Workshop:
Experiences on Net Zero Energy Buildings – Meet the experts

The meetings held in Barcelona by both programmes' experts – Task40/Annex52 and AIDA- constitute a unique opportunity to exchange views and expose cases of NZEB buildings, at a public event open to the public authorities and industry professionals. This workshop aims to present some of the most interesting examples of NZEB buildings related to local climate conditions.

Programme

16:00h **Welcome and introduction**
Antoni Martínez - IREC director
Joan Puigdollers - Barcelona Municipal Council President

16:10h **Task 40/Annex52 results presentation**
Josef Ayoub - CanmetENERGY - Natural Resources Canada
Presentation of case studies
Moderator: Jaume Salom - IREC

16:30h **CIRCE office building** (Zaragoza, Spain)
Eduard Cubí - IREC

16:45h **Pixel building** (Melbourne, Australia)
David Waldren - Grocon Group

17:00h **EnerPos University building** (La Reunion Island, France)
François Garde - ESIROI - Université de la Réunion

17:15h **Leaf house** (Ancona, Italy)
Maurizio Cellura - Università degli Studi di Palermo

17:30h **Presentation of AIDA project**
Raphael Bointner - Institute of Energy Systems and Electric Drives, Vienna University of Technology
Local experiences in NZEB
Moderator: Albert Cot - CEEC

17:50h **LIMA housing prototype** (Barcelona)
Christoph Peters - SaAS

18:05h **Cibeles apartments building** (Barcelona)
Oriol Gavaldà - AIGUASOL

18:20h **Questions and open debate**

18:50h **Closing**
Maite Masià - Director of the Catalan Institute for Energy (ICAEN)

19:00h **Closing cocktail**

Venue:

Palau Robert
Passeig de Gràcia, 107
08008 Barcelona

Please register at:

aidaproject.eu/study_tours_ca.php
(limited number of places)

Organized by:

IREC
Institut de Recerca en Energia de Catalunya
Catalonia Institute for Energy Research

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AIDA
AFFORDABLE INTEGRATED ENERGY DESIGN ACTION

International Energy Agency
Energy Conservation in Buildings and Community Systems Programme

NET ZEB

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INTERNATIONAL ENERGY AGENCY

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Ajuntament de Barcelona

Generalitat de Catalunya
Institut Català d'Energia

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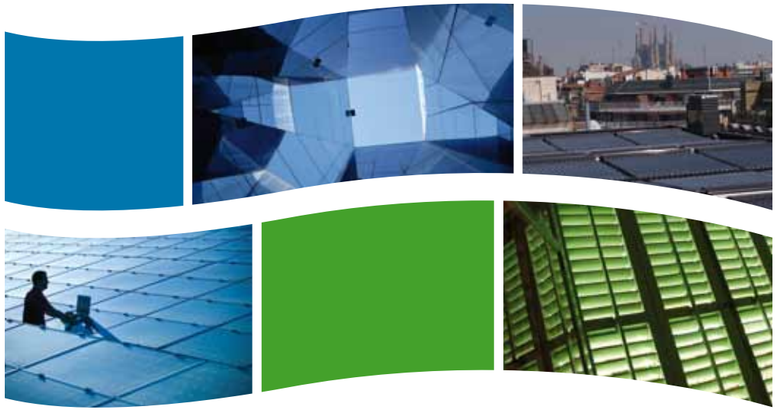
Meet the experts



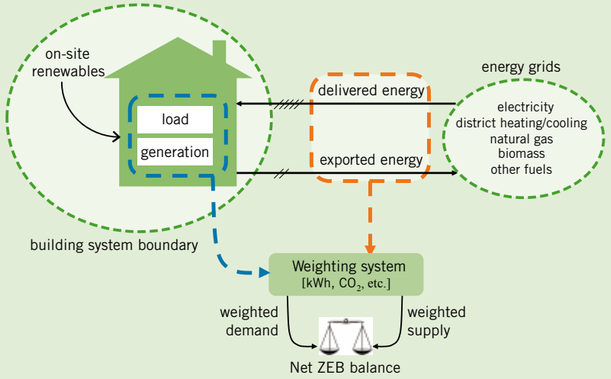
October 3rd 2012
Palau Robert, Barcelona

