



شركة تنمية نفط عُمان
Petroleum Development Oman



20 | SUSTAINABILITY 23 | REPORT



OUR BRAND IDENTITY

The **ammonite shell** was chosen to be Petroleum Development Oman's (PDO) logo in 1980, coinciding with one of the most significant milestones in the company's history which was the registration of PDO as a limited liability company in the Sultanate of Oman.

HIS MAJESTY
SULTAN HAITHAM BIN TARIK





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ABOUT THIS REPORT

The body of this report is organised according to nine priority areas, which are integrated into the Company's business processes. The Company continues to aim to strike the right balance between successfully delivering oil and gas sustainably to its shareholders, whilst respecting the welfare of society and of the natural environment, and the need to build a low-carbon future and diversified economy.

This report also integrates the Company's sustainability performance, charting its performance to operate safely, responsibly and efficiently to deliver lasting economic benefits to the whole of Oman. It covers the economic, environmental and social impact of our performance.

This update is testimony to our commitment to transparency and honesty in our business dealings. We will be using it as our Communication On Progress to the United Nations Global Compact (UNGC), which we formally joined in January 2015. We remain firmly committed to the UNGC's 10 principles on human rights, labour, environment and anti-corruption.

This report can also be viewed on our website www.pdo.co.om and on our internal staff intranet.

Most of our technical functions are certified by the relevant national, regional or international bodies, and the organisation as a whole is annually audited by the State Audit Institution of Oman, which is financially and administratively independent of us.

This document covers the 2023 calendar year and follows on from our previous Annual Sustainability Report for 2022, which was published in June 2023. Wherever possible, we endeavour to measure our practices against national and international benchmarks, such as the ISO 14001 certification. Going forward, our intention is to seek full external assurance.



If you have any queries about this report, please contact us at corporatecommunications@pdo.co.om
Petroleum Development Oman LLC
P.O. Box 81, Postal Code 100
Muscat, Sultanate of Oman



SALIM BIN NASSER AL AUFİ

Minister of Energy and Minerals and Chairman of the Board of Directors

CHAIRMAN'S FOREWORD

In the Name of Allah, the Compassionate and, the Merciful.

It is an honour to affirm the unwavering dedication of all those working in PDO, and the wider Omani energy sector, who supports Oman Vision 2040 for the nation's sustainable development.

They are fully aware of the pressing need to continue generating revenues for our country's progress while diversifying the economy and achieving carbon neutrality by 2050.

The aspirations and ambitions laid down in the Oman Vision 2040 are noble, vital and achievable if everybody involved in the oil and gas industry works with a collective commitment and focus.

In this respect, I am pleased to report that PDO performed magnificently in 2023, laying solid foundations for Oman's orderly Energy Transition.

One of the key pillars of that journey will be HSE, which the Company holds as a core value and overarching priority. In that respect, it made a concerted effort to arrest a recent negative trend in safety. This led to an impressive turnaround in 2023, with the Company posting its best personal safety record since 2011 and the best process safety performance in its history.

The "Boots-On-The-Ground" initiative to quickly support the frontline with expert help, ongoing intensive training to raise capability and an unrelenting focus on identifying and closing gaps with additional resources, all contributed to the magnificent effort.

The combined efforts of both staff and contractors show just what can be achieved through greater co-operation, a shared vision and an unrelenting commitment to ensuring the well-being of all in the workplace. I know PDO is determined to take this momentum forward and further reinforce its safety culture, practices, policies and systems to attain Goal Zero.

The Company also placed significant onus on operational excellence, deferment reduction and improving the availability of its facilities.

Its aspiration is to cut all forms of deferment to less than 5% by 2030 in its oil assets. This can be achieved by improving artificial lift reliability and implementing tech-enabled availability and maintenance improvements as this will definitely contribute to reaching the target.

The Company's new Purpose of building a sustainable and low-carbon future to maximise value for Oman and its refreshed Strategy, which places carbon and cost competitiveness at the heart of everything it does, are already reaping rewards.

Last year, PDO generated US\$22 billion from liquid production while reducing its carbon footprint.

Notable strides were also made in priming PDO's hydrocarbon maturation funnel with 19 new oil and gas discoveries, in addition to the booking of 120 million barrels of oil equivalent and 1.3 trillion cubic feet of non-associated gas as Contingent Resource volumes.

Likewise, it was encouraging to see the faster, more cost-effective, delivery of projects, such as the Greater Saqr Gathering Station, which will generate significant long-term revenue for the nation by ensuring maximum production and cost optimisation whilst protecting the environment.

It is a banner addition to PDO's burgeoning portfolio of projects, which are both economically and environmentally beneficial, not least with reference to those it has developed and those under development in the renewable space for power generation. I firmly believe such ventures will contribute to Oman producing 30% of its electricity from green sources by 2030.

The Company's second Solar Independent Power Producer project and Riyah Wind Farm scheme are rostered to come on stream in 2025 and 2026 respectively. There is no doubt that the greater deployment of such "clean" technologies will enable Oman to gradually capture gains from the solar and wind value chains, as well as those of other clean energy technologies such as hydrogen and low-emissions synthetic fuels.

What has also been impressive is how the Company has worked with Omani academia, industry and the SME community to develop and deploy their Energy Transition expertise so that the Sultanate can become a trailblazer in achieving a decarbonised and diversified economy.

Another area where Company is leading the way is in the implementation of In-Country Value (ICV). In 2023, it realised a further seven opportunities from the ICV Blueprint document, taking the number to 91 since the strategy was unveiled in 2013. This commitment has led to the creation of more than 3,200 jobs, the operationalisation of 78 ICV facilities, and the completion of 65 social investment projects aligned with the United Nations' Sustainable Development Goals.

In line with the strategic shift PDO is undertaking, a cultural change is also underway to create a more flexible, dynamic and inclusive workforce and workplace. This is a necessary but positive move to harness the talent and tenacity of staff and contractors alike, in addition to eradicating

behaviours and structural impediments that hamper change.

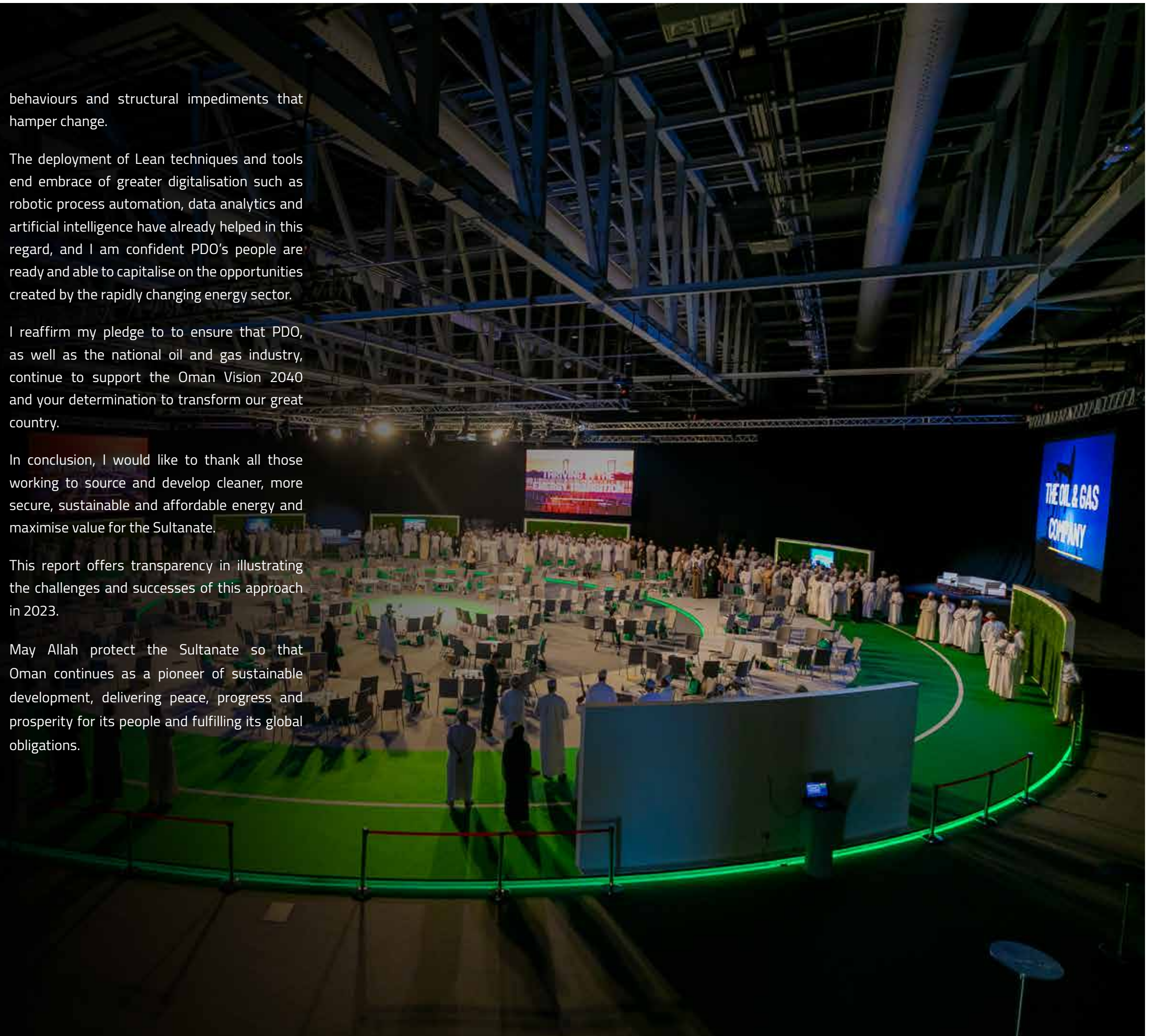
The deployment of Lean techniques and tools end embrace of greater digitalisation such as robotic process automation, data analytics and artificial intelligence have already helped in this regard, and I am confident PDO's people are ready and able to capitalise on the opportunities created by the rapidly changing energy sector.

I reaffirm my pledge to ensure that PDO, as well as the national oil and gas industry, continue to support the Oman Vision 2040 and your determination to transform our great country.

In conclusion, I would like to thank all those working to source and develop cleaner, more secure, sustainable and affordable energy and maximise value for the Sultanate.

This report offers transparency in illustrating the challenges and successes of this approach in 2023.

May Allah protect the Sultanate so that Oman continues as a pioneer of sustainable development, delivering peace, progress and prosperity for its people and fulfilling its global obligations.



BOARD OF DIRECTORS

ENERGY DEVELOPMENT OMAN, REPRESENTING THE GOVERNMENT OF OMAN



H.E. Salim Bin Nasser Al Aufi
Minister of Energy and Minerals
Chairman



Mr. Mazin Bin Rashid Al Lamki
Chief Executive Officer
Energy Development Oman (EDO)



Eng. Isam Bin Saud Al Zadjali
Board Representative
Energy Development Oman (EDO)



Mr. Sultan bin Ali Al Mamari
Chief Finance Officer
Energy Development Oman (EDO)



Mr. Azhar bin Ahmed Al Kindi
Chief Operating Officer
Energy Development Oman (EDO)



Mr. Peter Costello
Shell Netherlands



Mr. Walid Hadi
Shell Oman



Mr. Sergio Giorgi
Total Energies



Mr. Vitoon Chaisomboonpan
PTTEP Oman E&P Corporation



Mr. Eric Greenlee
Shell Oman

EXECUTIVE OFFICER

SECRETARY



Dr Aflah bin Said Al Hadhrami
Managing Director
Petroleum Development Oman (PDO)



Al Mukhtar Mohamed Al Hinai
Head of Board Secretariat
Petroleum Development Oman (PDO)

WHO WE ARE

Petroleum Development Oman (PDO) is the leading exploration and production company in the Sultanate of Oman. We deliver the majority of Oman's crude oil production and natural gas supplies, but above all else, we focus on sustainable value and growth for Oman, within and well beyond our industry.



60 %
INTEREST

Energy Development Oman
(on behalf of The Government of Oman)



34 %
INTEREST

The Shell Group



4 %
INTEREST
Total



2 %
INTEREST
PTTEP

*(Gas fields and processing plants are operated by PDO exclusively on behalf of the Government).

PDO is a limited liability company and operates on a no-profit, no-loss basis and is officially revenue-neutral. In 2023, our total capital and operating expenditure was US\$7,117 million.

On 1 January 1980, PDO was registered by Royal Decree (50/80) as a limited liability company in the Sultanate of Oman.

The Company adopted its name in 1951, first discovered oil in Yibal in 1962 and has been exporting oil produced in its 75,119 km² concession area, known as Block 6, since 1967. Our headquarters are based at Mina Al Fahal in Muscat.

We operate more than 200 oil producing fields, 43 gas fields, more than 11,000 active wells, over 33,000 kilometres of pipelines and flowlines and over 100 rigs and hoists.

In March 2023, we officially unveiled our new

Purpose and Strategy, designed to guide us in our part to ensure energy security, affordability and sustainability and to serve Oman.

Their implementation directly addresses the volatile energy landscape and mounting climate change realities while delivering on our commitments to Oman Vision 2040 and Net Zero 2050.

Our purpose, **"Building a sustainable and low-carbon future to maximise value for Oman"** defines our core reason for being and the resulting positive impact we have, and can continue to have, in Oman and throughout the world.

It commits us to both cost and carbon competitiveness, safely, efficiently and sustainably, growing our core oil and gas businesses whilst minimising emissions from our operations.

We intend to continue to maximise value to Oman through growth in our core oil and gas businesses. We will support the energy security and resilience of Oman by mobilising domestic and global partners, inspiring a new generation of world-class, Omani talent and deploying new technologies across our business to enhance production, while reducing our associated carbon footprint.

In delivering on our purpose, our strategy maximises value from our oil and gas core business in the short and the long term, whilst organically building low-carbon revenue streams for the future.

We aim to pioneer the new energy landscape, leading technology deployment, operational excellence, carbon reduction, and supply chain development for Oman's oil and gas industry.



The key components of our refreshed strategy are to:

- Achieve and sustain Goal Zero, no harm to our people, communities, environment or assets, as the fundamental bedrock of everything we do.
- Maintain ethics and compliance.
- Build and leverage PDO's cost competitiveness to generate resilient cash flows far into the future.
- Grow oil production sustainably beyond 700,000 barrels per day.
- Execute carbon competitiveness strategies to meet our net-zero ambitions by 2050 and halving emissions by 2030.
- Manage integrated infrastructure network (power, water, oil evacuation) to support growth and meet sustainability targets.

