World Benchmarking Alliance

Climate and Energy Benchmark in the oil and gas sector

Methodology

February 2023

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Executive summary

The 2022 report of the Intergovernmental Panel on Climate Change (IPCC) makes a clear statement: 'The scientific evidence is unequivocal: climate change is a threat to human wellbeing and the health of the planet. Any further delay in concerted global action will miss the brief, rapidly closing window to secure a liveable future'[1].

There is no second-guessing this message. We need a global decarbonisation and energy transformation, and we need it now. Global emissions are dominated by industries such as the energy sector (oil and gas, electric utilities), transport, manufacturing, chemicals, agriculture all of which play a vital role in decarbonising the way we produce, manufacture and consume. The world's most influential companies need to take their responsibility to lead this transformation. As part of this global decarbonisation, the World Benchmarking Alliance (WBA) aims to create an accountability mechanism that measures corporate progress against the goals of the Paris Agreement.

WBA's Climate and Energy Benchmark measures and ranks high-emitting companies on key issues underpinning the decarbonisation and energy transition. This publicly available benchmark operationalises the Assessing Low Carbon Transition (ACT) sectoral methodologies. Throughout its research cycle WBA works in partnership with CDP in aggregating climate related data and assessing a company's transition plan. Throughout the benchmark cycle WBA engages companies themselves, evaluating their current – and importantly – their future decarbonisation plans as well as their past and present performance to assess their alignment with the Paris Agreement. cycle WBA engages companies themselves, evaluating their current – and importantly – their future decarbonisation plans as well as their past and present performance to assess their alignment with the Paris Agreement.

Alongside assessing companies on their low-carbon transition, the Climate and Energy Benchmark also assesses companies on their contributions to a socially just transition. Embedding the principle of the Sustainable Development Goals (SDGs) to 'leave no one behind', WBA's benchmark fills a critical accountability gap bringing data and insights on what companies are doing to respect the rights of workers, communities and other affected stakeholders while working towards low-carbon goals. The benchmark aims to create transparency and corporate accountability through holistic assessments and steer companies towards commitment and action.

WBA published the first Climate and Energy Benchmark in the oil and gas sector in 2021. The second iteration, to be published in 2023 will assess the same 100 companies using the ACT Oil and Gas methodology complemented by a social assessment. The social assessment consists of a WBA's core social indicators and just transition indicators. This report provides an overview of these methodologies as well as an overview of the 100 companies included in the benchmark, and the principles used for selecting them.

Low-carbon transition and climate action in the oil and gas sector

The clock is ticking. The IPCC 2022 report shows that global warming, reaching 1.5°C in the near term, will cause unavoidable increases in climate hazards and present multiple risks to ecosystems and humans. Without urgent action to combat climate change, the world will experience more extreme weather events, rise in sea levels and negative impacts on biodiversity, ecosystems and oceans, affecting billions of people in both current and future generations. Moreover, climate change will have a disproportionate effect on the poorest and most vulnerable populations for decades to come.

In 2015, 196 countries signed up to the Paris Agreement for climate change action. In the same year, 193 countries committed to the UN SDGs. However, the world still needs a major decarbonisation and energy transformation if we are to align global efforts to achieve the goals set out in the Paris Agreement and prevent the worst impacts of climate change. These goals include limiting global warming to well below 2°C and, ultimately to below 1.5°C. Moreover, these efforts need to be carried out in a just and equitable way, so that no one is left behind[1].

Fossil fuel combustion is the principal source of man-made greenhouse gas emissions worldwide. These emissions result primarily from the use of coal, oil and gas, with oil and natural gas products representing approximately 57% of fuel-related CO2 emissions worldwide, according to the Global Carbon Budget 2022[2]. 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[3]. The impact of these company activities is not limited just to the emissions they produce but include their influence as well. InfluenceMap, an WBA Ally, reported 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[4]. The Carbon Tracker Initiative estimates that the total of potential oil & gas stranded assets (due to climate change related risks) represent about $1 trillion[5]. WBA's Financial System Transformation has therefore identified climate change as a key area of focus in developing its benchmark methodology in 2021.

The oil and gas sector's impacts and risks are not confined however to publicly listed or privately held companies. State-owned enterprises (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 developing economies. 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. 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

WBA's benchmarks are grounded in the seven transformations needed to put our society, planet and economy on a more sustainable and resilient path to achieve the 2030 Agenda. They provide the strategic framework that guides benchmark development and the identification of keystone companies – companies whose contribution is vital to achieving the SDGs, referred to as the 'SDG2000'. These companies have positive and negative impacts across the systems on which we measure and rank their performance. By publishing free and 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.

