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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 km²  
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 % CO₂ 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 single-family 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
- **CO₂ 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 CO₂
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"