

OG21

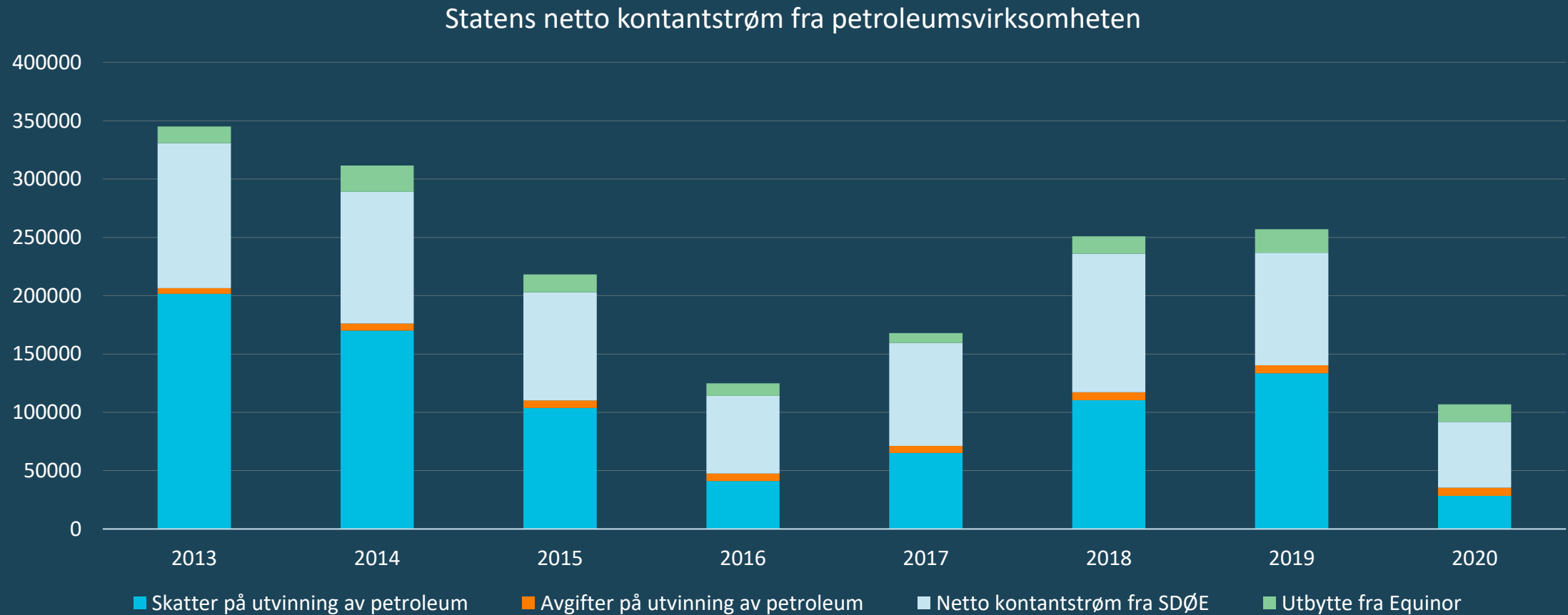
Neste kapittel

Ny OG21 strategi

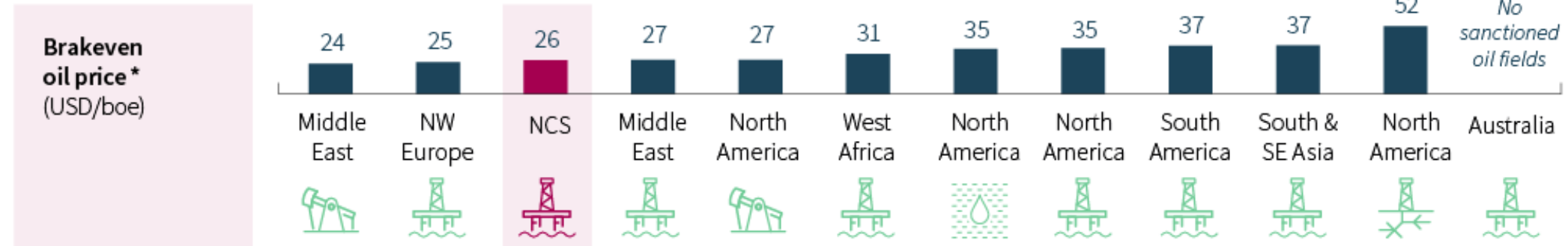
Elisabeth B. Kvalheim, Styreleder OG21
OG21-forum, 11.november 2021



