

# EURACOAL

European Association  
for Coal and Lignite



## The future of coal in Europe - new look at indigenous resources

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Petr Pudil - President

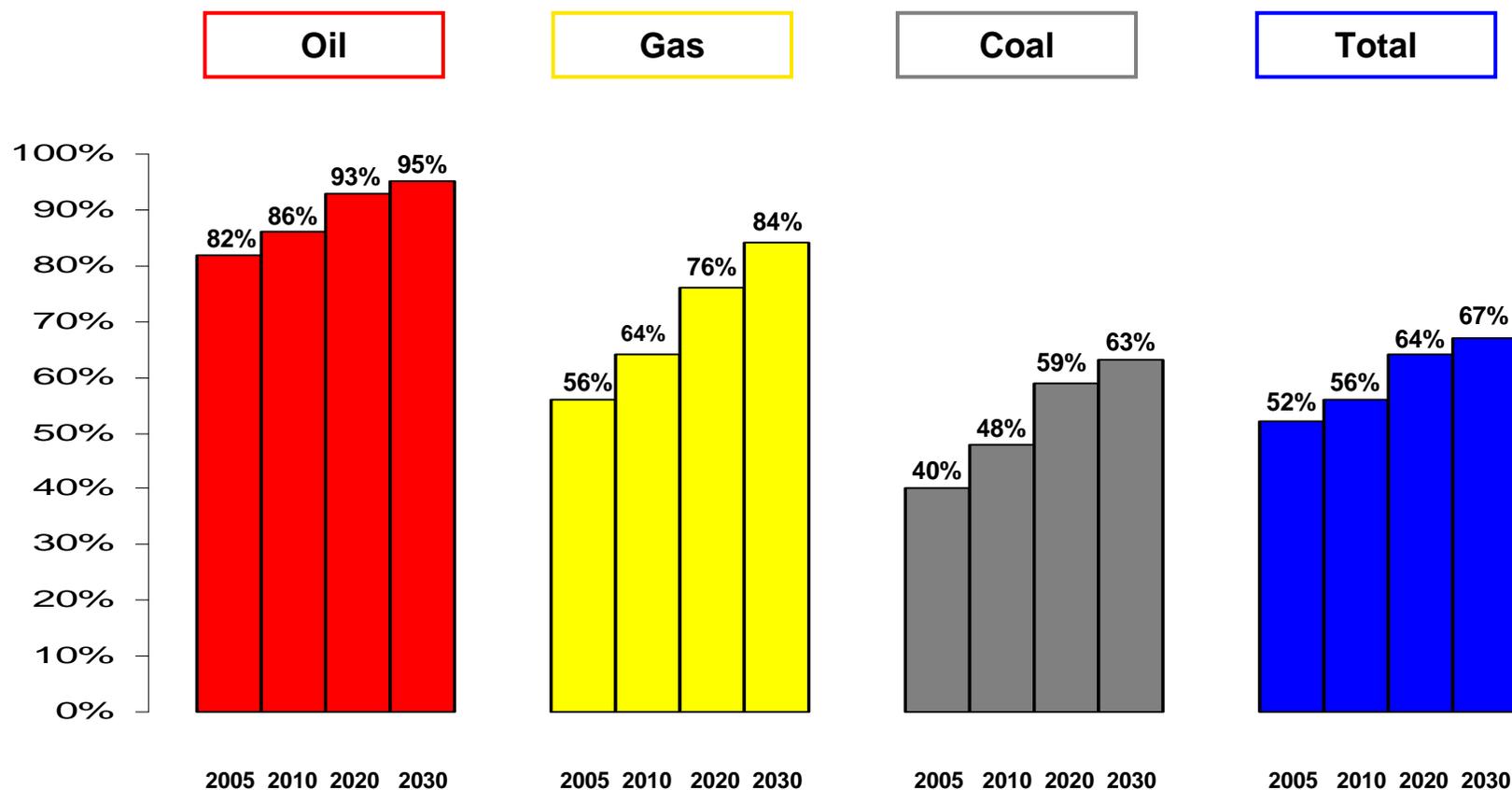
# Overview

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- Why we need coal in the European energy mix
- Coal production and potential (reserves and resources)
- Advantages of indigenous coal
- What can we do at EU level?
- What can we do at Member State level?

