

DISCLAIMER

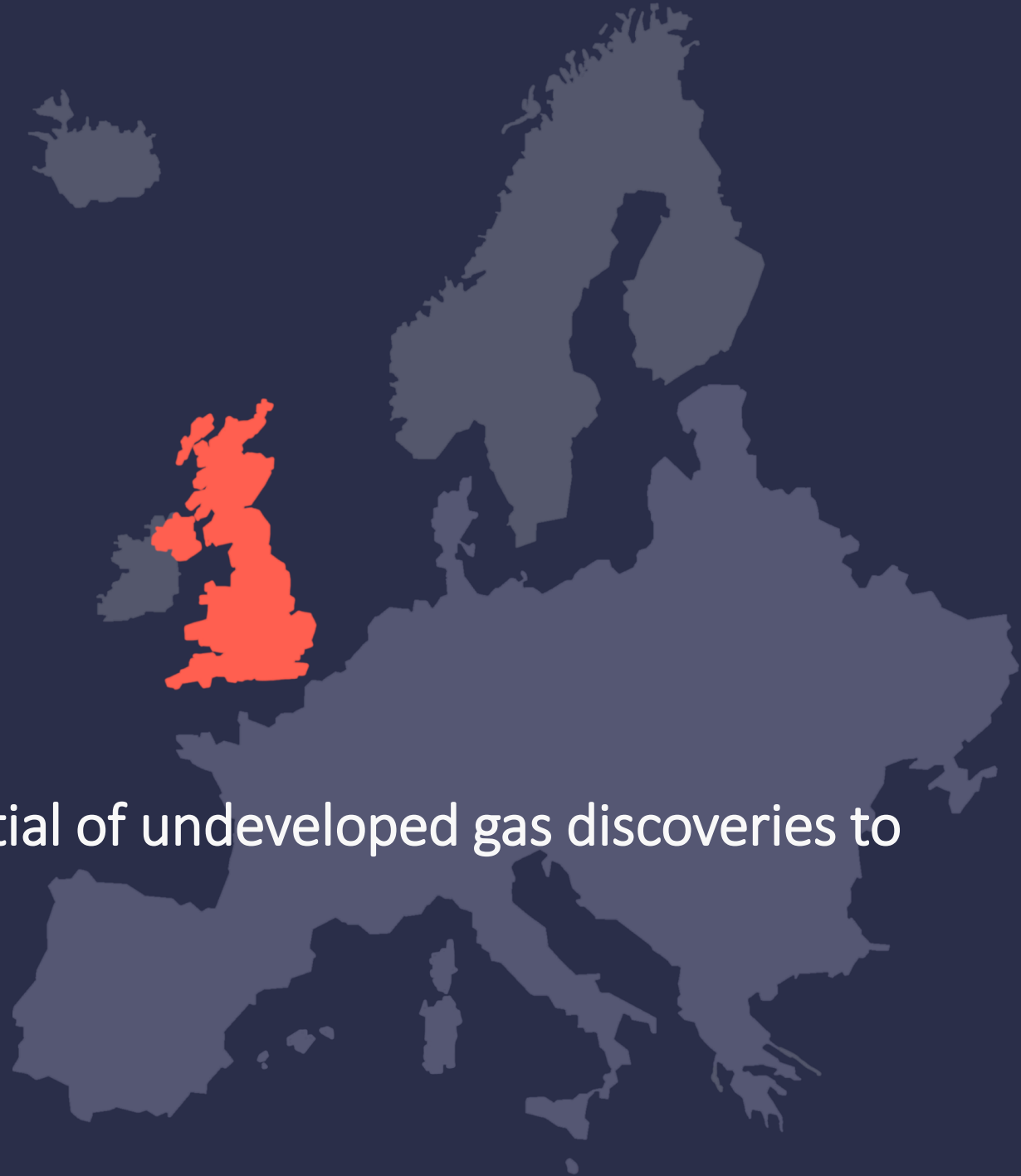
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DEVEX2025

Losing or securing supply: The potential of undeveloped gas discoveries to boost the UK's energy security

