- 4th SEE ENERGY FORUM-

Energy & Climate Change:the View of European Energy Industries

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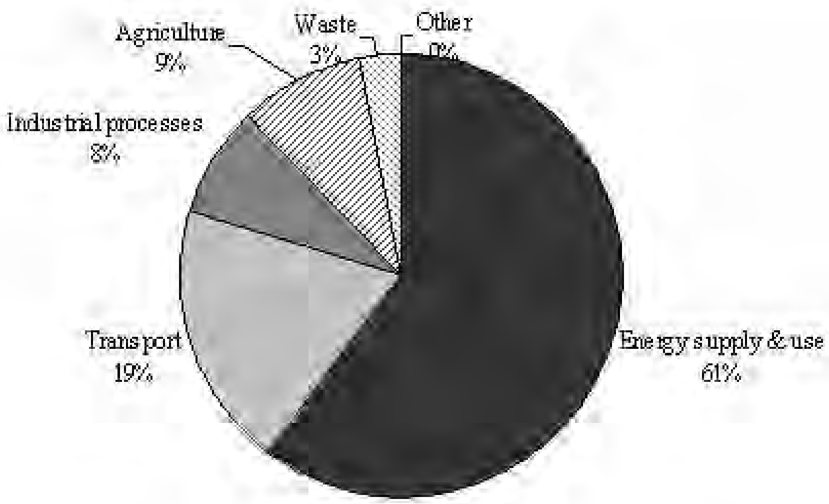
Terms of Reference

The **Objectives** of this WEC- Study are:

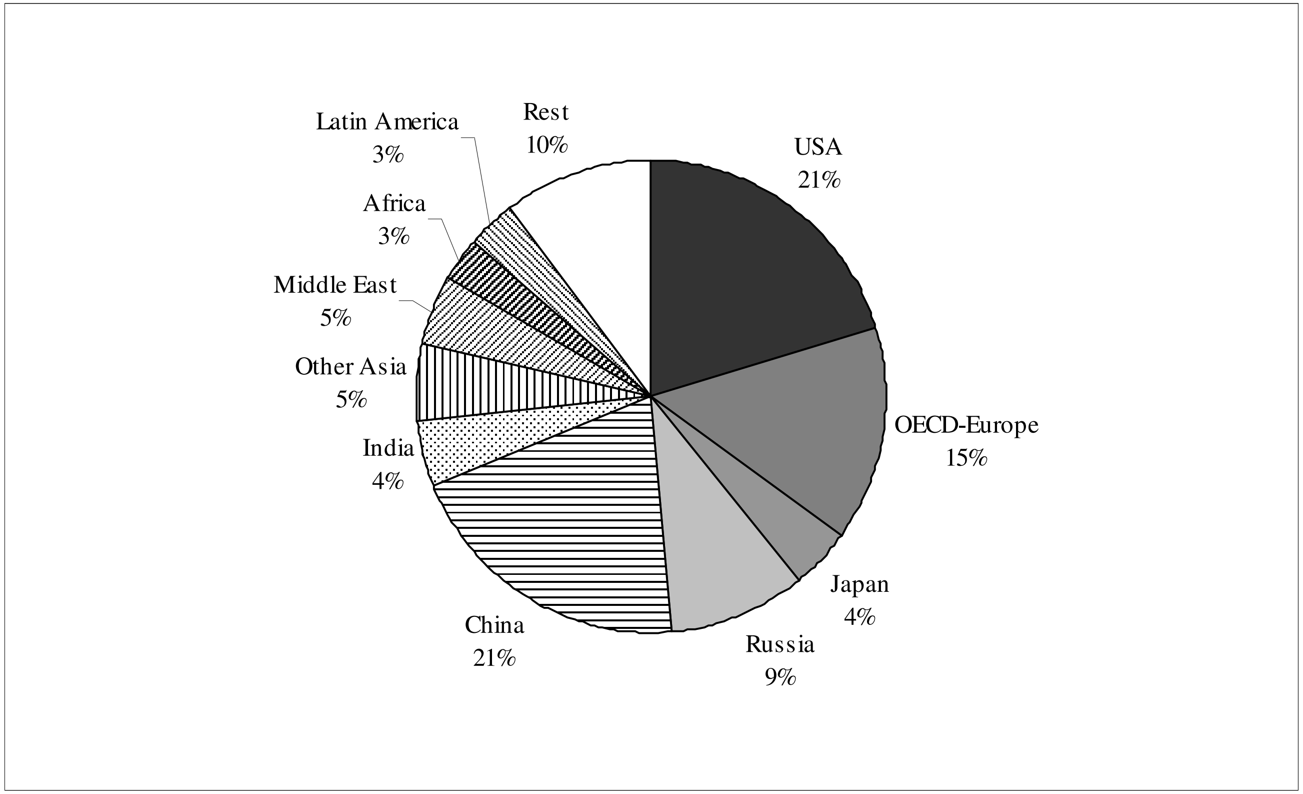
1. To develop a long-term view about options for climate change policy in Europe;
2. To deliver long-term scenarios of GHG-emissions and abatement technologies including abatement costs and influence on energy prices;
3. To develop a view on the further development of the EU emissions trading scheme after 2012

