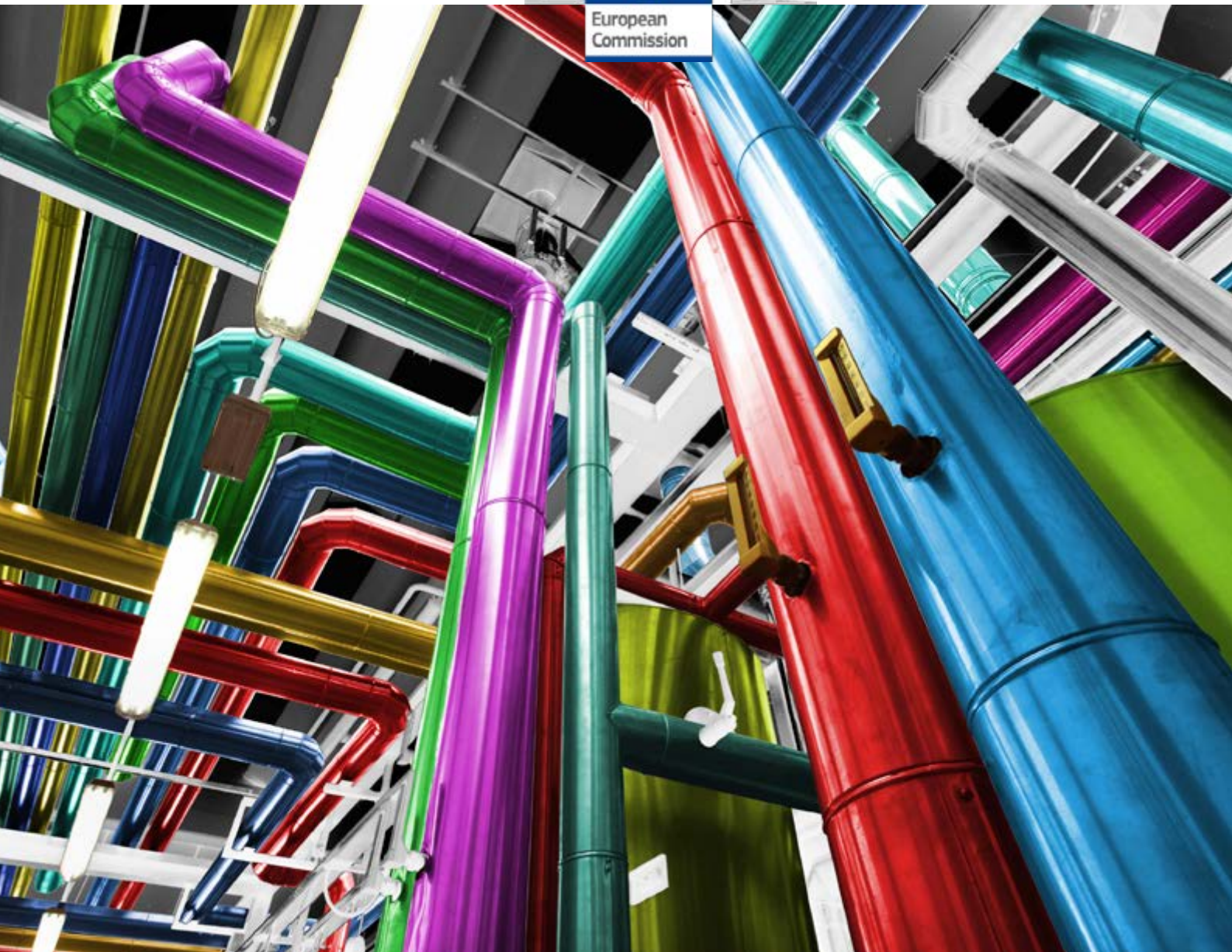




European
Commission



Energy Efficiency

*Overview of projects
2016*

Market Uptake Activities

*in support of the
New Heating and
Cooling Strategy*

*Executive
Agency
for SMEs*

Executive Summary

Heating and cooling consume half of the EU's energy and much of it is wasted. Horizon 2020 and Intelligent Energy Europe projects are supporting the new heating and cooling strategy of the European Commission by providing support to market uptake of energy efficient and renewable heating and cooling.

Against the backdrop of the development of policy for heating and cooling, EU-funded projects facilitating the market uptake of energy efficient and renewable technologies have helped deliver innovative business opportunities, tackled red tape, implemented capacity building activities and facilitated knowledge transfer to mention but a few. These projects were instrumental in informing the policy decision making process by providing evidence-based experience for the heating & cooling strategy. In addition, a number of projects aim at supporting the consumer to take informed decisions on available heating and cooling options.

