



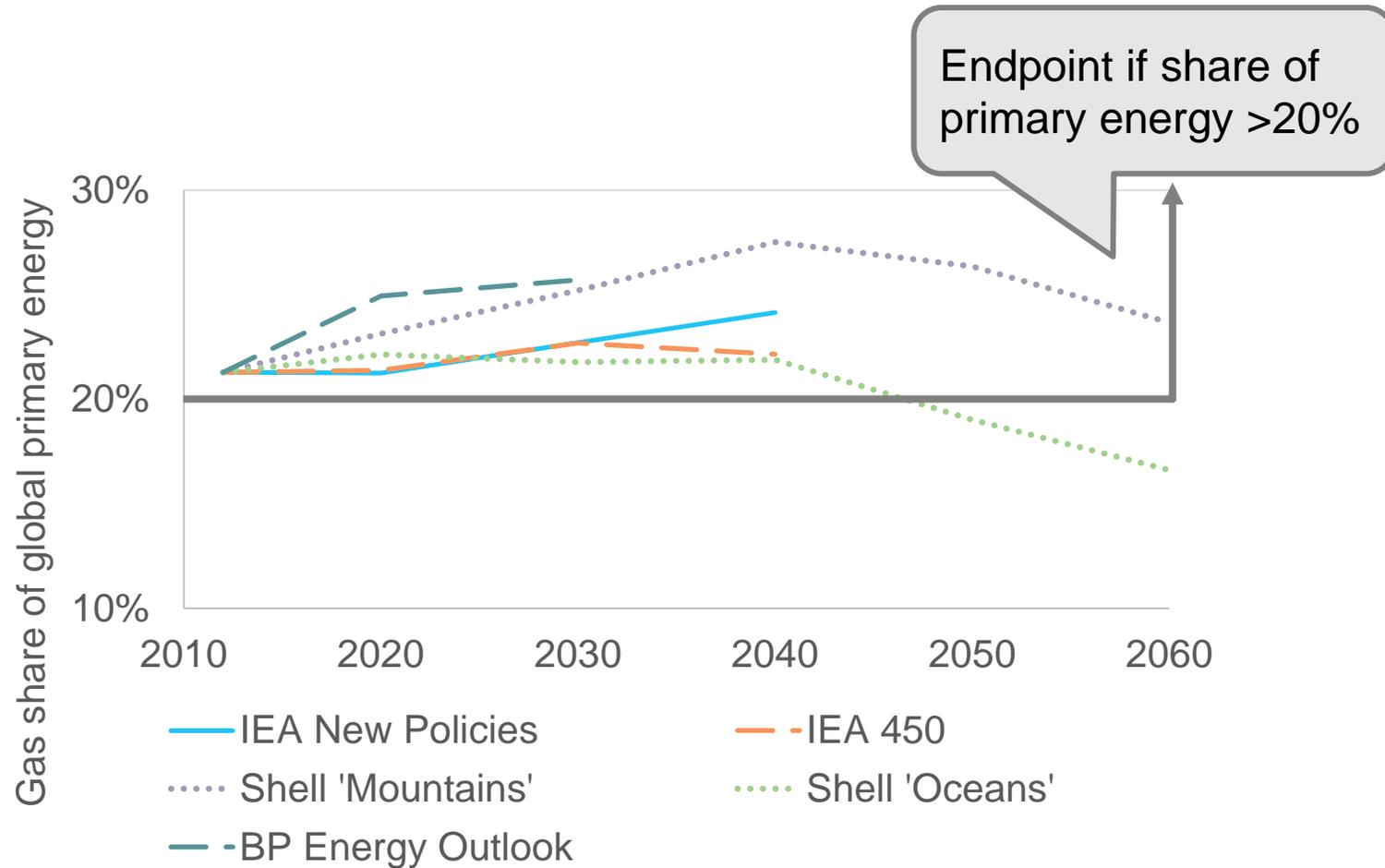
# Natural Gas in the UK – a stepping stone or an endpoint?

