

Surplus heat from carbon capture to be used for district heating in Greater Copenhagen area in Denmark

Ørsted has entered into an agreement with Danish district heating companies VEKS and CTR to utilise surplus heat from carbon capture at Avedøre Power Station. The surplus heat will provide district heating to up to 16,000 Danish households in the Greater Copenhagen area.

Avedøre Power Station in Denmark is establishing a carbon capture plant to capture 150,000 tonnes of carbon dioxide annually from its straw-fired unit. The plant uses straw from the local fields on Zealand to produce heat and power for the Greater Copenhagen area, and starting in 2026, the biogenic carbon from the stack will be captured and stored.

Following commissioning of the carbon capture plant, large volumes of surplus heat will be generated, which can be used to provide cheap, green district heating to the Greater Copenhagen area.

"We're constantly looking into opportunities for providing green and competitive district heating, and I'm pleased that we've made an agreement with our heat customers to utilise the surplus heat from our future carbon capture plant. By integrating carbon capture with heat generation at the power station, we can make the most of the energy in the fuel and supply cheap, green district heating to the Greater Copenhagen area, while minimising our own energy consumption for carbon capture," says Ole Thomsen, Senior Vice President and Head of Bioenergy at Ørsted.

The energy needed to capture carbon comes from the power station's own straw-fired unit and is therefore renewable energy. Via a heat pump, the surplus heat from the carbon capture process and from flue gas condensation can be upgraded to district heating, thereby utilising the same energy twice. This will result in greener district heating for the Greater Copenhagen area and significantly lower energy consumption for the carbon capture process.

"This agreement is a very important and tangible step in VEKS's transformation to the green technologies of the future. It's a good example why district heating is an important part of sector coupling while also being green, reliable, and sensibly priced. We look forward to the negotiations for a long-term agreement on the surplus heat from the plant," emphasises Steen Christiansen, Chairman of VEKS.

"It's positive that surplus heat from carbon capture is now part of the total heat supply to district heating customers in the Greater Copenhagen area.

Ørsted
Kraftværksvej 53
Skærbæk
DK-7000 Fredericia

www.orsted.com
Company registration no.
(CVR no.) 36 21 37 28

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The district heating supply of the future will consist of many different heat sources, which collectively can help us continue to provide district heating at an attractive price," says Line Barfod, Chair of CTR.

The carbon capture plant at the straw-fired unit at Avedøre Power Station will generate approx. 34 MW of surplus heat from the carbon capture process and approx. 19 MW from the flue gas condensation process. The total surplus heat of 53 MW corresponds to the annual district heating consumption of around 16,000 Danish households.

The agreement between VEKS, CTR, and Ørsted covers the period 2024-2027 when it will be renegotiated in order to reach a long-term agreement for the surplus heat from the carbon capture plant.

Ørsted is in the process of establishing another carbon capture plant in Denmark at Asnæs Power Station in Kalundborg and is working with the local heat and steam customers to devise a similar solution based on utilising the surplus heat in Kalundborg.

For further information, please contact:

Ørsted Global Media Relations

Carsten Birkeland Kjær, + 45 99 55 77 65, cabkj@orsted.com

VEKS

Steen Christiansen, Chairman of VEKS, +45 40 50 85 07,

steen.christiansen@albertslund.dk

Trine Sannem Mønsted, Vice President of VEKS, +45 26 18 02 92,

tsm@veks.dk

CTR

Line Barfod, Chair of CTR, contact via Simon Nyborg, Head of Media Relations, at +45 21 52 51 60, simon.nyborg@kk.dk

Randi Skogstad, CEO of CTR, +45 41 88 18 81, rask@ctr.dk

About Ørsted

The Ørsted vision is a world that runs entirely on green energy. Ørsted develops, constructs and operates offshore and onshore wind farms, solar farms, energy storage facilities, renewable hydrogen and green fuels facilities, and bioenergy plants. Ørsted is recognised on the CDP Climate Change A List as a global leader on climate action and was the first energy company in the world to have its science-based net-zero emissions target validated by the Science Based Targets initiative (SBTi).

Headquartered in Denmark, Ørsted employs approx. 8,700 people.

Ørsted's shares are listed on Nasdaq Copenhagen (Orsted). In 2022, the company's revenue was DKK 132.3 billion (EUR 17.8 billion). For further

information, visit orsted.com or follow us on [Facebook](#), [LinkedIn](#), Instagram, and [X](#).

About VEKS

VEKS is owned by a community of partner municipalities and run as a non-profit company. VEKS is engaged in the production, transmission, and distribution of district heating in the Greater Copenhagen area.

VEKS was established in 1984 with the aim of helping to recover and utilise heat from CHP plants and surplus heat from waste incineration plants, data centres, industrial companies, etc. Read more about VEKS at [VEKS.DK](https://veks.dk) or [LinkedIn](#).

About CTR

CTR's job is to provide a sustainable and continuous heat supply in the Greater Copenhagen area – centrally located between heat suppliers and heat distributors and across the Danish municipalities of Frederiksberg, Gentofte, Gladsaxe, Copenhagen, and Tårnby. The system enables heat generation optimisation in the area and therefore makes it possible for the municipalities to offer their residents cheap, convenient, reliable, and eco-friendly heat generated by biomass, heat pumps, and electric boilers. Read more about CTR at ctr.dk.