

AIDA

AFFIRMATIVE
INTEGRATED
ENERGY
DESIGN
ACTION

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AIDA: nZEBs in municipal practice - Chances and Challenges

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nZEBs: Challenges for the decade

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“Energy performance of buildings”-directive

2010/31/EU

- **nZEB-standard** for public buildings by 2019
- By 2021 for ALL renovations and new buildings
- Independent, skilled workers
- „*achieving cost-optimal levels...*“ 2010/31/EU, Art. 4.1
- Further Info on EPBD-implementation and support in policy making → www.entranze.eu





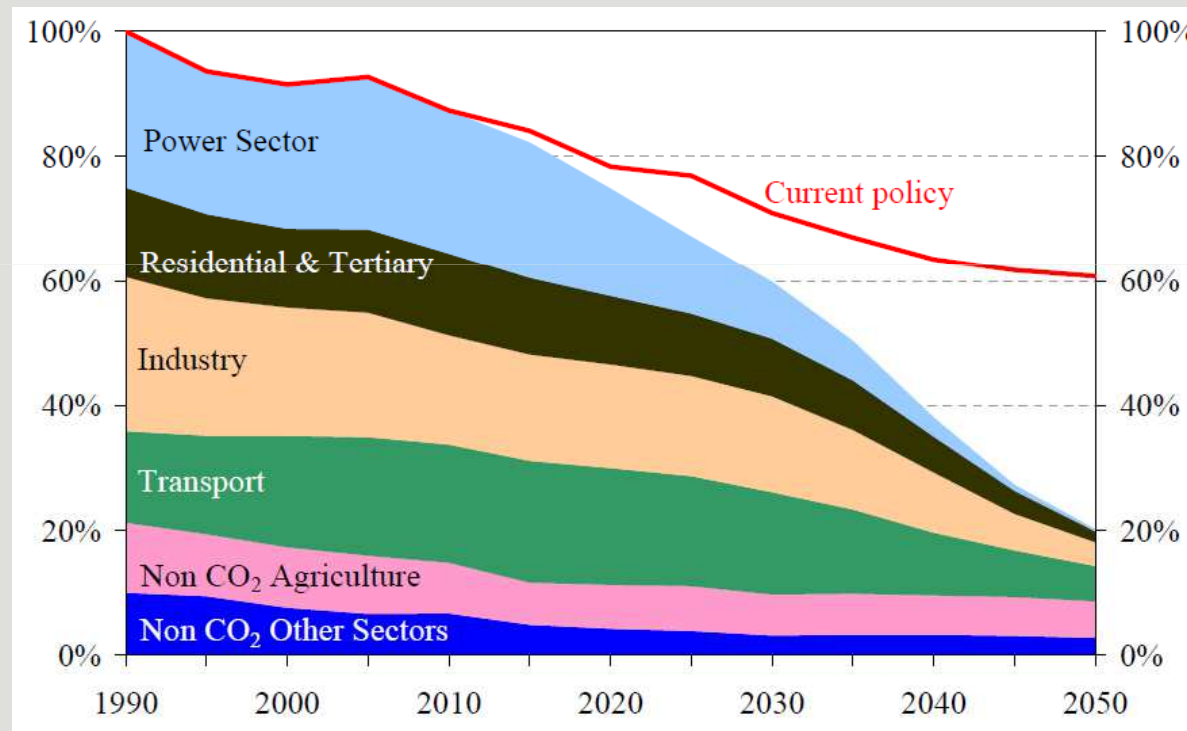
nZEBs:

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Challenges for the next decades

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„GHG emission reduction by 80 % to 95 % in the EU“



European target for CO₂-reduction according to the EU
Low-Carbon-Roadmap 2050, COM(2011) 112



Optimal solution?