Claire Black, Welligence Energy Analytics

May 2025



Agenda

Setting the scene – UK supply and demand

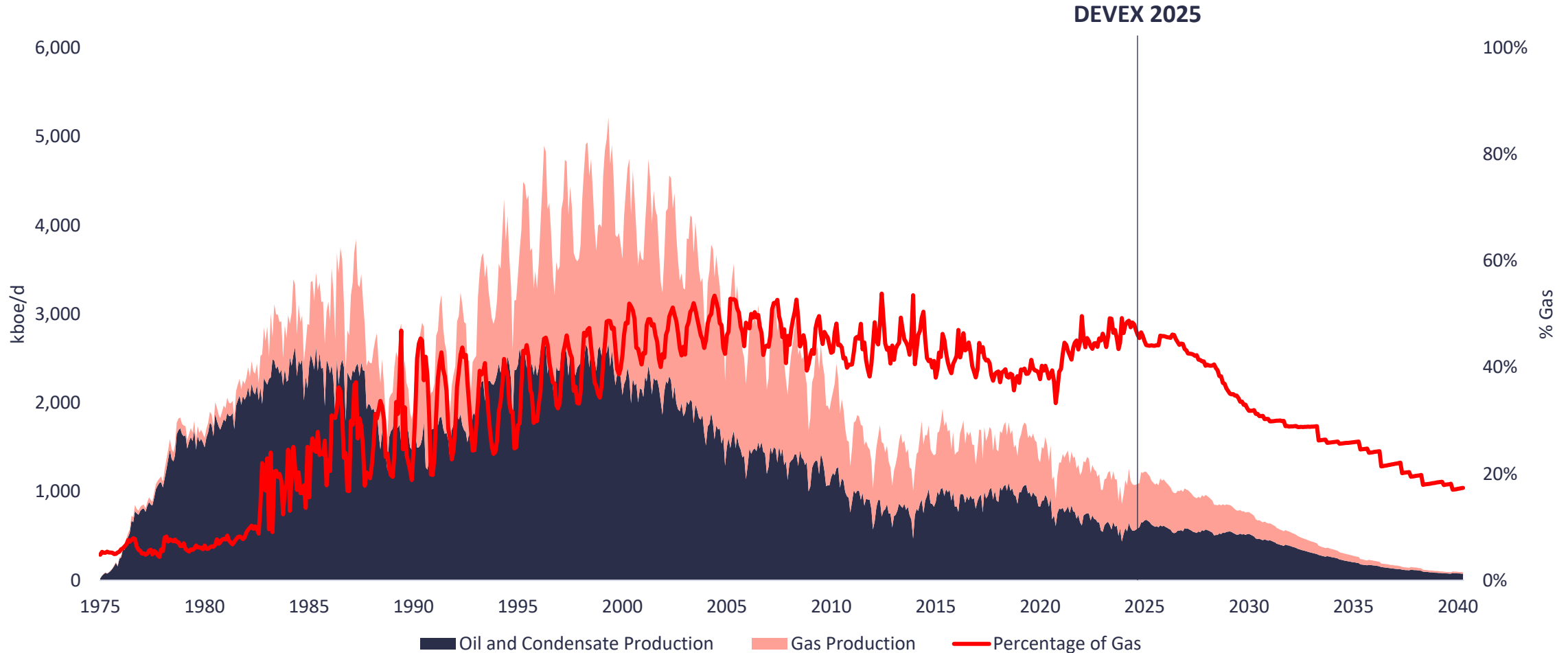
Remaining undeveloped gas discoveries

Focus: Southern North Sea & West of Shetlands

Conclusion

Setting the scene – UK production

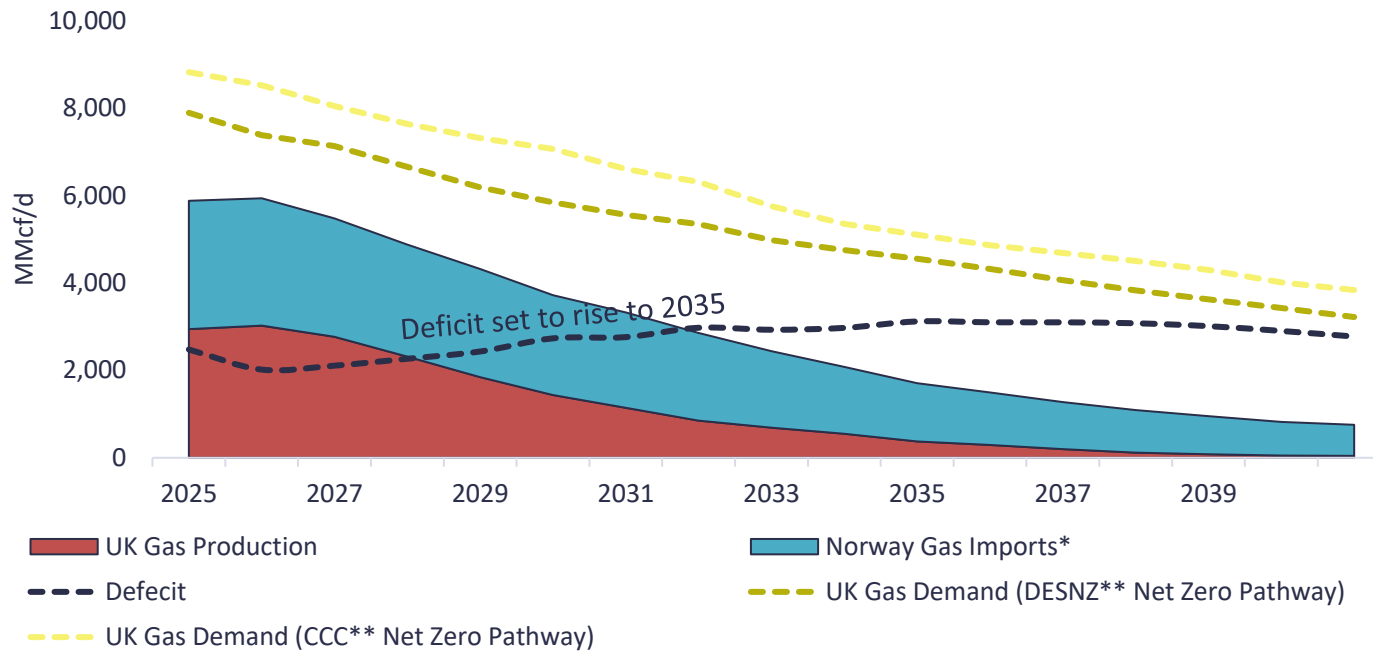
To date, the UKCS has delivered over 28 bnbbl oil and 17 bnboe gas



There is an acute need for more domestic gas...

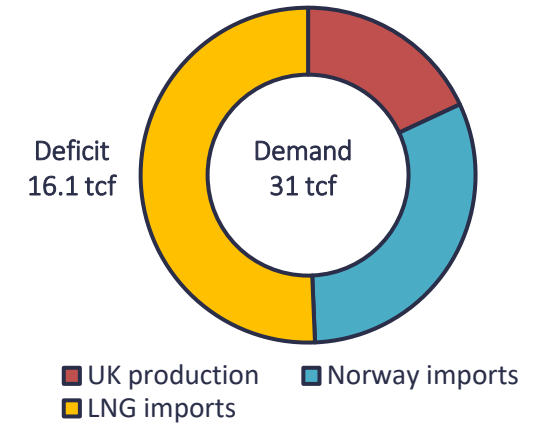
Dictated by demand, emissions targets and security of supply

UK balance of gas supply and demand, 2025 - 2040

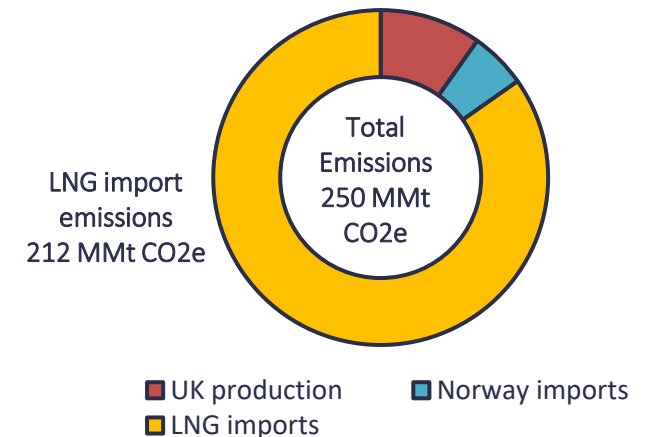


- LNG is expected to deliver 51% of gas demand, but will be responsible for over 80% of emissions

