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Enerday Dresden

Elements of an Enlarged Natural Gas Strategy for Europe's Energy Supply

Intermediate Results

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Dresden,
April 11, 2008

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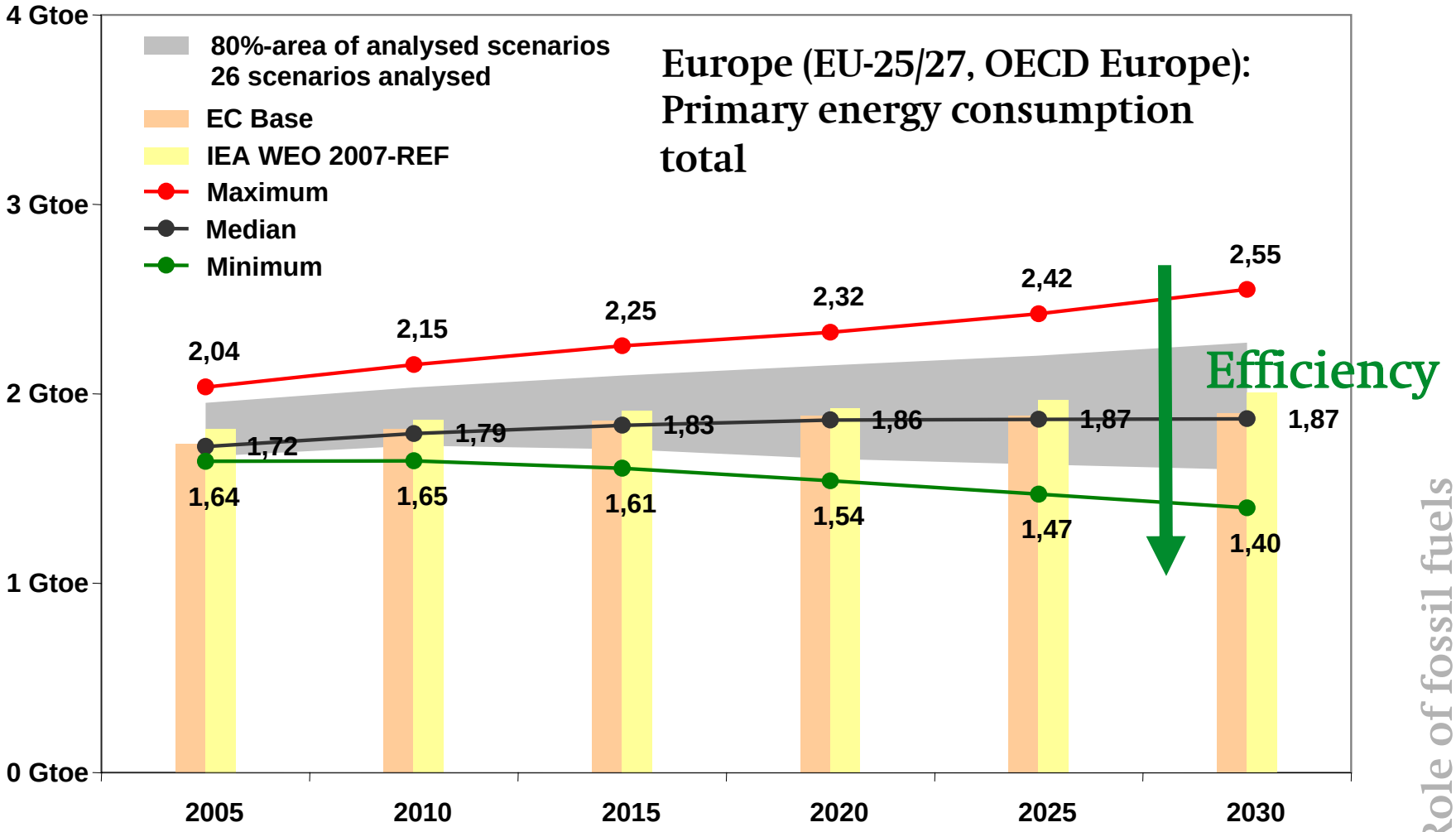
Primary Energy Demand in Europe will more or less stagnate. Efficiency gains might bring it further down.



Source: Meta study of Prognos AG 2007

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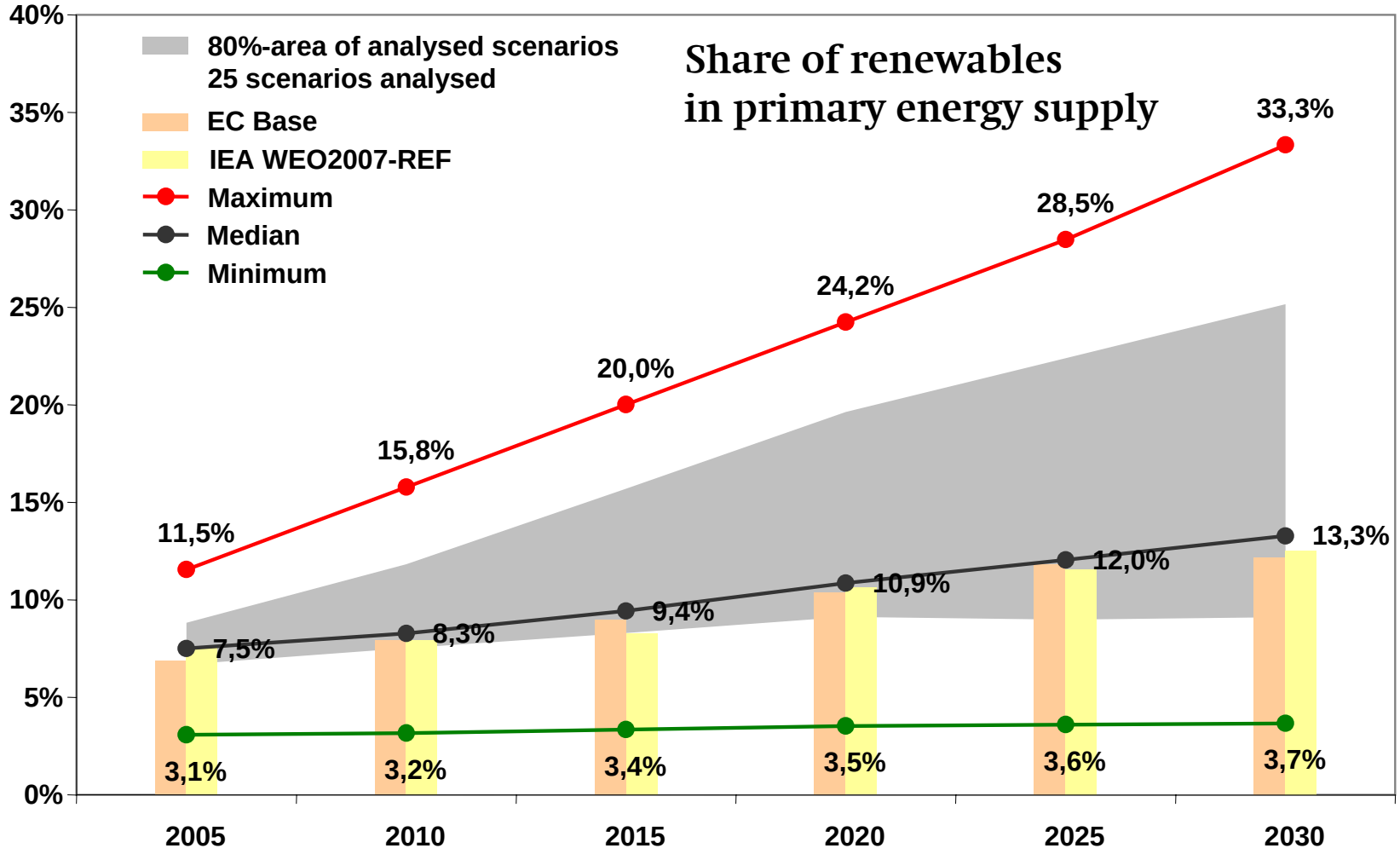
The share of renewable energies will grow rapidly but not quick enough to make fossil fuels dispensable



