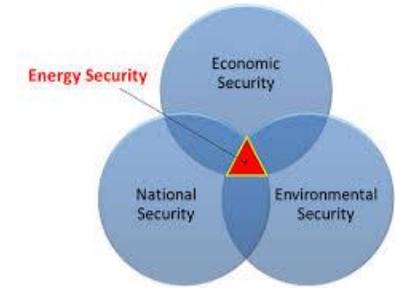


Energy Security in the Black Sea Region: Challenges and opportunities

Christian Egenhofer

Director CEPS Energy Climate House, Brussels

What is energy security?



- Oil for military – since World War I
- ‘Availability’ of energy at ‘affordable’ prices – since 1970/80s oil shocks (management of dependence)
- ‘Energy trilemma’ (security of supply – affordability – environmental sustainability) – since 2000s
- Concept is widening and sometimes includes
 - a) geo-economics (e.g. ‘energy as a weapon’)
 - b) climate security (implication of climate change & climate change policy)
 - c) cyber security (critical infrastructure, e.g. electricity)
 - d) Access to energy, energy poverty

Black Sea



Resource

- affordable gas,
- reducing dependence, and
- generating government revenues, jobs & growth

Condition:

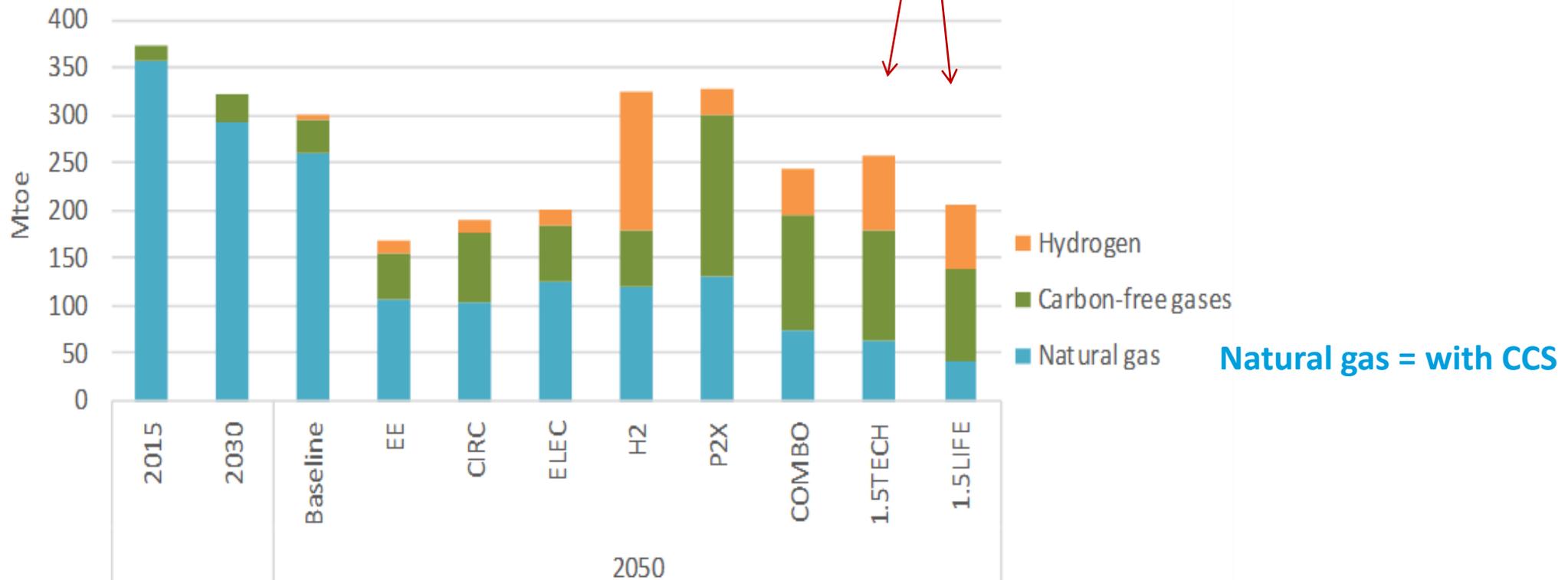
- **Competitiveness**
- **Technology**
- **Capital**
- **Demand**



EU 'climate neutrality'

Consumption of gaseous fuels

(European Commission Long-term Strategy, Nov 2018)



Short-term options

- Biomethane enrichment gas mix
- Hydrogen enrichment into gas mix

Long-term options

- Hydrogen (electrolysis, natural gas with carbon capture)
- Ammonia

Implications

- Romania is late – will there be a market beyond 2030?
- Will gas investment be stranded?
- “gas phase out” campaigns are starting – influence investors
 - Fossil investment becomes risky: depends on cost/price and depreciation
 - Institutional investors move out
 - EIB decision to stop supporting gas investment is logical (“money is needed elsewhere”)
- EIB is not the problem – investment community is waking up to carbon
- Sustainable finance taxonomy; Low carbon and positive carbon impact benchmarks
- Risk assessment, e.g. by Central Banks (global), carbon risk rating

Security of supply implications

(“Romania is like other EU member states”)

- **Natural gas is in the mix until 2030/35**
- **By then energy security rests on low-carbon (high share of renewables and nuclear, CCS) and energy efficiency**
- **Renewable energy requires cross-border trade (cross-border markets)**
- **Cyber security (grid) is crucial**
- **Digital technology will be essential**

East-West divide



Overstated

Attempt to
extract money

Excuse for lack
of political
will/capacity

More than
money – will
need a strategy