

ZEBRA 2020



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ZEBRA 2020

NEARLY ZERO-ENERGY BUILDING STRATEGY 2020

Developing successful nZEB policy strategies
Country SPAIN

Project Duration 1/4/2014 – 30/9/2016

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

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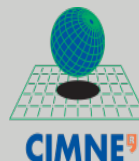
Summary slides for policy makers SPAIN



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Project consortium



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Overview



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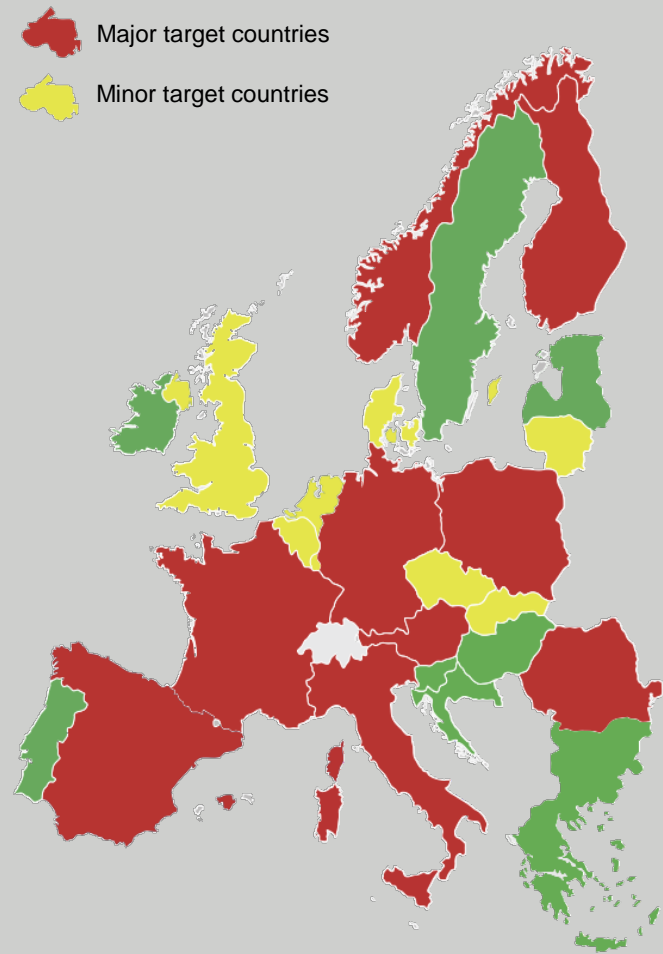


ZEBRA2020 - At a glance

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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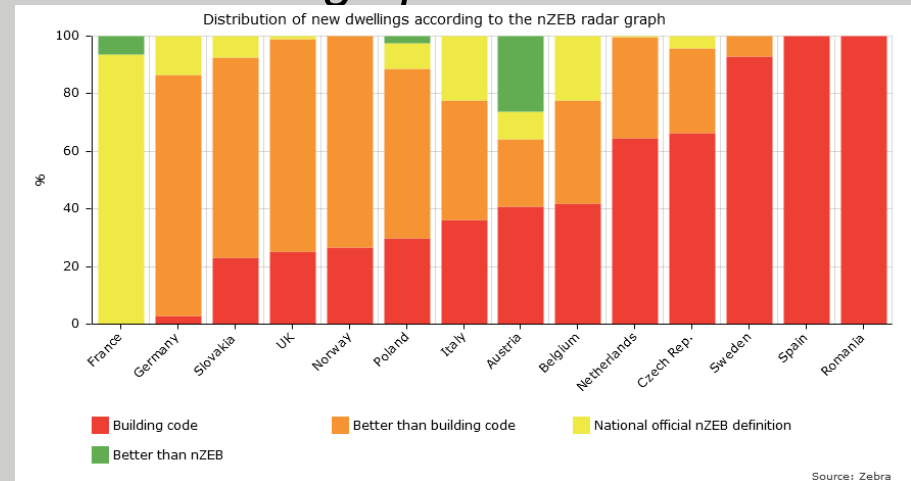
Online Data Tools

