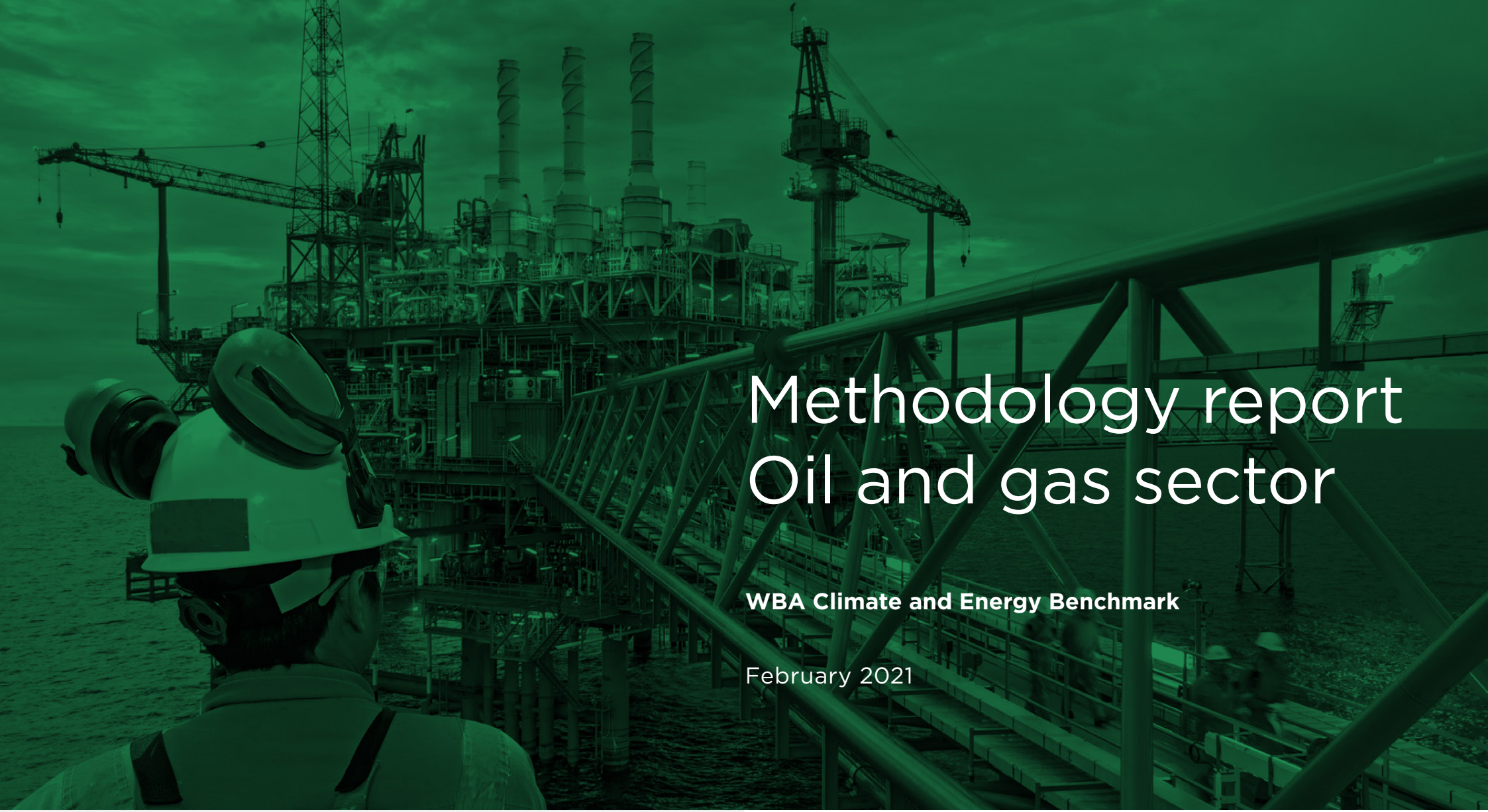

# Methodology report Oil and gas sector

**WBA Climate and Energy Benchmark**

February 2021

World Benchmarking Alliance

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# Executive summary

The World Benchmarking Alliance (WBA) has formed a strategic partnership with CDP and the Assessing low-Carbon Transition (ACT) initiative developed by CDP and ADEME, the French Agency for Ecological Transition, to accelerate a global decarbonisation and energy transformation. WBA's Climate and Energy Benchmark ranks companies against the climate and energy transition required to meet the Paris Agreement, by engaging with the companies themselves, evaluating their current and – importantly – their future plans in terms of decarbonisation pathways, as well as past and present performance to assess future alignment. From 2021, the Climate and Energy Benchmark will also assess companies' contributions to the just transition needed to achieve the SDGs. We expect the benchmarks to drive increased transparency and corporate accountability, moving companies from commitment to action.