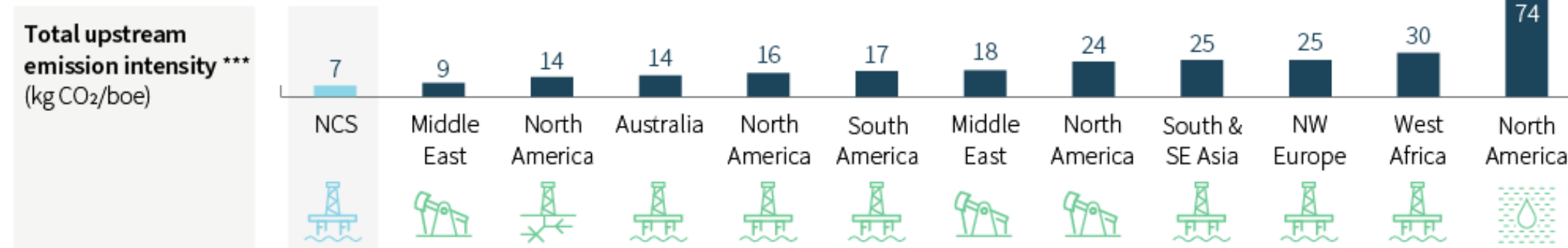
Olje og gass er Norges viktigste næring!



Konkurranseedyktige i dag...