We manage a large and diverse portfolio of oilfields in terms of field sizes, reservoir, and oil types, development methods and maturity.

Our aim is to improve the recovery factor of hydrocarbons through the application of a combination of world-leading well and reservoir management, the deployment of the latest innovative technology and a comprehensive range of recovery mechanisms including:

- **Primary**, such as fields on natural flow and artificial lift.
- **Secondary**, such as fields under water flood reservoirs and pressure maintenance.
- **Tertiary**, such as Enhanced Oil Recovery (EOR), where we work to modify the physical/chemical properties of in-situ oil.

The Company has become a global pioneer in EOR due to its maturing asset base and the complexity and challenging nature of Oman's geology. The three main recovery methods we currently use are thermal, chemical and miscible high pressure gas injection.

PDO meets its wider responsibilities to society, and secures a social licence, by taking economic, social, and environmental factors into account in all decisions, specifically in terms of the provision of oil revenues, domestic employment, staff, and contractor development, the support and advancement of local businesses, and community investment.

We aim to sustain a robust HSE culture by meeting, if not exceeding, international standards. This is being achieved through our Golden Rules of Comply, Intervene and Respect and our refreshed Life Saving Rules, as well as close collaboration with the government, regulators, contractors, operators, and academia.

At the end of 2023, PDO had 9,206 staff and **over 50,000** contracting employees, resulting in a combined workforce made up of over 60 nationalities.

THE MANAGING DIRECTOR'S COMMITTEE

The Managing Director's Committee (MDC) shares responsibility for the Company's overall performance and business direction.

It is headed by the Managing Director who is assisted by **13** other directors, who are responsible for setting the technical, operational and functional standards, the allocation of staff, and their development.

The MDC is answerable to the Board of Directors which provides objectives and guidelines to the Managing Director. The Board consists of **12** members. There are five government representatives, including our Chairman, the Minister of Energy and Minerals, His Excellency Salim bin Nasser Al Auqi, and those who represent PDO's private shareholders. (The Shell Group Total and PTTEP).

PDO GENERAL BUSINESS PRINCIPLES AND UN GLOBAL IMPACT MEMBERSHIP

PDO's reputation and success critically depend on compliance with applicable laws, and with the highest ethical standards of behaviour. PDO conducts its business in accordance with the principles of honesty, integrity, and fairness, including relationships with its contractors and suppliers.

To ensure the above, the PDO General Business Principles form the foundation of our business strategies, activities, and reputation. These principles are endorsed by our shareholders

and apply equally to corporate decision-making and the individual behaviours expected of employees when conducting business for, and on behalf, of PDO. Contractors and suppliers are also expected to comply with those principles as part of their relationship with PDO.

The Company has a long-standing commitment in Corporate Social Responsibility, being the first national oil company in the Gulf to become a member of the United Nations Global Compact (UNGC), the largest voluntary corporate social responsibility initiative globally. As a member, PDO is committed to supporting the UNGC's 10 universal principles on human rights, labour, environment, and anti-corruption. Since joining in 2015, PDO has remained committed to strengthening its already rigorous internal controls and continuing its UNGC membership.

PDO CODE OF CONDUCT

The PDO Code of Conduct provides requirements and guidance on how to apply the PDO General Business Principles in practice. Compliance



with the Code of Conduct is expected from all PDO staff, as well as contractors and suppliers. Staff are made aware that any violation of the Code of Conduct provisions and related policies, procedures, as well as applicable laws or regulations governing PDO's business activities, may have severe consequences for the individuals concerned and PDO.

The Code of Conduct addresses the following



Anti-bribery and corruption



People & safety



Safe guarding information and assets



Free competition and trade controls



Communication management

key areas:

Our Ethics and Compliance Risk Management activities aim to mitigate any issues in these areas. Through a structured approach of continuous education and awareness programmes, our Ethics and Compliance Risk Management framework contributes to effectively combating corruption and bribery challenges, as well as the misuse of power, bid rigging, unfair business practices, and undue influence exerted for private gain. PDO continuously monitors business activities by engaging with various departments and conducting surveys for the purposes of early detection and response to ethics and compliance risks. PDO also operates an internal Conflict of Interest declaration tool that all staff are required to sign declaring their actual, potential, and

perceived conflicts of interest annually, or when they arise.

- We also operate a Gifts, Hospitality, Travel, and Confidentiality declaration process to ensure transparency and compliance with anti-bribery and avoidance of conflict-of-interest laws, as well as a "Blow The Whistle" programme for anyone inside or outside of PDO to openly, or anonymously, raise concerns regarding adherence with the compliance requirements by PDO staff, contractors or any third party.
- PDO's senior management and Board are regularly updated by the Ethics and Compliance team on issues, key statistics and trends.

ETHICS AND COMPLIANCE KEY ACTIVITIES IN 2023

Our values are an integral part of our licence to operate. To support this, our activities in 2023 aimed at ensuring that we continue to do business ethically and responsibly:

- **Anti-bribery training:** we continued the application of our online training modules, with 1,763 staff completing the training.
- **Ethics and compliance training for staff at 'high risk':** a total of 114 staff in higher-risk positions were trained for several hours in face-to-face sessions to provide insights into potential areas or compliance risk and opportunities for control improvements at various departments.
- **Face-to-face awareness sessions:** we conducted 49 awareness sessions on ethics

and compliance topics including sanctions and trade controls awareness training for selected teams.

- **Whistle-blowing training and investigations:** A total of 6,117 staff received training on whistleblowing and reporting mechanisms in PDO, which increased the number of reported violations. The Ethics and Compliance team received and initiated 62 investigations into allegations of improper behaviour, breach of business ethics, and internal policies resulting in 'appropriate response and consequence' management actions.
- **Reporting and feedback:** Every quarter, the Ethics and Compliance team shares key learnings from their investigations and other activities with the Managing Director's Committee. This ensures that the PDO leadership is aware of the ongoing challenges in the Company, reinforces a corporate ethical culture, and ensures that this is embedded in our business priorities across all levels.
- **Ethics and Compliance Champions programme:** In 2023, we expanded our Ethics and Compliance Champions programme by appointing more local Ethics and Compliance Officers/Champions from staff in various directorates. The intention is to ensure that ethics and compliance remains a corporate priority and to empower directorates in setting the standards from above. At the same time, the programme helps us to continue embedding ethics and compliance requirements into business



processes, raise the accountability of the business with respect to compliance issues and ensure better communication and early prevention of the ethical issues within PDO.

- **Integrity due diligence:** a total of 601 vendors were assessed in 2023 before we entered contractual relationships with them while several improvement process and system opportunities were further identified that will enhance controls and better mitigate the risks associated with doing business with third parties.

NEW ETHICS AND COMPLIANCE STRATEGY

In 2023, PDO launched its overall Strategy Refresh to transform the Company and achieve its newly set strategic goals. As part of this new approach, Ethics and Compliance was named a “must-win” and one of the key enablers of our transformation.

We have planned and already executed some of the activities that will help us to progress the strengthening of an ethical culture, greater transparency in what we do and enhanced management of operational issues by increasing accountability, staff performance and capabilities, together with cost, and financial discipline.

In 2024, we aim to revamp the existing Ethics and Compliance programme by introducing a new Code of Conduct and the use of technology to manage and monitor our compliance processes, as well as further train our staff on ethics and compliance issues in line with the best

international standards and practices. We are actively working on the Ethics and Compliance Strategy, and a five-year action plan that will enable us to further expand our activities in line with the Company’s vision and mission.

COST COMPETITIVENESS

Business efficiency is a strategic aim to ensure PDO’s long-term sustainability and deliver value to stakeholders.

Cost competitiveness has been identified as a key organisational objective and we have embarked on a journey to maintain our unit operating cost (UOC) at US\$6 per barrel of oil equivalent (boe) until 2030. Various activities and projects have been established throughout the Company to reduce operating expenditure (Opex) and meet the given target without compromising safety and diluting value.

In 2023, our UOC was US\$6.2 per barrel of oil equivalent (boe), and we made cumulative savings of US\$643 million on capital and Opex. This was achieved through rigorous cost control measures, closer collaboration with our contractors, an enhanced operating model, people processes, and the further implementation of new technological solutions, such as automation and digitalisation.

We have also placed significant focus on deferment reduction and improving the availability of our oil and gas facilities. Our aspiration is to cut all forms of deferment to less than 5% by 2030.



The total capital and operating expenditure for 2023 was US\$7,117million.

PDO SERVICES

PDO Services (PDO-S) is a limited liability subsidiary company of PDO, which was established in 2021 to commercialise our strong technical capabilities, inherent capacity and competitive edges in niche areas, including enhanced oil recovery, geo-solutions, and adjacencies.

In 2023, PDO continued to monitor PDO-S during its incubation period, and it successfully secured its revenue targets, contributing to PDO’s continuous improvement & talent exposure, as well as meeting shareholders’ priorities.

MEMBERSHIPS

PDO is a member of the:

- United Nations Global Compact
- Regional Clean Sea Organisation
- Oil and Gas Methane Partnership 2.0
- Aiming for Zero Methane Emissions Initiative (OGCI)
- Gulf Co-operation Council (GCC) National Oil Company Steering Committee
- Oman Energy Association (OPAL)
- International Association of Oil Producers (via Shell)

MANAGING DIRECTOR'S FOREWORD

It is with great honour and pride that we present Petroleum Development Oman's (PDO) Annual Sustainability Report for 2023, my first as Managing Director of this illustrious company.

The report transparently charts our performance, our successes and challenges, during another testing year where the ongoing need to produce affordable, secure and sustainable energy.

Our economic, environmental and moral obligation to achieve this priority took place against a difficult backdrop of multiple geo-political factors, inflation, energy market volatility and the emergence of new technologies, such as artificial intelligence.

PDO's approach was shaped by our new Purpose of "Building a sustainable and low-carbon future to maximise value for Oman" and our new refreshed Strategy. This supports the delivery of the Purpose and places cost competitiveness and the drive for revenue and cash flow squarely alongside the goal of carbon competitiveness and the need to reduce our emissions.

Throughout 2023, PDO staff, a record 91% of whom are now Omanis, and our contractors have worked diligently to embed the Purpose and Strategy to support Oman Vision 2040, especially with the aim of diversifying the economy and achieving the Net-Zero Emissions aspiration by 2050 (NZE 2050).

Through an unstinting drive for excellence, PDO generated more than US\$22 billion in revenues from increased liquid production (and higher oil prices), some 65% higher than planned, while still reducing our carbon footprint.

Health, Safety and Environment

After a monumental effort across our entire organisation, PDO achieved its best personal safety performance since 2011 and its best process safety record ever.

There were no work-related fatalities, and we halved our Lost Time Injuries (LTIs) to 22 (compared with 2022), equating to a Lost Time Injury Frequency of 0.12 (from 0.22). Total Recordable Case Frequency per million manhours worked was also down to 0.57 (from 0.79).

In our pursuit to achieve Goal Zero, i.e. no harm to people, the environment, communities or assets; we accelerated our journey via a Safety Refresh initiative, based on a three-phase urgent response to personal safety issues. The first phase involved a "Boots-on-the-Ground" deployment of resources in our operation fields in the Interior to support the frontline teams in their site supervision and interventions. The second phase addressed the staff capability and capacity gaps in managing operations safely, and the third and final phase investigates our end-to-end resources strategy to ensure PDO reaches and sustains its desired safety status.

Tangible progress can also be seen with regard to road safety. There were no Motor Vehicle Incident (MVI) related fatalities and our serious MVI rate per million kilometres fell to 0.034 in 2023 from 0.05. Such results reflect the steady progress we made on our Darb Al Salama road safety (DAS) plan, a three-year initiative, involving our HSE and Operations teams, to encourage safe driving behaviour, safe vehicles and safe roads.

were recorded compared to 12 in 2022 showing a 67% decrease. This continued a year-on-year improvement in process safety results from 2017.



Dr Aflah Al Hadhrami

Managing Director

PEOPLE

Our people are our most valuable asset, and they are our sustainable competitive advantage. In this respect, the attainment of a record staff Omanisation level of 91% is a vivid testament to the capacity and capability of Omanis to take PDO forward in a fast-changing energy sector landscape.

The Company's long-running commitment to Diversity and Inclusion as a business imperative is clearly paying off and I am pleased to see women playing an ever greater role in the business, not just at Mina Al Fahal but also in the field.

Our talent pipeline is well primed with more than 800 graduating from the Shababuna development programme, which has been automated to improve business excellence, employee experience and efficiency.

We are now building an Integrated Talent System to deliver targeted learning interventions

and take streamlined data-driven decisions concerning employees so that we have the right people in the right jobs at the right time. This is being accomplished by integrating our Learning Management System with HR core modules, such as the management of performance, succession and talent acquisition and workforce planning.

I am confident that the launch of an enhanced Employee Value Proposition will improve our ability to attract and retain the very best in line with my desire to improve our work environment, making it more agile, collaborative and transparent.

ETHICS AND COMPLIANCE

Our values are an integral part of our licence to operate, and we must ensure we continue to do business ethically and responsibly. As part of our overall Strategy Refresh, Ethics and Compliance was named a "must-win" and one of the key enablers of our transformation.



We executed some activities that will help us to strengthen our ethical mindset. These include greater transparency in what we do and enhanced management of operational issues by increasing accountability, staff performance and capabilities, together with cost and financial discipline.

An extensive programme of training on topics such as anti-bribery, ethics and compliance for staff in "high-risk" areas, whistleblowing and the recruitment of more Ethics and Compliance Champions underlined the importance of business probity as a corporate priority.

We are working to revamp our Ethics and Compliance programme by introducing a new Code of Conduct and the use of technology to manage and monitor our compliance processes to ensure they adhere to the highest international standards.

COST-COMPETITIVE PRODUCTION

Business efficiency is a strategic aim to ensure PDO's long-term sustainability and deliver value to stakeholders. Therefore, cost competitiveness has been identified as a key organisational objective and various activities and projects have been established to reduce operating expenditure (Opex) without compromising safety and diluting value.

In 2023, our unit operating cost (UOC) was US\$6.2 per barrel of oil equivalent (boe) and we made cumulative savings of US\$643 million on capital expenditure (Capex) and Opex. This was achieved through rigorous cost control measures, closer collaboration with our contractors, an enhanced operating model and people processes and the further implementation of new technological solutions, such as automation and digitalisation. The total capital and operating expenditure for 2023 was US\$7,117million.



We also placed significant focus on operational excellence, deferment reduction and improving the availability of our facilities. Our aspiration is to cut all forms of deferment to less than 5% by 2030 in our oil assets by improving artificial lift reliability and implementing tech-enabled availability and maintenance improvements.