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/>



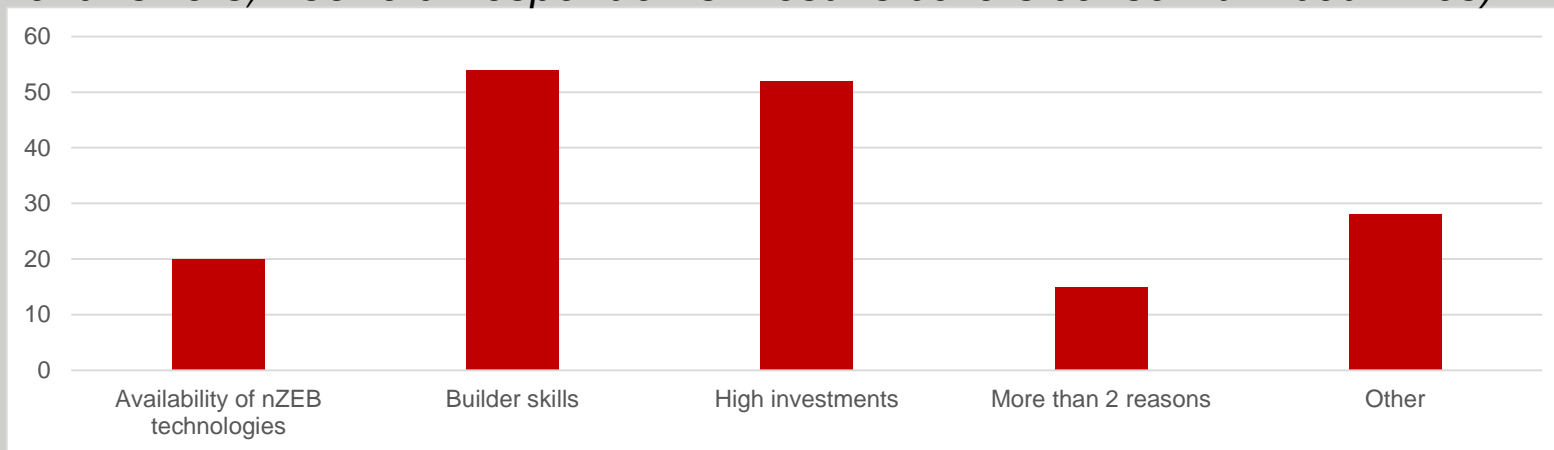
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Professional competence

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/>



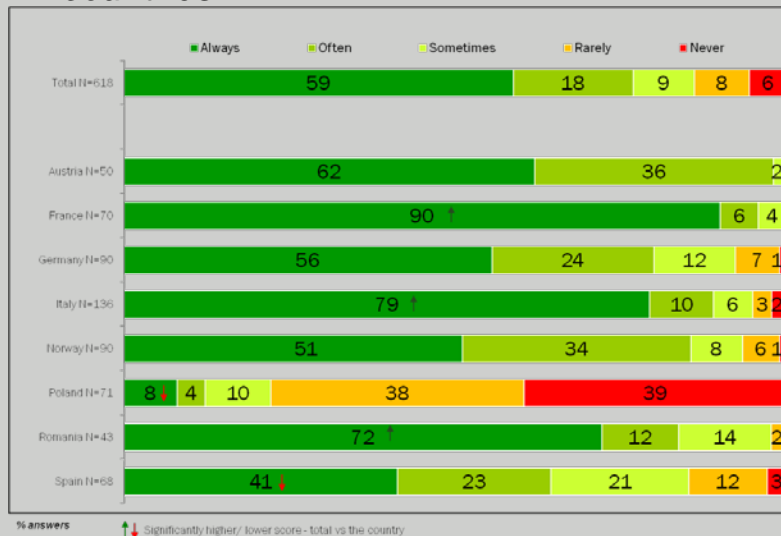
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Energy performance certificates – selected results

