THE OIL & GAS DECARBONIZATION CHARTER:

2024: A BASELINE FOR ACTION

OGDC THE OIL & GAS DECARBONIZATION CHARTER

CONTENTS

Please refer to the end of the report for the legal disclaimer and cautionary statement.

FOREWORD BY THE CEO CHAMPIONS

MOBILIZING THE INDUSTRY

On December 03, 2023, during COP28, more than 50 companies that together account for 43% of the world's upstream oil production signed the Oil & Gas Decarbonization Charter (OGDC or the Charter): a pledge to take concrete steps to accelerate the decarbonization of the industry.

BP(2023)

By joining the Charter, an unprecedented number of oil and gas companies have agreed to work toward achieving the following aims:

- Net-zero operations by or before 2050;
- Aiming for near-zero upstream methane emissions by 2030;
- Zero routine flaring by 2030;
- If not already shared publicly, set and share 2030 Scope 1 & 2 emissions[2] ambitions.

Additionally, signatories recognize the need to:

- Report on progress, in accordance with internationally recognized frameworks;
- Collaborate on reducing Scope 1 & 2 emissions and share environmental best practices (in compliance with legal best practices);
- Invest in the energy systems of the future.

Charter members recognize that climate change is a serious threat to the planet. The transition to low-carbon emissions energy systems is gaining pace. However, with the continued rise of energy demand, particularly from emerging markets, forecasts suggest that oil and gas will remain part of the energy mix for the foreseeable future, playing an important part in delivering energy security and affordability.

This is why it is vital that the industry meets the world's needs while taking steps to decarbonize the energy systems of today. Oil and gas companies have an important role to play in investing in – and deploying – the technologies and solutions that will ensure a cleaner tomorrow: from electrification; low-carbon emissions fuels; solar and wind power; to low-carbon hydrogen; carbon capture and sequestration (CCS); energy storage and carbon-negative emissions innovations such as direct air capture.

COP28 (2023)

Together, we have the opportunity to make a real difference, **and have positive impacts in support of the aims of the Paris Agreement**. Reducing operational oil and gas emissions alone could cut global greenhouse gases significantly.

One of the most game-changing steps the sector can take in the short term is to curb emissions of methane, a potent greenhouse gas. Given that the oil and gas industry is estimated to be the source of **nearly a quarter** of the world's methane emissions, achieving the Charter's objectives to reduce this to near-zero and stop all routine flaring will contribute significantly to the global climate effort.

The Charter offers a framework that can help guide the industry towards a net-zero operations future. Success depends on two factors: the emissions reduction efforts of each individual signatory; and effective collaboration among signatories and across the industry at large. We face a collective challenge – one that demands a global and inclusive response.

We are proud of the 54 companies that have already signed up to the Charter and are encouraged by the extent of their engagement.

Each is at a different phase of its journey. For some, the Charter reflects existing commitments and aligns with pledges already made via other initiatives. For others, it marks their first steps toward climate action.

The disparate nature of our membership offers advantages as well as challenges. Because each company brings to the endeavor different experiences, capabilities, stakeholders and national circumstances, signatories will have the opportunity to learn from the best practices and insights of peers with a wide range of backgrounds – and from across the globe.

Since its launch at the end of 2023, the Charter has built a robust operating structure and established itself as a hub of valuable knowledge and guidance for signatories, the broader industry and external stakeholders.

To lay the groundwork essential for successful cooperation – and to establish a base upon which to build future success – the OGDC has also undertaken a key voluntary data-gathering exercise, asking signatories to share information about where they stand in relation to Charter aspirations. For some, it was the first time ever sharing data on climate actions.

[1] COP28 refers to the 2023 United Nations Conference of the Parties of the UNFCCC on Climate Change.

[2] As defined by the Greenhouse Gas (GHG) Protocol Corporate Standard (**2019**).

However, this is only the beginning.

Under the guidance of the **Oil and Gas Climate Initiative (OGCI)**, now acting as its Secretariat, over the next year the OGDC will expand its emissions reduction toolbox, adding new resources to help signatories shape their net-zero operations roadmaps and increase data quality and visibility.

It will also continue to track the progress of all signatories toward the goals set out in the Charter. A natural focus in 2025 will be to encourage those that have not yet set interim emissions targets to do so, offer support where needed and share collective progress at the 2025 UN Climate Change Conference (UNFCCC COP30).

Since launch at COP28 we have welcomed three new signatories in China, India and Norway and encourage more to join us on this collective journey.

Since 2017, members of the OGCI have reported a cumulative **55% reduction in operated upstream methane emissions** and a 21% reduction in upstream carbon intensity[3].

This is clear evidence of the progress that can be achieved when a collective of oil and gas companies, committed to a cleaner future, works together to deliver rapid climate action at scale.

[3]Please note that DNV, an independent energy expert and assurance provider contracted to provide a third-party assurance statement verifying OGDC data submission, was not involved in the OGCI reporting and verification processes.

Dr. Sultan Ahmed Al Jaber

COP28 President, UAE Special Envoy for Climate Change, UAE Minister of Industry and Advanced Technology & Group CEO of ADNOC

Amin H. Nasser

President & CEO, Aramco

Patrick Pouyanné

Chairman & CEO, TotalEnergies

CHAPTER 1

BRINGING THE CHARTER TO LIFE

In December 2023, the Oil and Gas Climate Initiative (OGCI) was appointed to lead the Charter's operations for three years.

A **governance framework** has been created that has earned the backing of all 54 signatories. This includes two leadership bodies: the CEO Champions, a panel of leaders from three signatory companies who will serve in rotation, and the Signatories Committee, which consists of senior representatives from 12 OGDC signatories.

The OGCI has established a dedicated team to build the structures that will support signatories as they turn Charter ambitions into real-world climate outcomes. These include a central hub where signatories can collaborate with peers and access best practices, technical information and customized training.

Given the speed and scale of the change required, the initiative has adopted an agile operating model – one that will continuously iterate, innovate and collaborate to drive progress.

"We are proud to be amongst the founding members of the Charter. Ecopetrol has always put its sustainability agenda at the front and center of its operations, and we are leading by example in Latin America.

The commitments acquired through the OGDC are aligned with the long-term company strategy 'Energy that transforms', and, as a national oil company, we believe in the key role we play fostering a safe and just energy transition.

We look forward to collaborating as part of the OGDC, to scale up climate action in the region and to encourage other oil and gas companies in the country to speed up their efforts to decarbonize."

Sandra Lucia Rodriguez
VP of Territorial Transformation and HSE at Ecopetrol

CHAPTER 2

TRACKING PROGRESS

Transparency and accountability are prerequisites for meaningful collaboration among Charter signatories and for the delivery of tangible results.

The Charter calls on signatories to measure and publicly report on their performance and progress in reducing emissions. To this end, all are encouraged to adopt prevailing best practices in their target setting and transition planning.

The OGDC has implemented a phased, multi-year approach for the adoption of a common reporting framework, while working to enhance data quality over time. This ensures that all members can effectively demonstrate their progress and contribution to the Charter's goals in a unified way.

To gain a clearer understanding of the starting point – and to establish a foundation upon which all signatories can build – in 2024 the OGDC launched the **Charter Baselining Survey**, a self-reported data collection process amongst signatories.

Signatories were asked a series of questions related to the goals of the Charter. The Secretariat then worked with DNV to independently anonymize, aggregate, and verify consistency with the Charter, performance and progress in reducing emissions and to support continuous improvement in data quality in accordance with internationally recognized frameworks.

DNV also facilitated the exchange of non-public, non-sensitive information with the Charter, notably for state-owned companies, which can face restrictions on data publication. Finally, DNV issued a third-party assurance statement verifying data submission, available in **Appendix B** of this report.

The 2024 Charter Baselining Survey – and its iterations in the years to come – will be the primary source of data for OGDC as it monitors the progress of signatories toward Charter goals.

Repsol (2023)

"

A survey of the oil and gas industry's climate performance has never been attempted on this scale. Participants ranged from companies that pioneered operational decarbonization decades ago to those still in the early phases – all with different capabilities and reporting methods.

The lessons learned will be used to improve reporting, visibility and data quality and to create more targeted programs."

Bjørn Otto Sverdrup
Head of the OGDC Secretariat

ADIPEC (2024)

RESULTS OF THE 2024 CHARTER BASELINING SURVEY

The Charter Baselining Survey aimed to map the climate ambitions of signatories at the point they joined the Charter. The results will be crucial to helping the OGDC understand gaps and identify priorities, as well as to track future progress.

89% of signatories (48 out of 54) were able to provide all or some of the information requested. For many, this was a first.

Overall, the results showed that, before signing up to the Charter and depending on the topic, between 20% and 37% of signatories did not have company-specific emissions reduction ambitions for their operations consistent with the OGDC goals. This confirms that the OGDC marks an important milestone for a significant number of companies.

