

The NEEDS TIMES Pan-European model

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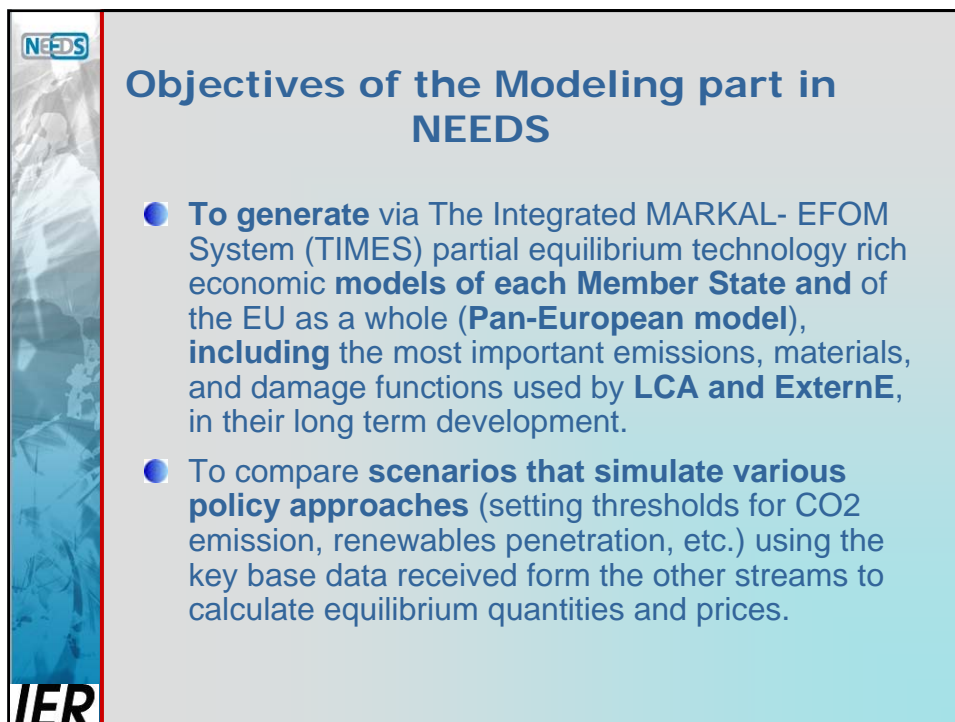
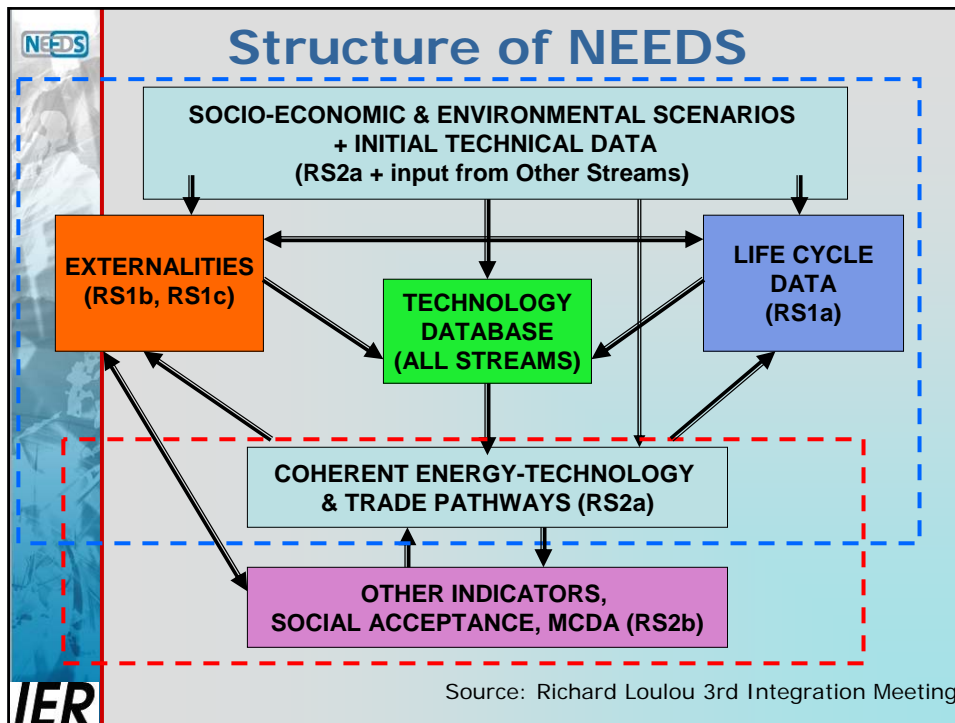