The European Commission is also providing support to public and private bodies in developing bankable sustainable energy investments through a number of dedicated technical assistance facilities. A number of these projects aim at launching investments for large scale heating and cooling infrastructure including district energy projects using local low carbon and renewable energy sources.

Launched in 2003, the [Intelligent Energy Europe](#) (IEE) programme has been, and still is, supporting a suite of heating and cooling projects at European, national, regional and local levels.

Under the IEE II Programme 2007-2013, over EUR 30 million were provided as grants for projects supporting the market uptake of energy efficient and renewable heating and cooling technologies, including: solar thermal, bio-energy, shallow and deep geothermal, as well as combined heat and power and district energy systems.

Horizon 2020 projects will build upon these, as support to market uptake activities continues under the EU's Research and Innovation Programme, from which there are currently three on-going market uptake projects supported under the H2020 Energy Efficiency Calls 2014 and 2015.



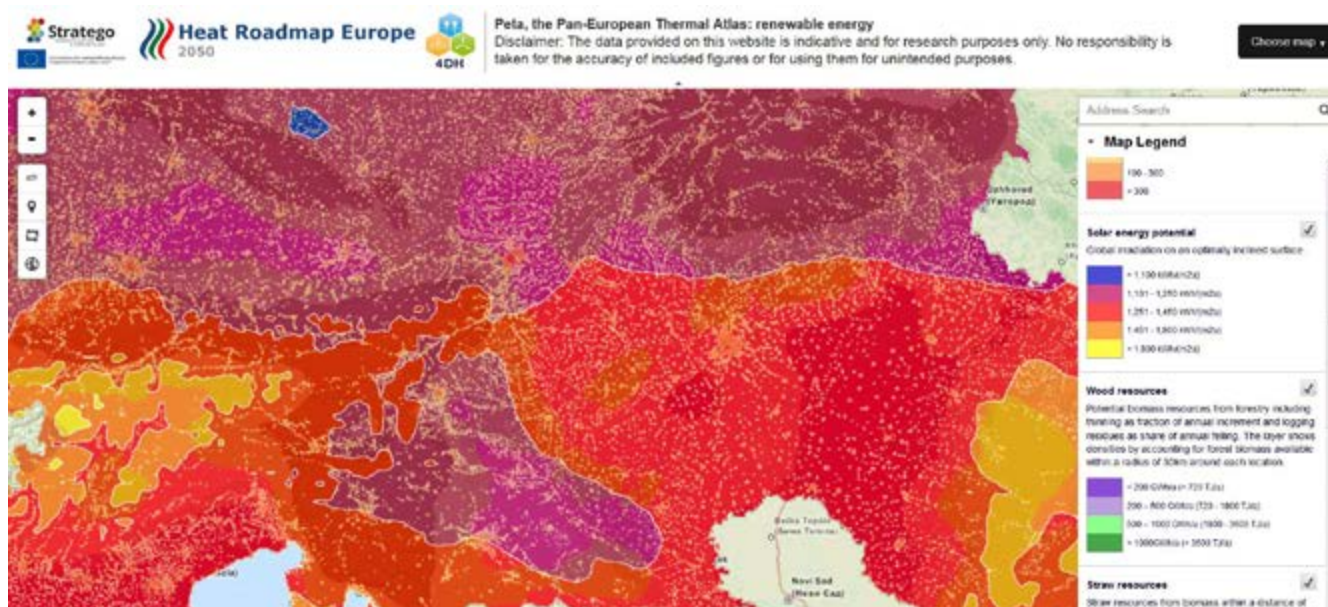
SUPPORTING HEATING AND COOLING PLANNING

Implementation of the Energy Efficiency Directive

The IEE programme is currently supporting a number of projects on heating and cooling planning at national, regional and local levels assisting EU Member States in the practical aspects of the implementation of Article 14 of the Energy Efficiency Directive on efficiency in heating and cooling. Examples of these projects include [STRATEGO](#), [RES H/C SPREAD](#) and [SmartReflex](#).

cooling demand, the local density of both demands, the basic geometry of district heating and cooling (DHC) supply, the available waste heat resources and the potential for renewable energy sources (solar thermal, geothermal, relative accessibility of biomass).

The project team is also working with over 20 cities and regions across Europe in a more detailed mapping of their local heating and cooling demand and supply in order to identify areas of priority for intervention.



