Fifth generation, Low temperature, high EXergY district heating and cooling NETworkS

Fact Sheet

Project Information

FLEXYNETS
Grant agreement ID: 649820
Project website

Funded under H2020-EU.3.3.1.

Start date 1 July 2015
End date 31 December 2018
Overall budget € 1 999 363,75
EU contribution € 1 999 363,75

ACCADEMIA EUROPEA DI BOLZANO

Coordinated by Italy

Objective

District Heating and Cooling networks distribute energy from a centralized generation plant to a number of remote customers. As such, actual DHC systems suffer from
• significant heat losses
• highly unexplored integration potential of different available energy sources (e.g. renewables and waste heat) into the network
• high installation costs.

FLEXYNETS will develop, demonstrate and deploy a new generation of intelligent district heating and cooling networks that reduce energy transportation losses by working at “neutral” temperature levels. Reversible heat pumps and chillers will be used to exchange heat with the DHC network on the demand side. In this way, the same network can provide contemporary heating and cooling.

FLEXYNETS solutions will integrate effectively multiple generation sources (including high- and low-temperature solar thermal, biomass, PV, cogeneration and...
Together with storages, control strategies that optimize the harvest of renewable energy sources are key from the technical and economic points of view. On the one hand, strategies will be assessed that assure a thermal balance among diffused heat generation, storage and utilization. On the other, policies will be elaborated to decide when energy is to be gathered locally or exchanged (both purchased and sold) with the electricity and gas networks.

The optimal management of such new generation networks will lead to a synergic effect on primary energy savings (hence on the reduction of the CO2 emissions), assuring at the same time investment and operation profitability. As such, FLEXYNETS will contribute to a higher penetration of smart DHC networks on the heating and cooling market, and will contribute to the European recovery plan.

Field of science

/social sciences/economics and business/economics/sustainable economy
/engineering and technology/environmental engineering/energy and fuels/renewable energy
/engineering and technology/electrical engineering, electronic engineering, information engineering/electrical engineering/power engineering/electric power generation/combined heat and power

Programme(s)

Topic(s)

Call for proposal

H2020-EE-2014-2-RIA

Funding Scheme

RIA - Research and Innovation action

Coordinator

ACCADEMIA EUROPEA DI BOLZANO

Address

Viale Druso 1
39100 Bolzano

Activity type

Research Organisations

EU contribution

€ 503 500
## Participants (6)

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Country</th>
<th>EU contribution</th>
<th>Address</th>
<th>Activity type</th>
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<tr>
<td>PLANENERGI FOND</td>
<td>Denmark</td>
<td>€ 375 250</td>
<td>Jyllandsgade 1 9520 Skorping</td>
<td>Other</td>
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<tr>
<td>SOLTIGUA SRL</td>
<td>Italy</td>
<td>€ 317 000</td>
<td>Via Roma 54 47035 Gambettola</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
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<tr>
<td>ACCIONA CONSTRUCCION SA</td>
<td>Spain</td>
<td>€ 241 687,50</td>
<td>Avenida De Europa 18 Parque Empresarial 28108 Alcobendas</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
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</table>

Contact the organisation [here](#)
HOCHSCHULE FÜR TECHNIK STUTTGART

Germany

EU contribution

€ 293 625

Address

Schellingstrasse 24
70174 Stuttgart

Website

Activity type

Higher or Secondary Education Establishments

Contact the organisation

SOLID AUTOMATION GMBH

Germany

EU contribution

€ 30 502,50

Address

Keltenstr. 25
72766 Reutlingen

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Contact the organisation

ENISYST GMBH

Germany

EU contribution

€ 237 798,75

Address

Robert Bosch Strasse 8/1
72124 Pliezhausen

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Contact the organisation

Last update: 15 July 2019
Record number: 194622

Permalink: https://cordis.europa.eu/project/id/649820/