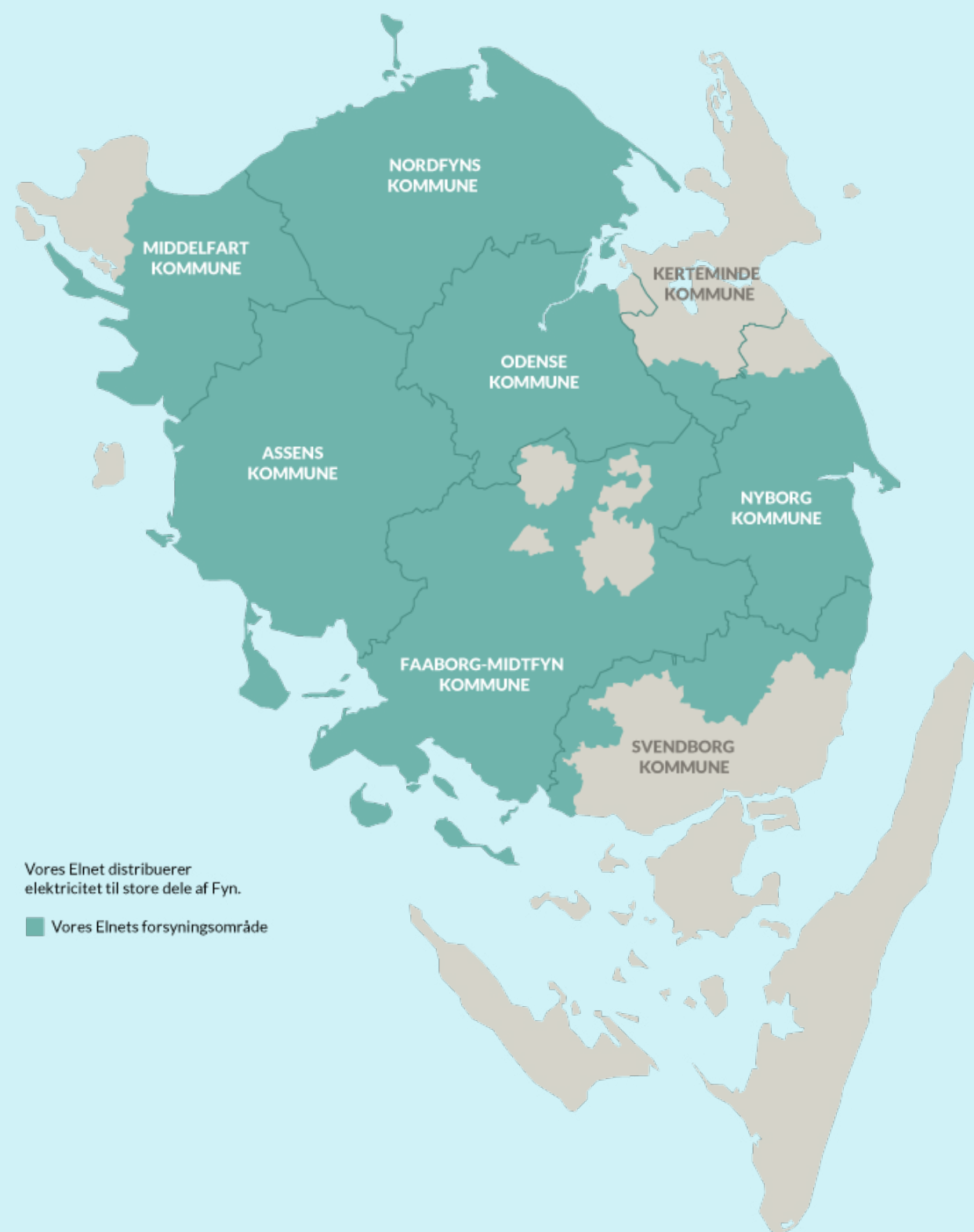
ROLL OUT THE NEXT GENERATION OF SMART METERING

Vores Elnet

One of the largest DSOs in Denmark, Vores Elnet supply more than 200,000 customers on the Islands of Funen (Fyn) and Langeland, 90% of the region's population. The company name roughly translates as "our network" in English, which is fitting as it's a cooperative utility, owned by its customers. Vores Elnet operate the LV and MV electricity networks across the region. Network efficiency is measured on an ongoing basis by the Danish Energy Regulator, which prepares a benchmarking of all grid companies in Denmark. and over the years have invested heavily in renewing and modernizing their electricity network to better meet future requirements.

Denmark is rightly proud of its energy grid, where the focus has been on green energy supply for over 40 years. Today, more than half of the electricity on the grid comes from renewable sources – one of the highest levels in the world. The Danish Energy Grid monitors the performance of the different regional suppliers, like Vores Elnet, to ensure consistent high standards. And it works: with an up-time of 99.8%, Denmark has one of the most reliable grids in the world.