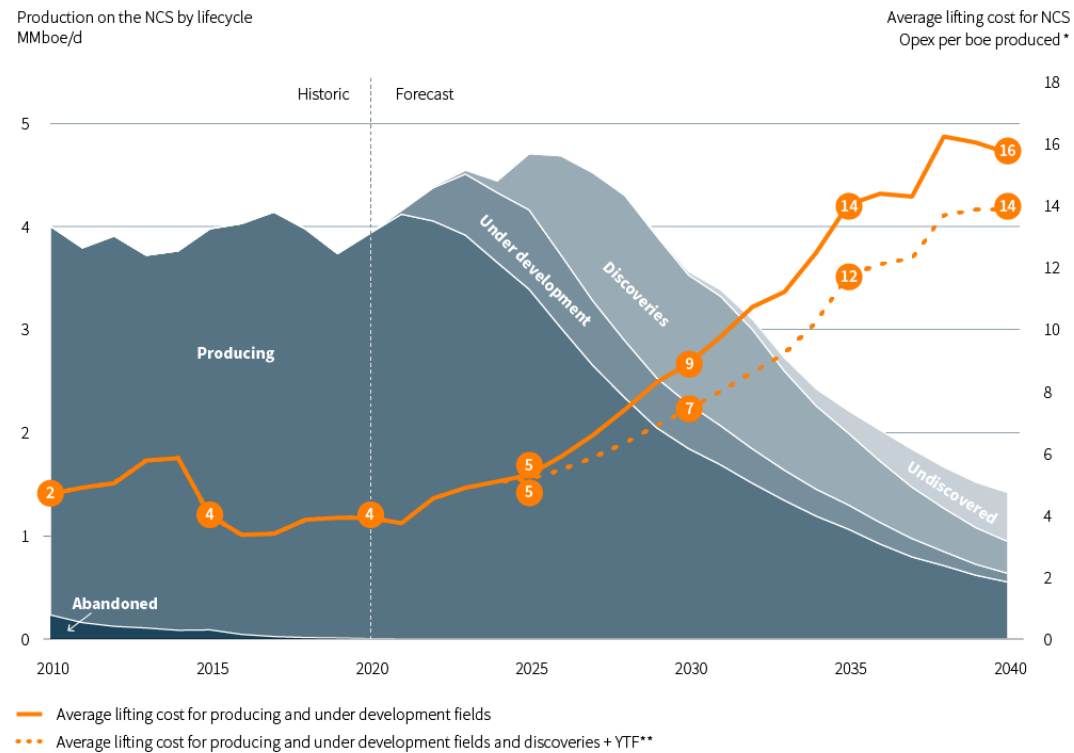


* Breakeven price for oil fields approved in 2018 seen from the approval year – oil price that returns NPV equal to zero at 10% discount rate.
Weighted average of 2019 and 2020.



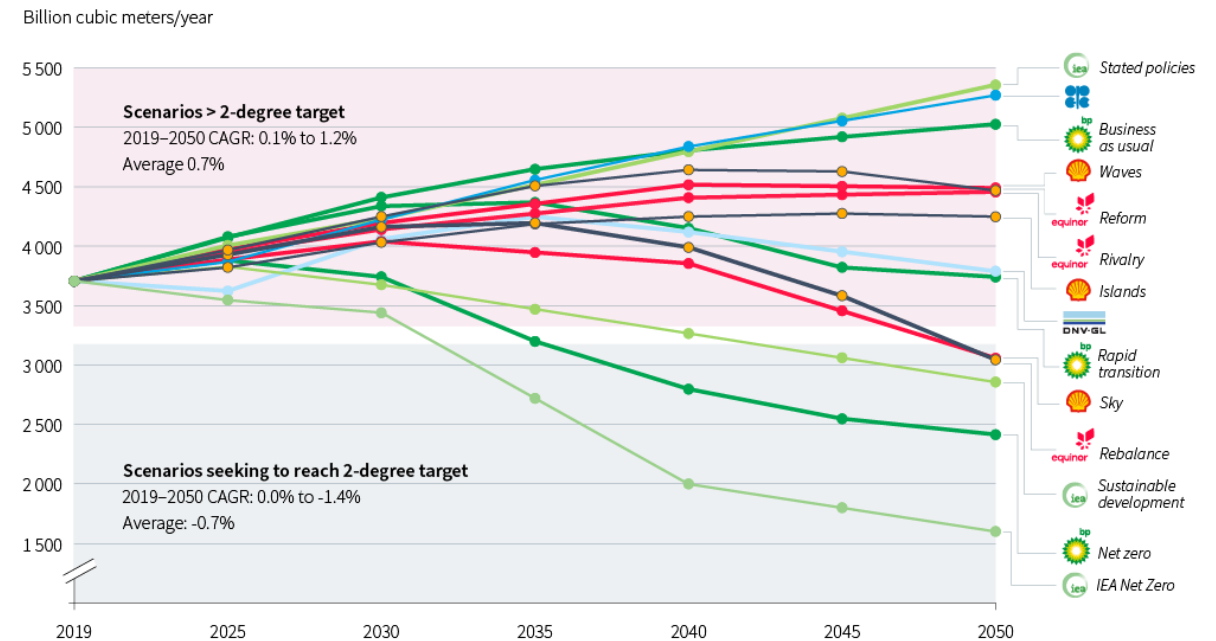
*** Total upstream emissions from extraction and flaring over produced volumes. Average of 2019 and 2020.

