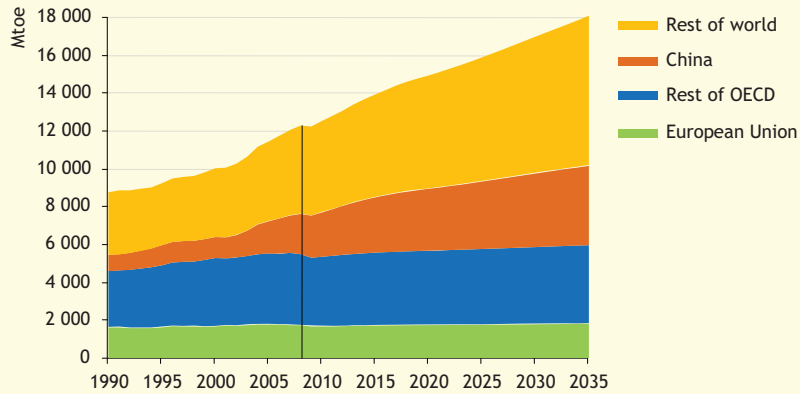


World energy demand is on the rise



EU energy consumption is expected to level out in future but world energy consumption will continue to grow due to global population growth and economic catching up. Overall, world energy demand may grow by 45 % between 2006 and 2030. In China and India, demand will nearly double.

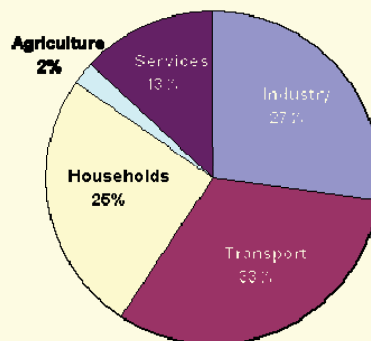


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Source: IEA, World Energy Outlook 2010

Energy powers our society and economy



EU-27 Total Final Energy Consumption (2008) Total = 1168.63 Mtoe

Transport and industry consume more than half of the total energy in the EU, while a quarter of energy is consumed by households.

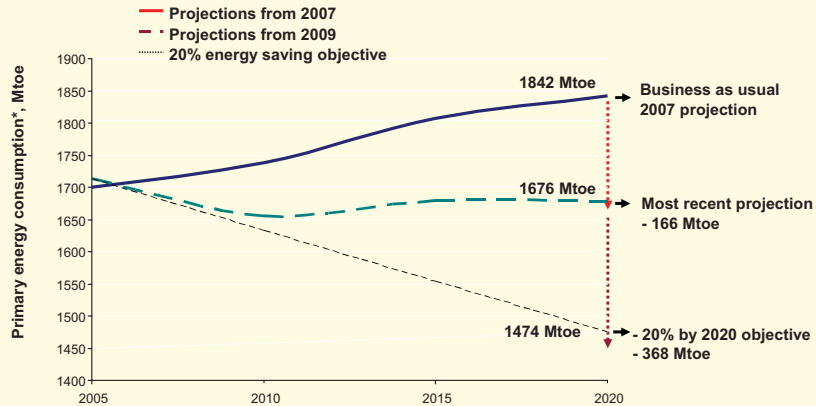


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Source: Eurostat 2010

The EU is not on track to meet its target



* Gross inland consumption minus non-energy uses

In spite of progress, significant additional efforts are needed to achieve the -20% energy consumption target. Most recent projections show that with current policies we will only achieve a 10% cut.



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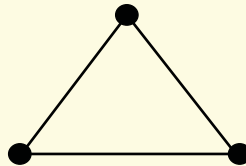
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Source: European Commission

Energy efficiency has multiple benefits

COMPETITIVENESS

- cut Europe's energy bill by about € 200 billion / year in 2020
- lower households' bills by about €1000 per household / year
- create up to 2 million jobs by 2020
- boost R&D and create markets where EU can become a global leader



SECURITY OF SUPPLY

- decrease our energy dependence
- help balance our trade
- alleviate the need for gas pipelines and grid investments

SUSTAINABILITY

- help fight climate change:
 - 740 Mt CO₂ / year in 2020
- limit environmental degradation



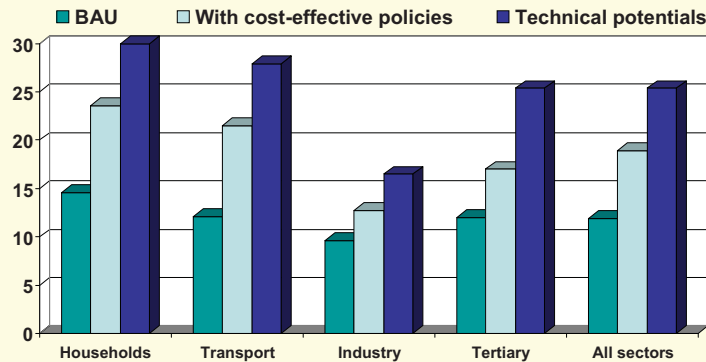
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Source: European Commission

This can be done in a cost-effective manner

Potential of consumption reduction by sector by 2020 (%)



While technologies are available for substantial energy savings, some may be too costly. Existing energy saving commitments can be achieved with cost-effective policies. The “business as usual” (BAU) scenario will not deliver.



