AIDA

AFFIRMATIVE INTEGRATED ENERGY DESIGN ACTION

www.aidaproject.eu

Energy Economics Group

TECHNISCHE UNIVERSITÄT WIEN
Vienna University of Technology

Inventing nearly Zero-Energy Buildings for tomorrow

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Energy Economics Group (EEG)

www.eeg.tuwien.ac.at

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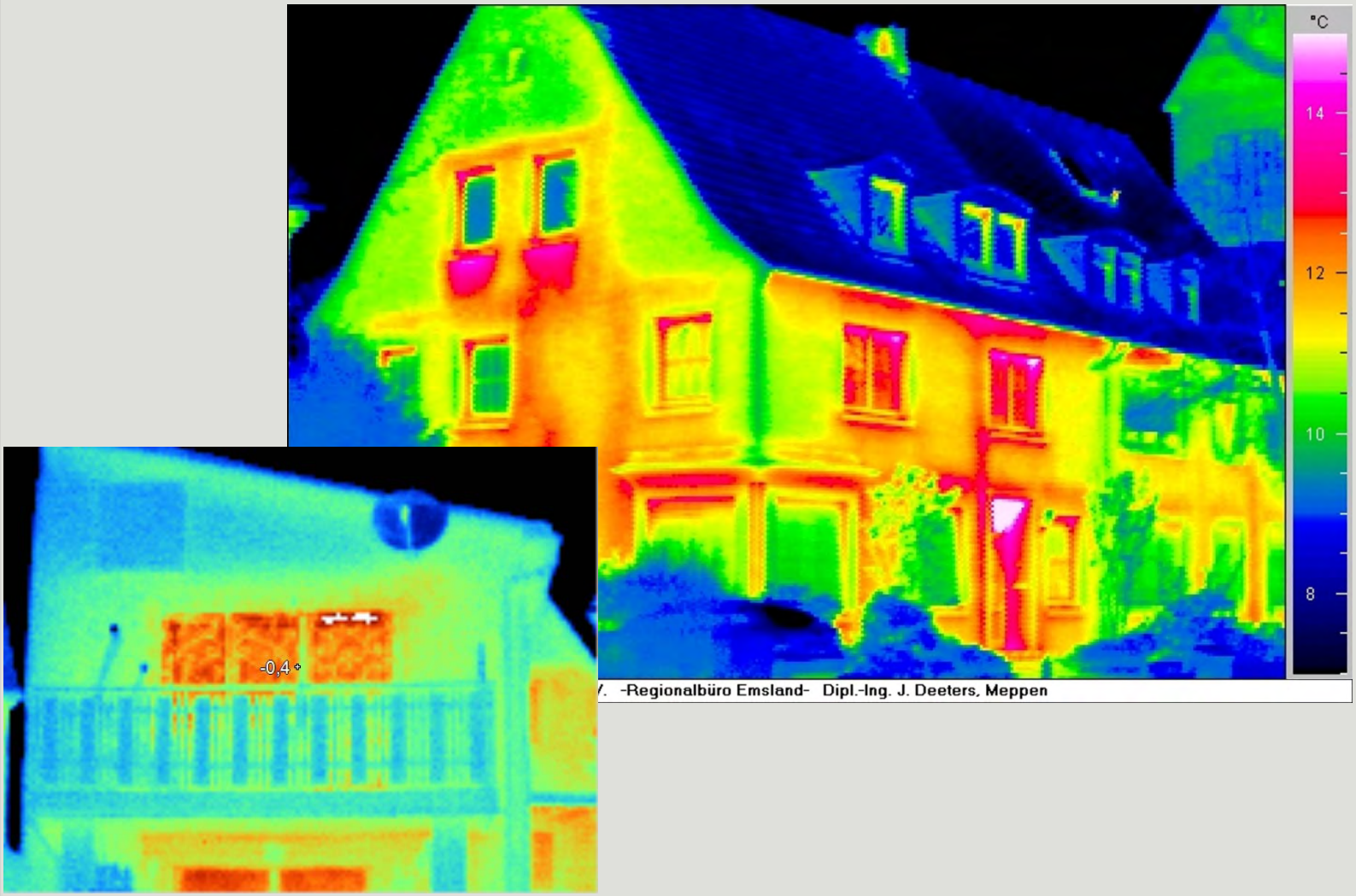
nZEBs: Status Quo