CARBON-COMPETITIVE PRODUCTION

PDO still firmly believes that oil and gas will play a key role in Oman's economy for decades to come, but production must be sustainable. This necessitates expedited projects and volume maturation, the development of stranded assets and Enhanced Oil Recovery (EOR).

On the other hand however, it requires investment in low-carbon fuels, Carbon Capture, Utilisation and Storage (CCUS), power to liquids, and flare and methane emission abatement techniques, as well as strong energy-efficiency practices.

This twin approach is necessary to fund national economic development and diversification and meet international climate change commitments.

Our average oil production in 2023 was 657,599 barrels per day (bpd), which was within 99.8% of the target. Condensate output was 97,426 bpd, while gas production was 58.26 million m³/d, consistent with lower customer demand. The combined total average barrel of oil equivalent production per day (boepd), oil, condensate and gas, was 1.1 million boepd.

The strong production effort was buttressed by a record number of more than 24,000 hoist, completion and well intervention activities and the delivery of 884 new oil and gas wells, a 24% rise from 2022.



This work was carried out in tandem with as many as 150 emission-reduction projects, including the renewables and water space, as part of a goal to halve emissions from our 2019 baseline of 12 million tonnes per year of carbon dioxide, equivalent to six million tonnes, by 2030.

Most of our CO₂ emissions come from power generation and the development of large-scale renewable projects, especially solar and wind and their associated supply chains that are critical to reach Oman's sustainability targets. It is expected we will derive 30% of our power capacity from such sources by 2026 with the aspiration of reaching 50% by 2030.

SUSTAINABLE GROWTH

The total value of projects under execution in 2023 was US\$1.1 billion. One key milestone was the completion of the Greater Saqr Gathering Station, delivered safely in a record time of 18 months, three months ahead of schedule, despite the disruption caused by COVID-19.

The facility represents our Strategy in action, delivering sustainable hydrocarbon growth from six satellite fields whilst reducing costs and emissions, with a peak production capacity of approximately 30,000 boepd and an expected annual carbon dioxide emission reduction of 6,600 tonnes.

GAS BUSINESS

In the gas domain, we achieved the start-up of Khulud Phase-2 project again one month early. This will advance the development of Khulud West fields, with a primary goal of enhancing production.

Thanks to the Exploration Directorate who made 19 new oil and gas discoveries and booking a total of 120 million boe and 1.3 trillion cubic feet of Non-Associated Gas (NAG) as Contingent Resource volumes. The overall unit finding cost was near US\$1 per boe.

TECHNOLOGY AND IN-COUNTRY VALUE

We launched 27 game changing technology initiatives (a 28% increase on the previous year's record) to tackle critical corporate technical challenges, such as HSE, energy management, well construction, artificial lifting and water management.

These endeavours promise to revolutionise the way we operate, optimising and automating our decision-making and workflow processes in real time, while unlocking new avenues for growth.

This approach dovetails with our overall In-Country Value (ICV) programme, which stimulates business development, builds Omani capability and capacity, and expedites economic productivity and diversification, in line with the Oman Vision 2040.

Our unwavering commitment to localisation saw the Company surpass the 40% threshold of in-country retained value in our total supply chain for the first time. We realised 11 more opportunities from the ICV Blueprint Strategy, amounting to US\$40 million. One such was the launch of the first local manufacturing facility for drilling rigs in Oman and the Middle East.

PDO has now brought to fruition 91 such opportunities since the blueprint was unveiled in 2013, with a total investment value of US\$615 million, the creation of 3,216 jobs for nationals and operationalisation of 78 ICV facilities and workshops in nine years.

At the same time, we maintained our drive to maximise our beneficial social impact in line with the United Nations' Sustainable Development Goals.

We completed 65 social investment projects and committed to a further 95 aligned with the themes of HSE, education and science, youth and female empowerment, infrastructure and community welfare.

REVENUE DIVERSIFICATION

It is crucial that we diversify revenue streams in support of Oman Vision 2040 objectives. This involves exploring new opportunities such as investment in technology adjacencies and the potential of CCUS as a key new technology enabler to a greener future.

In this respect, we launched a three-month pilot to explore the use of CO₂ emissions from our operations to enhance oil production from existing fields. We continue to explore opportunities to commercialise our strong technical prowess, inherent capacity and competitive edges in niche areas.

OPERATING MODEL AND CULTURE

During the year, we carried out extensive work to simplify our operating model, our systems, processes and governance and organisational structures, to achieve greater safety, efficiency and ethical standards.

This rationalisation has resulted, for example, in a modernisation of our contracting and procurement organisation with the aim of making it a world class integrated supply chain function, a halving of our hydrocarbon maturation cycle time and an acceleration of the delivery of high-margin projects.

We are investing heavily in our commercial mindset and leadership capability to improve collaboration, increase the quality of decisions and empower our people to work in more productive ways. We also cascaded a dynamic new corporate culture to eliminate behaviours and processes which thwart efficiency and embrace those which facilitate it.

Digitalisation and IT efficiency, including the recruitment, retention and development of proficient staff will enable our cultural transformation, along with the deployment of

Lean. Our CI roll-out is helping us to challenge the status quo and become safer, more efficient and cost-conscious. More than 6,000 new ideas were generated and 85% of these were implemented. In total, the Lean drive delivered over US\$140 million in value and freed up the equivalent of 50 full-time staff for value-added tasks.

2024 AND BEYOND

Our strategic priorities remain ensuring the cost and carbon-competitiveness of our core hydrocarbon business and aspiring for a cost-efficient oil production plateau of beyond 700,000 bpd while attaining and sustaining Goal Zero. This must correlate with bolstering the resilience of our hydrocarbon portfolio whilst halving our emissions by 2030 (against a 2019 baseline) and achieving NZE 2050.

We aim to diversify our revenue options as we move in an orderly fashion towards a sustainable, low-carbon future while maximising value for the Sultanate. We will continue to pursue renewable opportunities based around the accelerated deployment of solar and wind.

We will strengthen partnerships with key technology players and local vendors to support our Energy Transition priorities and significantly contribute towards the national agenda of a greener Oman. We plan to boost our ICV rate to 52% by the end of the decade and have identified more than 100 opportunities for goods, services and manpower.

We are proud to retain our membership of the UN Global Compact and will stay committed to its 10 principles on human rights, the environment, labour and anti-corruption, and embedding them in our Strategy, culture and day-to-day operations. These principles underpin our core values and ethical approach to business and provide the framework in which our staff and contractors are expected to operate.

There is no doubt that we will continue to face challenges, including heightening climate change realities, digital disruption, a volatile energy market and supply constraints and costs. However, I firmly believe every challenge presents an opportunity to innovate, improve and generate value. If we can build on all the positivity from our 2023 performance, I'm confident PDO can make a lasting contribution to Oman's sustainable development as both a role model and enabler.

Amal Steam Project

OUR STAKEHOLDERS AND THEIR PRIORITY AREAS

PDO is the central engine of Oman's economy. Its activities and performance directly impact the fortunes and futures of a rich diversity of stakeholders, including local communities, the government, shareholders, customers, suppliers, regulatory bodies, municipal authorities, academia, non-governmental organisations, the media, and of course, employees, and contractors.

Our determination to be a good corporate citizen, putting sustainability at the heart of all we do, necessitates that we regularly engage with our stakeholders to understand their needs, opinions, and expectations.

The aim is to act not only as a role model for the wider society but also as a collaborator in, and enabler for, the necessary change for the sustainable development of the country and its economic diversification in line with the **Oman Vision 2040**.

PDO believes it is important to engage with our key stakeholders honestly and clearly and report on our achievements and activities, while at the same time receiving feedback from them as this helps us to respond to any concerns about our impact and continuously improve our performance.

Our reporting focuses on the economic, environmental, and social challenges that matter most to our stakeholders, and their feedback and information come from a variety of sources, including formal and informal face-to-face meetings, telephone meetings, visits, workshops, surveys, and digital communication.

Stakeholder engagement continues to play a vital part in building, protecting, and projecting PDO's reputation.

We are aware of the need to clarify and consolidate our role in a fast-changing world characterised by mounting climate change

realities, pressures to phase out fossil fuels, cut emissions, develop renewable energy alternatives, and rapid digital disruption.

As a result, we took extensive soundings from our Board and more than **300 stakeholders** to craft a new corporate purpose, which will help us retain our position as a key partner of the Omani economy, as the provider of secure, affordable and sustainable energy in a decarbonised world.

This endeavour resulted in a following purpose - **"Building a sustainable and low-carbon future to maximise value for Oman."** - which was officially unveiled to local and international media representatives at Oman Sustainability Week in March 2023.

Maximising value for Oman is at the heart of our purpose, to fulfil our role in contributing to **Oman's Vision 2040** and **net-zero emissions 2050**.

This is underpinned by a new strategy with its emphasis on building and leveraging our cost competitiveness to generate resilient cash flows, as well as achieving and sustaining Goal Zero in HSE and zero tolerance of ethics and compliance breaches.

It also mandates the need to grow production sustainably beyond **700,000 barrels** a day, diversify Block 6 revenue, execute carbon competitiveness strategies, and manage an integrated infrastructure network.



The purpose and strategy will enable us to sustain our current energy system, meet existing customer needs and deliver value for Oman at the same time as building a new one. This means that, as we navigate the change, we must increase production while cutting emissions and rolling out cleaner alternatives to fossil fuels.

The comprehensive consultation with stakeholders enables us to obtain internal and external feedback on our challenges and opportunities during the energy transition and secure full buy-in for our future.

A NEW OPERATING MODEL AND CULTURE

It has been a top priority to fully engage all stakeholders, both external and internal, on the transformation taking place in our fast-moving sector and the organisational changes which need to take place to ensure PDO is ready and able to tackle the challenges and seize the opportunities ahead.

To embed our new purpose and implement our strategy, we have developed a new operating model, which has a high-performing, empowering work culture at its heart based on attracting and retaining exceptional talent.

The focus extends to developing long-term skills and capabilities that highlight value creation and a commercial mindset in all areas. A crucial element of this evolution is the enhancement of PDO's performance management system.

Digitalisation will also be a key enabler to deliver the strategy and PDO is embarking on a three-year push to increase IT efficiency, talent, and skills. We will optimise ongoing tech investments to transform IT, the corporate infrastructure, and landscape, with a view to becoming an in-country cloud service provider.

Meanwhile, a Governance Streamline project is nearing completion and has already achieved success by optimising the Board and MDC structures.

The number of Board committees has been reduced from nine to five and the total of MDC committees has been halved from **22** to **11**, providing a sharper strategic focus, greater alignment and clear remits and responsibilities.

The Company is also intent on transforming the Contracting and Procurement organisation into a world-class integrated supply chain function, integrating it with logistics and warehousing to ensure strategic alignment, efficient business delivery and security of supply.

As an integral part of the transformation journey, dialogues have taken place across PDO and with external stakeholders. As a result, a cohort of **350** leaders has emerged to lead the cultural evolution, drawn from every level of our organisation.

Through qualitative interviews, focus groups, "culture carpet" sessions, workshops and summits, there were discussions with more than 1,000 individuals, identifying elements in the PDO culture that either enable or hinder the realisation of the strategy. Additionally, 6,000 people shared their perspectives on the culture through a survey.

The engagements highlighted those negative behaviours which thwart progress, such as micro-managing and working in silos, and the positive ones, such as learning, listening, collaborating, empowering, acting and overcoming barriers.

This extensive engagement programme was underpinned by a wide-ranging internal communications drive, which featured six

Al Hewar sessions with the Managing Director, Managing Director's Committee (MDC) engagements, more than 160 corporate announcements, a live survey and messaging tool (Tawasol), digital banners and our dedicated corporate television channel, PDOTV.

EXTERNAL STAKEHOLDER ENGAGEMENT

Our dedicated Government and Stakeholder Relations team hosted the State Council and State Audit Institution at our Mina Al Fahal headquarters, where members were updated on our operations, major projects and PDO's vital contribution to the national economy.

There were also site visits to oil and gas fields in Block 6 including by the Minister of Economy and Minister of Agriculture, Fisheries and Water Resources, the Oman Investment Authority Chairman, and the Tender Board Chairman.

A number of engagements were conducted with the Ministry of Labour and Social Development on areas of mutual interest and improvement and there was constant interaction with contractors, specifically around boosting HSE, In-Country Value and operational efficiency.

In addition, as part of the duty to safeguard the Company's reputation and risk management approach, we released the first non-technical risk escalation procedure to ensure that incidents affecting external stakeholders are eliminated or mitigated to as low as reasonably practicable.

Our Community Development team hosted more than 100 walis and related dignitaries to raise awareness on PDO's role in supporting communities as well as to give a high-level



overview on our operations. These events covered all eight wilayats in the concession area along with participation from Director-Generals.

Ensuring PDO's operations are carried out sensitively remains a key part of our responsibilities, and the Community Development team worked tirelessly to facilitate an Exploration Directorate Nibras 3D seismic data acquisition operation, engaging three villages and more than 100 izbas.

There was extensive community outreach, including the delivery of HSE awareness campaigns to more than 400 people, visits to children hospitalised over the Eid Al Fitr holidays and clean-up campaigns.

We conducted two PDO Majlis sessions on an important topic aligned with the Oman Vision 2040: "Accelerating Climate Solutions: The Pivotal Role of the Industry Sector for a Sustainable Future." These discussed the role of the industrial and energy sectors in creating a sustainable future in the North Al Batinah Governorate and how renewables and energy efficiency could be key enablers.

We maintained our outreach through our Khebra project to share our expertise with staff from the government and private sectors, supervising 46 on-the-job trainees, making a total of 772 since the scheme was launched in 2018.

There was also further engagement through our Edhaat programme, which ensures our staff are acquainted with government and main stakeholder initiatives and processes. In 2023, this focused on goods prohibited by the Consumer Protection Authority and Oman's digital economy.

There was also further outreach to government ministries on embedding lean ways of working in their systems and processes to add more value, enhance efficiency, and streamline procedures.

Since 2019, we have worked closely with the Oman 2040 Vision Unit to help it simplify governmental processes. We have supported 25 government entities, trained more than 600 government staff, and improved more than 280 government processes.

COMMUNICATIONS AND EVENTS

Our External Affairs and Value Directorate managed and supported 119 events throughout the year, including Oman Sustainability Week, the Gas Producers' Association GCC Chapter, COMEX, ADIPEC, and the 10th Annual PDO Day. It also conducted nine Culture and Transformation labs, engaging thousands of staff in discussions on the evolution of PDO's corporate DNA and the changes to its operating model as it becomes a full-fledged energy business.