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**Presentation for the BIEE**

October 2015

## Many projections suggest gas maintains its current share



## Gas as an endpoint in the UK depends on six conditions

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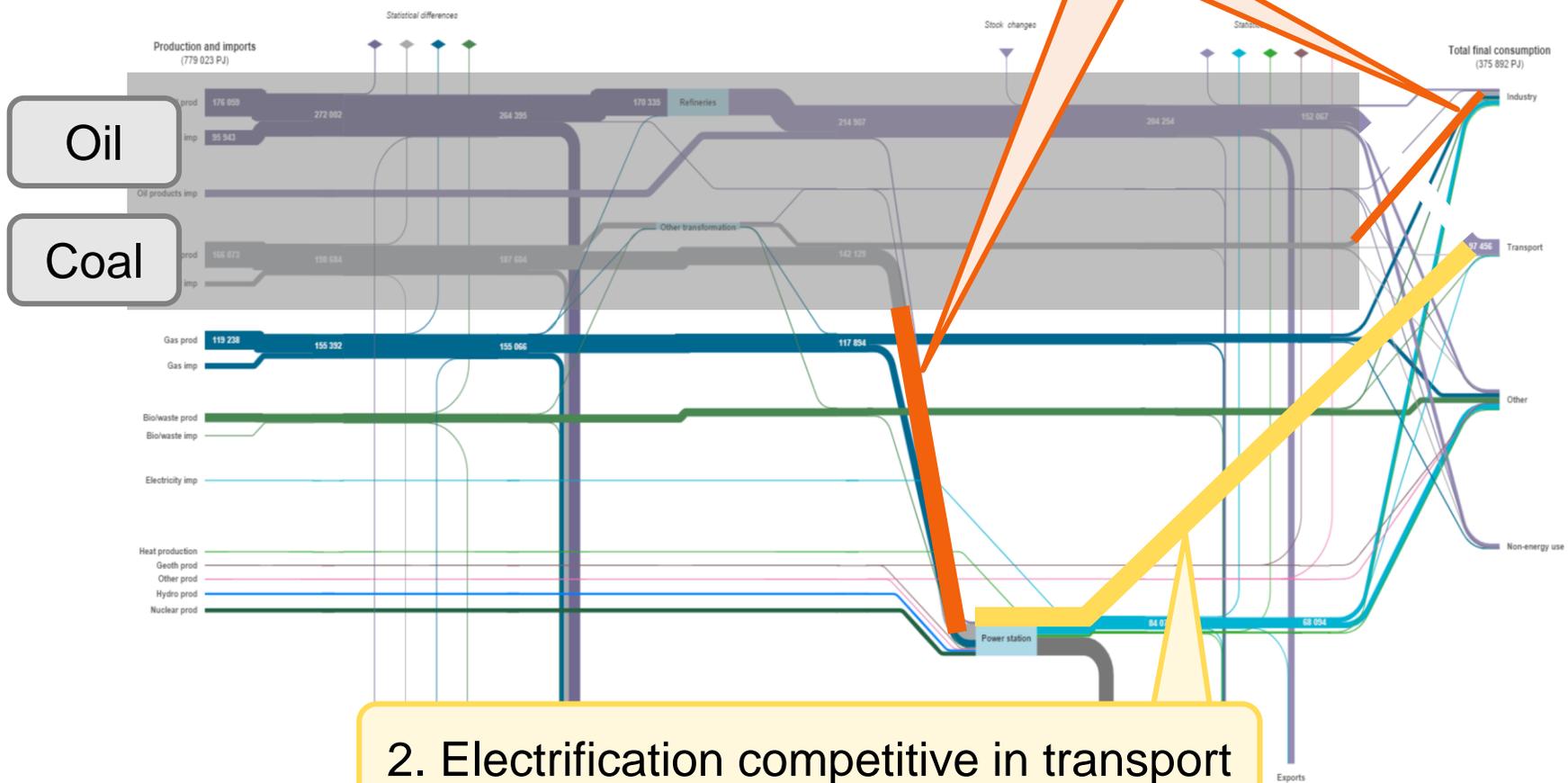
1. gas competitive with coal in power and heat generation (with CCS or carbon price)
2. electrification competitive in transport
3. limited supply of renewables
4. gas competitive with renewables (with CCS or carbon price)
5. gas competitive with storage (with CCS or carbon price)
6. secure gas supply