# Why we need coal (I)

## Projected EU energy import dependence

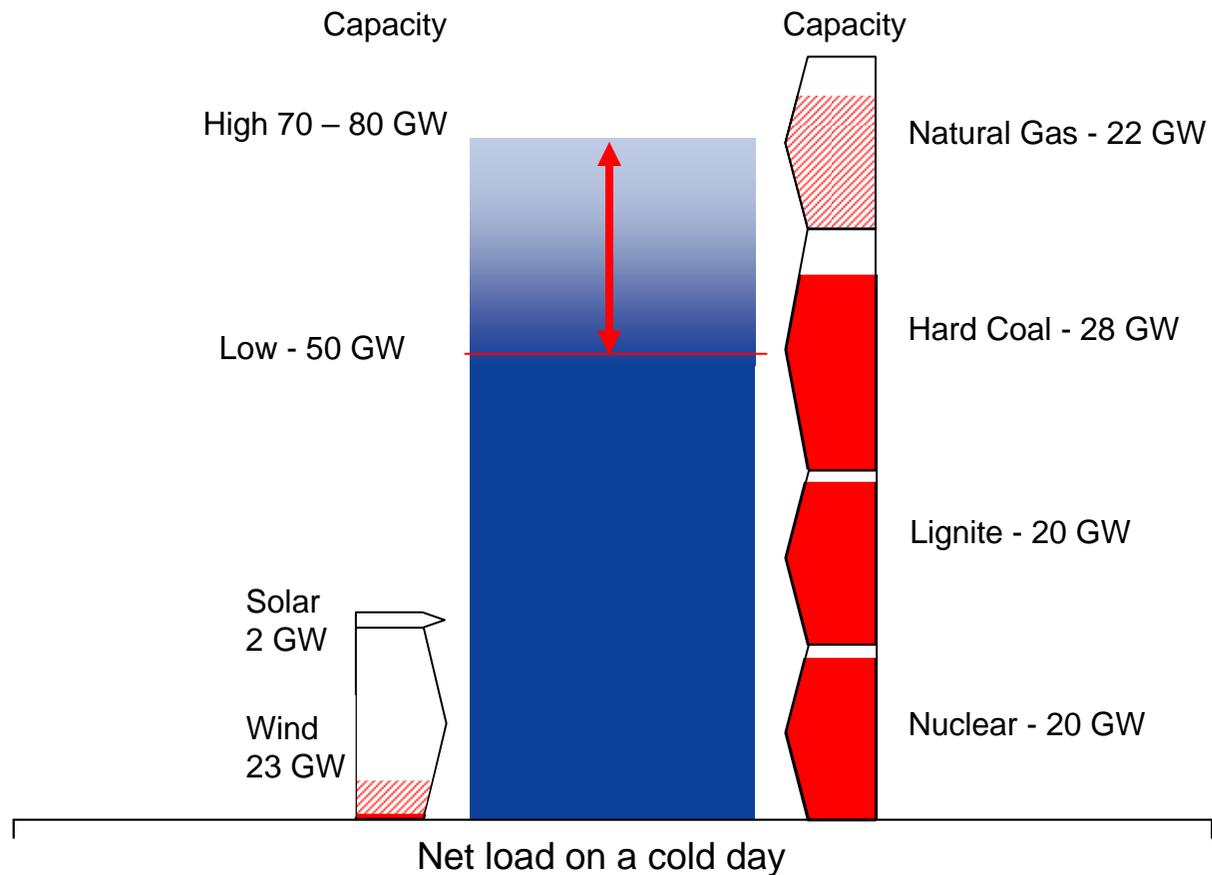


Source: European Commission, EU Trends to 2030, update 2007

The use of coal reduces import dependence

# Why we need coal (II)

## The gas crisis – Power generation 5 - 11 January 2009 - Example Germany



Coal generation helped in the crisis, renewables did not



# European hard coal potential (Mt)

Country	Production 2008	Reserves	Resources	Potential
Czech Republic	13	3,112	21,106	24,219
Germany	19	118	82,947	83,065
Hungary	0	276	5,075	5,351
<b>Poland</b>	<b>83</b>	<b>12,459</b>	<b>167,000</b>	<b>179,459</b>
Romania	3	14	2,373	2,387
Spain	10	868	3,363	4,231
United Kingdom	18	432	186,700	187,132
Other EU	3	770	7,468	8,231
<b>TOTAL EU</b>	<b>149</b>	<b>18,049</b>	<b>476,032</b>	<b>494,081</b>
Turkey	3	413	793	1,206
Ukraine	63	32,039	49,006	81,045