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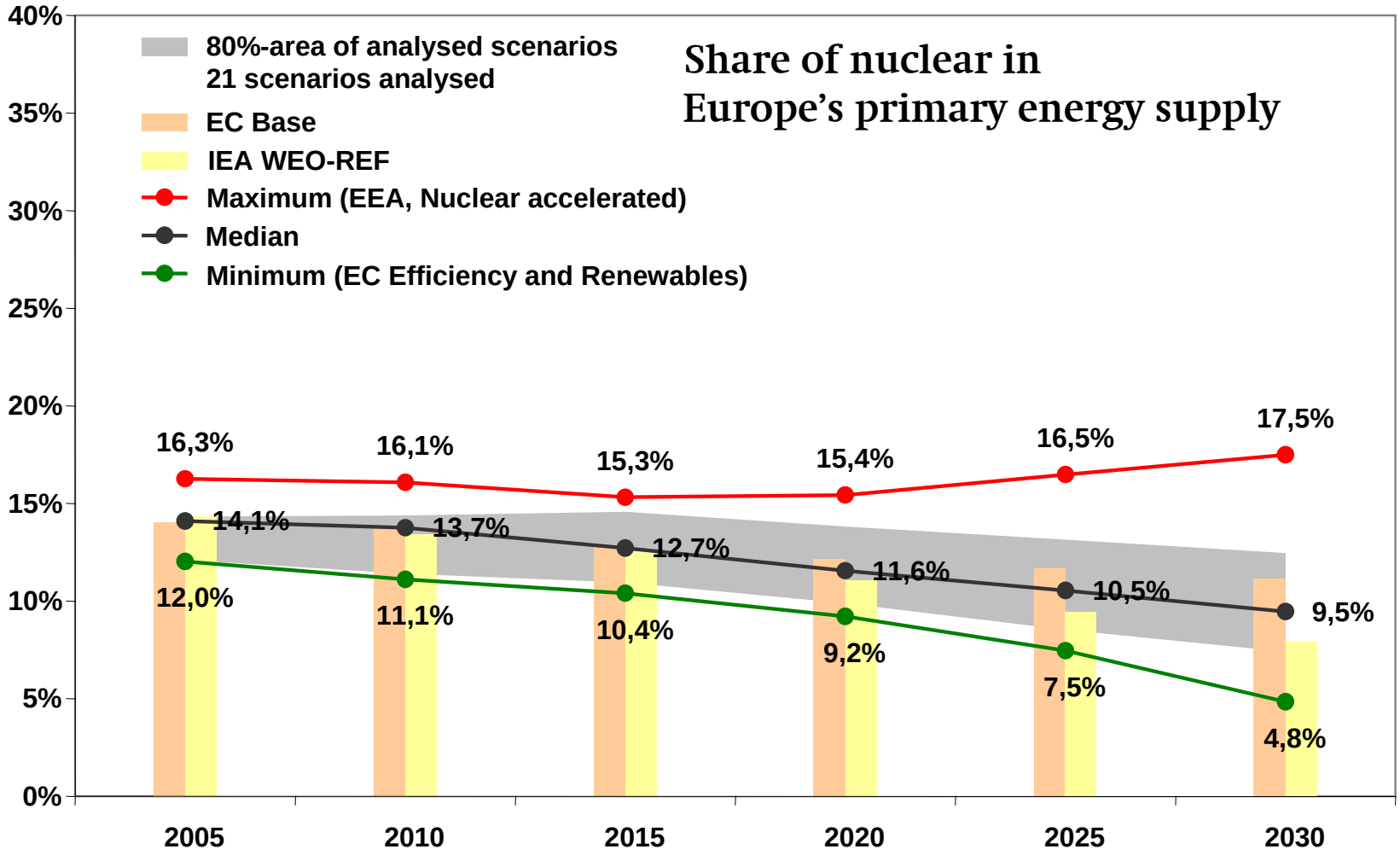
The share of nuclear does not grow significantly - even in very specific scenarios.



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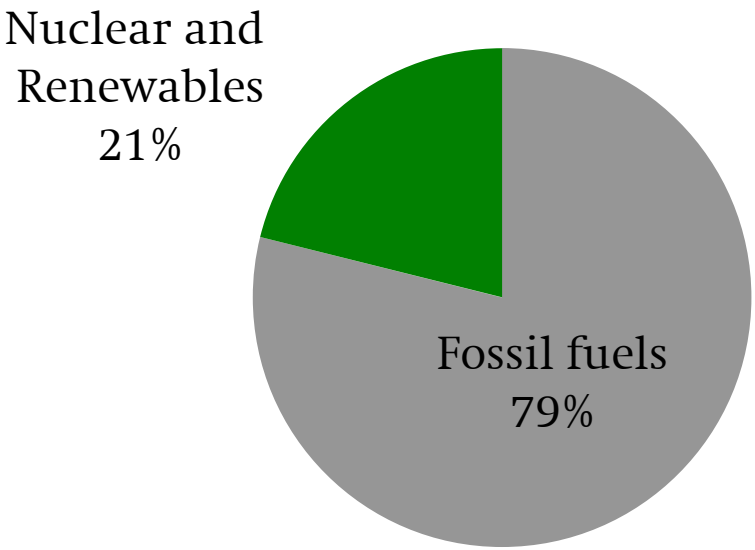
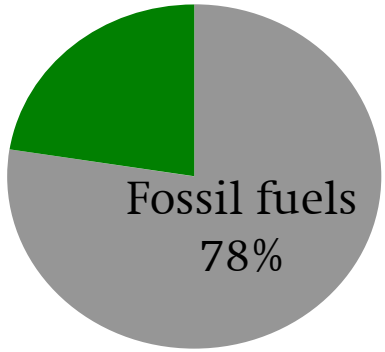
In all scenarios fossil fuels remain the dominant source of energy until 2030

