

EURACOAL

European Association
for Coal and Lignite



Coal in the Future EU Energy Mix

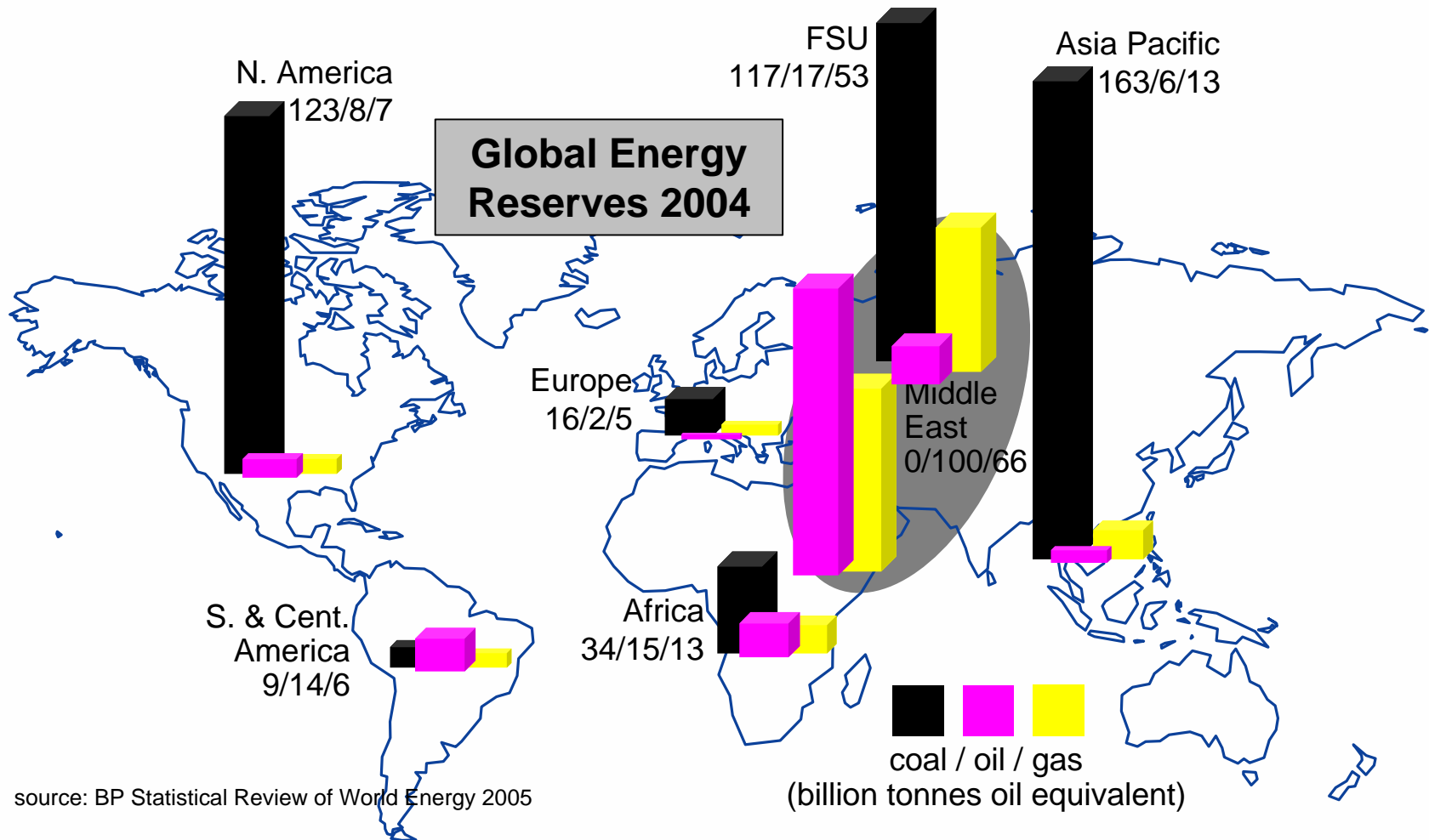
Berlin – 9th October 2006

Nigel YAXLEY
President

Coal in the Future EU Energy Mix

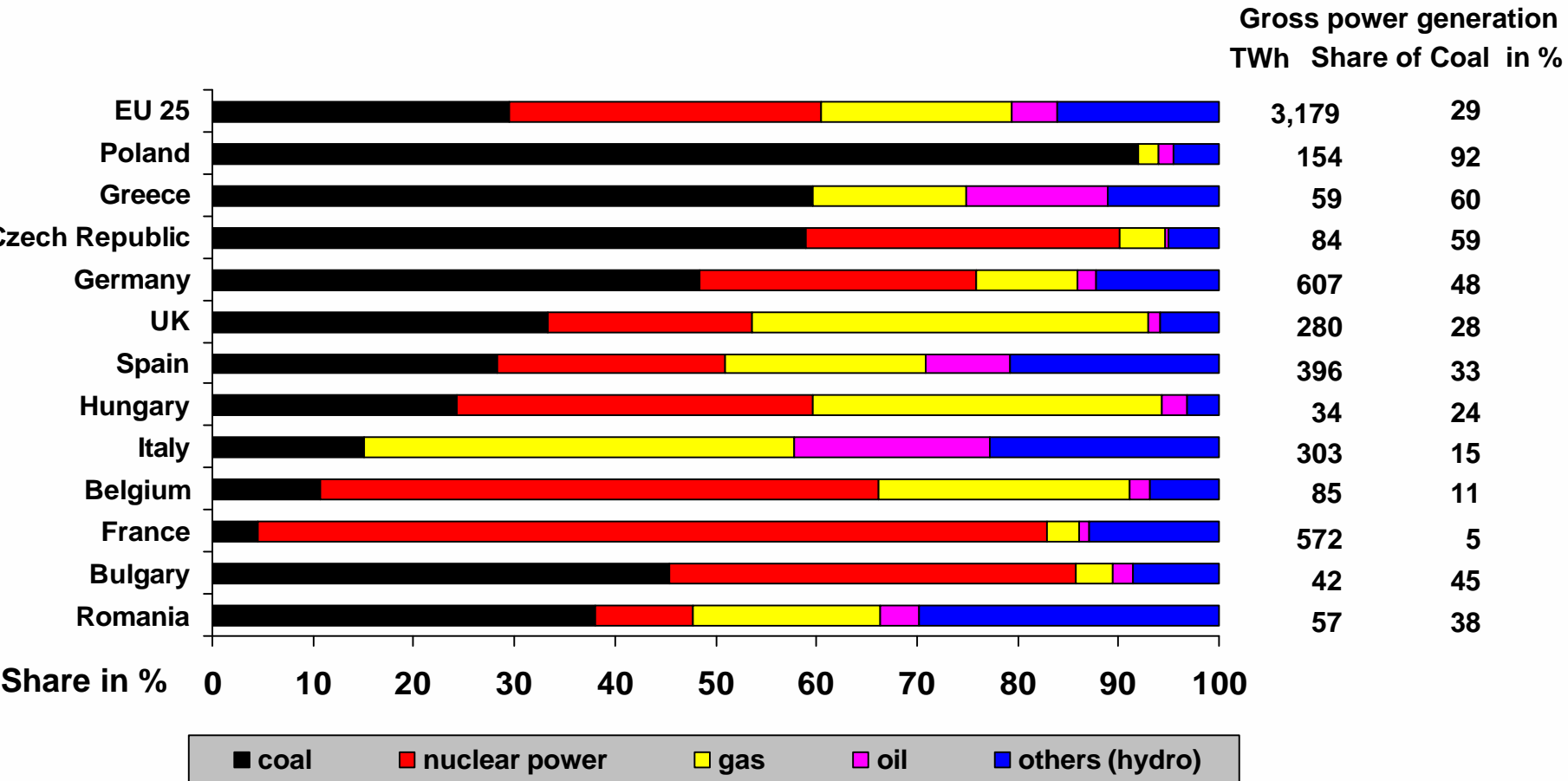
- Coal reserves worldwide
- Coal in Europe
- Coal and the Energy Green Paper
- Competitive coal
- Clean coal
- Coal policy for a sustainable future

Reserves of coal are evenly distributed around the globe



Coal is important in EU power generation ...