Source: BGR

# European lignite potential (Mt)

Country	Production 2008	Reserves	Resources	Potential
Bulgaria	26	1,928	4,194	6,122
Czech Republic	48	185	772	956
<b>Germany</b>	<b>175</b>	<b>40,818</b>	<b>36,760</b>	<b>77,578</b>
Hungary	9	2,633	2,704	5,337
Greece	66	2,876	3,554	6,430
Poland	59	3,870	41,000	44,870
Romania	33	408	7,947	8,355
Slovakia	2	83	525	609
Slovenia	4	315	341	656
Other EU	0	359	1,502	1,861
<b>TOTAL EU</b>	<b>422</b>	<b>53,475</b>	<b>99,299</b>	<b>152,774</b>
Bosnia-Herzegovina	2	2,369	1,814	4,182
Serbia	36	7,523	3,750	11,273
Turkey	80	1,814	7,176	8,990

Source: BGR

# Major advantages of indigenous coal (I)

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- Balances the EU energy mix and helps avoiding security of supply and price risks – solid fuels represent **80 % of EU 27 domestic fossil fuel reserves**
- Hard coal and lignite **available in most EU Member States**
- **Coal mining and value chain create wealth** in the EU, particularly in a number of disadvantaged regions

# Major advantages of indigenous coal (II)

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## Export of best practice in mining ...



**European mining technology dominates the world market**

**Healthy and safe workplaces are a priority and legal obligation for the European mining industry**



**The EU coal and lignite industries have created models for environmentally-friendly coal mining**

## What can we do - EU level ? (I)

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- **All relevant impact assessments (e.g. climate protection, clean air, water, waste and other environmental policies):**
  - Security of energy supply, particularly the role of indigenous fossil fuel resources, and
  - access to resources (- fossil fuels extraction is bound to the location where they are found -)

are a part of sustainable development and must be treated equally with environmental considerations.

**DG TREN's role here is and remains essential.**

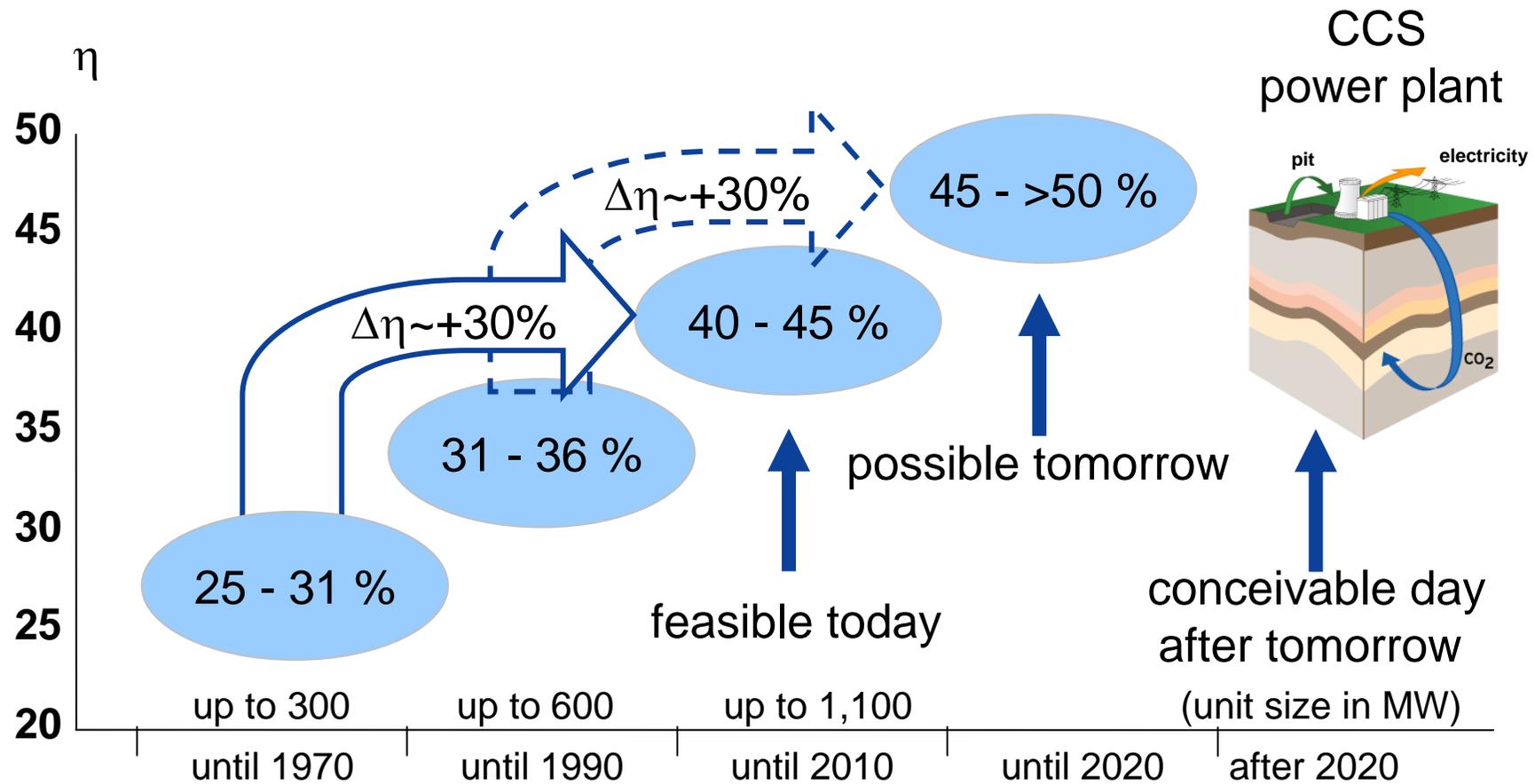
- An **inventory of strategic EU fossil fuel resources** may be helpful.

