

TRANS PED

TRANSFORMING CITIES
THROUGH POSITIVE
ENERGY DISTRICTS

Hammarby Sjöstad is a primarily residential neighbourhood in the Stockholm suburbs with very ambitious environmental goals. While construction started in 1990, all infrastructure in the area has now been built. ElectriCITY is a citizen-driven innovation platform for the neighbourhood that was formed in 2012, aimed at making Hammarby Sjöstad climate-neutral by 2030. Its Hammarby Sjöstad 2.0 project serves as a demonstration site and test bed for innovations in energy, transportation, circular economy, digitalisation, and urban agriculture.

HAMMARBY SJÖSTAD 2.0

POSITIVE ENERGY DISTRICT PROFILE

 LOCATION STOCKHOLM | SWEDEN

 SIZE 200 HA

 FUNCTION MIXED-USE: MAINLY RESIDENTIAL, OFFICES AND COMMERCIAL, SOME INDUSTRIAL

 TYPE NEW BUILD AND RETROFIT

 DURATION PLANNING: 1990
CONSTRUCTION: 1994
CITIZEN DRIVEN PED: FROM 2012
END DATE: 2030

 STATUS CONSTRUCTION COMPLETED.
FOCUS ON ENERGY SYSTEMS AT
DISTRICT LEVEL.

 WEBSITE WWW.HAMMARBYSJOSTAD20.SE



ENERGY HIGHLIGHTS

SAVE ENERGY

Ecodrives is an energy survey where one learns how properties work and how they can save energy through efficiency measures. It has resulted in up to 20% energy cost savings.

COMMUNITY ENERGY INVESTMENT

The community shares information about planned investments into renewable energy infrastructure. Joint procurement has led to increased investment as well as energy cost reductions of more than 50% for the housing associations.

SHARED ENERGY STORAGE

In a pilot project, renewable energy is stored and shared in microgrids. This allows for increased interaction between prosumers and consumers, and between system operators and local authorities.

OTHER ENERGY-RELATED IMPACTS

E-MOBILITY

Charge at Home primarily focuses on smart charging at home, making it easier and more profitable to invest in an electric car. Carpooling is promoted, making sharing easier and electric cars more profitable.

CIRCULAR ECONOMY

In a two-week period, pupils aged 10 to 13 develop new products and services that have a positive impact on the environment and climate in Hammarby Sjöstad.

DATA LAB

The project includes a national platform to share property management data. It aims to help develop new innovative digital services, such as smart control systems to reduce both energy consumption and the cost to residents.

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PROJECT SETUP

The Hammarby Sjöstad 2.0 project is run by ElectriCITY, a bottom-up citizen initiative focused on reducing the neighbourhood's climate footprint. Its unique collaborative approach brings together leading companies, specialised research institutions, and the municipal administration. Based on highly committed citizens, Hammarby Sjöstad is a real-life test bed and demonstration district for new sustainable solutions, collaborative projects, and innovative

business models. ElectriCITY applies a systems perspective to optimise integrated energy & transport systems, the circular economy, and digitalisation initiatives. The goal is to understand how systems can become smarter and more cost-effective when supporting each other in order to develop a business model for climate-neutral districts. The learnings can subsequently be copied by other districts and municipalities.

OPPORTUNITIES

SAFE & OPEN DATA

The project's data lab enables data sharing for the entire area, including both open data and information that is restricted for various reasons. This allows participants to safely test and simulate data models in a real-life environment.

INVESTMENTS & JOINT PROCUREMENT

Twelve housing associations collaborate strategically in pooling their energy efficiency projects in a joint procurement process. This enables the partners to realise substantial economies of scale including better terms, lower prices, and reduced risk.

MICROGRIDS

The microgrid pilot project will explore both legal structures and business models for a flexible local energy market. The aim is to realise benefits to the individual consumers as well as to the city district as a whole.

CHALLENGES

LEGAL

ElectriCITY wants to evaluate how laws and the policy framework affect the possibility of realising the microgrids in existing and new buildings.

SYSTEM INTEGRATORS

It is important to focus on the customers' and users' obstacles and driving forces as well. ElectriCITY needs to set up new business models with net-owners to create a flexible market that appeals to all stakeholders.

NEW BUSINESS MODELS

PEDs are increasing the opportunities for creating new business and new markets in the energy sector. ElectriCITY needs to investigate how various governance models contribute to or hinder the implementation of new technology and services.