To ensure a timely, accurate, and newsworthy flow of information, 2023 saw the execution of more than 60 media engagements, interviews, and activities with a potential reach of 1.1 billion.

Indeed, social media remains a key focus for PDO to reach a wider audience and increase digital brand visibility. There were more than 1,000 posts on a wide variety of activities, topics, and campaigns across the Company's six social media platforms, which directly engaged over 223,000 people with a potential reach of 157.9 million. The Company's LinkedIn page is the most followed Omani corporate account in the Sultanate.


475,000


120,200


79,400


20,00


9,380



SAFETY PERFORMANCE AND GENERAL WELFARE

2023 Highlights

- No work-related fatalities and the best safety performance since 2011.
- No Motor Vehicle Incident related fatalities or Lost Time Injuries.
- HSE contractor engagement and training strengthened.

The welfare of people and the natural environment are enshrined in PDO's Business Principles. We endeavour to provide all of our employees with safe and healthy working conditions. We will never be satisfied with the way we carry out our ambitious plans unless we do so in a way that respects people's health and safety, that benefits our neighbouring communities and that maintains the environmental richness of the country.

SAFETY

Safety is a core value for PDO, with an unrelenting focus on Goal Zero – no harm to people, environment, communities or assets.

In 2022, we embarked on Safety Refresh, a multi-year plan to tackle safety concern areas in a more structured and systematic approach.

In 2023, we recorded our best personal safety performance since 2011 and our best ever process safety performance.

There were no work-related fatalities and we halved our Lost Time Injuries (LTIs) to 22 (compared with 2022), equating to a Lost Time Injury Frequency of 0.12 (0.22). Total Recordable Case Frequency per million manhours worked was also down to 0.57 (0.79). There was also a 33% fall in repeated incidents and a 40% reduction in High Potential Incidents.

In our push to Goal Zero, we accelerated our safety journey via a three-phase urgent response to personal safety issues. The first phase involved a "Boots-on-the-Ground" deployment of resources to the Interior to support frontline teams in their site supervision and interventions. The second defines staff capability and capacity gaps in managing operations safely. The third investigates our end-to-end resources strategy to ensure PDO reaches and sustains its desired safety status.

We are now boosting critical resources in high-risk areas to ensure this progress is sustained.

The impact has been significant and we saw sharp increases in supervision and quality life-saving interventions. We also identified long-standing challenges that are now being addressed through our Permit To Work System,

competency, worksite hazard management, worker welfare and road conditions.

Many other initiatives contributed to the improved performance, including an HSE Ambassadors campaign which saw Omani football legend Ali Al Habsi and singer Haitham Rafi reach out to more than **2,000** PDO and contractor employees.

We also conducted **92** HSE performance audits of our contractors in a bid to elevate the safety standards across our contractor community.

Our Contractor CEO Forum saw more joint leadership site visits and opportunities for cross learning, further strengthening our partnership with our contractors and managing HSE as a collective challenge.



PDO HSE Ambassadors Campaign with Ali Al Habsi and Haitham Rafi

Supporting this, **106 staff** and **151 contractor** personnel were trained and certified as HSE assessors, enabling them to evaluate the HSE competencies of other employees.

We believe that the deployment of new technology, such as automation and proactive digital and CCTV safety monitoring, was also pivotal to the enhanced performance.

We also boosted existing safety programmes, with the launch of an upgraded online platform and mobile application for our behaviour-based Ihtimam scheme. The platform introduces enhanced capabilities integrated with advanced digital solutions.

ROAD SAFETY

There were no Motor Vehicle Incident (MVI) related fatalities or Lost Time Injuries and our serious MVI rate per million kilometres fell to **0.034** in 2023 from 0.05 in 2022.

By the end of December 2023, 21 months had passed without any fatalities, with nearly **500 million kilometres** driven.

Such results were underpinned by the steady progress that has been made in relation to our Darb Al Salama (DAS) plan, a three-year initiative, involving our HSE and Operations teams, to bring about safe drivers, vehicles and roads. We have seen a significant uptick in compliance with a **70%** fall in Life Saving Rule driving incidents, underscoring the efficiency of our ongoing.

communication, awareness and collaboration campaigns. These included DAS Week, driver forums at all Interior sites, a DAS Oasis roadside campaign and one during the Khareef season in Salalah in partnership with the Royal Oman Police.

Through a combination of road assessment surveys and a meticulous analysis of MVI hotspots, we established a priority list to address high-risk areas. By targeting these critical zones, we are proactively mitigating potential hazards and reinforcing our commitment to a safer road infrastructure.

The extension of the DAS initiative to encompass Ras Al Hamra and staff commuting, has been a pivotal step forward, especially as we sadly experienced two non-work-related private commuting fatalities in 2023.

To sustain these gains, the requirements and recommendations outlined in the plan have been integrated into the latest off-plot development and logistics contracts. This will ensure that non-compliant fleets are phased out in favour of vehicles meeting stringent safety standards, thus enhancing overall road safety.

MEDICAL CARE

PDO promotes medical, occupational and public health to achieve workforce wellness alongside its provision of medical care facilities.

The health and welfare of our workers are

Safety Performance 2019 – 2023					
Category	2019	2020	2021	2022	2023
Fatalities	6	5	10	12	2
PDO/contractor fatality from work-related incident	2	4	5	5	0
Third party fatality from work-related incident	1	0	1	3	0
Reportable, non-recordable, work-related incident	0	0	0	0	0
PDO/contractor non-work-related private commuting	3	1	4	4	2
Serious Injury, Illness and Fatality (SIF)	2	4	5	9	0
LTI injuries	21	34	38	43	22
Worksite Lost Time Injuries	19	29	32	39	22
Road traffic Lost Time Injuries	2	5	6	4	0
No. of people injured (excluding FAC)	120	113	132	148	108
RAM 4+ incidents (updated monthly)	118	84	79	82	56
Motor Vehicle Incidents (MVIs)	86	61	48	60	64
Severe MVI (LTIs, MTC, RWC and rollovers)	27	13	12	15	11
Minor MVI (first aid, damage)	59	49	36	45	53

Rollover MVI	27	7	6	11	10
Incident rates					
LTIF (per million manhours)	0.10	0.17	0.21	0.22	0.12
TRCF (total injuries per million manhours)	0.56	0.56	0.69	0.79	0.57
MVIR (motor vehicle incident rate per million km)	0.26	0.19	0.16	0.19	0.20
Severe MVIR (LTI, rollover, MTC, RWC)	0.08	0.04	0.04	0.05	0.03
Minor MVIR (first aid, damage only)	0.18	0.15	0.12	0.14	0.17
SIF/F (per hundred million manhours)	0.92	2.02	2.70	4.55	0.00
Exposure					
Million manhours worked	216	203.7	185.5	197.8	189.7
Million kms driven	325	326.3	301.5	317.2	322.0

regarded as a top priority and are enshrined within our General Business Principles. We ensure medical coverage for PDO staff and contractor facilities serving more than **60,000** workers in more than **150** camps.

PDO’s Medical Centre in Mina Al Fahal (MAF), and its **10** Interior clinics, deliver high quality, integrated healthcare and a real value proposition for employees, their eligible families and our pensioners.

The centre prides itself on being a leader in providing a comprehensive range of services to

address the needs of every employee’s health issues. It also ensures support for secondary and tertiary care, mostly through external providers or in-house multi-specialty services provided by Omani visiting consultants in the following specialties: cardiology, obstetrics, gynecology, ear, nose and throat, ophthalmology and physiotherapy.

The multi-disciplinary team at the MAF Centre and Interior clinics includes 17 GPs, 55 nurses, five paramedics, four qualified lab technicians, one physiotherapist, three pharmacists and an administration team.

We have a well-established Occupational Health department managed by an occupational health adviser, five industrial hygienists and two public health officers, focusing on promoting the highest degree of physical, mental and social wellbeing for workers to prevent any deleterious health impacts associated with the workplace.

The Medical team continues to offer various programmes, including psychological counselling, workplace mental health support and resilience sessions for employees. Other services for staff include general lifestyle health sessions, chronic medical illnesses, health risk assessments, ergonomic, radiation, noise and respiratory protection and first aid.

We are also focusing on mental well-being and launched a new scheme aimed at raising employee awareness of the subject.

The Medical department works regularly in collaboration with the Ministry of Health (MoH)

on its blood donation drive, which attracted **1,101** staff donors in 2023.

In addition to the MoH, our healthcare experts extended their support to several other government and non-government organisations, including the Ministry of Labour, the Environment Authority and Oman Energy Association (OPAL). The support includes establishing and reviewing fitness-to-work standards within our contractor community and the wider sector, occupational health regulations and furnishing training and expert advice.

The medical team works closely with the Infrastructure Directorate to progress the centralisation of medical facilities and provide equal care for all remote workers, ensuring cost-effective, evidence-based treatment.





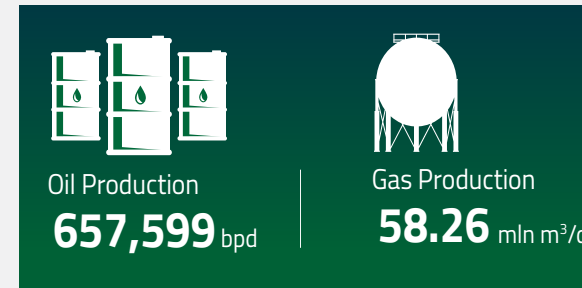
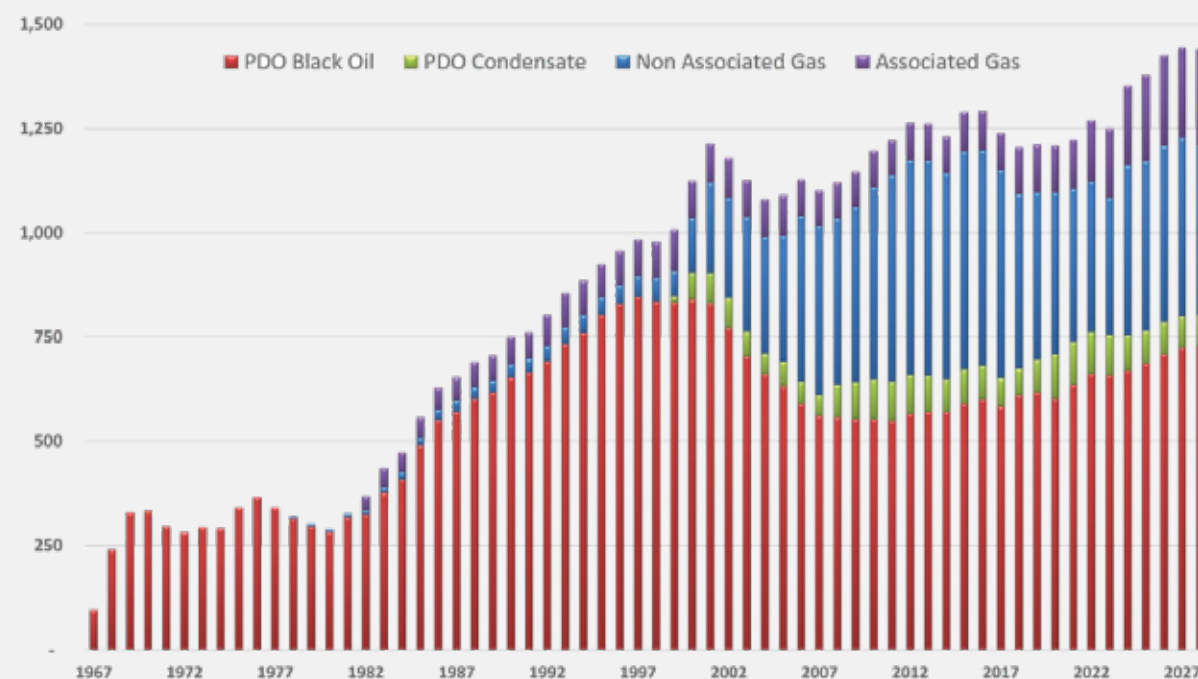
Blood Donation Drive

HYDROCARBON PRODUCTION AND RESERVOIR MANAGEMENT

2023 Highlights

- A combined oil, gas and condensate production of more than **1.1 million boepd**.
- Oil production was within **99.8%** of the target despite operational challenges.
- Exceeded condensate production target.
- Generated more than **US\$22 billion** in revenues from increased liquids production.
- Delivered a record number of new wells and completion in addition to well intervention activities.

Hydrocarbon production and reservoir management aim to optimise production from existing oil and gas fields in such a way that short-term output is maximised without jeopardising production sustainability or health, safety and the environment (HSE).



PDO average oil production for **2023** was **657,599** barrels per day (bpd), which was within **99.8%** of target. Condensate output was **97,426 bpd**, while gas production was **58.26 million m³/d**, consistent with lower customer demand. As the country's largest hydrocarbon producer, we continued our role as the country's swing producer for gas, requiring us to operate in a highly dynamic mode.

The combined total average barrel of oil equivalent production per day (boepd), oil, condensate and gas, was **1.1 million boepd**. We generated more than **US\$22 billion** in revenues from increased liquids production and, combined with higher oil prices, revenues were **65%** higher than anticipated.

The future will see continued production growth in line with our production ambition of more than 700,000 bpd.

WELL ENGINEERING

The production push was underpinned by the drilling of **884** new oil and gas wells – a **24%** rise on 2022 and a record for PDO. Our Well Engineering Directorate also executed more than **24,000** hoist and completion and well intervention activities, outstripping the record set in 2022 of 22,000.

Our competitive edge is evident in our performance benchmarks, with a significant proportion of our wells ranking in the top quartile and being considered 'best in class'.

These results are a direct outcome of our Continuous Improvement (CI) initiatives and our focus on narrowing the gap-to-potential, a key performance indicator that measures the gap between the current situation and what could be achieved if the full potential was realised.

Our success is also mirrored in the global recognition of our Nimr Insourcing team, which has consistently achieved outstanding positions in the Shell Global Rig ranking.

Our Refreshed Wells 2030 Strategy, which is aligned with PDO's purpose of "Building a sustainable and low-carbon future to maximise value for Oman." The strategy has been designed and crafted by our staff with input from our stakeholders to advance "Personnel Safety", "Wells Process Safety", "People and Talent Management", "Cost and Carbon Competitiveness" and "Sustainable Production Growth."