Power-generation structures in selected EU-25 states

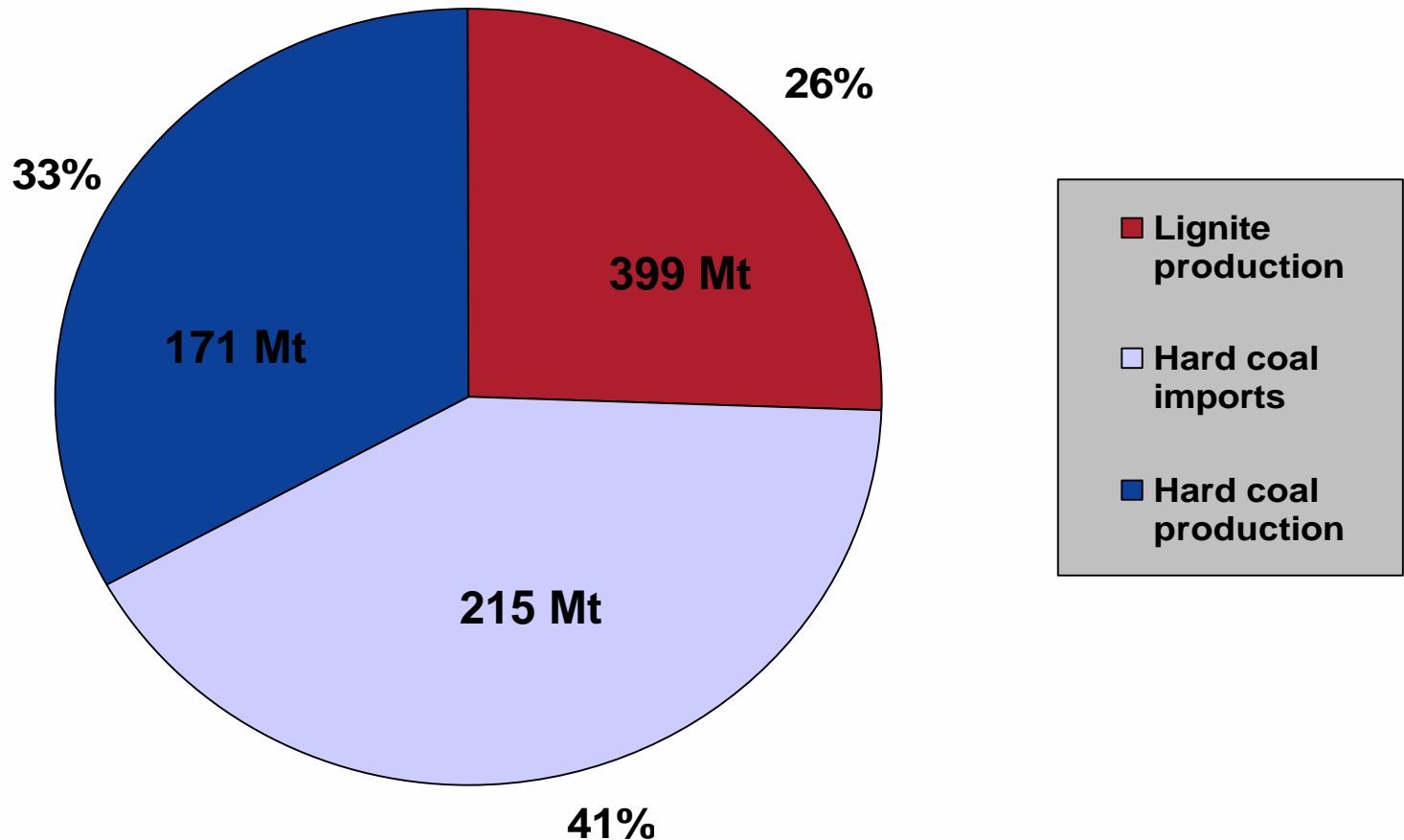


Data as per: 08/2006

Source: EUROSTAT – Energy / Yearly Statistics 2006

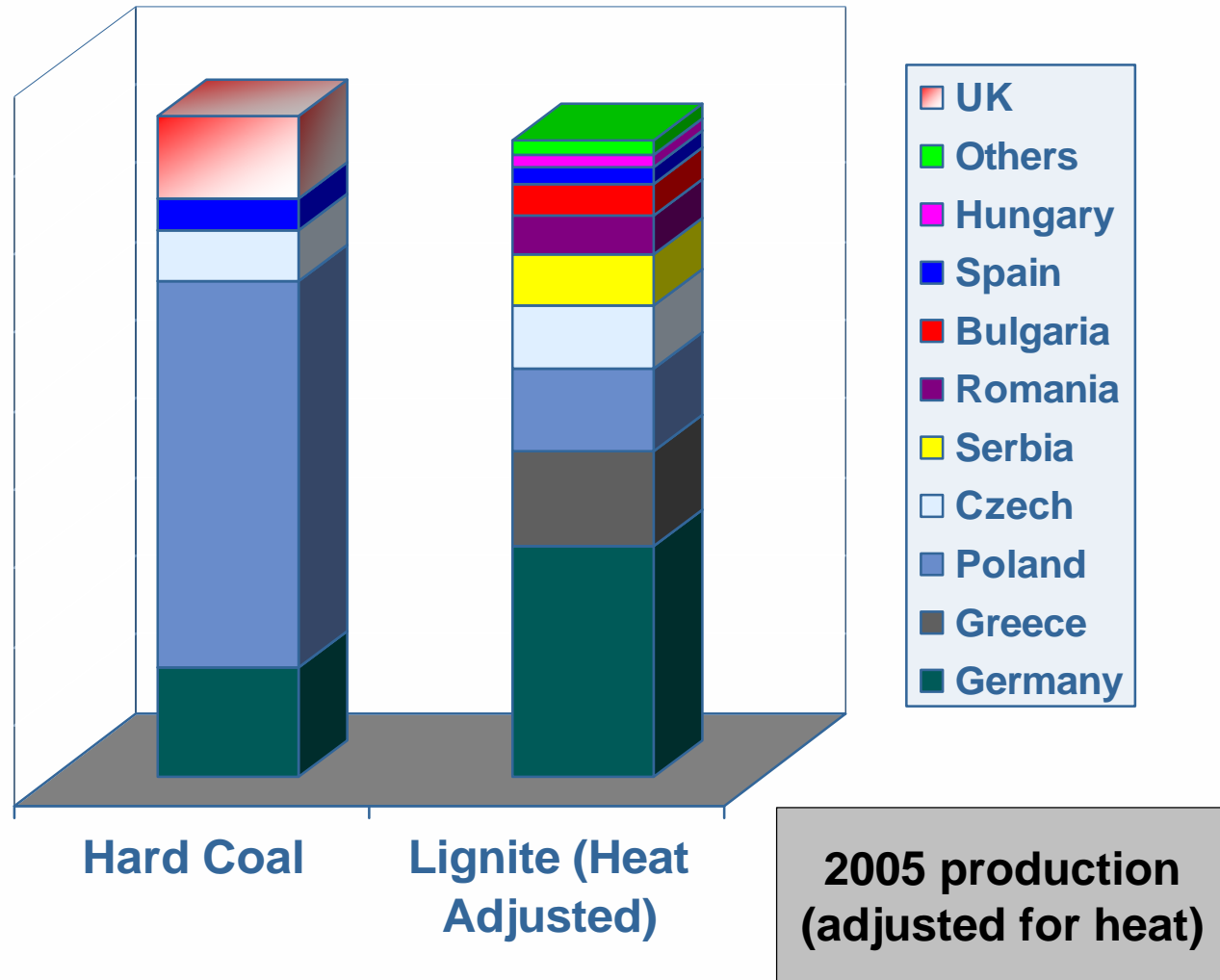
... with indigenous coal supply making a major contribution

EU25 Solid Fuel Supply 2005 (adjusted for calorific value)



Source: European Commission / Euracoal

European coal and lignite production is widespread in the EU-25



Source: IEA

Coal responds to the priorities (1)

- Tackling security and competitiveness of energy supply: towards a more sustainable, efficient and diverse energy mix
 - Coal provides a unique contribution to security of supply
 - Reasonable and relatively stable prices of coal help competitiveness

- An integrated approach to tackling Climate Change
 - Continuous modernisation and major efficiency improvements help reduce emissions significantly in the short and medium term
 - Carbon Capture and Storage in coal-fired power plants and geological storage to be developed for 2020 and beyond

Energy Green Paper –

Coal responds to the priorities (2)

