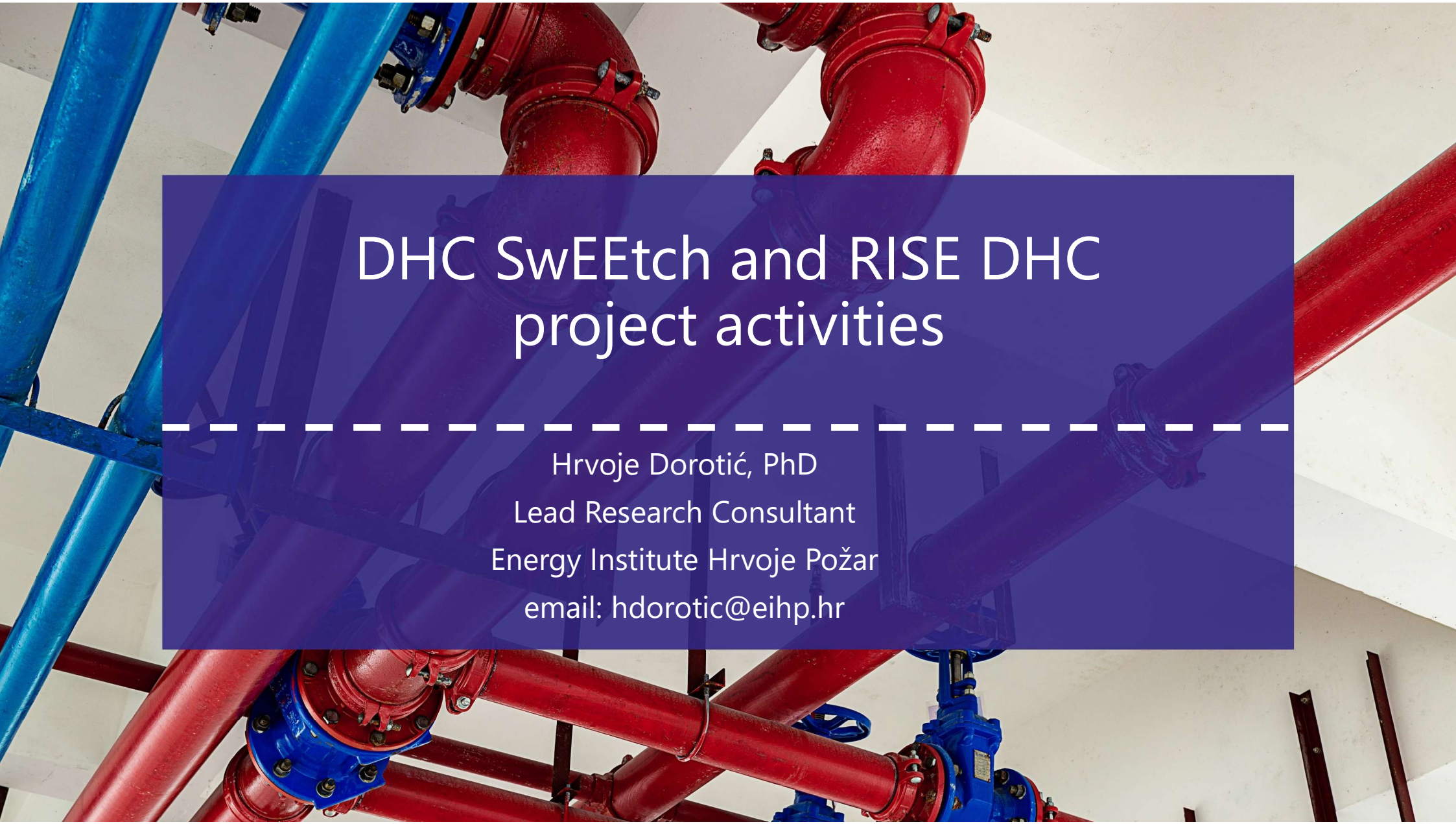

DHC SwEEtch and RISE DHC project activities

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The DHC SwEEtch project

- Integrated tool chain for decarbonization roadmaps and investment plans towards efficient district heating and cooling systems



