

Where is the Oil and Gas Industry with Decarbonization?

Nigel Jenvey, Global Head of Carbon Management



Disclaimer

The material and opinions expressed in this webcast are those of the author. While they reflect what is believed to be informed opinion, they are not represented as being the opinions of any of the organizations included nor their staff. Readers are urged to obtain independent advice on any matter relating to Greenhouse Gas estimation and the potential impact of related policies on reserves and resources.

The author is acting in an advisory capacity only and, to the fullest extent permitted by law, disclaims all liability for actions or losses derived from any actual or purported reliance on this webcast (or any other statements or opinions of the author) by any other person or entity.

GaffneyCline: Advising the Energy Industry since 1962

A boutique advisory firm with an established worldwide reputation for providing trusted, impartial advice based on technically robust analysis and commercially astute recommendations.

Our global experts comprise diverse backgrounds and disciplines to deliver integrated technical, commercial and strategic insights

Our clients include private and public energy companies, government ministries and regulators, legal firms, private equity, financial institutions, technology providers, original equipment manufacturers, and construction companies.



Capability focus areas include

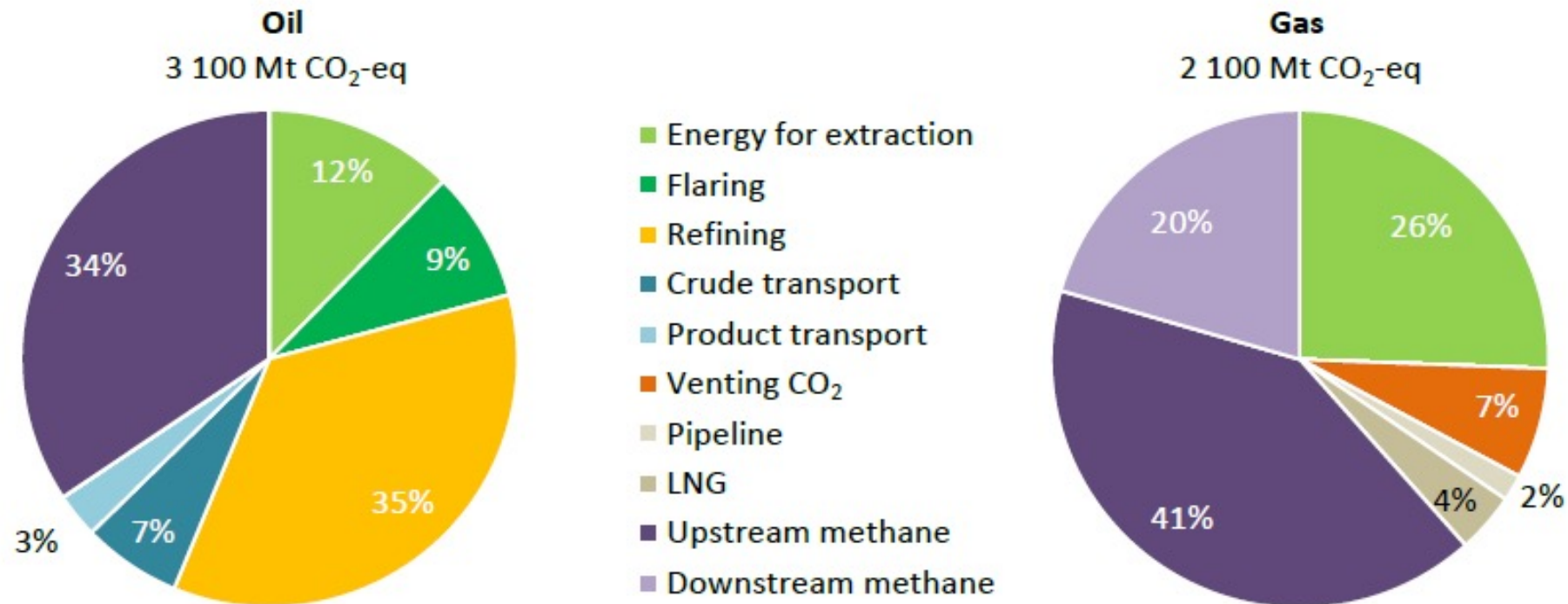
- Resource assessment & development
- Policy & commercial advice
- Gas & LNG
- Refining & chemical production
- Carbon management & energy transition