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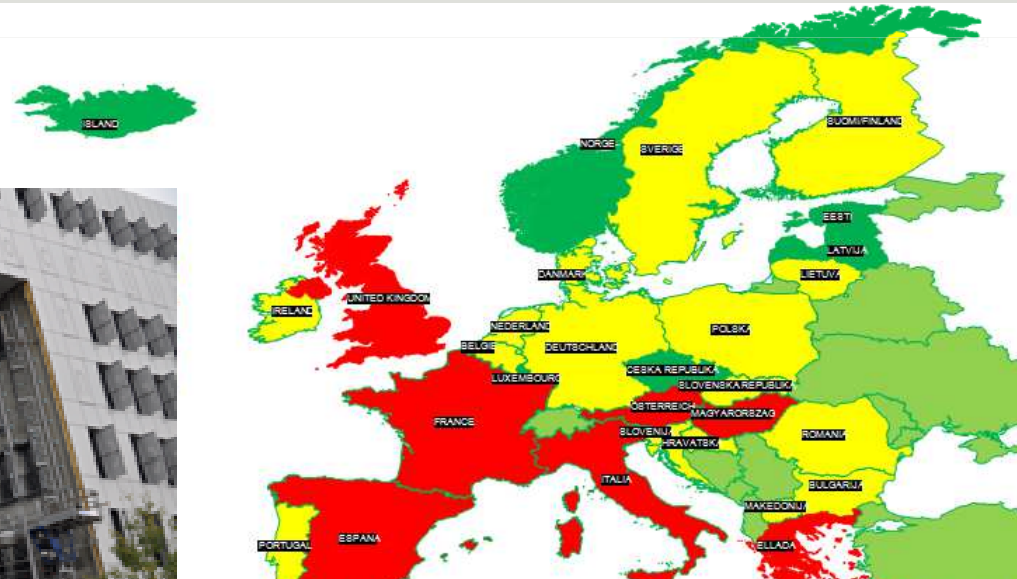


AIDA at a glance

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Affirmative Integrated Energy Design Action

- ✓ AIDA aims to accelerate the market entry of nearly zero-energy buildings (nZEB)
- ✓ AIDA supports municipalities and building professionals in the EU
- ✓ AIDA is financed by the European Commission (IEE)
- ✓ AIDA in many countries!
- ✓ April 2012 – March 2015



Co-funded by the Intelligent Energy Europe
Programme of the European Union



AIDA for YOU!

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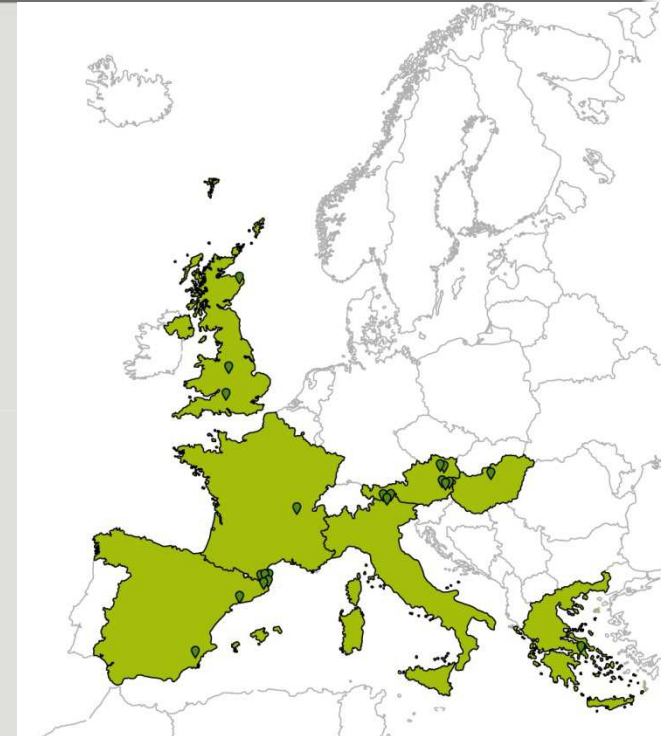
International study tours

- Vienna
- Lyon
- Athens
- Budapest
- Barcelona... & many more!

nZEB in municipal practice



- Best practice in new buildings & renovations
- SEAP Assistance
- Many reports available!



International network; contact: Peter Schilken/Energy Cities



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The AIDA project supports building professionals and local authorities all over Europe in designing nearly zero-energy buildings (nZEB). AIDA offers action tailored to these target groups, such as study tours to innovative buildings, best-practice-learning from operational success stories, presentation of innovative design software and active support for municipalities.

Be part of it!

Assistance in the development of NZEB-roadmaps for members of the covenant of mayors www.eumayors.eu

Your nearly zero-energy building lowers operation cost and sets a positive example for the local community and neighbouring municipalities!

Assistance for municipalities in the planning process of a new building or a major renovation (e. g. kindergarten, city hall, residential housing)

FOR MAYORS, MUNICIPAL REPRESENTATIVES AND LOCAL AUTHORITIES

BUILDING PROFESSIONALS, ARCHITECTS AND MASTERS

Guidance in using nearly zero-energy design software

First-hand information on developments and trends

National and international study tours to innovative buildings

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AIDA project
90 likes · 1 talking about this

Non-Profit Organization
Supporting building professionals and local authorities all over Europe in designing nearly zero-energy buildings (nZEB).