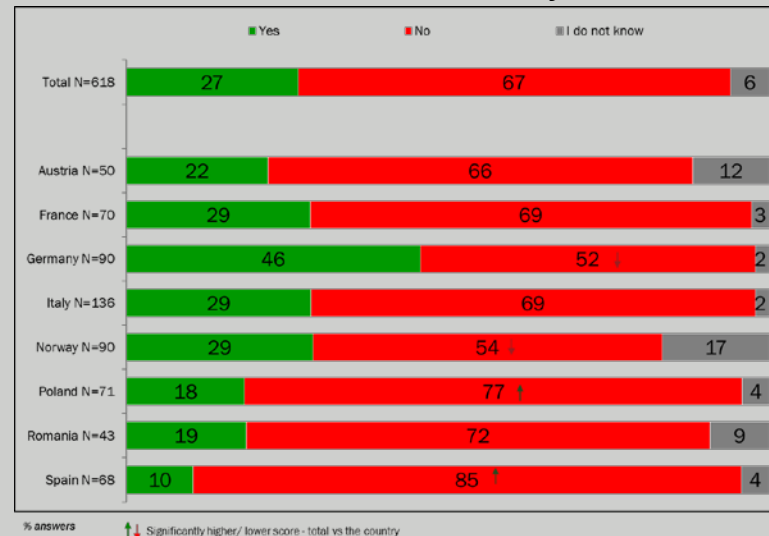
Real estate agents survey – mandatory EPCs