We are committed to further leveraging In-Country Value and the advantages of digitalisation. By automating our processes, we aim to liberate our engineers to focus on value-adding tasks. Additionally, we plan to optimise our operations utilising our newly inaugurated Wells Operations Centre. Here, we will employ advanced video analytics and Artificial Intelligence to enhance safety and propel our operational excellence to new heights.

This Refreshed Wells 2030 Strategy marks a decisive step in realigning our objectives with the current realities, positioning us for enduring success and sustainability in a dynamic environment.

HSE

Although we delivered more wells than ever before in one year, we managed to advance further towards Goal Zero – no harm to our

people, assets or environment. We believe that 'Musta'ed', our job-planning and transition-to-work tool, the use of closed-circuit television for proactive safety monitoring and our 'Boots-on-the-Ground' initiative (where our leaders spend considerable time on site engaging for excellence), have enabled us to make significant progress in this regard.

Looking forward, our focus remains resolute on enhancing safety leadership, risk management, and contractor HSE management, as we continue our determined journey towards operational excellence and safety as a core value.

During 2023 we conducted HSE audits on all our contractors and the vast majority have made noticeable progress in addressing their previous shortfalls. In future, we want our contractors to reach and sustain "green-banded" status. This signifies their capability to effectively and consistently self-manage HSE aspects within their operations, demonstrating a high level of proficiency and autonomy in this critical area.

To cut emissions, our initial focus was on replacing diesel generators with electric ones in camps, water wells and master pits, beginning with the implementation of variable frequency drive integrated power in hoists. These measures enhance safety and efficiency through central digital control. By the end of the year, we had eight electrified hoists.

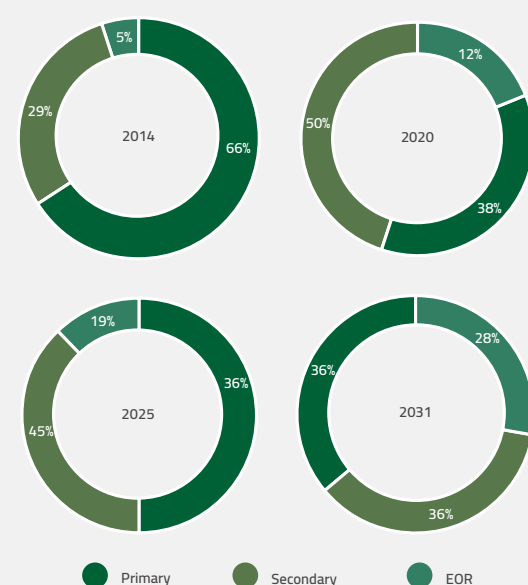
Our efforts to minimise flaring during well operations, such as well testing and fracking, continued throughout 2023, employing techniques such as inline testing and flare-less operations. In addition, we developed new well designs for carbon capture, utilisation, and storage (CCUS) in the Lekhwair and Duhlaima fields.

FIRST LOCALLY MANUFACTURED RIG

A landmark achievement on our ICV journey was the commissioning of the first rig manufactured entirely in the Sultanate of Oman. This was the first of four rigs that KCA Deutag committed to building in the Sultanate after securing a ten-year contract. Around 40% of the investment for the rigs was allocated to Omani small and medium-sized enterprises (SMEs), fostering domestic growth and development.

ENHANCED OIL RECOVERY (EOR)

PDO's journey in growing the future EOR contribution to oil production continued in 2023. It is anticipated that by 2031 around 28% of our production will come from such projects. We are currently operating a range of commercial-scale EOR schemes, including chemical EOR, miscible gas injection (MGI) and thermal applications. Further optimisation of the PDO portfolio and entry of new opportunities into the hydrocarbon maturation funnel has increased the production contribution from primary and secondary processes.



EOR contribution to PDO oil production by 2030

FULL FIELD DEVELOPMENTS UNDER EOR PROCESSES

The Marmul Polymer Phase 1 and Phase 2 projects were commissioned in 2010 and 2015 respectively with a total oil contribution of 32 million barrels of oil to date. The combined production gain from both phases hit the highest production rate of 9,700 bpd in April 2022. Work continues on the third phase to further improve execution readiness. The project, which started in Q1 2023 will develop an additional 61 million barrels of incremental oil.

Greater Birba asset is at the frontier of EOR MGI developments with more than 65% of production associated with the MGI mechanism. Future MGI projects include the Rabab Harweel integrated project (RHIP Tranche 2) and the Birba Budour integrated project (BBIP), which are being matured to come on-stream around 2030.

The Harweel 2AB project (Zalzala field) started MGI in April 2014 and is currently injecting at about 3 million cubic metres per day (m³/d). So far, 8.6 billion m³ of gas have been injected. A clear response to the MGI process has been established in terms of incremental oil rates (to date around 45 million barrels), and target pressures above the minimum miscibility pressure across the field. The expected total recovery with MGI is about 50%.



MGI Injection in the Sakhiya (SAK) field, as part of a mini-flood project, was initiated in mid-2015 with high injectivity of up to 2.5 million m³/d from three injectors. So far, some 4.9 billion m³ of gas have been injected and a positive reservoir pressure response continues to be observed.

The RHIP Tranche 1 – the largest and most expensive project in our history, commenced in June 2019. To date, 53 wells (21 injectors, 32 producers) of the planned 55 (21 injectors, 34 producers) have been drilled. Currently, gas recycling into the Rabab gas field has reached **5.5 million** m³/d while MGI into the SAK 2 fields (A2C and A3C) and the Dafaq field was close to its 2023 target of approximately **8.6 million** m³/d. Additional total MGI incremental oil to date is around 29 million barrels from SAK A2C and 8.7 million barrels from SAK A3C. The expected total recovery with MGI in A2C reservoir is also about **50%** and around **35%** for A3C.

The Al Noor Phase 3A MGI project began in 2015 but at a very low uptime/availability. However, follow-up improvements have been intensively pursued, with solid progress since 2019. To date, **2.4 billion m³** of gas have been injected and a positive reservoir pressure response continues to be observed, with MGI incremental oil to date standing at around **12.1 million** barrels. The expected total recovery with MGI is approximately 17%.

The Amal Steam project continues to demonstrate a good performance with a year-average oil production for 2023 of 2,626 m³/d (equivalent to around 16,500 bpd). There was a continued strong steam injection performance,

with a 2023 average injection rate of around 15,191 tonnes per day. Currently, there are 385 active thermally compliant wells (producers, injectors and observation wells) in both Amal West and Amal East.

The Amal West Phase 2A project is currently in the execute phase. Once on stream, this project is expected to reach peak production levels of 2,200 m³/day (13,840 bpd).

The steam for the Amal Steam project is being generated by the Miraah Solar Plant and heat recovery steam generators in Amal West and once-through steam generators in Amal East.

At the Qarn Alam Steam project, thermal EOR in 2023 is responsible for another 3,703 m³/d (equivalent to 23,291 bpd) of oil production from naturally fractured carbonate rocks. The oil is produced by a process called Thermally Assisted Gas Oil Gravity Drainage (TAGOGD), a technology pioneered by PDO. TAGOGD is a form of thermal EOR in which steam is injected into the natural fractures in reservoirs. This heats up the oil in matrix rock in between fractures, lowering its viscosity and allowing it to drain from the matrix into the fractures where it is produced.

A daily average of 11,934 tonnes of steam, generated using heat recovery steam generators, is injected per day at Qarn Alam to produce this oil.

In 2023, a final investment decision was taken on the Habur TAGOGD project. This aims to recover 5.4 million m³ of highly viscous oil from the Habur field, located approximately eight kilometres south of the Qarn Alam Steam project.

For thermal EOR in general, a PDO-wide project is ongoing to lower greenhouse gas emissions related to steam generation. Technologies being investigated include direct solar radiation (such as at Miraah).

FIELD TRIALS AND EOR RESEARCH

We are continuing to identify and develop novel technologies that have the potential to unlock difficult hydrocarbon resources, further reduce the technical costs of these developments and accelerate project delivery. This is being done through a series of dedicated laboratory and desktop studies and field-testing programmes in collaboration with local and international institutions, as well as screening third-party, off-the-shelf solutions.

As an output from these alliances, technologies such as alkaline surfactant polymer (ASP), foam

injection, surfactant foam, cyclic solvent injection and polymer/water simultaneous injection have been tested in the laboratory, and by desktop, and have shown positive results. Furthermore, off-the-shelf and cheaper chemical formulations have shown promising results in the lab. Moving forward, we are exploring the most efficient and cost-effective methodology to trial these technologies in the field.

Successful ASP field trials (Phase-1 project in 2019-2021) with two different ASP formulations and in two different oil reservoirs indicated a potential of 20-30% incremental oil recovery due to ASP injection after the water flooding. ASP Phase1 project also proved that the ASP solution can be injected in the quaternary mode (post-polymer) with a reasonable 7-10% incremental oil recovery under field conditions.



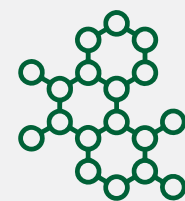
Commercial ASP application in Marmul was selected to identify the optimal concept to maximise ultimate oil recovery from polymer and ASP flooding in an integrated approach. This approach helps us to generate the maximum cashflow while reducing our overall carbon footprint as opposed to waterflooding. We expect ASP at Marmul Al Khalata to unlock approximately 50 million barrels of reserves with Phase 2 coming on stream in 2026.

Other research initiatives have targeted cost optimisation in our current and future EOR developments. Work is ongoing to expand the surfactant polymer application for more viscous oil. If successful, this will open significant potential volumes across our fields, estimated at around **185 million** barrels based on the latest EOR portfolio review. We are striving to reduce technical and development costs and greenhouse gas emissions during the next chemical-flooding phase.

In the carbonate portfolio, the EOR team conducted an international workshop where several oil operators and chemical vendors were invited. The applicability of several chemical EOR (cEOR) options (including polymer, surfactant/foam, nanosphere and conformance control) was evaluated for PDO carbonate reservoirs. In addition, any learnings from new advances or insights in applications of cEOR in harsh conditions (such as high temperature, high salinity or tight carbonate structures) by different companies worldwide were captured.

Screening of different technologies was then carried out to define their operating envelopes based on different reservoir conditions and

properties. The screening analysis showed that the opportunity of applying cEOR lies more within the Shuaiba formation than the Natih formation, where Gas Oil Gravity Drainage (GOGD) is being used as a recovery mechanism. Based on best-industrial practice and research/lab data availability and potential scalability, the cEOR technologies in carbonates could be split into three categories:



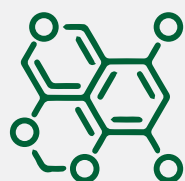
Promising

surfactant injection and nanosphere application



Emerging

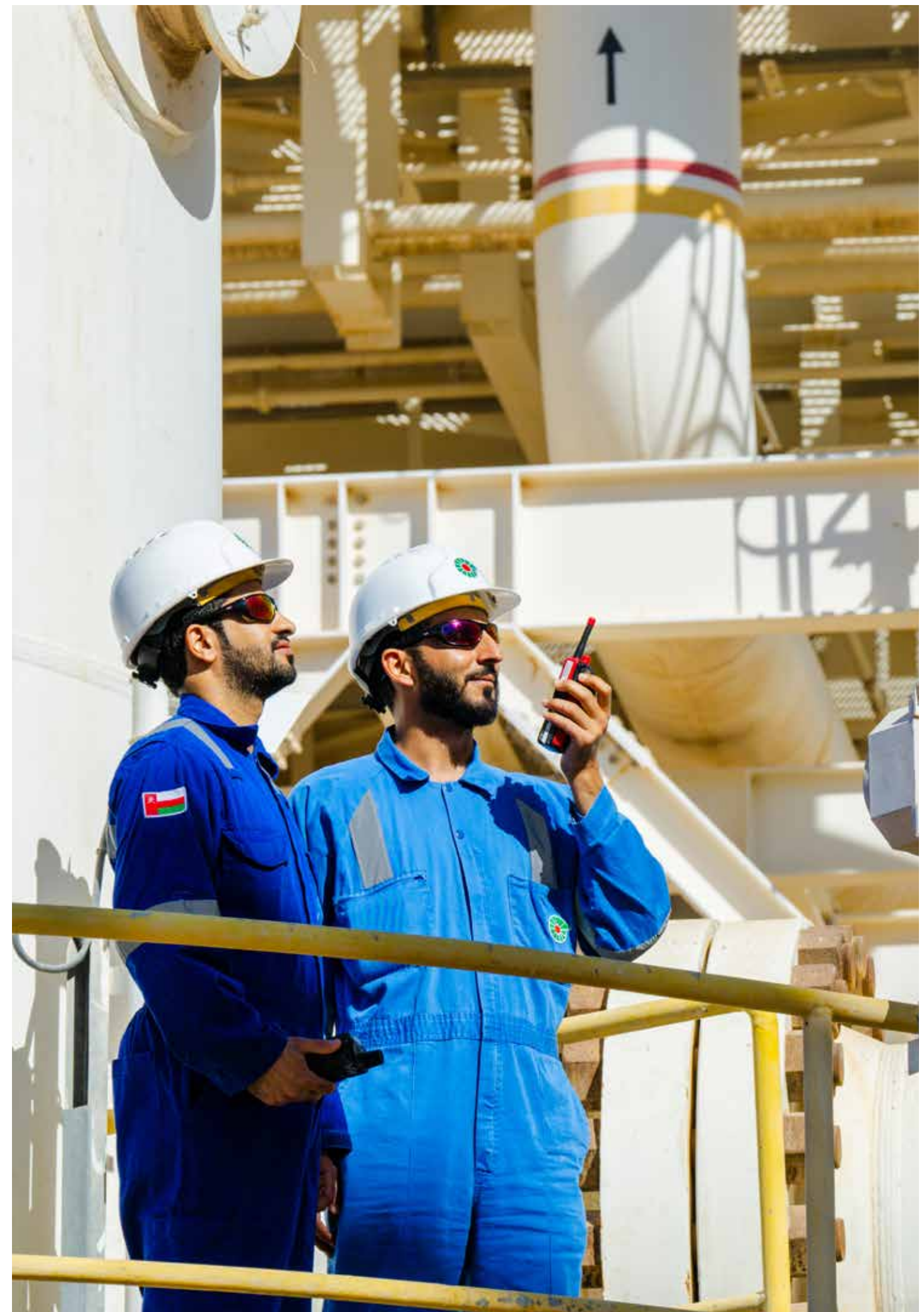
foam/low-tension gas and gel injection for conformance control



Challenging

polymer

Currently, the most attractive technologies are nanospheres and surfactants. The first phase of surfactant injection was trialled in 2023 at Lekhwair in the form of foam/low-tension gas (LTG) technology. Foam was generated in-situ and conformance improved around the wellbore. The second phase starts in 2024 with the aim of confirming that the identified chemical formulation can efficiently displace any remaining oil after waterflooding, improving conformance



and reducing residual oil saturation. A phased agile implementation strategy will be followed (upon the success of Phase 2 of the trial) to de-risk the LTG technology and capture any lessons and improvements for future phases. The expected unlocked volume from this concept is approximately 63 million barrels.