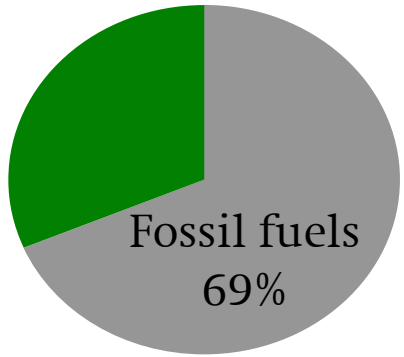
2005



2030
IEA Reference Case



IEA - Alternative Policy



Source: IEA / World Energy Outlook 2007

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2. Contribution of Natural Gas for De-Carbonisation

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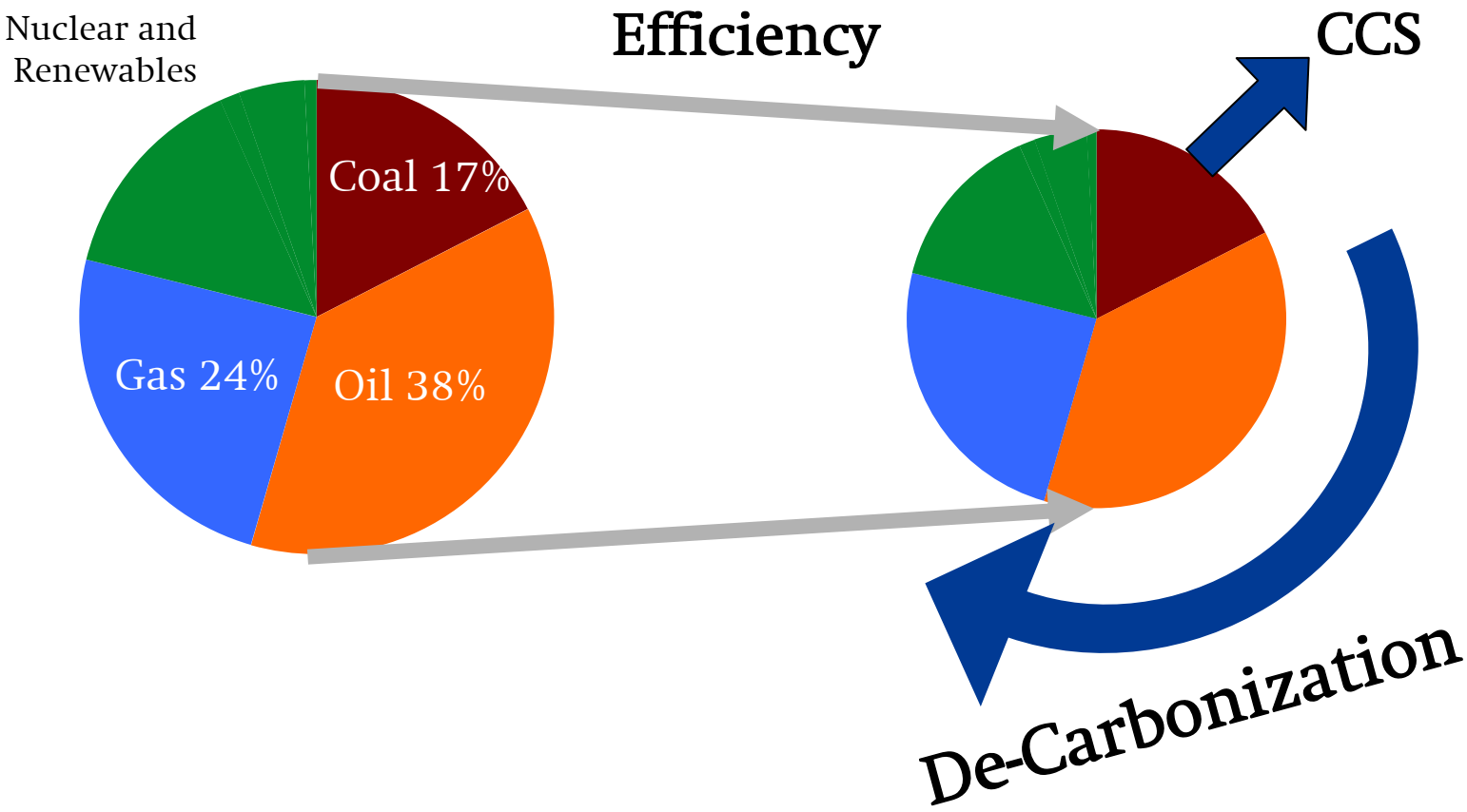
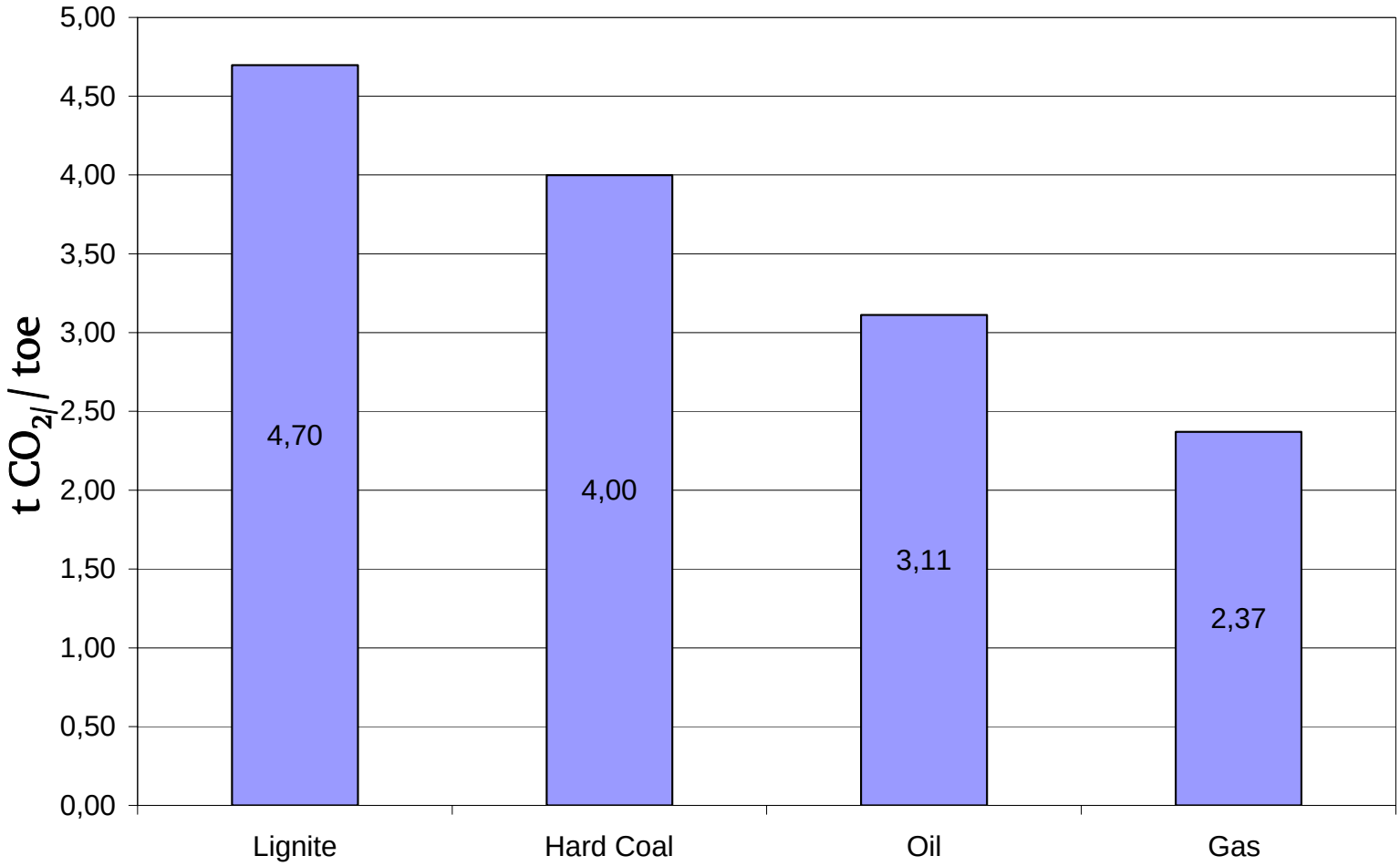
How can we reduce pollutants / CO_2-emissions while using fossil fuels?



