Beyond the cycle

Which oil and gas companies are ready for the low-carbon transition?

Executive Summary

November 2018

Authors: Luke Fletcher, Tom Crocker, James Smyth and Kane Marcell
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Authors:
Luke Fletcher
Tom Crocker
James Smyth
Kane Marcell

Acknowledgements:
Marco Kisic
Amy Bowe - Wood Mackenzie
Akif Chaudhry - Wood Mackenzie
This report updates and expands CDP’s research and League Table for oil & gas companies, first published in November 2016. It ranks 24 of the largest and highest-impact publicly listed oil & gas companies on business readiness for a low-carbon transition. The companies in aggregate represent 31% of global oil & gas production and 11% of proved reserves.

The oil & gas industry is amongst the most emissions intensive, with the production and use of oil & gas accounting for over half of global greenhouse gas emissions associated with energy consumption. This equates to more than 17 gigatonnes of carbon dioxide equivalent per year, with about 90% of these emissions coming in the downstream use of hydrocarbons (Scope 3 emissions).

Oil & gas companies are coming under increasing pressure to demonstrate portfolio resilience and adapt business models to align with a low-carbon energy transition. Post-Pari they have faced increasing investor scrutiny and with the recommendations from the G20 Financial Stability Board’s Task Force on Climate-related Financial Disclosures (TCFD), they now face a new normal in climate risk reporting.

This reflects a turn of the tide for oil & gas companies, made all the more imperative by the IPCC’s recent report detailing the impact of 2°C vs. 1.5°C of global warming. The median IPCC scenario for achieving a 1.5°C limit to warming above pre-industrial levels requires net zero global emissions by 2050.

There are four key areas assessed in the League Table, which are aligned with the recommendations from the TCFD:

**Transition risks:** We assess company portfolios, looking at production and reserve splits by hydrocarbon type as well as looking across various measures of carbon efficiency such as emissions intensity (including methane and flaring levels) and Wood Mackenzie’s NPV/tonne metric.²

**Physical risks:** We analyse company exposure to localized water stress issues on a facility-by-facility basis across onshore upstream production and downstream assets. We compare this water stress exposure with companies fresh water withdrawal intensity and governance frameworks.

**Transition opportunities:** We examine which companies are investing in low-carbon assets, R&D and embracing innovative technologies. We also analyse levels of capital flexibility; looking across exploration and production costs, reserve life, discretionary future spend, cash margins and financial gearing.

**Climate governance and strategy:** We analyse companies’ governance frameworks including emissions reduction targets and the alignment of governance and remuneration structures with low-carbon objectives. We look at which companies are conducting scenario analysis and stress-testing their portfolios against a low-carbon energy transition.

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**Key findings**

- **Equinor** convincingly retains first place with Total, Shell and Eni all closely ranked together in second, third and fourth respectively.

- **Lowest ranked companies** are CNOOC, Rosneft and Marathon Oil.

- **Transatlantic divide remains** – European companies come out on top across most key areas. They are pivoting portfolios towards gas, setting climate-related targets and investing in low-carbon technologies.

- **Since 2010 the 24 companies have invested US$22 billion in alternative energies.** However, spend on low-carbon assets for the sector as a whole remains low, expected to account for only 1.3% of total 2018 CAPEX.

- **5 companies have divested from oil sands assets.**

- **18 companies have disclosed Scope 3 emissions figures alongside Scope 1+2 for 2017.**

- The 24 companies in the study are **losing on average 3.3% of their natural gas production** through flaring, venting and methane leakages – worth almost US$5bn at the current Henry Hub gas price.

- **Companies are shifting focus to multi-staged developments and shorter-cycle opportunities to maintain capital flexibility.**

- **Ten companies are involved in CCUS projects** and collectively account for 68% of current global capacity. Expertise in this technology may form part of the oil & gas industry’s social license to operate in coming years.

- **Votes for shareholder resolutions relating to 2°C analysis grew** from an average of 21% in 2014 to 53% in 2018.

- **Lack of disclosure by Chinese companies** – no emissions data reported by Petrochina.

- **15 companies have set emissions reduction targets.** The sector has launched a number of initiatives aimed at cutting routine flaring and reducing methane emissions. Repsol, Shell and Total have all set long-term ambitions to reduce their net carbon footprint (which includes Scope 3 emissions).