IEE/13/650 STRATEGO. Project co-funded by the Intelligent Energy Europe of the European Union

Supporting National Authorities

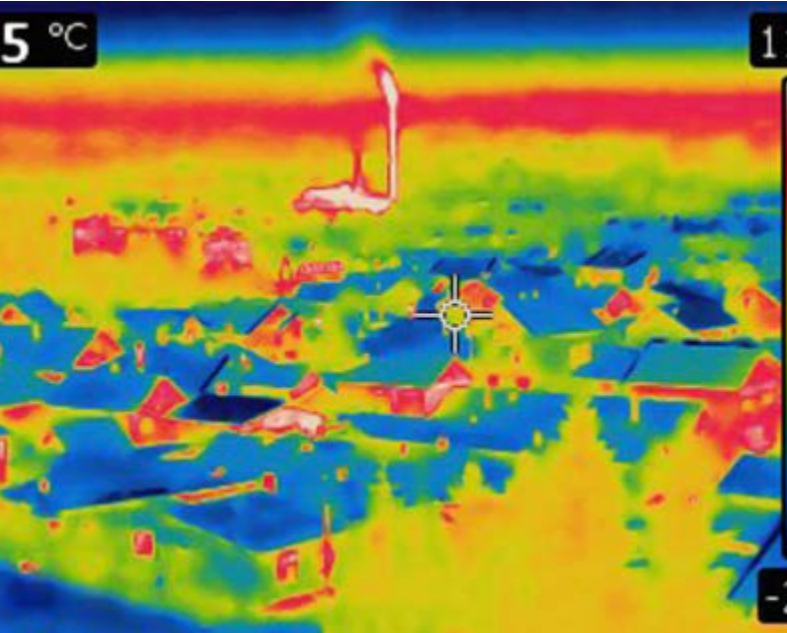
Building on the results of the [Heat Roadmap Europe](#), the [STRATEGO](#) project is supporting national authorities in the preparation of National Heating and Cooling Plans (NHCPA). The project has so far quantified the impact of implementing various energy efficiency measures in the heating and cooling sectors of five EU Member States: Czech Republic, Croatia, Italy, Romania, and the United Kingdom.

Building on the aforementioned activities concerning the Heat Roadmap Europe and STRATEGO, Heat Roadmap Europe 4 is a recently started project supported under Horizon 2020. This study will refine the already existing pan European thermal atlas by including the industrial sector in the calculations. In addition the project foresees to undertake comprehensive study of the heating and cooling sectors in the 14 largest EU countries.

A Pan European Thermal Atlas

The STRATEGO project has also produced a [pan European thermal atlas](#) containing information on the heating and cooling demands and potential supply sources across the European Union. It comprises the EU28 with a 1km² grid resolution. For each cell of the grid, the map contains the modelled heat and





Projects have covered a number of technologies and address a number of market barriers.

In close liaison with industry and district heating suppliers, the project [SDHPLUS](#) has promoted existing and developed new and innovative business opportunities for solar thermal district heating.

Facilitating knowledge transfer

The [REGEOCITIES](#) project has brought together 11 Member States with the objective of facilitating know-how and best practice exchange on the regulation and administration of shallow geothermal in cities.

The project [BiogasHeat](#) has proposed efficient uses for biogas in the generation of heat. On the use of cogeneration, the project [CODE2](#) has developed national Cogeneration Roadmaps for 27 MS and one European Cogeneration Roadmap. The project has also identified the potentials for micro-CHP and bio-energy CHP across 27 EU MS.

Cutting red tape

The project [GEODH](#) has been working with decision makers with the objective of removing the administrative and financial barriers affecting the further development of deep geothermal district heating systems.

Another IEE project, [RESCUE](#), has worked with a number of cities across Europe and has developed a methodology, toolset and practical guidance for decisions makers for the adoption and implementation of district cooling using locally available low carbon and renewable energy sources.

Promoting District Heating and Cooling systems

The [SmartReFlex](#) project is working on the promotion of district heating and cooling (DHC) systems, using high shares of renewable energy sources (RES), across 6 regions in 4 countries in Europe (Germany, Ireland, Italy and Spain).

Key to the project is the development and implementation of legislative and organisational measures for promoting high-RES DHC. In order to facilitate the adoption of the measures proposed and the initiation of projects regional task forces are active in each of the participating regions. Know-how transfer from the Danish experience into the project activities is central to this project.