About Photos Likes 90 Events

Highlights

AIDA project shared a link.
Monday

"Inventing Nearly Zero Energy Buildings for tomorrow" - Meet AIDA in Energy Cities Annual Rendezvous, Växjö, Sweden, 24-26 April 2013 - in Växjö, Kronobergs Län.

Energy Cities
energy-cities.eu
Energy Cities, the European Association of local authorities inventing their energy future.

Recent Posts by Others on AIDA project See All

MAP Magyar Passzívház Szövetség, Mapasz
Sajnos nem tudunk részt venni a mai rendezvényen, bár...
February 15 at 3:51am

Rita Balázs
A Virtuális Erőmű Program várja energiatudatos, és energi...
January 22 at 12:27am

More Posts -



SB13 Technical Tour

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AIDA Technical Tour 28 September 2013, 9:00 – 17:30

Multi-family house
Kapfenberg



Multi-family house Zanklhof



Plus Energy Network
Reininghaus - Smart City Graz



www.sb13.org/index.php/en/programme/excursions



nZEBs in municipal practice: Chances

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1. The wide-spread use of nZEB technologies can be accelerated by creating local seeds as starting points for technology diffusion all over Europe.
2. As soon as you overcome the lack of technical knowledge, municipalities get more & more interested in nZEB and RES
3. Municipalities are proud to participate in (inter)national initiatives



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nZEBs in municipal practice: Challenges

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1. nZEB requires a motivated town administration (mayor or high-level officials)
2. Financial crisis and / or missing funds – lack of money
3. nZEB standard usually not established in municipalities
4. No building projects within timeframe of your action
5. Building professionals and owners should work together → Integrated Energy Design Process beginning at the very first stage



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nZEBs in municipal practice:

Example: Meran/Merano IT

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Close cooperation with the municipality leading to nZEB-tender for a new elementary school (EE requirements & mandatory IED incl. RES):

- 40% of total primary energy from RES
- 60% of hot water supplied by RES
- Min. of 20W installed electric capacity per m² covered by RES (PV, Wind...)
- Max. 30kWh/m²a heating demand
- Max. 20kg/m²a CO₂-emissions