VORES Elnet





The Challenge

For the last 15 years, Vores Elnet has used smart metering devices across the grid, using technology supplied by Landis+Gyr. Over time, the solution has been continuously updated with new versions of devices and software, as well as the introduction of more advanced PLC communication technologies. But 15 years is a very long time in technology, and the first generation of smart meters are approaching the end of their life cycle. It was time to consider a more significant upgrade, including a move to new technology designed for the IoT era.

That's why, in 2021, Vores Elnet took a significant step towards an IoT infrastructure by updating their current AMI solution and moving to point-to-point residential meters with real time network monitoring capability

When undertaking a technical upgrade of this scale, it's vital to get the big decisions right, early on in the process. After all, the technology you install today still needs to be functional and flexible enough to meet the energy needs of a difficult-to-predict future. What's more, in an ideal solution, the upgrades and installation of new equipment should be invisible to the end users, in terms of continuity of service. The only visible difference should be the improved functionality unlocked by the new infrastructure.

The project was carefully planned in close collaboration between Vores Elnet and Landis+Gyr. In order to get on the right track from the beginning, Vores Elnet used Landis+Gyr Project Management Services during the first steps of the project. System set-up, project planning and detailed configurations were defined under the leadership of Landis+Gyr's Project Managers.

An important decision taken right at the beginning was to upgrade the existing AMI system environment and transfer the entire device infrastructure to a new Head End System (HES) at the same time as the installation of new consumer-end devices. As the HES and Meter Data Management (MDM) functionalities in Landis+Gyr AIM are fully integrated, and the MDM remains unchanged, this transition will have no impact on daily system operations – from a user's perspective, the AMI interface remains the same. After full installation, the project is managed by the skilled in-house resources of Vores Elnet, with Landis+Gyr providing supporting in the background.

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We are proud to continue our partnership with Vores Elnet. This project is an example of how we are able to work with our forward-looking customers to get the most out of our technology for their use case. Furthermore, the benefits of P2P-system are undeniable; it is effortless to install and cost-effective to use. ”

Kjeld Gade | Head of Sales of Landis+Gyr in Denmark

The Solution

Designed for the requirements of the IoT world, Landis+Gyr's E360 meter uses international SIMs for flawless data transmission even in rural areas, based on LTE connectivity, while featuring new levels of capabilities in metrology and computing capacity. This new solution enables:

- **Real-time data collection:** By integrating a new Head End System, the new infrastructure enables secure, real-time data collection on energy consumption, event and power quality information, at 15-minute intervals.
- **Fallback communication:** In addition to the pre-configured LTE M1 communication, Landis+Gyr E360 meters can utilize NB-IoT. This secondary channel is a fallback option, and in case of bad or missing M1 connectivity, meters automatically change to NB-IoT communication.
- **Connectivity in the remotest countryside:** The P2P technology provides flexibility to rollout planning: E360 LTE meters can be used for both new builds and meter replacements well outside of the active mass installation areas, as the meters can communicate with the network independently of the surrounding meter infrastructure.

Landis+Gyr's market-leading Project Management Services are ready to support customer projects at any stage of their development. Make the right decisions, the first time, and develop the best possible solution to match the needs of the market.

- Highly-Qualified Resources
- PMP-Certified Project Managers: Follow a standard discipline to deliver successful project execution on-time and on-budget
- Agile and at-the-Ready: Quick, expert guidance and support from one of your local team locations
- Robust, Proven Processes
- Best practices Playbook: Proprietary, proven and repeatable methodology to identify and mitigate any possible risks during Gridstream installation
- Standards-driven Enterprise: Adhering to ISO, OSHA and ITIL frameworks for excellence in quality, safety and IT operations
- High-performing, Secure Solutions
- World-Class and Secure NOC: Delivering lowest total cost of ownership via SSAE-16 compliant monitoring and hosting center



Designed for the Future

Landis+Gyr delivered its Gridstream Connect solution for 160,000 metering points, with 80,000 meters delivered within the first 10 months. The E360 LTE-M communicating meters were installed by Voret Elnet's external partner. By the middle of 2021, Vores Elnet was carrying out mass installations at full speed. Every week, around 2,500 Landis+Gyr E360 LTE M1 communicating meters were installed in homes across the island of Funen.

The LTE M1 technology demonstrated its strength from the start: directly after installation, more than 99.9 % of the devices installed in Denmark established a stable connection with the system – without any additional clean-up work required. And most importantly, the highest level of communication reliability is retained throughout the device's operational lifespan.

The E360 has been selected by other utilities in Switzerland and in the Nordics, including E.ON Sweden. The fast-growing wireless technologies LTE M1 and NB-IoT are characterized by cost efficiency, excellent indoor coverage, and a simplified device integration.

