

A successful strategy for energy efficient public buildings

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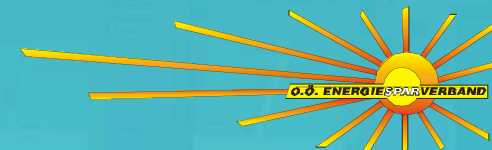
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O.Ö. Energiesparverband



Objectives

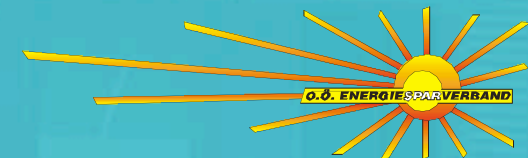
- Energy Efficiency
- Renewable Energy Sources
- New Technologies

Organisation

- Regional Energy Agency
- set up in 1991
- Services for private households, public bodies & businesses
- Member of the European networks (OPET, FEDARENE, EUFORES)

Services

- Information and public awareness
- Energy advice
- Events & publications
- European projects
- Energy certification for buildings
- Training
- Third party financing
- Research and pilot projects
- OEC - green energy network



Oberösterreich - Upper Austria

Capital:	Linz
Population:	1.38 mio
Area:	12.000 km ²
GNP:	30.400 mio €
Cross inland cons.:	299 PJ; 30 % renewables
Unemployment:	4.3 %
economic activities:	industry, service sector, tourism, 25% of the Austrian exports

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- regional energy agency
- energy efficiency, renewable
- energy & innovative technologies
- main funding: regional government
- services to private households, SMEs, public bodies



Energy Action Plan of Upper Austria

1994 - 1999

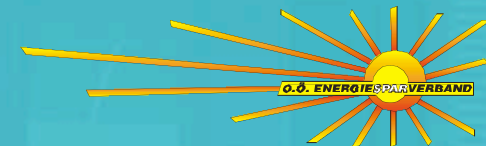
- 30 % renewable energy (14 % hydro, 14 % biomass, 2 % solar)
- energy consumption in new housing reduced by 30 %
- 15,000 jobs

2000 - 2010

- double biomass & solar
- increase energy efficiency by 10 %

Energy Efficiency Programme

- adopted in 2004
- 1 % energy savings/year
- 1.5 % for the public sector



Upper Austria's sustainable energy strategy

3 Pillars



**Legal
measures**

"stick"



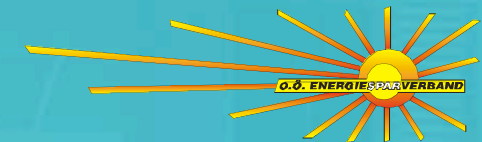
**Financial
measures**

"carrot"



**Information
activities**

"tambourine"



Example: Building strategies in Upper Austria

Energy performance indicator

Energy certification / labelling

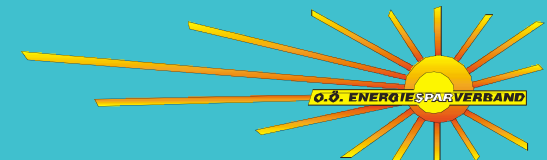
Training & education

Subsidy programmes

Advice & information

Legal thresholds

In Austria, the regions are responsible for the implementation of the Buildings Directive.





Creating an Energy Efficiency Market

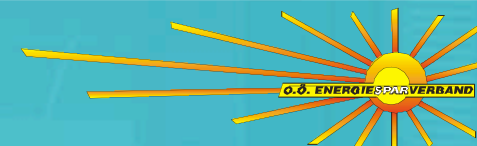
The Upper Austrian Public Buildings Programme

"Political & legal measures"

- 1.5 % target
- minimum performance requirements
- performance requirements in tender documents
- priority for RES for heating & hot water
- mandatory energy accounting

"Soft measures"

- energy advice
- support to tenders
- events, competitions, publications, training
- financial support/TPF
- local energy strategies (EGEM)
- exemplary role of regional buildings

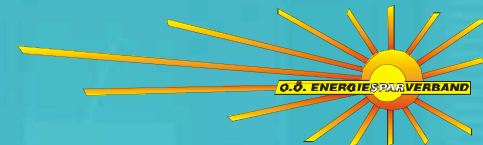


Annual benchmarking of regional buildings

Building types	1994	2002	2004	2005
vocational schools	117	90	90	85
district offices	117	95	88	80
administration buildings	105	104	98	93
agricultural schools	127	109	104	102
hospitals	218	160	147	140

Energy performance indicators for heating (kWh/m²,a)

Table1: Energy accounting of the public buildings owned by the regional administration.
Source: Land OÖ, Abt. Gebäude- und Beschaffungs-Management





Third Party Financing Programme

- support programme for TPF
- more than 60 projects supported, more than 100 TPF projects in the region (mostly energy efficiency contracting)
- 1.3 M€ support → 15 M€ investment triggered
- more than 10% of all municipalities in Upper Austria have implemented a TPF project
- success factors:
 - pilot projects & step by step development
 - standardised procedures
 - information activities, PR
 - (neutral) advice for clients and ESCOs
 - high satisfaction of clients (1.67)





TPF projects for regional buildings (1)

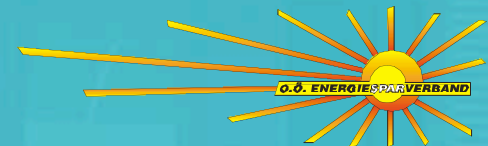
- TPF-projects for the public buildings owned by the Upper Austrian administration:
 - 1st TPF pilot project (2003/2005)
 - "Pool I": 3 buildings/inst. (2006)
 - "Pool II": 10 buildings/inst. (2006)
 - "Pool III": 4 buildings/inst. (2008)
 - "Pool IV": 25 buildings/inst. (under prep.)
- retrofitted and not retrofitted buildings included in the pool
- retrofitting measures implemented by regional administration
additional optimisation done by the ESCO





