

ZEBRA 2020



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ZEBRA 2020

NEARLY ZERO-ENERGY BUILDING STRATEGY 2020

Developing successful nZEB policy strategies
Country Romania

Project Duration 1/4/2014 – 30/9/2016

Contract no. IEE/13/675/SI2.675834

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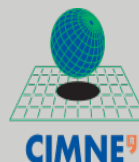
Summary slides for policy makers ROMANIA



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Project consortium



Project Coordinator

Raphael Bointner – TU Wien

bointner@e-think.ac.at

+43(0)-1-58801-370372

www.zebra2020.eu

National Contact - Romania

Serban Danciu - BPIE

Serban.Danciu@bpie.eu

www.zebra2020.eu



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Overview



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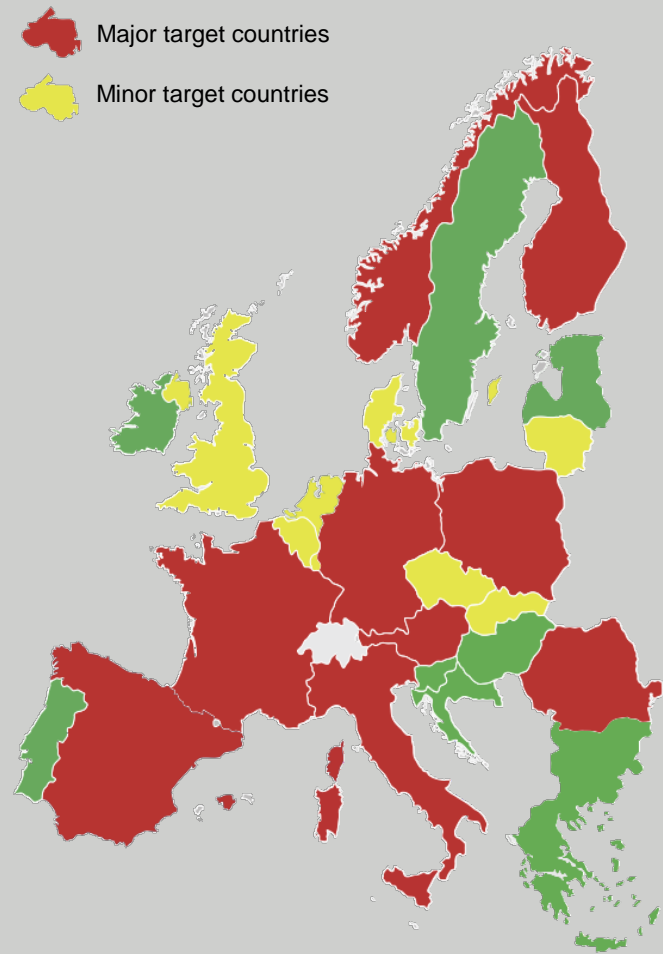


ZEBRA2020 - At a glance

Key objectives: monitor the market uptake of nZEBs across Europe and provide **data**, as well as **recommendations** on how to reach the nZEB standard.

Policy and industry workshops generated alignment around **nZEB strategies** to make changes happen. Data and strategies are accessible via **online tracking tools**.

ZEBRA2020 covers **17 European countries** and almost **90% of the EU/EEA building stock and population**. It is actively contributing to meeting the ambitious target of 100%-share of nZEBs for new buildings from 2020 and a substantial increase of deep nZEB renovations.



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Background



Sustainability of the European society and economy will be based on **renewable energy** and **resource efficiency**. This implies the large scale deployment of nearly Zero-Energy Buildings (nZEBs). The technology is already available and proven; however the large scale uptake of nZEB construction and renovation is a big challenge for all market actors. A substantial **gap in reliable data** on current market activities makes it difficult for policy-makers to evaluate the success of their policies.

ZEBRA2020 aims at monitoring the **market transition to nZEBs** across Europe and creating an **observatory**, thereby generating data and evidence for **policy evaluation** and **optimisation**, via online tracking tools. It derives recommendations and strategies for the building industry and policy makers to accelerate the market uptake of nZEBs.



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Objectives and main steps of ZEBRA2020



- Monitor the **nZEB market activities** in target countries and across the EU;
- Provide a user-friendly and easy-to-communicate **presentation of the nZEB market**, tracking data and indicators;
- Involve and assist **policy-makers** to develop an **nZEB strategy** and **recommendations** to accelerate the market transition by 2020 and beyond;
- Prepare the **follow up** of the nZEB market tracking beyond the project duration;
- Ensure an effective and comprehensive **communication with policy-makers and stakeholders**.