Among respondents that had ambitions in place, a majority reported they have detailed implementation plans that include such measures as the deployment of low-carbon technology, energy efficiency, changes to operational procedures and specific improvement projects. These companies are well positioned to lead by example, transferring knowledge and best practices, and helping to accelerate the emissions reduction efforts of signatories at earlier stages.

The survey results demonstrate that many companies could benefit from sharing more information about Scope 1 & 2 decarbonization aspirations and climate performance publicly. Still, signatories face different operating realities, with listed and national companies subject to different disclosure requirements and / or country-specific regulations and expectations.

The OGDC is actively working with the six signatories that could not participate – as well as with those that were able to provide only limited information – to help them overcome such challenges as data insufficiency, regulatory restrictions and limitations related to internal processes. The aim is to offer these companies tools and best practices to enable more comprehensive reporting.

"As a national energy provider and with Azerbaijan hosting COP29 this year, SOCAR has truly benefited from taking part in the Charter Baselining Survey.

If we are to achieve the goal of reaching net-zero emissions by 2050, it is imperative to gain a full understanding of the state of play in the industry, now and in the future, as well as of our performance relative to peers."

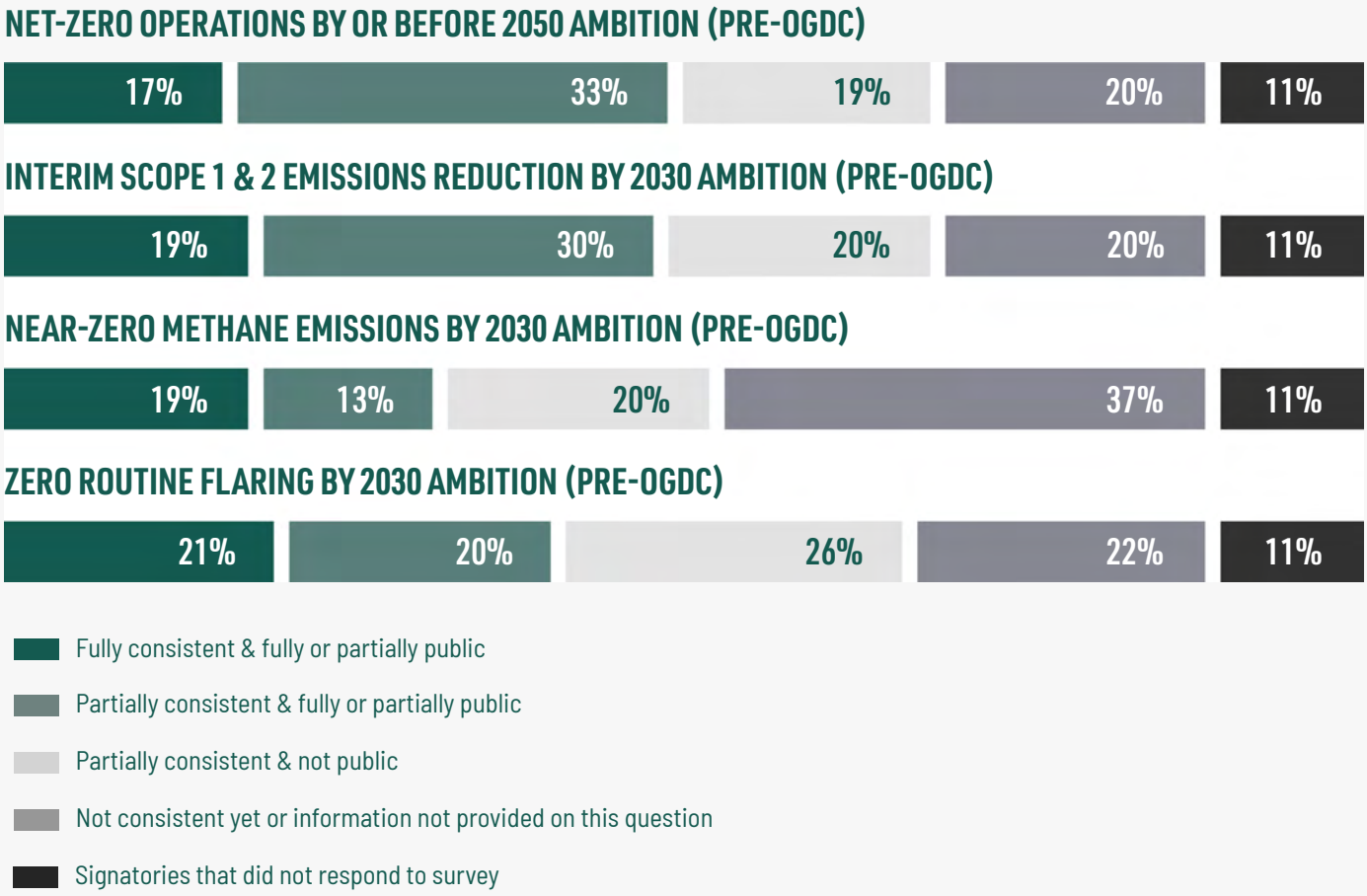
Afgan Isayev
Vice President, State Oil Company of Azerbaijan (SOCAR)

NEAR-TERM AND LONG-TERM SCOPE 1 & 2 AMBITIONS

All signatories were asked whether they had established near- and long-term Scope 1 & 2 ambitions prior to signing the Charter. The results of the DNV analysis are illustrated below.

69% of signatories said they had established ambitions to reach net-zero Scope 1 & 2 emissions by or before 2050 prior to joining the Charter, although 52% highlighted differences in methodologies, target years and greenhouse gases in scope.

FIGURE 1: Did the signatories have company-specific ambitions consistent with the Charter prior to joining? Were such ambitions made public?



Assessment by the independent third-party verifier
(Source: DNV analysis of the 2024 Charter Baselining Survey, labels simplified for readability by OGDC and the first two categories merged for simplicity)

CASE STUDY: DECARBONIZING ADNOC'S OPERATIONS

ADNOC aims to achieve net-zero operational emissions by 2045 and to reduce carbon intensity by 25% by 2030. The company focuses on energy efficiency, zero routine flaring, methane emission reductions, electrification using nuclear and solar energy and CCS technologies.

In 2023, ADNOC reduced its Scope 1 & 2 emissions by 6.2 million tons of CO_2e ($MtCO_2e$), with 4.8 million tons from clean grid energy. Its upstream greenhouse gas (GHG) intensity was ~7 kilograms of CO_2e per barrel of oil equivalent (kg CO_2e / boe) — among the lowest in the industry. The company established a zero routine flaring policy in the 2000s and aims to eliminate routine flaring by 2030. The World Bank Global Gas Flaring Tracker Report lists the United Arab Emirates as having one of the lowest flare volumes and intensities among oil and gas producers.

ADNOC's energy management system includes technology and Artificial Intelligence (AI) deployment, operational improvements, waste heat recovery, renewable energy use and efficient equipment. The Panorama Digital Command Center has saved 15% in energy expenditure since 2017. In 2023, ADNOC achieved 900 kilotons CO_2e reductions from energy efficiency initiatives and aims for a 5% improvement by 2025.

ADNOC is decarbonizing offshore operations with a $3.8 billion sub-sea transmission network with TAQA, expected to reduce its offshore carbon footprint by up to 50% by 2026. On-site solar panels at service stations generated over 20,667 MWh of solar energy in 2023.

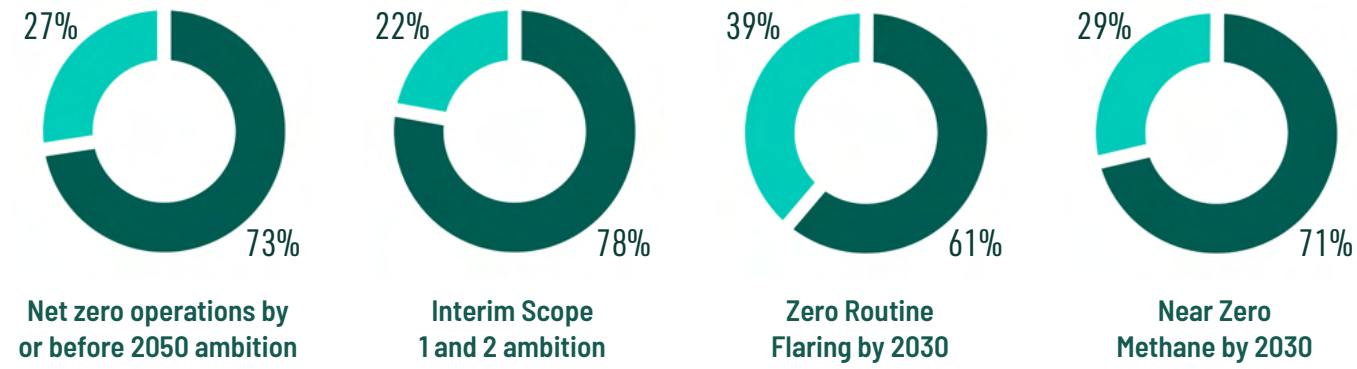
ADNOC is also leveraging technology and AI to build a future energy system, generating $500 million in value and abating up to 1 million tonnes of CO_2 emissions between 2022 and 2023.