Financed under **LIFE-2023-CET-DHC**



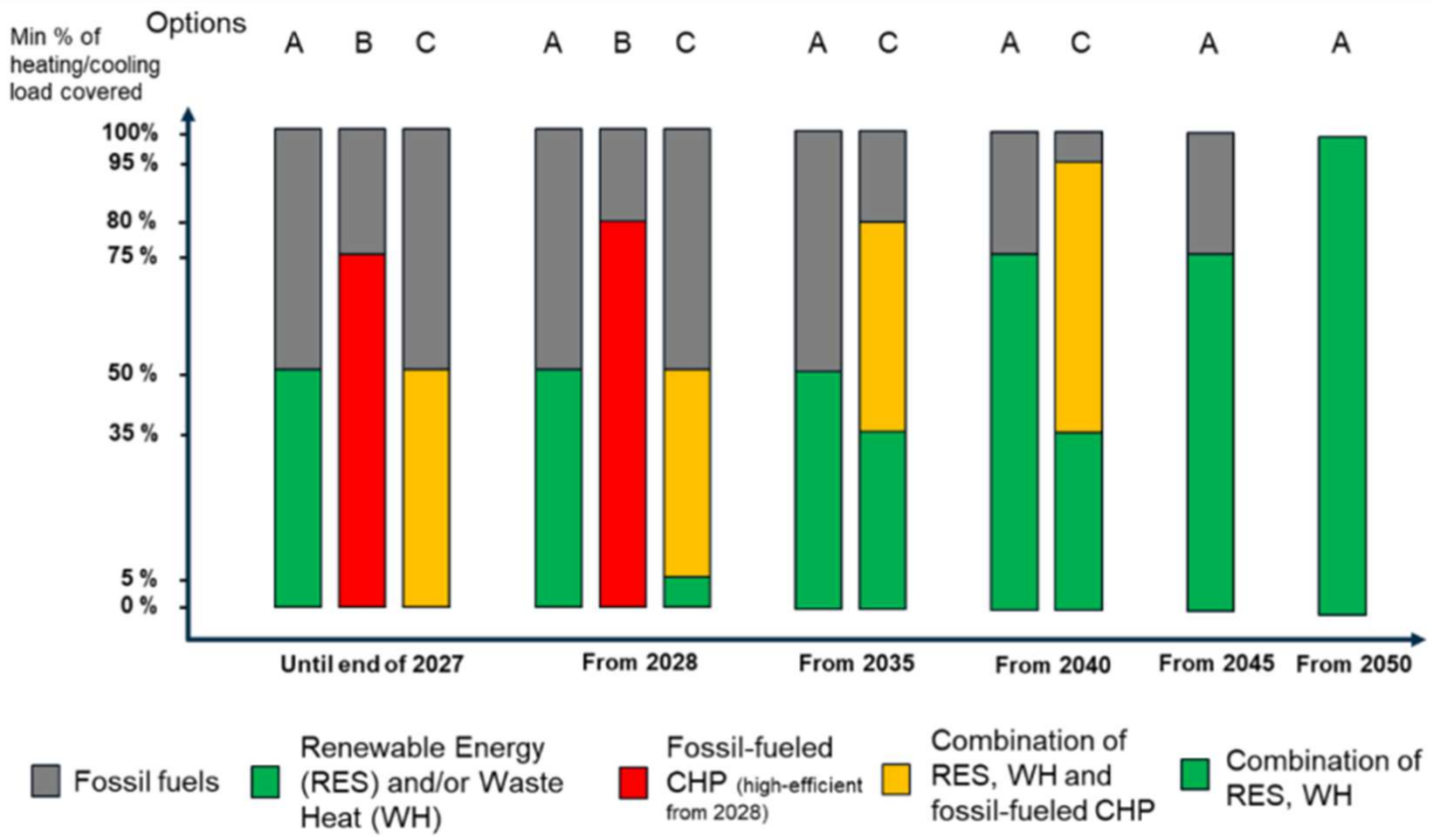
Duration: 10/24 – 09/27



Provide technical support to operators of existing DHCN to prepare decarbonization roadmaps by 2050 and related investment plans within a **10-year time horizon** in line with the criteria for **'efficient district heating and cooling' set by the revised Energy Efficiency Directive**