...men ingen grunn til å hvile på laurbærerne



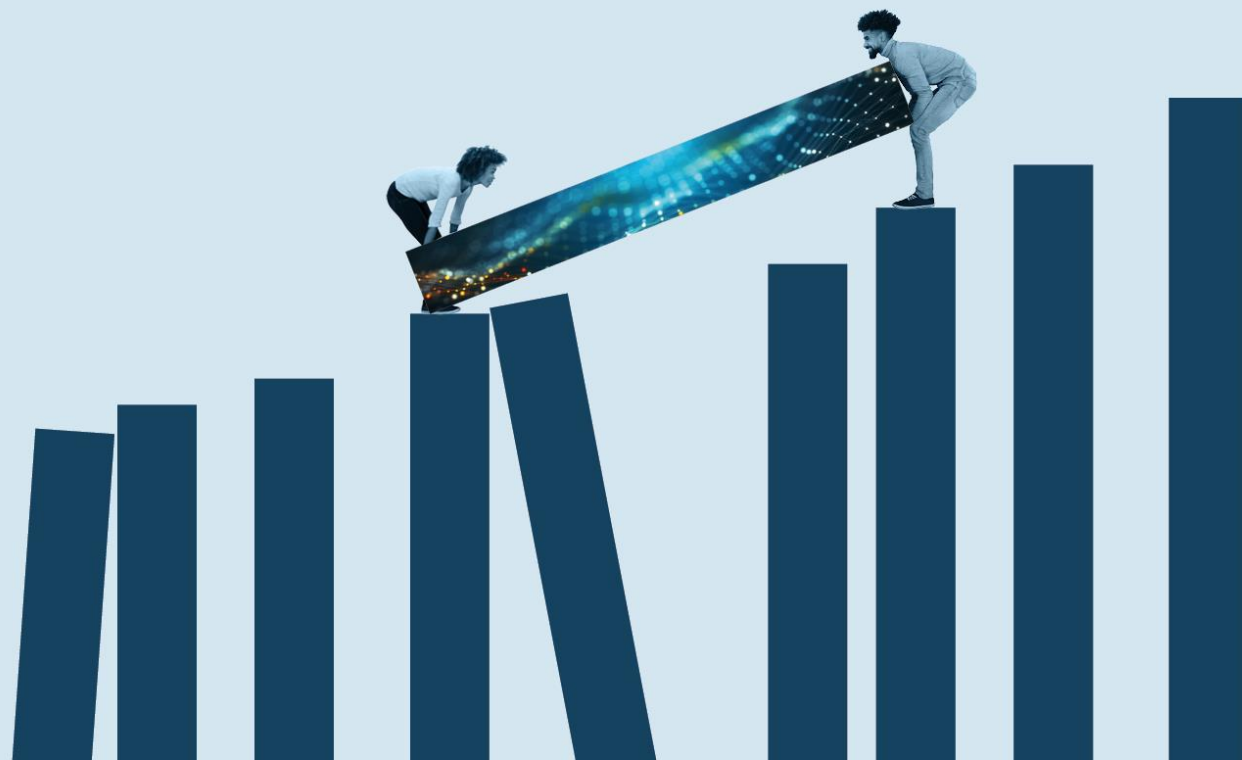
*Production opex only. SG&A and transportation tariffs not included; **only from opened areas

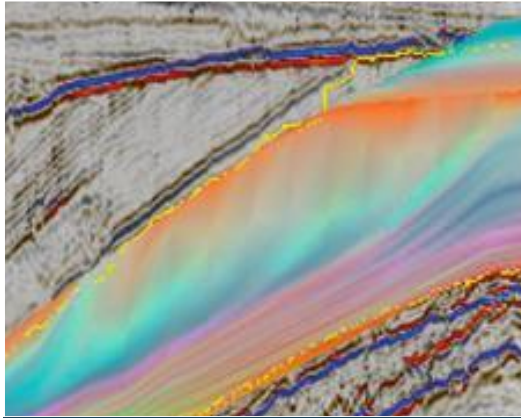
Source: Rystad Energy UCube



* Indexed to RE 2019 levels as different providers define units and markets differently.