Singapore International Energy Week (2024)

In addition, signatories were asked if they had implementation plans in place to support their Scope 1 & 2 ambitions. The results in Figure 2 collate responses only from companies that reported their decarbonization ambitions:

FIGURE 2: Did the signatories have company-specific implementation plans to underpin their ambitions?

SCOPE 1 & 2 AMBITIONS AND IMPLEMENTATION PLANS (PRE-OGDC)



Assessment by OGDC
(Source: 2024 Charter Baselining Survey), based on subset of signatories that self-reported ambitions

Some 70% of OGDC signatories had established an interim ambition for Scope 1 & 2 emissions. Of these, nearly 80% had company-wide implementation plans that outline how they aim to achieve their respective ambitions.

Approximately two-thirds of signatories had ambitions to eliminate routine flaring by 2030, but only 61% had company-wide implementation plans. In total, half of OGDC signatories (27 companies) are part of the World Bank Zero Routine Flaring Initiative.

While at least 37% of signatories did not have near-zero methane emissions ambitions prior to joining the OGDC, 71% of respondents with methane ambitions in place said they also have company-wide implementation plans. In total, more than 40% of OGDC signatories (24 companies) are part of the UNEP Oil and Gas Methane Partnership 2.0, and all signatories evaluated in the 2023 International Methane Emissions Observatory (IMEO) report have achieved the initiative's **gold standard.**

This confirms that decarbonization of operations and target setting, flaring and methane reduction remain priority topics for the OGDC. Signatories are encouraged to set clear interim ambitions and to communicate their implementation plans. The latter will enable more accurate ongoing measurement of collective progress and help the OGDC to identify how it can best support signatories' climate actions.

Shell (2024)

CASE STUDY: SHELL'S METHANE REDUCTION ACTIVITIES ARE SHOWING RESULTS, ALLOWING THEM TO WORK TOWARDS ACHIEVING NEAR-ZERO METHANE EMISSIONS BY 2030

Shell has a range of technologies and work practices in place to help find and fix methane emission sources in their operations. Examples include:

Methane abatement: Shell is using advanced technologies, such as drones and satellite monitoring, to enhance monitoring of methane emissions. At its QGC Upstream gas business in Australia, improved reporting and subsequent measures taken, has reduced reported methane emissions by around 70% since 2017.

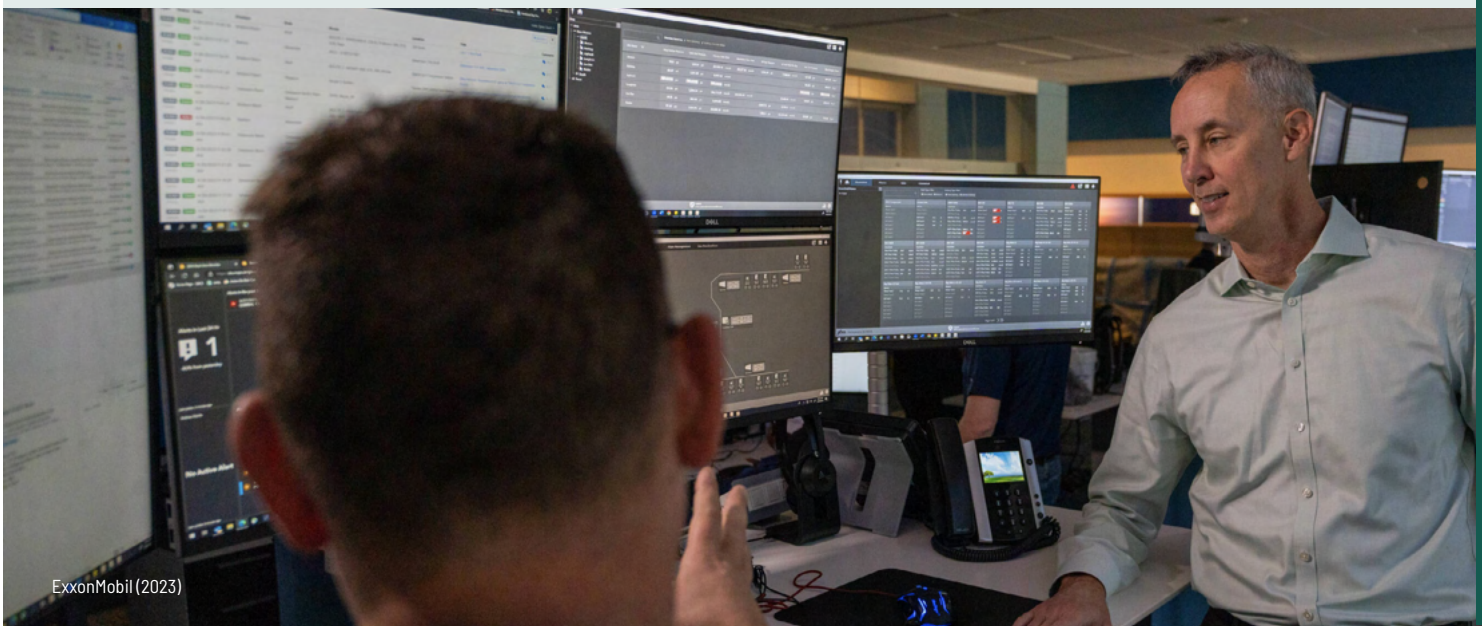
Finding methane leaks and improving reporting through direct measurements: By the end of 2023, more than 80% of fugitive emission sources at Shell-operated oil, gas and liquefied natural gas production facilities used leak detection and repair (LDAR) programs to tackle leaks and monitor equipment.

Transparency and accuracy of methane emissions reporting: Shell was awarded Oil and Gas Methane Partnership 2.0 Gold Standard in 2023 for the third consecutive reporting year – meaning 95% of Shell-operated ventures methane emissions are on a credible path to report at levels 4 and 5 by end 2023 and reasonable endeavors are demonstrated to achieve the same in non-operated ventures by end 2025[4].

[4] Levels 4 and 5 of the Oil and Gas Methane Partnership 2.0 (OGMP 2.0) are related to source-level and site-level emissions reporting respectively.

CASE STUDY: EXXONMOBIL HUNTS DOWN EMISSIONS IN REAL TIME WITH COMET

In 2021, ExxonMobil became the first company to announce plans to reach net-zero Scope 1 & 2 greenhouse gas emissions from unconventional operated assets in the U.S. Permian Basin by 2030. Reducing methane emissions is a key part of that plan. Launched in 2022 with an investment of $20 million, the company's Center for Operations and Methane Emissions Tracking (COMET) is an initiative designed to centralize, continuously monitor and analyze methane emissions data from sources across ExxonMobil operations in the Permian Basin for rapid detection and mitigation. When fully deployed at all 700 operated sites across 1.8 million acres in the Permian, COMET will ultimately provide near continuous, real-time monitoring in the region.

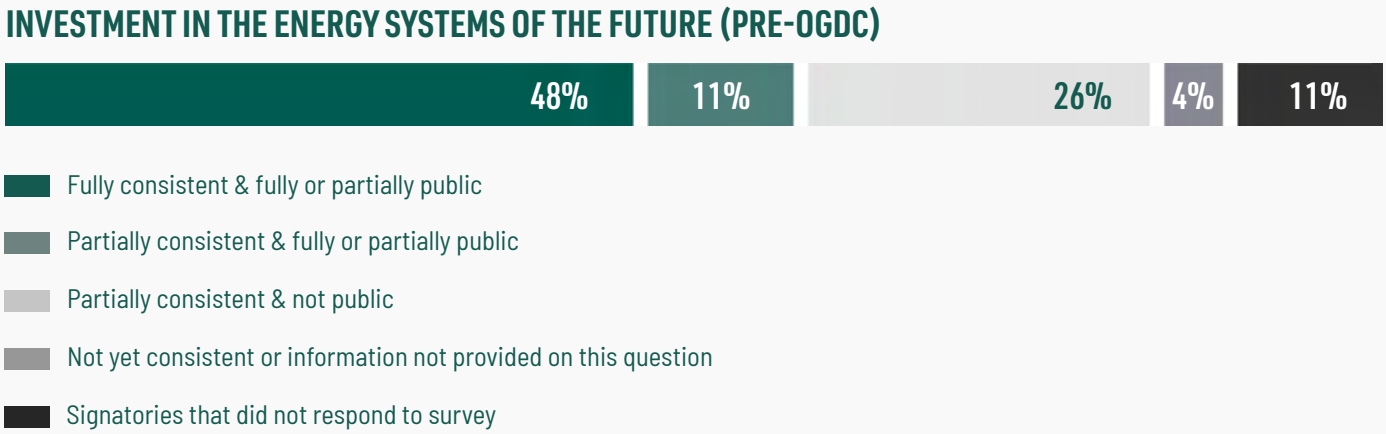


ExxonMobil (2023)

CASE STUDY: KAZMUNAYGAS TAKES TOUGH STEPS TO CURB METHANE EMISSIONS

KazMunayGas (KMG), the first national company from Kazakhstan to join the United Nations Environmental Program's Oil & Gas Methane Partnership 2.0, is making real progress in methane management. To this end, it has collaborated with organizations such as Carbon Limits, Tetra Tech and International Financial Corporation. These organizations have helped KMG assess and reduce methane emissions and to conduct field studies to monitor methane leaks at its subsidiaries. Through these efforts and more, KMG is on track to reach its ambitious methane reduction targets, while enhancing emissions reporting.

