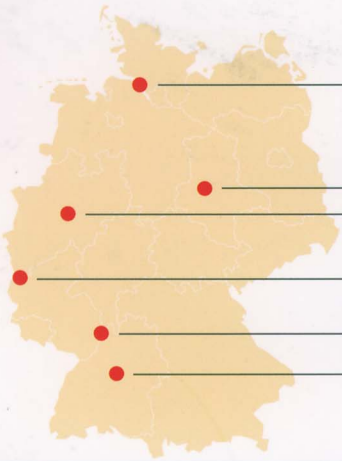


E-Energy: Smart grids decentralised commercial use



eTelligence model region of Cuxhaven

RegModHarz regenerative model region of Harz
E-DeMa model region of Rhine-Rhur

Smart Watts model region of Aachen

Model city of Mannheim model region of Rhine-Neckar

MeRegio model region of Baden-Württemberg



The E-Energy model region of Cuxhaven has a broad-based mix of renewable energies – such as wind and biomass – and is thus especially suitable for the eTelligence project.

Project

E-Energy
www.e-energy.de

Key data

Locations

6 selected model regions:
Cuxhaven, Rhine-Ruhr, Baden-Württemberg, Rhine-Neckar, Harz and Aachen

Project supported by

Federal Ministry of Economics and Technology,
Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

Project leader

Ancillary research commissioned by the BMWi

Further partners

Partners are the six E-Energy model regions, companies from the ICT and energy industries, institutes and universities.

Time line

2008 – 2012

Investment for demo project (M€)

140

Environmental benefit

Reduced emissions through the development of decentralised, renewable energy generation and improved efficiencies in the electricity industry.

Thumbnail sketch

The goal of E-Energy is to optimize all areas of the electricity industry from generation, distribution and storage through to consumption by using innovative information and communication technologies. The superior objectives are security of supply, economic efficiency and environmental compatibility.

Project details

There are six model regions in Germany: eTelligence (model region of Cuxhaven); E-DeMa (model region of Rhine-Ruhr); MeRegio (model region of Baden-Württemberg); ModelCity of Mannheim (model region of Rhine-Neckar); RegModHarz (regenerative model region of the Harz); Smart Watts (model region of Aachen)

Everyone in the energy market benefits from E-Energy: the power generators, the power utilities and grid operators, private and industrial consumers, as well as, the environment. For example, E-Energy enables the development of decentralized and renewable energy sources by providing highly efficient solutions for their system integration. These will provide a complex control system that balances out the volatility of renewable energies and smoothes out peak loads. In this way, energy consumption can be shifted to times when cheaper electricity is available. The "Internet of Energy" will also allow optimum integration of electric vehicles in the power grid, so that electric mobility can make an important contribution towards increasing energy efficiency as an energy storage solution and balancing power potential.

Business and investment opportunities

According to a study conducted for the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, until 2030 between €6 and €8 billion will be invested each year in the development of renewable energies to implement the German government's goals. To connect all electricity consumers to the "Internet of Energy" will require approximately 60 million gateways based on intelligent electricity meters. With the amendment of the German Renewable Energy Law, from 2010, power companies must offer these smart meters and new buildings and extensively renovated buildings must be fitted with them where this is technically feasible and not unreasonable from a financial point of view. Based on smart meters and gateways, established companies as well as start-ups will develop attractive business models for new services. They will invest in products for remote meter reading and load balancing in industry and in the smart homes of the future. Extensive new hardware and software will be needed for the intelligent integration of decentralized electricity generators and consumers (e.g. electric vehicles) and optimum management of the grid infrastructure, from generation through to consumption.