Gas volumes to meet demand to 2040



Associated emissions in meeting demand to 2040



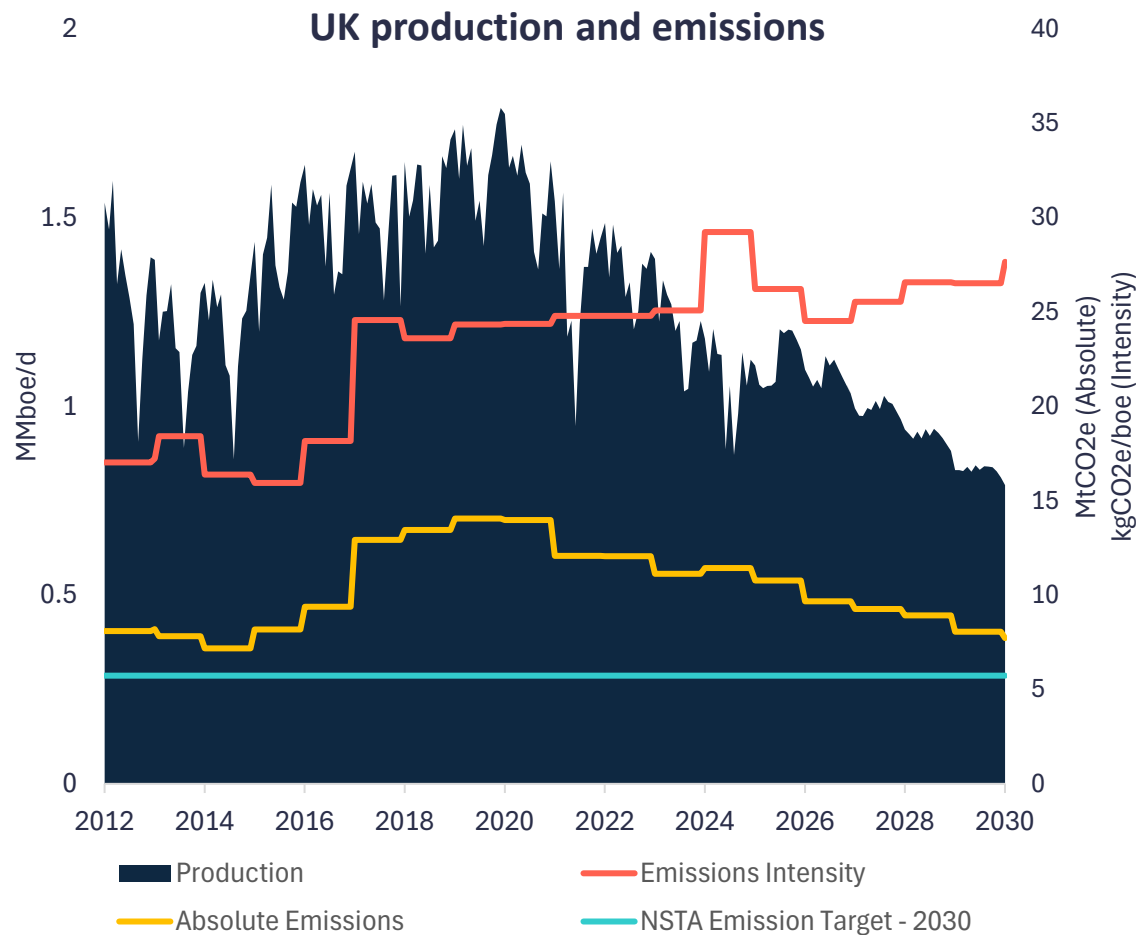
Source: Welligence Energy Analytics and NSTA

*Gas imports are assumed to remain proportionally the same as 2022 - 22.5% of Norway production.

**DESNZ (Dept. for Energy Security and Net Zero); CCC (Climate Change Committee).

...coupled with a need to reduce emissions

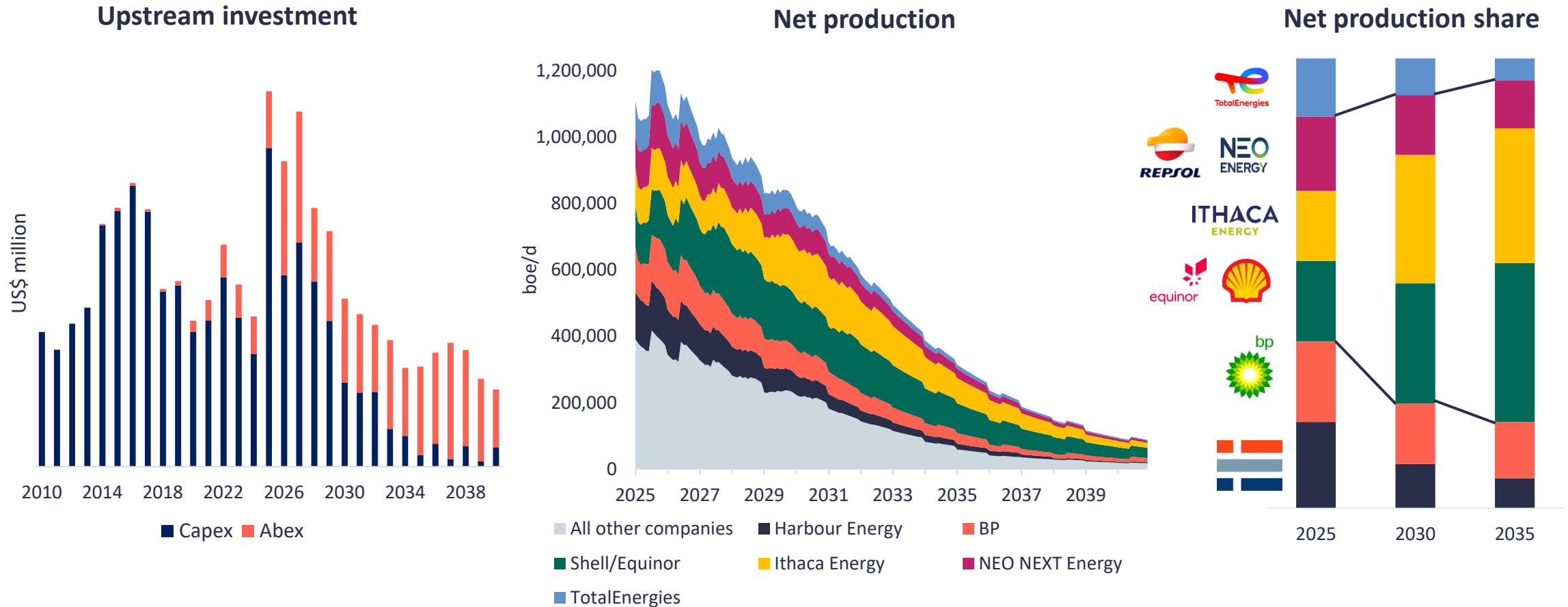
In Europe, both regulators and companies are setting emissions reduction targets