FIGURE 3: Are the signatories investing in the energy systems of the future?



Assessment by the independent third-party verifier
(Source: DNV analysis of the 2024 Charter Baselining Survey, labels simplified for readability by OGDC and the first two categories merged for simplicity)

85% of signatories said they are investing in energy systems outside oil and gas. Investment areas included renewable energy and energy storage, low-carbon fuels and hydrogen, carbon capture, utilization, and storage (CCUS) and carbon-negative emissions innovations such as direct air capture.

Additionally, at least 63% of companies plan to increase such investments in the future. Information on past investments and plans for the future is limited due to it being competitively sensitive for many signatories[5].

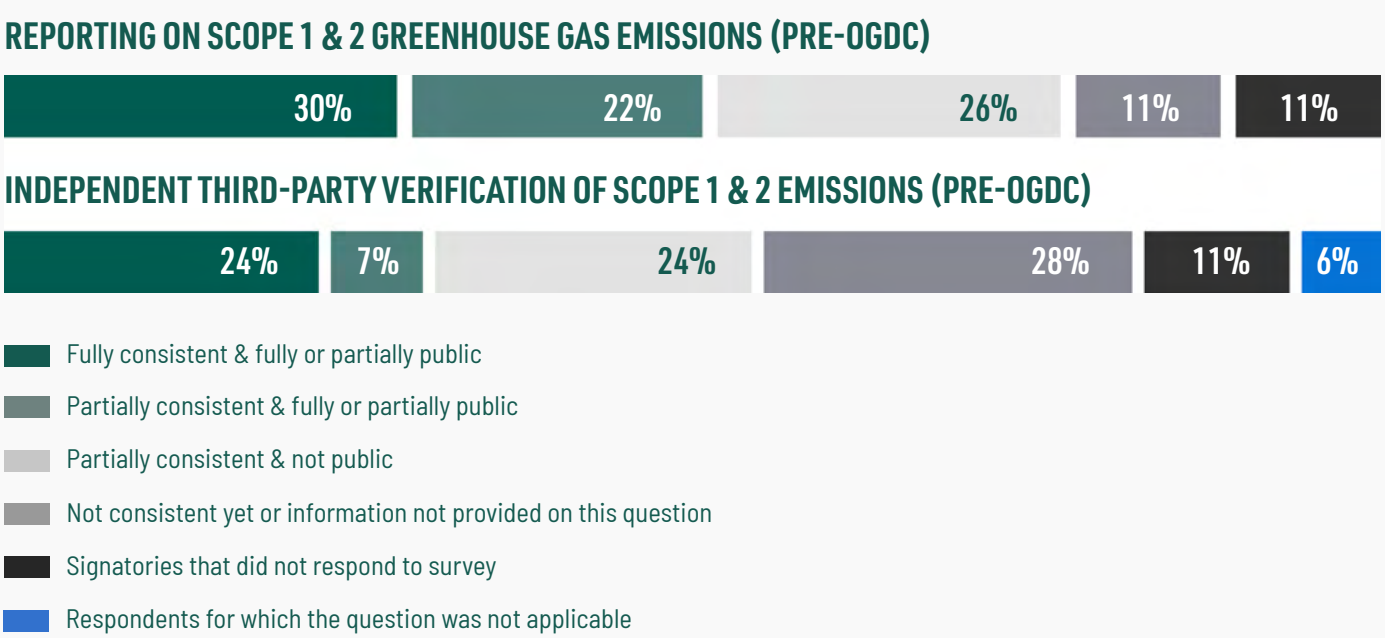
[5] To comply with anti-trust regulations and not share competitively sensitive information, the OGDC adheres to strict data protection criteria and anti-trust regulations.

We are proud to be part of the Oil & Gas Decarbonization Charter, a pivotal initiative supporting the transformation that the energy sector must undergo to reduce our collective carbon footprint. As a global, progressive energy company, ADNOC is at the forefront of this transformation. We have an ambition in place to achieve net-zero operational emissions by 2045.

We demonstrate this commitment through proactive measures in emissions reduction, energy efficiency, and pioneering projects like CCS. These initiatives highlight our dedication to delivering tangible progress and making real impact. As we advance our decarbonization efforts, we remain steadfast in driving positive change within the industry and contributing to global climate goals."

Ibrahim Al Zu'bi
Group Chief Sustainability & ESG Officer, ADNOC

FIGURE 4: Are the signatories reporting on greenhouse gas emissions?



Assessment by the independent third-party verifier
(Source: DNV analysis of the 2024 Charter Baselining Survey, labels simplified for readability by OGDC and the first two categories merged for simplicity)

At the time of the survey, 78% of signatories partially reported GHG emissions. However, only 30% were fully consistent with the Charter and substantiated their analysis with public information. 48% would benefit from more complete reporting and / or more data disclosures, while 11% were not yet reporting GHG emissions in 2023, or didn't provide enough information for the third party to assess quality of their reporting. About 70% of signatories that do disclose their GHG emissions had adopted independent verification processes.

This initial baseline survey did not provide sufficient or sufficiently uniform data to allow for an aggregation of GHG emissions at the OGDC level - and this is therefore not included in this report. DNV supported this conclusion.

However, the results of this first exercise will be invaluable for establishing the foundations that will allow the OGDC to work toward anonymization and aggregation of numbers in the coming years.

Africa Oil Week (2024)

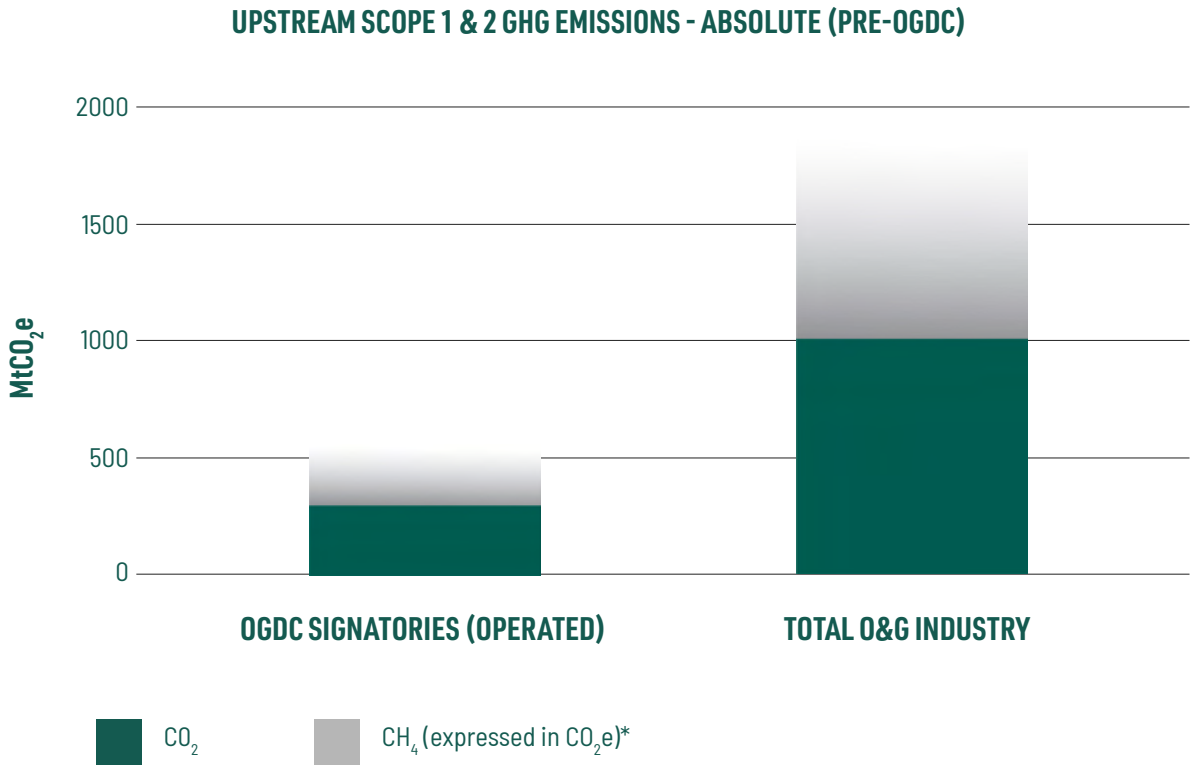

ADIPEC (2024)

INDEPENDENT ANALYSIS FROM EXTERNAL SOURCE

To supplement the Charter Baselining Survey and overcome the methodological differences in GHG reporting cited earlier, OGDC sought an independent analysis from the research and business intelligence company **Rystad Energy**. Rystad provided estimates of signatories' production levels, upstream GHG emissions and geographical presence, based on its own proprietary dataset and methodology.

