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# Renovation as Driver for Economic Growth – the experiences in Upper Austria

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### The Region of Upper Austria - Oberösterreich

Capital: Linz

Population: 1.38 million Area: 12.000 km<sup>2</sup>

Economic activities: industry, service sector, tourism,

25 % of the Austrian exports

### The O.Ö. Energiesparverband

- regional energy agency
- energy efficiency, renewable energy sources
- main funding: regional government
- services to private households, SMEs, public bodies
- manage building programmes (> 110,000 buildings since 1993)







## Renewable energy & energy efficiency high priority in Upper Austria



Share of renewable energy: 34 % of total primary energy demand

(15 % biomass, 15 % hydro, 4 % solar etc.)

Share of renewable heating: 50 % of total heating demand

Avoided imports of fossil fuels: > 1 billion Euro per year

#### By 2030, all electricity and space heating will come from renewables!

→ reduction of heat demand by 39 %

→ reduction of electricity demand by 0.5 %/year

→ minus 65 % CO<sub>2</sub> emissions

Motivations: climate - economy - social





# The building market - resistant to change: Carrots, sticks and tambourines



## **Housing Renovation Programme** in Upper Austria - 1998 - 2011



- soft loan programme for home renovation with energy efficiency criteria
- part of a large regional programme (new construction & renovation of singlefamily homes and apartment buildings)
- 45,000+ renovated homes since 1998
- "deep renovation" with 3 levels of energy performance requirements (larger loans for higher energy efficiency levels)
- free individual on-site energy advice
- O.Ö. Energiesparverband provides support to regional government (110,000+ new & renovated buildings assessed and advised)

#### Average energy performance (useful heat) - 2011

• before renovation: 242 kWh/m²,a

after renovation: 61 kWh/m²,a





### **Housing Renovation Programme** in Upper Austria - 2011



#### **Results in 2011**

participants:
 5,500 one-family homes

• programme costs: 36 million Euro

energy-related investments: 200 million Euro

• employment equivalent: 3,000 person years

tax income:
 400 million VAT + others

energy savings
 4,700 GWh in 20 years

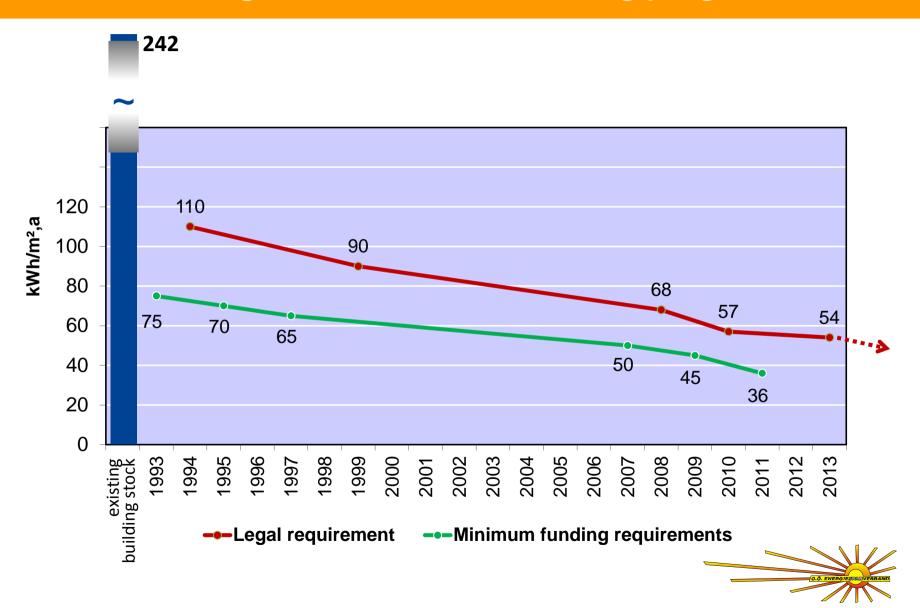
• CO<sub>2</sub> savings 1.3 million tons in 20 years

savings of energy costs:
 470 million Euro in 20 years





## **Energy performance requirements:**minimum legal standards and funding programmes



## Leading by example: Building renovation with energy efficiency contracting

- energy efficiency contracting in public buildings owned by the Upper Austrian administration
- 2003: 1st pilot project, since then 4 more "pools of buildings"
- in total 40 buildings: schools, district offices, hospital
- measures taken by the ESCOs: control systems, retrofitting of windows, biomass heating systems, water saving measures
- contract duration: typically 10 years
- 3.3+ million Euro investment by the ESCOs
- 2.4 million Euro guaranteed
  energy cost savings and 13,000 t CO<sub>2</sub>





## Lession learnt: we need "smart" building renovation programmes



#### A well balanced approach required!

- based on energy performance requirements
- high level of energy efficiency ambition vs. high market activation
- programme size: significant enough to be noticed but not too big (leading to supply shortages and higher prices)
- avoiding "boom and bust"
- no "one fits it all" different instruments to mobilise different market segments (domest/non-domestic; low income/middle-class)
- the right combination of "sticks + carrots + tambourines"