TPF projects for regional buildings (2)

- "Pool of 10 buildings": vocational & agricultural schools, district offices, hospital
- measures: optimisation of control, retrofitting of windows, installation of biomass heating systems, water saving measures,
- more than 600,000 € investment
- duration: 10 years
- annual savings of 58,200 € energy costs and 278 t CO₂





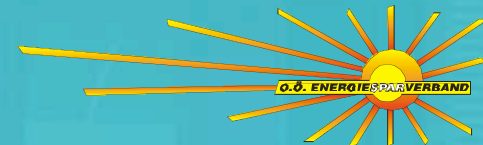
Trainings, events & competitions for municipalities

Training seminars & events

- "Breakfast for mayors" (3 times/year), examples for topics: local energy strategies; renovation of schools; energy-efficient streetlighting; spatial planning/building permits & energy
- Training "Energy in municipalities" (twice/year)
- Contracting meetings & events

Competitions

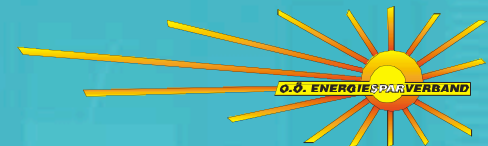
- Annual regional competition "Energie Star"
- "Regional solar league"





Local energy strategies

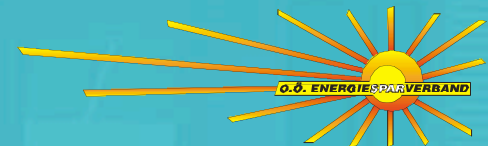
- "EGEM – Energiespargemeinde" (Energy saving municipality) programme
- process of commitment & action, covering energy efficiency & renewable energy sources
- modular approach: analysis of the situation – defining EE & RES potentials – targets – action plan – implementation – monitoring
- important: local participation and involvement
- part of the regional energy strategy, up to 20,000 € financial support
- so far, more than 20 E-GEM municipalities





Campaign "Richtig Hell" – "Really Bright" Energy Efficient Lighting in Upper Austria

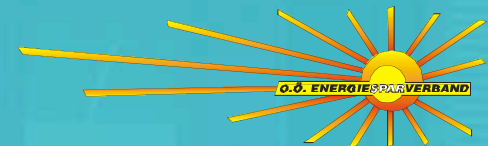
- regional campaign for different target groups
- spring/summer 07: companies (focus on hotels);
autumn/winter 07/08: homes & offices & street lighting
- campaign for companies:
 - press campaign
 - exchange of lamps with reduced prices for CFLs & halogen lamps in cooperation with Philips & Osram & 168 retailers
 - direct mailings (focus on hotels)
 - training seminars, event "energy efficient lighting" (> 300 part.)





Renewable energies in municipalities

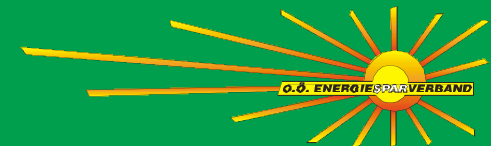
- part of local energy strategies
- priority for RES for heating & hot water
- > 100 municipalities heat with biomass
- > 235 district heating plants
- 80 biogas plants
- new source of income for farmers
- community involvement in RES-e plants (hydro power, wind, PV)



Energy Efficiency

invisible - unknown - boring

clean - clever - competitive



World Sustainable Energy Days 2008

www.wsed.at

5. - 7.3.2008

Wels / Austria

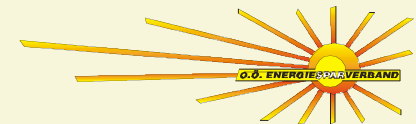
Call for Papers

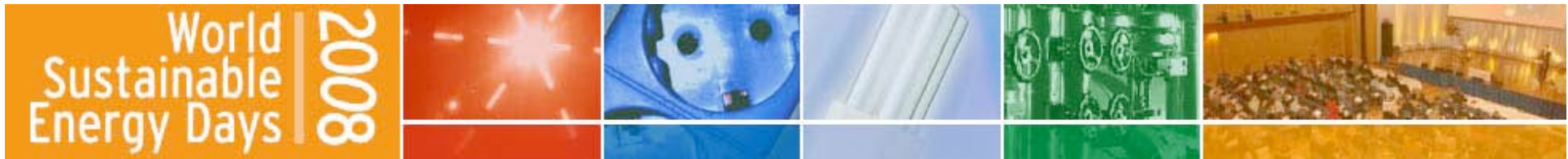
10. 10. 2007

Deadline



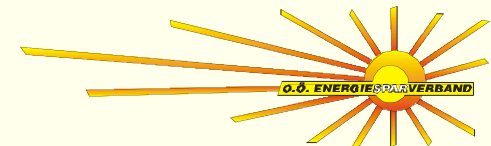
Intelligent Energy  Europe





World Sustainable Energy Days www.wsed.at

- Renewable Heating & Cooling
- European Pellets Forum
- European Energy Efficiency Conference
- Electricity Efficiency Conference
- Efficient Lighting Conference
- Seminar "Energy Efficient Procurement"
- Seminar "Future Energy Technologies"
- **Call for Papers: 10.10.2007**



Examples

"TZ Perg":

- "Technology center" in Upper Austria
- low energy office building
- 3,000 m² heated area
- energy performance indicator for heating below 20 kWh/m²,a



"Passive house music school Wolfern"

- first passive house music school building in Upper Austria
- innovative energy concept, due to the high insulation and construction standard, now conventional heating system is required
- energy performance indicator for heating max. 15 kWh/m²,a