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Online Data Tool

<http://www.zebra-monitoring.enerdata.eu/>



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Online Data Tools

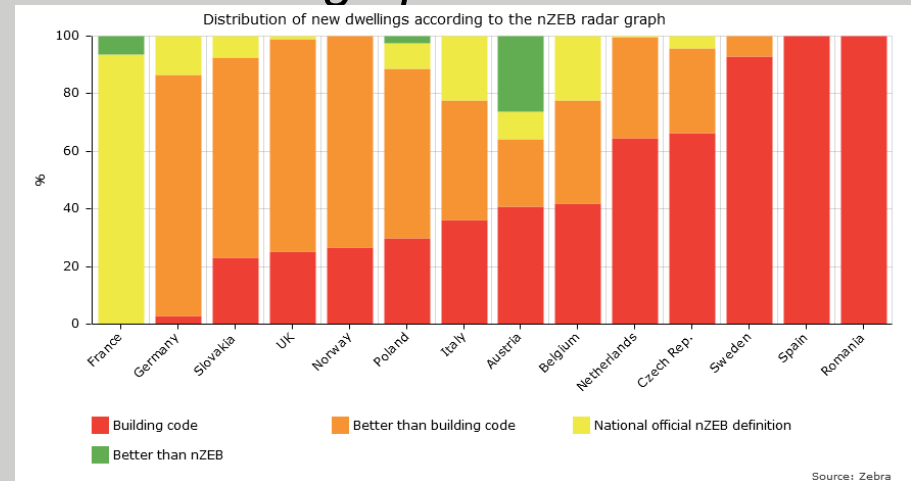
Energy efficiency trends in buildings: enables to display indicators on the status of building stock development

nZEB buildings: enables to display relevant indicators for a sample of nZEB buildings and high efficiency buildings

Both tools are available at

<http://www.zebra-monitoring.enerdata.eu/>

Exemplary result graph: Distribution of new dwellings according to the nZEB radar graphin 2014



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Professional competence

Report „Nearly zero-energy building (nZEB) components,
cost assessment and performance “

<http://zebra2020.eu/publications/nzeb-technology-solutions-cost-assessment-and-performance/>



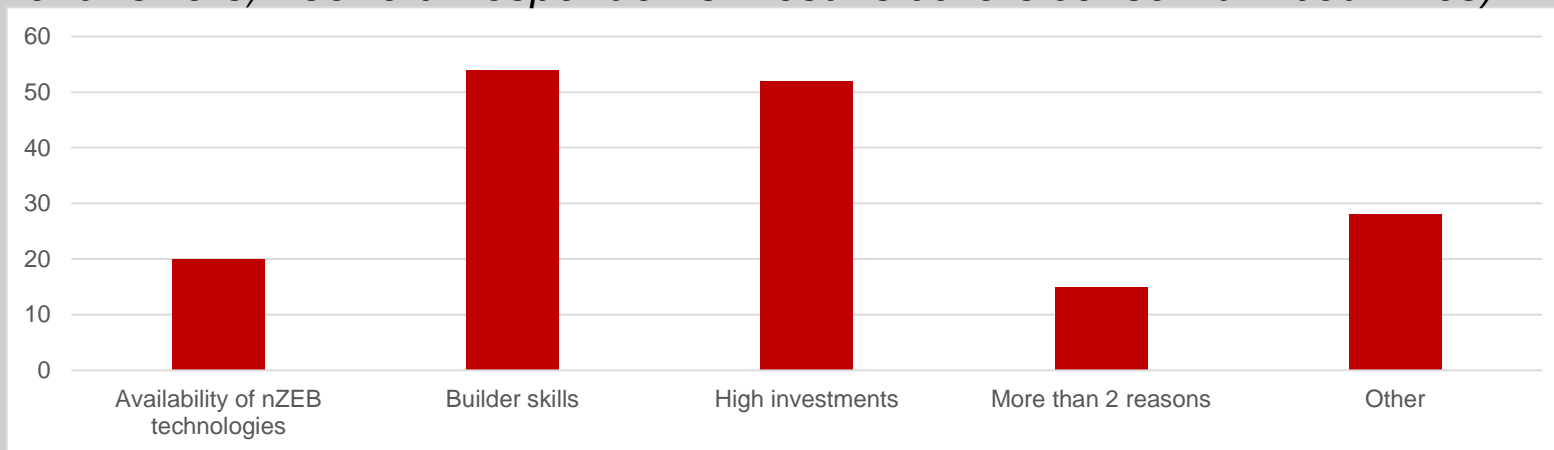
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Professional competence

The **lack of professional skills** continues to be an important barrier and should remain a focus, especially the construction of buildings.

Barriers to the nZEB transition in the opinion of building professionals (No. of answers, 169 total respondents. Results covers consortium countries).



