

Chapter 61

# The Drive Towards NEAR Zero Energy Buildings Through Professional Training in Southern Europe: The SouthZEB Project

**Filipa Amorim**

*MIT Portugal, Portugal*

**Ricardo Gomes**

*MIT Portugal, Portugal*

**Hang Dao**

*University of Lisbon, Portugal & Aalto University, Finland*

**Miguel Carvalho**

*MIT Portugal, Portugal*

**Carlos Silva**

*MIT Portugal, Portugal*

**Paulo Ferrão**

*MIT Portugal, Portugal*

**Manuel Correia Guedes**

*Instituto Superior Técnico, Portugal*

**Manuela Almeida**

*Universidade do Minho, Portugal*

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## **ABSTRACT**

*This chapter gives an overall summary of the challenges faced by European countries regarding the adoption of nZEBs, particularly focusing in the training needs in the Southern Mediterranean countries, and on the experience reached so far by the ongoing SouthZEB Project. Therefore, it first elaborates on the nZEB concept definition framework focusing on the relevance of the topic to local and regional development purposes. Secondly, the chapter gives an overview of the definitions that may be used to the adoption of nZEB across European countries. The perspective presented is first through a top-down approach, based on the policy implementation efforts developed by the European Commission and, after that, based on a bottom-up perspective, including an overview of existent voluntary standards that may be regarded as contributing to the adoption of near zero energy buildings. Thirdly, the chapter reflects on some of the barriers encountered that hamper nZEB adoption, specifically addressing the need for professional training in Southern European countries. Finally, the methodology used by the SouthZEB Project to define the training and certification needs, which is based on the participatory process, is presented along with an overview of the project major results achieved until now and the main difficulties identified so far.*

## **INTRODUCTION**

The implementation of European Energy/Climate policies fully comply with the goals of regional development and the buildings sector is one of the most relevant to tackle both dimensions. On the one hand, buildings are at the spotlight of the EU's energy efficiency policy, as nearly 40% of final energy consumption and 36% of greenhouse gas emissions is carried in the European building stock, such as residences, offices, shops and other types of buildings. On the other, it is a crucial sector to spatial development dynamics of a territory.

The 2030 European Commission Communications, published in July 2014, highlight the key role of the building sector, stating that “the majority of the energy saving potential is in the building sector”. Therefore, improving the energy performance of Europe's building stock is crucial to achieve the EU Energy/Climate targets and, beyond these, to bring about drastic greenhouse gas emission reductions in the building sector of 88 to 91% compared to 1990 by 2050 (European Commission, 2011).

Over the past decade, energy efficiency has consistently reduced annual energy consumption and confirms its place as the first fuel option for the economy, according to the 2014 Energy Efficiency Market Report (International Energy Agency, 2014). In particular, the report evaluates 18 IEA<sup>1</sup> countries where energy efficiency has had the largest percentage improvements in the residential sector, driven by improvements in space heating, water heating, lighting and appliances, and where energy demand has been reduced by 5% in the period between 2001 and 2011. In this way, energy efficiency is strengthening its position as a fuel option for countries in their efforts to balance supply and demand in support of growth and competitiveness, energy security and environmental objectives. This strategy is far more pressing in Europe where final consumers' electricity bills are expected to continue on the rise, at least for the next following two decades (Rezessy, 2014) (Eurelectric, 2014).

It is in this given context of high potential for reducing the buildings' energy requirements, that the amendment act to the EU's Energy Performance of Buildings Directive introduced in 2002 (Official Jour-

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