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

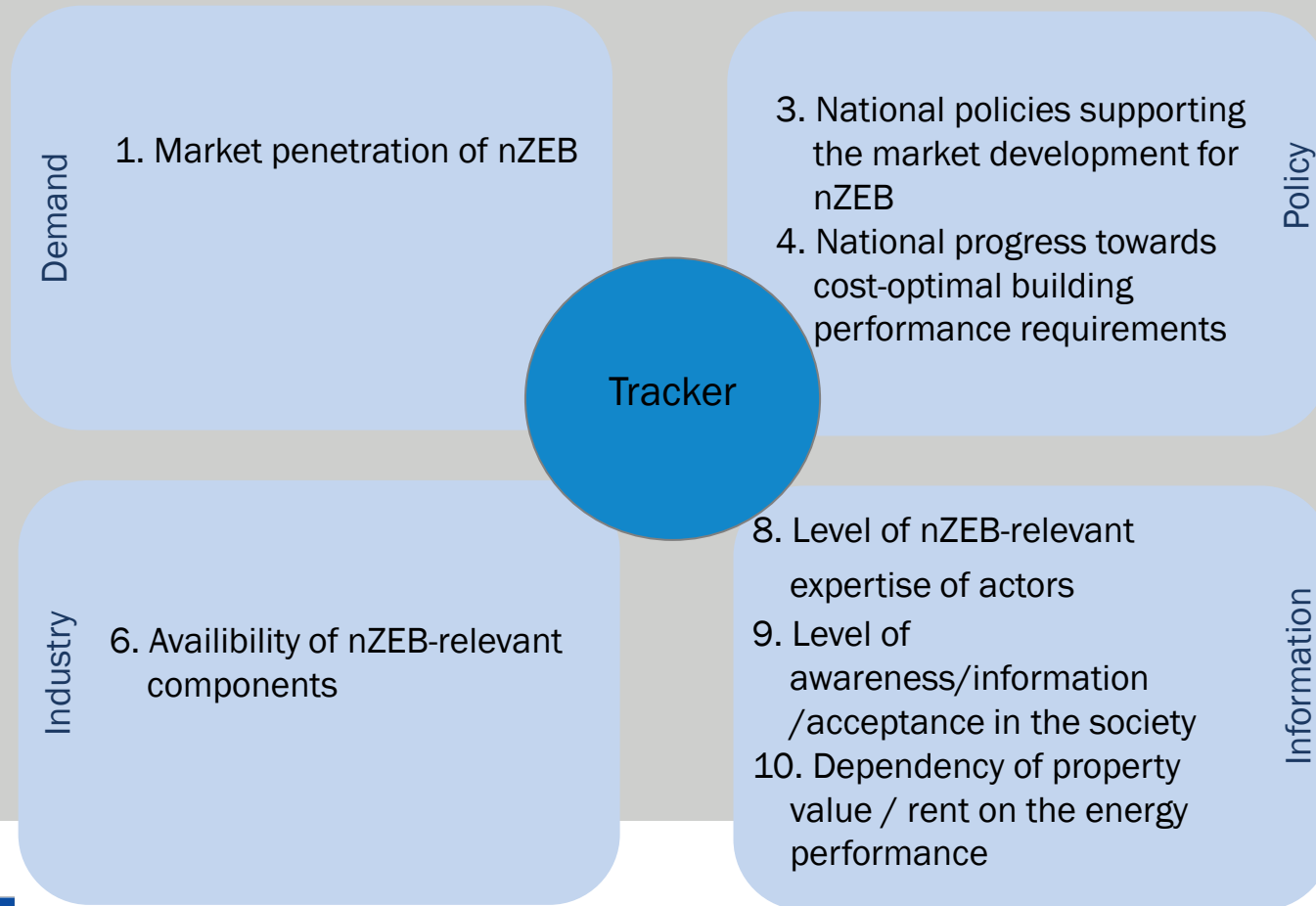


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nZEB tracker for measuring market maturity

The tracker assesses 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:

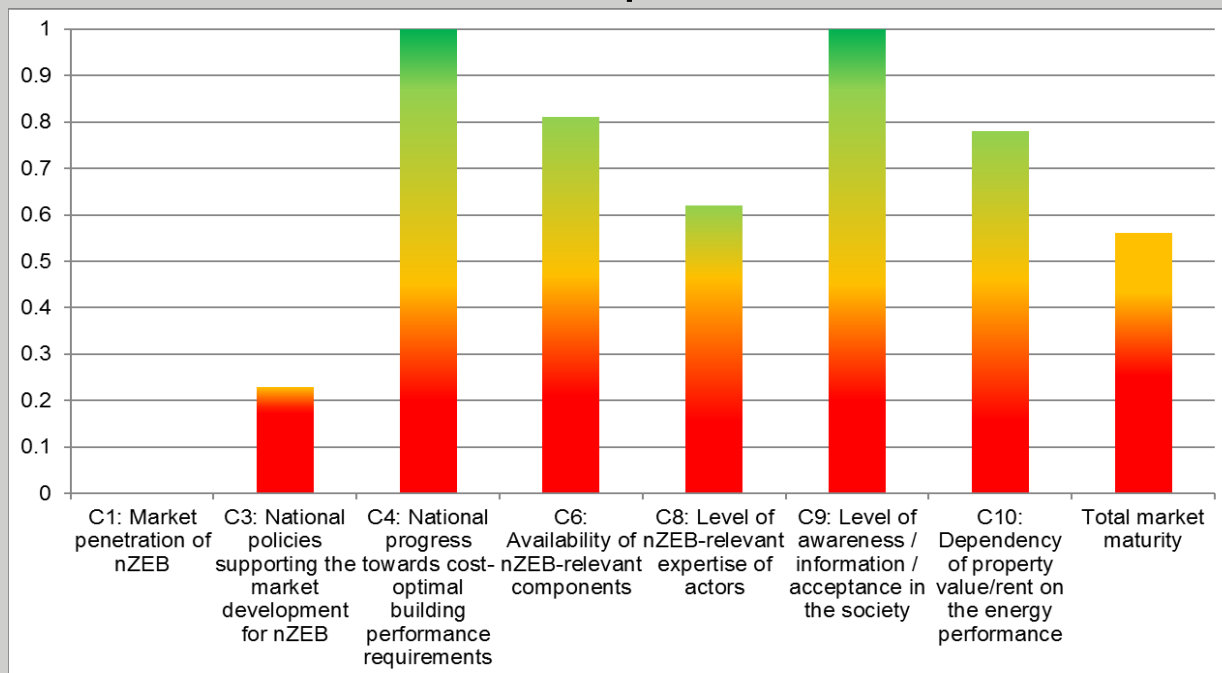


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nZEB Tracker

nZEB tracker results for Spain 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