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Energy performance certificates

Report „The impact of Energy Performance Certificates on property values and nearly Zero-Energy Buildings”

<http://zebra2020.eu/publications/the-impact-of-energy-performance-certificates-on-property-values-and-nearly-zero-energy-buildings/>



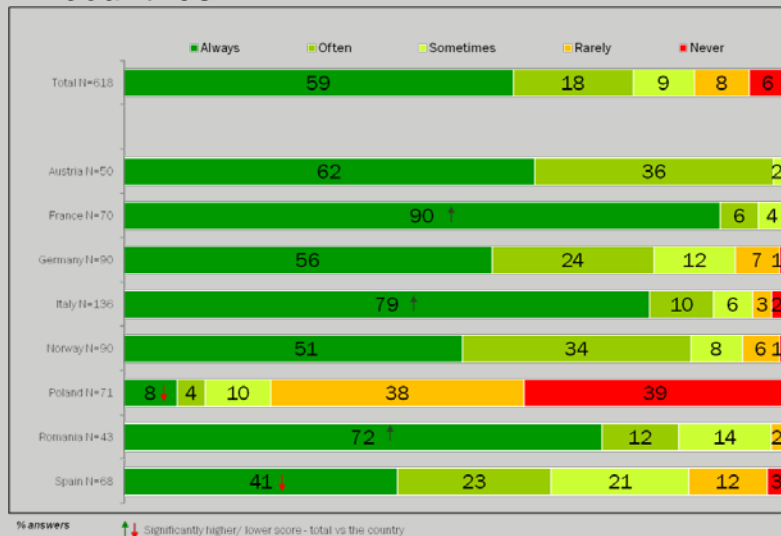
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Energy performance certificates – selected results

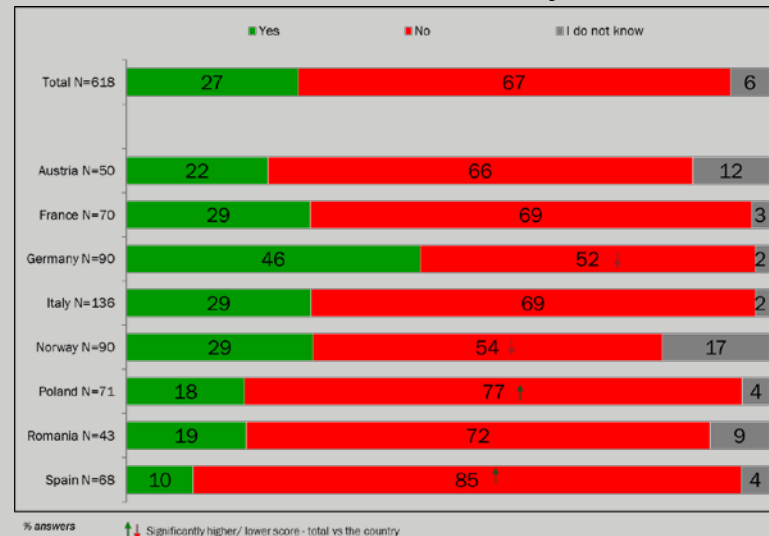
Real estate agents survey – mandatory EPCs

The requirement of presenting certificates by contract parties is not fully accepted and the level of this acceptance varies across countries.



Real estate agents survey – rent/price surplus

The association between the high evaluation of the real estate energy performance and the higher price of a given real estate exists, but it's not very common.



