

NEWSLETTER DECEMBER 2016

The EnergyLab Nordhavn project was officially launched in April 2015. Now, one and a half years later the first demonstrations have commenced. The first residents part of EnergyLab Nordhavn have recently moved in to their new homes and we look forward to receiving the first research data later in 2017.

NEW RESIDENTS

In November both Frihavnstårnet and Havnekanten/Terra Nova were ready to welcome the first residents who have agreed to participate in EnergyLab Nordhavn.

In Frihavnstårnet where Boll+ has been developer the three top floors, a total of 13 apartments will contribute. ABB and Balslev are responsible for the demonstration which includes installation of intelligent building automation, automatically controlling heat and light through sensors measuring CO₂ level and temperatures.

In Havnekanten/Terra Nova developed by KPC, Danfoss is responsible for demonstrating smart heating. The purpose of the demonstration is to show how controlling the indoor climate can be optimized as well as gain insight in how the thermal mass influence heat storage.



Frihavnstårnet, ABB

In practice sensors have been placed in several depths in the heavy constructions in wall and ceilings. Together with the room sensors connected to the heating system, it provides an option of demonstrating how you in periods can postpone or move forward the heating of the rooms, so energy consumption is moved to when energy is low priced or green. With room sensors located in different positions in the apartment the thermal comfort in the rooms is always satisfying.

In both buildings collected data will be used together with simulation programs involving weather forecasts and presence to optimize control of the thermal indoor climate and energy consumption.

ELECTRICAL VEHICLES

In December chargers for electrical vehicles were installed in the parking garage Lüders. The chargers can be used for intelligent charging. Within the next year CleanCharge expect to have installed several chargers around the area.

The parking garage will as the first in Denmark be able to offer quick charging which is also part of the demonstration of intelligent charging in EnergyLab Nordhavn.



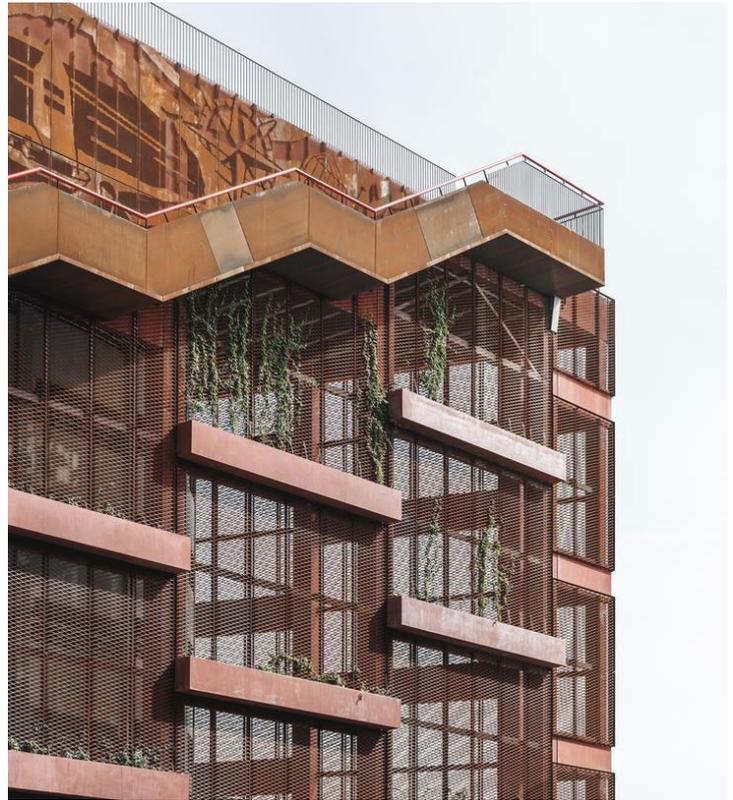
ENERGYLAB NORDHAVN

The project “EnergyLab Nordhavn – new urban energy infrastructures” will develop and demonstrate future energy solutions. The project utilizes Copenhagen’s Nordhavn as a full-scale smart city energy lab and demonstrates how electricity and heating, energy-efficient buildings and electric transport can be integrated into an intelligent, flexible and optimized energy system. The project participants are: DTU, City of Copenhagen, CPH City & Port Development, HOFOR, Radius, ABB, Balslev, Danfoss, CleanCharge, METRO THERM, Glen Dimplex and the PowerLab facilities. The project is supported by EUPD (Energy Technology Development and Demonstration Programme) and runs from 2015-2019.

LARGE BATTERY WILL BE INTEGRATED IN THE GRID

As part of the EnergyLab Nordhavn project a giant battery will be installed in the Lüders parking garage facilitated by By & Havn. The energy capacity of the battery is 460 kWh and the effect capacity is 630 kW. Fully charged the battery can supply approximately 60 homes for one full day.

The purpose of the demonstration is to find out how to reduce the number of hours when the central grid is strained. In practice the battery will be charged during the night and discharged in periods where the demand for power is high.



Parking garage Lüders, Rasmus Hjortshøj, By & Havn

ENERGYLAB NORDHAVN ATTRACTS INTEREST FROM DENMARK AND ABROAD



Participants from the Smart City conference “The Greater Copenhagen Smart Solutions: Living Labs for Liveable Cities” were introduced to fuel shift, intelligent building automation, low temperature district heating and electrical vehicles when they visited Nordhavn during the summer.

An important part of the project is to showcase the solutions the project offer. We want to inspire similar projects around the world and we both welcome delegations to Nordhavn as well as participate in conferences in Denmark and abroad. During the fall we have been to:

- Copenhagen Climate Solutions Conference
- Climate Week in New York
- 2nd International Conference on Smart Energy Systems and 4th Generation District Heating in Aalborg
- EuroSun 2016 at Mallorca
- 9th International Conference on Indoor Air Quality Ventilation & Energy Conservation In Buildings in South Korea.

MORE INFORMATION

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