Company	% Interim reduction target*	Target year	
		2025	2030
Energiean	85%	●	
Repsol	55%		●
Moeve	55%		●
bp	50%		●
Equinor	50%		●
Harbour Energy	50%		●
Shell	50%		●
Var Energi	50%		●
Galp	40%		●
TotalEnergies	40%		●
MOL Group	30%		●
Ithaca Energy	25%	●	

Setting the scene – UK investment and company production

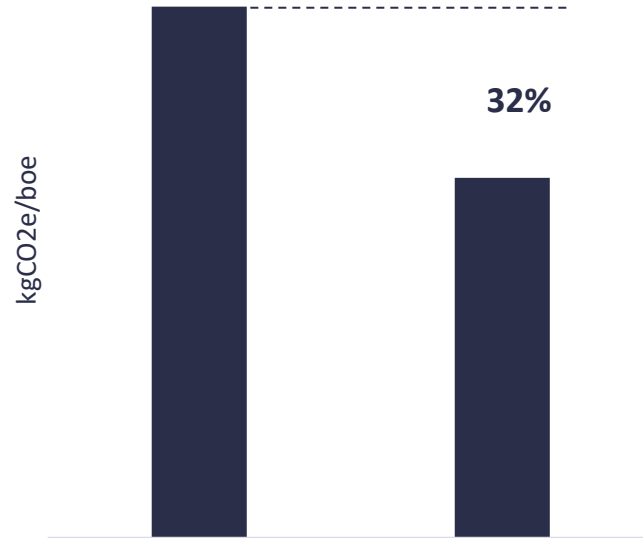
Capital investment is entering a decline and the top producers are changing



Impact of exploration success on hub emissions - Selene example

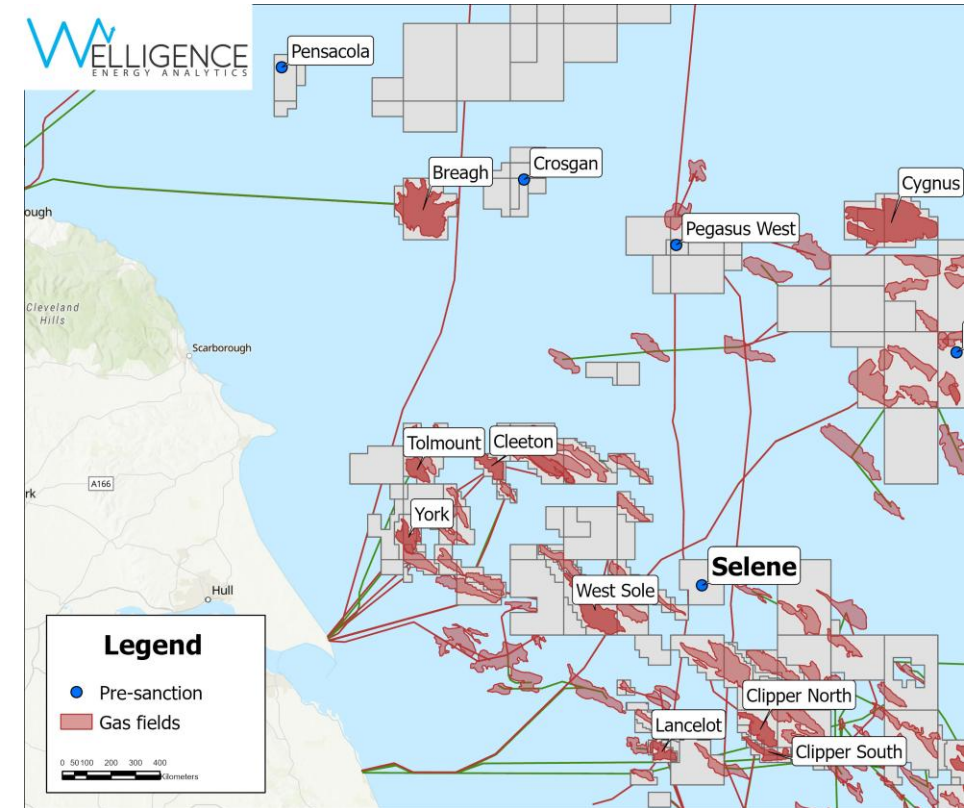
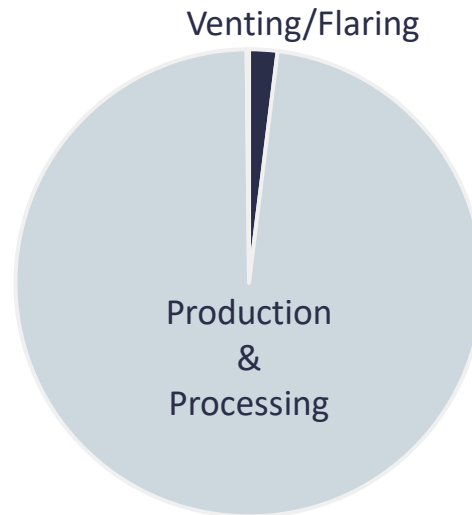
Delivering new gas production and reducing emissions intensity – an example win-win