Efficient district heating and cooling system

- **Energy Efficiency Directive (EED III)**, Article 26.
- Renewables, waste heat cogeneration



Vinkovci

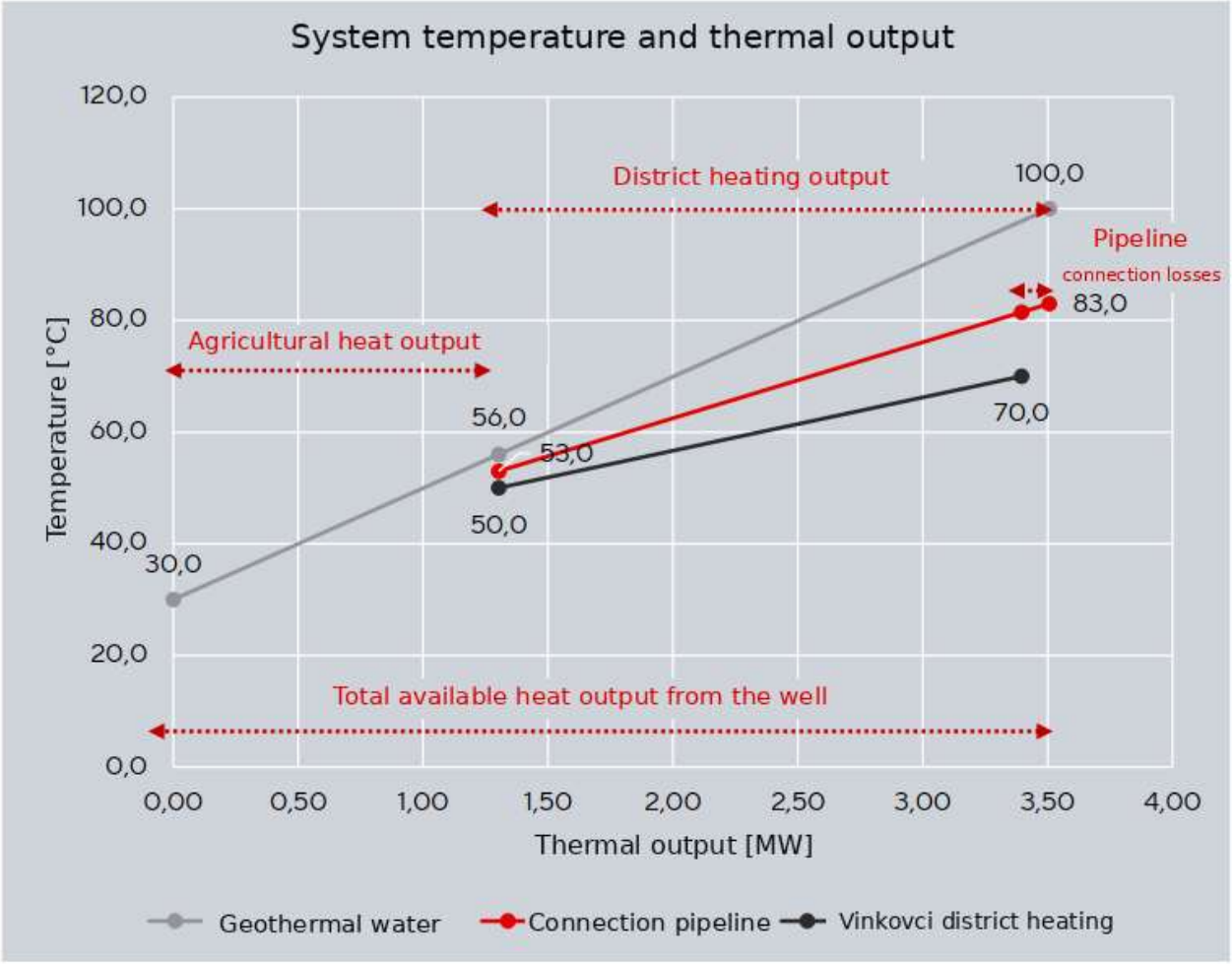
- Geothermal energy potential identified and assessed
- A second geothermal well is planned
- WWTP potential in addition to geothermal energy
- Higher heat demand is needed → new customers to improve project viability