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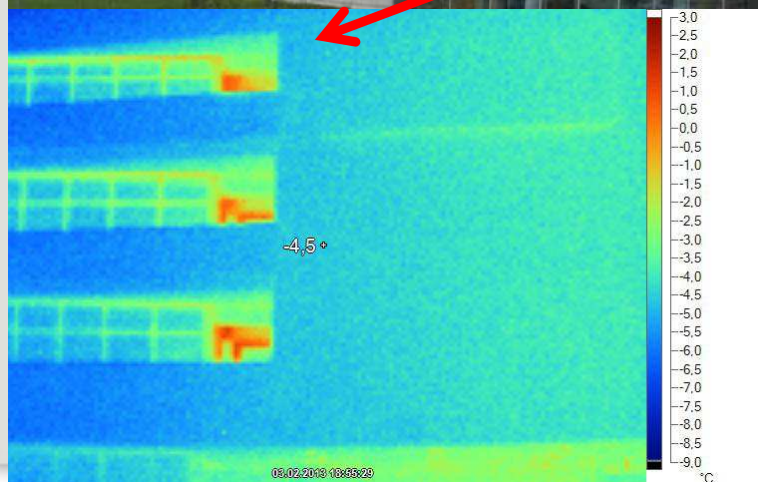
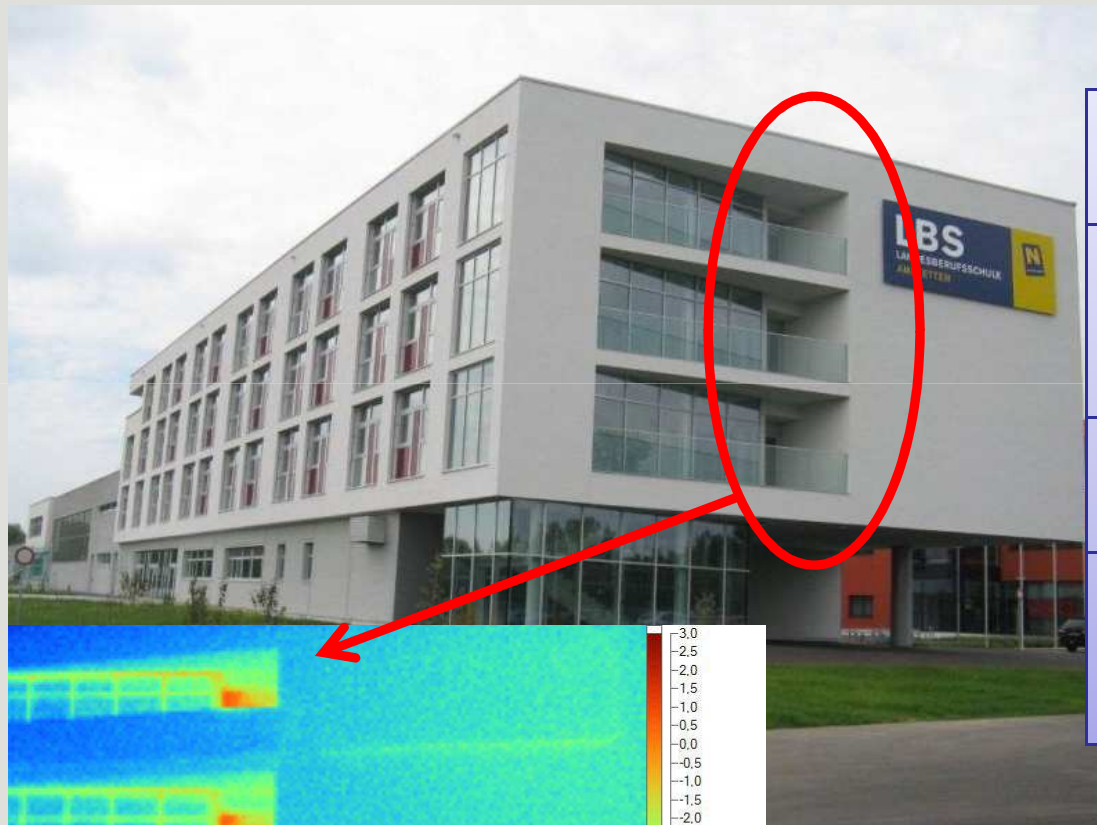


Vocational school

(school, office, workshop, dorm & canteen) nZEB in Amstetten, Austria

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Multifunctional building	
Energy demand for heating	20 kWh/m ² a
PV-system	5 kw _p tracking system
Heating and domestic hot water system	Biomass district heating system



Lessons Learnt (1)

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- Decarbonisation in the building sector can be achieved „easily“ and should therefore be realised.
- Inertance of the building sector → measures should be taken right now and show high effectiveness
- Policy measures for minimum standards & national implementation of EPBD (31/2010/EU)



Lessons Learnt (2)

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- Combined heat & power (CHP) district heating systems in urban areas (high heat density)
- Many interlinkages between energy efficiency, heat- and electricity sector and energy storage; role model Denmark
- High potential for solar- and ambient heat in nZEBs due to low flow temperature
- PV becomes more and more attractive



Lessons Learnt (3)

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- Do not create competition among energy efficiency and renewable energy sources, instead push an optimal use of synergies!
- The requirements of a sustainable energy supply are enormous; all available options are needed!
- It's a long way but be positive...

Yes we can!



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- Technische Universität Wien, Energy Economics Group, AT
 - AEE - Institute for Sustainable Technologies, AT
- CIMNE BEEGROUP, Building Energy and Environment, ES
 - Centre for Renewable Energy Sources and Saving, EL
 - EURAC research Institute for Renewable Energy, IT
 - Geonardo Environmental Technologies Ltd., HU
- HESPUL - énergies renouvelables & efficacité énergétique, FR
 - IREC - Catalonia Institute for Energy Research, ES
 - Greenspace Live Ltd., UK
 - Energy Cities, FR

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Technical scheme for nearly zero-energy buildings



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1. Energy efficient envelope
2. Use of passive heat sources, passive cooling & ventilation (heat recovery)
3. Energy efficient appliances
4. Use of renewable energy sources on-site
5. Off-site supply of renewable energy



Surrounding conditions for nZEBs



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- Policy framework
- Detailed analysis of the building site
- **Cost optimality (?)** (i. a. product's life-span, interest rate)
- **Training and education** of building professionals
- **User behaviour is essential!**