AIDA

AFFIRMATIVE
INTEGRATED
ENERGY
DESIGN
ACTION

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Energy Economics Group

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www.eeg.tuwien.ac.at

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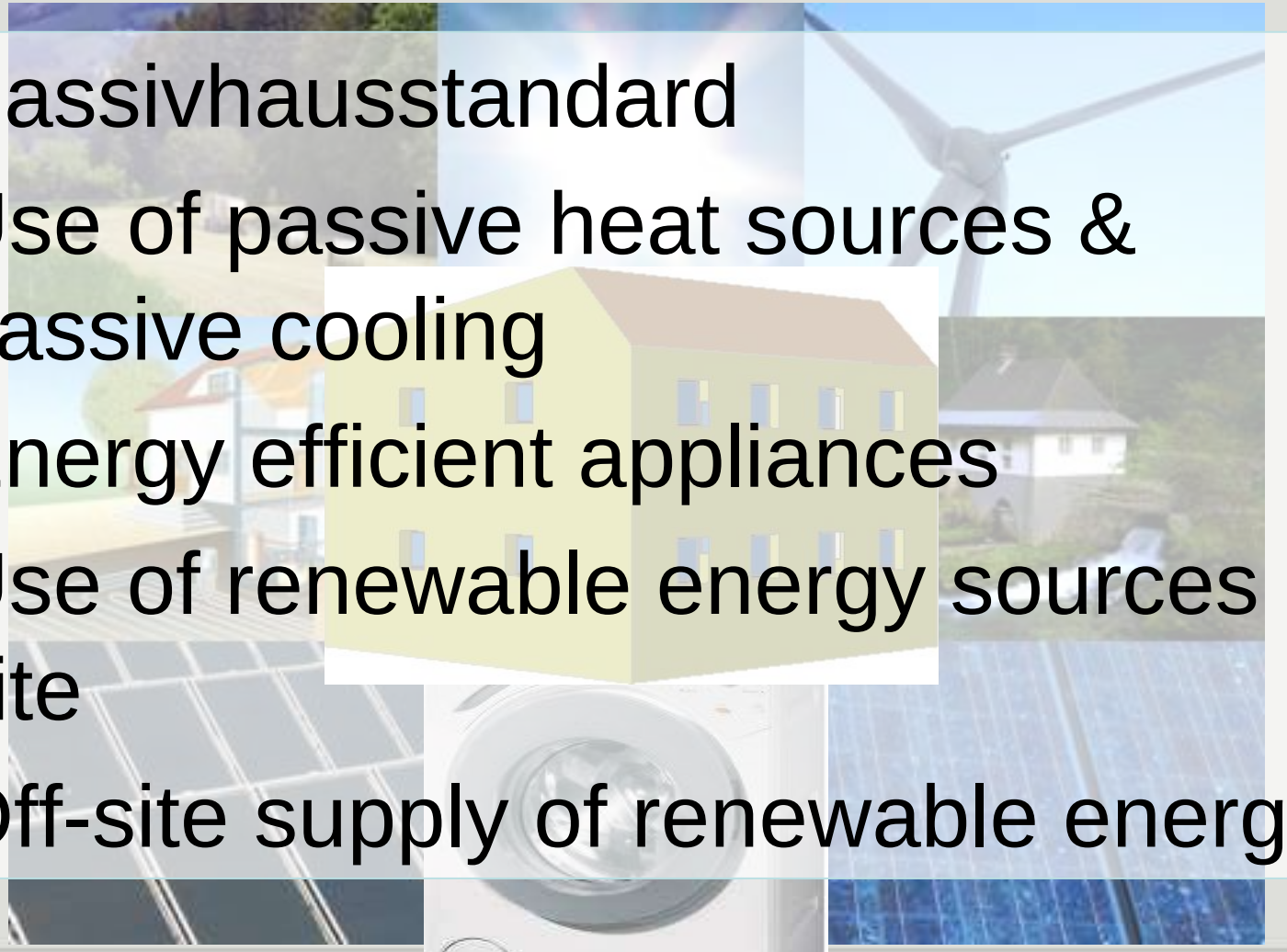
Technical scheme
Plus-energy building



1. Passivhausstandard
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

Surrounding conditions Plus-energy building

- Detailed analysis of the building site
- **User behaviour is essential**
- **Training and education of building professionals**
- Policy framework **?!**

nZEBs: Challenges for the next decade

Renewables Directive 2009/28/EC

- **Mandatory use of renewable sources** in new buildings and major renovations by 2015; Art. 13 (4).
- Public buildings as role models by 2012; Art. 13 (5).
- Information and **Training** Art. 14 – e. g. „certification schemes for installers“ of renewable energy systems by 2013.

nZEBs: Challenges for the next decade

New Energy efficiency directive (adopted 11 Sept. 2012)