Capacity building in regions

Capacity building activities are taking place for key actors and stakeholders in different regions. The [RES H/C SPREAD](#) project is also assisting 6 regions in Europe (Austria, Bulgaria, Greece, Italy, Latvia and Spain) in the development and adoption of heating and cooling strategies with a high share of renewable energy sources.

Accelerating the market uptake of mature technologies

The IEE programme has also supported projects with the concrete objective of accelerating the market uptake of already mature technologies.



es related to the energy labelling process: the issuing of 'package labels' by installers, including the communication to the final consumer. Package labels will give consumers an indication of the overall energy efficiency of heating systems that combine conventional and renewable heating systems such as solar thermal.

Label Pack A+ will provide clarification, interpretations and validation to all actors of the supply chain on the preparation and implementation of the package label, including clarification on their respective roles, in order to remove market barriers and increase acceptance. The project will provide suppliers and dealers a validated, tested and operational set of tools, information and training to support those in charge of issuing the package label. In addition, the project will set up and run six national pilots and National Stakeholder Platforms in Austria, Germany, France, Italy, Portugal and the United Kingdom, to pilot the implementation of the package label and reach out to consumers to promote and explain the package label.

Another project, SuperSmart, has only recently started and is being supported under Horizon2020. During the next 3 years the project will support the uptake of energy efficiency in the supermarket sector across Europe with a special emphasis on heating and cooling. The project will provide guidelines and trainings to stakeholders in the sector and across the entire value chain including equipment manufacturer, designers, consultants, energy managers and decisions makers.



SUPPORTING DECISION MAKING: EMPOWERING CONSUMERS AND ENERGY LABELLING

Empowering end-consumers to take informed decisions

The project [FRONT](#) aims at increasing transparency of heating and cooling costs using renewable heating and cooling technologies relative to the use of fossil fuels. The project team is developing a methodology to compare the costs of generating heating with a number of technologies using fossil fuels and renewable energy technologies.

Using these results, a tool targeting end-consumers will be developed and be made publicly available to provide an easy-to-use manner to compare the prices of heat generation with different options. To support this, the FRONT project is also setting-up national consultation platforms in 6 Member States i.e., Austria, Spain, Netherlands, Poland, Portugal and the UK, in order to bring together stakeholders representing industry, public authorities, consumers and national energy agencies across 6 Member States.

Energy labelling directive covering heating products

Supported under Horizon 2020, the project [LabelPack A+](#) is supporting industry in the implementation of the energy labelling directive for combined heating and solar thermal systems. The project addresses one of the main challeng-

Project development assistance: Launching investments

The European Commission is also providing support to public and private bodies in developing bankable sustainable energy investments through a number of dedicated technical assistance facilities including ELENA, MLEI-PDA and Horizon 2020 PDA.

The grants support feasibility studies, stakeholder and community mobilisation, financial engineering, business plans, technical specifications and procurement procedures. A number of these projects aim at launching investments for large scale heating and cooling infrastructure including district energy projects using local low carbon and renewable energy sources. The objective of this support is to bridge the gap between sustainable energy plans and real investments through supporting all activities necessary to prepare and mobilise investment into sustainable energy projects, a process known as project development assistance (PDA).

Example of PDA supported by the Commission include the project [MLEI GeoKec](#) that is providing technical assistance to the City of Kecskemét in Hungary for the retrofitting of the city district heating network to deep geothermal what would result in a geothermal share of over 80% in the overall city wide district heating network.

The total investments expected to be triggered by this action are in the order of EUR 30 million.

In Spain the project [MLEI EFIDISTRICT](#) is supporting to the housing association of the Region of Navarra for the deep renovation of condominiums including the retrofitting and extension of the existing district heating network to biomass. The expected investment adds up to EUR 11 million.

As a further example, the H2020 project [BEener-Gi](#) is providing technical assistance to the County Council of Girona in Spain for the preparation of the investments associated to the installation of collective heating systems in public buildings and to the energy efficient retrofitting of street lighting.

Project development assistance: from action plans to investments

Information on other market uptake type of projects supported under the [Horizon 2020 Call for Proposals 2016](#) will be provided soon. Future funding will be available under the Energy-efficiency Call 2017 for support of both research and market uptake activities on heating and cooling. An [Information Day](#) will be also organised. Information will be available in the coming months.



Photo credits

Cover: © seraficus iStock.com

Page 1: © Mathew Hertel iStock.com

Page 4 left: © Marccophoto iStock.com

Page 5 left: © assalve iStock.com

Page 5 right: © tomodaji iStock.com

Disclaimer: The views expressed in this document represent the opinions of the authors. This paper is not an official communication by the EASME or the European Commission.