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# New Heating and Cooling Solutions Using low grade sources of thermal energy

www.relatedproject.eu

## About **RELATED PROJECT**

Renewable Low Temperature District, RELaTED, will provide an innovative ultra-low temperature concept for thermal district energy networks with lower

costs, fewer heat losses, better energy performance and more extensive use of de-carbonized energy sources than actual district heating concept.

BELOTED

### DEMONSTRATIONS



The main objective of RELaTED Ultra Low Temperature District Heating is to demonstrate the feasibility of the concept, with large share of renewable energy and waste heat sources, in European urban environments.

Considering the complexities and particularities of each district heating (DH), RELATED concept is being implement in four different DH networks covering extremely

## TECHNOLOGIES

RELATED will integrate present technologies into a new ULT DH concept, at distribution temperatures below commercially operative DH networks today.



DISTRICT HEATING SUBSTATION **TECHNOLOGY** 

HEAT PUMP TECHNOLOGY

#### **BUILDING INTEGRATED SOLAR THERMAL** SYSTEMS TECHNOLOGY

#### Glazed ST collector system



**Unglazed ST** collector system



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METRO THERM

INNOMETAL



- IURRETA (SPAIN), CORPORATE DHNETWORK
- TARTU (ESTONIA), BIOMASS BASED DH
- (DENMARK), **URBAN** VINGE NEW DEVELOPMENT
- BELGRADE (SERBIA), LARGE DH NETWORK
- different climatic conditions, construction traditions, urban density, pre-existing district scheme, ownership and energy services contract schemes:





**INAVENTA SOLAR** 

tecnalia) Inspiring