Rystad Energy estimated that absolute GHG Scope 1 & 2 emissions from upstream oil and gas were around 1,900 million tons CO_2 equivalent (Mt CO_2e) in 2023. They estimated that the OGDC signatories represented around 500 Mt CO_2e of that number, of which methane emissions contributed roughly 45%.

FIGURE 5: Estimated Scope 1 & 2 emissions from OGDC signatories and the global oil and gas industry overall (in 2023)

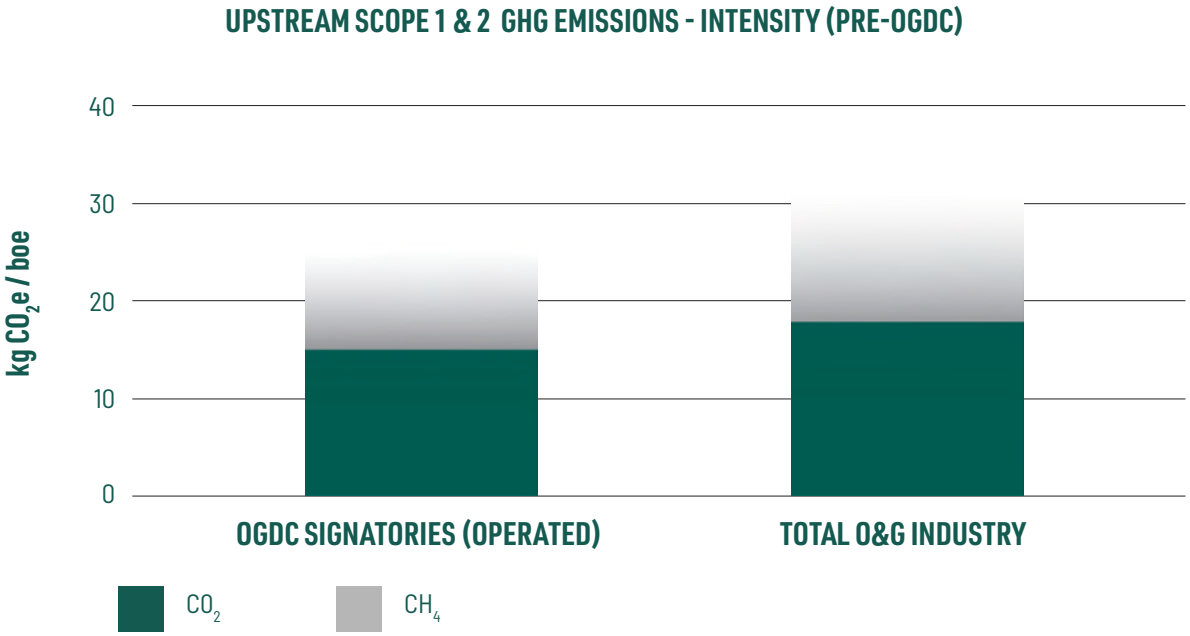


*The methane emissions were converted to CO_2 equivalent using a 100-year time horizon global warming potential (GWP) of 25 for fossil-based methane as per IPCC AR4.

Source: Rystad Energy analysis

FIGURE 6: Estimated carbon intensity Scope 1 and 2 of OGDC signatories and global oil and gas industry (in 2023) (Source: Rystad Energy analysis)[6]

Rystad Energy estimated that the average upstream carbon intensity of Scope 1 & 2 emissions of the entire oil and gas sector was around 32 kilograms CO_2 equivalent per barrel of oil equivalent (kg CO_2e / boe) in 2023. It further estimated that OGDC signatories had a collective average operated upstream carbon intensity of Scope 1 & 2 emissions of 26 kg CO_2e / boe in 2023, including both CO_2 and CH_4 emissions.



*The methane emissions are converted to CO_2e using a 100-year time horizon Global Warming Potential (GWP) of 25 as per IPCC AR4.

Source: Rystad Energy analysis

Estimates from Rystad Energy suggest that assets operated by OGDC signatories are already performing 30% better on average on a carbon intensity basis when compared to the rest of the oil and gas industry. In comparison, the 12 OGCI member companies reported an average of 17.9kg CO_2e/boe in 2022 (or in the **2023 Progress Report**).

It should be noted that:

- Rystad Energy leverages its proprietary methodology to provide the above estimates, including signatories' voluntary reporting, regulatory reports, measurements data and internal analysis and interpolation. As such, there is some unavoidable uncertainty around upstream GHG emissions – particularly regarding methane. As a result, its numbers should be considered as ballpark figures only.
- Rystad Energy's estimates are based on a different methodology and dataset to those used by many companies.
- Neither the OGDC nor its signatories are in a position to validate or confirm Rystad's data or estimates.

[6] Rystad Energy's upstream methane emissions database is a proprietary field-by-field emissions inventory database combining asset-level reported data (in regions where available), quality aggregated reported data (e.g. company and regional level), methane satellite data, and satellite flaring data (based on VIIRS Nightfire, Colorado School of Mines). Due to the sparse and low data quality in the public domain, bottom-up methane estimates, by definition, do not represent total emissions inventories from the industry.

CASE STUDY: ARAMCO'S ENERGY EFFICIENCY SOLUTIONS

Over the years, Saudi Aramco has successfully reduced its upstream and methane carbon intensities to be among the lowest in the world. Aramco has implemented multiple measures to attain an upstream carbon intensity of 9.6 kg CO_2e / boe in 2023, including best-in-class reservoir management practices, flare minimization, GHG emissions management and the methane LDAR.

These measures are complemented by Aramco's investments in infrastructure, along with its continuous development and deployment of digital solutions to monitor, manage, and reduce its energy intensity and flaring emissions that sets the company apart from most producers.

Among the company's infrastructure projects is its investment in cogeneration facilities which has contributed to significant improvements in energy efficiency.

Aramco installed 17 cogeneration facilities for high-efficiency energy generation. **The Cogen project** achieved a total high-efficiency power output of 5.3 Gigawatt (GW) and exported surplus power to the national grid. This resulted in an annual reduction of 7 million tons of CO_2 and as a result, lowered energy intensity by 23% between 2011 and 2022.

"

At Aramco, our ambitions and performance extend beyond being a leading supplier of reliable and affordable energy. We are actively pursuing multiple approaches to reducing GHG emissions from our operations through energy efficiency, methane detection and repair and flare minimization. These efforts have enabled us to achieve upstream carbon and methane intensities that are among the lowest in the industry. We are focusing on the development of new energy solutions, including CCS, lower-carbon fuels and hydrogen.

Through Aramco Ventures, we are investing in potential breakthrough technologies and start-ups to find solutions to complex climate challenges. Additionally, we are utilizing robust measurement, reporting and verification processes that use leading international standards to report our Scope 1 & 2 GHG emissions and intensities in a transparent and consistent manner.

As one of the first-term champions of the OGDC, our goal is to leverage our knowledge and expertise to amplify the impact of the industry. Establishing a solid baseline is a key priority for the OGDC this year and a crucial step in driving our journey forward."

Musaab Al-Mulla
Aramco Vice President of Energy & Economic Insights at Aramco

CHAPTER 3

COLLABORATE & SHARE

The Collaborate & Share program is a cornerstone of the OGDC's efforts to accelerate climate action by disseminating solutions, promoting peer-to-peer collaboration and encouraging the adoption of best practices. It offers signatories a repository of international industry knowledge and resources across a broad range of areas, from measurement and reporting to methane mitigation and the development of corporate decarbonization strategies for Scope 1 & 2 emissions.

"

The successful implementation of Eni's net-zero strategy cannot be achieved without collaboration with stakeholders – from business partners and private individuals to the public sector, international organizations, civil society associations and research institutes.

We are bringing our experience and commitment to the OGDC, by sharing our decarbonization skills and solutions within the energy sector and beyond, to help deliver meaningful emissions reductions. In particular, Eni has established strategic collaborations with international partners, such as Sonatrach in Algeria, EGAS in Egypt, ADNOC in the United Arab Emirates and SOCAR in Azerbaijan to identify opportunities for reducing GHG emissions."

Francesca Ciardiello
Head of Sustainability at Eni

In developing the program, the OGDC drew upon the decade of experience available within the OGCI and teamed up with internationally recognized consultants and global environmental and development bodies such as the United Nations Environment Programme (UNEP) and the World Bank to develop and deliver tailor-made company-specific training.

OGDC also worked closely with the Environmental Defense Fund (EDF), International Association of Oil and Gas Producers (IOGP), Ipieca, Methane Guiding Principles (MGP), and OGCI to develop emissions reduction toolkits.