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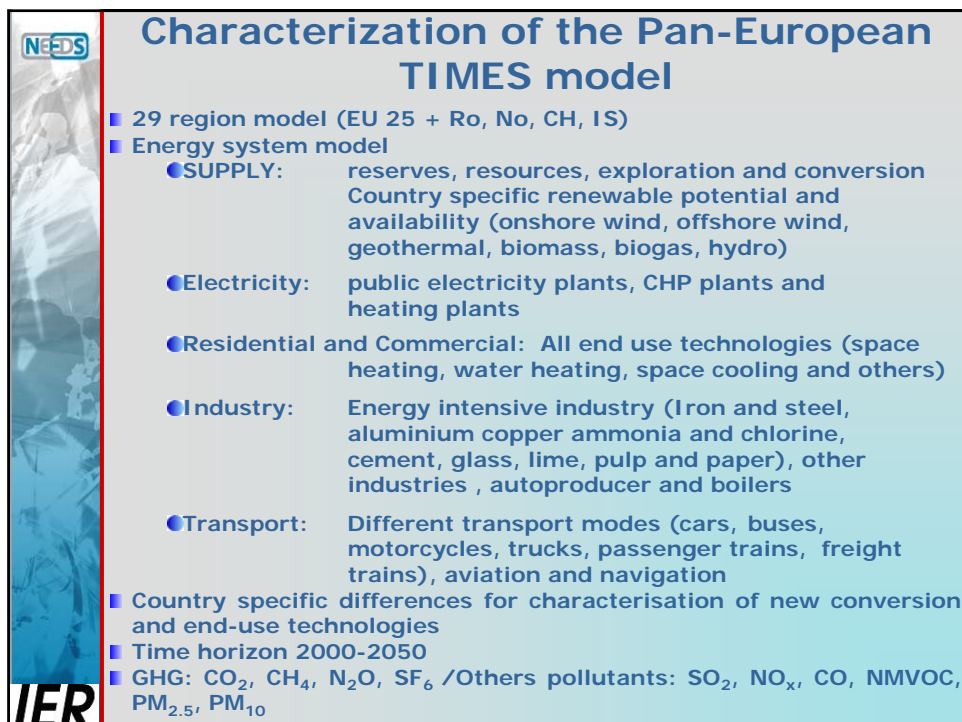
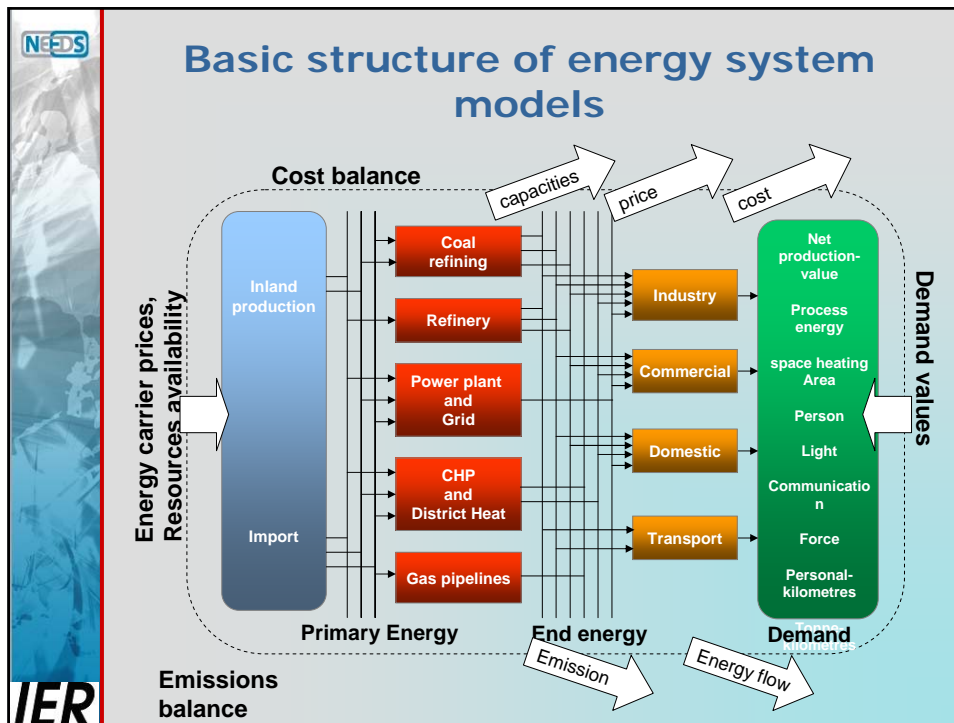
Objective of NEEDS