Remaining emissions intensity



Clipper Hub Base Case Clipper Hub + Selene

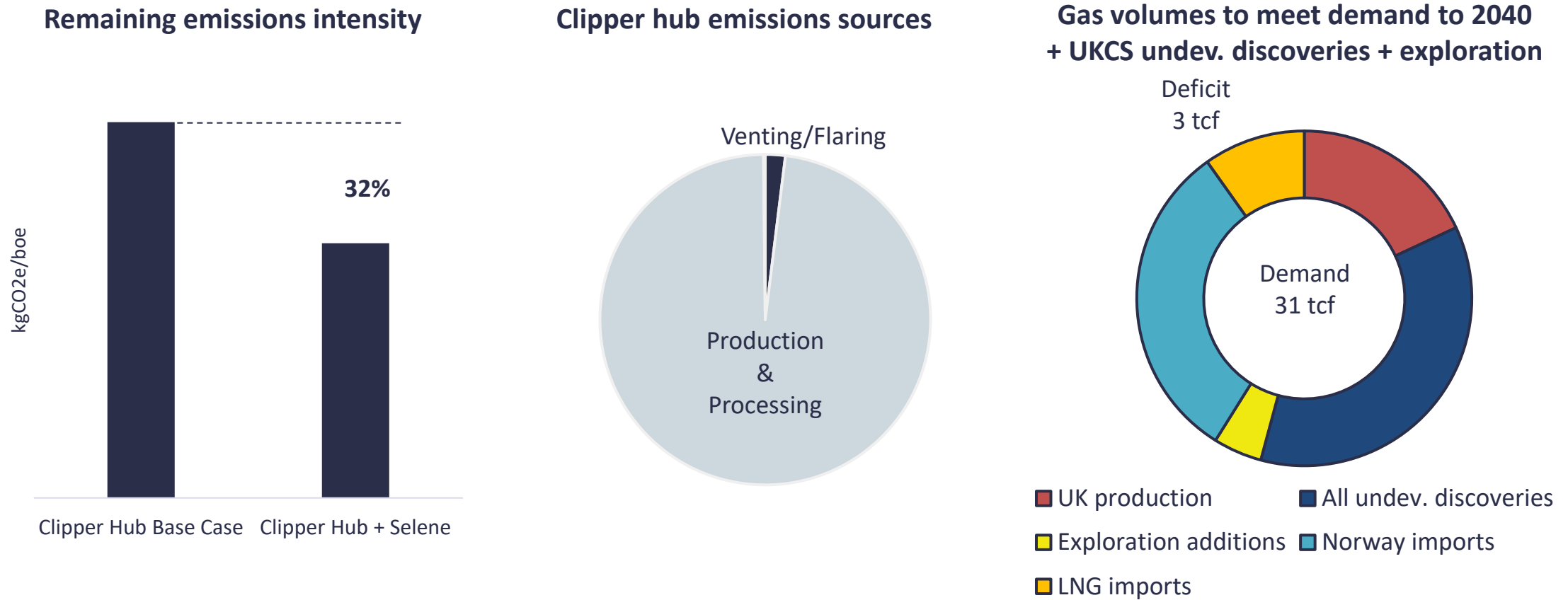
Clipper hub emissions sources



- Selene is an example of tieback development which has the potential to materially reduce emissions intensity of the host hub
- Infrastructure proximity, emissions profile, hub capacity and timing all play a part

Impact of exploration success on hub emissions - Selene example

Delivering new gas production and reducing emissions intensity – an example win-win