these are primarily driven by global factors

# Decarbonisation requires new energy sources for power, high grade heat and transport

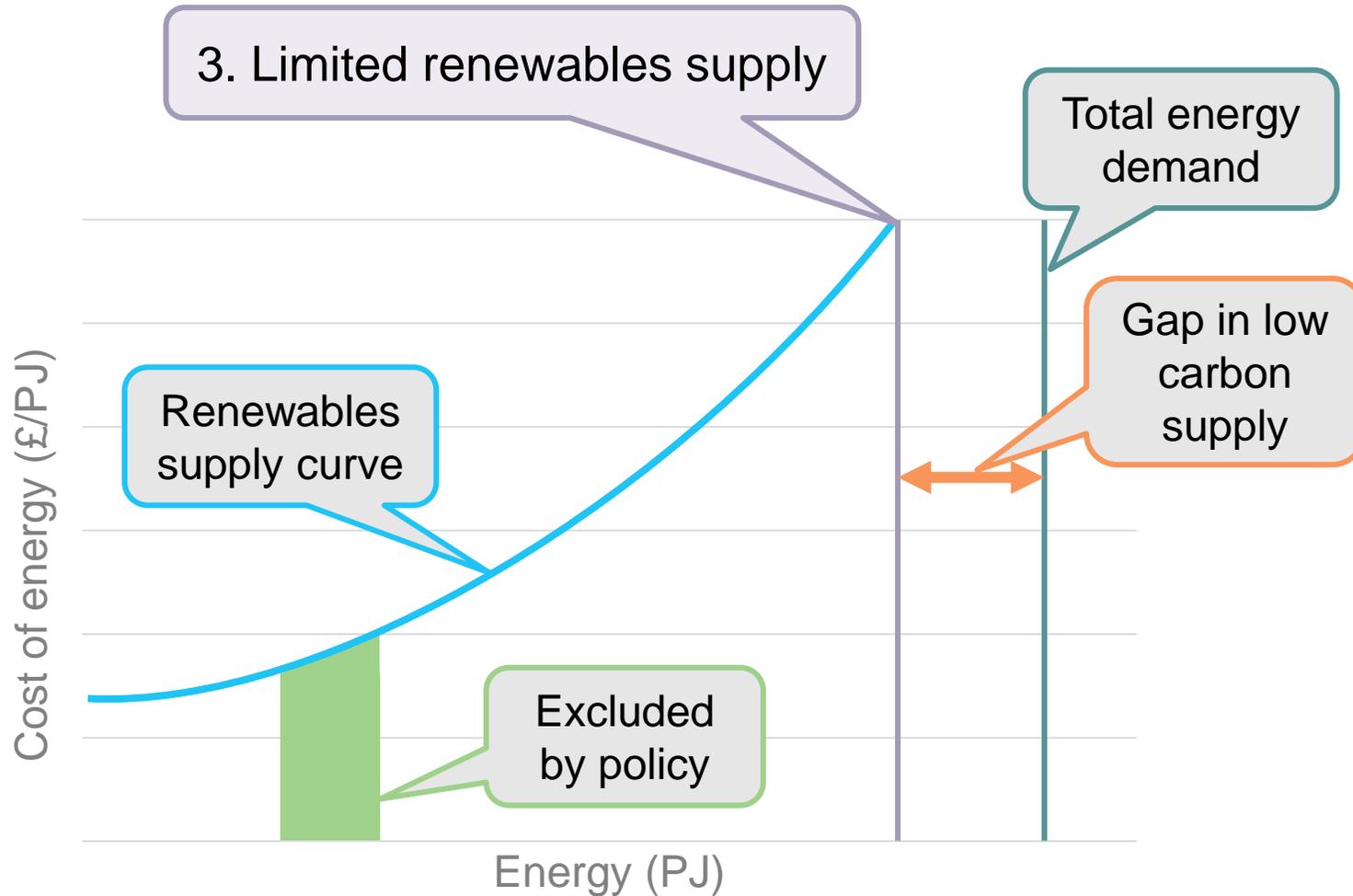
1. Gas competitive with coal in power and heat