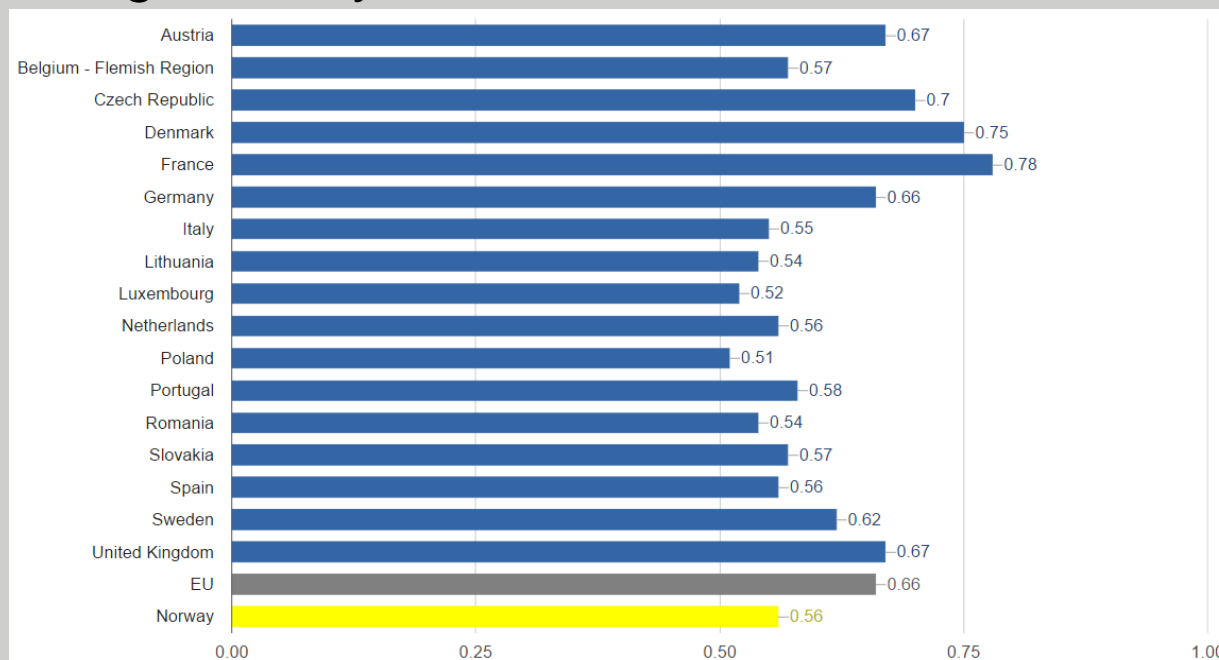


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nZEB Tracker

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.

