



Co-funded by the Intelligent Energy Europe
Programme of the European Union



Policies Promoting Heating and Cooling from Renewable Sources: Factsheets of Good-Practices and Future Challenges

Authors: Austrian Energy Agency: Nina Pickl, Johannes Schmidl, Lorenz Strimitzer

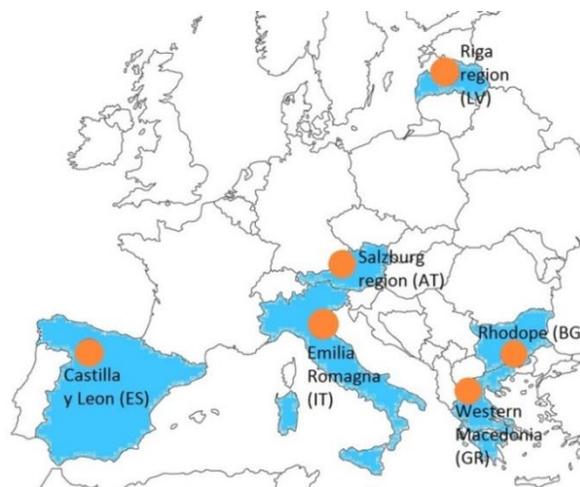
Across Europe, a variety of instruments have been introduced in recent years to support the expansion of renewable energies in the heating and cooling sectors. Based on interviews carried out within the partner countries, good-practice examples of effective measures and strategies promoting RES H/C have been identified and analysed.

Altogether 36 best-practices have been collected of which 32 are from Austria, Bulgaria, Greece, Italy, Latvia, and Spain and further 4 from Germany, the Netherlands, Sweden, and the UK. Important criteria for their selection have been the transferability of the examples and the fact that the practices are market proof. Specific attention has been paid to innovative financial instruments that are able to support the promotion of RES H/C. Apart from financial instruments, the selection of best-practices cover investment projects, training programs, information campaigns, and others.



Overview on the Country Polices

Policy frameworks have shown to be essential for the market-development of innovative technologies. Supportive schemes are in place in all countries surveyed in one or the other way. Financial support for investments is available at EU, national and/or regional levels.



Austria

In this country there have been positive developments in the renewable heat sector, both in district heating and in buildings. The positive developments are mainly due to the support for RES-heat as well as high oil prices leading to higher investments in renewables. The main policy instruments lie within the competence of the Austrian regional governments. Specifically, the development of the legislation and of RES measures for residential buildings fall largely within the competence of the regional governments. RES measures in industrial and commercial buildings are mainly supported at federal level through the Environmental Aid Act.

Here, there seems to be little support from the policy framework. Nevertheless, there is substantial increase in the RES H/C-installations. The Bulgarian NREAP highlights the necessity to strengthen the support to RES H/C, as these energy sources have the highest economic potential to contribute to the national renewable energy targets. Currently, the use of renewable energy for heating and cooling is being promoted through property tax exemptions for buildings owners, soft loans and financial guaranteed from the Energy Efficiency and Renewable Sources Fund, and subsidies from the EU Structural and Cohesion Funds.



Bulgaria



Greece

In this country the use of RES systems in heating and cooling is supported by tax rebates or capital investment subsidies, which are bound in specific programs. Tax relief is granted for the installation of RES-fuelled boilers. There are a number of national programs whose primary aim is to promote energy efficiency through the use of RES in public or private buildings, but which also provide funding for RD&D activities. For instance the Program "Exoikonomo" supports measures to increase the energy performance of buildings through the provision of interest-free loans and subsidies for the installation of RES plants.

At national level in Italy, the main active policy supporting small-scale projects of energy efficiency improvement and production of thermal energy from renewables is the Ministerial Decree of 28 December 2012 (the so-called "Renewable Energy for Heating & Cooling Support Scheme" or "Conto Termico" in Italian, which implemented Legislative Decree no. 28 of 3 March 2011). Another recent and important legislative Decree (102/2014) envisages a series of measures to foster the development of the "Nearly-Zero Energy Buildings" through the use of renewables, to refurbish public buildings and sets aside funds to support the development of district heating networks.



Italy



Latvia

This country has one of the highest national targets for the share of renewables within the EU for 2020, namely 40%. With reference to the prominent role district heating plays in the country, a lot of direct and indirect support schemes and grants provide support for RES-use in district heating systems. Currently, there are two important policies promoting the development of RES installations. Firstly, the certification scheme for RES system installers and secondly, an obligation to use renewable heating and cooling systems in new and renovated buildings. There are no regional or local policies promoting RES in DH.

In this country there are no subsidies in place, nevertheless there are other support schemes (financing schemes such as soft loans, specific financing programs, etc.) for RES H/C. In addition, there are some policies of interest for RES H/C available, the R&D plan, as well as the building code.



Spain



Future Challenges and Improvements

All the best practices that have been analysed show that, the policy framework is essential for the market development of innovative RES H/C technologies. For the successful implementation of a new technology enabling maximum growth of RES H/C, it is necessary to have an ambitious mix of policies and measures, combining economic incentives, regulatory instruments as well as additional measures for overcoming barriers like training, awareness raising, and research and technology development.