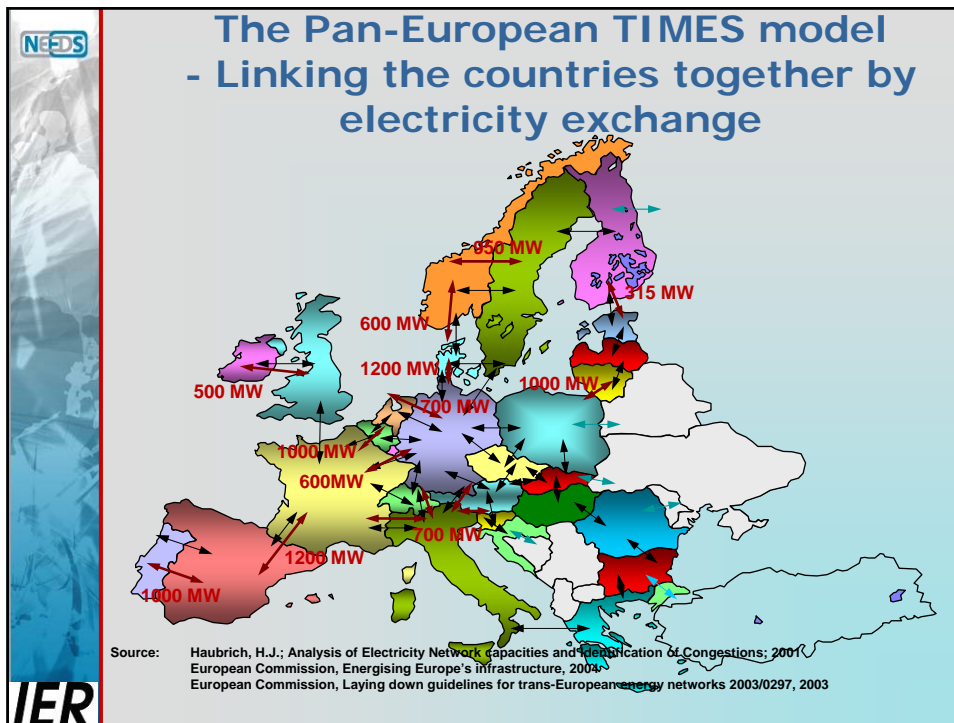
The ultimate objective of the NEEDS Integrated Project is to evaluate the full costs and benefits (i.e. direct + external) of energy policies and of future energy systems, both at the level of individual countries and for the enlarged EU as a whole.

From the scientific and technological viewpoint, this entails major advancements in the current state of knowledge in the following main areas of:

- Life Cycle Assessment (LCA) of energy technologies
- Monetary valuation of externalities associated to energy production, transport, conversion and use
- Integration of LCA and externalities information into policy formulation and scenario building
- Multi-criteria decision analysis (MCDA), which allows examining the robustness of the proposed technological solutions in view of stakeholder preferences.