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

This will be the second iteration of the Climate and Energy Benchmark for the oil and gas sector, the Oil and Gas Benchmark. This time it is a unified assessment of ACT together with the social assessment, following the most recently published benchmark for the transport sector. This benchmark will assess the same 100 companies as in 2021 and rank the companies on their alignment with a low-carbon world and their contributions to a just low-carbon transition.

Benchmark assessments for a just climate and energy transition

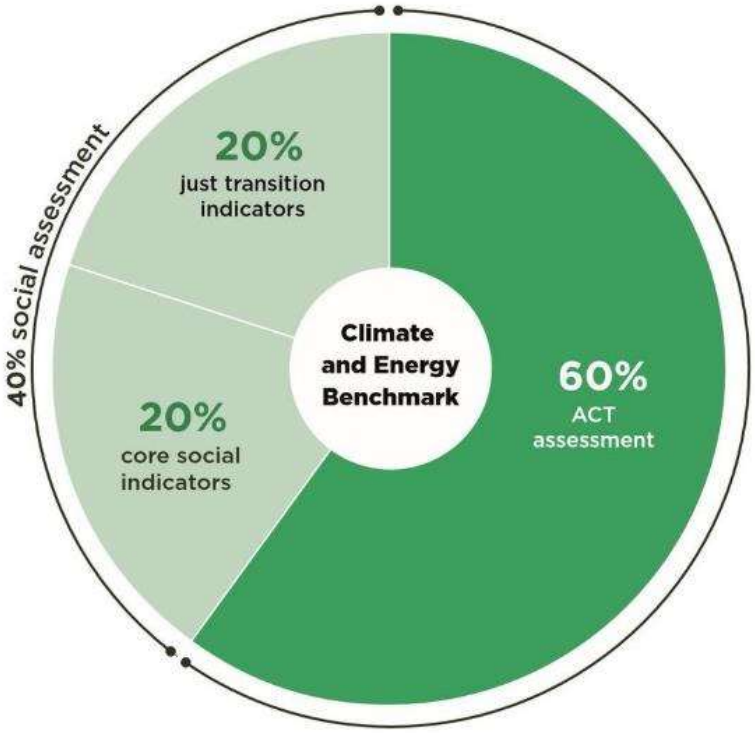
Since its inception, WBA's Climate and Energy Benchmark has operationalised the ACT (Assessing low Carbon Transition) sectoral methodologies to assess and benchmark keystone companies in high-emitting sectors on their decarbonisation efforts. In 2021, WBA launched the just transition indicators which – used together with our core social indicators – assess companies' responsible business conduct and their ambitions and actions to address the social impacts of the low-carbon transition.

Since 2022, the Climate and Energy Benchmark series brings these methodologies together to provide an ACT assessment and social assessment for all companies. This approach provides a holistic assessment of companies' efforts to achieve a low-carbon transition and their efforts to make the transition just and equitable. This approach aligns with WBA's strategy to integrate the core social indicators at the heart of each of the seven system transformations that it focuses on, so that we move towards a world where companies value all people and leave no one behind.

Companies are ranked based on one integrated score comprising their ACT assessment and social assessment scores. The ACT and social assessment scores are weighted 60% and 40% of the total score respectively. This decision is based on feedback received during the public consultation on WBA's just transition methodology and in dialogue with WBA's Just Transition Advisory Group.

The following graphic visualises how the three scores are integrated into one overall score on a scale of 1 to 100.

FIGURE 1: CLIMATE AND ENERGY BENCHMARK FRAMEWORK



The benchmark ranking is based on integrated scores thus ranks the performance of companies in terms of the low-carbon transition as well as their relevant impacts on the social transformation. Furthermore, the benchmark provides the ACT, core social and just transition scores at the indicator level, and stakeholders can use these to rank companies separately on each of these dimensions.