World  
BALANCE (2012)

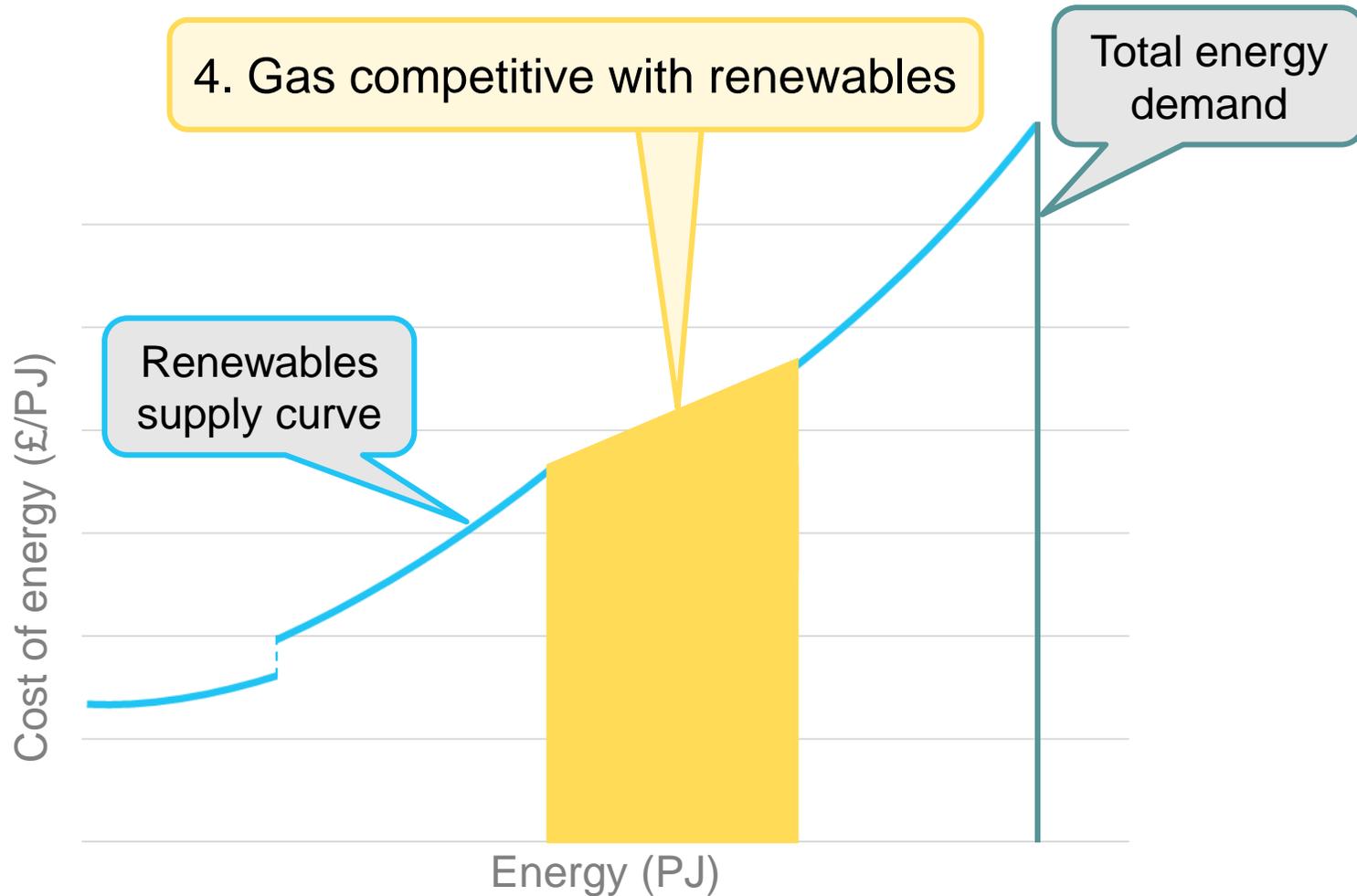


2. Electrification competitive in transport