This report presents an overview of why WBA is benchmarking companies in the oil and gas sector; the ACT Oil and Gas methodology used for the benchmark; our principles for selecting the 100 companies to be included in the 2021 Benchmark; and the list of companies to be assessed.

"The production and use of oil and natural gas contributes the majority of energy-related worldwide greenhouse gas emissions. The oil and gas sector is thus critical to the decarbonisation and energy transformation needed to achieve Paris goals and the SDGs. Deep transformational change in this industry is needed if we are to meet the well-below 2°C ambition."

**Vicky Sins,**
Decarbonisation and Energy Transformation Lead, WBA

# A burning need for transformational change

The clock is ticking. Without urgent action on climate change, the world will experience more extreme weather events, sea level rise and negative impacts on biodiversity, ecosystems and oceans. These will have a disproportionate effect on the poorest and most vulnerable populations for decades to come; and overall, climate change affects billions of people, in both current and future generations. 196 countries signed up to the Paris Agreement in 2015, in the same year 193 countries committed to the UN Sustainable Development Goals (SDGs). The Intergovernmental Panel on Climate Change 2018 Special Report on limiting warming to 1.5°C showed that global $CO_2$ emissions need to fall by about 45% from 2010 levels by 2030 and reach net zero by around 2050[1].

A major decarbonisation and energy transformation is therefore needed to align with global efforts to prevent the worst impacts of climate change and achieve the goals set out in the Paris Agreement of limiting global warming to well below 2°C and pursuing efforts for 1.5°C. This needs to be done in a just and equitable way, so that no one is left behind.

Fossil fuel combustion is the principal source of man-made greenhouse gas emissions worldwide[2]. These emissions result primarily from the use of coal, oil and gas, with oil and natural gas products representing approximately 56% of fuel-related $CO_2$ emissions worldwide[3]. Therefore, a major shift from fossil fuels to renewable energy sources and low-carbon electricity is needed to achieve the Paris Agreement and the SDGs. New business models for companies in the oil and gas sector are emerging, including in low-carbon energy, energy demand reduction, and carbon capture and storage.

Companies have a critical role to play in the transformation and specific fossil fuel producers have been linked to 71% of industrial greenhouse gas emissions from 1988 to 2017[4]. The impact of these company activities are not limited just to the emissions they produce but include their influence as well. InfluenceMap, a WBA Ally, reported in 2019 that the five largest publicly traded oil and gas majors spent over US$1 billion on 'misleading climate-related branding and lobbying' from 2015-2018[5]. There is increasing pressure on investors to divest from fossil fuel assets, recognising that if the Paris commitments are followed, these assets will become stranded[6]. WBA's Financial System Transformation has therefore identified climate change as a key area of focus in developing its benchmark methodology in 2021.

# A burning need for transformational change

The oil and gas sector's impacts and risks are not confined however to publicly listed or privately held companies. State-owned companies (SOEs) produce about two-thirds of the world's oil and gas and own about 90% of global reserves. Many countries with SOEs are highly dependent on revenues from these fossil fuels and are often lower-income countries[7]. Recent research by Carbon Tracker shows that 400 million people live in the most vulnerable fossil-fuel reliant countries, and that 51% of revenue from 'petrostates' would be lost if low-carbon trajectories are followed[8]. A just transition in the oil and gas sector is therefore crucial to ensure that no one is left behind.