The EOR team leveraged on best-industrial practice to expediate the field trial in PDO of nanosphere as a deep conformance control technology.

A nanosphere trial is expected to come on stream at Yibal in Q3 2024 and the expected unlocked volume from this technology is approximately 25 million barrels. The formulation has been proven to be efficient at lab scale with optimised slug sizes and concentrations in stable conditions. To expand the application of the deep conformance control chemical, the EOR team are assessing implementing nanosphere in the Qarn Alam area through a horizontal development concept and thin oil column, with an anticipated pilot in 2025.

PDO is also investigating the applicability of the operational lease (OL) concept to EOR projects. This is being particularly pursued for new chemical polymer projects in the south, such as Nimr A and E and Haima West, with an expected

total recoverable volume of 80 million barrels. This is in line with our Lean and Replication processes. It is envisaged that OL will allow for faster field implementation through a phased development approach and reduce risk and cash exposure.

In the last five to **10 years**, various EOR technologies have been further developed and several EOR projects and trials have been successfully conducted. This has generated valuable information from a field testing and performance perspective, including operational learnings. It has also allowed for a much wider window of application and contributed to our aspirational target of exceeding our **700,000 bpd** production plateau aspiration.

We believe cEOR will help us reduce emissions by reversing water cut. Such a fall would result in a carbon dioxide intensity reduction of around **6%**. All chemical EOR projects anticipate a greenhouse gas intensity of less than 0.1 tCO₂/tHC.



Rabab Harweel Integrated Project (RHIP)

OPERATIONS EXCELLENCE

2023 Highlights

- The best process safety performance in the history of **PDO** with a **67% fall in Tier 1 and Tier 2 incidents**.
- Introduction of monthly reports to improve contractor performance.
- Operational safety audits completed in North, South and Gas assets.
- Robotic process automation of safety-critical element reporting.

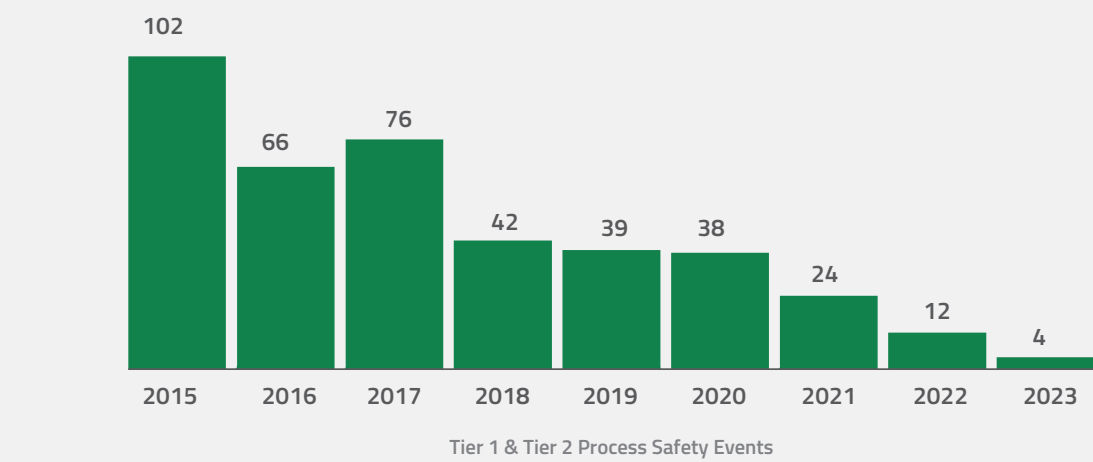
The Operations Excellence initiative in PDO has been instrumental in ensuring the superior management and maintenance of all surface facilities, leading to the realisation of targeted levels of reliability and availability in our processing plants. The primary focus is facilitating the secure and continuous flow of oil and gas through pipelines to the terminal. The commitment to maintaining top-class standards in the running, and maintaining surface facilities, reflects our dedication to upholding the highest operational efficiency and safety protocols.

ASSET INTEGRITY AND PROCESS SAFETY MANAGEMENT (AI-PSM)

We intensified our commitment to safety prevention and risk management, which we regard as being at the core of the sustainability of the oil and gas industry. This multi-disciplinary endeavour relies on dedicated teamwork and a high degree of commitment from all staff at all levels. Our AI-PSM strategic objective remains:

"Our Assets Are Safe and We Know It." A total of **four** Tier-1 and Tier-2 events with no harm to people were recorded compared to 12 in 2022 – a **67% fall**. This continued a year-on-year improvement in process safety results extending back to 2017.

We are committed to continuously improving AI-PSM by training staff and contractors



by using the latest tools, technologies and expertise. The AI-PSM steering committee, led by PDO functional directors, meet on a monthly basis to support and review the progress being made. PDO implements internal safety policies in line with international standards. It maintains an ISO 55001:2014 certification for its asset management systems, including its AI-PSM processes which relate to the management of assets to support the production, treatment, storage and transport of oil and gas in our concession area.

AI-PSM STEP CHANGE PROGRAMME

Our AI-PSM Step Change Programme involves 10 non-negotiable Process Safety Fundamentals (PSFs) to increase compliance across all functions.

It outlines three primary goals for our Engineering, Operations, Petroleum and Well functions:

Goal 1 focuses on enhancing compliance through our PSFs.

Goal 2 aims to improve learning from incidents (LFIs).

Goal 3 centres on leadership behaviours .

Quarterly evaluations are conducted by the functional directors, with further semi-annual assessments carried out by the Technical Director in collaboration with managers to gauge progress in these key areas. Substantial strides have been made in all of them.

Additionally, our AI-PSM Steering Committee meets monthly to support and review the

progress that has been made. PDO implements internal safety policies in line with international standards. It maintains an ISO 55001:2014 certification for its asset management systems, including PDO's AI-PSM processes which relate to the management of assets to support the production, treatment, storage and transport of oil and gas in our concession area.

An annual structured gathering called "The Deep Dive" allows senior leadership to take a broader view and consider the Company's AI-PSM path toward Goal Zero – no harm to our people, assets or the environment. In 2023, the session focused on Tier 3 and Tier 4 leading indicators. It was agreed to shift the AI-PSM focus from a purely technical one to also embrace the behavioural culture of "9,200 PDO staff and around 50,000 contractors," and encourage effective LFIs to raise the AI-PSM performance to the next level.

LETTER OF ASSURANCE (LOA)

The goal of the Letter of Assurance (LoA) is to ensure that process safety hazards are recognised, recorded and controlled to a level as low as reasonably practicable (ALARP). One of the most significant AI-PSM achievements in 2023 was having an integrated (Petroleum, Wells, Engineering, and Operations) assets LoA review with the Technical Director, which reflects the commitment to an effective cross-functional collaboration.

AIPSM L2 ASSURANCE

The Operations Directorate conducted an AIPS L2 assurance process at the Greater Birba Terminal and the Engineering Directorate performed one at Qarn Alam Oil in June 2023. The assurance results indicated systemic progress, however, specific localised risks remain, particularly around compliance with standards and procedures and Change Management. Recommendations were made to focus on closing existing systemic actions and emerging specific risks, while supporting site organisations with a broad coaching model. In addition, PDO is working towards formulating an integrated approach in delivering the first integrated Level 2 AI-PSM audit in September 2024.

AI-PSM Key Performance Indicators (KPIs) for Engineering and Maintenance Contractors

Monthly performance updates were submitted by all contractors in 2023 in line with our HSE/AI-PSM monitoring plan. An SP-2338 (Specification for Discipline Authorities – DAs - in Contracts) has been issued, and structured audits have been conducted to ensure the effective deployment of the specification.

CUMULATIVE RISK MANAGEMENT

The AI portal for cumulative risk visualisation remains an important tool in managing AI-PSM risks and supporting the LoA process. Further functionality to support visibility and improvement of safety-critical element (SCE) performance was added, along with the increasing use and visibility of Tier 3 and Tier 4 measurements. Data from the AI portal was also used to support the first use case of the PDO "Digital Twin" focusing on visualising cumulative



risks to support frontline decision making and risk awareness.

SCE MANAGEMENT IMPROVEMENTS

SCE Management Improvements continued to be made with the automation of SCE reporting using robotic process automation for consistent and error-free reporting. In addition, the visibility of overall SCE performance was fully automated in the AI portal to allow each cluster to understand their current SCE status and areas of risk.

ENSURING SAFE PRODUCTION

An Ensure Safe Production Asset Management System was sustained across the board with audits completed in the North, South and Gas assets. Benefits include the prioritisation of operator work through daily operator instructions and an improved alarm management regime.

The use of the new procedure variance and temporary portable equipment (TPE) tools has been embedded bringing an improved digitalised risk assessment.

A new operational Statement of Fitness tool has also been enhanced to meet the latest Asset Management System requirements and improve risk visualisation.

In addition, a new Facility Upgrade Management System was enhanced to increase operability and improve the ability to manage change throughout the Facility Change Proposal lifecycle.

An automated Well Location Custody Transfer tool has now been introduced along with a plan to ensure compliance at all new wells.

EXCEPTION BASED SURVEILLANCE (EBS)

EBS deployment was completed and alarm acknowledgment improved from 65% in 2022 to 85-90% in 2023 with the gas asset exceeding 90%. An EBS bi-weekly gathering across assets is to be conducted to assure sustainability.

The new EBS scope for 2024 encompasses tackling well hydraulic panel issues and high back pressure due to fluid assurance issues.

CHANGE AND CONTINUOUS IMPROVEMENT (LEAN) BUSINESS EFFICIENCY

Our Continuous Improvement (CI) drive delivered over US\$140 million in value, the equivalent of 50 full-time staff freed for value-added tasks. More than **6,000 new ideas** were generated from the business and roadshows and **85%** of these were implemented. More than **9,000 staff** are engaged in cascading a dynamic new corporate culture, with the aim of eliminating habits, behaviours and processes which thwart productive working and embracing those which spur it forward. To underpin the spirit of change, we held our first Leadership Culture Change Summit.

We hosted **19 government CI secondees** and **25 government entities** received our support, with over 600 people trained and **5,000 coaching hours** invested. PDO has been responsible for helping to improve more than **280** government processes, culminating in the Ministry of Labour’s Change Management Excellence Award. We also extended CI support to five critical contractors.



EXPLORATION AND HYDROCARBON MATURATION

2023 Highlights

- Booked **120 million barrels** of Contingent Resource (CR) oil volumes.
- Booked **1.3 trillion cubic feet (Tcf)** contingent resource (CR) gas volumes from the Amin and Birba plays.
- Maintained a low unit finding cost (UFC) for oil and gas of **~US\$1.0** per barrel of oil equivalent (boe).
- Completed **3D** seismic acquisition over the Nibras area covering around **5,130** square kilometres (**km²**).
- Goal Zero: completed **8 years** without a Lost Time Injury (LTI).

The core mission of the Exploration Directorate is to safely and effectively explore and mature commercially viable and technically feasible hydrocarbon volumes within Block 6. This not only generates immediate value, but also ensures the sustained growth and success of PDO and its stakeholders.

Entrusted to the Exploration Directorate, is the discovery and appraisal of new reservoirs, while the Hydrocarbon Maturation Centre of PDO spearheads field simulations and conceptual planning. This framework allows our reservoir engineers and production geologists to focus on forward-looking strategies without being side-tracked by the exigencies of short-term production.

By focusing on the subsurface elements of field development (underground), we aim to identify and harness hydrocarbon-bearing reservoirs, thoroughly assess their dimensions, composition, and dynamics, and devise

sophisticated models to predict the flow of hydrocarbons into wells. This comprehensive approach enables us to make informed decisions on the optimal extraction methods, considering the entirety of available data and inherent uncertainties.

Our continued exploration efforts, bolstered by cutting-edge seismic imaging technology and the expertise of our passionate geoscientists and engineers, guarantee the replenishment of our extracted resources, thereby reinforcing our strategic position in the industry.

In 2023, the directorate celebrated a notably successful year, marking significant oil and gas discoveries across a range of geological plays. We booked **120 million barrels** of oil and **1.3 trillion** cubic feet (tcf) of Non-Associated Gas (NAG) as Contingent Resources (CR), with the overall (oil and gas) Unit Finding Cost (UFC) impressively close to **US\$1 per barrel** of oil equivalent (boe).

Simultaneously, through the innovative use of newly acquired Wide Azimuth (WAZ) 3D seismic data, extensive assessments of oil and gas assets were conducted. Our "Innovation Pod," a cutting-edge, agile-based operational model, played a pivotal role in advancing the drilling of wells as part of an expanded drilling programme. This initiative is a cornerstone of our five-year exploration strategy aimed at thoroughly cataloguing the oil and gas portfolios in Block 6.

The directorate also achieved the safe drilling of 38 exploration wells for oil and gas, including ultra-deep ones into the Haima plays in the North. Maintaining a strong emphasis on early hook-up and production from more exploration wells was a priority throughout the year. The "Produce While We Explore" initiative, launched in 2022, is set to continue, underscoring our commitment to maximising the value from exploration wells, thereby enhancing our strategic objectives and operational efficiency.

OIL MATURATION

Our five-year exploration growth roadmap is focused on extending the creaming of the proven plays of Shuaiba and Gharif through expanding the evaluation of novel oil trapping concepts across Block 6, as well as growing the delivery potential for the emerging Mesozoic plays such as Mafraq, Jilh and Sudair. The new concepts and plays are part of the activity plan supporting PDO's production target.

In 2023, focus continued with oil portfolio rejuvenation and diversification using the latest 3D WAZ seismic data. In addition, dedicated resources were set to further process this information and facilitate advanced quantitative interpretation (QI). This will provide another

technique to identify and mature novel opportunities and improve the exploration success rate.

Oil bookings were at the core and emerging plays of Shuaiba, Hanifa, Sudair, Khuff, Gharif, Buah and Khufai reservoirs in the North and predominantly in the Mafraq, Gharif and Karim reservoirs in the South. The overall UFC for oil was around **US\$1.7 per barrel**.