Plans and programs have to be harmonized with the national policy strategies

The lessons learned from the best-practices show that the impact of regional or national programs can be increased enormously, when they are well embedded into existing energy- and climate policy strategy. If so, the different instruments can easily support each other and the program gets the clear goal and vision from the climate and energy strategy. Hence, these programs will have a strong backing from the government. Furthermore, the investigation shows that in order to ensure quality, regular updates as well as constant evaluation of the effectiveness are necessary.

Existing energy- and climate policy strategies as well as the National Action Plans derived from there should contain clear energy performance targets and a plan on how to reach these targets with the relevant measures and responsibilities of internal and external parties clearly defined. The results from the evaluation of the effectiveness of different measures and programs should be analysed towards meeting the relevant targets on a regular basis.

Policy strategies should aim to develop a stable and predictable policy framework

Investments in RES H/C are dependent on a stable and predictable policy framework. Uncertainty increases the risk and consequently the cost of these investments whose returns should be commercially competitive with the investments in fossil energy technologies.

Envisaging financial incentives and demonstration activities

Compared to conventional technologies, renewable energy technologies such as solar thermal and geothermal energy have low running costs, but require a high upfront investment. Hence, the availability of economic instruments is crucial for the RES H/C-investment. To overcome this barrier, EU member states should then provide financial incentives to encourage the use of renewable energies for heating and cooling. In addition the collected best practices have shown that investment projects and demonstration activities are very important in fostering the implementation of new renewable energy technologies.



Incentives and demonstration activities do not work alone if measures are not convincing from the economic point of view

Nonetheless good business models are required to facilitate the upscaling and roll out of the RES H/C technologies. A number of new approaches have been identified, for example the Energy Performance Contracting (EPC) models.

The lack of information can be a barrier

Apart from missing comprehensive policy support, the lack of information can be a barrier for the implementation of RES H/C. Hence, information campaigns and support programs play a crucial role. The investigated good-practices indicate that it is crucial for the success to accompany implementation of technologies by comprehensive information measures such as training, special events, and networking possibilities etc.

And ad hoc training programs are required

Moreover, sufficient skills of plumbers, installers etc. are of great importance for the successful implementation of RES H/C technologies. Installers are usually the first contact-persons for potential investors. To ensure high quality installations they need advice and trainings. In addition quality standards for the implementation of technologies are generally needed; some are already in place, but not all of them are securely applied.

Accompanied by well addressed programs to improve the capacity of the public administrators

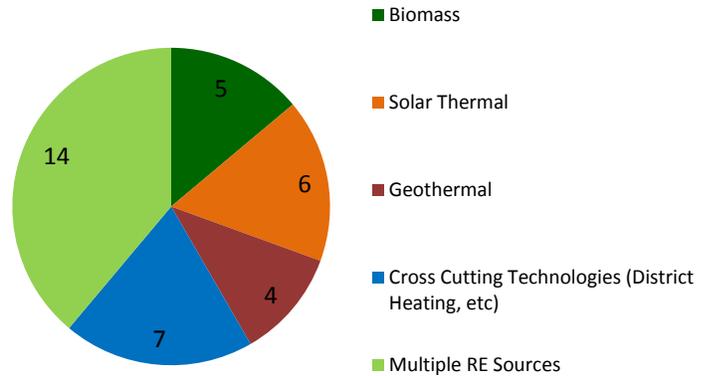
Another important success factor is the mobilization of municipalities as well as the capacity of the local authorities in the field of renewable energy planning. Building such capacity, however, is a long process. In order to achieve this, it is important to foresee the involvement of relevant stakeholders in the development of local sustainable policies



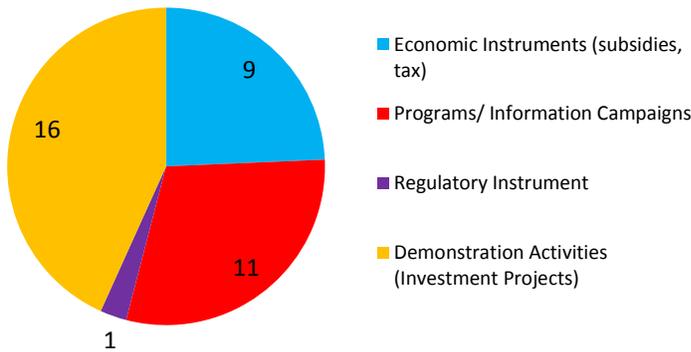
Some figures...

Targeted renewable energy technologies

The 36 best-practices refer to all the renewable energy sources, including solar thermal, biomass heat and geothermal energy. The 40% of the analysed interventions address all the renewable energy sources while 20% envisage technologies for hybrid systems such as solar thermal energy with heat pumps, as well as district heating systems with biomass or geothermal. The remaining 40% address just one RES technology: solar thermal energy (6 out of 36), biomass (5/36), and geothermal energy (4/36).



Type of Measures



The RES H/C policies and measures issued or planned to encourage the uptake of renewable energy vary among the 36 best-practices. There are actually 9 economic instruments, 11 programs and information campaigns, 1 regulatory instrument, and 16 demonstration activities.

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