"

NNPC Limited is working to ensure a low carbon footprint across all our businesses, from oil and gas through to new energy. We are excited about the OGDC's Collaborate & Share program, which offers signatories an unparalleled opportunity to benefit from the experiences and practical insights of our peers.

We are rolling the first one-to-one training on decarbonization strategies and marginal abatement cost curves with OGDC and an international management consultancy, and we look forward to applying these learnings to our strategy."

Chinedu Igwe

Head of Sustainability at the Nigerian National Petroleum Company Limited (NNPC)

NORTHERN LIGHTS (2024)

To date, the program has developed and/or provided:

- **More than 20 training modules** covering decarbonization of operations strategies, GHG emissions reporting and methane and flaring reduction, of which nine leveraged UNEP's OGMP2.0 training program;
- **Tailor-made training delivered to seven signatories, including 21 modules, with over 80 hours of training provided to 200+ executive leaders, staff, and management.**
- **Six webinars** from ExxonMobil, IOGP, Ipieca, Oxy, Shell and TotalEnergies covering Scope 1 & 2 decarbonization strategies and how to develop marginal abatement cost curves, methane emissions data management systems, GHG emissions reporting and methane emissions monitoring technologies;
- **Four executive roundtables in North America, Asia, Africa and the Middle East**, which gathered more than 75 executives to assess regional challenges to decarbonization of operations and explore joint regional climate action;
- **An internal directory of more than 75 technical assistance and support options** available at no cost to signatories from some 20 industry associations, non-governmental organizations, philanthropic organizations, financial institutions and not-for-profits;
- Supported the development of a **library of resources** on reducing methane emissions, developed by OGCI, and expected to launch in Q1 2025. The library will include some **150 best-in-class resources** covering subjects as diverse as detection and quantification technologies, methane fundamentals, regulations and standards, methane abatement strategies and operational guidance;
- **Three frameworks**[7] of essential resources for methane and flaring mitigation, developed in collaboration with EDF, IOGP, Ipieca, MGP and OGCI.

[7] www.iogp.org/bookstore/product/ogdc-methane-and-flaring-framework/

CASE STUDY: INDIA'S ONGC LTD. AND TOTALENERGIES PARTNER TO ELIMINATE METHANE EMISSIONS

In the spirit of the OGDC's focus on sharing best practices, TotalEnergies has taken an active role in making its pioneering AUSEA technology available to national oil companies, enabling them to carry out methane detection and measurement drone campaigns on their own assets.

To support the efforts of India's Oil and Natural Gas Company (ONGC) to achieve zero methane emissions by 2030, TotalEnergies and ONGC signed a cooperation agreement in 2024 for drone campaigns on three ONGC-operated sites in 2025.

The drone-mounted AUSEA gas analyzer, developed by TotalEnergies and its research and development partners, consists of a dual sensor capable of detecting methane and carbon dioxide emissions and identifying their source. This technology marks a step change from traditional techniques and is regarded as one of the most accurate technologies in the industry.

"

We strongly believe that sharing technology is instrumental to pivoting the whole industry towards near-zero methane emissions by 2030. To reach this collective ambition, the first step is to measure emissions, asset by asset.

We are pleased to collaborate with ONGC, as well as with a growing list of national companies, on the use of AUSEA. I am also convinced that the workshop we have organized within the OGDC will encourage the implementation of this best practice"

Namita Shah
President, OneTech at TotalEnergies

TotalEnergies (2024)

CHAPTER 4

LOOKING AHEAD

In its first year of operation, the OGDC has laid the groundwork to support signatories as they advance toward the goals outlined in the Charter, with the baselining survey setting the foundation for the collective work ahead.

In addition to setting up a governance framework and establishing a central repository of emissions reduction resources, the Charter has taken important first steps to encourage companies to share more data on climate ambitions and performance.

Since the launch in 2023, additional signatories have come on board, among them Oil India Limited, PetroChina and Vår Energi, and we invite others to join the Charter.

"OGDC is a crucial platform for driving the green and low-carbon development of the global oil and gas industry. PetroChina implements a green and low-carbon development strategy, setting forth a three-step plan of 'clean substitution, strategic succession, and green transformation'.

While ensuring energy supply, we actively develop new energy businesses such as geothermal, wind and photovoltaic power generation and hydrogen energy, and vigorously promote the construction and industrial development of CCUS demonstration projects.

As a signatory to the OGDC, we will actively promote green and low-carbon practices, contributing the wisdom and strength of PetroChina to the global transition towards a green and low-carbon future."

Weidong Du

Deputy General Manager of the Quality Health Safety Environmental Protection (QHSE) Department of PetroChina

In the year to come, the OGDC will focus on providing the resources and guidance signatories needed to make concrete progress toward reducing methane, flaring and carbon dioxide emissions – all of which have the potential to cut global greenhouse gas significantly.

As part of its drive to improve data quality and reporting, the OGDC will work with those signatories that have yet been able to set and publicly share their 2030 Scope 1 & 2 CO_2e emissions to enable them to do so.

"Action on climate change requires impactful collaborations. PETRONAS is committed to working closely with our partners to help achieve the aims of the OGDC as we collectively navigate the energy transition and undertake our own journeys to achieving near-zero methane emissions by 2030 and net-zero carbon emissions by 2050."

Charlotte Wolff-Bye
Group Chief Sustainability Officer at PETRONAS

The OGDC will support action to turn its ambitions in progress. We will aim to share some tangible examples from our progress at COP30, set to take place in Brazil in November 2025.

The Oil and Gas Decarbonization Charter has set out an ambitious direction of travel for its signatories and for the industry at large: one that has the potential to deliver positive climate impact on a global scale. It has united an unparalleled number of oil and gas companies, ranging from small independents to large state-owned enterprises, from North to South, and East to West, across the globe.

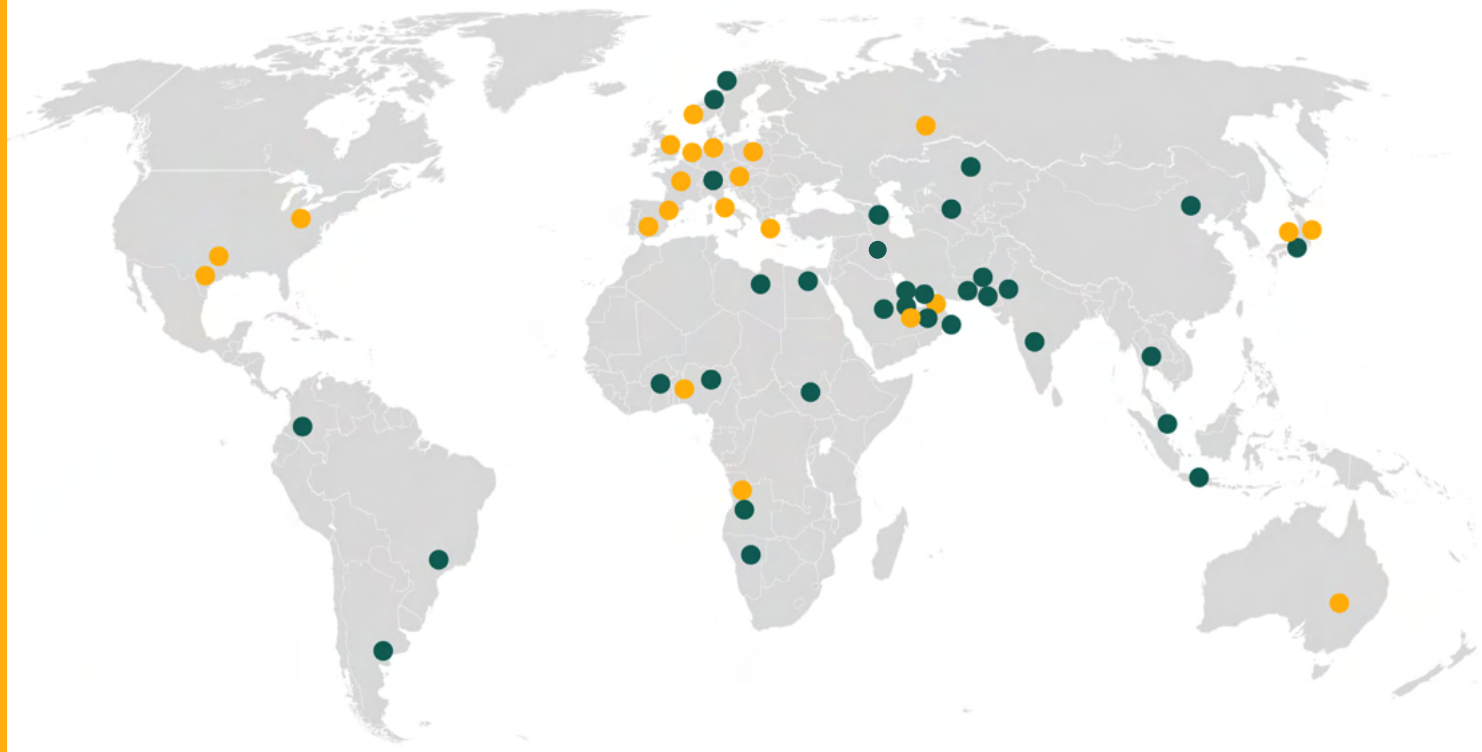
Important work lies ahead of us.