# Benchmarking the oil and gas sector

World Benchmarking Alliance

WBA is developing a range of benchmarks to assess the progress of 2,000 companies across seven system transformations needed to achieve the UN's Sustainable Development Goals (SDGs) and accelerate sustainable business beyond 2030. The private sector has a crucial role to play in advancing the SDGs, but there needs to be real change in the way that business impact is measured. By publishing free, publicly available benchmarks, WBA envisions a future where companies, investors, policymakers, civil society and individuals are empowered with data to take action and encourage more sustainable business practices across all sectors.

The WBA Climate and Energy Benchmark is an accountability mechanism that measures corporate progress against the Paris Agreement and whether companies are contributing to a just transition. Private sector engagement alongside action by governments and civil society are critical for meeting the SDGs and the Paris goals.

In 2021, the Climate and Energy Benchmark will assess and rank 100 companies on their alignment with a low-carbon world and their contributions to a just transition. This report sets out how we will do that.

# ACT methodology: scope and assessment

The ACT initiative assesses organisations' readiness to transition to a low-carbon economy, using future-oriented indicators. The ACT methodologies assess companies' climate strategy, business models, investments, operations and management of greenhouse gas emissions. Based on the sectoral decarbonisation approach developed by the Science-Based Targets initiative, ACT evaluates a company's alignment with a low-carbon world, by establishing a decarbonisation pathway for each company that can be compared against its publicly stated low-carbon targets and transition plan. The application of the sectoral decarbonisation approach is described in the ACT framework.

ACT published its Oil and Gas sector methodology in February 2021. WBA will use assessments created using this methodology to create its Oil and Gas Benchmark 2021.

## Scope of the methodology and the benchmark

The ACT Oil and Gas methodology is designed to assess various types of companies: integrated and semi-integrated oil and gas companies; upstream (only); midstream (only); and downstream (only) companies. Companies with oil and gas equipment and services (only), petrochemical (only), oil and gas trading (only), and exploration (only) activities are excluded from the scope of the methodology. This is because there is a limited scope for action on decarbonisation in these activities. The WBA Oil and Gas Benchmark therefore excludes such companies. The large majority of GHG emissions (around 80% along the value chain) induced by oil and gas companies take place in the downstream segment during the combustion of sold products for final energy use. The Oil and Gas Benchmark therefore focuses on integrated oil and gas companies, with activities across the value chain. (please see below for more detail on how companies were selected for the benchmark).

## The Oil and Gas Benchmark as a roadmap

The Oil and Gas Benchmark can act as a roadmap for companies to show how they can contribute to achieving the SDGs and the Paris Agreement goals. The ACT assessments place a particular emphasis on three key areas: alignment of a company's targets across the value chain (i.e., Scopes 1, 2 and 3); future projected emissions intensity across the value chain; and locked-in emissions (i.e., emissions planned or 'locked in' by a company from its upstream oil and gas assets between now and 2050, compared to its carbon budget). Companies will also be assessed on their implementation of low-carbon business models, which include the production of sustainable fuels and gases; production and sales of low-carbon electricity; sales of energy efficiency services; and reducing fossil fuel activities. The ACT methodology's definitions of Sustainable Renewable Electricity, Electricity (Storage) Equipment, Biofuels and Biogas and Hydrogen are aligned with the EU Taxonomy. Further, each company's development of a low-carbon transition plan and scenario analysis, determining the impact of the transition on its strategy or business model, are also important elements of the assessments.

**FIGURE 1:** Low-carbon aligned state for companies in the oil and gas sector

Developing the methodology and alignment with other frameworks


The ACT Oil and Gas methodology was developed with input from a multistakeholder Technical Working Group. Public consultation and a thorough technical 'road test' were important steps in the development of the ACT Oil and Gas methodology. ACT sought the views and opinions of a wide range of stakeholders including companies, civil society, academics and other relevant experts. The methodology includes indicators that align with the information disclosed by companies using CDP, GRI and SASB. It is also aligned with and supports the objectives of the recommendations made by the Taskforce on Climate-related Financial Disclosures. A mapping table, showing alignment with these standards and frameworks, will be available via https://actinitiative.org/. The ACT team has also been in regular consultation with the developers of the upcoming Science Based Targets Initiative methodology for the Oil and Gas sector. WBA will continue to embrace multi-stakeholder dialogue and consultation throughout the benchmark development process.