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nZEB Tracker

http://zebra2020.ecofys.com/Main_Page

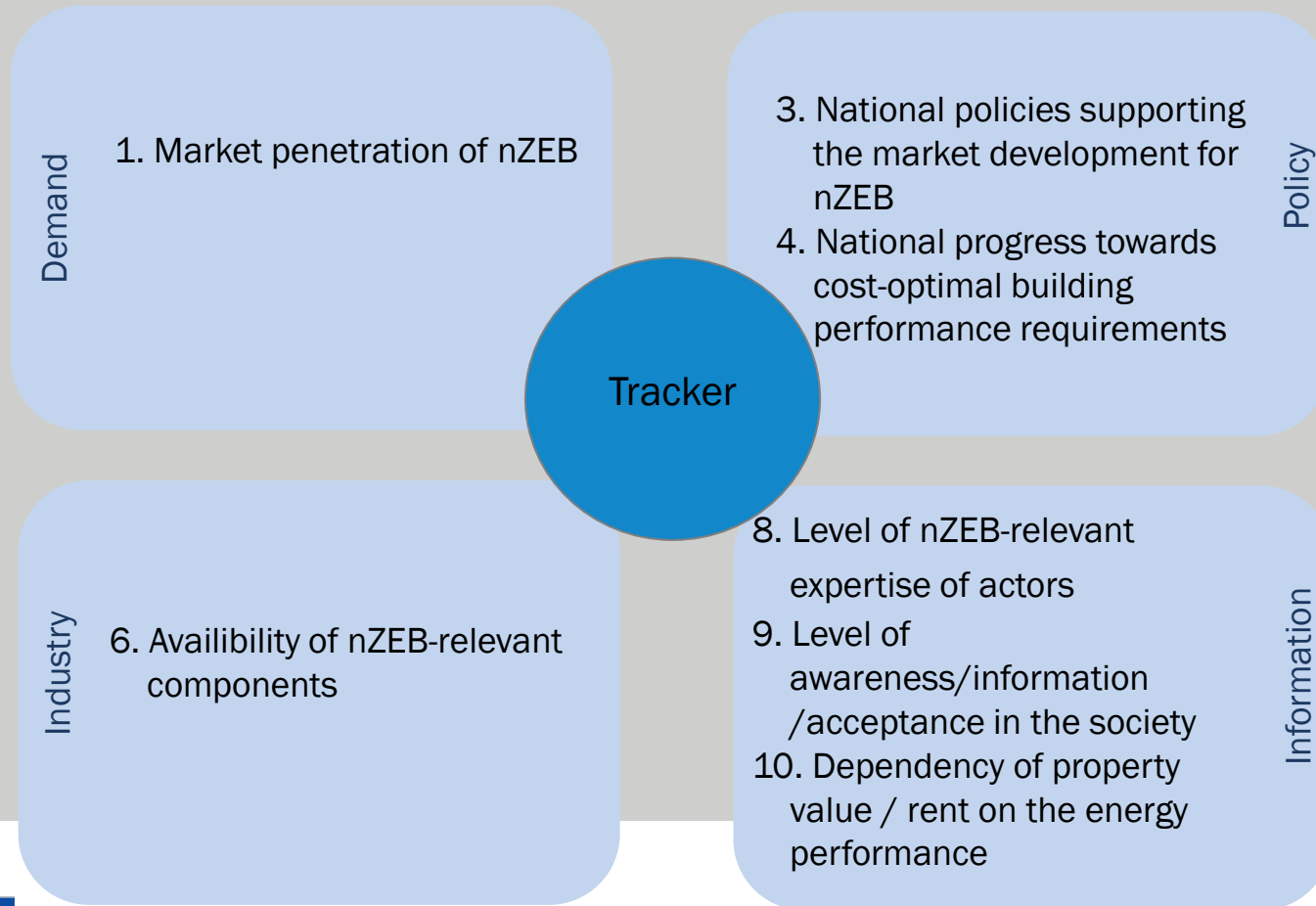


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nZEB tracker for measuring market maturity

The tracker assess the status of the market maturity for nearly Zero-Energy Buildings (nZEB) across the European Union via comparable tracking criteria. The tool provides dynamic visualization of results. Different nZEB tracker dimensions:

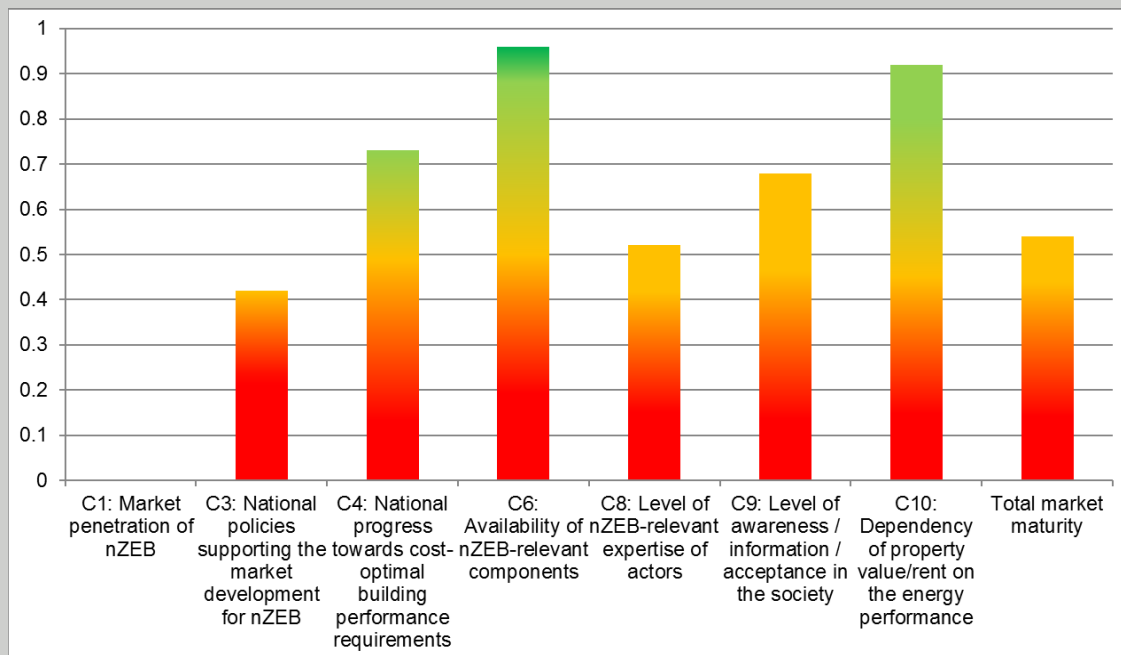


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nZEB Tracker

nZEB tracker results for Romania for 2014



The key findings are available at

- Report “Strategies for nZEB market transition on national level”
- Online tool http://zebra2020.ecofys.com/Main_Page

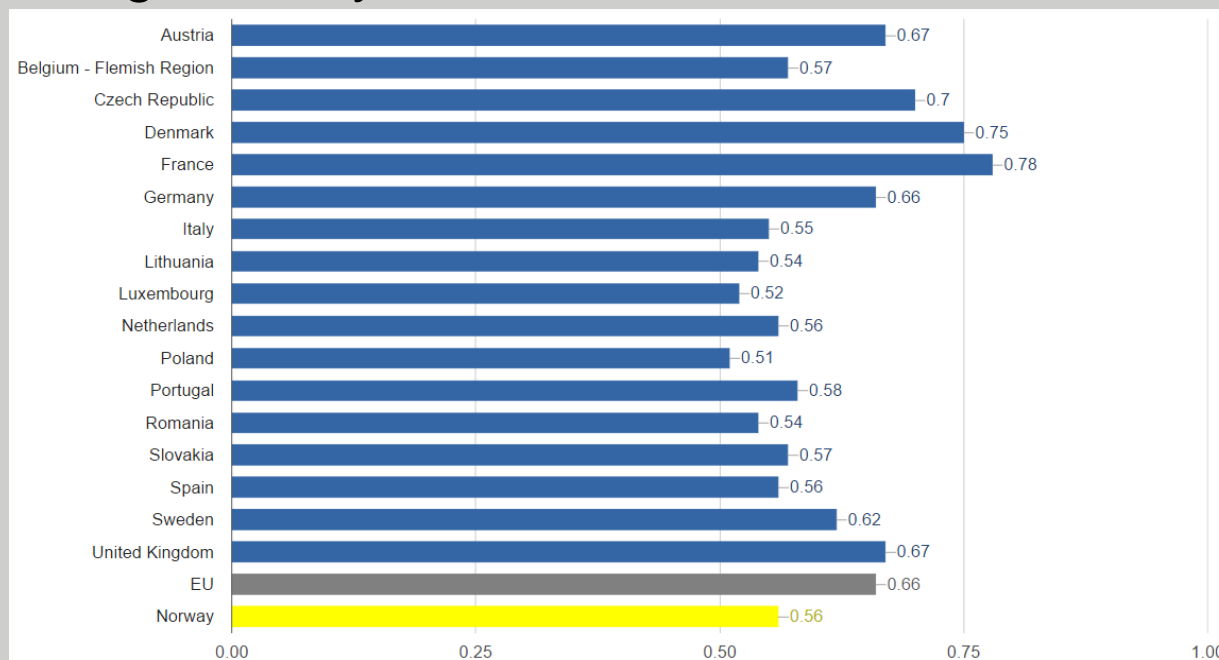


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nZEB Tracker

Resulting maturity of the national and EU nZEB markets in 2014



The key findings are available at

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nZEB Scenarios

Report „Strategies for nZEB market transition on national level”

<http://zebra2020.eu/publications/strategies-for-nzeb-market-transition-on-national-level/>

Report “Strategies for a nearly Zero-Energy Building market transition in the European Union”

<http://zebra2020.eu/publications/strategies-for-a-nearly-zero-energy-building-market-transition-in-the-european-union/>

Scenario Tool

<http://eeg.tuwien.ac.at/zebra/>



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Introduction

Development of scenarios for building energy demand for space heating and cooling up to 2030 and 2050 was carried out with building simulation tool Invert/EE-Lab.

The model describes the building stock, heating, cooling and hot water systems on highly disaggregated level; determines reinvestment cycles and new investment of building components and technologies; calculates energy needs and delivered energy.

Policy instruments are implemented in the model as parameters which affect decision makers regarding building renovation and heating, hot water and cooling systems.