No silver bullet –
Trenger mangfold av
teknologier for å sikre
konkurransekraft

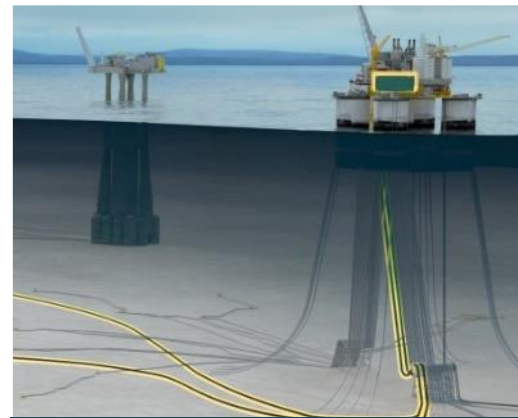




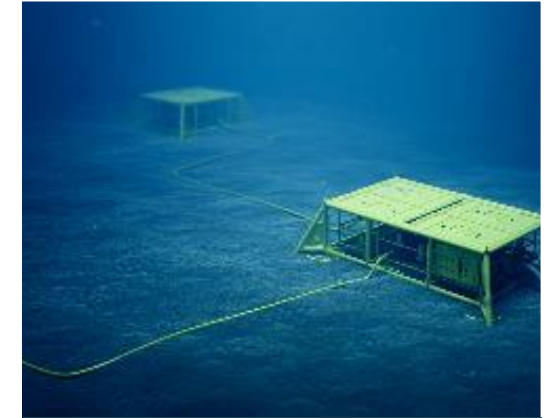
Forbedret undergrunnsforståelse



Kostnadseffektiv boring og P&A



Effektiv bruk av eksisterende infrastruktur



Ubemannna plattformer og subsea tie-backs



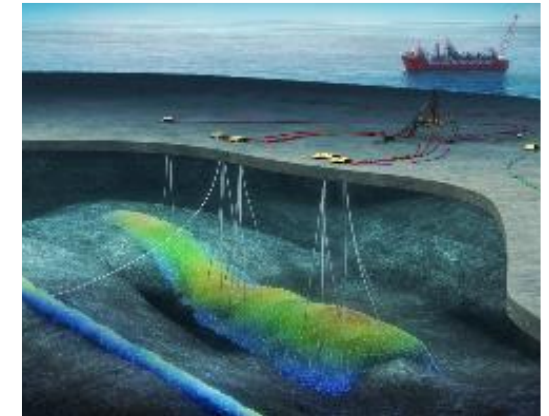
Energieffektivitet og kostnadseffektiv elektrifisering