Vinkovci



DHC SwEEtch
Co-funded by the European Union

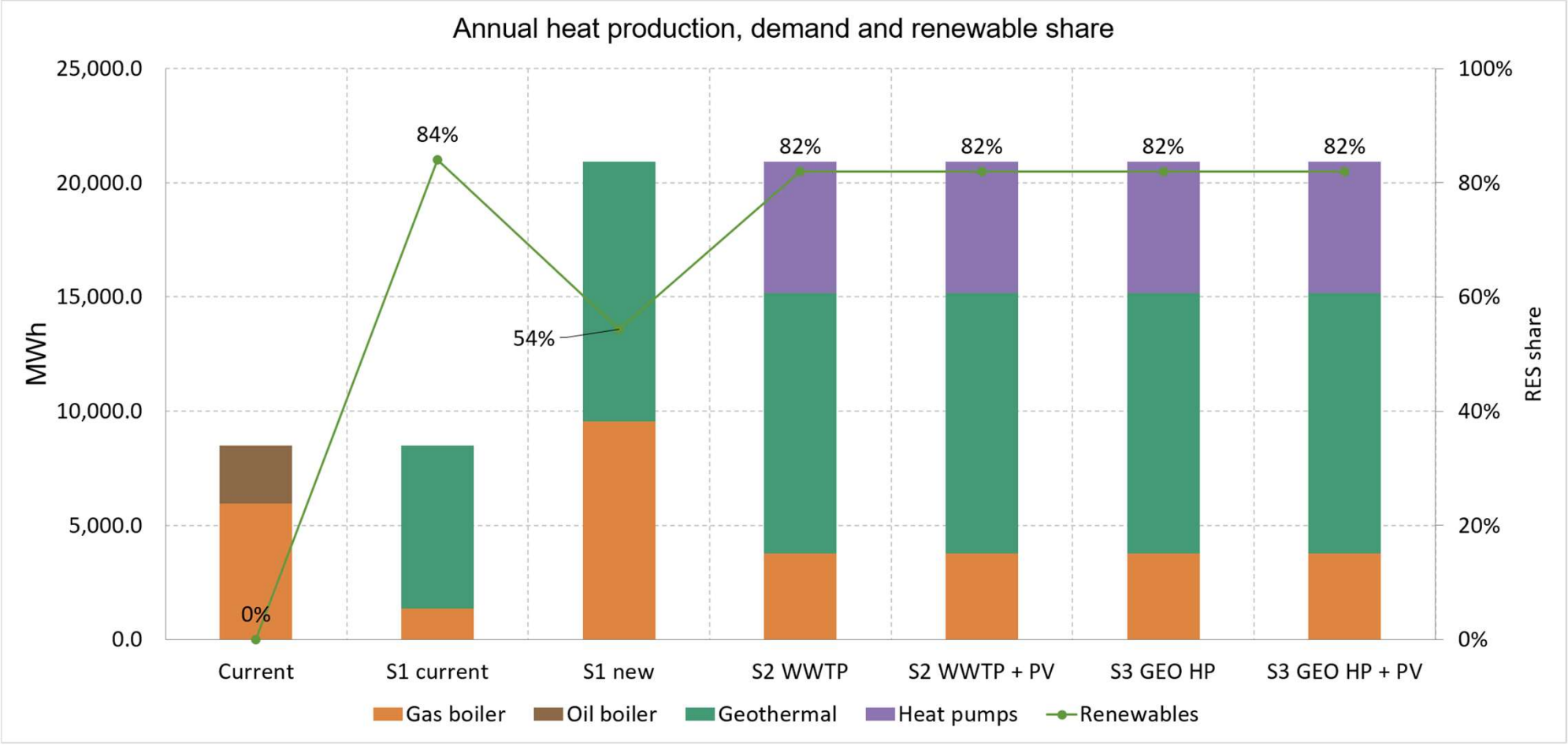
Vinkovci


System temperature and thermal output
120,0
100,0
80,0
60,0
40,0
20,0
0,0
Temperature [°C]
District heating output
100,0
Pipeline
connection losses
83,0
Agricultural heat output
56,0
53,0
50,0
70,0
30,0
Total available heat output from the well
0,00
0,50
1,00
1,50
2,00
2,50
3,00
3,50
4,00
Thermal output [MW]
Geothermal water
Connection pipeline
Vinkovci district heating