# Selecting the 100 keystone oil and gas companies

World Benchmarking Alliance

WBA has applied systems thinking to identify the companies that will have a disproportionate influence on meeting the SDGs and the Paris Agreement. We built on leading academic research that put forward the idea of keystone actors, inspired by the concept of 'keystone species' in ecology, to illustrate that the most influential companies in a given industry can operate similarly to keystone species in ecological communities. This means that these companies can have a disproportionate effect on the structure and system in which they operate[9].

To identify the 100 keystone oil and gas companies for the benchmark, we used the following five criteria and principles established by WBA for selecting keystone companies:

1. The company dominates global production revenues and/or volumes within the oil and gas sector.
2. The company controls globally relevant segments of production and/or service provision, based on an assessment of production of barrels per day (where this information was available).
3. The company connects (eco)systems globally through subsidiaries and their supply chains.
4. The company influences global governance processes and institutions.
5. The company has a global footprint, particularly in developing countries.

These principles are applied holistically. For principle 5, which is a crucial element to WBA's work, we considered companies from all regions, which resulted in the inclusion of some companies that have relatively small revenues and production volumes compared to some others, to balance this with principles 1 and 2. For principles 4 and 5 in particular, our selection process specifically considered the inclusion of companies headquartered in Organization of the Petroleum Exporting Countries (OPEC) jurisdictions.

**The WBA Oil and Gas Benchmark is unique, because it assesses not only publicly listed but also privately and state-owned oil and gas companies.**

WBA used various sources to inform the selection of the 100 companies, including the CDP and Climate Accountability Carbon Majors Report[10]; and by cross-checking companies assessed by the Transition Pathways Initiative[11] and Climate Action 100+[12] to ensure maximum alignment with these initiatives where it fit with our selection principles. In accordance with WBA's systems thinking approach, some companies that have previously been benchmarked in our Electric Utilities Benchmark will also be assessed in the Oil and Gas Benchmark.

# Next steps

1. WBA will contact all 100 companies to offer engagement throughout the benchmarking process in the coming months. The WBA and CDP teams will share data for validation by each company between March to May 2021. Companies will be provided with resources and materials to learn more about the ACT assessments and WBA Oil and Gas Benchmark ahead of the data collection period.

2. We strongly encourage companies to participate in the data validation process and are on hand to answer any questions companies have about the assessments and benchmark. Companies may only submit an appeal to their assessment result if they have actively participated in the data validation process. Please see our FAQs here for further details.

3. The benchmark results will then be published on WBA's website in summer 2021.

4. Thereafter, the WBA Climate and Energy Benchmark team will publish assessments of these companies on their contributions to a just transition. These results are expected in Q3 2021.

If you have questions about the Climate and Energy Benchmark, please reach out to:

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# Appendix 1: Companies in the Oil and Gas Benchmark 2021

World Benchmarking Alliance

**APPENDIX 1:** Companies in the Oil and Gas Benchmark 2021

| Alphabetic order | Company name | Country of headquarters |
|---|---|---|
| A | Abu Dhabi National Oil Company (ADNOC) | United Arab Emirates |
| | Ampol Limited | Australia |
| | Apache Corporation | United States of America |
| B | Bharat Petroleum Corporation | India |
| | BHP | Australia |
| | BP | United Kingdom |
| C | California Resources Corporation | United States of America |
| | Canadian Natural Resources | Canada |
| | Cenovus Energy | Canada |
| | Chesapeake Energy Corp | United States of America |
| | Chevron Corporation | United States of America |
| | China National Offshore Oil Corporation (CNOOC Group) | China |
| | China National Petroleum Corporation (CNPC) | China |
| | China Petroleum and Chemical Corporation Limited (Sinopec) | China |
| | Compania Espanola de Petroleos SAU (CEPSA) | Spain |
| | ConocoPhillips | United States of America |
| | Cosmo Energy Holdings | Japan |
| | CPC Corporation, Taiwan | Taiwan, China |
| D | Devon Energy Corp | United States of America |
| E | Ecopetrol | Colombia |
| | Egyptian General Petroleum Corporation (EGPC) | Egypt |
| | Emirates National Oil Company (ENOC) | United Arab Emirates |
| | ENEOS Holdings | Japan |
| | Engie | France |
| | Eni | Italy |
| | Enterprise Products Partners | United States of America |
| | EOG Resources | United States of America |
| | Equinor | Norway |
| | Exxon Mobil | United States of America |
| F | Formosa Petrochemical Corp | Taiwan, China |