Main sectors in EU-27:

Energy supply and transport



European share on global GHG-emissions

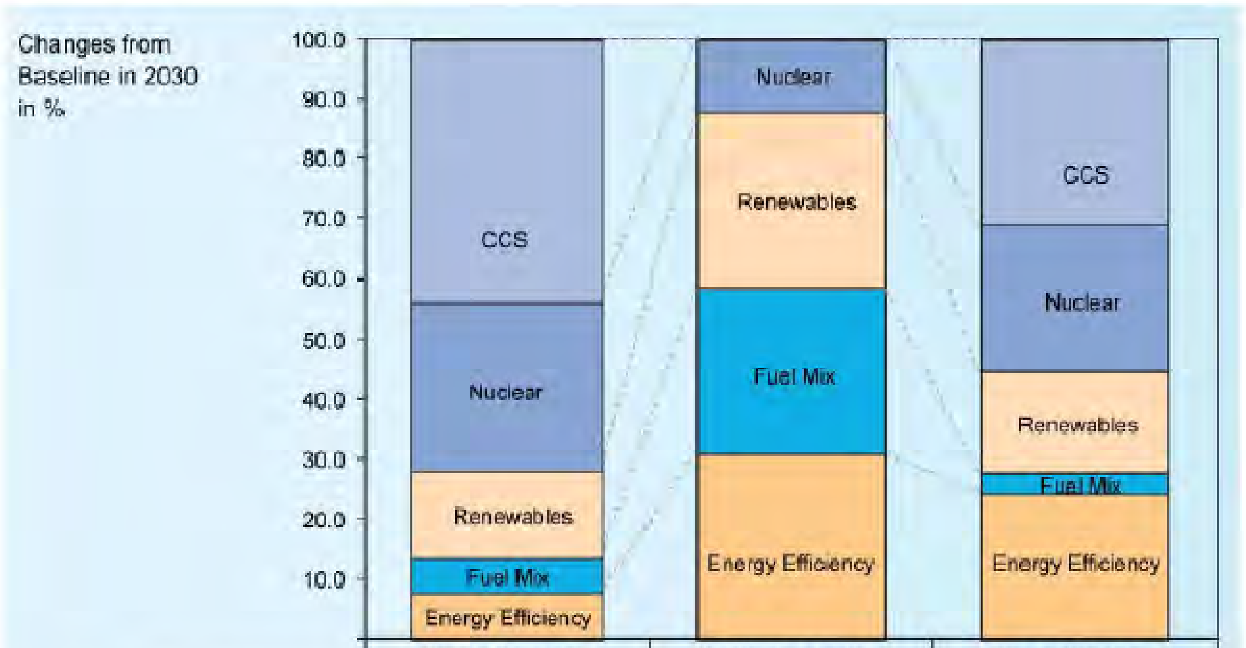


	kWh/capita	gCO_2/kWh	tCO_2 Per capita	Population In M	Mt CO_2
USA	14,606	573	8,37	305	2,553
China	2,420	788	1,91	1,332	2,540
EU-27	8,547	341	2,91	497	1,449
India	638	943	0,60	1,149	691
World	**3,411**	**502**	**1,71**	**6,705**	**11,481**

Roadmap for electricity: what mainly each scenario assumes:

1. Baseline Scenario: dramatic increase of European dependence on energy imports:
2. Efficiency and RES: shift towards low carbon; decrease of imports; high el. price; high rate of RES in power generation;oil imports in 2030=2005;
3. Supply Scenario: high level of nuclear & less of RES; CCS will play a major role in reducing GHG.
4. Electricity Scenario:more balanced approach and wider variety of tools for GHG reduction; boost for nuclear, RES and CCS.

Technology contributions in the alternative scenarios



	Supply Scenario	Efficiency & RES	Role of Electricity
CCS	43.6	-	31.2
Nuclear	29.6	12.1	24.1
Renewables	14.5	29.6	17.0
Fuel Mix	5.7	27.4	3.4
Energy Efficiency	7.7	30.9	24.3

General conclusions & recommendations

- Solidarity & global commitment to this issue;
- Achieving a global market with a global price price for carbon/CO2 emissions;link of regional to global market.
- We need more political support for climate- friendly technologies, with all alternative options;
- Investments are the key-longer horizons needed;therefore, a long-term transparent & stable framework with fixed- abatement goals, as well consistency of policies;
- Re-balancing necessity: Climat change + security of supply at Affordable energy price (A-vailability; A-accessibility; A-ffordability)=sustainable future

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General conclusions & recommendations (cont`)

- Promote free trading of energy & goods;WTO role;

- Emission trading as a market-based Instrument; once emission targets are fixed, then the JI & CDM to remain;
- JI & CDM to be improved by including cost-efficient emission reduction measures and without technology restriction (open to large hydro, nuclear, CCS);
- All emitting sectors to be included in emission trading system, or at least to be bounded with other GHG reduction policy instruments;
- EU to take a leading role and promoting also the OECD-wide carbon market; keep the trading system simple.

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