Vinkovci – Scenarios

- Current situation – natural gas and fuel oil
- Scenario 1 – geothermal energy with existing customers
- Scenario 1a – Scenario 1 + new customers
- Scenario 2 – new customers + geothermal + WWTP heat pump
- Scenario 2a – Scenario 2 + solar PV
- Scenario 3 – new customers + geothermal energy + geothermal heat pump
- Scenario 3a – Scenario 3 + solar PV

Vinkovci – Scenario results



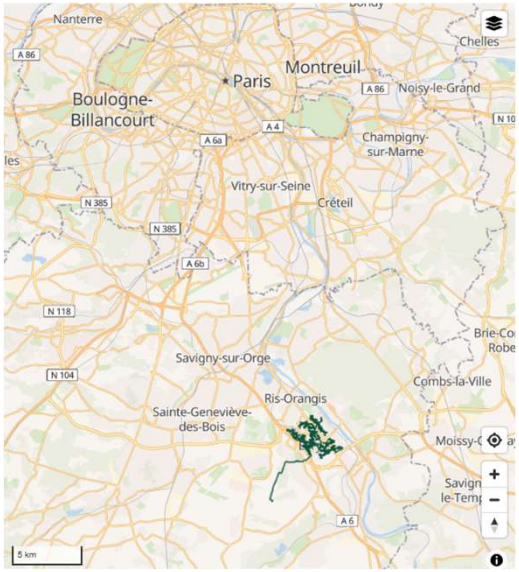
Vinkovci – national funding

- Signed Agreement for national funding



Similar project in France

- Evry, France
- High-temperature geothermal heat pump

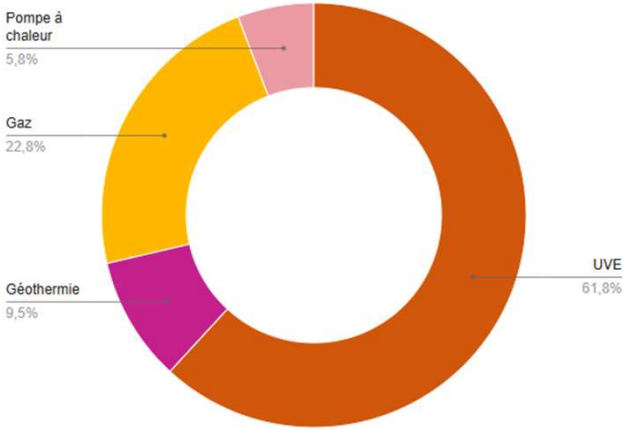


Technical specifications

Year of network creation	1997
Data for the year 2024	
Delivery points	395
Total heat deliveries	224 GWh
Details by sector	
Total heat production	261 GWh
Details by energy type	
Total installed power	204 MW
Details by energy type	
Natural gas	126 MW
UIOM	35.0 MW
Geothermal energy	13.5 MW
PAC	11.4 MW
Other recovered heat	18.0 MW
Yield	86%
Network development	6%
Data for the year 2021 *(this data is no longer updated with the same level of accuracy)*	
Network length (one way)	44 km
Heat transfer fluid - hot water	100%
Heat transfer fluid - superheated water	0%
Heat transfer fluid - vapor	0%