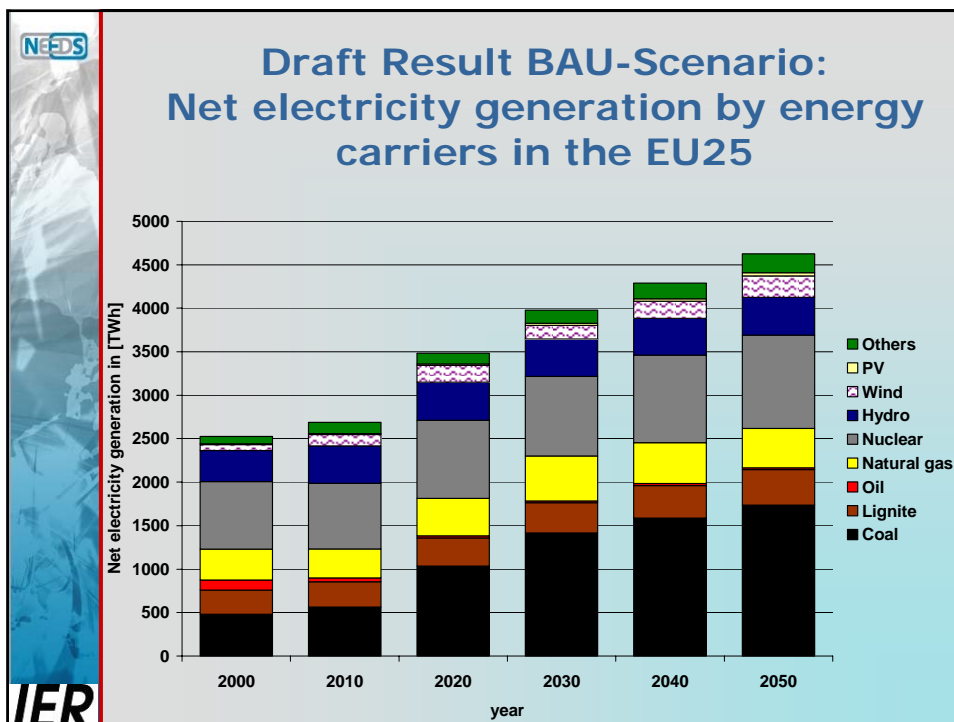
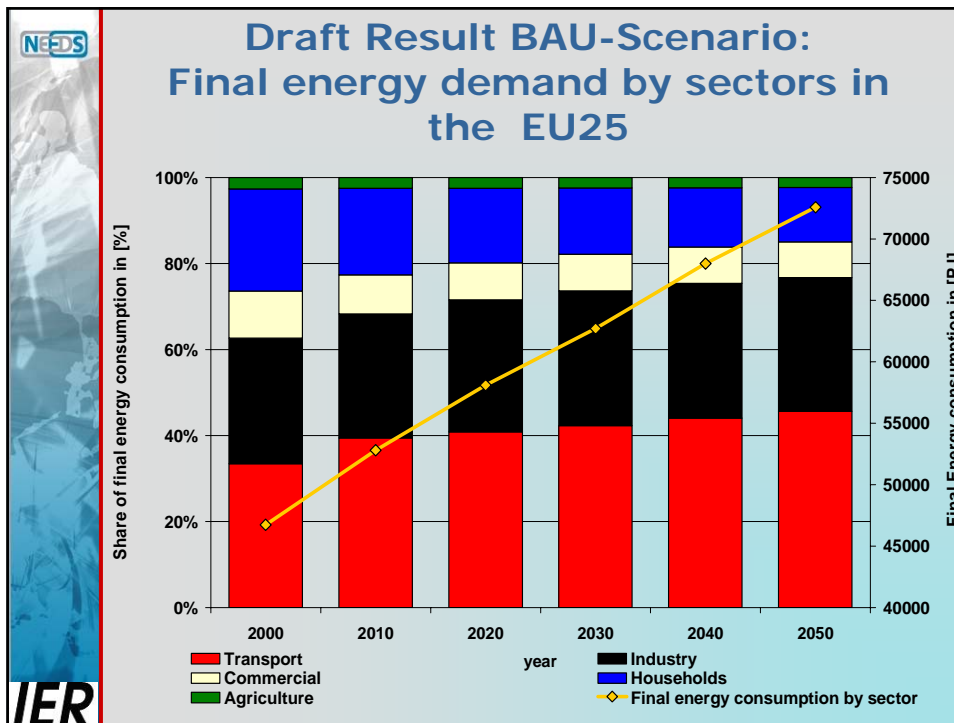