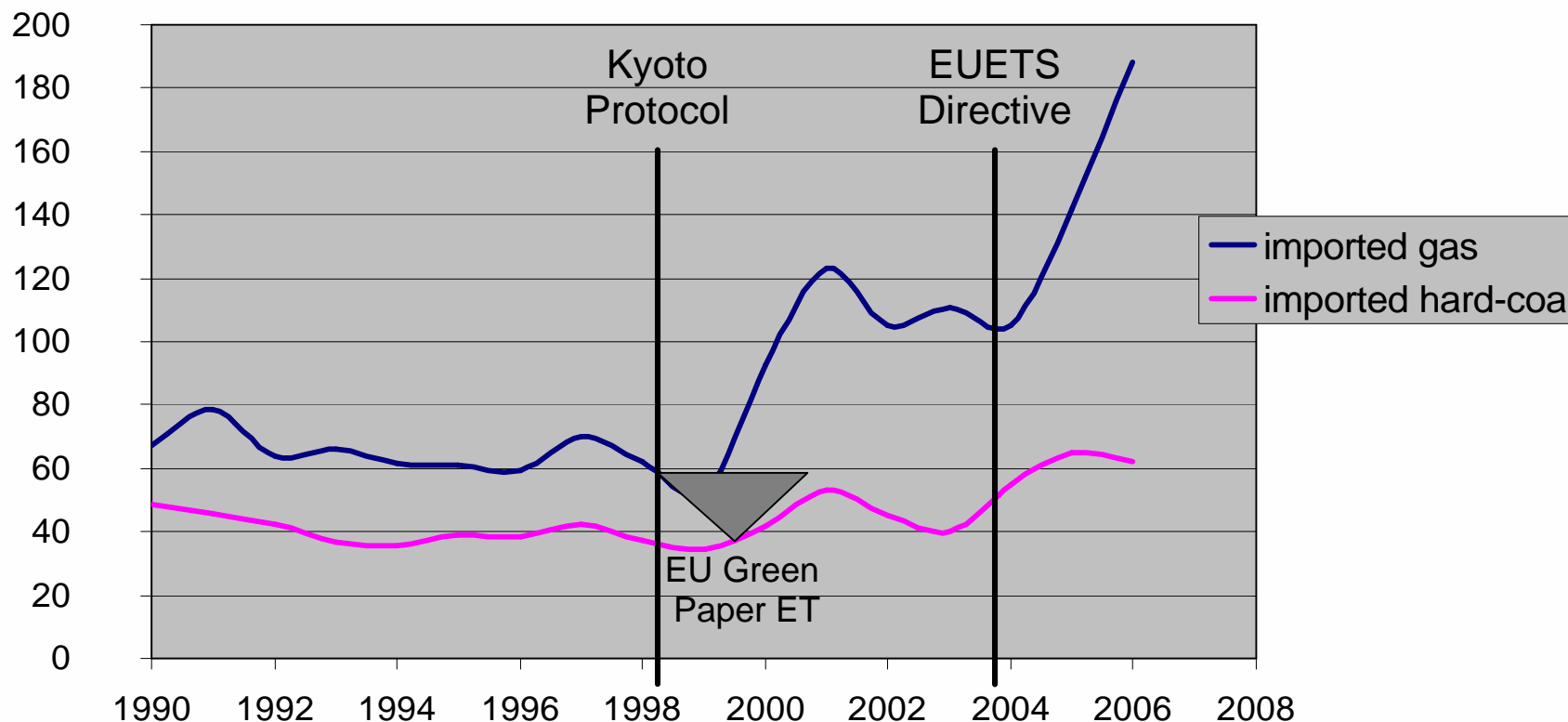
- Encouraging innovation: a strategic European energy technology plan
 - The coal industry backs two Technology Platforms
 - Zero Emission Fossil Fuels Power Plants (ZEP)
 - Sustainable Mineral Resources (SMR)
 - EURACOAL welcomes coal-based pilot and demonstration plants with CO₂ Capture and Storage

- Towards a coherent external energy policy
 - Indigenous coal reduces import dependency