Mix énergétique

Données pour l'année 2024



DHC SwEEtch

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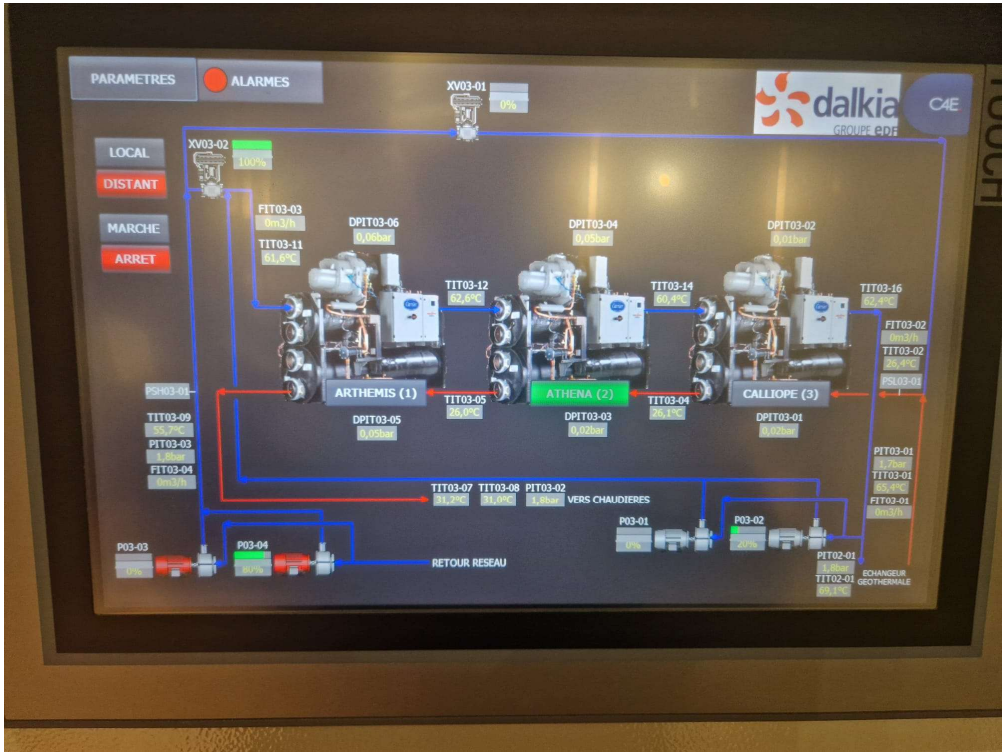
Similar project in France





EIHP

DHC SwEEtch

Co-funded by the European Union

RISE DHC

Project overview – What is LIFE RISE DHC?

DHC SwEEtch

Co-funded by the European Union

RISE DHC at a glance

- **Purpose:** develop **bankable investment plans** for **new DHC systems fully based on renewable energy and waste heat**.
- **Scope: 8 case studies** across **7 countries**.
- **Duration:** 36 months · 1 Sep 2026–31 Aug 2029.
- **Budget: €2.105m eligible costs** · €1.999m EU grant · 95% funding rate.
- **Consortium:** 10 beneficiaries + 1 affiliated entity + 5 Associated partners, coordinated by **EIHP**.
- **Destination:** plans ready to enter endorsement and move toward realization after project end.

RISE DHC

DHC SwEEtch

Co-funded by the European Union

A consortium built for delivery

11 core organisations

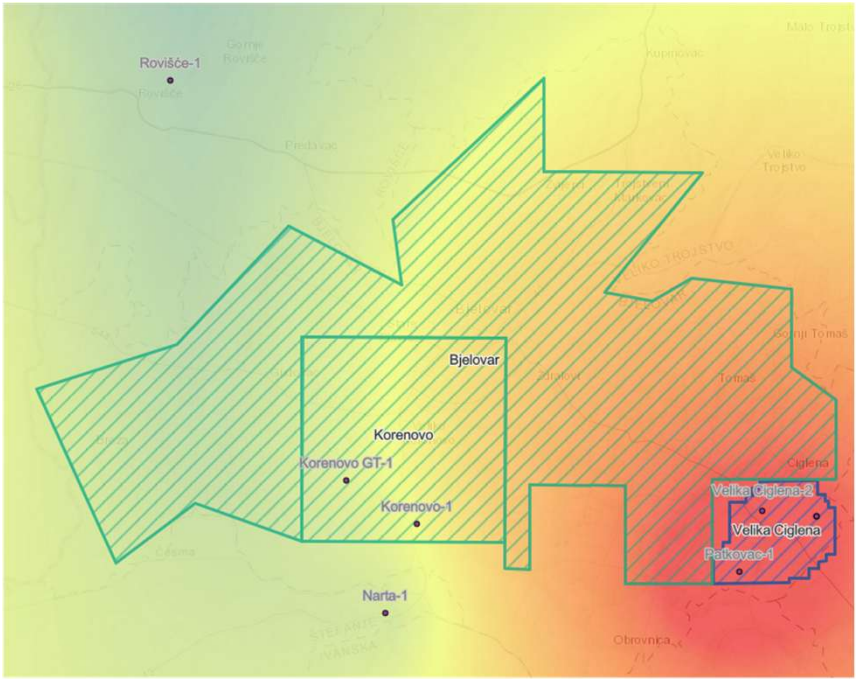
- **EIHP (HR)** — coordinator
- **EURAC + R2M (IT)**
- **LUND (SE) · HeatGrid (IE)**
- **ADENE · Guimarães · LdP (PT)**
- **GeoZS (SI) · TH AB (DE) · EHP (BE)**
- **+5 Associated partners**