Net Zero Energy Buildings

Buildings are one of the major energy users globally, while they offer some of the most cost effective means of reducing energy use and carbon emissions. In this context, Net Zero Energy Buildings (NZEBs) have become a policy target in many countries. The European Directive 2010/31/EU of 19 May 2010 urges member states to ensure that all new buildings are *nearly zero energy consumption* before December 31st, 2020 (2018 for public buildings).

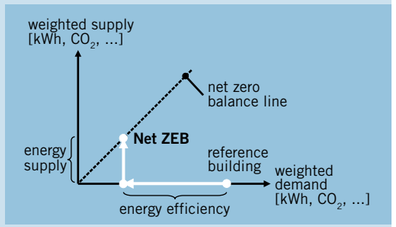
How to define NZEBs

A Net Zero Energy Building, NZEB, can be broadly defined as a building with reduced energy demand that can be balanced by an equivalent renewable generation, produced on-site, but connected to energy grids.



How to achieve NZEBs

The way to achieve NZEBs consists of different sequential stages: passive strategies, active strategies and renewable energy systems. The figure presents these steps referenced to energy consumption and production. The first two steps minimize the energy demand, while the third one meets the zero balance.



IEA- SHC Task40 ECBCS Annex 52

Given the global challenges related to climate change and resource shortages, much more is required than incremental increases in energy efficiency. Currently, a prominent vision proposes so called "net zero energy", "zero net energy", "net zero carbon" or "EQuilibrium" buildings. Although these terms have different meaning and are poorly understood, several IEA countries have adopted this vision as a long-term goal of their building energy policies.

What is missing is a clear definition and international agreement on the measures of building performance that could inform zero energy building policies, programs and industry adoption

The objective of the Task is to study current net-zero, near net-zero and very low energy buildings and to develop a common understanding, a harmonized international definitions framework, tools, innovative solutions and industry guidelines. A primary means of achieving this objective is to document and propose practical NZEB demonstration projects, with convincing architectural quality.

The planned outcome of the Task is to support the conversion of the NZEB concept from an idea into practical reality in the marketplace. The Task source book and the datasets will provide realistic case studies of how NZEBs can be achieved. Demonstrating and documenting real projects will also lower industry resistance to adoption of these concepts.

IEA-Task40/Annex 52 is operated by Mr. Josef Ayoub, from CanmetENERGY -Natural Resources Canada. More than 60 experts from 19 countries around the world are involved. It is been running from 2008 and is scheduled to end in 2013.

AIDA - Affirmative Integrated energy Design Action

The AIDA project, belonging **to Intelligent Energy Europe 2011 Programme**, aims to **accelerate the market entry of nearly zero-energy buildings** (NZEB).

Currently, there is a lack of intense actions to spread knowledge about NZEB. It is evident that citizens will be better prepared and more willing to adopt NZEB if their municipality sets an example thus giving them direct access to and experience of NZEB.

Raising awareness towards NZEB among local authorities and building planners becomes a key factor. So, in particular the target group of this proposal are primarily **municipal representatives** as market multipliers on the demand side, and also **architects and master-builders** on the supply side.

AIDA offers action tailored to suit each of these groups including:

- Study tours and operational success stories: through visiting national and European NZEB buildings, municipalities and design teams can learn from real experiences
- Presentation of existing tools for designers to help implement Integrated Energy Design
- Active support for NZEB design: AIDA can assess and support municipalities involved in a NZEB
- Active support for establishing roadmaps: assessment to implement NZEB criteria in public tenders and other planning instruments such as SEAP's

AIDA is coordinated by Raphael Bointner at Institute of Energy Systems and Electric Drives from Vienna University of Technology. It is scheduled from 2012 to 2015.