- Art. 4: **3 % of the total floor** area owned and occupied by its central government **is renovated each year** according to 2010/31/EU, Art. 4
- Information and **Training,** Art. 13a

nZEBs: Challenges for the next decade

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"Energy performance of buildings"-directive

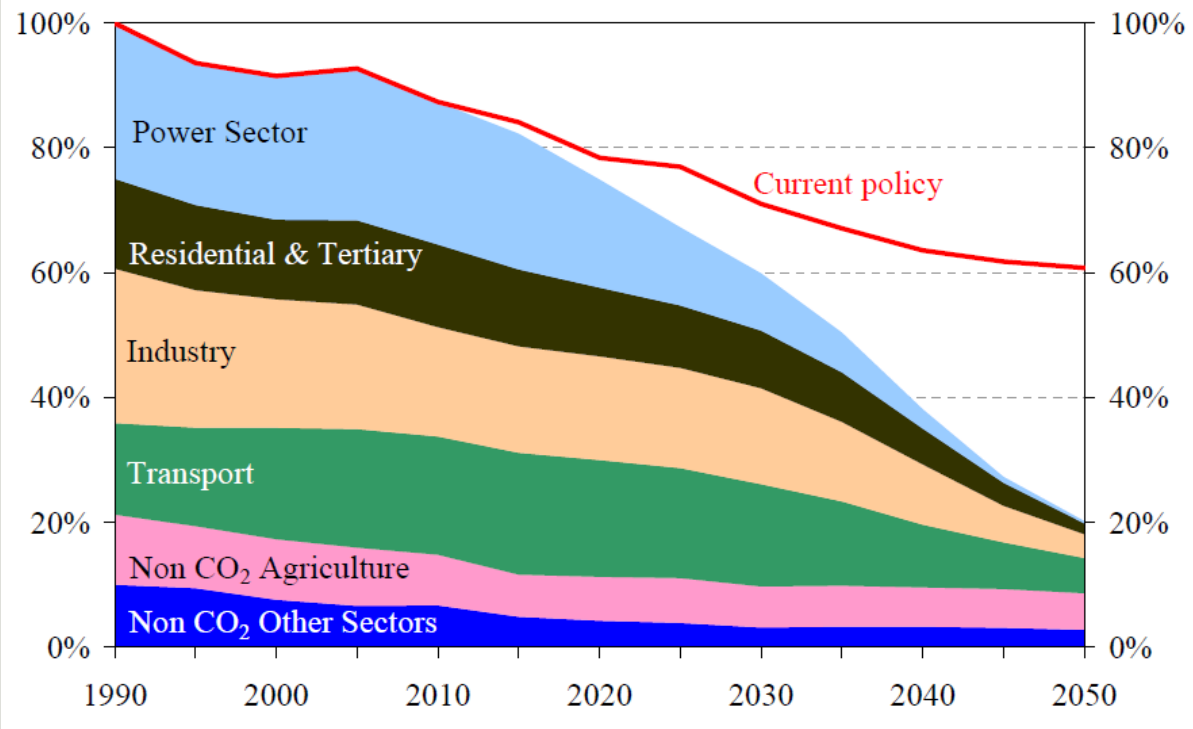
2010/31/EU

- **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 supporting policy making → www.entranze.eu

nZEBs: Challenges for the next decades

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



European target for CO_2-reduction according to the EU **Low-Carbon-Roadmap** 2050, COM(2011) 112

