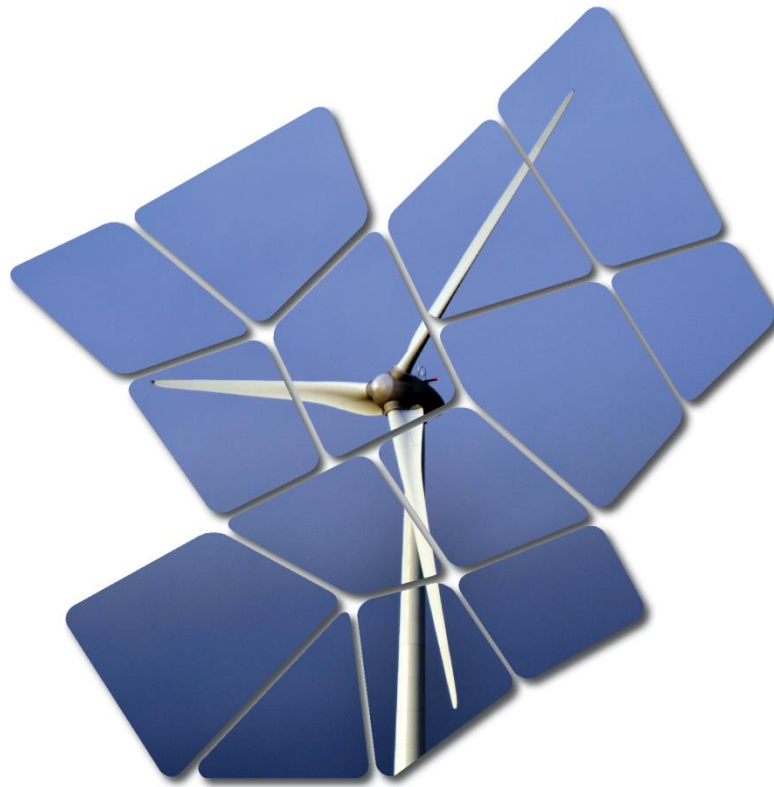




Kristianstads
kommun



Renewable electricity production



Kristianstad, Sweden



2014-06-04



Kristianstad, a city defined and shaped by the ever present water. And while the water gives the city its character, it also makes the threat of climate change very much tangible here. Rising water levels means increased risk of flooding, potentially causing damage to homes and infrastructure. Therefore it is only natural that Kristianstad wants to be a leader in cutting the use of fossil fuel and in investing in renewable energy. The municipality targets to become **Fossil Fuel Free** – continuously promoting production and use of **renewable electricity from wind, water, sun and from biomass**.

Wind power

With the Baltic Sea to the east, high forest ridges in the west and south and large open plains in between, the municipality houses many areas with favourable wind conditions.

Kristianstad aims to increase the production of **wind power** within its geographic area into equalling half of the local electricity consumption.

In the year of 2014, there are 40 privately owned wind turbines operating within the area, together producing about 135 GWh (gigawatt hours) of electricity per year, and the number of turbines is steadily increasing. The electricity is sold on the market and sent into the grid.



Combined heat and power plant (CHP):

The biomass combined heat and power plant Allöverket, established in 1995, is estimated to have reduced emissions of carbon dioxide in the Kristianstad region with more than 130 000 tons. The capacity of Allöverkets two main boilers are 75 MW (50 MW + 25 MW) of heat.

Today Allöverket can utilize approximately 20% of the heat to make electricity in a 15 MW power steam turbine. C4 Energy has 2013

rebuilt Allöverket and installed a second steam turbine of 8 MW. The produced electricity is sold on the market.



The main district heating network in Kristianstad contains more than 230 km of pipes spread out through the city centre to smaller areas in the outskirts of Kristianstad.

Hydropower

One **hydro-electric power** station is situated within the municipality. It is located in the Helge å river at the village of Torsebro, slightly to the north of Kristianstad's city. This facility, owned by the power company E.ON, produces about 25 GWh of electricity a year. Due to the high value and sensitivity of the river's ecosystem, and the disturbance to nature that hydro-electric power still inevitably means, any major further extension of this energy source in the municipality is deemed unlikely.

Photovoltaic

The municipality of Kristianstad owns two **solar power** constructions. One is situated in the housing area of Österäng and the other is at naturum, the central visitor's centre for the world biosphere reserve. Together, these solar panels produce about 20 MWh a year.

In the case of naturum, (see picture) its solar panel alone produces enough electricity (10 MWh) to keep the entire building cool during hot days of summer. The municipality will continue to follow the development within solar power for additional future investments – and is especially working with encouraging private house owners to install solar panels at home.

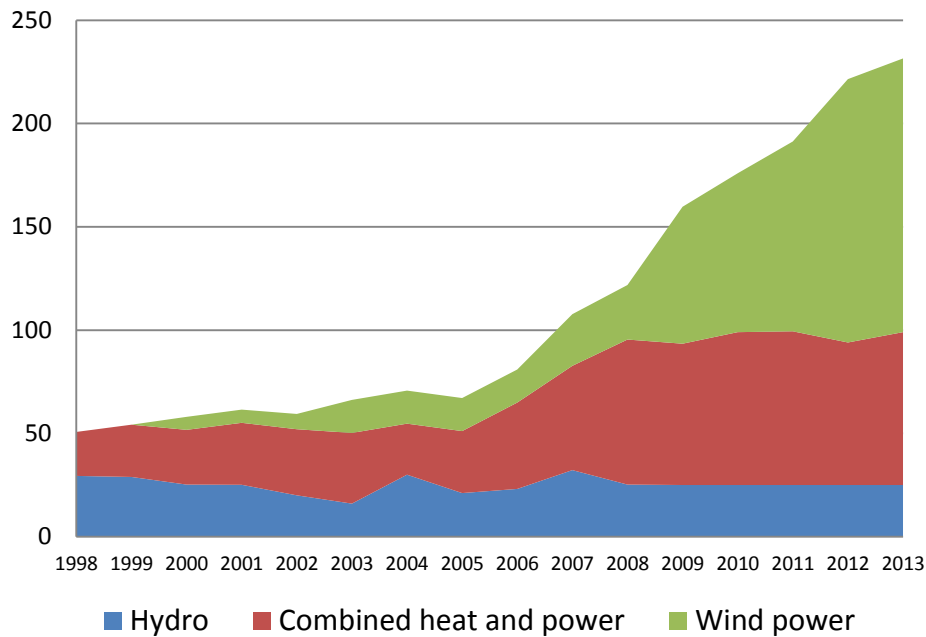
In 2014, C4 Teknik will install five more photovoltaic systems on municipal buildings.

Closest in time are schools in Tollarp and Degebergal where the installation has begun, with completion in late May. Tollarp's school will have an installed peak power of 43.5 kW and Degeberga' school has a peak power of 14 kW. In July, a smaller facility, 3 kW, will be installed at the new Orangery in the Tivoli Park. In the autumn solar cells will be installed at Kristianstad ice stadium and Öllsjö school. The Ice stadium is expected to have a peak power of 43.5 kW and Öllsjö school 42 kW. The solar cells are expected have at total production potential of about 120 MWh / year.



Result so far

Renewable electricity GWh/år



Electricity production 2013

Wind power	135 GWh
Electricity production	74 GWh
Hydro power	25 GWh
Photovoltaic	20 MWh

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