

Transforming Heat Supply to RES and provides Liveable Climate

Take the opportunity and start the decarbonisation path
to RES DHC for future-proof

Bioenergy

Biomass as a renewable energy source can be used for heat only as well as for combined heat and power (CHP) production and can be easily stored

Power-to-heat

Coupling DHC with renewable electricity provides support to the power grid, making it more resilient

Low-temperature use

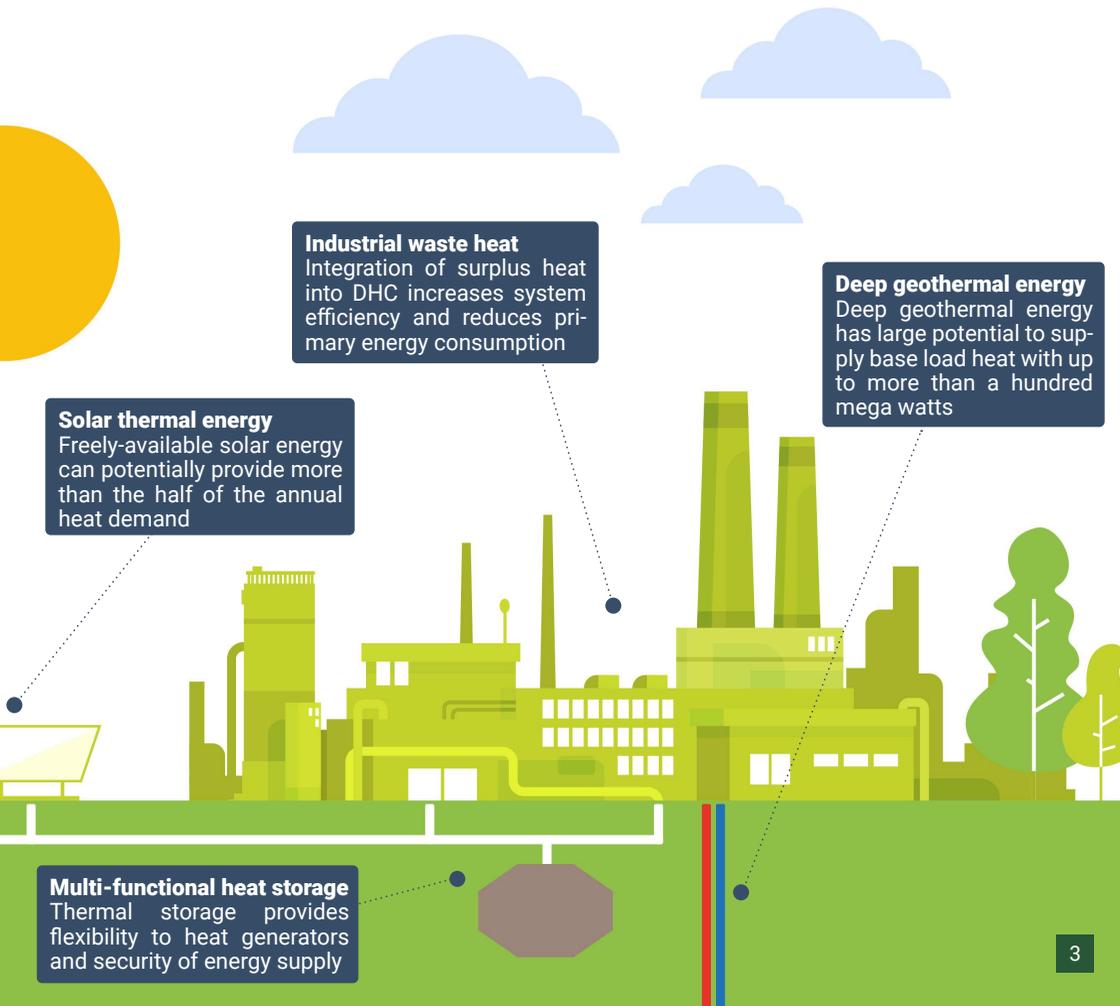
Smart integration of heat pumps in DHC provides heat at lower, more-useful temperatures

Distribution

DHC networks connect local renewable energy sources with consumers by supplying heat through a series of pipes

DHC increases Local Added Value Create Conditions for the Future

process of your district heating and cooling systems
and sustainable heat supply!



Solar thermal energy

Freely-available solar energy can potentially provide more than the half of the annual heat demand

Industrial waste heat

Integration of surplus heat into DHC increases system efficiency and reduces primary energy consumption

Deep geothermal energy

Deep geothermal energy has large potential to supply base load heat with up to more than a hundred mega watts

Multi-functional heat storage

Thermal storage provides flexibility to heat generators and security of energy supply

AMBITIOUS RES-DHC TARGETS FOR EUROPE ...

For the new European Climate Law, the European Commission agreed on the binding target of net zero greenhouse gas emissions by 2050 and a target for 2030 of reducing greenhouse gas emissions by at least 55% compared to levels in 1990.

For achieving these ambitious targets, the heating and cooling sector, representing half of the EU's energy consumption, needs to be addressed with great consistency. RES-DHC is a strong lever for decarbonising this sector and it can contribute in a relevant manner to climate protection in Europe.

... REQUIRE CONCRETE MEASURES AT LOCAL LEVEL

How to get started? Here is a good example from Graz in Austria: since 2013 Graz' local working group "Heat Supply 2020/2030", involving local stakeholders and society groups, has developed a detailed roadmap for the substitution of fossil district heat generation with renewable energy sources. The first steps have been implemented and concrete projects have also been realised, such as the best practice project HELIOS operated by Graz' heat supplier Energie Graz.



The HELIOS storage project is an exciting future concept as well as a wonderful sign of the change in the ecological thinking of the city of Graz. A former landfill area is transformed into a production site for sustainable energy.

The centerpiece is the buffer storage, which can be charged by various units and enables shifting of peak loads of the heating network via an intelligent storage management system, so fossil energy sources can be replaced by renewable energy sources.

solites



AMBIENTEITALIA



GRAZ UMWELT



ENERGIE GRAZ



HAMBURG INSTITUT



PLANAIR

PlanEnergi

SEC SZCZECIŃSKA ENERGETYKA CIEPLNA



15 PARTNERS, 8 COUNTRIES, 6 MODEL REGIONS EU H2020 PROJECT RES-DHC

The RES-DHC project addresses the heating and cooling sector, which is the sector representing the highest potential for the use of renewable energy generation due to fast and cost-effective transformation processes. The project started in September 2020 and has a duration of 3 years.



Technical solutions to introduce RES at large scale



Strategy development to face organisational barriers



Improved access to legal and institutional frameworks



Facilitation of economic heat transition approaches

H2020 Project RES-DHC

Get in touch with us and benefit from a strong international network.

On our internet portal, you will find useful and interesting documents as well as current news and relevant events:

www.res-dhc.eu

Follow us on [Twitter \(@DhcRes\)](https://twitter.com/DhcRes) and [LinkedIn \(www.linkedin.com/showcase/res-dhc-project\)](https://www.linkedin.com/showcase/res-dhc-project)

Edited by

Solites - Steinbeis Research Institute for Solar and Sustainable Thermal Energy Systems

Meitnerstr. 8
70563 Stuttgart
Germany

info@solites.de
www.solites.de

with support of the RES-DHC project partners.

Image sources:
Łasztownia: SEC
HELIOS project: Energie Graz



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 952873.

The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the views by the institutions of the European Union. Neither the European Commission nor the authors are responsible for any use that may be made of the information contained therein.

www.res-dhc.com