Sustainable development can only be achieved by striking the right balance between economic, environmental and social components. For the energy transition to contribute to the realisation of human rights and the SDGs, the renewable energy sector must also be sustainable and underpinned by the fundamental corporate responsibility to respect human rights, particularly of the most vulnerable. Companies should therefore contribute to a 'just' transition by mitigating negative social impacts of the transition and supporting an enabling environment by helping to drive robust policy and incentives to accelerate the transition in a responsible manner. The concept of a just transition, which strikes the right balance between the needs to decarbonise on the one hand and to respect the rights of workers and communities on the other, is relatively new and still evolving. Currently it can be understood somewhat differently by different actors, in terms of the expectations it sets for governments, companies, and other stakeholders. The concept of a just transition is established in international goals and agreements. The 'imperatives of a just transition of the workforce and the creation of decent work and quality jobs is referenced in the 2015 Paris Agreement, the international community's commitment on climate change[6]. Just transition is also addressed in the 2015 Guidelines by the International Labour Organization (ILO), which aim to enable governments, workers and employers globally to 'leverage the process of structural change towards a greener, low carbon economy, create decent jobs at a large scale, and promote social protection[7].

Assessing low-carbon transition: ACT methodologies

The sectoral ACT methodologies assess organisations' readiness to transition to a low-carbon economy using future-oriented indicators. This includes assessing companies' climate strategies, business models, investments, operations and management of greenhouse gas (GHG) emissions. Based on the sectoral decarbonisation approach developed by the Science Based Targets initiative (SBTi), ACT evaluates a company's alignment with the transition to a low-carbon world. It establishes a decarbonisation pathway for each company, which 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. As per the first iteration of the Oil and Gas Benchmark published in 2021, this methodology is used to feed the assessments for the second Benchmark iteration in 2023.

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), oil and gas trading (only), and exploration (only) activities are exduded from the scope of the methodology. This is because there is a limited scope for action on decarbonisation in these activities. Petrochemicals activities are also excluded from the benchmark and are addressed by the ACT methodology, ACT Chemicals.

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.

A mapping between Nomenclature of Economic Activities (NACE) codes and the scope of activities considered in the ACT Oil and Gas methodology is presented below.

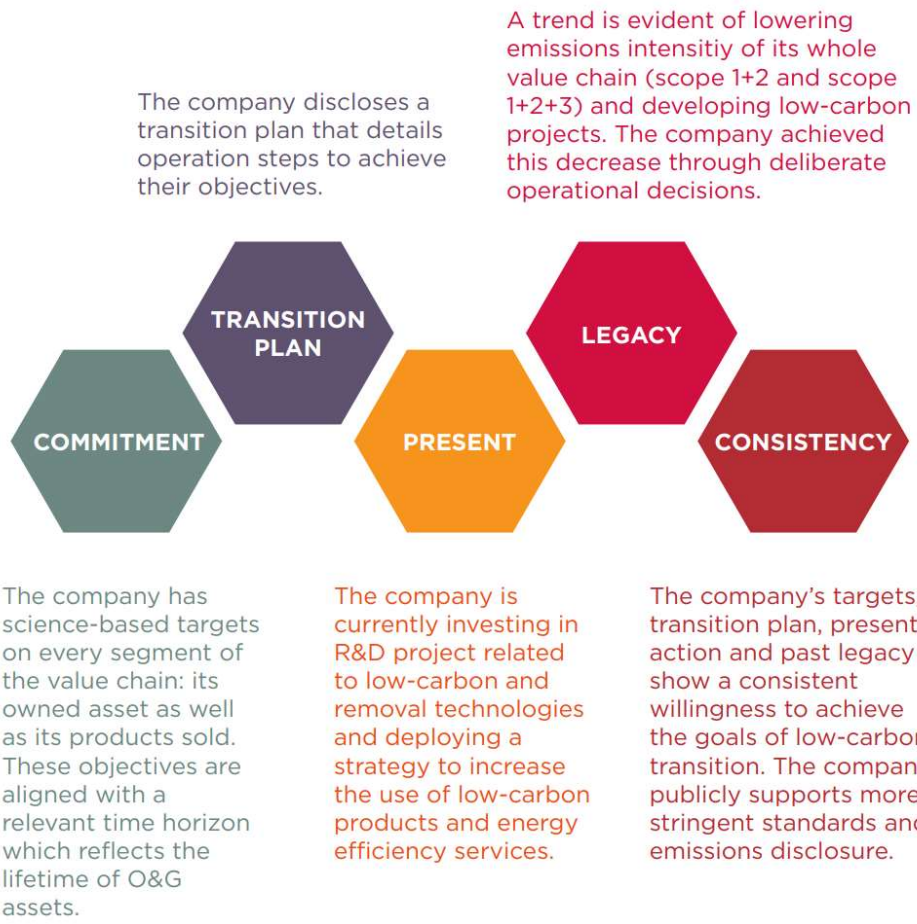
Segment	Oil value chain	Gas value chain
Upstream	Oil & Gas Exploration [09.10] Oil & Gas Production [06.10 and 06.20] Biomass production (agriculture, forest, etc.) [A]	
Midstream	Oil transport (mainly ship and pipeline) [50.20 (transport) / 49.50 (pipeline)] Oil Refining [19.20] Biofuel production and blending (solid, liquid, gaseous) [19.20] Production of bio-sourced gases and production of low carbon hydrogen [35.21]	Pipeline transport [49.50] Gas shipping (LNG) [35.22] Gas storage [25.29] LNG infrastructure [25.29] Production of bio-sourced gases and production of low carbon hydrogen [35.21]
	Electricity production [35.11]	
Downstream	Downstream oil products logistics [50.20] Retail automotive fuels stations [46.71] Marketing and distribution of other oil products [46.71] Distribution and retail of biofuels [46.71]	Gas distribution & logistics (pipeline, trucks) [35.22] Gas retail (Natural Gas, LPG) [35.23] Distribution and Retail of bio-sourced gases and low carbon Hydrogen [35.23]