Source: IEA / World Energy Outlook 2007

Contribution of gas

CO_2-emissions can be reduced significantly when switching from coal and oil to gas



Contribution of gas

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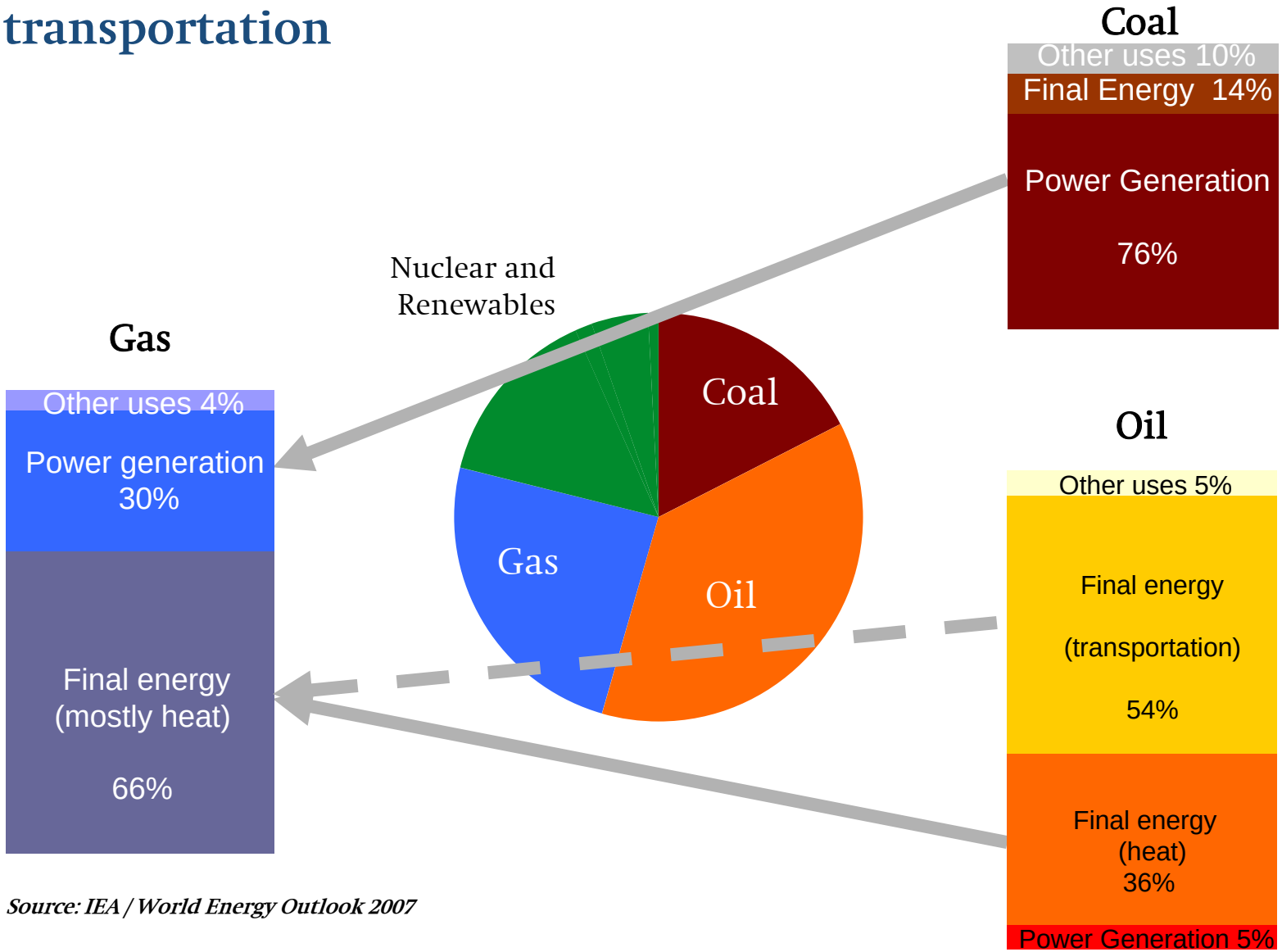
De-Carbonisation is possible in power, heat and transportation