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Source: European Commission

Situation in CEE (environment, energy)

- Energy
 - Relatively high energy intensity
 - Decades of subsidized energy prices
 - Limited – although increasing – use of RES
 - Good potential for the utilisation of domestic renewables
 - Old and very poor building stock from the energy perspective
 - Large proportion built with industrial technology
 - Use energy inefficiently and contribute to GHG emission
 - District Heating (DH) widespread, but also in need of modernisation
 - both company and user side
- Transport
 - Obsolete public transport infrastructure with extremely old vehicles
 - Low energy efficiency
 - Established network in some countries



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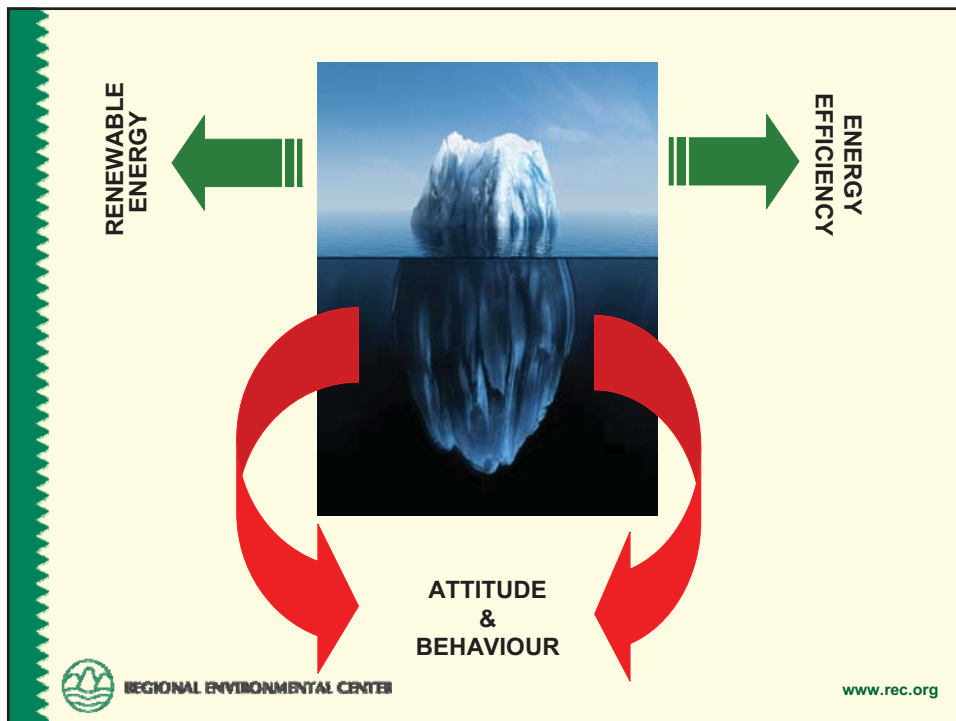
Eurobarometer results (January, 2011)

- The wish list of EU citizens on energy:
 - Stability of energy prices: the respondents' first priority (29%)
 - Renewable energy: Europeans' second priority (27%)
 - Security of energy supply: the third priority (20%)
 - **Energy efficiency: the fourth priority (16 %)**
- *Is it the right approach???*



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Key examples – awareness raising

- Education for the youngest – **My Friend Boo**
 - Development of cartoon series for 4-7 years old children launched in 2010
 - Energy conservation, renewable energy, sustainable transport
- Multi-media environmental education curriculum kit – **Green Pack**
 - Primarily intended for secondary school teachers and their students
 - Focus on particular aspects of environmental protection and sustainable development
 - **30.000+ teachers - 3.000.000+ students - in 18 countries....**
- Cross-sectoral approach – **Sustainable Development Academy**
 - A comprehensive (~ 1 month!) educational programme about the “three pillars” of sustainable development initiated by the Italian Government
 - **SEE □ CEE □ Black Sea Region □ Kazakhstan □ Russia**

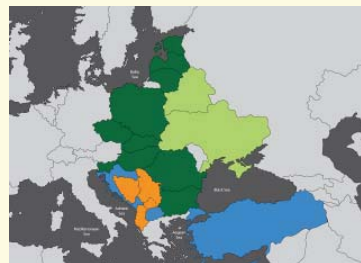


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Regional Environmental Center (REC)

- “... is an international organisation with a mission to assist in solving environmental problems (...)”
 - The **REC** is legally based on a **charter signed by 30 countries** and the EC
 - Multi-stakeholder international Board
 - **190 staff** (some 30 nationalities)
 - **Offices in 17 countries**
 - 100% project based organization
 - over **200 running projects**
 - 10 – 12 million € annual turnover
 - Operates in various regions:
 - EU Members of Central and Eastern Europe
 - EU Enlargement countries, candidates and potential candidates
 - Eastern Partnership Countries
 - EU27
 - Operation beyond the REC Country Office Network