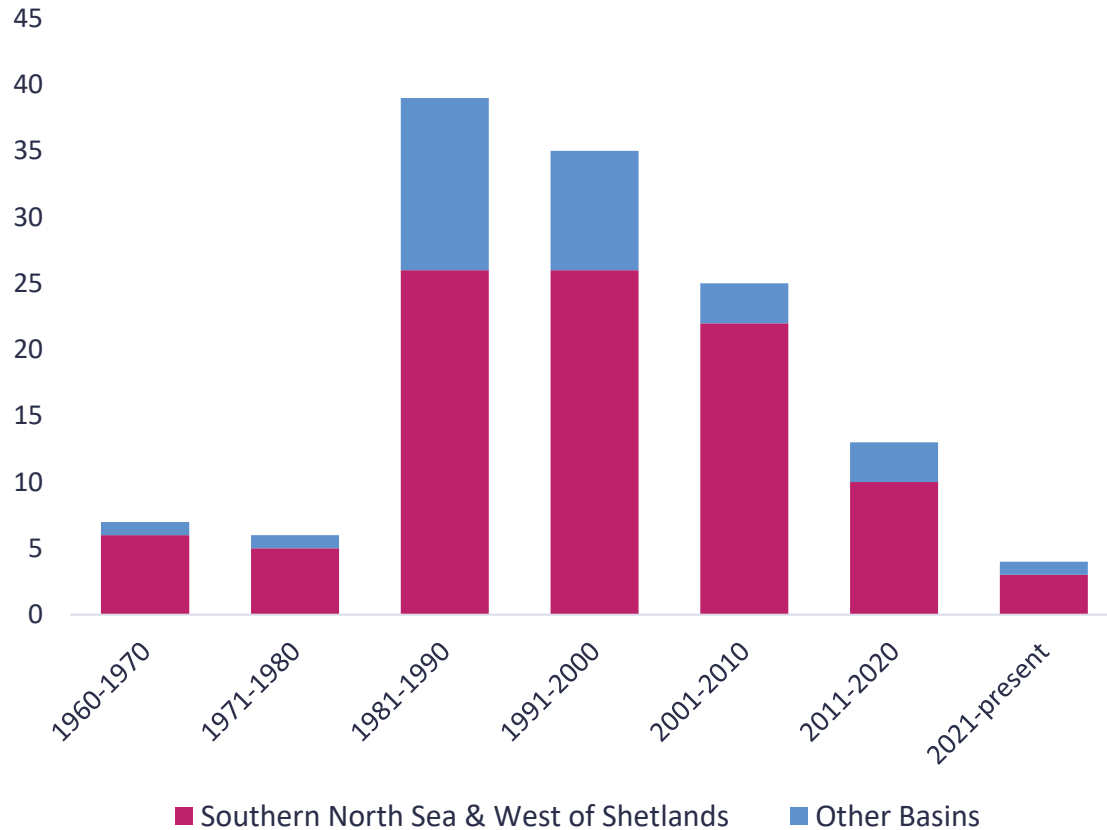


- Scale this up – what impact could upside have on the UK's gas supply/demand balance?

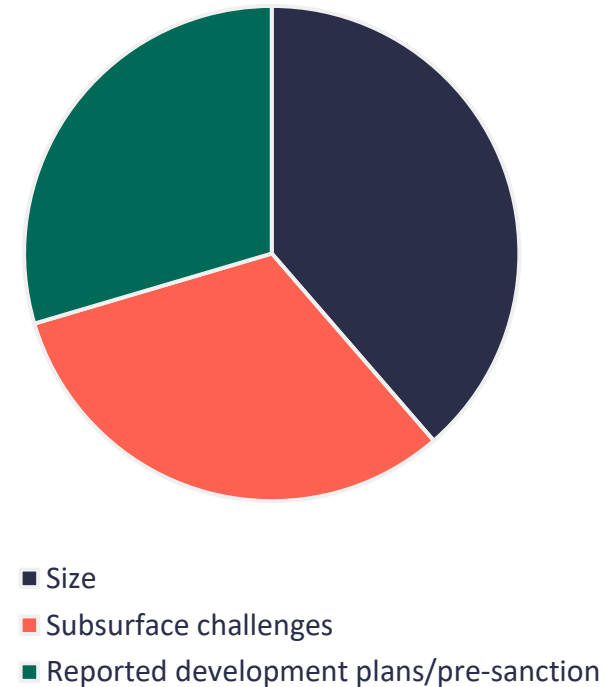
Remaining undeveloped gas discoveries

Over 120 gas discoveries – all at risk of remaining undeveloped

Number of UK undeveloped gas discoveries



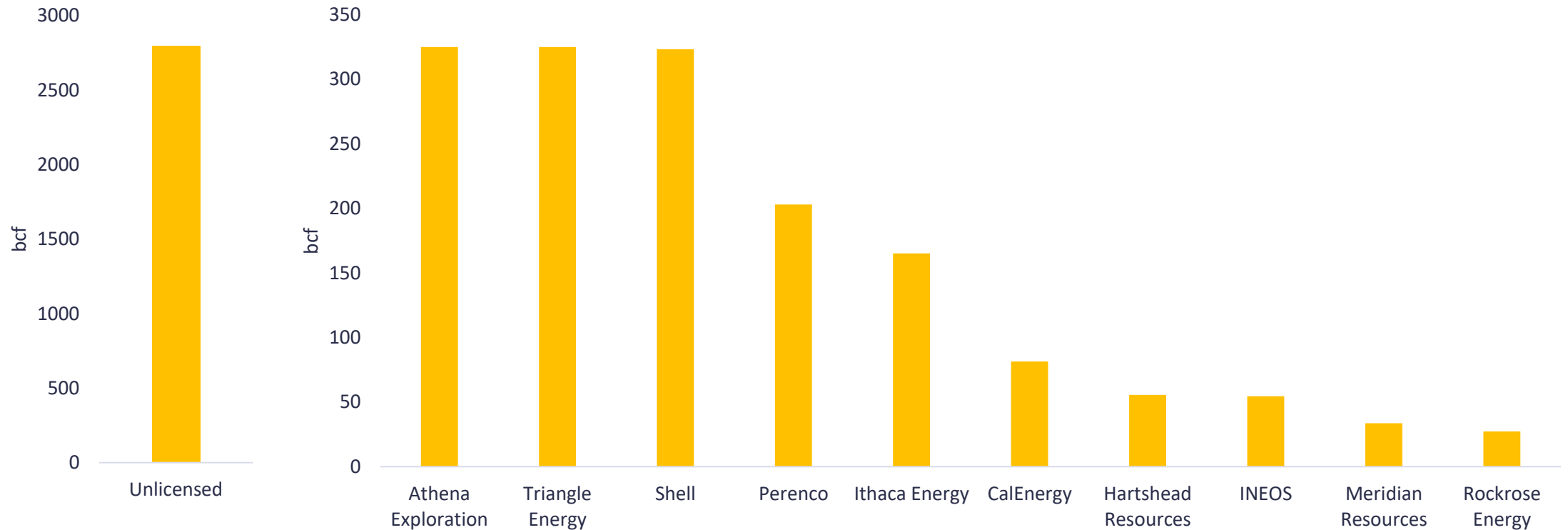
UK undeveloped gas discoveries in Southern North Sea and West of Shetlands



Who owns the gas resources?

