

Policy Brief

Promoting the Low Carbon Economy in the EU: EU Policies and the Role of Cities and Regions

This Policy Brief highlights policy developments in the EU in the field of renewable energy, energy efficiency, and sustainable mobility, and the role regions and cities play in these areas.

1. Introduction

With the ratification of the Paris Agreement on the 4th of October 2016, the European Union made a crucial step towards the development of a low-carbon economy. Cities and regions will be an integral player in reducing emissions, achieving the Paris objectives and securing green growth, energy security and competitiveness. To achieve the multi-fold objective of a low-carbon economy, cities and regions across the European Union are facing the challenge of adopting policies and supporting actions and investments to:

- Support **energy efficiency**, smart energy management and renewable energy use in public infrastructure, housing, businesses and households;
- Raise the share of **energy from renewable** sources in the overall energy mix by encouraging and facilitating the production and distribution of renewables;
- Promote sustainable, **low-carbon transport and mobility**, cleaner transport and alternative mobility behaviour;
- Promote **low-carbon innovations** and adoption of low carbon technologies, especially in the framework of Smart Specialisation Strategies.

Through the Low-Carbon Economy Policy Learning Platform, Interreg Europe supports regions and cities in this challenge through the exchange and collection of experience and 'good practices' towards a low-carbon economy. This first policy brief presents a general overview of EU policies supporting cities and regions in the transformation towards a low-carbon economy.

2. Policy Developments

The Paris climate agreement reconfirms the EU climate objective. Temperature increases should stay below 2°C and efforts should be made to limit the growth to 1.5°C. The 2030 climate and energy framework, the 2050 Energy Roadmap, and the 2020 targets are the EU's cornerstone policies in achieving this objective.

The 2020 targets (2007)

In 2007, the EU agreed on a package of three key greenhouse gas reduction targets (which were enacted in legislation in 2009) to be reached by 2020. These key targets are:

- 20% greenhouse gas reduction relative to 1990 levels;
- 20% of EU energy consumption from renewables, including a 10% share of renewable energy in the transport sector; and
- 20% improvement in energy efficiency.

The 2050 Energy Roadmap (2011)

The 'Energy Roadmap 2050' explored the challenges arising from the efforts towards the EU's 2050 de-carbonisation objective, while simultaneously trying to retain security of energy supply and competitiveness. It was concluded that the existing EU policies and measures to achieve the Energy 2020 goals were ambitious and would remain effective beyond 2020 in pursuit of reducing emissions by about 40% by 2050. The Energy Roadmap unveiled that the 2020 policies and measures only accounted for half of the de-carbonisation goal of 2050. At the same time, the Energy Roadmap confirmed that the EU's low-carbon goal was economically feasible.

The 2030 climate and energy framework (2014)

On 23 October 2014, the European Council agreed on the "2030 climate and energy framework" containing the new EU-wide targets and policy objectives for the period between 2020 and 2030. The framework proposes the following targets for 2030:

- 40% greenhouse gas reduction relative to 1990 levels;
- At least 27% of EU energy consumption from renewables, with flexibility for member states to set national targets;
- 27% improvement in energy efficiency.

2.1 Renewable Energy

To deal with the challenge of climate change and energy security, renewable energy has been widely regarded as key to a low-carbon economy. The 2009 Renewable Energy Directive (RED) provides a crucial framework for the Member States to achieve this objective. In the newly proposed REDII, the binding national targets are replaced, for the period after 2020, by a binding EU-level target of at least 27% renewable energy in final energy consumption by 2030.

2.2 Energy Efficiency

Although renewable energy is essential to achieve low-carbon economy, it is the energy efficiency, which has been recognised as the most effective tool for achieving it. There is increasing evidence that energy efficiency improvements lead to numerous additional benefits, such as increase in employment and GDP, positive effects on public budgets and the energy system (e.g. grid stability, reduced network losses, reduced costs for system upgrades), improved local air quality and positive impacts on health and well-being.¹ Recognising the role of energy efficiency as its 'first fuel', the EU has set up a comprehensive legislative framework to ensure the achievement of its energy consumption saving targets for 2020 and 2030. The overarching Energy Efficiency Directive (EED) sets indicative energy savings' target for all sectors outside the EU emissions trading system. Besides the EED, there are directives in place targeting specific sectors, including the Energy Performance of Buildings Directive (EPBD).² Other directives, such as the Ecodesign and Energy Labelling Directives target specific appliances, technologies, and products.

