City of Lund

Solar energy in Lund

The incoming solar radiation from the sun for one hour is bigger than the entire world's human energy needs for a whole year, and we can through a very small effort use this almost endless source of energy in a way that meets future energy needs without affecting the climate. For example the energy can be utilized by installing photovoltaics (PV) that convert solar energy to electricity.

In 2012 Lund municipally had PV and solar panels with a capacity of 205 MWh of electricity from PV and 271 MWh of heat from solar panels. The Service Department at Lund municipality annually reserves two million Swedish crowns for investment in renewable energy sources such as PV or solar panels.

About ten solar power facilities where connected to the municipally owned energy company's (Kraftringen) network the spring of 2013.

The municipally owned energy company (Kraftringen) has together with the Municipality of Lund, Lund University and the Solar Region Skåne developed a map (Solkartan) of the entire municipality of Lund that shows the most suitable places to install solar panels for electricity production in Lund municipality. Solkartan is an accessible and easy-to-use tool for property owners who are considering an investment in PV. The purpose and goal of the project is to increase the production of solar electricity in Lund municipality. Solkartan is used systematically by the municipal administration to identify suitable roofs for PV-installation.

A mapping of PV connected to the grid in Skåne has been developed by the Solar Region Skåne (see Figure 1). According to this mapping, Lund ends up in third place of the municipalities in Skåne, with 792 kW grid connected PV.

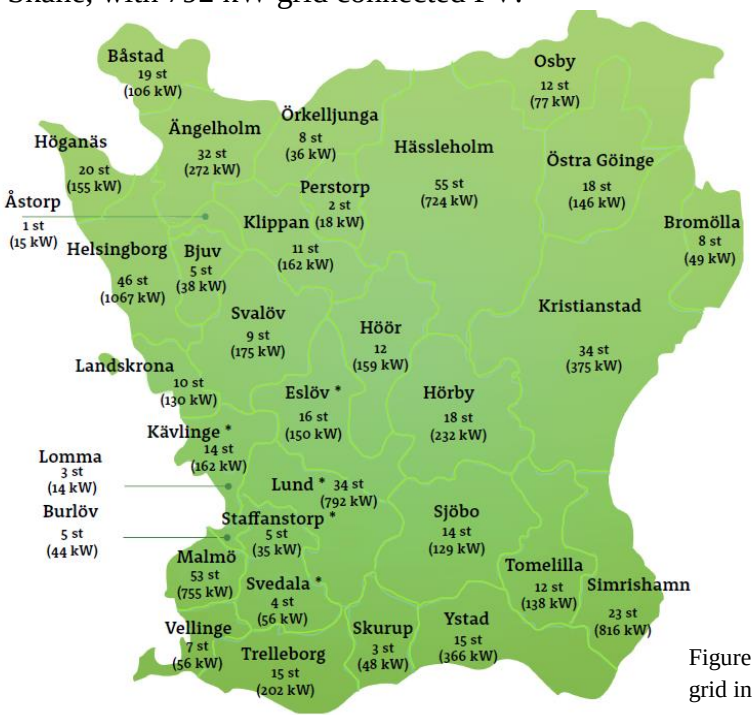

Figure 1. Mapping of PV connected to the grid in Skåne

Europe's largest facility with high-efficiency panels

In September 2014 Europe's largest facility with high-efficiency panels was installed in Lund. The solar power facility has a total area of about 850 square meters and is located on the roof of Maskinteknikhuset at Lund University.

The facility has 300 Wp high performance neon panels from LG. The unique thing about the facility is that each PV-panel uses the light that hits it both on the front and on the back, which means that the reflection of light from the white roof is absorbed and gives extra electricity.

The project is collaboration between the Akademiska Hus and Kraftringen and the facility is expected to produce about 150,000 kWh per year, equivalent to the annual consumption of electricity of 30 households.

Other examples of solar power facility in Lund

- The solar power facility at Ideon Gateway is 975 square meters and has an installed peak power of 122 kW. The façade integrated PV are expected to deliver approximately 64-66 MWh/year. It is one of the largest facilities of its kind in Sweden.
- Ekologihuset at Lund University has a solar power facility with an area of 767 m² and consists of sun screens over windows, vertical façade screens and PV mounted on the low-sloped roof. The facility was installed in December 2007 and the first year it produced over 81 MWh. The facility has also resulted in a decreased need for cooling of the building, which has been estimated to about 25 MWh.
- Lund municipal-owned real estate company (LKF) has a solar power facility on Magistratsvägen. The plant has a peak power of 31.85 kW and has an estimated power generation of about 31 000kWh per year.
- LKF also owns two large solar facilities, Jöns Ols and Byalaget Dalby, with a total production of 150 MWh of heat per year.

- Lund municipal-owned parking company (LKP) has a photovoltaic plant with an output of 13 kW at the parking house at the Arena, and is planning to put PV on all their parking houses in Lund.
- The Service Department has a pilot solar power facility on a noise barrier which is expected to generate 12 MWh per year. The facility is situated on Råbyvägen.