	Distribution and Retail of bio-sourced gases and low carbon Hydrogen [35.23]	
	Energy efficiency services [84.13] Electricity retail [35.14]	

The Oil and Gas Benchmark as a roadmap

The Oil and Gas Benchmark can act as a roadmap for companies to show how companies 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 2: LOW-CARBON ALIGNED STATE FOR COMPANIES IN THE OIL AND GAS SECTOR



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 ACT methodology includes indicators that align with the information disclosed by companies using CDP, GRI and SASB reporting frameworks. It is also aligned with and supports the objectives of the recommendations made by the TCFD. Mappings of alignments on transition plan elements across some frameworks could be found in a CDP paper (p. 5) and GFANZ paper (p. 61).

The ACT team has also been in regular consultation with the developers of the 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.

The assessment score based on the ACT methodology will consist of performance, narrative and trend:

- **The performance score** - a number from 20 (highest) to 0 (lowest): represents a company's performance across key levers for the low-carbon transition.

- **The narrative score** - a letter from A (highest) to E (lowest): represents a company's state of alignment with the Paris Agreement goals with a holistic overview including consistency and reputation matters.
- **The trend score** - "+" for improving, "=" for remaining the same, or "-" for worsening: signals the near-term movement of the company's alignment with the low-carbon economy.

Notably, the ACT Oil & Gas methodology weighs the different modules that make up the performance scores according to each company's business model's impact on climate change. Indicator weights, therefore, vary depending on companies' location along the sectoral value chain and the scope of their activities – but all companies will receive a comparable ACT rating.

Social assessment: the core social and just transition indicators

The social transformation lies at the heart of the WBA transformations model, embedding the 'leave no one behind' principle in every transformation area that WBA focuses on. In keeping with this, WBA is committed to integrating social criteria in all its benchmarks.

Considering the crucial role that the private sector must play in achieving a low-carbon world, the Climate and Energy Benchmark intends to assess 450 companies by 2023 on their contribution to a just transition. These 450 companies employ around 24 million people and hold immense influence to power a just transition. Therefore, alongside companies' alignment with the Paris Agreement goals, the assessment will also evaluate their approach to addressing the social challenges of a low-carbon transition.

Core social indicators (CSIs)

The social transformation framework sets out the societal expectations for business conduct that companies should meet to leave no one behind. The framework establishes three pillars for companies to uphold; namely, they should: respect human rights, provide and promote decent work and act ethically. By doing so, companies can support the SDGs, address inequalities and contribute to a sustainable future for all.

The CSIs measure how companies perform on these high-level expectations for social transformation. Eighteen core social indicators act as 'signposts' towards companies' performance in relation to the three pillars of social transformation.

Each CSI will be scored on a scale of 0 to 1 based on publicly available information. The scale will be divided into three levels to gauge company performance:

1. Fully met: a company meets all of the elements for a particular indicator (1 point).

2. Partially met: a company meets some elements for a particular indicator (0.5 points).

3. Not met: a company meets none of the elements for a particular indicator (0 points).

In cases where a company meets only one element of an indicator, there isn't possibility to assign a 'partially met' score of 0.5 points. Thus, a company can either only 'fully meet' (1 point) or 'not meet' (0 points) such indicators.

