Absolicon solar park heat up Härnösand

Absolicon Solar Collector, a pioneer in the development of sustainable technology, is involved in the development of Sweden's largest district heating system based on solar concentrating technology. The Högslätten solar thermal park in Härnösand is being built by Absolicon in collaboration with the Swedish Energy Agency and is the first large capacity solar-powered district heating plant in Sweden for 20 years.

Absolicon is part-financing the construction of the plant and will serve as an Energy Service Company (ESCO) by selling solar heat to Härnösand Energi & Miljö (known as HEMAB), the owner and operator of the town of Härnösand's DH network, 400 kilometres north of Stockholm. HEMAB is fully owned by the city council, serving electricity, tap water and sewage services, district heating and recycling to the citizens of Härnösand.

Högslätten is being developed in several phases. The first step, which came into operation in 2021, consists of approximately 1000 m2 solar panels along with a service building for the heat transfer connection to the heat network. The park will be completed in 2023 with heat generated from the 3,000m2 field of parabolic trough collectors fed directly into the district heating grid in Härnösand, providing renewable hot water and heating to the city without any combustion involved.

Lena af Geijerstam Unger, CEO of HEMAB said "To add solar heat into our present network is a massive step forward, providing our customers with a future-proof and sustainable product".

Absolicon have developed an innovative technological solution to create the high temperatures needed to generate energy for the heat network. They have designed a silvermirror that directs sunlight to a receiver that is essentially a pipe filled with pressurised water. The solar panels follow the sun during the day, from sunrise to sunset, maximising the heat that can be derived. Absolicon's panels are designed to handle up to 160C to keep a flow temperature of 120C.

The panels are the first of their kind to be certified according to the quality standard Solar Keymark and have the highest measurable efficiency. As a result, surplus energy created by the panels can be stored via the heat network when it is cheap to produce and then utilised when it would be much more expensive to produce.

SWEP is involved in the overall project through the provision of our high-capacity B649 brazed plate heat exchangers (BPHEs). The power of these units provides the potential to build larger and more cost-effective energy transfer stations with output capacity far higher than what has been possible in the past.

HÖGSLÄTTEN 2023 SOLAR THERMAL PARK	
Solar collector model:	Absolicon T160
Plant area:	10 000 m²
Collector area:	3 000 m²
Effect:	1,5 MW
Energy production:	1 000 000 kWh heat/year
Temperature:	73 -120 °C

SWEP
A DOVER COMPANY