Karbonfangst og –lagring



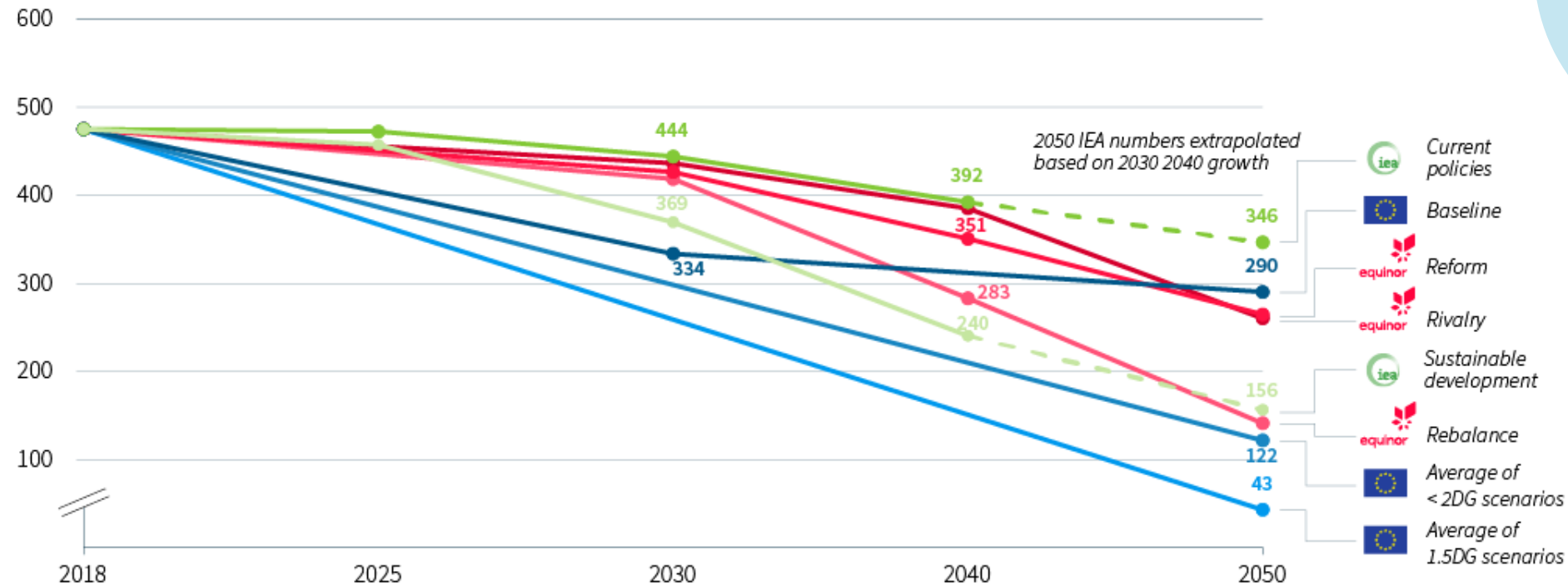
Verdensledende HMS og miljø



Digitalisering

Utslippskutt langs verdikjeder viktig for langsiktig konkurransekraft

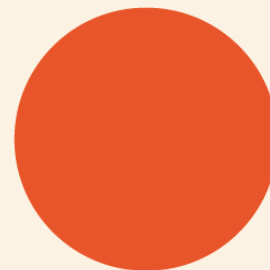
Billion cubic meters/year



Forventer
etterspørselen
etter naturgass
å falle

*Indexed to IEA EU28 gas demand as definitions vary across scenarios. Source: Rystad Energy research and analysis; IEA WEO 2020; EU Commission; Equinor Energy Perspectives 2020

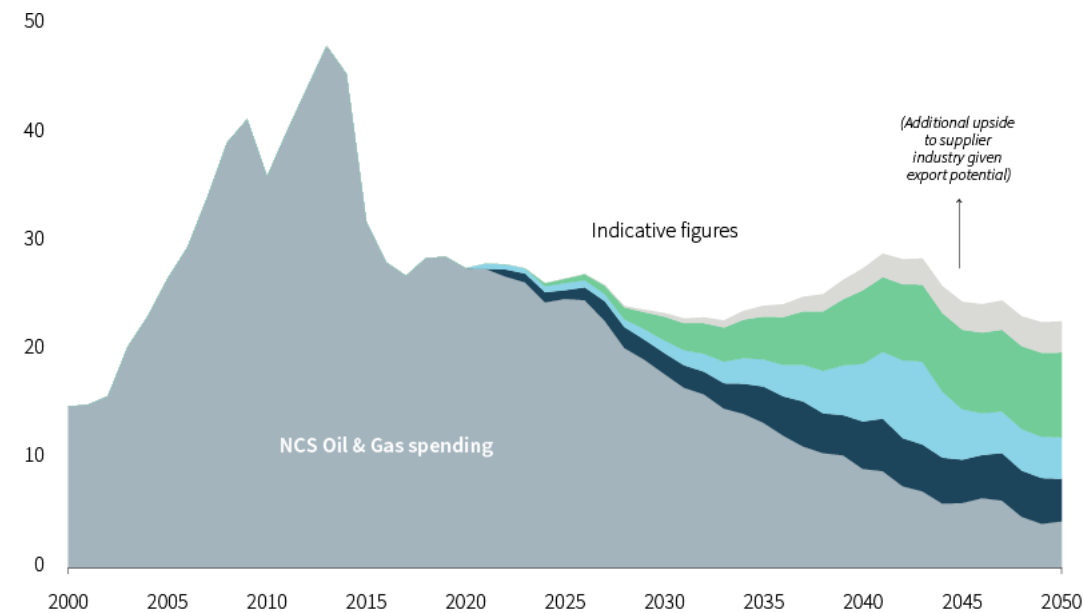
Kunnskap og løsninger
fra petroleumsnæringen
kan bli viktig for nye
næringer