Source: IEA / World Energy Outlook 2007

Contribution of gas

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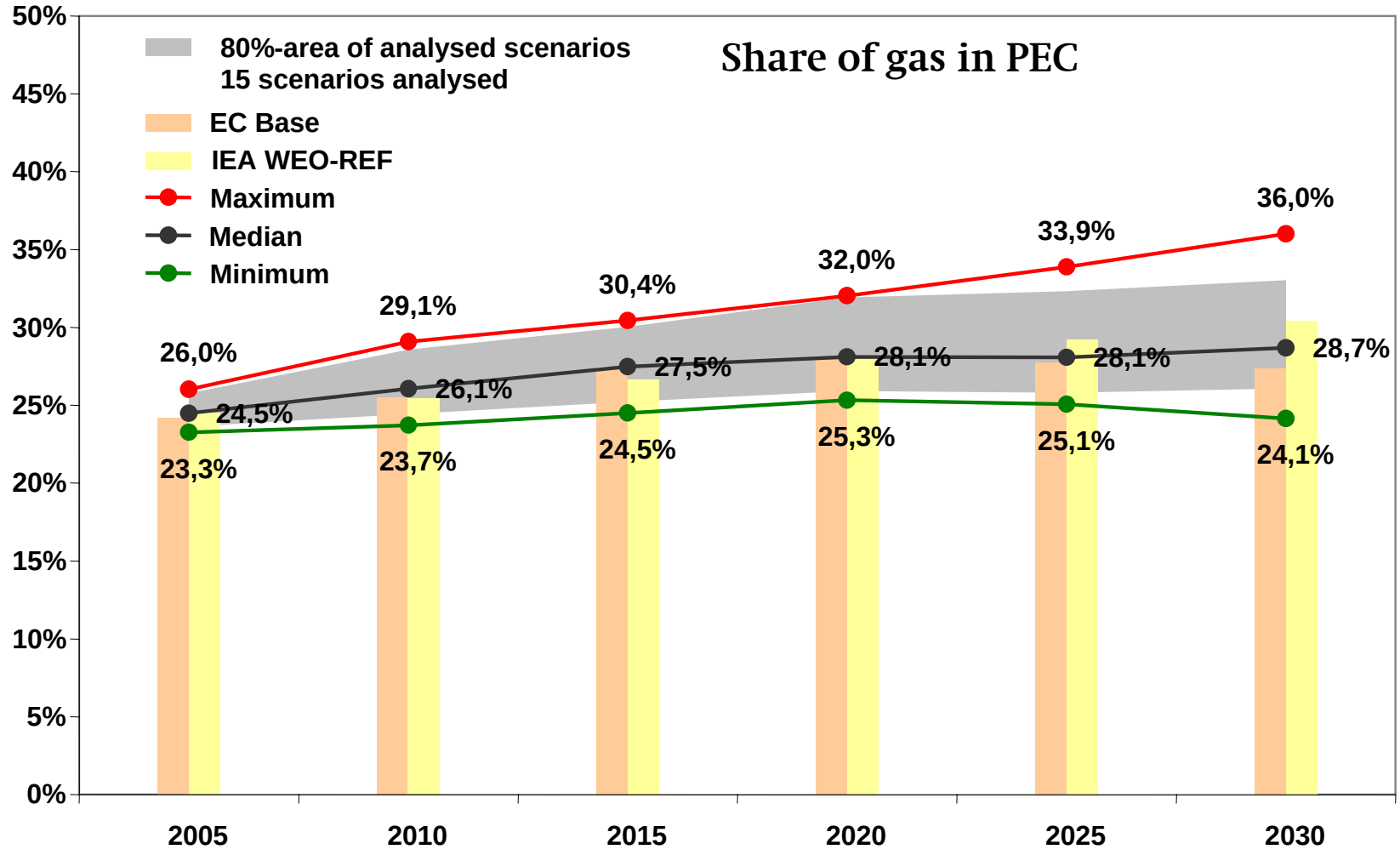
Development of the Share of Gas in Primary Energy in the EU-25/27



Source: Meta study of Prognos AG 2007

Contribution of gas

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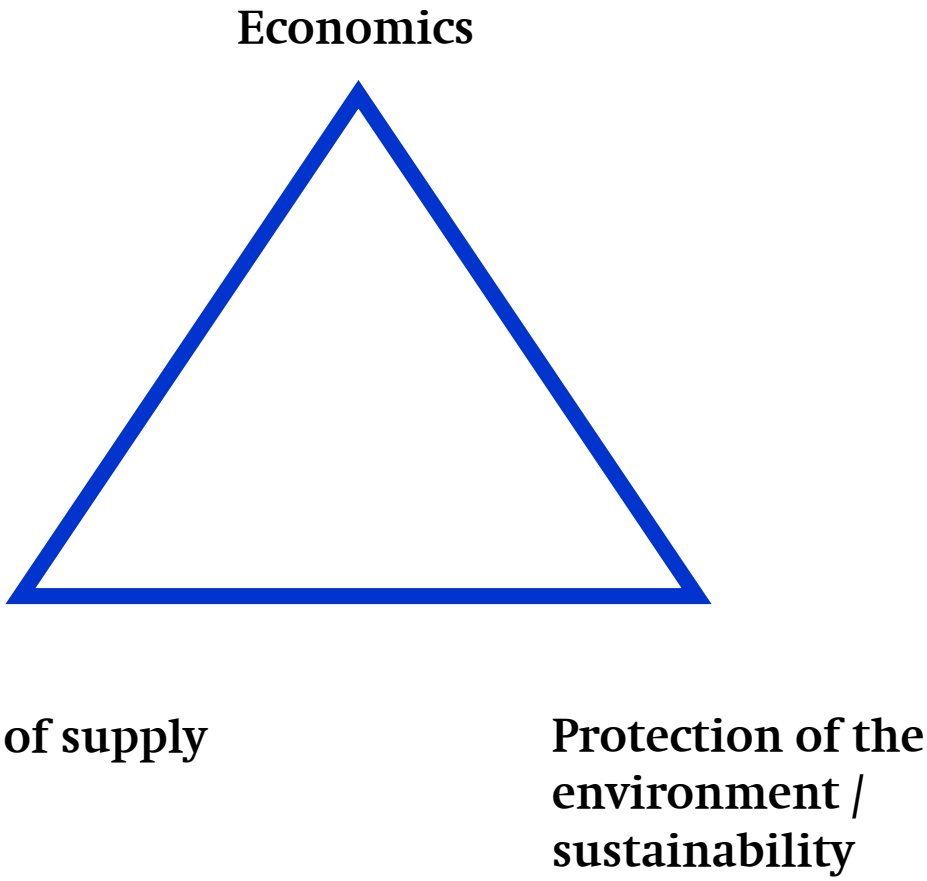
3. Problems of Increased Gas Usage

