

Webinar – Gradska Toplana, Karlovac, Croatia

Thursday 12th November 12.00 – 14.30

12:00 – 12:05 Welcome / Lars Hummelose, DBDH

12:05 – 12:10 Short intro to each participant in the webinar

Introduction

12:10 – 12:25 District Heating in Karlovac including general challenges
/ Hrvoje Klobucar, Gradska Toplana

Expert Panel Answers:

12:25 – 13:05 Theme 1: Managing the transition to efficient DH system from the perspective of the market/customer

1. Intro to the topic /Gradska Toplana (7 min)
2. Jens Andersen, Næstved District Heating Utility (7 min)
3. Dmitry Bochkalov, Danfoss (7 min)
4. Morten Engelsen/Steen Schelle Jensen, Kamstrup (7 min)
5. Jørgen Ægidius, Logstor (7 min)
6. Theme 1 Q&A (5 min)

13:05 – 13:40 Theme 2: SCADA solutions for DH system

1. Intro to the topic /Gradska Toplana (7 min)
2. Jens Andersen, Næstved District Heating Utility (7 min)
3. Frank Grundholm, ABB (7 min)
4. Kyriaki Foteinaki, ENFOR (7 min)
5. Theme 2 Q&A (7 min)

13:40 – 14:15 Theme 3: Binding RES to DH system including heat storage

1. Intro to the topic/Gradska Toplana (7 min)
2. Jens Andersen, Næstved District Heating Utility (7 min)
3. Thomas Østergaard, COWI (TBC) (7 min)
4. Jesper Peter Menne Baunsgaard, GEEOP (7 min)
5. Theme 3 Q&A (7 min)

14:15 – 14:20 Summary

14:20 – 14:30 Open discussion

Status of Gradska Toplana

DH company Gradska Toplana was founded in 2012 (after the previous company Toplana went bankrupt) and is in 100% ownership of City of Karlovac. The DH tradition is more than 50 years old. Currently we provide DH to about 50% of the city's urban area covering 7.389 households (apartment buildings) and 313 business customers via centralized DH system and 131 households via small separated block facility. We're the 3rd biggest DH system in Croatia by pipeline length. Our production facility consists of one 58 MW gas boiler and one 29 MW oil boiler. Our DH pipeline is 22 km long (44 km of pipe length) and rated with 64 MW power. We provide our customers with about 50 GWh of heat p.a. and with full service: from production over distribution to maintenance of their house heating system. The company has 47 employees.

Our goal is to improve the company in order to increase of customer satisfaction and by improvement of operating performance.

Due to the fact that the whole system is obsolete, in poor shape and our pipeline losses are substantial, we are working on EU funded project application to recover and improve our distribution (74% of the pipeline, all substations, distribution pumps, SCADA), estimated project value is about 20 M€. We expect to sign the contract for the EU funds by the end of 2020 and to start to execute the project in Q1 2021.

Furthermore we're working on the project to improve our production to be able to receive the heat from RES by introducing the heat storage tanks (retrofit of the existing 2x1000m³ oil tanks), heat exchanging station, PV panels and introducing new final stage of our existing 58 MW gas boiler to increase efficiency. We expect to apply for EU funds from the new financing period 2021-2027. Our sister company Geotermika d.o.o. is working on the project (currently in investigation phase) re exploration of the geothermal sources near our city. The aim is to use the geothermal energy for DH. It is expected to have the geothermal heat in our pipeline around year 2025 with the share of at least 50%.

Participants Karlovac

Names:	Position:	Company/organization	E-mail
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Goran Krajacic	Professor	Faculty of Mechanical Engineering, University of Zagreb	Goran.krajacic@fsb.hr

Participants from Denmark

Names:	Position:	Company/organization	E-mail
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