



Increasing Energy Efficiency in Buildings in Romania

3rd Plenary Meeting Concerted Action for the Energy - Efficiency Directive

17 October 2018

Bucharest, Romania



Using proved arguments in the communication activity

Principles

Technological Neutrality

Full transparency in cooperation with public authorities

Promote a favourable regulatory and economic framework for energy efficient construction and renovation of buildings in Romania

ROENEF objectives

Create a predictable and stable business environment

Founding members



ENGINEERING TOMORROW



Energy Efficiency in the global context

2030 Agenda for Sustainable Development

- adopted by world leaders in September 2015, defining 17 Sustainable Development Goals in order to mobilize efforts to end all forms of poverty, fight inequalities and tackle climate change, while ensuring that no one is left behind
- SDG 7 “Ensure access to affordable, reliable, sustainable and modern energy for all”
target: double the global rate of improvement in energy efficiency by 2030

Paris Agreement

adopted by 195 nations in December 2015: limiting average temperature rise to 2°C over pre-industrial times by the end of this century

2018 special report of the Intergovernmental Panel on Climate Change (IPCC)

Presenting the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways

- Now the world has heated up by 1°C on average compared to preindustrial times
- Climate-related risks to health, livelihoods, food security, water supply, human security and economic growth are projected to increase with global warming of 1.5°C and increase further with 2°C
- Global economic **damages** from warming: \$54 trillion if the world warms by 1.5°C by 2100, \$69 trillion if temperatures reach 2°C.
- Fighting climate change could in fact boost the global economy with economic **benefits** estimated at \$26 trillion by 2030

Challenge: how to convince countries to spend billions now to save trillions in the future

Energy Efficiency in the global context

European Commission's priority

- to build a resilient Energy Union and a forward-looking climate change policy

The EU energy efficiency targets

- adopted in 2007: 20% for 2020
- On 30 November 2016 the Commission proposed an update to the EED including a new 30% energy efficiency target for 2030
- On 14 June 2018, a political agreement for a binding energy efficiency target for the EU for 2030 of 32.5%, with a clause for an upwards revision by 2023

Measures to improve energy efficiency in Europe

- an annual reduction of 1.5% in national energy sales
- EU countries making energy efficient renovations to at least 3% of buildings owned and occupied by central governments per year
- mandatory energy efficiency certificates accompanying the sale and rental of buildings
- minimum energy efficiency standards and labeling for a variety of products
- the preparation of National Energy Efficiency Action Plans every three years by MS
- the planned rollout of close to 200 million smart meters for electricity and 45 million for gas by 2020
- large companies conducting energy audits at least every four years
- protecting the rights of consumers to receive easy and free access to data on real-time and historical energy consumption

Energy Efficiency in buildings in Romania

Residential sector

- 8.1 million homes in Romania, distributed in 5.1 million buildings, **SFH representing 61%**;
- In the urban area, 72% of the dwellings are in city blocks, while in the rural area 94.5% of the dwellings are single-family houses;
- 37% of the homes in Romania are concentrated in just 2% of the residential buildings.;
- The total living area has increased in Romania from 270 million m² in 2000 to 425 million m² in 2016;
- Most of the residential buildings were built between 1961 and 1980, in the absence of efficiency standards for the building envelope;
- About 53% of the residential buildings were built before 1970;
- **In Romania, one in seven families face serious housing problems, most often regarding poor quality of walls, floors, and window frames.**

Non- Residential

- Public administration, educational and commercial buildings account for about 75% of non-residential energy consumption, each with 20-25% of the total;
- Schools are the largest energy consumers (354 kWh/m²/year), with other sectors ranging from 200 to 250 kWh/m²/year;
- At the other extreme, new office buildings in urban centers have, to a large extent, green building certification, which certifies ecological performance throughout the building's life cycle

The ROENEF study “increasing energy efficiency in buildings in Romania: challenges, opportunities and policy recommendations”

Main obstacles for carrying out building renovation programs:

legislative

- The existence of multiple authorities with responsibilities in the field and without a clear regulation framework
- Lack of a national integrated strategy for the implementation of sustainable energy efficient solutions and technologies

economic

- Insufficient funds for building renovation
- Insufficient private investments in building renovation – a high level of dependency on public grants
- High operating costs from the energy service companies (ESCO)
- The execution of low-quality renovation works
- Low demand of innovative technologies for building renovation

lack of skills and training

- Shortage of skilled workers using energy efficiency technologies and systems, as well as RES integration

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Policy recommendations and priority actions aimed at facilitating the deep renovation of the buildings in Romania:

- Set up of the Energy Efficiency Investment Fund – private funds, structural funds, state budget, GHG
- Establishment of programs financed from public funds for the renovation of buildings inhabited by people in energy poverty/fuel poverty;
- Implementation of a National Building Registry database;
- Achieving an annual renovation rate of 3% for public buildings;
- Support for the installation of RES systems in buildings;
- Maximizing the absorption of European funds;
- Support for “green loans”;
- Monitoring of the proper use of the building codes;
- Implementation of “One-stop-shop”, to support investments in deep renovation;
- Implementation of information and awareness campaigns for the final beneficiaries;
- Increased training of professionals in the field of energy efficiency and building renovation;
- Supporting R&D and demonstrative projects of the use of new technologies and solutions for deep renovation;

ROENEF proposed priority actions

Proposals

- Promoting deep renovation and introduction of quality standards into the criteria for funding under the Regional Operational Programme

- establishing a support scheme for the renovation of SFH

- developing the regulatory framework for ESCOs and the energy performance contracts

Context

- Mainly shallow renovation projects;
- Launching procurement process using “lowest price criteria” ;
- Lack of knowledge concerning the use of Innovative technologies and solutions;

- Out of the 8,1 million homes in Romania, SFH represent 61%;
- Casa Verde Plus Programme is not active and requires a revision of the Guide for Applicants;
- one in seven families face serious housing Problems regarding poor quality of walls, floors and window frames.

- High potential in stimulating investments for increasing EE mainly in public buildings and public lighting;
- The statistic treatment of the EnPC and impact on public debt and public deficit;

Benefits

- Increase of comfort and air quality leading to preventing diseases and premature death;
- Increasing employment in the construction sector;
- Increasing efficiency of public spending;
- Increase of the energy efficiency of the building and energy savings;

- Reducing energy poverty;
- Low energy bills;

- Using EnPC guarantees the energy savings;
- Mobilizing private investment for increasing energy efficiency in buildings;
- Implementing deep renovation;
- Implementing modern and efficient technical solutions that contribute to the increase of energy efficiency;



Thank you!

Mihai MOIA – Executive Director

Mobil: +40761.321.647

E-mail: mihai.moia@roenef.ro

www.roenef.ro