## What can we do - EU level ? (II)

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- **Investments in power plants are crucial for investments in mining;** therefore policy makers and authorities should promote both
  - continuous modernisation of power generation and
  - CCS demonstration and – as soon as possible - deployment
  
- **Promote R&D related to unconventional uses of coal** such as underground coal gasification (UCG) and coal to gas / liquids (CtG/CtL), all in connection with CCS

# Modernisation and increased efficiencies



**The right base: continuous power plant modernisation/renewal**

# Unconventional uses of coal

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## Extending the range of coal applications via

### ■ Surface conversion

- Liquefaction: Coal to Liquids, CtL, for synthetic fuels
- Gasification: Coal to Gas, CtG, for a wide range of products/energy carriers (additional benefit: enables very effective CO<sub>2</sub> capture)

### ■ Underground conversion

- Underground Coal Gasification, UCG, a combined extraction and conversion process, delivering synthesis gas for a range of products
- combined UCG/CO<sub>2</sub> storage

# What can we do – Member State level ?

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- **Increase acceptance for new power plants, CO<sub>2</sub> pipelines and storage sites by emphasizing**
  - the important contribution of coal to the security of energy supply
  - top efficient plants' contribution to resource protection
  - the role of mining for regional added value
  
- **Secure access to resources**
  - The legal system must ensure that access to resources (opencast and underground) remains possible also in practice – this refers mainly to regional planning as well as environmental approval procedures
  - No hasty closing down of mines on the basis of short-term considerations
  
- **Guarantee a reliable framework for the long term investments needed**

# Conclusions

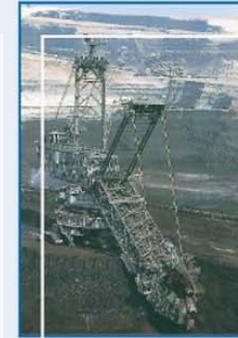
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- European societies will need hard coal and lignite in their energy mix for decades – coal can contribute to the energy mix due to its vast resources in many EU Member States
- Indigenous coal production demonstrates global best practice for mining, environmental protection and safety at work
- Security of fossil fuel supply and access to resources to be a part of Commission impact assessments – as formal as possible
- New capture-ready power generation capacity helps achieving the climate protection goals and security of supply objectives at the same time - we should repeatedly explain this to the public

Coal is a part of the solution to Europe's energy policy issues

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