2.3 Sustainable Mobility

Sustainable Mobility has an important role in the Europe 2020 Strategy to become a smart, sustainable and inclusive economy. Creating a resource-efficient, low-carbon transport sector will help combat climate change and improve the living environment in our cities and regions. It can also contribute to increased competitiveness. The importance of transport is apparent from the high transport-related costs in European society.

Transport is also responsible for a third of the total energy consumed in the EU. For example, land transport accounts for almost one-fifth of the EU's total green-house gas emissions. The costs of these emissions to EU society are enormous. Reducing the adverse impacts of transport on our health and the environment would lead to huge economic cost savings. In addition, achieving the EU 2020 energy goals could, by 2020, save € 60 billion on Europe's bill for oil and gas imports.

¹ Cf. e.g. IEA (2014). Capturing the multiple benefits of energy efficiency.

² Both, the EED and EPBD are currently under review and its adoption is foreseen before the end of 2016.

In order to minimise the role of transport and mobility in carbonising the economy, the European Commission has implemented a variety of specific regulations and initiatives³. These include the Directive on the Promotion of Clean and Energy Efficient Road Transport Vehicles, Sustainable Transport Forum, and the Urban Mobility Package.

3. Role of Cities and Regions

Many of the low-carbon economy's challenges are encountered locally, and much of the final energy – as much as 80% - is consumed in an urban setting. Action by cities in particular is crucial to achieve the energy efficiency goals. It is important to find ways to reduce energy use and integrate renewable energy technologies into the urban environment. This includes the identification of what resources – including energy savings – can be tapped locally, which administrative procedures for renewable energy deployment at local level can be simplified, how consumers can be better informed on renewables, and how cost-optimal deployment of renewables can be incentivised. New cross-disciplinary, systems-level approaches also need to be developed to secure higher energy efficiency in the urban environment.

The main transport-related challenges also lie within cities and urban areas. Cities, towns and suburbs provide a home to almost three quarters (72.4 %) of the EU's population and account for some 85% of the Union's GDP. In many urban areas increasing demand for mobility has created a situation that is not sustainable. Congestion is primarily concentrated in urban areas. Urban transport is responsible for about a quarter of CO₂ emissions from transport and up to 70% of other pollutants from transport.

Cities and regions are often in the best position to find the right responses to their mobility challenges. A range of measures can help deal with these challenges and promote sustainable urban mobility, for instance:

- Measures to reduce the number and/or length of trips. Such measures can involve road use and parking charges, vehicle access restrictions, (high-density) land use planning, but also technologies that enable remote working.
- Measures in support of the shift to environmentally friendly transport modes. Examples include the provision of (financial) incentives for the use of public transport, multimodal transport information and the creation of infrastructure for cycling and walking.
- Measures aimed at improving the energy efficiency and reducing emissions through cleaner and more efficient fuels and vehicles.

While cities and regions have the potential to address these challenges, the solutions are rarely straightforward and easy. Putting together an effective and efficient package of activities and implementing it is a complex task. It can be challenging to get sufficient political and public support. Local governments are often faced with budget constraints. Moreover, sustainable energy and transport planning requires a comprehensive and integrated approach.

Many cities across the EU are already working towards improved energy efficiency. Nevertheless, considering the complexity of the challenges, a holistic knowledge about the urban energy efficiency potential is far from complete. It can be enhanced through exchange of experience and transfer of know-how on current initiatives across the EU. The task of the Interreg Europe Policy Learning Platforms is to facilitate such exchange and transfer, and help local and regional actors develop tailor-made approaches.

³ Directive 2004/17/EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors

Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts

Regulation (EC) No 1370/2007 of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road and repealing Council Regulations (EEC) Nos 1191/69 and 1107/70

Directive 2014/94/EU on the deployment of alternative fuels infrastructure

<http://www.eltis.org/>

<http://civitas.eu/>

*#LowCarbonEconomy #RenewableEnergy #EnergyEfficiency #SustainableMobility
#EuropeanPolicy*

15 November 2016

Interreg Europe

Policy Learning Platform Renewable Energy

Thematic Manager: Marie Jose Zondag

T: +31 6 201 35 010

E: mj.zondag@policylearning.eu

W: www.interregeurope.eu

Thematic Experts: Hanneke de Jong, Renewable Energy and Smart Grid

Michiel Modijefsky and Rob Jeuring, Sustainable Mobility

Rob Williams and Koen Rademaekers, Energy Efficiency