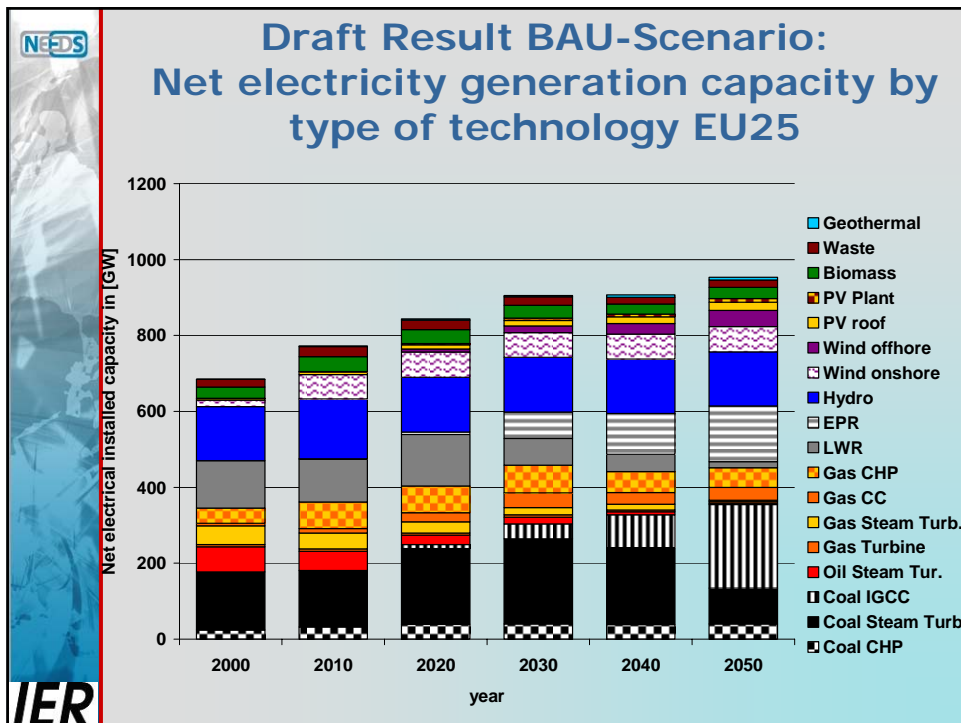
NEEDS

For the scenario analysis – Definition of the county specific policies

		AT	CZ	DE	ES	FI	FR	GR	HU	PL	
general	GHG reduction pathway											
	Minimum share of renewables in PEC											
	Min./Max. domestic production of hard coal (PJ)											
	Min./Max. domestic production of lignite (PJ)											
	Min./Max. domestic production of natural gas (PJ)											
Min./Max. domestic production of crude oil (PJ)												
public electricity and heat generation	Min. and max. values for electricity prod. based on renewables (in PJ)											
	nuclear energy policy											
	CO2-sequestration											
	Expansion of CHP (Share in net electricity consumption)											
	Min./Max. share of heating plants in district heat production											
sector specific	Min./max. import of electricity (PJ)											
	Min./max. export of electricity (PJ)											
	Min. shares of pure biofuels in FEC by transport mode											
	Min. content of biofuels as blend in conventional fuels											
	Min. share of hydrogen in FEC by transport mode											

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- ### Scenario analysis - The Baseline and the Key Policy Cases
1. Specification of the **Baseline** case
 2. **Post-Kyoto** climate policy to stabilize CO₂e concentrations at 550/450 ppmv
 3. **Enhancement of endogenous energy resources**, (constraining imports of fossil fuels to foster the use of renewables, efficiency standards and new nuclear)
 4. Improve **environmental quality** by endogenizing externalities related to local air pollution (i.e., w/o global externalities)
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