

## A fuel cell powered data centre is being connected to district heating at RISE Luleå

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On May 30<sup>th</sup> to 31<sup>st</sup>, partners of the EU-funded WEDISTRIC project met near the Research Institutes of Sweden (RISE) ICE data center in Luleå, Sweden for their 7<sup>th</sup> general assembly meeting. Project partners discussed recent developments and advancements of their project's district heating and cooling solutions at the three demo sites in Romania, Spain and Sweden.

Partners visited the Swedish demonstration site, which uses biogas-powered fuel cells for an innovative waste heat recovery experiment. The project's goal is to capture excess heat from the RISE ICE data center and channel it into an adjacent building which is connected to a local district heating network. The generated electricity from this process could be used to power the data center almost independently.

"The objective of this demo site is to demonstrate the use of data centers in combination with fuel cells to achieve heat recovery from data center and fuel cells directly into district heating systems without the use of heat pumps," said Jonas Gustafsson, Research Program Manager at RISE Research Institutes of Sweden.

"The idea would be that it could become grid independent, it could run in island mode, and it's just converting biogas into digital services and heat for consumption in an urban area - because it's fairly quiet," adds Dr. Jon Summers, the Scientific Lead in Data Centers at RISE Research Institutes of Sweden.

In 2019, RISE joined with other European research partners for WEDISTRIC, a Horizon2020 project that aims to develop innovative 100% fossil-free heating and cooling solutions for new and existing district heating and cooling systems. Along with the rest of the consortium of 20 partners from nine European countries, RISE embarked on the adventure of creating solutions that integrate multiple sources of renewable energy, advanced thermal storage, and smart technologies to increase the operational efficiency of the systems.

Along with the Lulea demosite, WEDISTRIC is developing two other demo sites; one in Spain and one in Romania. The project also developed several tools to control the heat and energy flow within the demo sites. The project has been extended until September 2024 with a budget of €14.9 million and is working on replicable solutions that can be implemented throughout Europe.&

### More information

[Lulea Demosite brochure on wedistrict.eu](#)

[WEDISTRIC project brochure](#)

<https://www.wedistrict.eu/>

### Attached files



WEDISTRIC consortium at Lulea on May 30th 2023



Jon Summers and Jonas Gustafsson from RISE, Sweden inside the fuel cell container.

The WEDISTRIC demosite containers in Luleå with the fuel cell container stacked upon the data center container



**9 biogas fuel cells in container connected to building heating system (and preheated by datacenter)**

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**Notes for editors:**

**For more information on the Luleå demo site please contact:**

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