Service focus areas include

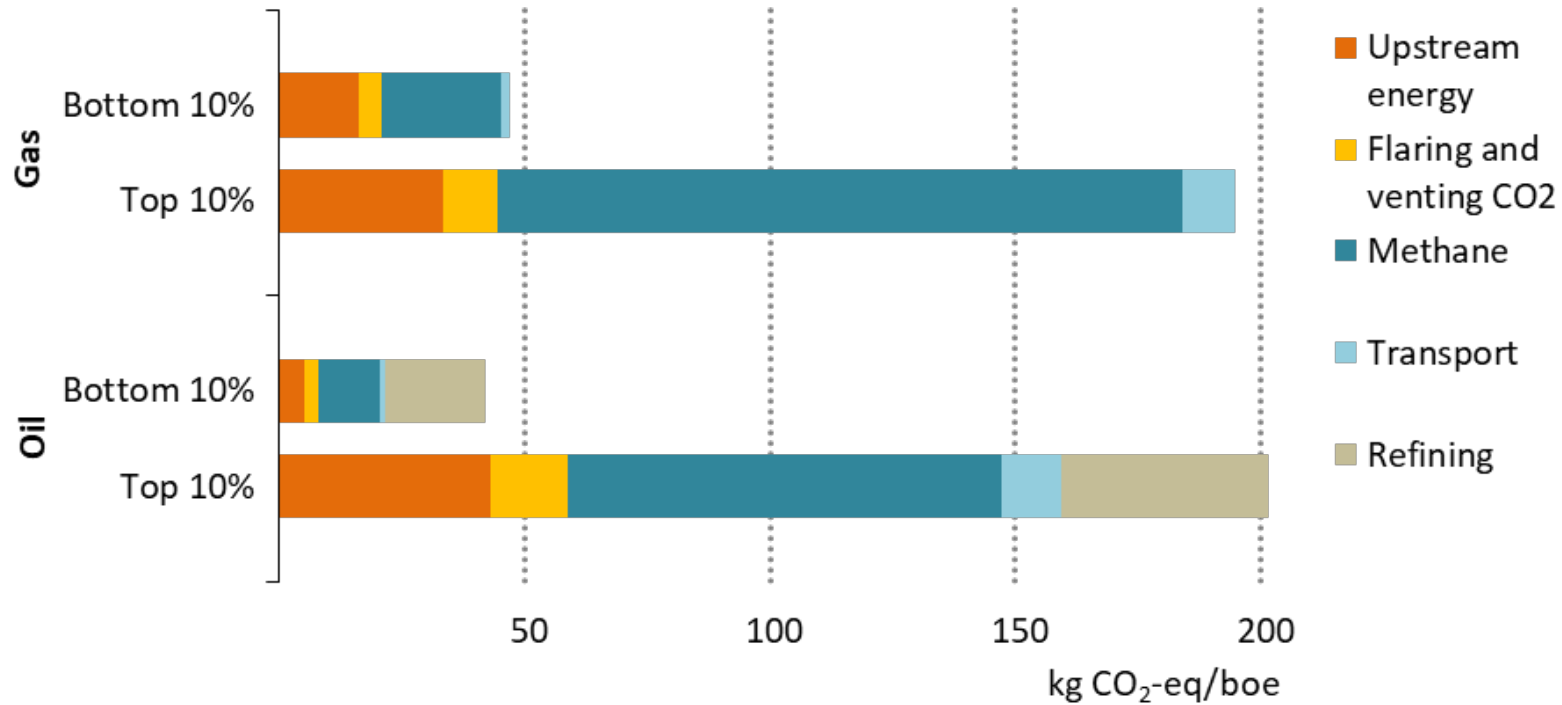
- Sovereign advisory
- Regional market and technology insights
- Independent engineering
- Acquisitions and divestment
- Litigation and arbitration