GAS MATURATION

Gas maturation followed a similar five-year roadmap to oil. The work continued a strategy that focuses on extending the novel stratigraphic and pinch-out trapping concepts in the gas provinces and opening the deeper and potentially complex reservoirs close to existing facilities. This approach is considered critical to replenish and rejuvenate the portfolio for long-term sustainability and potential growth. To achieve success, it was critical to integrate play-based regional assessments with advanced QI to define new concepts and opportunities. These concepts were tested in multiple plays - Gharif, Barik, Miqrar, Amin, Birba, Buah and Khufai.

As a result of extensive maturation work, the Gas Exploration team were able to book 1.3 Tcf of CR gas volumes. They also added 1 Tcf of risked ultimate recovery prospective portfolio volumes and five Tcf of new undefined risked prospective volumes. This addition was made across different plays spanning shallow to deep, opening more options and choices in future gas maturation plans.

GEOPHYSICAL ENDEAVOURS

Throughout 2023, our commitment to cutting-edge exploration technology was exemplified by our relentless pursuit of 3D WAZ seismic acquisition, employing the ultra-high productivity (UHP) method along with innovative wireless nodal system receiver technology. A notable milestone was achieved with the introduction of the compressive sensor technique within PDO, marking its inaugural application through the 3D WAZ seismic data acquisition in the Nibras region, successfully completed 85 days ahead of the original plan.

A considerable expanse of seismic data, totalling 5,130 km², was collected over 365 days of operation, executed with paramount safety, zero lost-time injuries (LTIs), no significant asset damage, or environmental repercussions. These accomplishments did not go unnoticed, as the Seismic Operations Team was honoured with the esteemed annual Chairman's Award for Excellence and the Oman Energy Association's (OPAL) top accolade for Best Practices in Operational Excellence.

The Exploration Directorate has taken significant leaps in enhancing seismic data processing and interpretation by automating workflows, thanks to our strategic alliances and enduring partnerships. These innovative processes have paved the way for uncovering new plays, expediting operational tempo, and refining the identification of subtle traps as well as the mapping of geobodies. This progress is epitomised by the implementation of state-of-the-art velocity model construction using full waveform inversion, coupled with sophisticated techniques for eliminating multiples in the South region.

GEOMATICS INITIATIVES

The Geomatics Team has consistently provided unparalleled, efficient, cohesive, and forward-thinking geospatial services and solutions throughout the organisation, a foundational aspect of critical operations including well site establishment, engineering surveys, urban development planning, facility assessments, subsidence tracking in fields, and the application of geographic information systems (GIS) and remote sensing technologies.

By harnessing our internally managed geospatial data and expertise, our team has continued to develop and refine sophisticated geospatial platforms, resulting in greater business integration, streamlined processes, and improved decision-making capabilities. Noteworthy among these innovations is the HSE Management System, which has been successfully implemented across all contractors within the Exploration Directorate.

This system forms a comprehensive framework that simplifies the "Plan, Do, Check, Act" cycles of HSE performance management. It facilitates the logging, tracking, and analysis of our HSE performance and compliance, thereby enhancing the protection and maintenance of safety-critical operations within the directorate.

In addition to its foundational responsibilities, the department has expanded its focus to include pivotal business initiatives like the journey towards net-zero emissions. Our remote sensing team has played a critical role in tracking emissions using satellite technology and drone-mounted sensors, enabling prompt detection and remediation of leaks.



This year also saw a surge in demand for "Visual Line of Sight" (VLOS) inspections, with VLOS teams dedicatedly supporting operations by inspecting overhead lines, wellheads, flares, and tank stations. This technological advancement broadens PDO's operational perspective, promising reductions in operational delays, safety risks, and emissions.

Furthermore, we extended the reach of our "Beyond Visual Line of Sight" (BVLOS) remotely piloted aircraft systems (RPASs) across all northern assets. These long-distance drones, equipped with the latest sensors, allow for remote data collection and analysis through proprietary artificial intelligence technology, enabling the department to report any anomalies to asset managers within 24 hours via a PDO-designed dashboard. This initiative broadens the company's strategic approach, further reducing production downtimes, minimising safety risks, and decreasing emissions.

In summary, the department has not only expanded its operational scope but has also leveraged technological and digital advancements to enhance value creation for stakeholders. Above all, it has upheld its commitment to safety excellence, marking 42 years without lost-time injuries (LTIs).

PROJECT DELIVERY

2023 Highlights

- Targeted project onstream milestones in the Oil North, Oil South and Gas Asset portfolios.
- **Greater Saqr Gathering Station** opens ahead of schedule.
- Start of **Marmul Polymer Phase 3** with zero Lost Time Incidents (LTIs) in 2023.
- **MLNW Shammar** development on stream two months ahead of schedule.
- Award of new North and South off-plot delivery contracts (ODCs).

Project Delivery Excellence, in its broadest sense, is about planning, engineering, procuring, executing, setting the right controls and commissioning facilities safely, with quality, on budget and on time, as promised to PDO shareholders.

In the short term, the Company's primary focus lies in optimising the cost-efficient extraction of oil and gas from our fields in alignment with existing development plans. In the longer term, good project delivery becomes even more important as PDO brings on stream more complex sour and enhanced oil recovery projects, which require advanced technology to produce the oil, and explore diverse opportunities within the renewable energy space through the reduction of carbon emission to transition to a net-zero operation by 2050.

The Project Delivery Department focused on the execution of a large portfolio of oil and gas recovery projects. The total value of projects under execution in 2023 was US\$1.1

billion. Despite the external challenges faced in meeting all milestones on time, the team demonstrated their commitment to excellence by achieving several critical capital project milestones either on or ahead of time, showcasing noteworthy schedule and cost performances.

Key considerations were safety, cost control, project service, operation, commissioning, construction, engineering, contracting, In-Country Value (ICV) and Diversity and Inclusion (D&I). We promoted Omanisation and ICV through the application of common strategies for our projects and the continued development of Omani graduates.

In the South, the start of production at the Greater Saqr Gathering Station project came in record time, 18 months ahead of schedule despite the disruption from COVID-19. This gathering station plays a main role in maximising oil recovery from six satellite small fields through the implementation of standardised water flooding patterns.

Overall, the project consists of a **23-kilometre** gas pipeline network, **11** water injection manifolds, **10** main selector valves and more than **400** wells, with staff and contractors working **4.2 million** manhours without any LTIs.

The venture is regarded as a showcase for the Company's contribution to Oman Vision 2040 and represents PDO's strategy in action, to deliver sustainable growth of its core oil and gas businesses whilst reducing costs and emissions.

With a peak production capacity of approximately **30,000 barrels** of oil equivalent per day (boepd), it is expected to contribute to an annual emission reduction of **6,600 tons** of carbon dioxide (CO₂).

PDO opted for a Design-Build-Own-Operate-Maintain (DBOOM) concept in developing the project, where the Canadian company Enerflex Water Solutions is responsible for the design and construction, as well as the long-term operation and maintenance services over its 20-year lifespan.

ICV was central to the scheme's success. PDO exceeded its Omanisation targets, with nationals comprising over 80% of staff across different administrative levels during the operational phase. Additionally, more than **US\$5.88 million** was paid to local small and medium enterprises and more than **US\$30 million** to nationally registered suppliers for their work.

The start-up of the Marmul Polymer Phase 3 (MPP3) project was another success. This aims to enhance production in the Marmul

field in the South and encompassed drilling new wells, upgrading existing flowlines and pipelines and intensifying polymer injection into the field to boost production.

In the North, the completion of the Malan Shammar development one month ahead of the schedule was a major achievement. This harmonises development at Lekhwair of the Malaan West, Shammar, Lekhwair East, Lower Shuaiba and the Upper Shuaiba reservoirs by establishing a shared production gathering facility. The project's scope involved overhauling existing facilities, rerouting specific flowlines, and introducing new/expansion elements, such as a central remote manifold station (RMS) and satellite Lekhwair-East RMS facilities, along with interconnected pipelines and flowlines for the new complex.

In the domain of gas, we achieved the start-up of the Khulud Phase 2 project, again one month early. This will advance the development of Khulud West fields, with a primary goal of enhancing production. The scheme's main scope includes the establishment of two RMSs and two 12-inch duplex stainless steel (DSS) pipelines.

We also awarded two significant ODCs to Omani construction majors – Al Tasnim Enterprises and Galfar Engineering and Contracting.

Under the agreements, Al Tasnim will oversee the South ODC, which encompasses Nimr, Amal, Marmul and Greater Birba, while Galfar will be responsible for the Qarn Alam and Saih Rawl areas. The project work covered by the agreements will be completed within seven years.

With the high level of often complex construction activities, the focus on staff and contractor HSE performance and our aspiration to attain Goal Zero, no harm to our people, assets or environment, was paramount, particularly with reference to road safety and asset integrity and process safety management (AIPSM). The quality performance of our vendors and contractors was also, and will remain, an area of continuing focus.

The full deployment of Continuous Improvement (CI), new technology and digitalisation optimised costs and improved performance. Moving forward, these will be critical to success along with a shift from deliverables-driven to information-driven project frameworks to enhance both people and process efficiency through closer team collaboration.



Greater Saqr Station

IN-COUNTRY VALUE (ICV) and CSR

2023 Highlights

- Surpassed the **40% (US\$2.5 billion)** threshold of our total supply chain spend in country.
- Invested **US\$0.9 billion** with SMEs and LCCs – **18%** of our total supply chain spend.
- Secured **1830 jobs** for Omanis and redeployed **2,754 employees** from old contracts.
- Oversaw the local manufacture of drilling rigs, a first for Oman and the Middle East.
- Developed 50 localisation strategies in contracts with a total approved value of **US\$6.3 billion**.
- 65 social investment projects were completed and 95 new ones agreed.

PDO's In-Country Value (ICV) programme has transformed thousands of lives for the better by retaining more of our total spend in country to benefit business development, build Omani capability and capacity and stimulate productivity and diversification in the country's economy, in line with the Oman Vision 2040.

Our business philosophy has been based on four key pillars:



Developing and creating job opportunities for locals



Maximising the procurement of Omani goods and services and local vendor development



Investment in Oman



Social Investment

To help spur economic diversification and progress, our focus has been, and will remain, on digitalisation, the Energy Transition, business development, job creation, assurance and sustainability, maximising ICV from contracts and capability building.

JOBS AND TRAINING

Our Emdad programme works closely with the Ministry of Labour, PDO contractors and local training institutes to reduce the number of jobseekers in the Sultanate. This is achieved by vocational training for young Omanis, providing the private sector with skilled nationals, and, in parallel, securing employment for registered jobseekers.

Our ICV Development team secured a total of **1830 job opportunities** in disciplines such as HSE, pipeline, protection relay testing, planning, maintenance, rig mechanics and IT through our employment and training initiatives in 2023. PDO also signed **21 capability-building** and employment Memorandums of Collaboration (MoCs), providing over 961 jobs and vocational training opportunities. Two graduation ceremonies were held for 588 graduates from both technical and non-technical training schemes.

In addition, we successfully redeployed and transferred **2,754 employees** from old to new contracts.

We also completed the first year of our Skills Development (Kafa'a) programme, establishing **28 schemes** to develop 10 essential engineering skills among a pool of **1,000 engineers**.

Partnerships with the government, in addition to other operators and contractors, have been

key to consolidating and expanding ICV. A case in point was the initiation of the Emdad Internship programme, which contributed to the employment of 190 from **357 candidates** enrolled since its inception.

As part of our dedication to promoting local workforce development and creating meaningful job opportunities, we have also introduced innovative initiatives, such as the Industrial Apprenticeship programme, offering part-time opportunities for job seekers to learn industrial trade skills.

Our commitment to providing meaningful job and training opportunities for Omanis saw our Emdad scheme win two awards during the year: the Oman Petroleum and Energy Show (OPES) Award for Human Capital Development; and the Alam Allktisaad Award for Sustainability Leadership in Job Creation.



GOODS AND SERVICES

PDO surpassed the **40%** threshold of in-country retained value of our total supply chain spend for the first time. This amounted to **US\$2.5 billion** and represented a **2%** increase on 2022.

We plan to boost the ICV level to **52%** by the end of the decade and we identified more than 100 opportunities for goods, services and workforce, outlining clear plans for their realisation within the next 10 years.

Furthermore, **50** ICV strategies in contracts were developed with a total approval contract value of **US\$6.3 billion** and an accumulative planned retained value of **US\$567 million**.

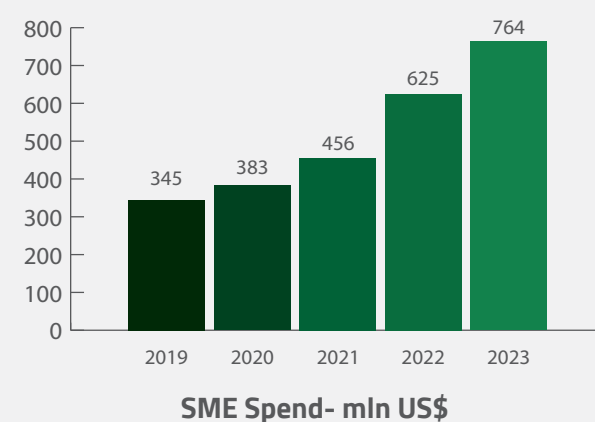
We realised **11** more ICV opportunities amounting to **US\$40 million**, which generated over 20 job opportunities for Omanis.

One such was the launch of the first local manufactured drilling rig in Oman and the Middle East – another target from the ICV Blueprint Strategy list launched in 2013.

The unit was the first of four highly automated rigs designed and constructed by KCA Deutag. These highly automated, fast-moving, 1,250 horsepower rigs are tailor-made with a focus on digitalisation, utilising the latest technologies to deliver safe, efficient and sustainable drilling operations.

Other opportunities realised included the supply of local solar string DC cables and mounting structures, and Omani manufacture of telecommunications towers.

We also signed an agreement with oil field equipment and services provider Borets, to establish two manufacturing facilities. These will produce industrial power cables, including cables and permanent magnet motors for electrical submersible pumps (ESPs) – again a first for Oman. The two facilities will jointly offer around 180 job opportunities with an Omanisation rate of up to **85%** within five years of commercial operations.



PDO has now realised **91** ICV Blueprint Strategy opportunities, with a total investment value of **US\$615 million**. This has led to the creation of **3,216 jobs** for nationals and the operationalisation of **78** ICV facilities and workshops in nine years.

To ensure compliance with our contractual ICV plan, ICV assurance reviews were conducted for **12 contracts** worth **US\$ 2.1 billion** across different directorates. This process encompassed nine service agreements and three call-off agreements. Robotic process automation (RPA) was used in the monitoring process.