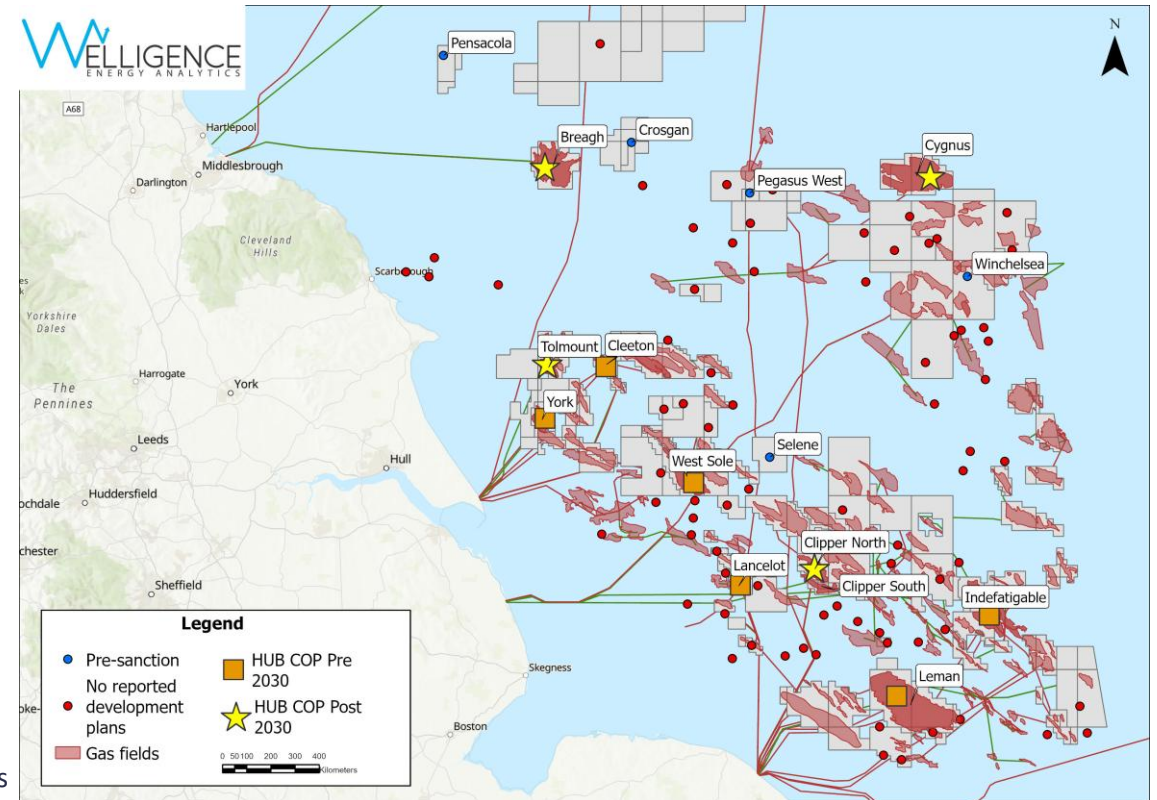
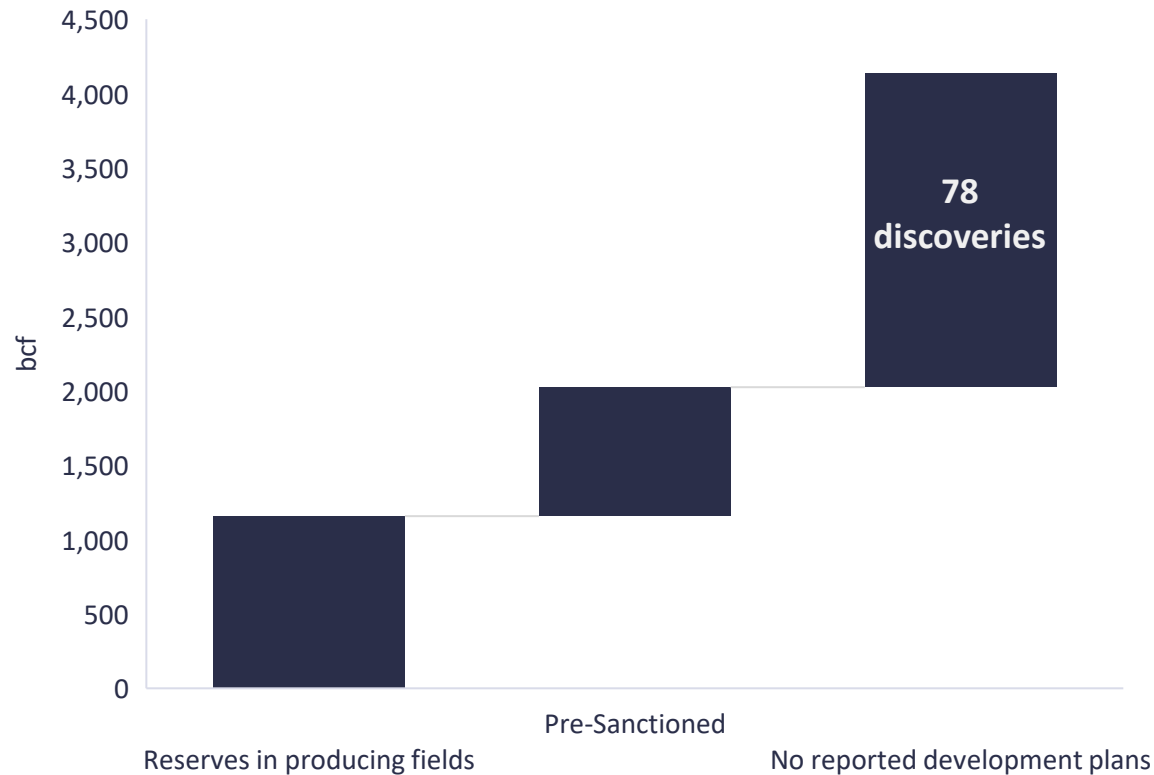
Supportive fiscal regime essential to progress developments

Net gas resources by company (top ten) in the Southern North Sea and West of Shetlands