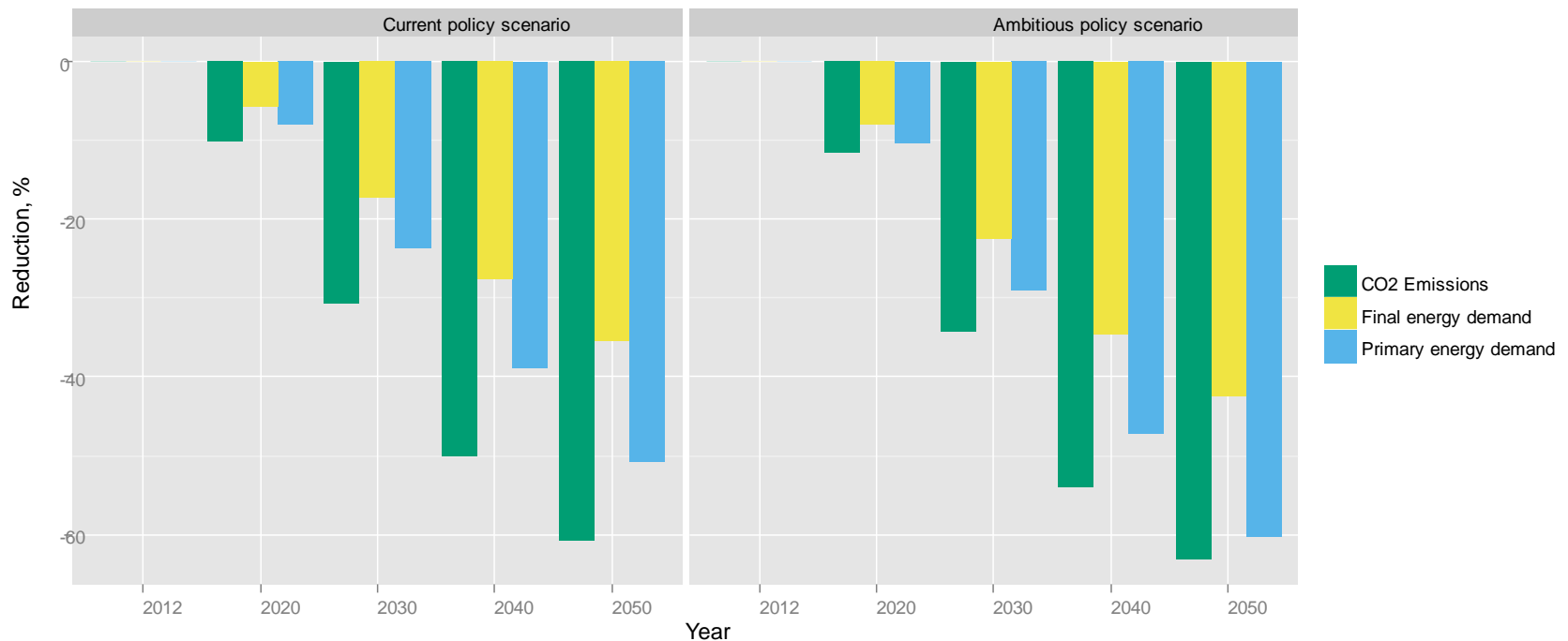
Two scenarios were developed: current policy scenario driven by the existing policies and ambitious policy scenarios including more intensive policies.