Inventing nearly Zero-Energy Buildings for tomorrow

Overview

nZEBs for municipalities

- Austrian example
- TU Wien
- AIDA project

Residential Building

Renovated to a Plus Energy Building in Kapfenberg / Austria (in 2012/13)

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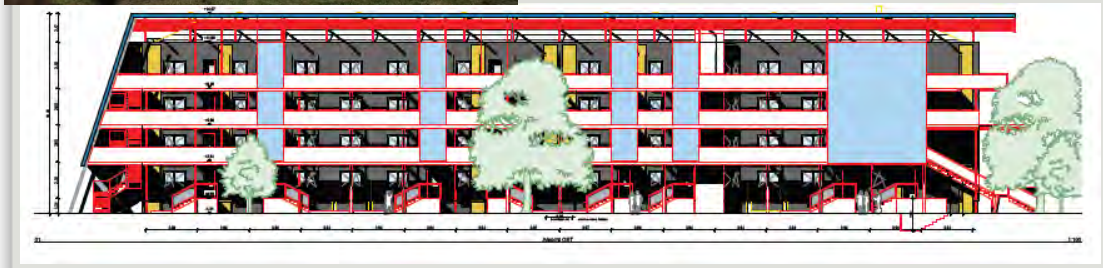
Pictures: Arch. Nussmüller, AEE INTEC



32 Apartments	60,96 to 88,71 m² net area
Energy demand for heating	11,6 kWh/m²a
PV-system	400 m² (50 kw_p) on the roof
Heating and domestic hot water system	200 m² solar thermal collectors District heating

Solar Decathlon

A competition towards plus-energy buildings!

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Pictures: LISI-Team

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20 teams are competing in October 2013 in Irvine, CA

Only two university are from outside the US

Plus-Energy-Office

Renovated to a Plus Energy Building in Vienna / Austria (2012/13)

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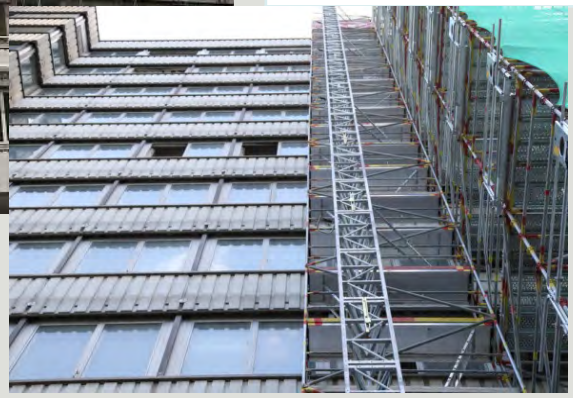
Office Tower of the Vienna University of Technology

Gross floor area	**7.322 m² (10 storeys)**
Energy demand for heating	**3,4 kWh/m²a**
Energy demand for cooling	**2,5 kWh/m²a**
Energy demand for lighting	**5,6 kWh/m²a**
Energy demand for ventilation	**1,0 kWh/m²a**
Total primary energy demand	**82 kWh/m²a**
PV-system	**Austrias largest PV system on the roof and the facade**
Heating and domestic hot water system	**Heat pump & district heating**