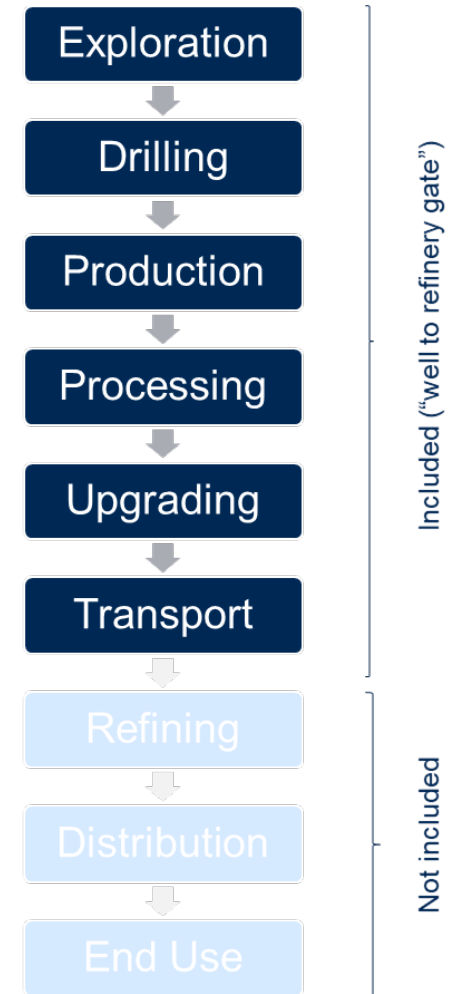
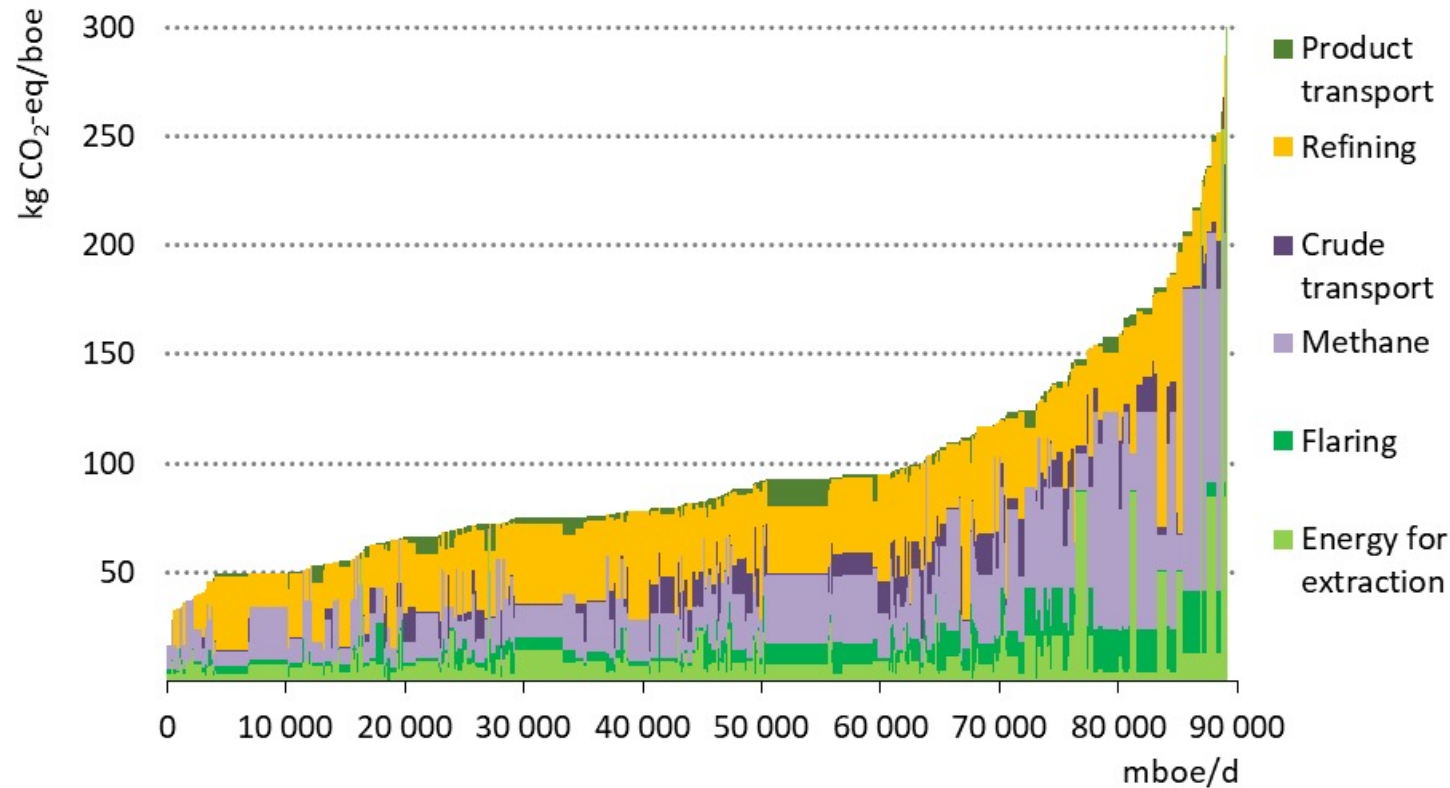
GHG emissions from oil and gas supply is about 15% of global energy sector...