nZEBs: Status Quo

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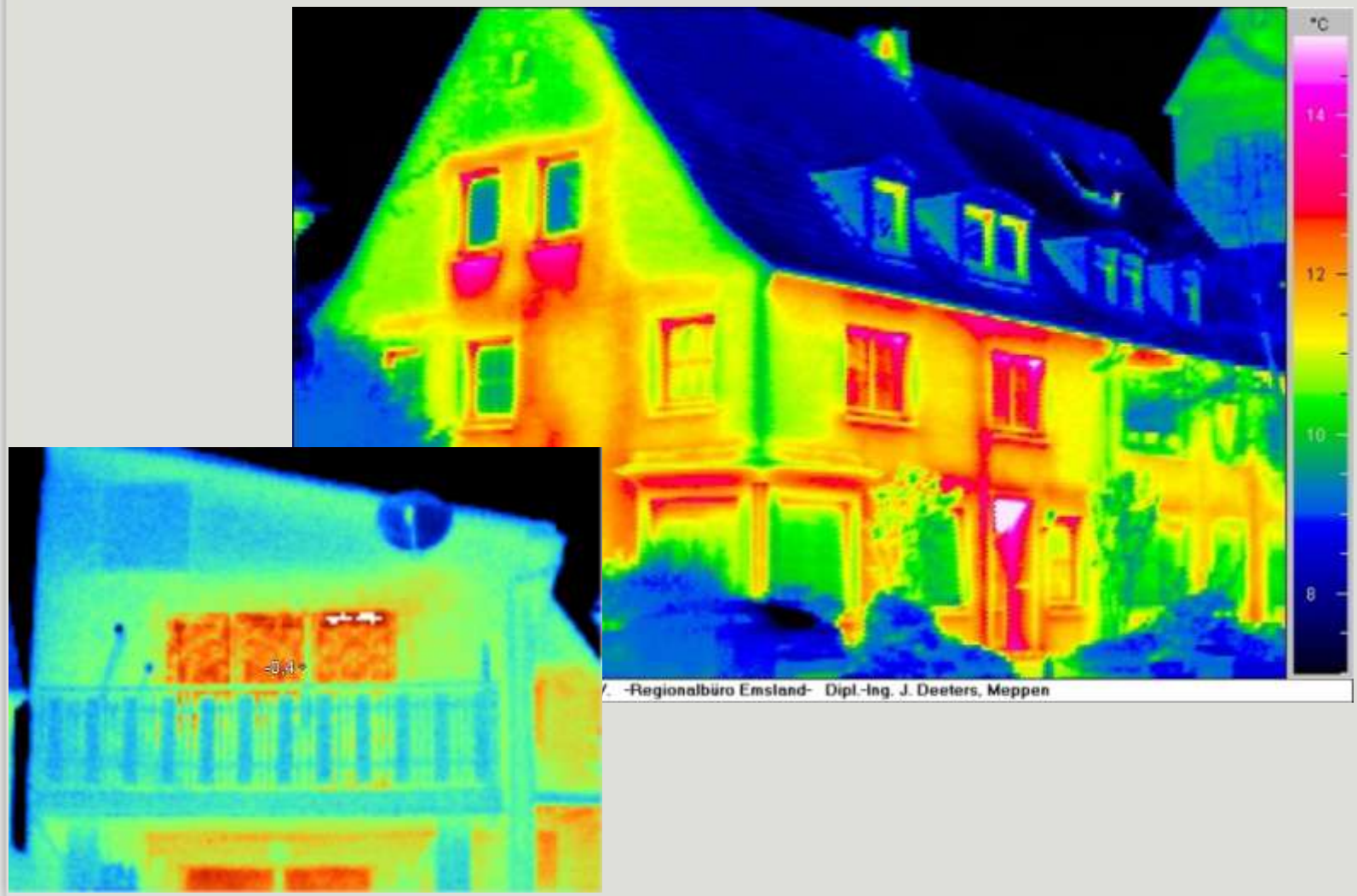

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1. nZEB will become a mainstream trend in Europe, if main stakeholders and the public are well informed and both consider sustainable building as a matter of course.

2. The wide-spread use of sustainable building technologies can be accelerated by creating local seeds as starting points for technology diffusion all over Europe.

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At a glance

Affirmative Integrated Energy Design Action

- ✓ AIDA aims to accelerate the market entry of nearly zero-energy buildings (nZEB)
- ✓ Study tours for municipalities and building professionals
- ✓ Design support for dedicated municipalities
- ✓ Demonstration buildings
- ✓ April 2012 – March 2015

Our vision: nZEBs for Europe

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AIDA‘s objectives and target groups

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Increasing the visibility of front runners

→ 42 national & 21 international study tours

Widespread adoption of integrated energy design & nZEBs

→ Assistance for new buildings & renovations

→ Assistance for the development of municipal roadmaps towards nZEBs

Target groups

→ Municipalities, local representatives, building professionals (e. g. architects & master builders) and (local) media

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Blood bank of Catalonia

Office building

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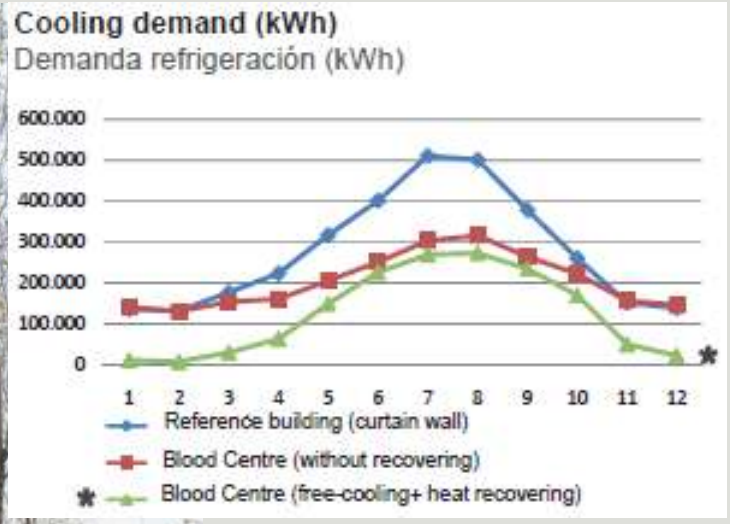
1st study tour
1st October 2012
35+43 Participants