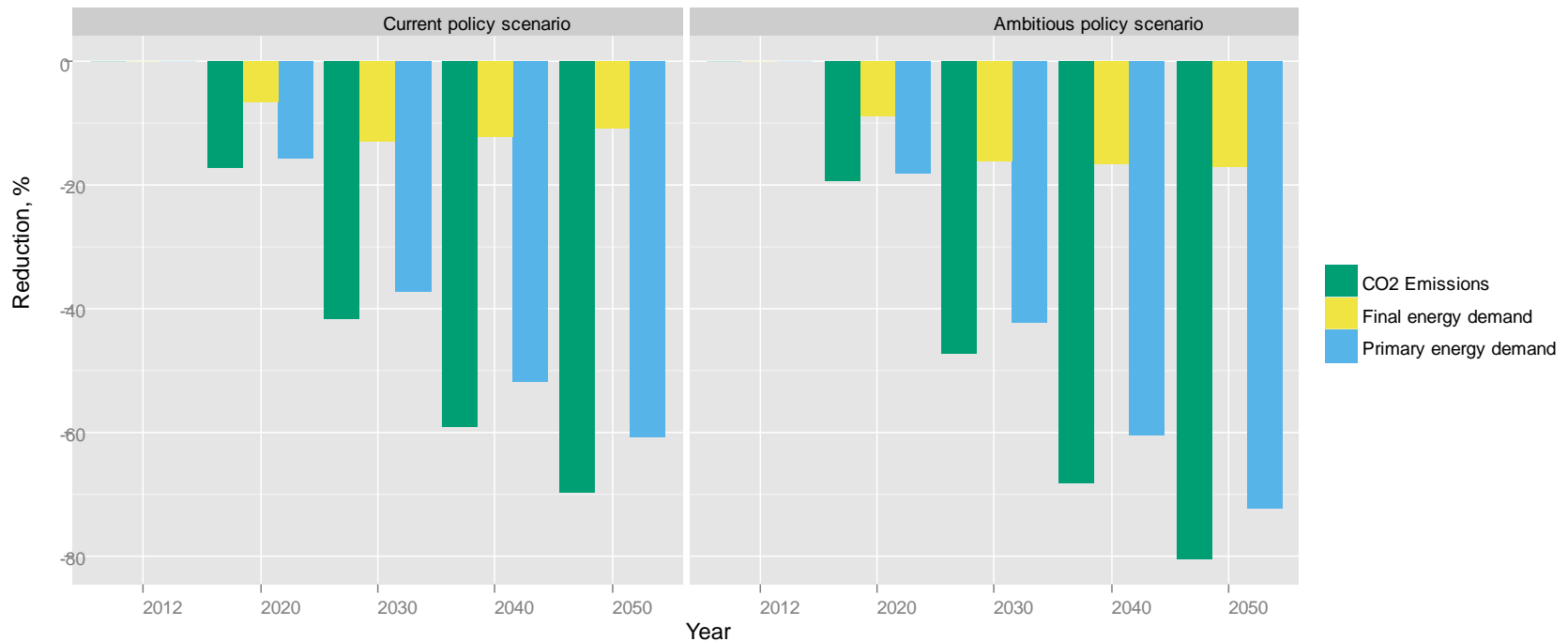
Two scenarios were developed: current policy scenario driven by the existing policies and ambitious policy scenarios including more intensive policies.



