Call for proposals 2013 INTELLIGENT ENERGY EUROPE

Title: CITIES TOWARDS NEAR ZERO ENERGY BUILDINGS

Promotion of energy refurbishment of existing residential buildings of European intermediate cities towards NZEB

Ayuntamiento de A Coruña
Concello da Coruña

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OUTLINE OF THE PROPOSAL

CITIES TOWARDS NEAR ZERO ENERGY BUILDINGS

Promotion of energy refurbishment of existing residential buildings of European intermediate cities towards NZEB

KEY ACTION: Energy Efficiency & renewable energy use in buildings (Integrated Initiatives).

SCOPE:

The project focuses on promoting energy efficiency and renewable energy use in the residential building sector of intermediate European cities that had a large urban development in the second half of the twentieth century.

BACKGROUND AND OBJECTIVES:

During the second half of the twentieth century, in most of the intermediate cities[1] across Europe the residential buildings construction experienced a boom that changed the landscape of the urban areas. Most of these residential buildings were built without taking into account any criteria related with the energy dimension and impact of the heating and cooling systems or electricity consumption. Nevertheless a big part of the population of these cities is still living in buildings which were built during this construction expansion phase. The domestic energy use represents 28% of European Union final consumption and this consumption is the core element (together with transport or public consumption) of the environmental impact and the greenhouse gas emissions of the cities.

The Article 9 of the *DIRECTIVE 2010/31/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 May 2010 on the energy performance of buildings* requires that "*Member States shall ensure that by 31 December 2020 all new buildings are nearly zero-energy buildings; and after 31 December 2018, new buildings occupied and owned by public authorities are nearly zero-energy buildings"*. Member States shall furthermore "*draw up national plans for increasing the number of nearly zero-energy buildings*" and "*following the leading example of the public sector, develop policies and take measures such as the setting of targets* ***in order to stimulate the transformation of buildings that are refurbished into nearly zero-energy buildings***".
A nearly zero-energy building is defined in Article 2 of the Directive as "*a building that has a very high energy performance. The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby*".

The main objective of the **CITIES TOWARDS NEAR ZERO ENERGY BUILDINGS** Project is to contribute to the refurbishment of existing residential buildings from the energy point of view,

[1] The European Union defines intermediate cities as settlements that contain between 20.000 and 500.000 inhabitants, while the World Bank raises the upper limit to one million. INTERMEDIATE CITIES. PROFILES AND AGENDA. Second phase of the UIA-CIMES programe "Intermediate cities and world urbanisation" Edition: Ajuntament de Lleida. Texts: Carme Bellet i Josep M. Llop

focused on the special characteristics of these residential buildings and offering the best adapted solutions. This project will implement a comprehensive action for achieving the following objectives:

- Increasing savings in energy consumption in residential buildings by means of a comprehensive methodological tool that enables the thermal behavior and the energy potential of residential buildings in a real way and which also enables the optimization of environmental solutions towards NZEB by means of energy efficiency solutions and renewable energy sources.

- Walking towards the challenge of a real energy-saving and emissions reduction in the cities through the development of NZEB modeling, by a specialized support addressed to stakeholders involved (owners, architects, energy and other decision-makers and local government) and target groups, in order the promote energy efficiency solutions and renewable energy sources.

At the operational level will be achieved the following specific objectives:

- Determine the actual current energy performance (thermal, environmental performance, etc.) of residential buildings in the participant cities, according to their geographical location, local climate and building characteristics.

- To support the decision-making process, facilitating the identification of energy solutions to residential buildings areas in the participant cities in Europe (based on efficiency and renewable energy use), adapted to their needs and with the technical support of a network of European institutions specialized in energy innovations and technologies research.

- Involvement of the citizens as key actors and consumers and helping to convert their houses into near zero emissions buildings, with information and advice about their possibilities in saving and renewable energy sources, facilitating access to information and the specific energy advice.

- Boosting the offer of services and technical solutions providers around the implementation of energy solutions of NZEB in renovations of residential buildings, with a special attention to professionals and technical decision makers connected with buildings refurbishment who will participate in the design of the comprehensive methodological tool.

- Effective implementation of energy solutions in the participant cities by involving the city governments, with active measures to promote the energy refurbishment, and the citizens, with adapted solutions in energy savings and renewable sources.

Work Programme Sketch:

WP 1. Management, monitoring and evaluation of the Project
WP 2 Mapping the building energy consumption in the participant cities
WP 3 Technologies and innovations for cities with near zero emissions buildings/ districts
WP 4. Package of measures for near zero emissions residential buildings/districts in the cities.
WP 5. Specific communication activities of the project: Guidelines for energy efficiency and
WP 6. IEE common communication activies and pre-defined standard activities.

PARTNERS:

The project is involving different stakeholders of the chain of value of the residential building sector, from local governments to institutions as experts in the energy area:

1. City of Coruña ES http://coruna.es/
2. City of Burgas BG http://www.burgas.bg/
3. City of Timisoara RO: http://www.primariatm.ro
4. City of Mannheim DE: http://www.mannheim.de/
5. University of Vigo ES https://www.uvigo.es
6. University of Coruña ES http://www.udc.es
7. Denkstatt Romania RO: http://www.denkstatt.ro/
8. Bre Wales UK http://www.bre.co.uk/page.jsp?id=659
9. CNR ITC IT http://www.itef.pd.cnr.it/Frames_principali.html
10. TREFLE Université Bordeaux 1 FR http://www.trefle.u-bordeaux1.fr/

At local level some target groups and key actors will be involved in the action:

- Professional associations of key players in construction (architects, engineers …)
- Association of building owners and neighbourhood association
- Association of consumers

GENERAL FINANCIAL CHARACTERISTICS

Grant up to 75% of the total eligible cost

Direct staff costs

Other direct costs: subcontracting (external services), travel and subsistence, purchase, others.

MORE INFORMATION AND CONTACT

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