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Good Practices

- **INTENSE** www.intense-energy.eu
 - Intelligent energy saving measures for municipal housing in CEE countries
 - The project focuses on enhancing the implementation and enforcement of the Q EU legislation in new MS with special emphasis on municipal/local level implementation
 - Main activities: assessing consumption patterns, developing public awareness raising and information toolkits; selecting best practices for energy saving measures in buildings; enhancing knowledge and skills of different stakeholders by training programmes; municipalities integrate EE into city planning
- **USE Efficiency** www.useefficiency.eu
 - Universities and Students for Energy Efficiency project is to create a common stream for energy efficiency systems in university buildings.
 - Main Activities: improved energy performance of university buildings with students active involvement in defining EE measures; trainings modules and a summer school for students; increase in knowledge by sharing internationally the outcomes of energy efficiency activities for university buildings
- **Trainrebuild** www.trainrebuild.eu
 - accelerate the implementation of EU legislation on buildings (i.e. EPBD Recast, ESD, NEEAP) and addressing the retrofit of a wide range of "residential buildings", spanning from individual to multi-family houses and from private to social housing
 - Main activities: analysis of the training needs for stakeholders in focus; training for property owners, public authorities (financing also provided); training toolkits, forums, best practices



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Good Practices – Regions for Sustainable Change Project

- The project data
 - 12 partners from 8 countries
 - 2008-2011
- The project aims
 - To promote an EU-wide shift to climate-friendly economies through regional authorities
- Main activities:
 - Establishing indicator system (climate confidence index)
 - Assessment of present stage of regions
 - Practical tools (handbook) how to integrate climate change issues into policies and practices



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Good Practices – Financing Low Carbon refurbishment

- Demonstration project in the CEE region support removing barriers from financing low carbon refurbishment projects on a large scale
- Main Activities:
 - Establish a Finance Research Office
 - Carry out research on existing policy framework for green banking and guarantee fund, available financing mech., EE and RE technology and market, recommendations for policy mix and existing financial mechanisms
 - Implement demonstration projects



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Good Practices – Energy-Efficient Mobility of Older People

- Europe facing major demographic challenges. 2012: European Year of Active Ageing
- A “car generation growing old” → using alternatives (walking, cycling public transport) is good for the individual, good for society.
 - The AENEAS project implemented demonstration projects to enable this.
 - When alternatives exist, we tell people about them. For this the REC implemented a major Europe wide information campaign.



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AENEAS – www.aeneas-project.eu

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Good Practices – ELTIS: the urban mobility portal

- Since 2006 the REC supports the EC to operate its flagship web portal on urban mobility
- Content provision (news, case studies, events, legal acts, translation)
- Large-scale Europe-wide dissemination activities
- User support: training seminars, helpdesk
- www.eltis.org



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Good Practices – CIVITAS

- CIVITAS is an EU initiative for supporting and evaluating the implementation of integrated sustainable and energy efficient urban transport strategies in European cities that should make a real difference to the welfare of the European citizen
- Key elements
 - Network of cities for cities
 - Public Private Partnerships
 - Political commitment
 - Living “laboratories”
 - Peer to peer learning

www.civitas.eu



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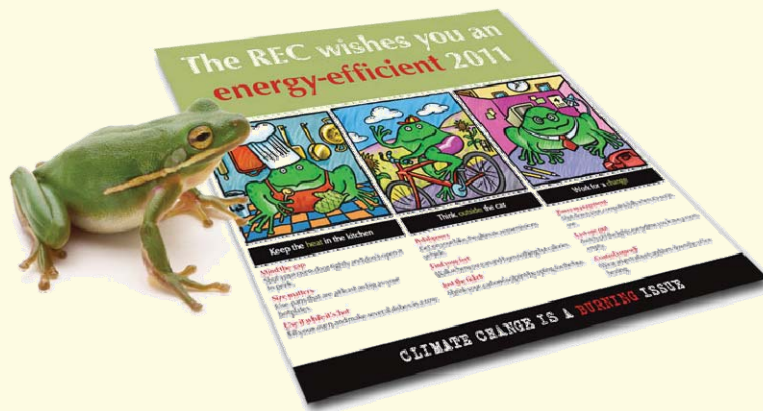
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REC's Zero Emission Conference Center

- The biggest SOLAR POWER plant in Hungary (close to 30 kW maximum capacity)
 - High efficiency envelope
 - minimise heat loss in winter, prevent heat gains in summer and maximise natural lighting
 - Lighting system
 - a „light shelf” diffuses natural light throughout the interior
 - Photovoltaic
 - The PV system generates close to 30 kilowatt hours
 - Heating ventilating and air-conditioning
 - Ground source heat pumps
 - Architecture
 - Energy systems and architecture have been designed in a modern and integrated approach
- ↓
- Eco-friendly building initiatives
 - China, Montenegro...



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