

Case Study

Stockholm Royal Seaport



S3C related keywords:

- New products and services
- Incentives & pricing schemes
- End user feedback (system communication)
- Cooperation between stakeholders
- Scalability/replicability

“Sustainable district, sustainable business arena”

Project Summary

Stockholm’s rapid expansion raises demands for the city to develop in a sustainable manner. The Royal Seaport area is a smart and sustainable city project with a high environmental profile that intends to meet future challenges such as social, ecological and economic sustainability as well as biodiversity. This is one of Europe’s most wide-ranging urban development projects, including 12 000 new homes and 35 000 workplaces. The area is therefore a highly suitable place for developing new solutions, including smart grids.

What sets this project apart from other Smart Grid projects?

The Stockholm Royal Seaport is a new city district in the capital of Sweden, and one of the most extensive urban development projects in Europe. The idea is to integrate living, employment opportunities, services and recreation in the close area. In total, 12 000 new apartments and 35 000 workplaces will be created. The construction of the first 670 homes started in 2011 and the exploitation will continue until 2030, see Figure 1. The project has been inspired by previous urban development projects and put considerable effort on trend spotting, which influences the development of the area to meet current and future requirements. For example, instead of only targeting high-income young couples, the area is also designed for families and the elderly by offering a wide range of social services.

The project was mainly initiated and coordinated by the city of Stockholm, with the intention to create a business arena where companies meet, collaborate and strive to meet the sustainability challenges with joint efforts. The scale of the project as well as the variety of partners and collaboration between large multinational companies has attracted considerable international interest.

Regarding the development of smart grids, an early project phase called “The active house in the sustainable city” was finished during 2014. A family of four (two full-time working adults with two teenage children) moved into an apartment equipped with different innovative smart appliances and control systems to evaluate the smart systems during a six month period. The family was recruited by advertisements and was carefully selected to more or less represent the expected inhabitants. The apartment was equipped with Home Energy Management Systems (HEMS), energy measurement equipment for different rooms and appliances, motion- and temperature sensors in all rooms,

dimmers, regulators on all radiators and “away”-buttons decreasing the consumption when the family was away from home.



Figure 1. Model of the Stockholm Royal Seaport area. The white building models represent existing buildings and the beige buildings to the left will be built in the near future. There are still only rough plans for the larger beige blocks in the upper and lower parts of the model.

The active house pilot was executed in collaboration between partners both from the construction industry, energy utilities, product development, academia and research institutes:

- Fortum (DSO and retailer)
- ABB (power and automation technologies)
- Electrolux (appliances)
- Interactive Institute (IT and design research institute)
- JM (building company)
- NCC (building company)
- HSB (housing organization)
- ByggVesta (building company)
- KTH Royal Institute of Technology (university)

What happened?

The smart grid part in the Royal Seaport project is developed in three phases: First, a pre-study was conducted. During 2013-2014, the active pilot apartment called “The active house in the sustainable city” (described above) was initialized, monitored and evaluated. For the future, there are plans for 170 active apartments, a smart grid lab and a data repository system.

Further information / Contact

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