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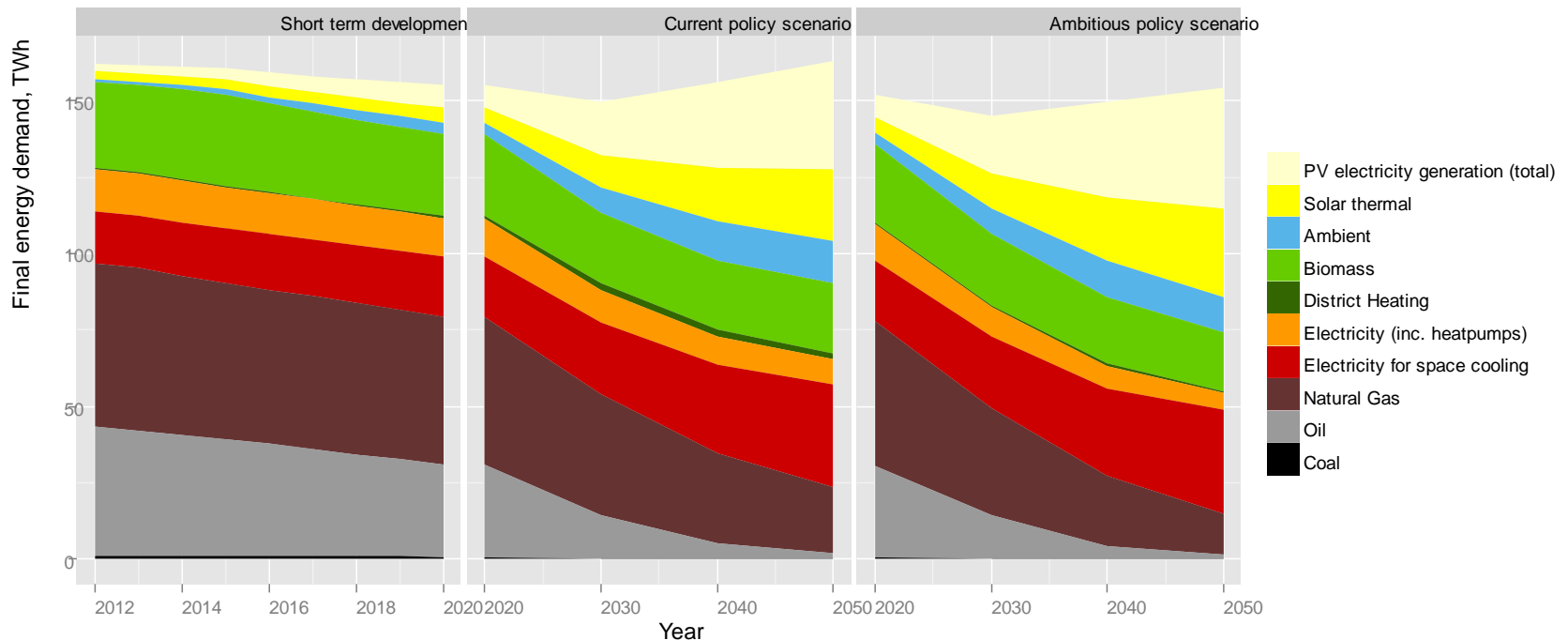
Reduction of CO2 Emissions, final energy demand and primary energy demand for space heating, hot water and space cooling, 2012 to 2050 for Spain, current policy and ambitious policy scenarios



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Final energy demand for space heating, hot water and cooling, 2012 to 2050 for Spain, 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