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

Residential Building

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

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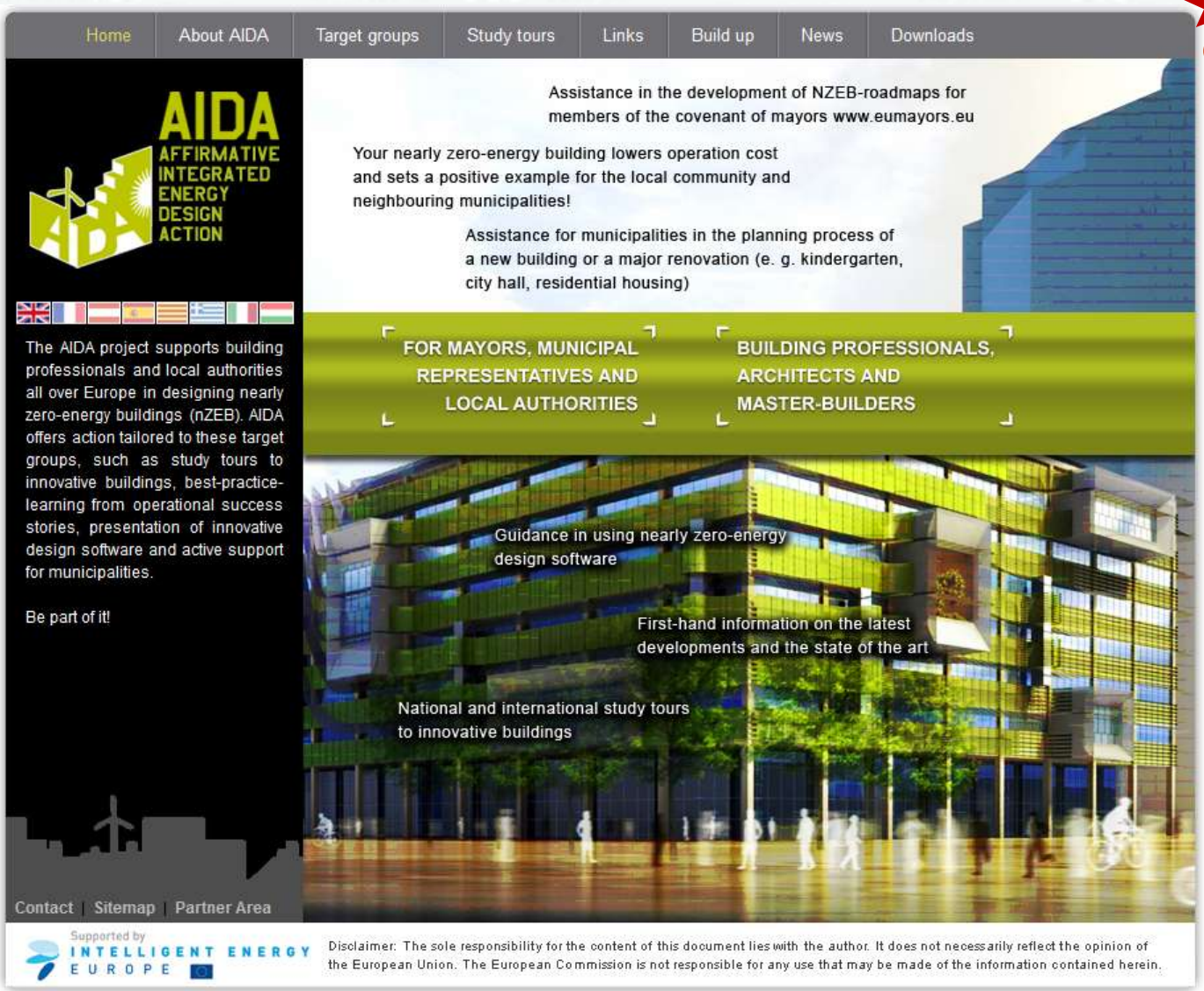
Pictures: Arch. Nussmüller, AEE INTEC

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

AIDA‘s expected results

- ✓ Enabling the market uptake of nZEBs in Europe by assisting dedicated municipalities in seven EU countries to develop tenders for new and renovated nearly zero-energy buildings.
- ✓ Increasing the visibility of front runners by offering study visits for more than 3000 European building professionals and local decision makers.
- ✓ Training for at least 1500 building professionals on integrated energy design tools
- ✓ 6 Mio. EUR investment made in sustainable energy, leading to 45 toe/yr Renewable Energy production and 51,5 toe/yr Primary energy savings

Visit our homepage!



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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

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