Southern North Sea

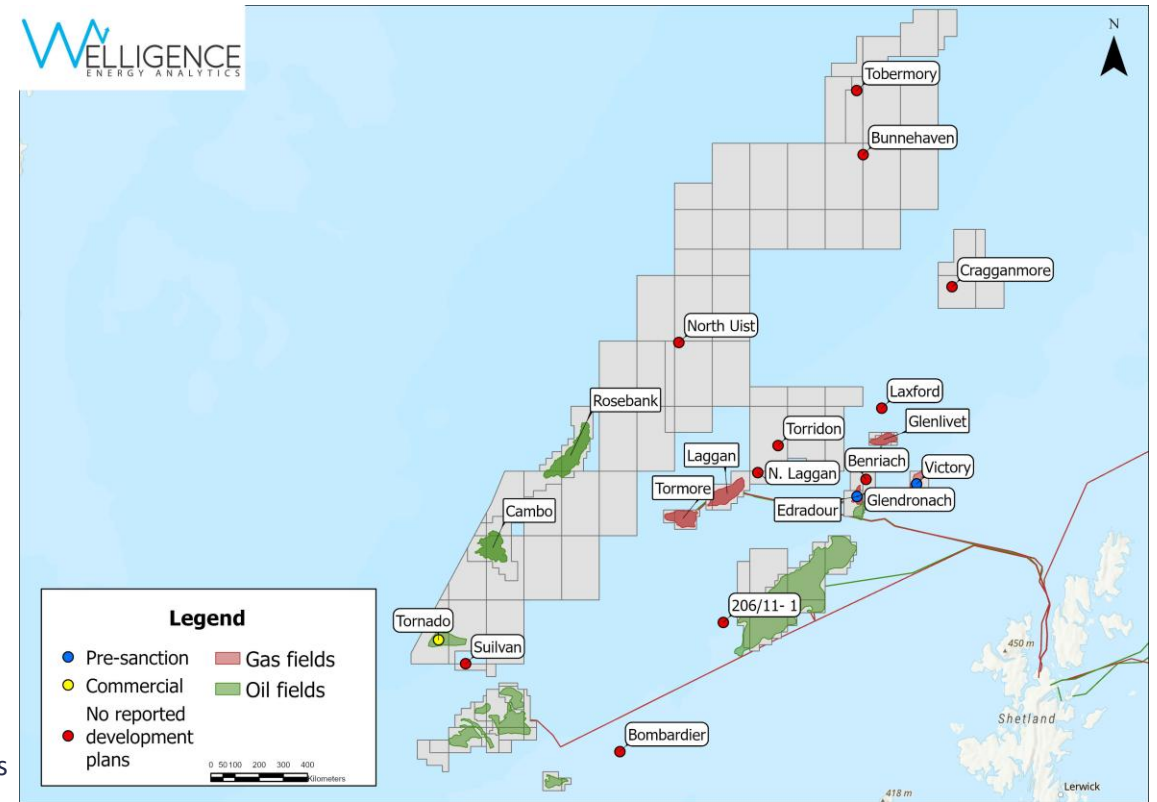
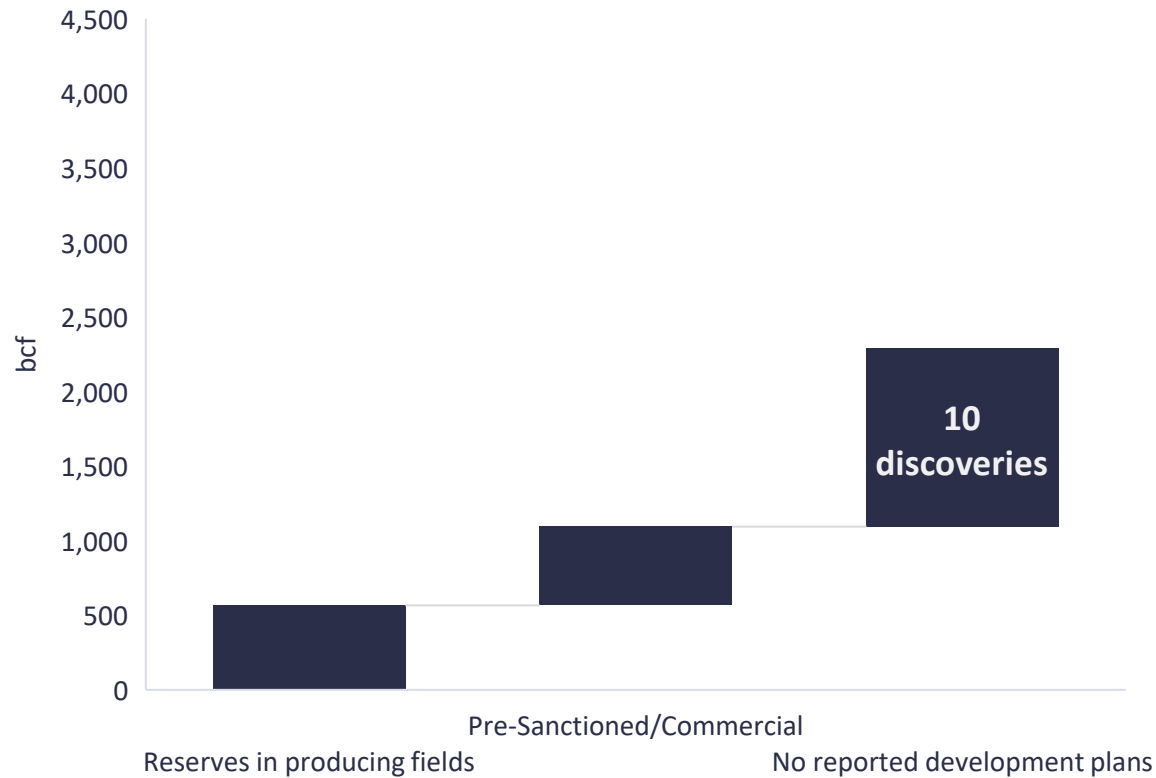
Smaller discoveries and ageing infrastructure



- **Only four hubs** anticipated to be producing post 2030 requiring urgency to ensure commercial discoveries are developed in time.

West of Shetlands

Big discoveries and longevity in the basin



- Significant developments will bring investment and longevity to the basin.
- However, there is **over 500 bcf** remaining in unlicensed acreage in the basin which is at risk of remaining undeveloped.

What needs to be done?

- Increasing domestic gas supply will reduce reliance on LNG imports and with it, emissions, while boosting tax revenues, jobs and supply chain.
- Welligence identifies **two key things** required for increasing domestic gas supply:
 1. The right fiscal environment that incentivises new gas developments.
 2. An industry roadmap on how it can be achieved.
- Importantly, these have been achieved previously therefore not challenging to implement.
- In addition, **licensing rounds need to continue.**



SETTING THE STANDARD IN ENERGY RESEARCH AND ANALYTICS