WEF (2024)

APPENDIX A

A SNAPSHOT OF OGDC SIGNATORIES

THE OGDC HAS 55 SIGNATORIES TO DATE



- NATIONAL OIL COMPANIES' HEADQUARTERS
- INTERNATIONAL OIL COMPANIES' AND INDEPENDENTS' HEADQUARTERS

GLOBAL REACH (SOURCE: RYSTAD ENERGY):

60% are NOCs (National Oil Companies)

40% are IOCs (International oil companies and independents)

Circa **6,700** assets

in **104** countries

headquarters in **35** countries

57% from **G77 nations**

66% of signatory companies are publicly traded, of which

57% are among the top 10 largest companies in their respective countries

DIVERSE INDUSTRY REPRESENTATION:

MANY SIGNATORIES HAVE SIGNIFICANT INFLUENCE (SOURCE: RYSTAD ENERGY):

Operate **35%** of global upstream oil and gas production

and own **43%** of global oil volumes

Own **57%** of global offshore production

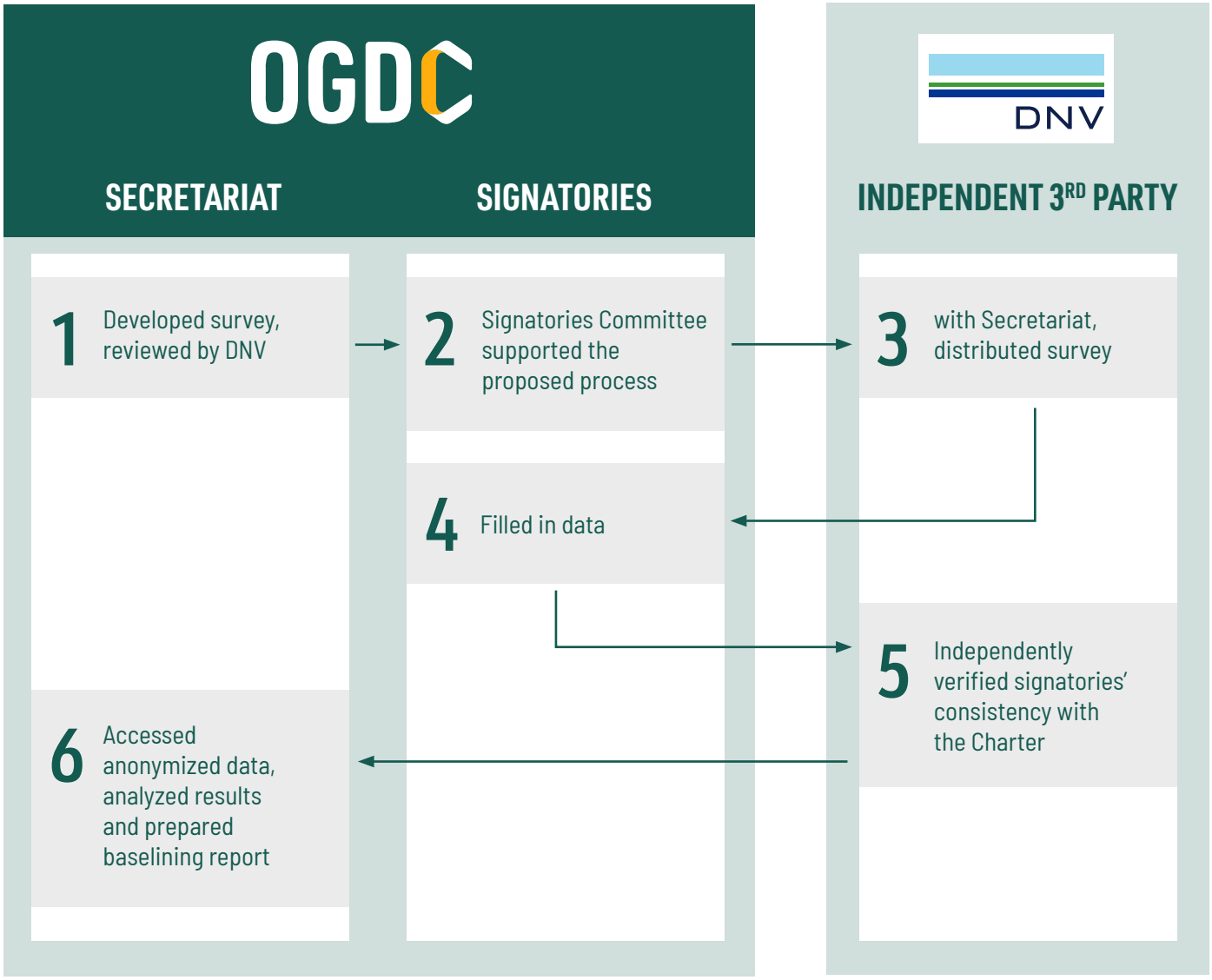
and own **30%** of onshore oil and gas production

Operate **73%** of global deepwater production

Represent **47%** of all upstream companies with production exceeding 1 million barrels of oil equivalent per day.

APPENDIX B

DNV METHODOLOGY AND RESULTS FROM THE CHARTER BASELINE SURVEY



BASELINE VERIFICATION STATEMENT - OGDC

Project name:	Independent verification of Oil & Gas Decarbonization Charter
Report title:	Baseline Verification Statement OGDC
Customer:	OGCI CLIMATE INVESTMENTS LLP,
Date of issue:	2024-10-17

1 INTRODUCTION

1.1 The OGDC

The Oil & Gas Decarbonization Charter (OGDC)[1] unites the oil and gas industry in a collective commitment to combat climate change. The signatories, comprising, 54 oil & gas companies (as of October 24th 2024), have pledged to work toward the following:

- Net-zero operations by or before 2050;
- Aiming for near-zero upstream methane emissions by 2030;
- Zero routine flaring by 2030;
- If not already shared publicly, set and share 2030 Scope 1 and 2 emissions[2] ambitions.

Additionally, signatories aim to:

- Invest in the energy systems of the future;
- Report on progress, in accordance with internationally recognized frameworks;
- Collaborate on decarbonization and share environmental best practices (in compliance with legal best practices).

1.2 Role of DNV

DNV AS (DNV), is an independent assurance and risk management provider. DNV has verified the signatories' consistency with the decarbonization charter, based on their answers to a questionnaire sent by the OGDC Secretariat to its signatories.

2 SCOPE & OBJECTIVES

The objective of DNV's involvement is to independently verify consistency with the OGDC, performance and progress in reducing emissions and to support continuous improvement in data quality in accordance with internationally recognized frameworks.

[1] OGDC Charter link: COP28 O&G Charter

[2] As defined by the Greenhouse Gas (GHG) Protocol Corporate Standard (2019).

The objective of the OGDC baselining is to document the starting point of the OGDC signatories and is based on the signatories' responses to a questionnaire developed by the OGDC Secretariat. Future progress can then be measured against this baseline.

This questionnaire consists of a set of questions for baselining the 54 signatories' performance against the key aims of the OGDC.

3 METHODOLOGY USED

3.1 Process

The OGDC Secretariat communicated directly with the signatories by sending them their questionnaire. DNV received their feedback. All questionnaire answers should reflect the reporting year 2023 where applicable. The final responses were verified by DNV against publicly available information. Only the mandatory questionnaire questions were in scope of the verification. DNV assessed public availability and traceability of the signatories' responses and graded each received questionnaire in the categories of completeness, consistency with the OGDC text, traceability and publicly availability.

3.2 Assessment criteria

DNV conducted the verification in accordance with DNV's own quality system and internal procedures. DNV rated all questionnaires based on an internally established rating methodology, considering the aims and objectives of the OGDC. Key objectives for the assessment methodology were to ensure objective and consistent assessments. DNV assessed the signatories' questionnaire answers to the OGDC aims and objectives along four key criteria: completeness, consistency with the OGDC text, traceability and publicly availability.

4 MAIN RESULTS

4.1 Response rate

The response rate to the survey was 89%. From the 54 signatories, a total of 48 questionnaires were received by DNV.

4.2 Completeness

The completeness of the signatories' answers was assessed on a total of 9 main questions (74 including sub-questions). Of the total 74 questions and sub-questions, 43 were mandatory, whereas the rest could be answered voluntarily.[3] For the completeness, all 74 sub-questions were assessed, including the voluntary sub-questions. Sub-questions from the assessment which were not applicable to the company were excluded, for example where a sub-question was only applicable if the main question was answered "yes". This means that some companies have fewer applicable questions than others. Overall, out of the 48 companies that responded, 40 companies (approx. 83%) completed over 75% of the questions applicable to them.

[3] In the 74 total questions and sub-questions, we count each sub-question separately, e.g., question 3.1 includes five sub-questions.

