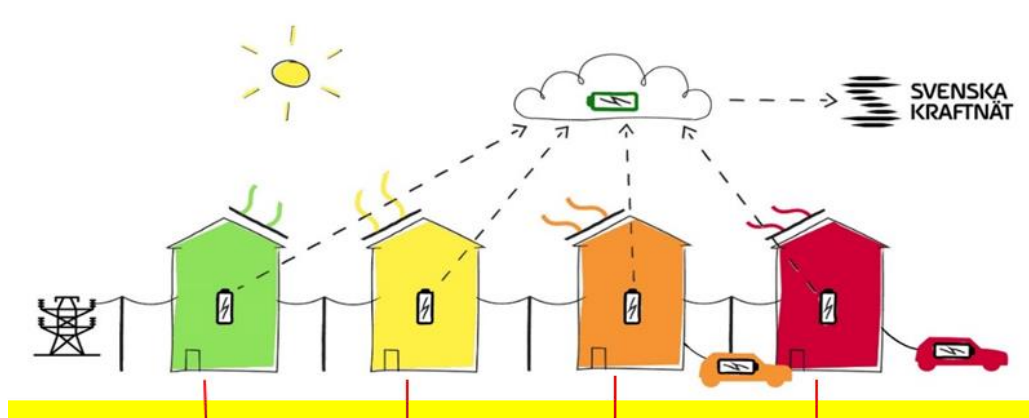


Tamarinden - Buildings sharing energy



The new city district of Tamarinden a microgrid can effectively combine internal energy resources with external supply as a complement. By both storing and sharing energy, the solutions help reduce energy needs and climate impact as well as contributing to the reducing the Swedish power grid capacity issues. Parts of the solution have already been tested and are scaled up while others are at the forefront and challenge existing legislation in Sweden. The model for Tamarinden has been developed by Örebro municipality in collaboration the municipal housing company ÖBO and the energy company E-ON.

In Tamarinden, the municipality plans for the properties to be connected in a microgrid so that they can store and share the energy with each other. The city's electricity and heating plants are also connected to the grid. In this way, the area can contribute to cutting the power peaks, but also supply electricity to the Swedish power grid. Houses are no longer passive users of energy but an important part of the energy system. Solar cells on the roof generate energy during the hours of sunshine. But the houses are also equipped with batteries and hopefully one or more electric car pools, which means that the energy can be used even when the sun has gone down. With the help of a sophisticated control system that ensures that the energy goes where it is most needed, it is possible to steer away top load at times when the large electricity grid is short of capacity. In this way, this working method provides a solution to the capacity problem that can arise at certain times.

Tamarinden must be able to reduce, produce, store and share energy in a way that has never been done before and serve as a model for further expansions of the city.