Norwegian competence				Commodity industry relevance				
Norwegian geographical cluster	Field of industry competence	2019 Norwegian employment [# employees]	Examples of relevant players*	Oil and gas	Hydrogen ¹	CSS ²	Offshore wind ³	Marine minerals ⁴
Eastern Norway	Seismic	2 500	TGS, emgs, roxar, allton, PGS, magseis, fairfield	●●●	●●●	●●●	○○○	●●●
	Geology			●●●	●●●	●●●	●○○	●●●
	Engineering	9 500	MOSSMARITIME, OLAV OLSEN, GLOBAL MARITIME	●●●	●●●	●●○	●●○	●●○
	Subsea	16 500	Aker Solutions, TechnipFMC, subsea 7	●●●	●●●	●●●	●●○	●●○
West coast	Marine operations	9 000	DEEPOCEAN, DCF, Ostensjø Rederi, SOLSTAD OFFSHORE	●●●	●●●	●●○	●●●	●●●
	EPC- and shipyards	15 000	aibel, VARD, KVERNER, KLEVEN, ULSTEIN	●●●	●●●	●●○	●●○	●●●
	Drilling	10 000	Transocean, Seadrill	●●●	●●●	●●○	○○○	●○○
South coast	Drilling rig- and topside equipment	22 000	Schlumberger, ABB, mhwrth, KNOX, WÄRTSILÄ	●●●	●●●	●●○	●○○	●●○
Country Wide	Automation and digital technologies	26 000	Sekal, Cognite, Kongsberg	●●●	●●●	●○○	●○○	●●●
	Other, incl. maintenance services		DNVGL, AXESS, JOTUN	●●●	●●●	●●●	●●●	●●●

*Many of the listed oil field service companies perform work within several fields of competence, logos placed based on their main activities
Source: Rystad Energy research and analysis; Brønnøysundregistrene; Statistics Norway; Norwegian Petroleum

○○○ Relevance degree - from high (3 filled) to low (1 filled)

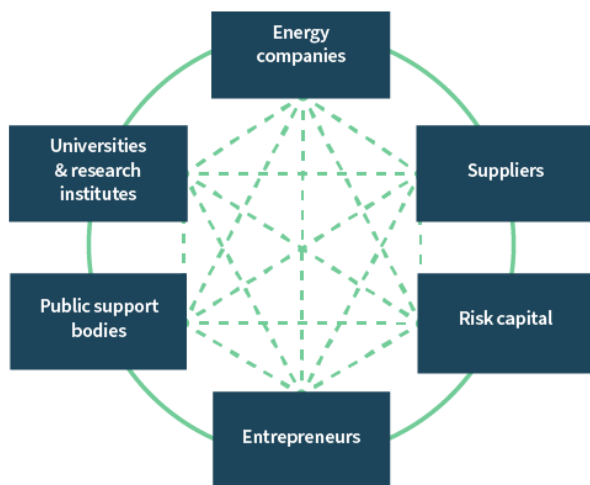


*Includes both capital and operational expenditures, in addition to historical exploration costs and assumed future exploration costs
Source: Rystad Energy research and analysis; Rystad Energy UCube

- Marine minerals
- Offshore wind
- CCUS
- Blue hydrogen

OG21 anbefaler





**Jage teknologi gjennom
innovasjonssystemet**



**Utøve
teknologilederskap**



**Tiltrekke og utvikle
kompetanse**

The background of the image is a photograph of ocean waves. The water is a deep blue-grey color, and the waves are breaking, creating white foam and spray. The perspective is from a slightly elevated position, looking down at the water. The lighting is somewhat muted, giving the image a cool, serene feel.

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