# Appendix 1: Companies in the Oil and Gas Benchmark 2021

World Benchmarking Alliance

| Alphabetic order | Company name | Country of headquarters |
|---|---|---|
| G | GAIL (India) | India |
| | Galp Energia | Portugal |
| | Gazprom | Russia |
| | GS Holdings | South Korea |
| H | Hellenic Petroleum | Greece |
| | Hess Corporation | United States of America |
| | HollyFrontier | United States of America |
| I | Idemitsu Kosan | Japan |
| | Indian Oil Corporation (IndianOil) | India |
| | Inpex | Japan |
| | Iraq National Oil Company (INOC) | Iraq |
| K | Kuwait Petroleum Corporation (Q8) | Kuwait |
| L | Lukoil | Russia |
| M | Marathon Oil | United States of America |
| | Marathon Petroleum Corporation | United States of America |
| | MOL Magyar Olajes Gazipari Nyrt | Hungary |
| N | Naftogaz | Ukraine |
| | National Iranian Oil Company (NIOC) | Iran |
| | National Oil Corporation of Libya | Libya |
| | Naturgy Energy | Spain |
| | Neste | Finland |
| | NGL Energy Partners | United States of America |
| | Nigerian National Petroleum Corporation (NNPC) | Nigeria |
| | NK KazMunayGaz | Kazakhstan |
| | Novatek | Russia |
| O | Occidental Petroleum | United States of America |
| | Oil and Natural Gas Corporation (ONGC) | India |
| | OMV | Austria |
| | Origin Energy | Australia |
| P | Pertamina | Indonesia |
| | Petroecuador | Ecuador |
| | Petroleo Brasileiro (Petrobras) | Brazil |
| | Petroleos de Venezuela (PDVSA) | Venezuela |
| | Petroleos Mexicanos (Pemex) | Mexico |

# Appendix 1: Companies in the Oil and Gas Benchmark 2021

World Benchmarking Alliance

| Alphabetic order | Company name | Country of headquarters |
|---|---|---|
| | Petroleum Development Oman (PDO) | Oman |
| | Petroliam Nasional Bhd (PETRONAS) | Malaysia |
| | PetroSA | South Africa |
| | Phillips 66 | United States of America |
| | Pioneer Natural Resources | United States of America |
| | Polski Koncern Naftowy Orlen (PKN Orlen) | Poland |
| | PTT | Thailand |
| **Q** | Qatar Petroleum | Qatar |
| **R** | Reliance Industries | India |
| | Repsol | Spain |
| | Rosneft | Russia |
| | Royal Dutch Shell | Netherlands |
| **S** | Santos | Australia |
| | Saras | Italy |
| | Sasol | South Africa |
| | Saudi Aramco (SABIC) | Saudi Arabia |
| | Shaanxi Yanchang Petroleum Group | China |
| | Sinochem Energy | China |
| | SK Innovation | South Korea |
| | Sonangol | Angola |
| | Sonatrach | Algeria |
| | State Oil Company of Azerbaijan Republic (SOCAR) | Azerbaijan |
| | Suncor Energy | Canada |
| | Surgutneftegas | Russia |
| **T** | Targa Resources | United States of America |
| | Tatneft | Russia |
| | Total | France |
| | Türkiye Petrol Rafinerileri | Turkey |
| | TurkmenGaz | Turkmenistan |
| **U** | Ultrapar | Brazil |
| **V** | Valero Energy | United States of America |
| | Varo Energy | Switzerland |
| | Viva Energy Group | Australia |
| **W** | Woodside Petroleum | Australia |
| **Y** | YPF | Argentina |

# Appendix 2: Glossary of selected ACT Oil and Gas methodology terms

**Decarbonisation pathway:** A standard, pathway or point of reference against which things may be compared. In the case of pathways for sector methodologies, a sector benchmark is a low carbon pathway for the sector average value of the emissions intensity indicator(s) driving the sector performance. A company's benchmark is a pathway for the company value of the same indicator(s) that starts at the company performance for the reporting year and converges towards the sector benchmark in 2050, based on a principle of convergence or contraction of emissions intensity.