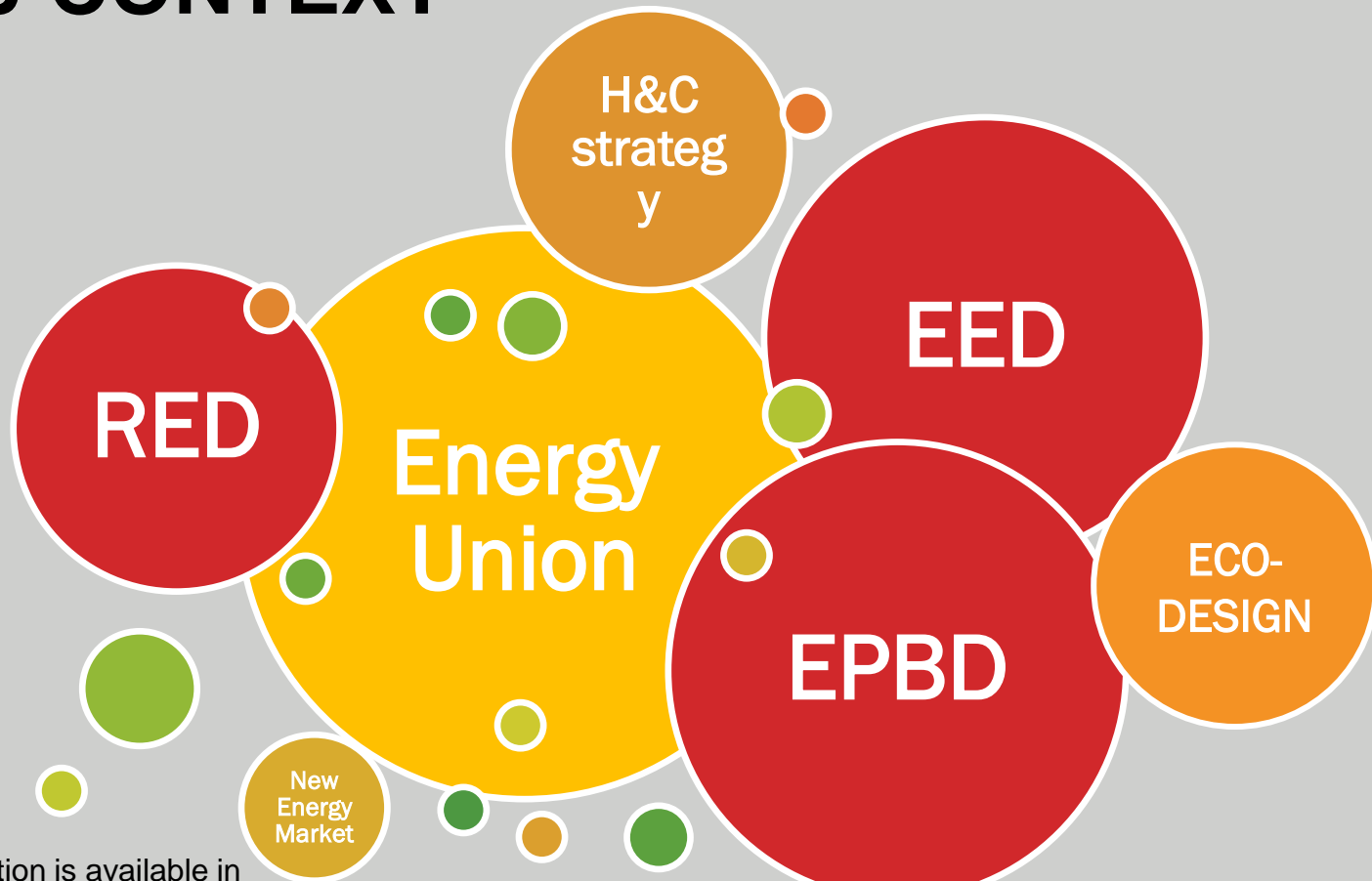
SOCIAL ASPECTS



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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 Spain: Background

- Due to the economic malaise that has prolonged since 2009 in Spain, the building sector struggles with a slow economy and big debts, hampering well-needed investments. The slow rate of building new constructions is even more alarming than the absence of energy renovations.
- The Spanish government and industries should view the investments in buildings as an opportunity rather than a cost. Investing in highly energy efficient buildings and renovations, can boost the lagging economy and generate desirable jobs.
- Almost 75% of existing buildings is constructed before 1980 and around 90% is residential .
- It is obvious that Spain has an enormous energy saving potential in renovation of the building sector. Despite this fact, there are no updated/new ambitious official plans or strategies for new constructions.



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Recommendations for Spain

Legislative and Regulation instrument

ES1 - Regulate building performance minimum standards through the building code	ES2 - Provide building owners and investors with tailored advice according to specific renovation roadmaps (building passport)
ES3 - Support nZEB transition with public procurement processes	ES4 - Over time, buildings in the lowest energy performance classes should be deemed unsuitable for occupation

Economic measures

ES5 - Adapting new financing products that look long term and entitle nZEB investors with preferential mortgages

Incentivize the markets

ES6 - Promote demonstration projects to exemplify the benefits and viability of highly performing buildings

More information is available in

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Recommendations for Spain

Communication

ES7 - Training building professionals with "NZEB and beyond" qualifications preparing them to build and upgrade the building stock for the future

Quality framework

ES8 - Foster the uptake of industrialised renovation

Social issues

ES9 - Include the benefits of alleviating (energy) poverty in nZEB strategies

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