4.3 Consistency with the OGDC text, traceability and publicly availability.

OGDC sets out that the goals need to be publicly reported[4]. Therefore, consistency with the OGDC must be paired with public availability to provide sufficient context. DNV has assessed both consistency with OGDC and public availability.

The main questions included in the assessment are listed in Table 1. Each main question can consist of several sub-questions. Ambitions fully consistent with the OGDC text is needed on all relevant sub-questions to achieve a full score. In addition, companies need to provide publicly available information for each sub-question for a full public availability score. Partial consistency with the OGDC is given where some sub-questions are consistent with OGDC. Partial public information is when public information is given for some sub-questions, but not all.

#	Main question
2	Investment in energy systems of the future
3	Net-Zero ambition scope 1&2 GHG emissions by 2050
4	Near-zero upstream methane emissions ambition
5	Zero routine flaring ambition (e.g. by 2030)
6	Intermediary aspiration (e.g. by 2030) for Scope 1 and 2 CO_2 emissions (absolute and/or intensity)
8	Reporting on scope 1 and 2 GHG emissions
8,5	Third party verification of GHG emissions
9	Volumes of routine flaring in 2023
10	Existence of verification system for all GHG emissions
11	Existence of a system to support data quality improvement and alignment with internationally recognized frameworks

Table 1: Survey main questions included in the assessment

An overview of the survey outcomes for all main questionnaire questions is shown on the next page.

[4] "We aim to measure, monitor, publicly report and independently verify (MMRV) GHG emissions and our performance and progress in reducing our emissions"

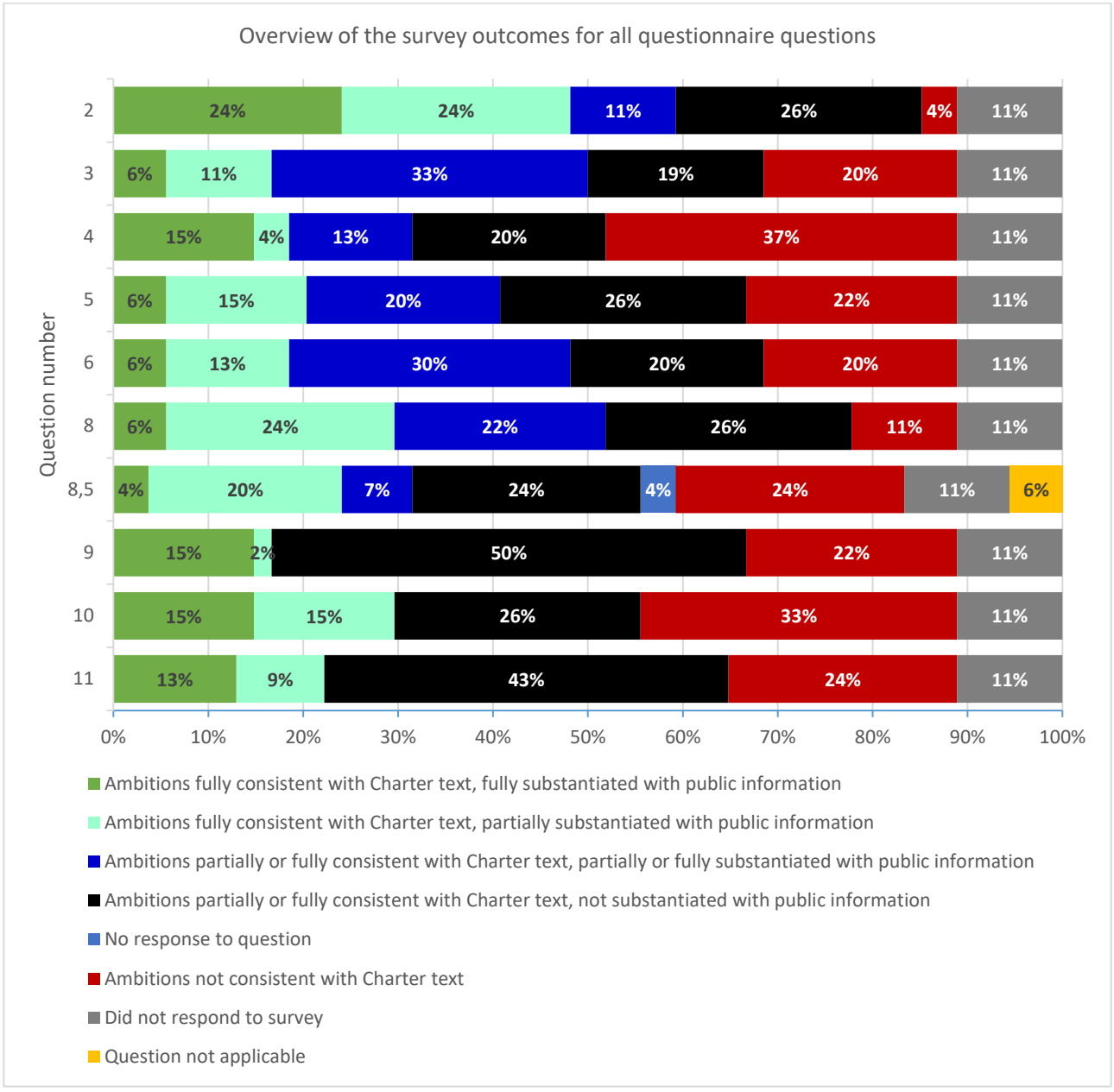


Figure 1: Overview of the survey outcomes for all questionnaire questions[5]; Source: DNV analysis of the signatories' questionnaire answers. Source: DNV analysis of the signatories' questionnaire answers

5 COMMENTS AND IMPROVEMENT OPPORTUNITIES

The results of the survey show that the degree of consistency with the OGDC differs widely across companies. One of the main challenges for companies to obtain a full score was the quality and consistency of the data reported in the questionnaire, especially on traceability and public availability. Improving the quality of reported data, providing all necessary figures in the correct units, and providing precise definitions would increase companies' traceability and public availability scores.

[5] While 48 companies have been assessed, not all questions are applicable to all companies, such that the number of companies who answered a question varies.

6 CONCLUSION

Based on our verification work, described in the chapter “Methodology used”, nothing comes to our attention which causes us to believe that, for the 48 assessed questionnaires, the mandatory answers provided do not provide a reasonable baseline basis, usable for measuring the progress of future signatory consistency against the aims & objectives of the OGDC.

7 RESPONSIBILITIES

The OGDC Secretariat is responsible for the development of their questionnaire and a fair presentation of any related reporting, and any statements made in accordance with OGDC’s own climate change aims and objectives. All reports and statements published by OGDC based on signatory data, will be in an anonymous form.

DNV’s responsibility is to express an opinion on the completeness, consistency, traceability, and public availability of documentation of the signatories’ mandatory questionnaire answers to the OGDC aims & objectives.

8 DNV’S COMPETENCE AND INDEPENDENCE

DNV is an independent assurance and risk management provider, operating in more than 100 countries. Through its broad experience and deep expertise DNV advances safety and sustainable performance, sets industry standards, and inspires and invents solutions.

DNV provides assurance to the entire energy value chain through its advisory, monitoring, verification, and certification services. As the world's leading resource of independent energy experts and technical advisors, the assurance provider helps industries and governments to navigate the many complex, interrelated transitions taking place globally and regionally, in the energy industry. DNV is committed to realizing the goals of the Paris Agreement and supports customers to transition faster to a deeply decarbonized energy system.

9 LIMITATIONS

DNV AS did not verify any GHG emission values of individual signatories nor did DNV perform in any way an aggregation of GHG emissions.

DNV AS did not verify sources other than those provided by the companies in the questionnaire.

Høvik, October 24th 2024

DNV AS

Elisabeth Rose

Rose, Elisabeth

Digitally signed by Rose, Elisabeth
Date: 2024.11.07 17:15:38 +01'00'

Project Manager

Senior Principal Consultant

Hans Kristian Danielsen

Project Sponsor

Vice President

LEGAL DISCLAIMER

While some signatories have contributed to the development of this report, the views or positions it contains may not fully reflect the views of a particular signatory. Similarly, this report does not cover all relevant activities of signatories; nor do all signatories participate in all of the activities herein described.

CAUTIONARY STATEMENT

This document contains certain forward-looking statements – that is, statements related to future, not past, events and circumstances – which may relate to the ambitions, aims, targets, plans and objectives of some or all OGDC signatories. These may use expressions such as "accelerate", "advance", "aim", "ambition", "commit", "expect", "plan", "strive", "target", "aspirations", "work towards" and "will" or similar expressions intended to identify such forward-looking statements. Forward-looking statements involve risk and uncertainty because they relate to events and depend on circumstances that will or may occur in the future and are outside of the control of signatories. Actual results or outcomes may differ from those expressed in such statements, depending on a variety of factors. Signatories do not undertake to publicly update or revise these forward-looking statements, even if experience or future changes make it clear that the projected performance, conditions or events expressed or implied therein will not be realized.