 - Imports are from diverse sources

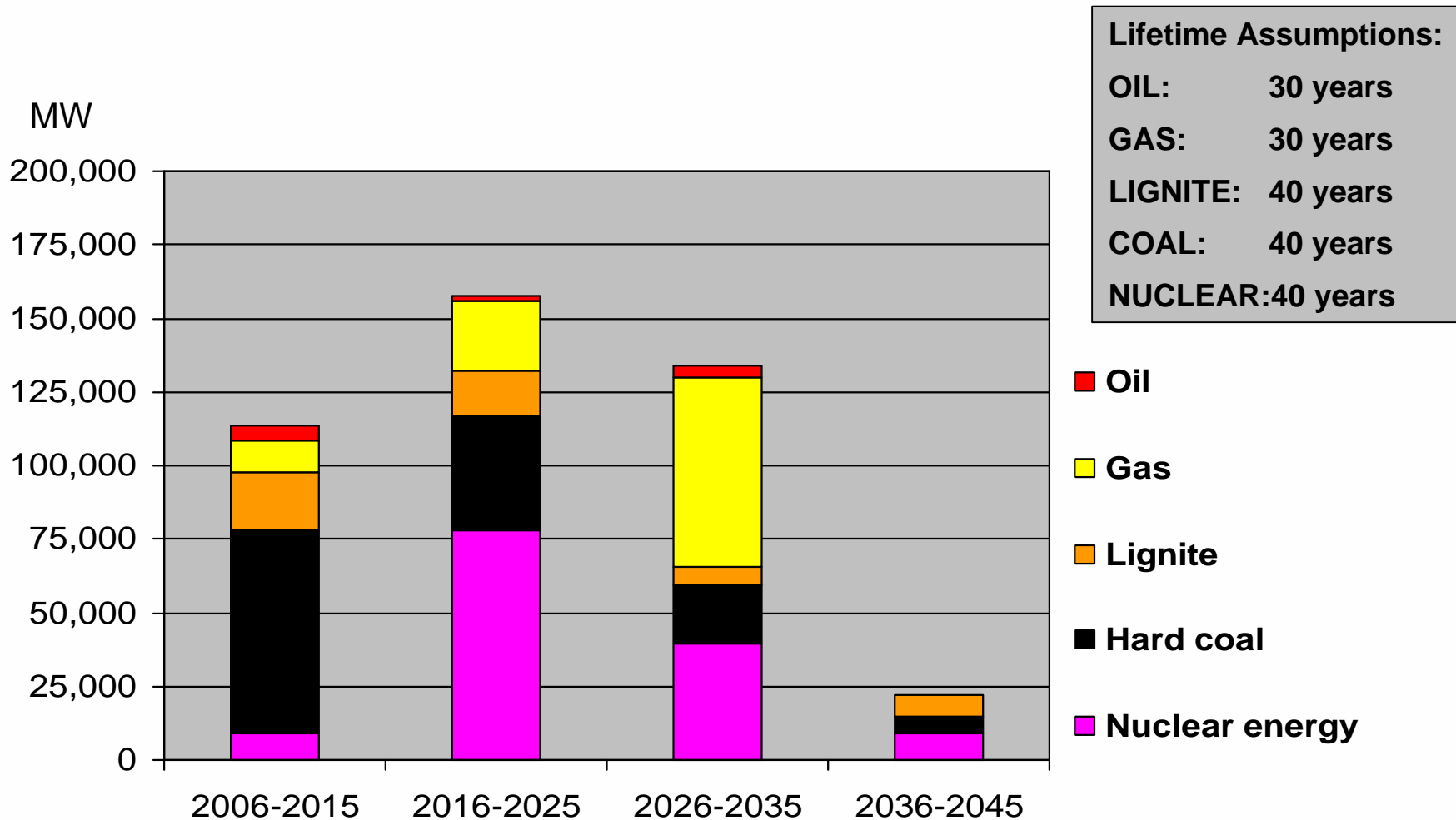
Coal remains competitive for power generation

€/t SKE



Source: Statistik der Kohlenwirtschaft e.V.

Significant capacity needs to be replaced in the EU-25 in the short to medium term



Source: Prog

Clean coal comes in three stages

Clean coal I

Retrofit and new-build in line with state of the art, increase in efficiency, reduction of SO₂, NO_x and dust