TU WIEN
TECHNISCHE UNIVERSITÄT WIEN
Vienna University of Technology



Technical scheme for nearly zero-energy buildings

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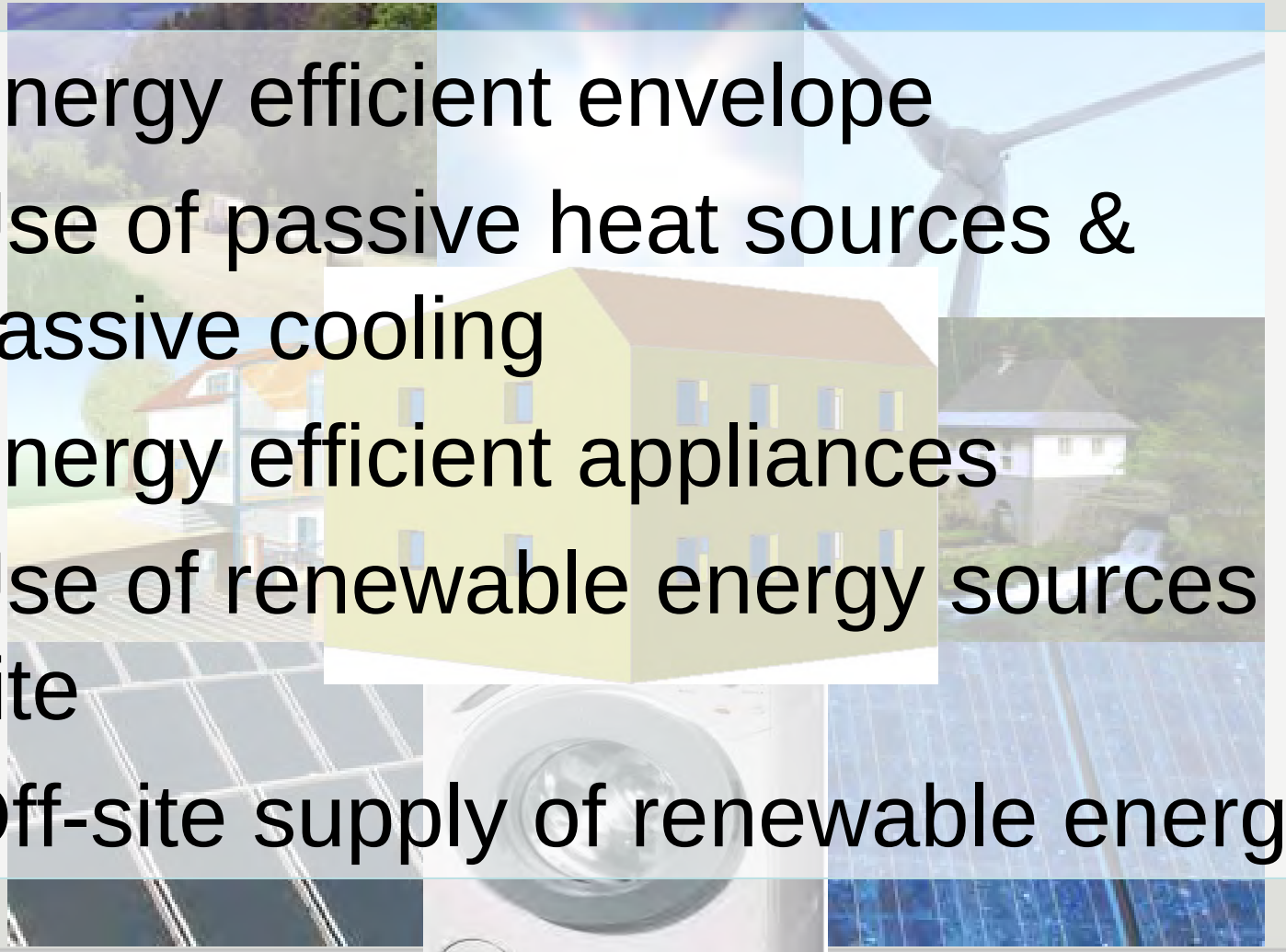

1. Energy efficient envelope
2. Use of passive heat sources & passive cooling
3. Energy efficient appliances
4. Use of renewable energy sources on-site
5. Off-site supply of renewable energy