Each CSI will be singly weighted, except for the following indicators that are part of the human rights due diligence process: CSI 4 (Assessing human rights risks and impacts) and CSI 5 (Integrating and acting on human rights risks and impacts). Given the foundational importance of human rights due

diligence, these two indicators will receive double weighting. The 18 CSIs will therefore represent a total of 20 points.

Just transition indicators

Decarbonisation of the global economy will only succeed if it includes solutions for affected workers and communities. This is known as a 'just transition'. The just transition assessment is the first of their kind and will be integrated into the Oil and Gas Benchmark.

The assessments will make use of six just transition indicators (JTIs):

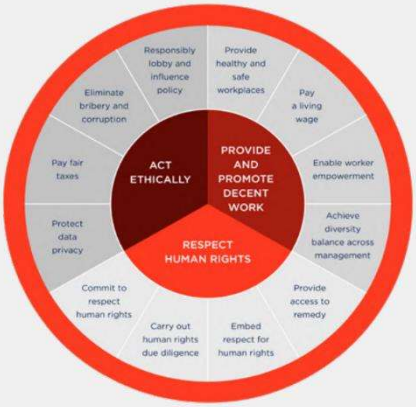
1. Social dialogue and stakeholder engagement.
2. Just transition planning.
3. Creating and providing or supporting access to green and decent jobs.
4. Retaining and re- and/or upskilling.
5. Social protection and social impact management.
6. Advocacy for policies and regulations.

Each JTI will be scored on a scale of 0 to 2 points based on publicly available information. The most recently published information (within the last three years) will be used to ensure it is relevant to the just transition. For simplicity, each indicator has four indicator elements, (a) to (d), with each element typically representing 0.5 points. So, for example, if a company meets elements (a) and (b), but not elements (c) and (d), it will score 1 point out of a maximum of 2.

Each JTI will be singly weighted, except for JTI 1 (Social dialogue and stakeholder engagement in a just transition) and JTI 2 (Just transition planning). Given the relative importance of these indicators, JTI 1 and JTI 2 will receive double weighting – so the 2 points available in this case will represent a maximum of 4 points. The six JTIs will therefore represent a total of 16 points.

FIGURE 3: CORE SOCIAL INDICATORS

Social: responsible business and people at the heart



Core social indicators

- Fundamentals of responsible business conduct for SDG transformations
- Applied to all WBA SDG2000 companies
- 18 indicators
- Scored out of 20

Just transition: to leave no one behind in decarbonisation

Specific measurement areas

1. Social dialogue and stakeholder engagement
2. Planning for a just transition
3. Green and decent job creation
4. Retaining and re-and/or up-skilling
5. Social protection and social impact management
6. Advocacy for policies and regulation supporting a just transition

Just transition indicators

- Sector-agnostic fundamentals of just transition for high-emitting sectors
- Build on Core Social Indicators
- Designed to build on ACT indicators
- 6 indicators, with 4 requirements each
- Scored out of 16

Selecting the 100 keystone oil and gas sector companies

WBA has applied systems thinking to identify 100 oil and gas sector companies that have a disproportionate influence on meeting the SDGs and the Paris Agreement goals. We have built on leading academic research that puts forward the idea of keystone actors, inspired by the concept of 'keystone species' in ecology. This is because the most influential companies in a given industry 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[8].

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. In this assessment, the same 100 companies that were assessed as part of the benchmark in 2021 are reassessed. This enables progress tracking among the keystone actors, to hold them accountable on their low carbon transition plans and examine progress.

WBA used various sources to inform the selection of the 100 companies, including the CDP and Climate Accountability Carbon Majors Report; and by cross-checking companies assessed by the Transition Pathway Initiative and Climate Action 100+ to ensure maximum alignment with these initiatives where it fit with our selection principles.

Next steps

1. WBA will contact all 100 companies to encourage their engagement in the benchmarking process. In March and April 2023, the WBA and CDP teams will share the ACT and social transformation assessment data with each company for validation. Companies will be provided with resources and materials to learn more about the ACT and social transformation assessments and the WBA Oil & Gas Benchmark.

