

# Smart Grid in a Smart Region

Mälarenergi Elnät AB

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# Mälarenergi Elnät AB and Västerås

## Company profile of Mälarenergi Elnät AB:

- 103 000 customers
- Fifth largest DSO in Sweden
- Mid-sized DSO with both urban and rural electricity grid
- Located in Mälardalen (incl. the city Västerås)
- Proximity to Stockholm

## The city of Västerås:

- Inhabitants: 143 700 people (2014)
- Education: 26,2 % have a BSc or higher (Swe. av. 25,1%)
- One of Sweden's leading high-tech cities where several large tech companies are represented.
- ABB Automation, Bombardier Transportation, Westinghouse, IBM, KPMG, JM, Tieto Enator, etc.

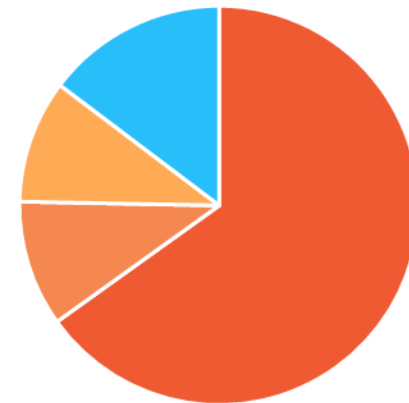


# Mälarenergi Elnät AB

## Company profile of Mälarenergi Elnät AB:

- Owned by the Company Group Mälarenergi AB, and three municipalities geographically-covered by the electricity grid.
- Electricity delivery: 1 753 GWh
- Turnover: 493 MSEK in 2014  
(approx. 52.5 MEURO)
- Employees: 138 people
- Annual investments: 135 MSEK (109 MSEK)  
14.4 MEURO (11.6 MEURO)
- Note: Swedish DSO's have revenue regulations.

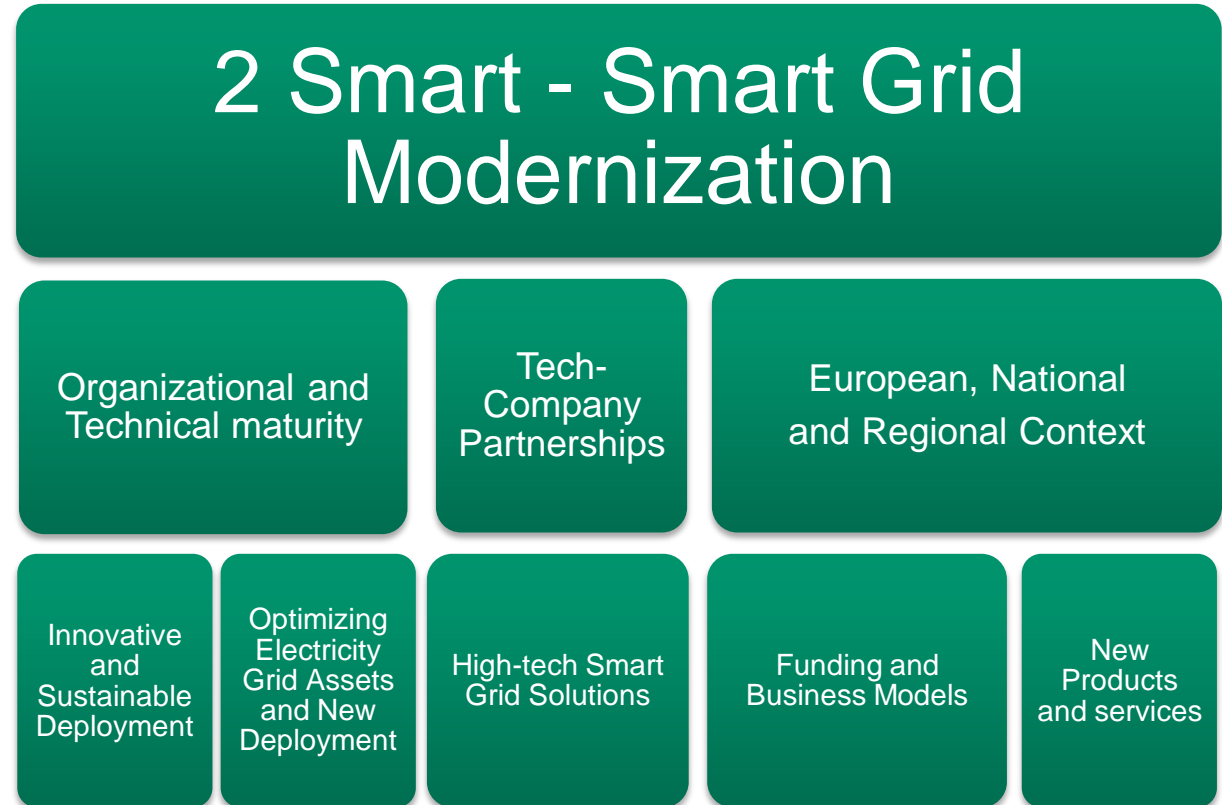
## Ownership structure



- Mälarenergi AB
- Arboga municipality
- Hallastahammar municipality
- Köping municipality

# 2 Smart Programme 2015-2019

- Strategic Programme for Smart Grid Deployment Within the Region
- Provides a unified direction for innovative and sustainable smart grid development
- Total expected investment: 25 million EUROS.
- Current status: encompasses 12 development projects.
- Current financial means:
  - our own investments;
  - local and regional funding, and
  - co-financing with partnerships.
- Ambition: Partnership with owning municipalities and companies.



# 2 Smart Projects and Initiatives

## Metering – Integration/Communication

- Assessment of Communication System
- 2 Secure – Balanced Security Analysis Inside Communication System
- New Generation Meters
- Metering Requirements for Capacity-based Tariff
- Controlled Distribution Grid

## Monitoring and Control of Renewable Energy Sources and Distributed Generation

- European Pattern Recognition – Integration of Renewable Energy Sources (upcoming)

## EV Charging Infrastructure and Storage

- Small Scale Implementation of EV Fast Chargers and Strategy Development for Full-scale Roll Out
- Storage Possibilities (upcoming)
- Regional Implementation of Charging Infrastructure (upcoming)
- Development of Sustainable Business Model for Charging Infrastructure

## Organizational and Competence Development

- Feasibility study – Setting up 2 Smart Programme and Research of Scope and Content
- Projekt Manager Course (upcoming)
- Assessment of Project Funding Opportunities

## Grid Improvement and Optimization Efforts

- Implementation of In-the-ground, Buried Junction Box
- RNA – Reliability Network Analysis
- Power Quality for Larger Customers
- Critical Societal Functions and Internet of Things
- Model Synthesis for the Correlation of Customer Tariff Structure

# Thank you for your attention!

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