Clean coal II

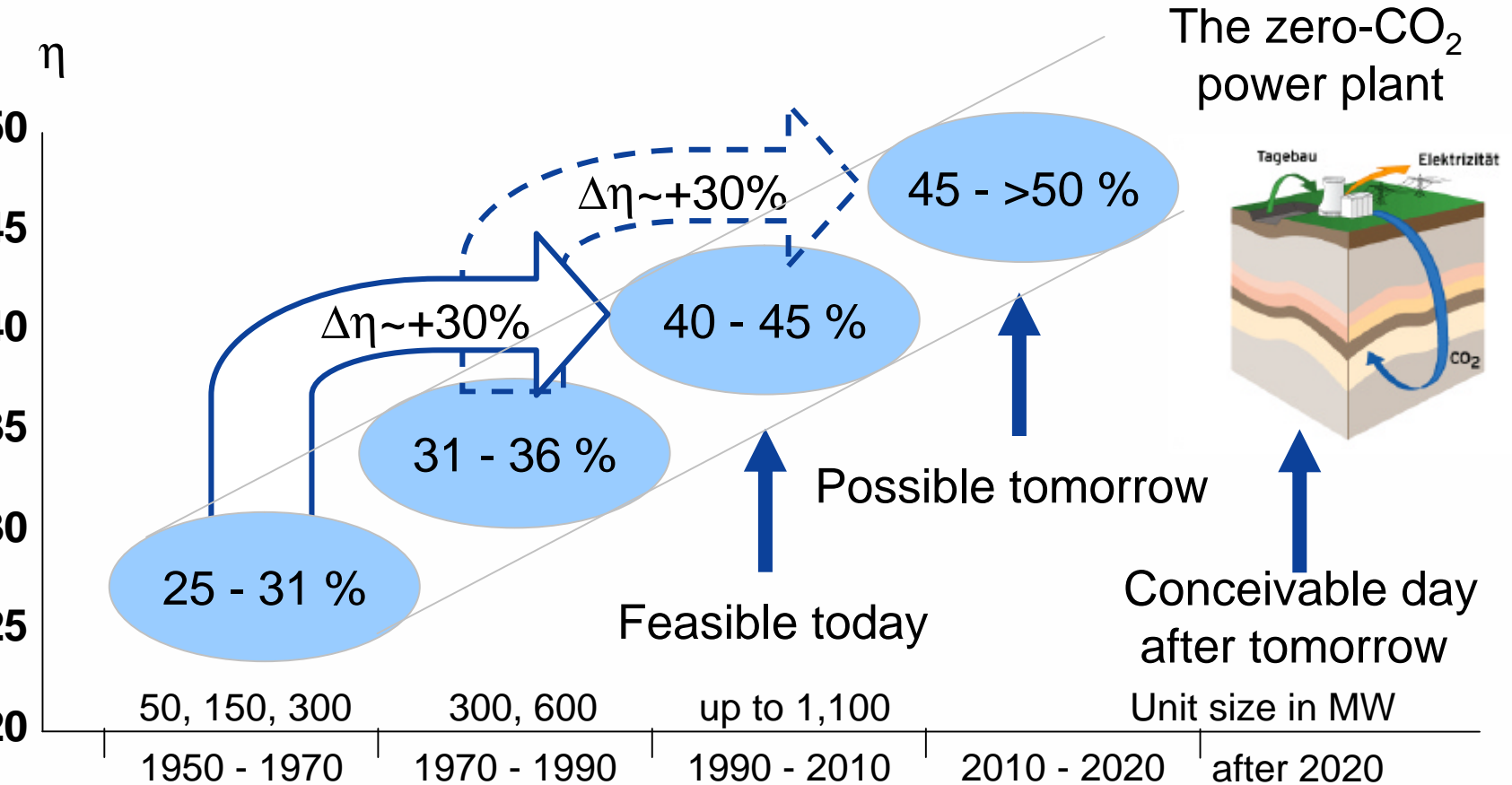
Research and development for increase in efficiency to > 50 %