AIDA at a glance

Affirmative Integrated Energy Design Action

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

Our vision: nZEBs for Europe

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Blood bank of Catalonia

nZEB Office building

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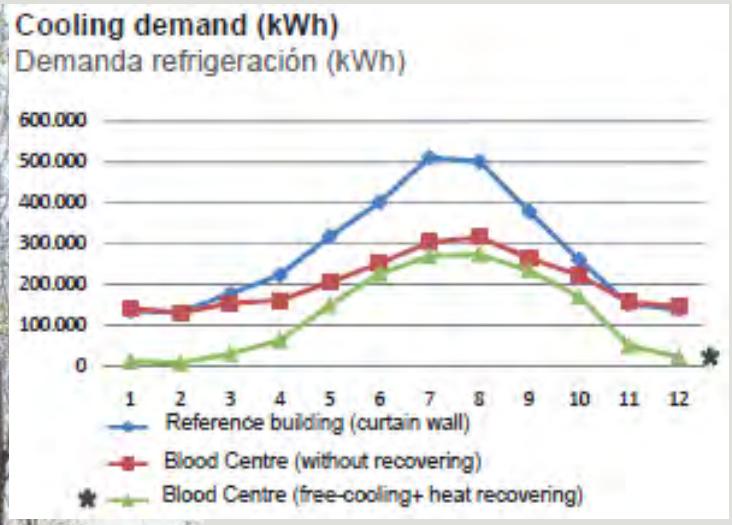
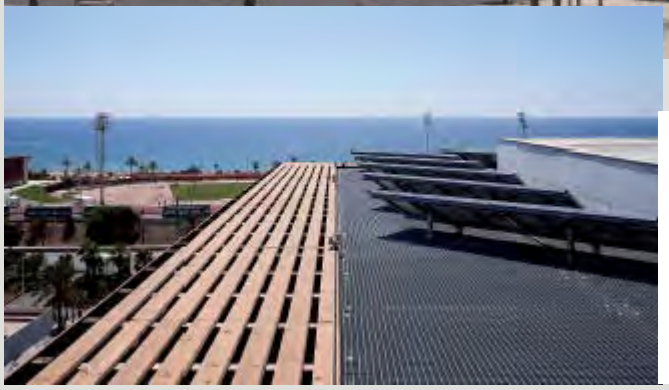
1st study tour
1st October 2012
75 Participants





Office building (16.600m²)

Exterior Wall U=0.3 W/m²K, G-Value glass front 0.27

Heating demand 8 kWh/m²a

Cooling demand 24 kWh/m²a

Solar thermal and photovoltaic system on the roof

Vocational school

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

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11th Study tour
12th June 2013
~50 Participants

- 3 presentations
- 2 buildings & biomass district heating

Multifunctional building	
Energy demand for heating	**20 kWh/m²a**
PV-system	**5 kw_p tracking system**
Heating and domestic hot water system	**Biomass district heating system**

AIDA for municipalities

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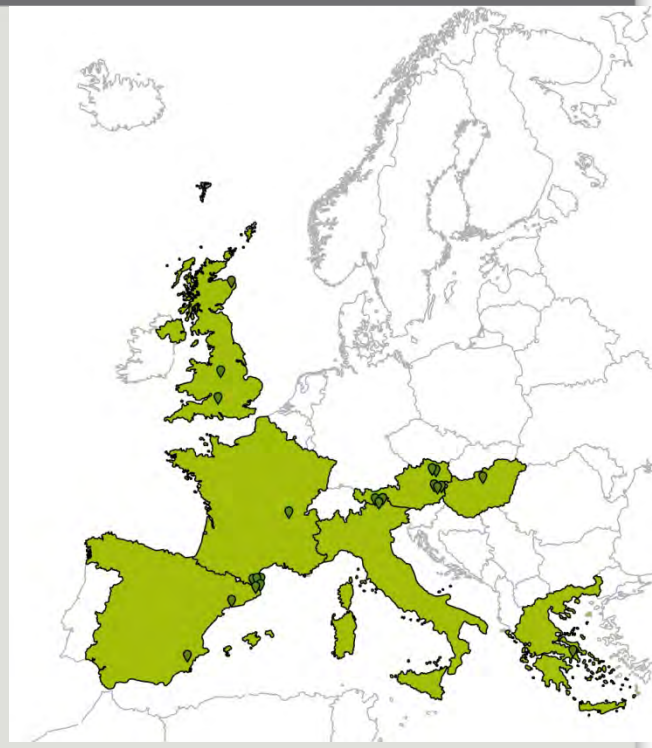
National & International study tours

- → Vienna
- → Lyon
- → Athens
- → Budapest
- → Barcelona… & many more!



nZEB in municipal practice

- → Assistance for new buildings & renovations
- → Assistance for the development SEAPs

energycities

Contact: Peter Schilken/Enery Cities

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Visit our homepage!