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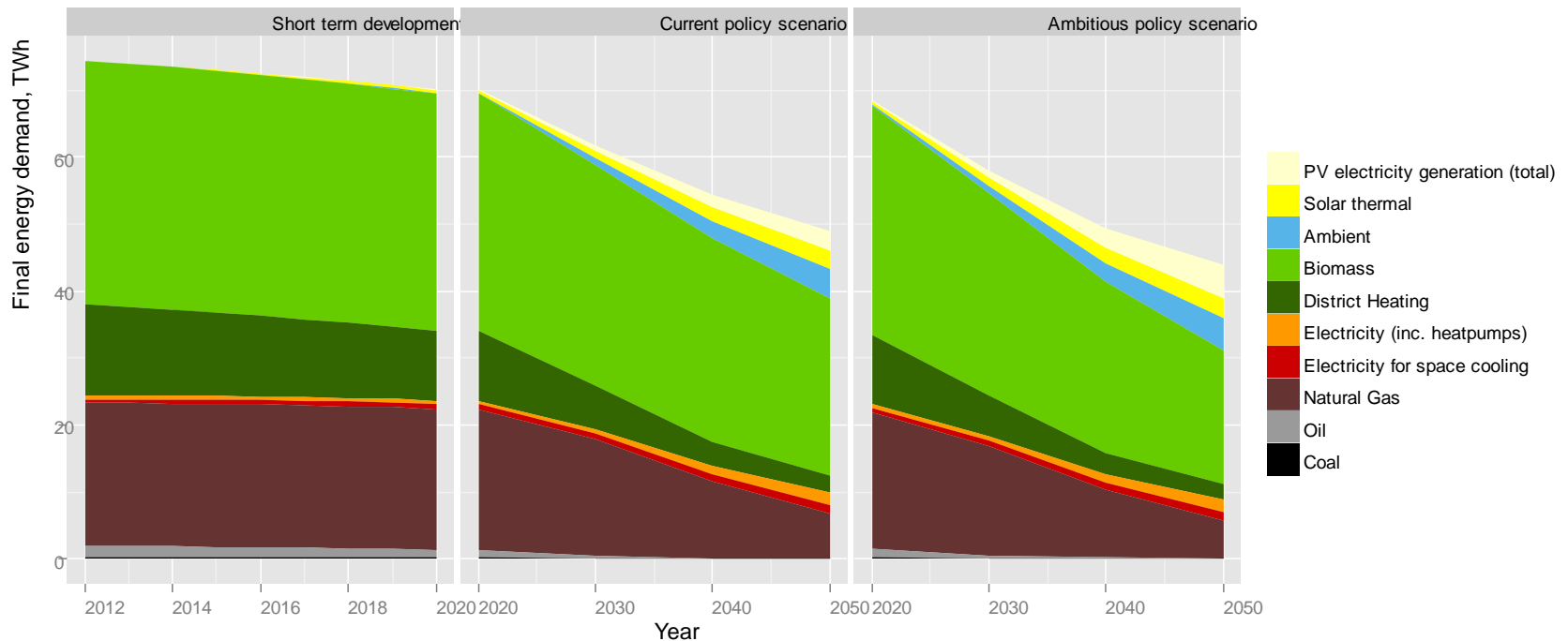
Reduction of CO2 Emissions, final energy demand and primary energy demand for space heating, hot water and space cooling, 2012 to 2050 for Romania, current policy and ambitious policy scenarios



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Final energy demand for space heating, hot water and cooling, 2012 to 2050 for Romania, current policy scenario and ambitious policy scenario



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Recommendations to accelerate the nZEB market transition

EU Member States and Norway: Report „Strategies for nZEB market transition on national level”

EU/EEA level: Report „Strategies for nZEB market transition in the European Union”