Internationally Accepted Objectives of Energy Policy



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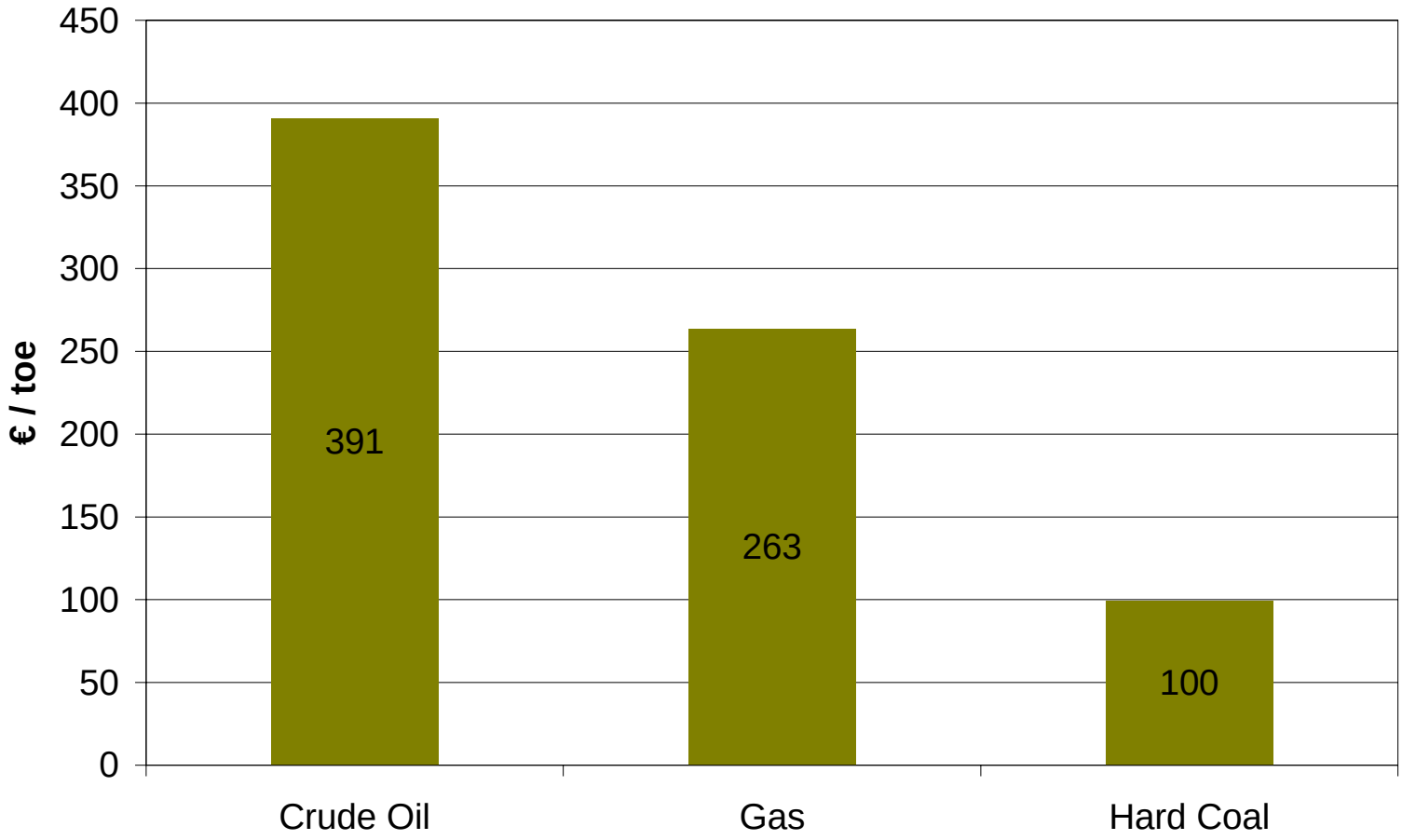
Economics: Border Crossing Prices in Germany 2007



Source: Energiewirtschaftliche Tagesfragen 3/2008, p. 43

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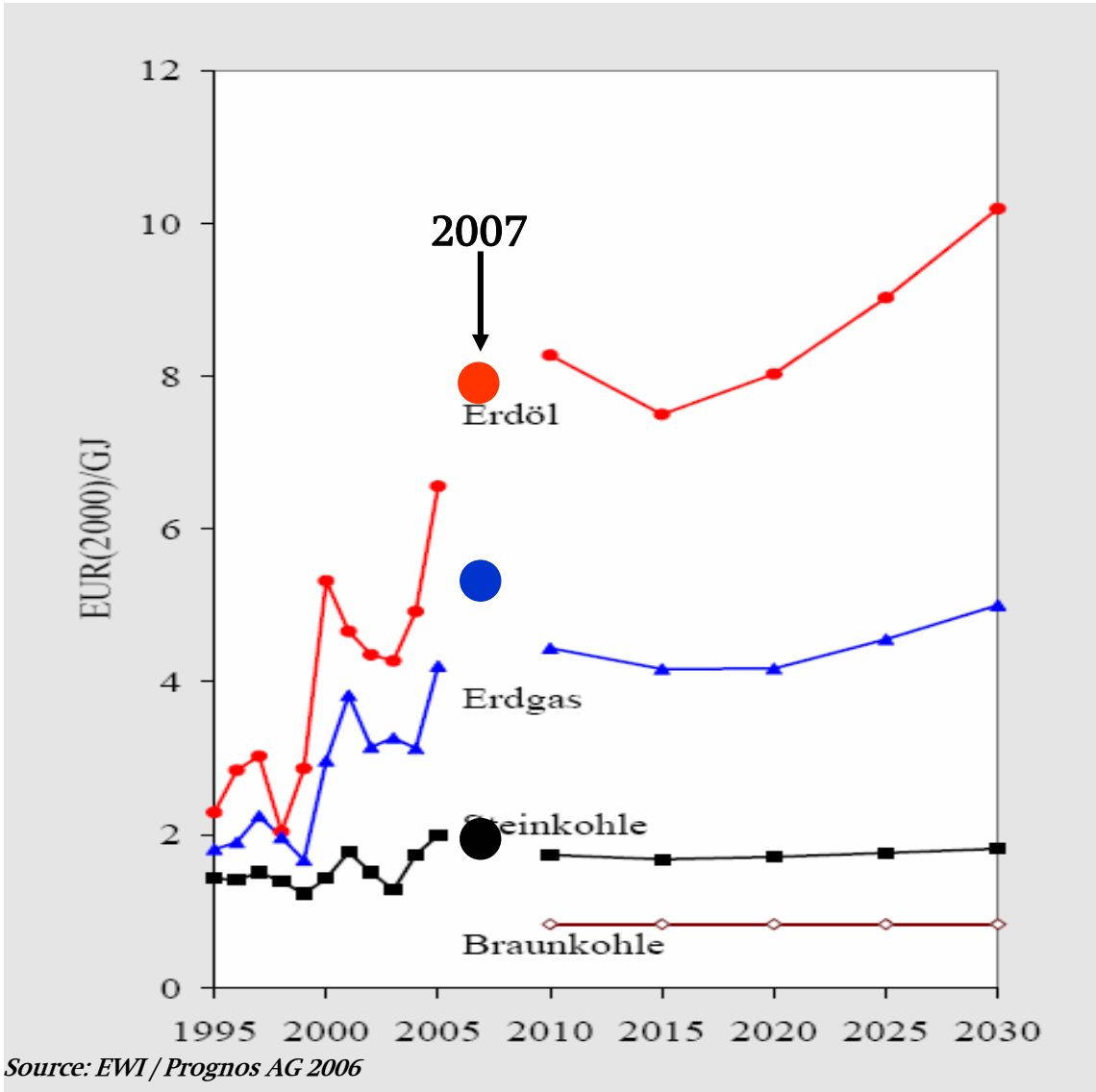
Economics: Gas will stay much more expensive than coal



