# HEATflex

District heating is a cornerstone of the flexible energy system of the future.

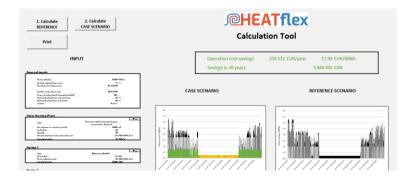
*There is a huge potential for utilizing waste heat in a large number of cities. Also in streamlining and flexibility.* 

# Ways to tomorrows district heating - Green and more efficient.

The overall aim of the project is to develop a common technical and economic strategy to increase the competitiveness of CHP and district heating plants by providing HEAT flexibility through the following 2 approaches, that are linked to each other:

- Centralised generated HEAT flexibility: CHP + direct linked heat pumps
- Decentralised generated HEAT flexibility: Heat prosumers through a new developed heat substation (e. g. for supermarkets, offices, industry, apartment buildings etc.) + direct linked heat pumps will be used.

In workshops, interviews and meetings with people from the sector, the project is in the process of describing and developing guidelines. Among other things, tools are being developed to help the district heating sector make decisions.



#### **ERA-Net Smart Energy Systems**



This project has received funding in the framework of the joint programming initiative ERA-Net Smart Energy Systems. The initiative has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreements no. 646039 and no. 755970.

# **@HEATflex**

# **Project Duration**

15.05.2019 - 14.05.2022

# **Project Budget**

Total Budget: € 1.394,612.-Funding: € 1,015,486.-

#### **Project Coordinator**

PlanEnergi (Denmark)

#### **Project Partners**

- 4ward Energy Research GmbH (Austria)
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- Reiterer & Scherling GmbH (Austria)
- Regelungs-Verteilerbau GmbH (Austria)
- EnergyCluster Denmarkr (Denmark)
- Viborg Varme (Denmark)

# **Project Website**

www.heatflex.dk

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ERA-Net Smart Energy Systems Joint Call 2018

This project has been awarded funding within the ERA-Net SES Joint Call 2018 for transnational research, development and demonstration projects. EUR 33.4 Mio of funding have been granted to 23 projects from 16 regions and countries.

### **Main Objectives**

In HEATflex, we see district heating as a cornerstone in the transformation towards a low carbon society. Here, the temperature levels in the network are important, as with lower temperatures we can make much better use of waste heat from industry. In addition, the utilization of heat pumps becomes more efficient with lower temperatures. But it is not simple to lower the temperatures. There are a number of barriers, both technical, organizational, and financial.

# **Expected Main Results**

- Technical and economic strategy for increasing Waste Heat and Renewable Energy Sources (RES) in the heat sector based on the new EU RES-Directive
- Practical guideline for centralized and decentralized generated heat flexibility (technical, economical, legal, implementation, business models)
- Roadmap for the implementation, planning and engineering of a flexible district heat supply (e. g. empirical formula for upscaling)
- Good practice examples
- Recommendations

The idea of the HEATflexcel Tool is to give the user the possibility to calculate the (positive) effects of the integration of waste heat and renewables in a district heating grid. And the benefits of lowering temperatures in the grid, renovating grids, connecting new consumers / prosumers e.c. It is Excel based tools which will be freely available on the project website after finalization and validation.



Joint Programming for Flourishing Innovation from Local and Regional Trials towards a Transnational Knowledge Community

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