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Recommendations

OVERARCHING CONDITIONS

Stakeholder involvement

Long-term strategy with intermediate targets

Continuous assessment and improvement

Incentivise frontrunners and empower the local level



RECOMMENDATIONS

LEGISLATIVE & REGULATORY INSTRUMENTS

ECONOMICS

COMMUNICATION

QUALITY FRAMEWORK

NEW BUSINESS MODELS & INNOVATION

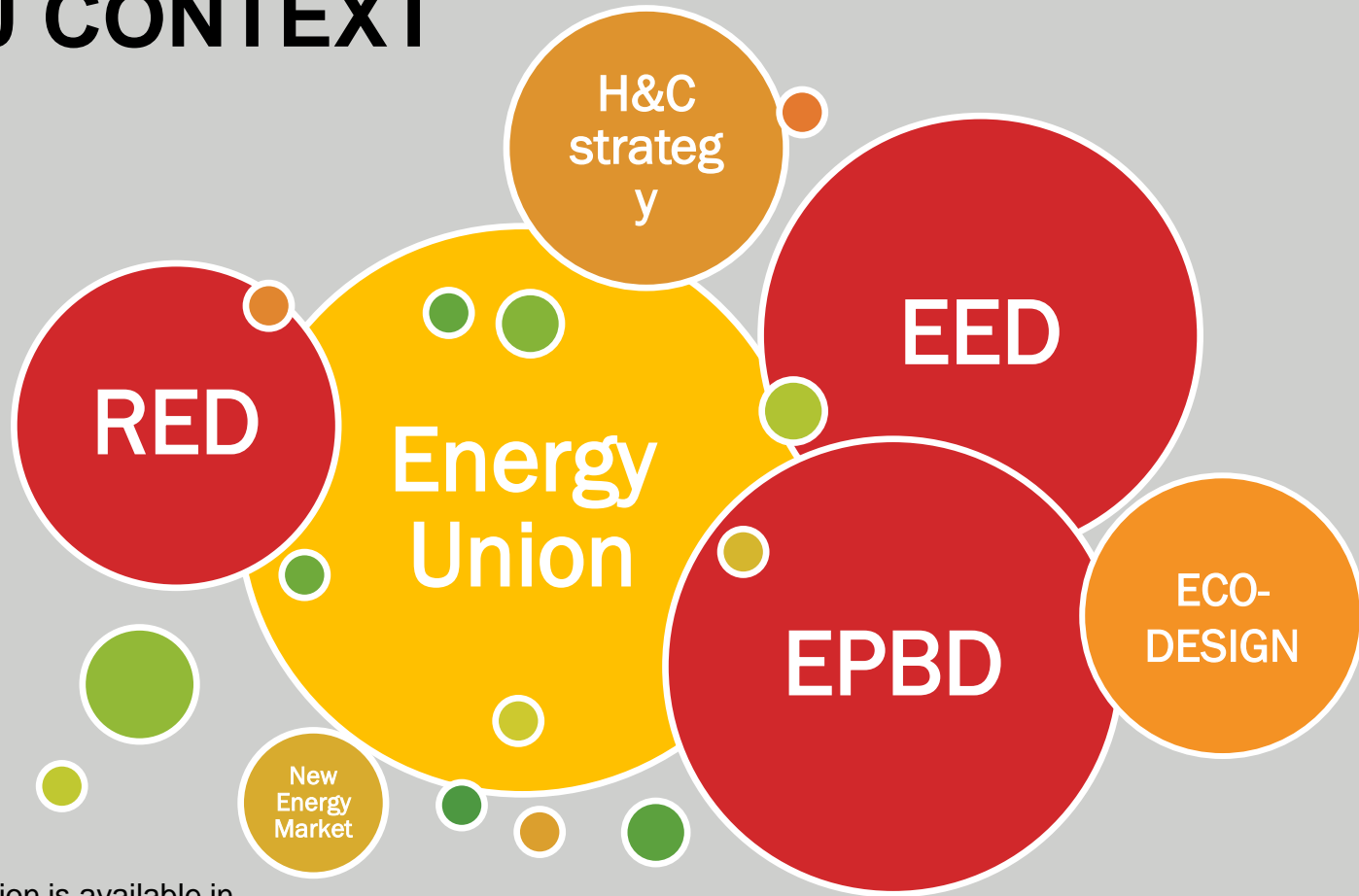
SOCIAL ASPECTS



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EU CONTEXT



More information is available in

- Report for EU Member States and Norway: Report „Strategies for nZEB market transition on national level”
- <http://zebra2020.eu/publications/strategies-for-a-nearly-zero-energy-building-market-transition-in-the-european-union/>



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EU-recommendations



Clarify the nZEB definition



Improve the usage of Energy Performance Certificate, including a robust compliance system



Define a long term vision to guide the transformation of buildings as integrated parts of the society and the wider energy system



Provide building owners and investors with tailored advice according to specific renovation roadmaps



Encourage nZEB with public procurement processes



EU-recommendations



Evolve the EPCs into Building Passports



Walk the talk with public buildings



Focus on vulnerable people



Link policies and financing



Future-proof buildings



Recommendations for Romania: Background

- There are today 493,000,000 m² of building floor area in Romania, of which 86% are accounted for by residential buildings. Of the 8.1 million dwellings, single family houses dominate, accounting for 61% of the total. In the non-residential stock, the total floor area sums up to 67,200,000 m².
- Romania suffers from having a big share of low performing buildings. 58% of the “block of flats” constructed before 1985 need to be renovated.
- **Low energy prices** in Romania undercuts the viability of nZEB measures and prolongs fossil fuels dependency and energy poverty.
- **Energy poverty** is also a big problem in Romania. In 2013, 30,5% of the Romanian population found it difficult to be able to pay housing costs and utility bills (compared to average of 11,7% for the whole Europe).
- The shortage of **skilled labor** is another challenge for Romania in achieving nZEB level and beyond.



Recommendations for Romania

RO1 - Implement long-term coherent (yet dynamic) regulatory framework, in close cooperation with stakeholders

RO2 - The energy performance and thermal requirements of buildings should be stricter and better enforced, creating a path towards nZEB

RO3 - Increase the predictability of financial programmes and steer the building stock towards nZEB level

RO5 - Training building professionals with "nZEB and beyond" qualifications preparing them to build and upgrade the building stock for the future

RO6 - Develop and consolidate quality frameworks for nZEB techniques and technologies

RO7 - Enhance the proficiency of certifiers in order to increase the reliability of Energy Performance Certifications

More information is available in

- Report “Strategies for nZEB market transition on national level”
- <http://zebra2020.eu/publications/strategies-for-nzeb-market-transition-on-national-level/>



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Recommendations for Romania

RO4 - Increase information availability and provide guidance to interested parties

RO8 - Stimulate the market uptake of Energy Performance Contracting (ESCOs)

RO9 - Explicitly define energy poverty and set up monitoring mechanisms

RO10 - Shift from fuel subsidies to energy efficiency measures

RO11 - Improve air quality by better building performance to boost public health and quality of life

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National Contact
Romania

Serban Danciu - BPIE
Serban.Danciu@bpie.eu
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