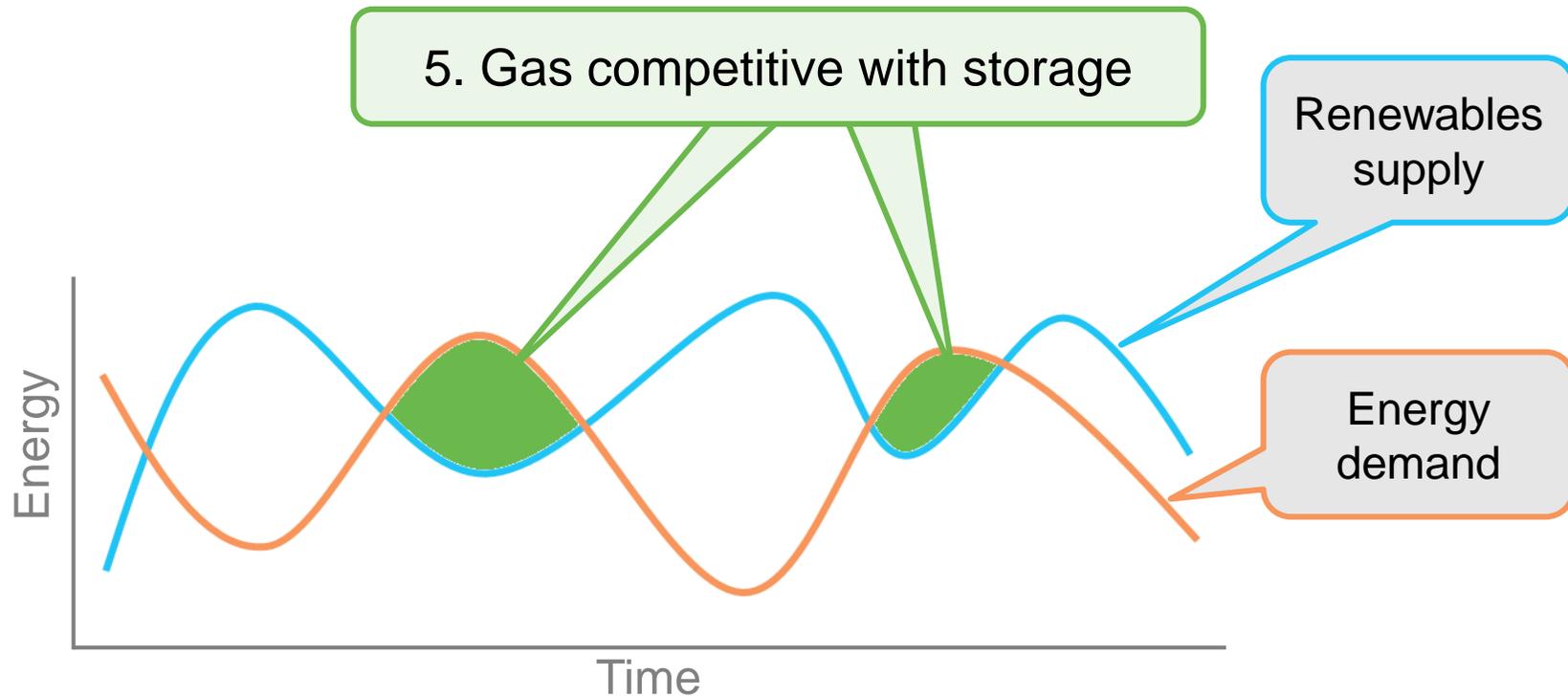
## Renewables supply may face limits: physical or political



