

## Press release

### Heating transition pioneer turns solar power into district heating

#### GP JOULE switches on large-scale heat pump supplied directly with green electricity, the only system of its size in Germany

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**The large-scale heat pump in Mertingen in Germany's Donau-Ries district has now come on stream in a special ceremony. What makes this air-source heat pump unique is that it is supplied with green electricity straight from a nearby solar farm. As well as being the only arrangement of its kind in Germany, it is also a flagship project for the heating transition, a fact acknowledged by numerous guests at the switching-on ceremony, amongst them Bavaria's new State Minister for Digital Affairs Dr Fabian Mehring.**

"This project demonstrates the nationwide significance and the boldness of both GP JOULE and the municipality of Mertingen," Dr Mehring said. "With its innovative combination of a heat pump and a solar farm, GP JOULE is bridging the gap between the energy and heating transitions in lockstep with the municipality of Mertingen. With its latest project, the family business is once again leading the way on the climate transition - such a vital topic - here in the heart of our homeland. It's an impressive sign of how Bavaria's SME sector has embraced resilience and innovative strength. Being a minister from Swabia makes me even more proud of the successful pioneers of the energy transition that come from our region."

Even as long ago as 2017, when Mertingen's heating network was put into operation, the municipality was one of the first in the region to adopt renewable heating, setting up the "ProTherm Mertingen" utility company together with GP JOULE. The heating network has so far been supplied with waste heat from two local biogas plants plus heat from a wood chip plant.

"Not least the crises of the past few months have demonstrated how important it is to have a self-sufficient, stable and affordable supply of heat," says Mertingen's mayor Veit Meggle. "People are pressing for solutions - there's great demand."

#### **Creating a complete air-source heat pump solution**

The heating network is thus being gradually expanded, with the 20<sup>th</sup> stage of construction set to begin in the coming year. A further 2 kilometres of lines are to be added to the existing 14 or so kilometres, enabling just over 60 homes to be supplied with affordable, climate-friendly heat from just down the road. However, a new generating plant has had to be integrated in order to facilitate these additional connections. And this is where GP JOULE struck out on a new and innovative path.

A complete air-source heat pump solution was developed with a thermal capacity of up to 900 kilowatts. The technology deployed enables a high flow temperature of 80°C within the heating network, meaning that conditions stay warm even in existing buildings. Climate-friendly ammonia is used as a natural coolant. Amongst other things, the industrial large-scale heat pump is powered by a ground-mounted photovoltaic system with a capacity of 750 kilowatts. To enable as much of the solar power as possible to be used to generate heat, the heat can also be stored temporarily in two buffer tanks, each holding 84,000 litres of water, as well as being fed directly into the network.

“Integrating a directly connected solar farm to power the heat pump system allows renewable energy to be used right where it’s generated,” says Felix Schwahn, Managing Director of GP JOULE WÄRME. “This is good for the energy system, because the electricity doesn’t weigh down the grid; good for the region, because value creation is kept local; and good for the climate as well.” At the same time, the system can take electricity off the grid when there is a surplus and convert it into low-cost heat.

### **Harnessing renewable energy locally**

“This project is a major landmark for the whole of Europe,” said Heinrich Gärtner, Co-Founder and CTO of GP JOULE at the switching-on ceremony. “It’s linking the electricity and heating transitions and giving GP JOULE a blueprint for how to supply renewable heat using heating networks in the future.”

The municipality is also keen to ensure the supply of renewable energy to its local businesses by building three more solar farms. Jörg Baumgärtner, Managing Director of ProTherm Mertingen, added: “We’re taking some major steps towards a renewable energy future for our municipality.”

**Images:**



From left to right: Gerhard Rohde, Felix Schwahn (both Managing Directors of GP JOULE WÄRME) and Heinrich Gärtner (Co-Founder and CTO of GP JOULE) together with Wolfgang Fackler (Member of the State Parliament), Jörg Baumgärtner (Managing Director of ProTherm Mertingen), Veit Meggle (Mayor of Mertingen), Dr Fabian Mehring (State Minister for Digital Affairs), Anna Rasehorn (Member of the State Parliament), Eva Lettenbauer (Member of the State Parliament), Claudia Marb (Deputy District Chief Executive), Stephanie Schuhknecht (Member of the State Parliament) and Andrea Wörle put Mertingen's new heat pump into operation, thus ushering in a new age for energy.



Dr Fabian Mehring, Bavaria's new State Minister for Digital Affairs, praised the project, which, in his words, showed GP JOULE leading the way in Germany once again.



Heinrich Gärtner, Co-Founder and CTO of GP JOULE





Guests were able to see the site for themselves on a guided tour after the ceremony.

Image rights: GP JOULE; images can be used for free conjunction with reports on the commissioning of the Mertingen heat pump.

Photos can be found in our press portal at <https://www.gp-joule.com/en/newsroom/press/press-photos>.

### **About GP JOULE**

GP JOULE is an integrated energy supplier that covers the entire energy value chain, from generation to use - and from consulting and financing through to project planning, construction and service. GP JOULE produces and sells wind and solar power, green hydrogen and heat and makes use of it where it is most effective: in electric and hydrogen-based mobility, in households and in industry. From its base in Germany, GP JOULE has been shaping the future of energy in Europe since 2009. For a secure, independent and sustainable supply of energy. For 100% renewable energy for everyone.

GP JOULE won the 2022 German Mobility Award for its eFarm hydrogen mobility project.

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