Source: EWI / Prognos AG 2006

Aspects of Energy Security

Definition of Energy Security

"Uninterrupted availability of sufficient energy of adequate quality at predictable and affordable prices during a given period of time."

	Oil	Gas	Coal
Geological availability	3	2	1
Political stability of producing countries	3	2	1
Vulnerability of transport routes	2	3	1
Import dependency	3	2	1
Stability of trading relations	3	2	1
Predictability of prices	3	1	2
Affordability of prices	3	2	1
Adequate quality	1	1	1
Sum	**21**	**15**	**9**
Total Rank	3	2	1

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Assessment of Selected Fossil De-Carb Measures

Sector	Measure	Economics / Competitiveness	Security of supply	Sustainability
		Change of Status quo		
Power	substitution of coal by gas	-	-	+
Power	CCS	-	0	+ (?)
Buildings / Industry	substitution of oil by gas	0	+	+
Transportation	substitution of oil by gas	0	+	+

Status quo is…

-	**deteriorating**
0	**stagnating**
+	**improving**

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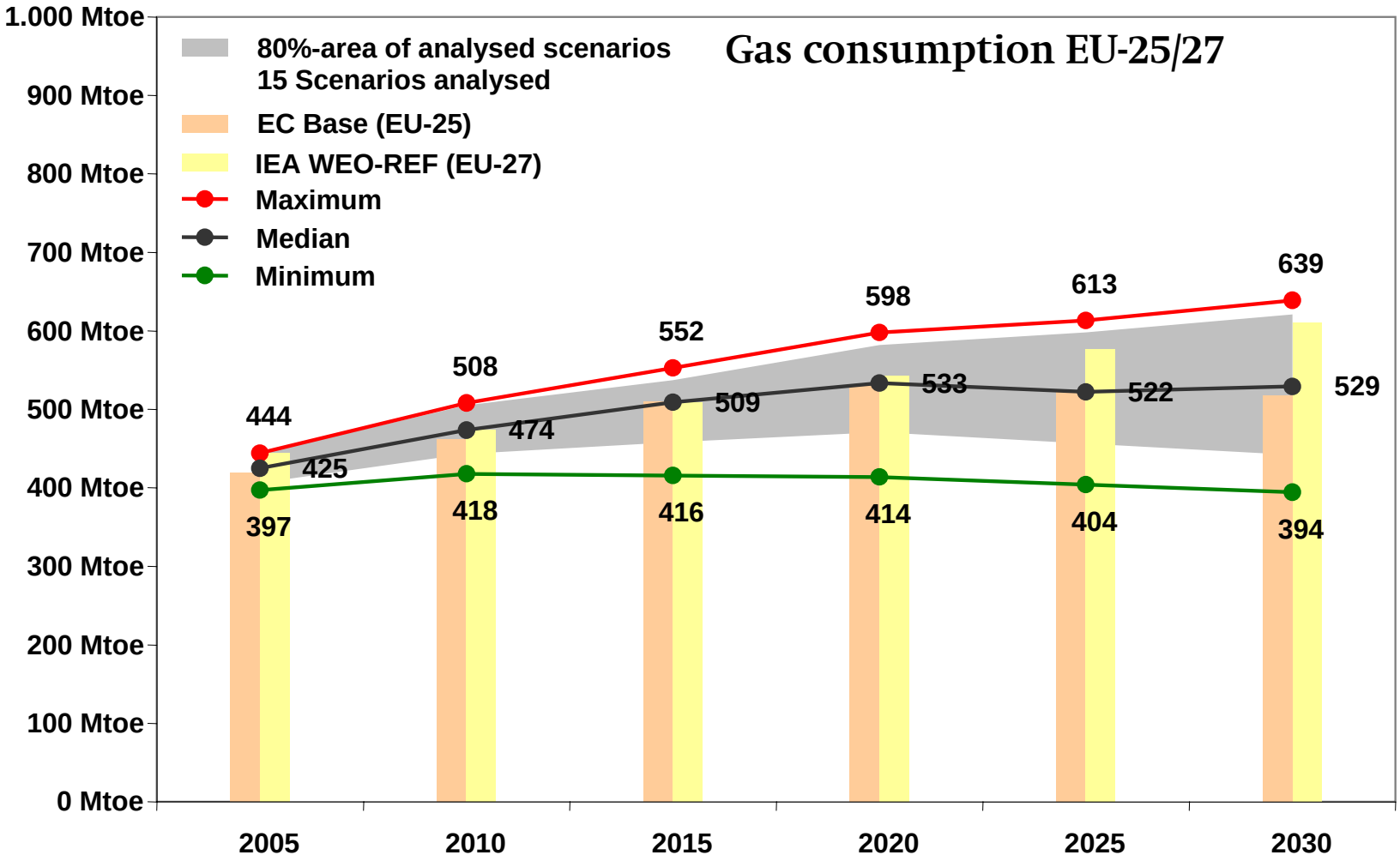
Development of Gas Demand in the EU-25/27



Source: Meta study of Prognos AG 2007

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4. Policy Options and concluding remarks

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De-Carbonisation is a major pillar on which Europe climate policy should rely

- Power markets: CCS might be the better choice rather than gas-to-power,
- The world will use coal as cheap energy source: Europe should help to develop the technology for making coal cleaner.