# Gas with CCS may be competitive with marginal renewables

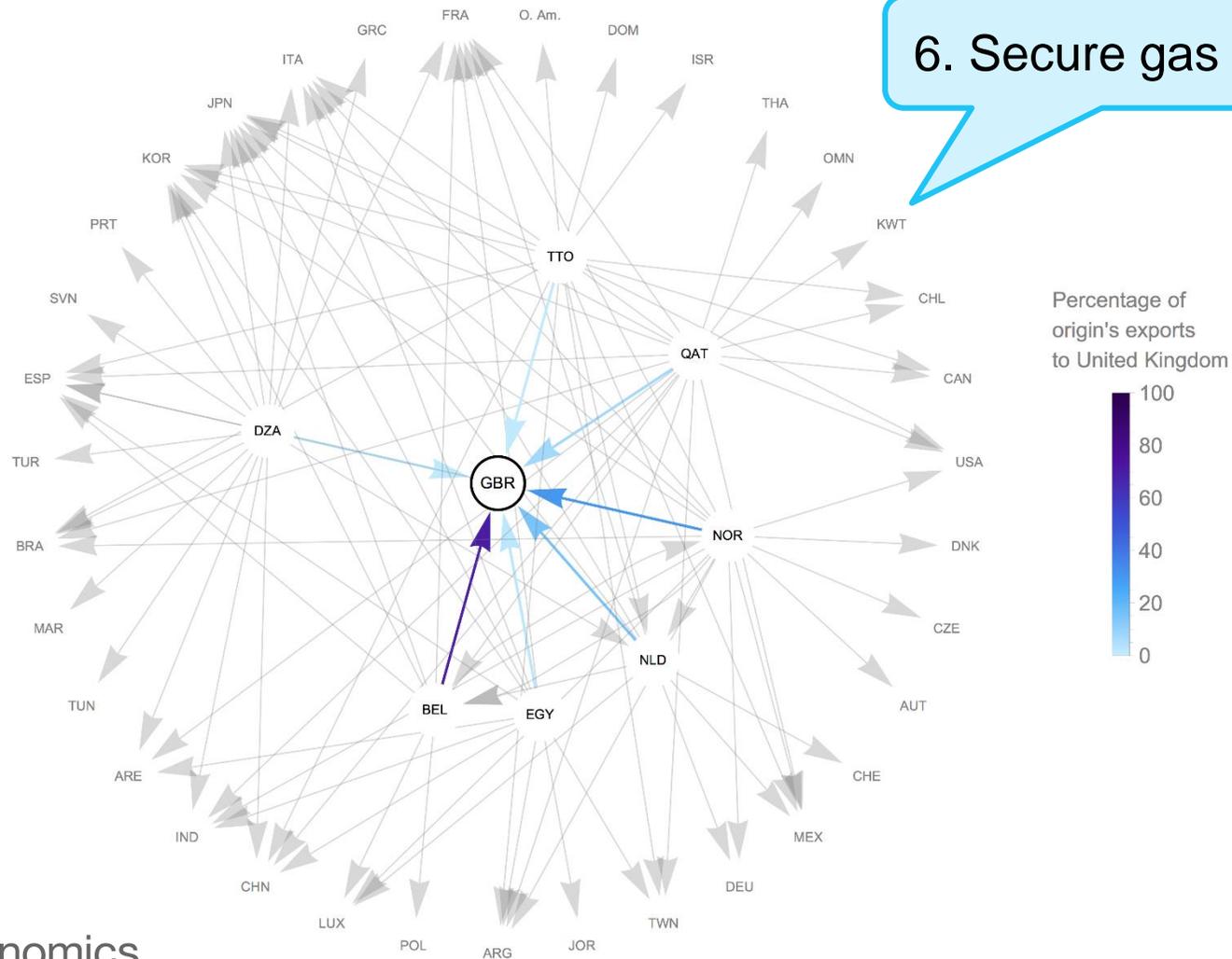


# Renewables intermittency requires gas or storage



# Security through trade is improving as LNG connects markets

6. Secure gas supply



## Prospects for most conditions are uncertain

#	Condition	Criteria	Prospects
1.	Gas competitive with coal	gas price + CCS/CO <sub>2</sub> < coal + CCS/CO <sub>2</sub>	?
2.	Electrification competitive in transport	electrification cost < hydrogen <= biofuels <= oil products	✓
3.	Limited supply of renewables	renewables supply < total energy demand	✓
4.	Gas competitive with renewables	gas price + CCS/CO <sub>2</sub> < marginal renewable	✓
5.	Gas competitive with storage	gas price + CCS/CO <sub>2</sub> < storage <= hydrogen	?
6.	Secure gas supply	liquid, interconnected regional markets	✓

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