Clean coal III

CO₂ capture and storage

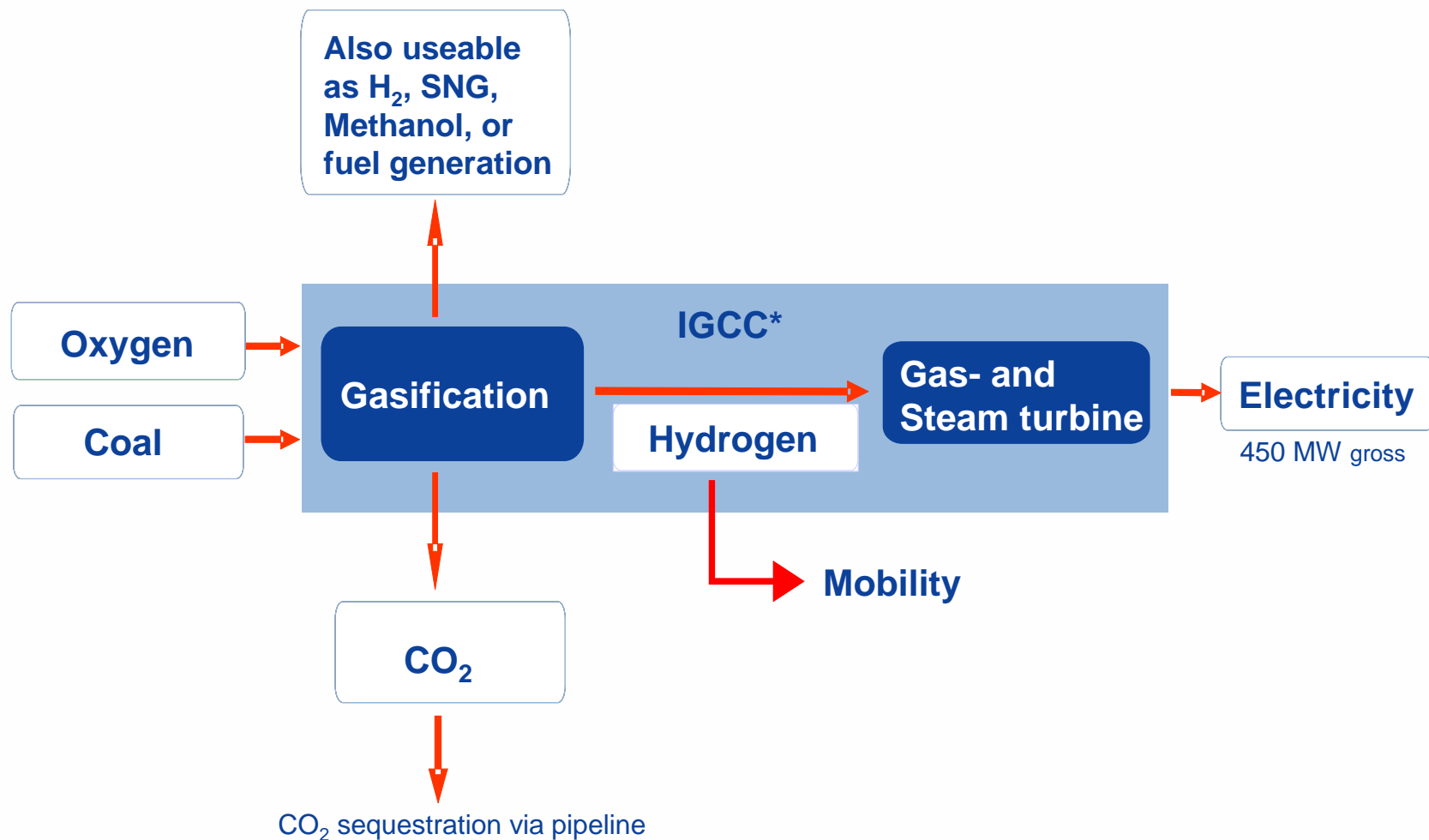
Investment in ultra-modern technology

Continuous modernization and increased efficiency is a pre-requisite to CCS...



The right approach: continuous power plant modernization/renewal

...ultimately leading to the “hydrogen economy”



*IGCC = Integrated Gasification Combined Cycle

Political as well as technological action is needed to make CCS a reality

- EU - Elements of a Directive on CCS
 - Management of the environmental risks associated with CCS
 - Effective and reliable permitting of storage sites
 - Incentives for CCS activities (eg inclusion in EUETS)
 - Liability for CCS activities
- International maritime and national legal frameworks
- Public Acceptance
 - Less than 10 % heard of CCS – Before explanation only 13 % were positive, after explanation 55 % agreed.

Coal for a Sustainable Future

- Coal and lignite provide a unique contribution to security of supply. They will be abundantly available and competitive in the decades to come.
- In order for coal to play its full part in the EU energy mix, EURACOAL welcomes the efforts of the ZEP Technology Platform and the Commission, the EP and the Member States to have a number of commercially viable Zero-Emission coal-fired power plants by 2020.
- For carbon capture and storage as well as for the continuous modernisation of power plants, EURACOAL calls for a favourable investment framework. It will help Europe to keep technological leadership and to export coal technologies.

Coal Industry's Policy Requirements

- Acknowledge the unique role of coal to security of supply and its contribution to competitiveness
- Further commitment to the vision of CCS including financial support of pilot and demonstration plants
- Support adoption of a legal framework for CO2 storage
- Recognise that increased plant efficiency and continuous modernisation have the potential to preserve resources and reduce CO2 in the short and medium terms
- Acknowledge efficiency increase as a pre-requisite of CCS

Coal as a sustainable part of the EU energy mix.