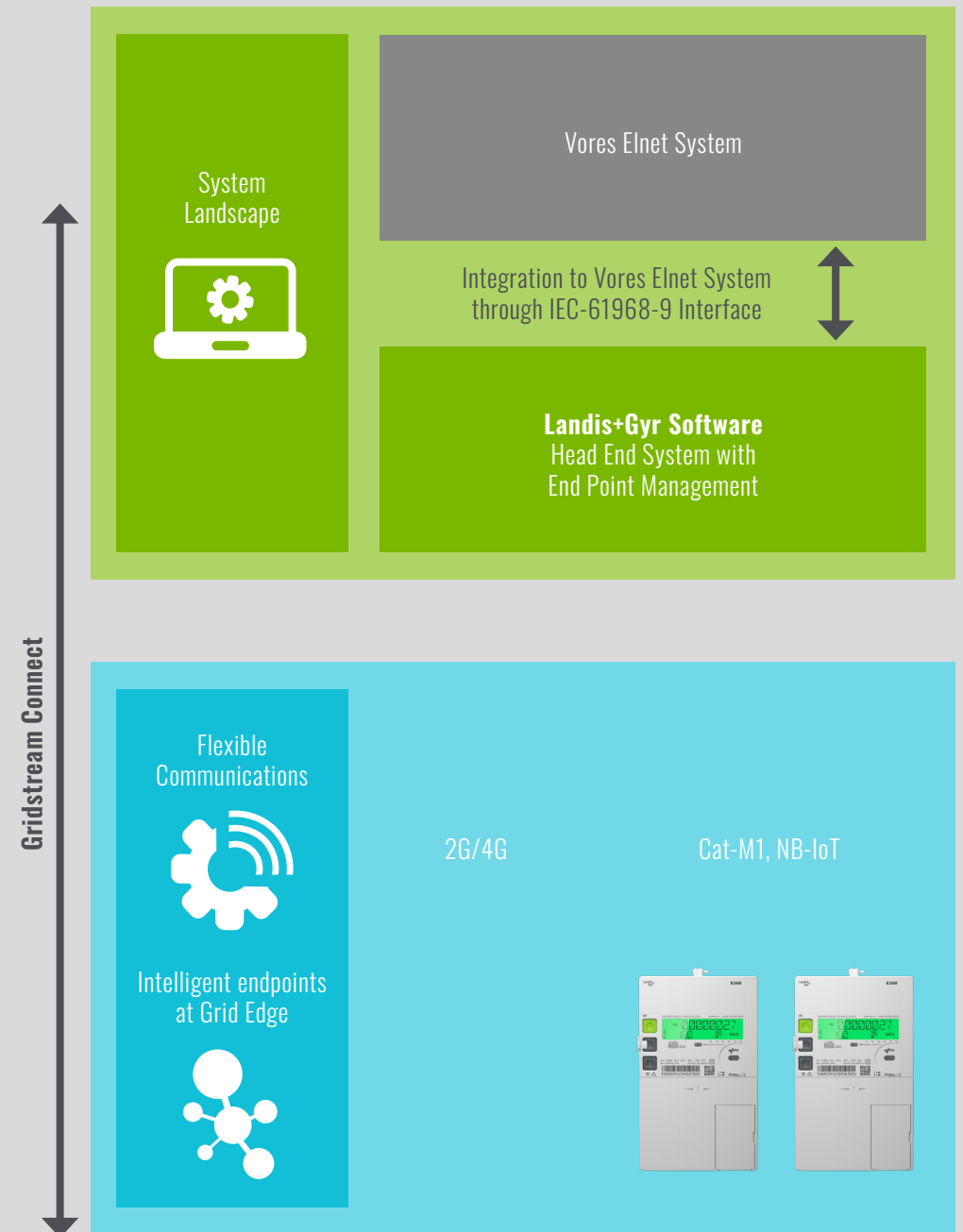
And development is ongoing – E360 meters are constantly being upgraded with new capabilities. Future releases will bring further optimized communication solutions, with data and event push, support for new multi-utility devices, and extended power quality diagnostics. These functionalities will be available not only on new meters delivered from the factory, but also as over-the-air upgrades on the Vores Elnet E360 meters that have already been installed.

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By choosing the newest technology with E360 devices and LTE-M communication from a reliable vendor, we will be ready for any future demands. Having worked with Landis+Gyr for years, we are looking forward to further developing our advanced metering infrastructure, achieving new levels of efficiency, and expanding our customer service.”

Stig K. Bøgelund | Head of Installations and Metering Technology, Vores Elnet

Gridstream Connect with Integration to Vores Elnet System



About Landis+Gyr

Landis+Gyr is a leading global provider of integrated energy management solutions for the utility sector. Offering one of the broadest portfolios, we deliver innovative and flexible solutions to help utilities solve their complex challenges in Smart Metering, Grid Edge Intelligence and Smart Infrastructure.

With sales of USD 1.4 billion in FY 2020, Landis+Gyr employs more than 5,000 people in over 30 countries across five continents, with the sole mission of helping the world manage energy better.

Learn more at landisgyr.eu/resources or [get in touch with us](#).

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