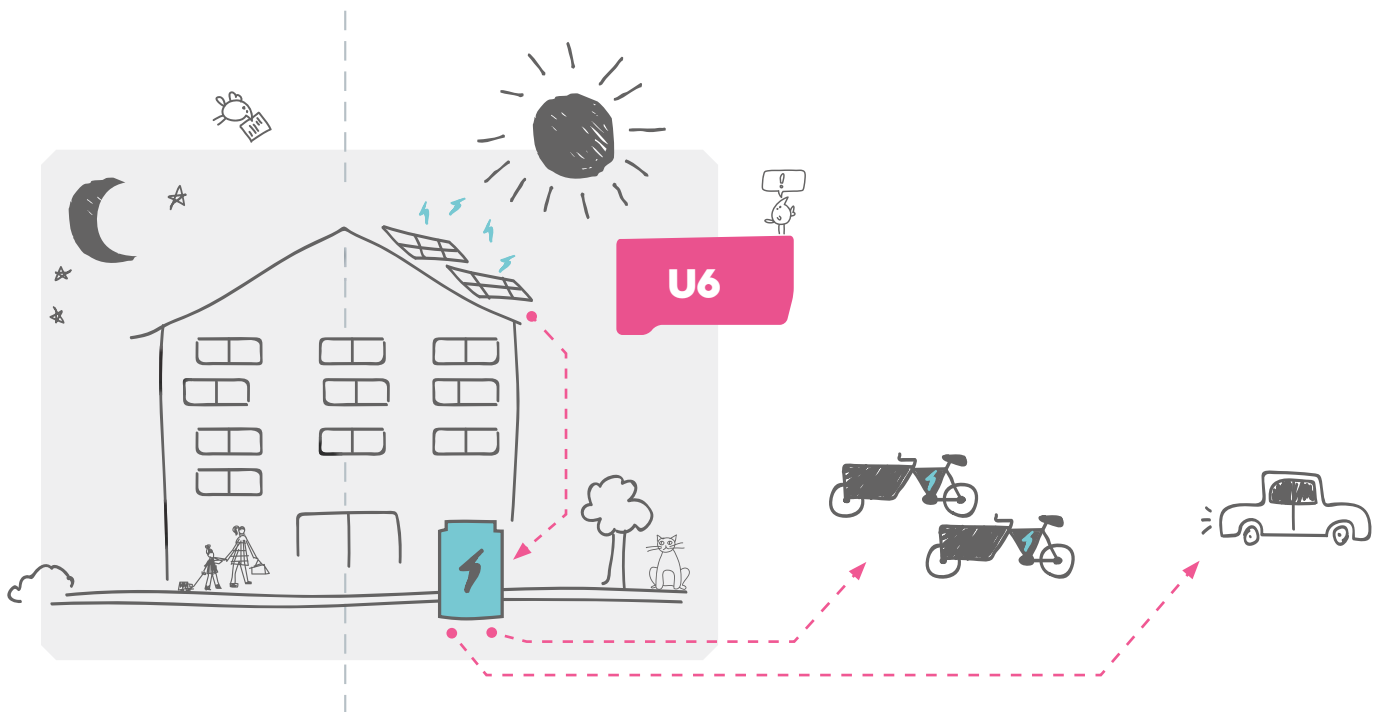


E-charging Hub & charging infrastructure

Umeå

Smart electricity grid & e-mobility



The goal is to reduce CO2 emissions in the city of Umeå by involving students, personnel and people in the implementation area, to be more aware of their impact. This requires finding a model to scale up or down solutions depending on the size and need of the building. With a new facility installed in the building including solar panels and battery storage, a new charging hub is tested. The electricity generated by the solar panels can be used for electric bikes, cars or to relieve the power grid.

Main partners involved:



FACTSHEET U6

E-charging Hub & charging infrastructure

How does it work?

At the roof of the E-charging Hub, solar panels will be installed - where energy can be used directly or stored in batteries in the facility. The electricity generated by the solar panels can be used to charge bicycles and cars, or to relieve the power grid during times when the peak load is high.

With this innovation, the solution is in the energy storage. Storing energy is something that is now increasingly possible thanks to better batteries. In the project, partners now experiment with the amount of energy storage required to achieve the optimal use of the solar plant. The aim of the project is to find a model that can be scaled up or down depending on the size and needs of the property.

The project also includes providing a battery facility control, in order to control and adjust the locations in which the battery installation is to be charged or not.

Västerbotten County Council is responsible for building a supercharger for electric taxis in the hospital area. The idea is that the supercharger is built with the latest technology to enable taxi companies to switch to a more environmentally friendly energy source - the goal being environmental benefits in terms of reduced exhaust emissions and lower noise levels in the area.



Estimated impacts

- An energy efficient building
- Reduced CO2 emissions in the city of Umeå
- Production of renewable energy
- Testbeds for solar panels, charging and battery storage
- User involvement (tenants)

Replication potential

The goal with the solution is to find an optimal distribution between load (electrical power consumption of the building), battery storage and solar panels. Finding key parameters is essential for making it possible to have a scalable solution.

One purpose with the solution is to even out the power consumption. Buildings with high and short power peaks are more suitable for replication of this specific solution.

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