...but GHG emissions from oil and gas supply can vary considerably...

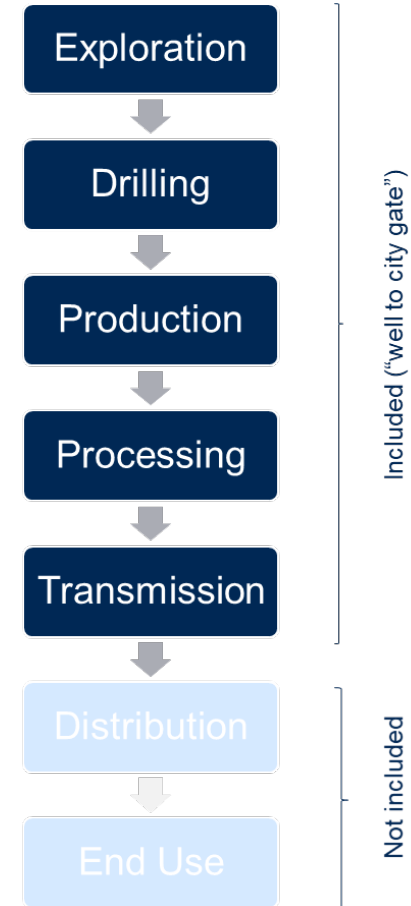
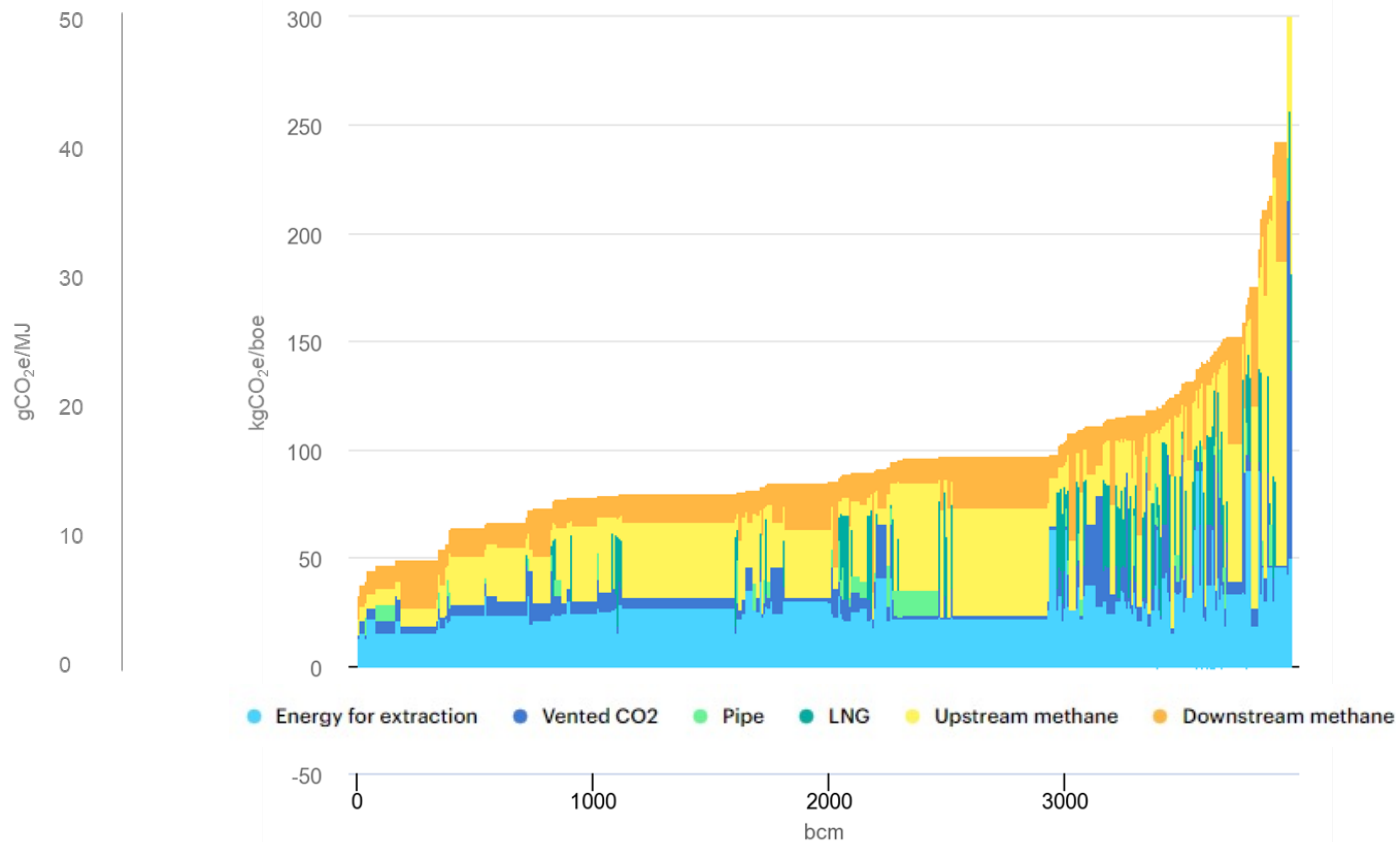


...as not all oil is created, developed or operated equally...



Source: International Energy Agency (2018), World Energy Outlook 2018, OECD/IEA, Paris

...but equally not all gas is developed, operated or transported equally...



Source: IEA, 2020: "Spectrum of the well to tank emissions intensity of global gas production 2018".

...so the type of oil and gas resources, how they are developed and operated needs to change

- Existing field production decline at ~8% per year without investment is larger than any plausible fall in global demand - even in 1.5°C deg net-zero by mid-century scenarios
- Markets will become increasingly competitive. Those with lower-costs and better environmental performance will benefit
- Many options exist to avoid, reduce, replace, offset and sequester GHG emissions from oil and gas
 - Approximately 40-50% of methane emissions can be avoided at no net cost
 - 10% of energy use can be reduced through applying energy efficiency at low or no cost
 - 25% of energy use can be replaced with low carbon alternatives at a \$50/te carbon price

Changes in the average global emissions intensity of oil and natural gas operations in the SDS

