

# ECO-BUILD

## Comparison of Policy Regimes

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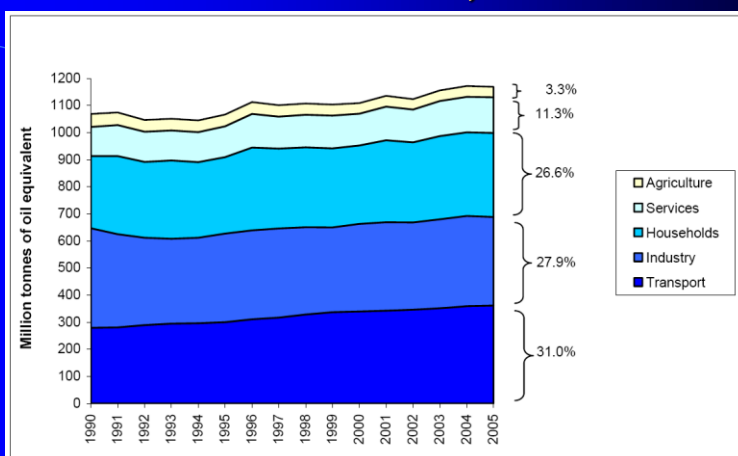
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## Final energy consumption by sector in the EU-27, 1990-2005



- 1990 - 2004, energy consumption by households increased to 26 percent from 23 percent of total energy consumption - GHG Emissions for households remained at 23 percent of total emissions - [eea.europa.eu](http://eea.europa.eu)

Drivers of increased consumption: raising personal incomes, increased ownership of appliances, larger homes

Final Energy Consumption (million TOE)      Per Capita

Austria	27	3.3
France	158	2.5
Germany	218	2.6
Italy	134	2.3

## Energy Consumption Rates Building Sector

Austria (2003) – 34% total energy consumption,  
20.5% heating, 17% hot water

France (2005) - 42.5% of the total energy consumption  
=23% of GHG Emissions - Heating represents 56% of  
the average household's energy consumption.

Germany (2005) 29% only primary-tbc

Italy est. 29%



## Key National Policies

- - Austrian Energy Certification Providing Act (2006) - for sale, rental of buildings/units
- Climate Strategy (2007) – emphasis on use of locally available technologies for energy efficiency, development of renewables
- - German Energy Saving Regulation (*Energieeinsparverordnung – EnEV*) - EPBD
- Renewable Energy Heating Law (*Erneuerbare-Energien-Wärmegesetz– EEWärmeG*) (2009) – mandatory renewables in new construction



## Key National Policies – con't

- Italy's Law 192/2005 transposed the EPBD Directive and updated building codes;
- 'White Certificate' system (2004) – energy providers to meet efficiency targets
- France: Law RT2005, aimed to reduce household energy consumption to between 80 to 130 KWH/m<sup>2</sup>. RT 2012 with a target of 50 KWH/m<sup>2</sup> - applies to all building permits for houses constructed since 2006. Renovate all public buildings by 2012 (Grenelle Environment Prog.)

## Energy Performance Certificates

- Mandatory upon rental and legal transfer of buildings and units:
  - Austria, Italy, France, Germany
- Qualified Experts with examination
  - Italy, France
  - Germany and Austria (training offered)

## Building Integrated Photovoltaic Systems

- Germany: European leader in Building Integrated Photovoltaic Systems followed by Italy, France and Spain on European level.
- Due to:
  - - supportive legislation, eg: German EEG law
  - - feed-in tariffs and interest free loans
- Implications:
  - - high level of expertise among BIPV installers, designers, architects and manufacturers
  - - high level of awareness among the end consumers.

## Incentives

- Financing schemes : green mortgages, White Certificates (Italy, France) Green Certificates – Renewable Energy Certificates (RECs)
- Tax credits
- Performance contracting
- Public awareness and education, ie: advice centers



## Economic Recovery Plan % dedicated to Green Industries

- Austria:
- France: 20% dedicated to low carbon industries
- Germany: 13%
- Italy: 1%

## Policy Benchmarks

- - Cost effective with minimum bureaucracy
- - Quick market penetration — ie: lack of expertise and incentives to be addressed
- - Long-term and integrated approach
- - Public awareness and outreach component

- THANK YOU
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