2. We strongly encourage companies to participate, for the first time or second time if they already did during first Benchmark iteration in 2021, in the data validation process. We will be on hand to answer any questions companies have about the assessments and the benchmark. Companies may only submit an appeal regarding their assessment result if they have actively participated in the data validation process.

3. The benchmark results will be published at the end of Q2 2023.

4. We intend for our work at WBA to contribute to a multi-stakeholder movement. In tandem with the development of the Oil and Gas Benchmark, we will therefore be engaging with our global Alliance and a broad range of stakeholders to build communities of practice and action to take forward the benchmark findings.

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

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Appendix I: Companies in the 2023 Oil and Gas Benchmark

Order	Company Name	Country of headquarters
A	Abu Dhabi National Oil Company	United Arab Emirates
	Ampol	Australia
	Apache	United States of America
B	Basra Oil Company	Iraq
	Bharat Petroleum	India
	BHP Group	Australia
	BP	United Kingdom
C	California Resources	United States of America
	Canadian Natural Resources	Canada
	Cenovus Energy	Canada
	Chesapeake Energy	United States of America
	Chevron	United States of America
	China National Offshore Oil	China
	China National Petroleum	China
	China Petroleum and Chemical Corporation Limited (Sinopec)	China
	Compania Espanola de Petroleos (CEPSA)	Spain
	ConocoPhillips	United States of America
	Cosmo Energy	Japan
	CPC	Taiwan, China
D	Devon Energy	United States of America
E	Ecopetrol	Colombia
	Egyptian General Petroleum	Egypt
	Emirates National Oil Company	United Arab Emirates
	ENEOS	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	Taiwan, China
G	GAIL (India)	India
	Galp Energia	Portugal
	Gazprom	Russian Federation
	GS Holdings	Republic of Korea

H	Hellenic Petroleum	Greece
	Hess	United States of America
	HollyFrontier	United States of America
I	Idemitsu Kosan	Japan
	IndianOil	India
	Inpex	Japan
K	Kuwait Petroleum Corporation	Kuwait
L	Lukoil	Russian Federation
M	Marathon Oil	United States of America
	Marathon Petroleum	United States of America
	MOL Magyar Olajes Gazipari Nyrt	Hungary
N	Naftogaz	Ukraine
	National Iranian Oil Company	Iran
	National Oil Corporation of Libya	Libya
	Naturgy Energy	Spain
	Neste	Finland
	NGL Energy Partners	United States of America
	Nigerian National Petroleum Corporation	Nigeria
	NK KazMunayGaz	Kazakhstan
	Novatek	Russian Federation
O	Occidental Petroleum	United States of America
	Oil and Natural Gas Corporation	India
	OMV	Austria
	Origin Energy	Australia
P	PBF Energy	United States of America
	Pemex	Mexico
	Pertamina	Indonesia
	Petrobras	Brazil
	Petroecuador	Ecuador
	Petroleos de Venezuela	Venezuela
	Petroleum Development Oman	Oman
	PETRONAS	Malaysia
	PetroSA	South Africa
	Phillips 66	United States of America
	Pioneer Natural Resources	United States of America
	PKN Orlen	Poland
	PTT	Thailand
Q	Qatar Petroleum	Qatar
R	Reliance Industries	India
	Repsol	Spain
	Rosneft	Russian Federation
S	Santos	Australia
	Saras	Italy
	Sasol	South Africa
	Saudi Aramco	Saudi Arabia

	Shaanxi Yanchang Petroleum	China
	Shell	Netherlands
	Sinochem Energy	China
	SK Innovation	Republic of Korea
	SOCAR	Azerbaijan
	Sonangol	Angola
	Sonatrach	Algeria
	Suncor Energy	Canada
	Surgutneftegas	Russian Federation
T	Targa Resources	United States of America
	Tatneft	Russian Federation
	TotalEnergies	France
	Türkiye Petrol Rafinerileri	Turkey
	TurkmenGaz	Turkmenistan
U	Ultrapar	Brazil
V	Valero Energy	United States of America
	Varo Energy	Netherlands
	Viva Energy	Australia
W	Woodside Petroleum	Australia
Y	YPF	Argentina

Appendix II: References

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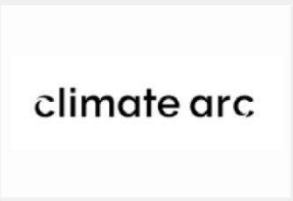

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