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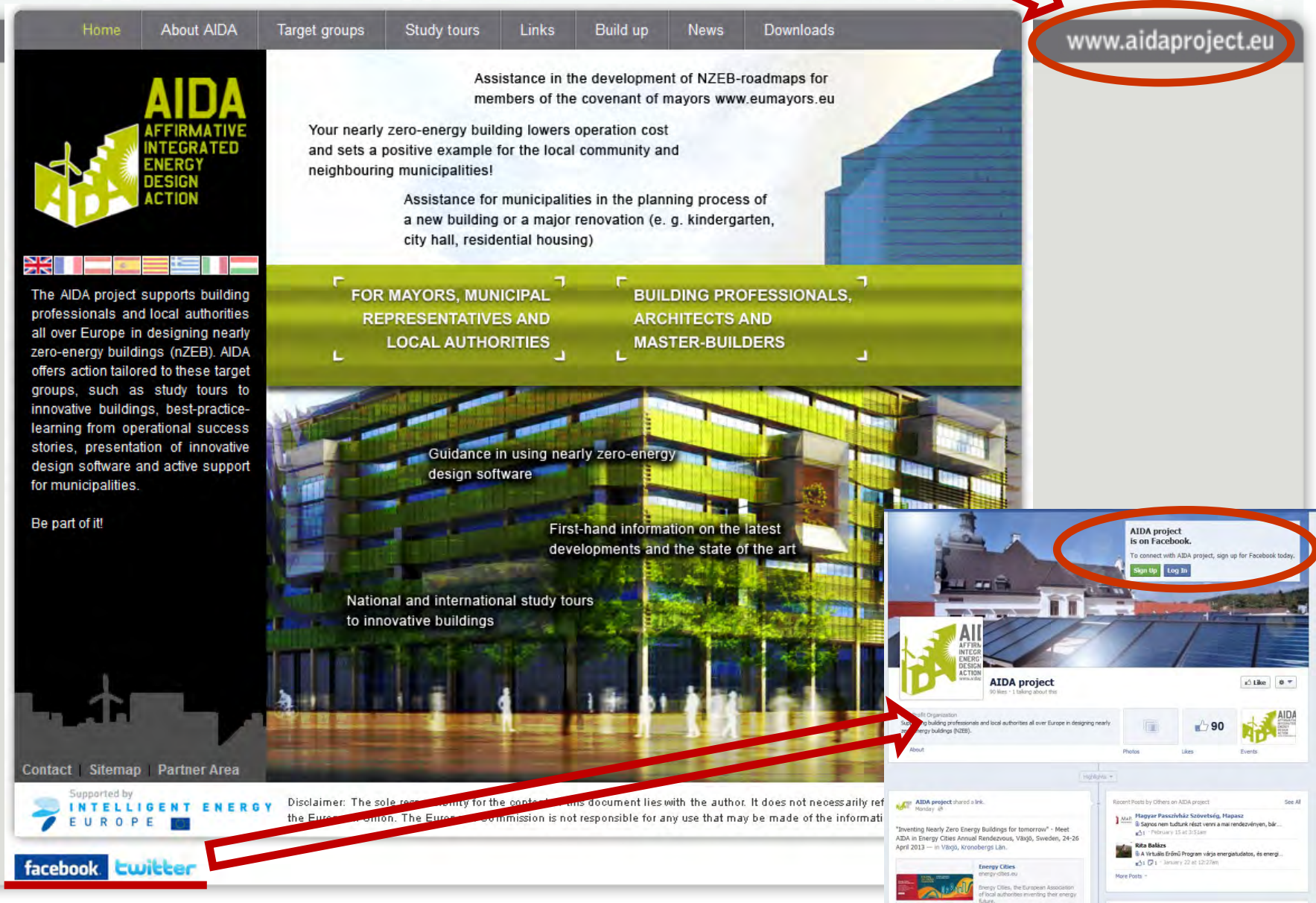

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- Technische Universität Wien, Energy Economics Group, AT
- AEE - Institute for Sustainable Technologies, AT
- CIMNE BEEGROUP, Building Energy and Environment, ES
- Centre for Renewable Energy Sources and Saving, EL
- EURAC research Institute for Renewable 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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