- **Only five companies have officially supported the TCFD.**

- Nine companies have published 2-degree scenario analysis with others looking to do the same. **Under low-carbon scenarios the winning barrels will be low-cost, low-risk and lower-carbon.** Managing the resource theme mix is key to attaining a lower-carbon footprint.

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1. Calculated using IEA and EDGAR carbon and emissions data.
The summary League Table below presents headline company findings. It is based on detailed analysis across a range of carbon and transitional indicators which could have a significant impact on company performance. The League Table is designed to serve as a proxy for business readiness in an industry which will undergo significant change as governments increase efforts to implement the Paris Agreement. Companies placed towards the bottom are deemed less prepared for a low-carbon transition.

### Figure 2: League Table summary

<table>
<thead>
<tr>
<th>LT rank</th>
<th>Company</th>
<th>Country</th>
<th>Average market cap Q2 2018 (US$bn)(v)</th>
<th>Production 2017 (million boe/d)</th>
<th>2017 Emissions Mt CO₂</th>
<th>Weighted rank</th>
<th>Transition risks rank</th>
<th>Physical risks rank</th>
<th>Transition opportunities rank</th>
<th>Climate governance &amp; strategy rank</th>
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</table>

### Figure 3: Company production split by hydrocarbon

#### Weighting

- **35%**
- **10%**
- **30%**
- **25%**

(i) Weighted ranks are calculated for each area. We display non-weighted ranks in this summary for simplicity only.

(ii) Average market cap for last 12 months up to Q3 2018.

(iii) Analysis for BP excludes its share in Rosneft. Scope 1+2 emissions figures are for 2016 for Apache and ExxonMobil and is an estimated figure for Petrochina.

(iv) For Adjusted EBITDA split by business area, Downstream includes Midstream and/or Chemicals if split is not available.

(v) Apache, BP, Chevron, CNOOC, ExxonMobil and Marathon Oil are non-responders to CDP’s 2018 climate change questionnaire. We encourage investors to raise this lack of transparency in discussions with company management.

Source CDP

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*Natural Gas Liquids (NGLs)*

Source: CDP, company reports
## CDP Investor Research

### CDP UK
- **Carole Ferguson**
  Head of Investor Research
  +44 (0) 20 3818 3956
carole.ferguson@cdp.net

- **Marco Kisic**
  Senior Analyst,
  +44 (0) 20 3818 3961
  marco.kisic@cdp.net

- **Luke Fletcher**
  Senior Analyst,
  +44 (0) 20 3818 3951
  luke.fletcher@cdp.net

- **Christie Clarke**
  Analyst,
  +44 (0) 20 3818 3951
  christie.clarke@cdp.net

- **Kane Marcell**
  Analyst,
  +44 (0) 20 3818 3956
  kane.marcell@cdp.net

- **Tom Crocker**
  Analyst,
  +44 (0) 20 3818 3935
  tom.crocker@cdp.net

- **James Smyth**
  Analyst,
  +44 (0) 20 3818 3935
  james.smyth@cdp.net

### CDP contacts

### CDP North America
- **Emily Kreps**
  Head of Investor Initiatives
  +1 646 517 6470
  emily.kreps@cdp.net

- **Radhika Mehrotra**
  Manager, Investor Initiatives
  +1 646 517 6471
  radhikamehrotra@cdp.net

### CDP Europe
- **Laurent Babikan**
  Director of Investor Engagement
  +33 658 66 60 13
  laurent.babikan@cdp.net

- **Torun Reinhammar**
  Senior Account Manager,
  Investor Engagement
  +46 (0) 705 365903
  torun.reinhammer@cdp.net

- **Matteo Brezza**
  Account Manager,
  Investor Engagement
  +49 30629033120
  matteo.brezza@cdp.net

### CDP Japan
- **Kyoko Narita**
  Senior Account Manager,
  Investor Initiatives
  +81 (0) 3 6869 3928
  kyoko.narita@cdp.net

### CDP Board of Trustees
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- **Takejiro Sueyoshi**

### Media enquiries
- **Rojin Kiadeh**
  Communications Manager,
  +44 (0) 20 3818 3973
  rojin.kiadeh@cdp.net

- **Tess Harris**
  Communications Manager,
  +44 (0) 20 3818 3973
  tess.harris@cdp.net

---

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