Please note that this is also the definition of the terms: 'benchmark' and 'benchmark pathway' in the ACT Oil and Gas methodology. As 'benchmark' has a specific meaning and application in relation to the work of WBA and its benchmarks, the WBA Climate and Energy Benchmark uses the term decarbonisation pathway.

**Fossil fuel:** A natural fuel such as coal, oil or gas, formed in the geological past from the remains of living organisms.

**Low carbon scenario (or pathway):** A low carbon scenario (or pathway) is a well-below 2°C scenario or a scenario with higher decarbonisation ambition. (Note: in the ACT Oil and Gas methodology, 'Reference scenario' is used to refer to these low carbon scenarios.)

**Primary energy:** Primary energy is an energy form found in nature that has not been subjected to any conversion or transformation process. It is energy contained in raw fuels, and other forms of energy received as input to a system. Primary energy can be non-renewable or renewable.

**Renewable energy:** Energy from a source that is not depleted when used, such as wind or solar power.

**Science-Based Target:** To meet the challenges that climate change presents, the world's leading climate scientists and governments agree that it is essential to limit the increase in the global average temperature at below 2°C. Companies making this commitment will be working toward this goal by agreeing to set an emissions reduction target that is aligned with climate science and meets the requirements of the Science-Based Targets Initiative.

The full glossary of ACT terms is available in the methodology.

# Appendix 3: References


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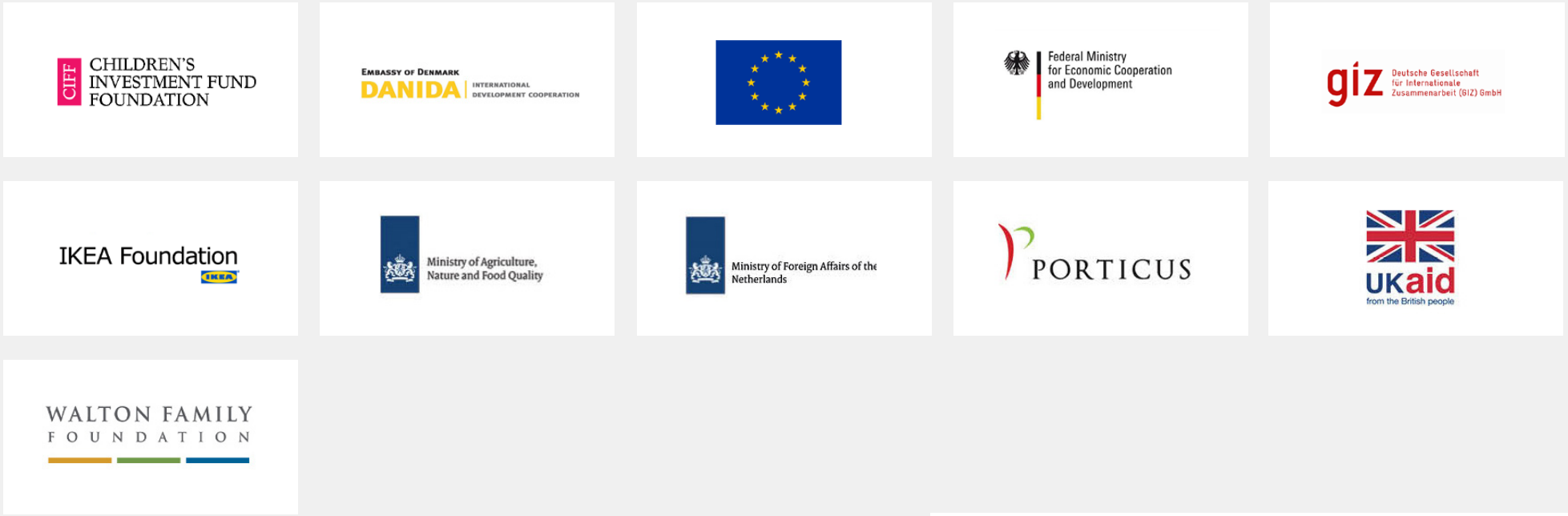
The World Benchmarking Alliance is funded by

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