- Heat markets: Limiting factor is the availability of gas grids.

- Transportation: Large theoretical and technical potential for substitution of oil.

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Questions and Challenges

1. Will CCS be technically and commercially available and competitive with other measure in the power sector and will storage problems be solved in due time?
2. Will gas in the heat markets continue to substitute oil?
3. Will it be possible to increase the market share of gas in the transport sector and how can this be done ?
4. How will the total gas demand develop?
5. If it does, how can the sources of gas supply be diversified?
6. How can security of supply be maintained in the long run?
7. How will the prices of natural gas develop in the long run?

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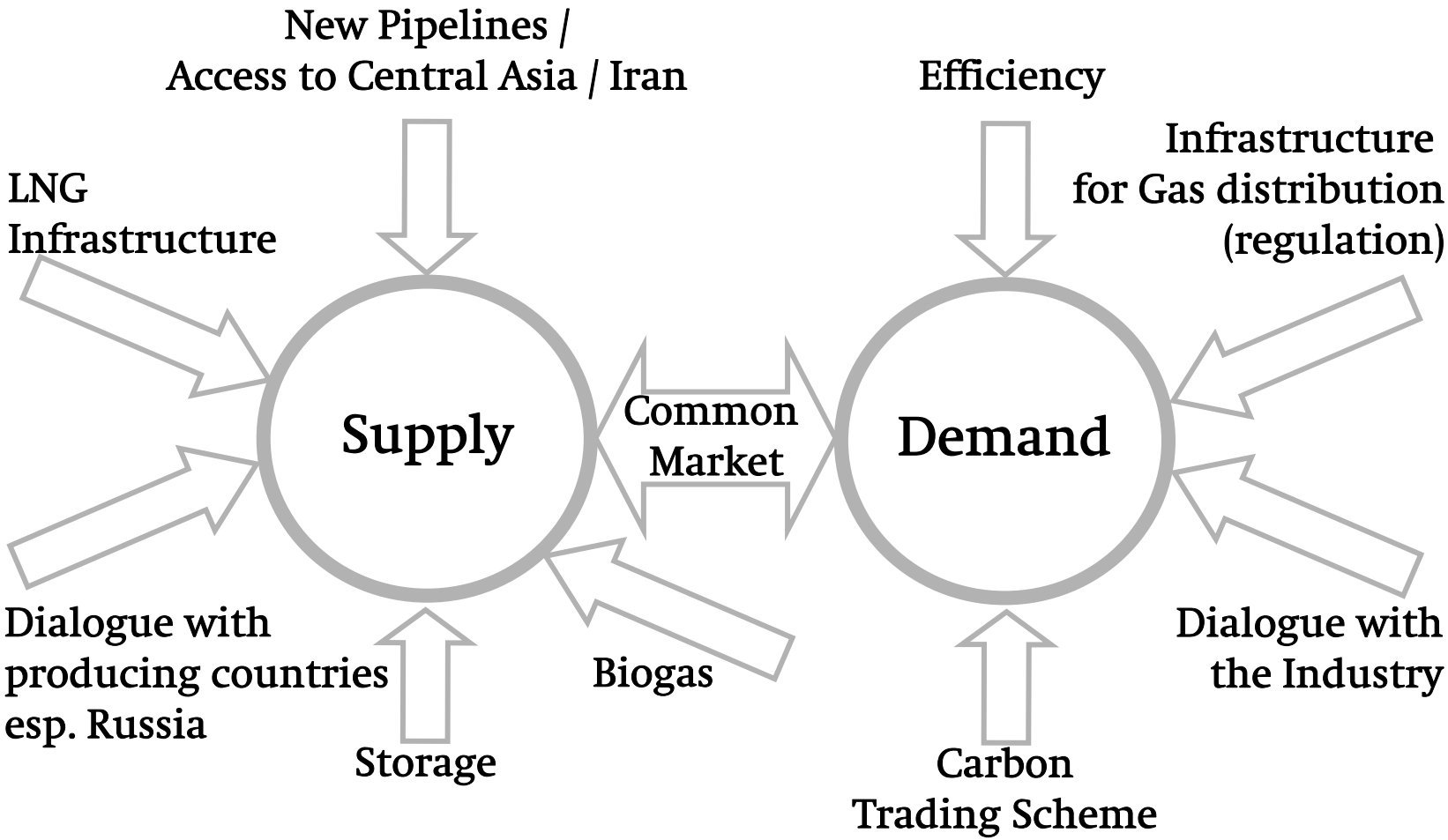
European Gas Market: Policy Options and Fields of Action



Policy Options

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Demand Side Policy Options

1. Europe's plan to improve energy efficiency should be followed consequently – action plans should become binding!
2. In the heat and transport sector, infrastructural barriers have to be overcome. Regulation should set incentives for further expansion of gas networks.
3. Gas availability at filling stations must be increased strongly - maybe with economical assistance like investment subsidies.
4. A dialogue with the car and mineral oil industry should be led.
5. To help gas to a break through in transportation, merely all member countries should work together to improve the attractiveness of gas
6. Growing shares of gas can be replaced by biogas – a feed-in law comparable to the German Renewable Energy Law seems sensible.

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Supply Side Policy Options

1. Europe needs additional access to gas sources. A positive framework for new pipelines is to be achieved.
2. New LNG infrastructure will increase the security of supply and fungibility of the gas market – these projects should also get high priority status.
3. The dialogue with Russia should be continued in order to achieve an agreement close to the energy charter treaty.
4. Additional storage capacity like in the oil market could be a matter of regulation.
5. Growing shares of gas can be replaced by biogas – a feed-in law comparable to the German Renewable Energy Law seems sensible.
6. Europe needs a Foreign Energy Policy.

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Concluding remarks

1. Fossil fuels will play a dominant role in Europe's energy supply in the decades to come.
2. There are various options to reduce carbon dioxides emissions caused by fossil fuels. Among them, the shift to natural gas.
3. The largest potential for natural gas is seen in the transport sector but also in the heat markets.
4. Policy can act on the demand as well as on the supply side in order to help the market to higher shares of gas in primary energy. Foreign energy policy is needed to safeguard future gas supply – especially from Russia.

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Thank you for your attention. And now the floor is yours...

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Contact