Together: technical, municipal, financial, capacity-building and replication expertise.



Geothermal potential

- Bjelovar is located in the geothermal-rich Croatian part of the Pannonian Basin
- Korenovo-1 shallow well, approximately 500 m deep, provides water at ~30°C
- The Korenovo GT-1 well reached 1,290 m and confirmed a reservoir temperature of 83°C
- The resources are suitable for heating, recreation, tourism, agriculture and other direct uses
- **New geothermal wells are planned …**



Other Geothermal Projects in Bjelovar

- **Wellovar:** new geothermal sports, recreation and wellness complex in Veliko Korenovo
- **Korenovo GT-1:** geothermal energy for heating Wellovar complex
- Surplus heat could subsequently supply the future **Korenovo Business Zone**, Bjelovar Fair and greenhouse production



Wellovar
Geotermalno sportsko-rekreacijski park

DHC SwEEtch

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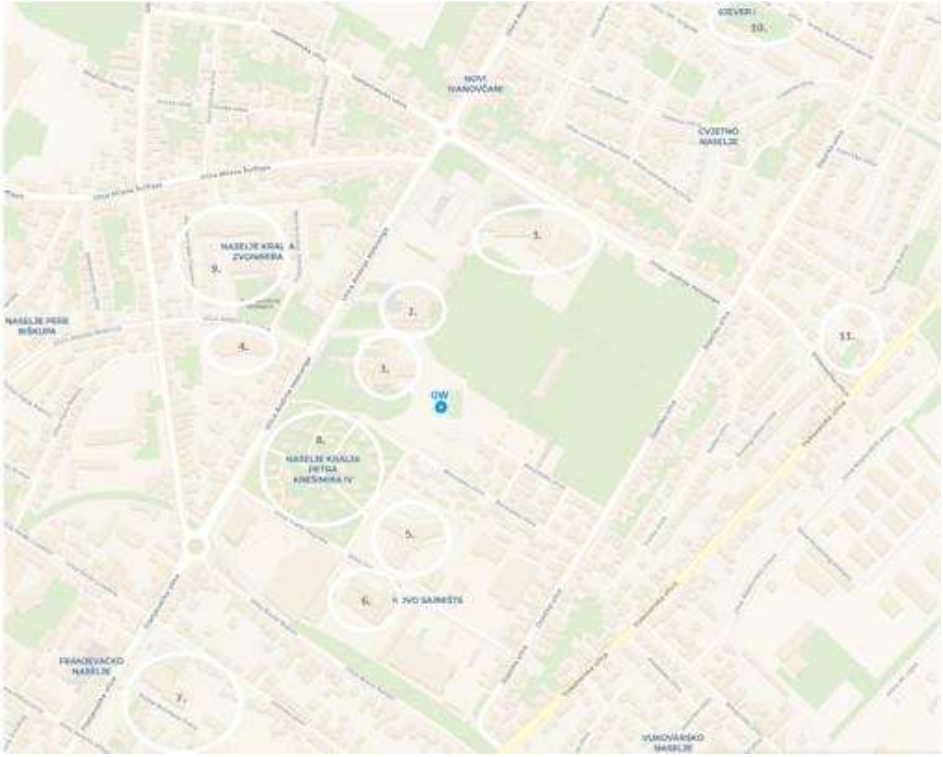
Urban Geothermal District Heating

- Develop a new geothermal district-heating system within Bjelovar's urban area
- Proposed concept: a new production–reinjection doublet and a network operating at approximately 90/70°C
- Heat pump integration will be analysed, depending on the reservoir temperature



More about this in one year ☺



Thank you for your attention

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