LOCAL BUSINESS DEVELOPMENT

We aim to share the benefits of the oil and gas industry with local communities through our ICV programme.

To this effect, we invested **US\$0.9 billion** with small and medium enterprises (SMEs) and Local Community Contractors (LCCs). – **18%** of our total supply chain spend in 2023.

We have formulated a comprehensive strategy to increase our spend on SMEs and LCCs, which is expected to increase by **2%** per year for the coming five years.

The strategy has also established direct opportunities for SME and LCC development in several technical fields such as chemicals, construction, maintenance and the Fourth Industrial Revolution, with the provision of some four ring-fenced opportunities annually over the next five years.

In addition, we are working hard to build capability in the SME space. In the last three full financial years we have also conducted the Tazeez Training Programme for more than 60 SME representatives to help their businesses bid more effectively for PDO contracts.

We also completed the first phase of our Afaq programme, which aims to build the capability of local SMEs so they can compete in markets related to the Energy Transition, carbon reduction, and technology.

We received **31** proposals from **16** SMEs offering solutions to some of our key challenges and two proof-of-concept trials were completed successfully with the support of our Operations team in the Interior.

Moreover, PDO conducted a six-month HSE Competency Coaching programme for **40** LCC and

sub-contractor participants to foster a deeper safety culture in their operations, blending theory and practice so they can identify and mitigate risks and operate secure working environments.

A total of **528** LCCs had been registered on the online Joint Supplier Registration System (JSRS) up to December 2023.

Our LCC spend was around **US\$171 million** and some **2,378 Omanis** are currently working with LCCs.

SUPER LOCAL COMMUNITY CONTRACTORS (SLCCS)

SLCCs are closed shareholding companies established by PDO and the government to support communities in the oil and gas concession areas with around **10,000 shareholders**.

These companies create jobs, investment and entrepreneurship opportunities for people living in and around our fields, in addition to providing a range of core oil and gas activities, including hoist operations, well intervention, pipeline maintenance, drill water services, flowline replacement and facility management services.

All five – Al Baraka Oilfield Services, Al Haditha Petroleum Services, Al Sahari Oil Services, Al Shawamikh Oil Services and Sakan Facility Management – maintained their focus on growth, efficiency and business diversification beyond oil and gas throughout the year.

The total cumulative revenue from PDO SLCCs contracts was more than **US\$277 million**.

Around **1,850 Omani employees** currently work with our SLCCs and we have granted contract extensions to all companies until 2029 to sustain their business growth and raise their Omanisation ratio.

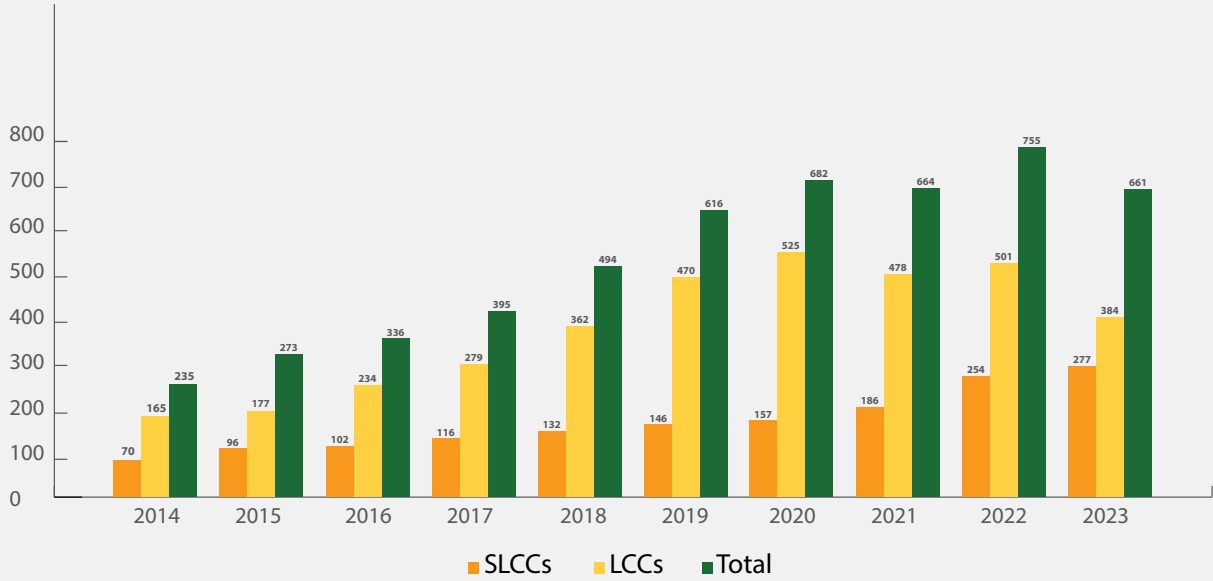
Throughout the year, the work of our Community Relations team in empowering local contractors

through strategic initiatives continued apace. They conducted a future roadmap workshop for SLCCs and initiated an SLCC governance audit in collaboration with the Oman Centre for Governance and Sustainability.

2023 FULL-YEAR SLCCs/LCCs Spend (Revenues)

The cumulative total revenue from PDO contracts for SLCCs, Matured LCC and the LCC expenditure was almost **US\$639.46 million**.

The following chart illustrates SLCC and LCC revenues in 2023:



SOCIAL INVESTMENT (SI)

We are on a continuous quest to maximise the social benefits from our various operations.

As a responsible corporate citizen, PDO is committed to delivering meaningful SI programmes that create sustainable benefits for Omani society in line with the United Nations’ Sustainable Development Goals (SDGs).

In 2023, we committed to **95** new SI projects, totalling some **US\$12.8 million**, including donations and sponsorship projects. A total of **65** projects worth approximately **US\$5 million** were completed. We also secured co-funding for SI projects with various entities worth **US\$13,730,600**.

To ensure our schemes are efficiently delivered, our Commercial Projects Team supported our SI work, providing project management consultancy on completed schemes such as the Bahla, Mudhaibi and Shuwaymeia fish markets and the Al Wafa Social Centre in Adam.

Such projects will have tangible impacts on the quality of life of thousands of people living in our concession area and beyond, providing infrastructure development, training and the provision of technology and equipment.

Moreover, three charity appeals were launched to help the victims of the earthquake in Turkey and Syria, flooding in Libya and the conflict in

Gaza, which raised up to **US\$ 3.1 million** with matched funding.

The team thoroughly evaluated over **700** proposals for support from across the country, strategically selecting the most promising ones for presentation to our Corporate Social Responsibility Steering and Sponsorship, Grants and Donations Committees.

In their pursuit of identifying CSR programmes that best serve Oman, the team successfully established seven joint committees that were formed in collaboration with the Ministry of Health, the Environment Authority, the Ministry of Agriculture, Fisheries and Water Resources, the Ministry of Social Development, Sultan Qaboos University, the Ministry of Higher Education, Research and Innovation and the Ministry of Education to identify the most impactful projects and oversee their implementation.

During the summer campaign, 305 employees provided support to 179 organisations over a 90-hour period as part of our Baader[LW2] volunteering initiative. Our staff also helped the Oman Food Bank during Ramadan, where over 2,000 meals were prepared and delivered to the needy.

There were 28 post-implementation review visits to various completed projects that were carried out to assess the impact and gather lessons for the future and 90 quality assurance site visits were conducted for ongoing projects

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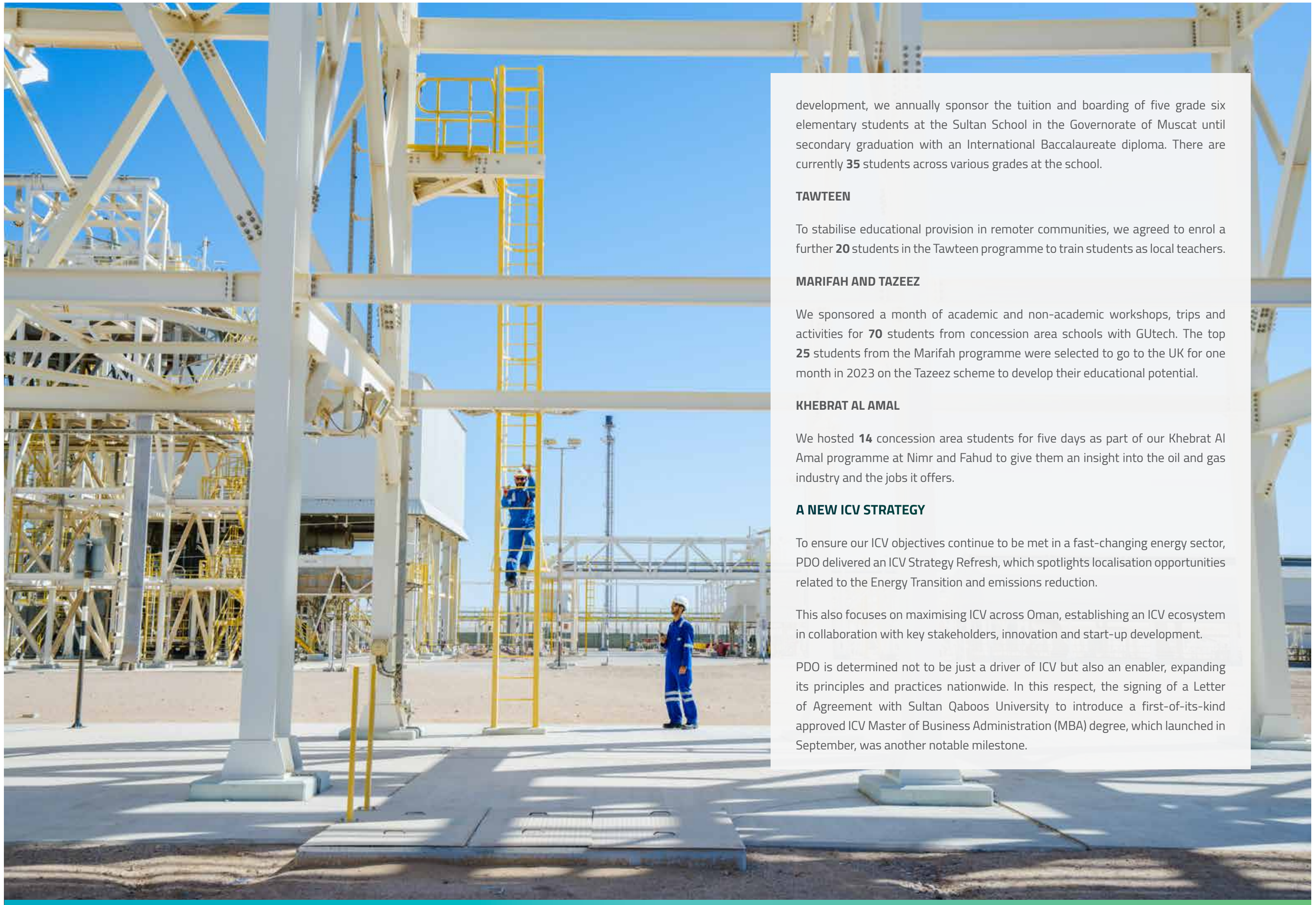
COMMUNITY SERVICES

Community Scholarship Programme

We signed a Memorandum of Co-operation (MOC) to enrol a further **150** students on our Community Scholarship programme (CSP) to enable them to reach higher education.

The CSP gives students from PDO’s concession area the freedom to choose any undergraduate programme that suits their interests and provides a monthly support allowance for five years up to Bachelor degree level.

As part of our commitment to sustainable



development, we annually sponsor the tuition and boarding of five grade six elementary students at the Sultan School in the Governorate of Muscat until secondary graduation with an International Baccalaureate diploma. There are currently **35** students across various grades at the school.

TAWTEEN

To stabilise educational provision in remoter communities, we agreed to enrol a further **20** students in the Tawteen programme to train students as local teachers.

MARIFAH AND TAZEEZ

We sponsored a month of academic and non-academic workshops, trips and activities for **70** students from concession area schools with GUtech. The top **25** students from the Marifah programme were selected to go to the UK for one month in 2023 on the Tazeez scheme to develop their educational potential.

KHEBRAT AL AMAL

We hosted **14** concession area students for five days as part of our Khebrat Al Amal programme at Nimr and Fahud to give them an insight into the oil and gas industry and the jobs it offers.

A NEW ICV STRATEGY

To ensure our ICV objectives continue to be met in a fast-changing energy sector, PDO delivered an ICV Strategy Refresh, which spotlights localisation opportunities related to the Energy Transition and emissions reduction.

This also focuses on maximising ICV across Oman, establishing an ICV ecosystem in collaboration with key stakeholders, innovation and start-up development.

PDO is determined not to be just a driver of ICV but also an enabler, expanding its principles and practices nationwide. In this respect, the signing of a Letter of Agreement with Sultan Qaboos University to introduce a first-of-its-kind approved ICV Master of Business Administration (MBA) degree, which launched in September, was another notable milestone.

PEOPLE AND STAFF DEVELOPMENT

2023 Highlights

- Attained a record staff Omanisation level.
- Achieved the highest number of women on staff.
- Launchhed an enhanced Employee Value Proposition for staff.

At PDO, we firmly believe that our employees are our most valuable asset. With a skilled and knowledgeable workforce, where nine out of ten members are proudly Omanis, we stand at the forefront of contributing to the nation’s development. It is through the collective dedication, skills, and expertise of our team that we continue to drive sustainable growth and development across the country.

STAFF NUMBERS

As of the end of 2023, PDO’s workforce totalled 9,206 employees, with a composition of 85% male and 15% female (amounting to 1,353 women), including 8.8% (112) Omani women based in the interior – a testament of our ongoing efforts to increase female participation in the field. Additionally, 9% of our staff were international employees, hailing from 57 nationalities, showcasing the diverse and global perspective they bring to our operations. The substantial majority, 91%, were Omani nationals, representing all 11 governorates, marking a new milestone in PDO’s Omanisation efforts and our commitment to workforce localisation and inclusiveness.



EMPLOYEE ENGAGEMENT

Our annual People Survey serves as a vital tool for assessing employee sentiment and pinpointing opportunities for enhancement. Recognising the significance of this feedback, we are committed to engaging with, and acting upon, these insights constructively.

The 2023 survey witnessed an impressive 81% participation rate, a testament to the concerted efforts of team leaders and 124 survey ambassadors who played a pivotal role in motivating and encouraging our staff to contribute their perspectives.

Out of the 7,059 surveys completed, the findings from 2023 underscore the need for increased focus on areas such as Organisational Leadership, Employee Engagement, Total Rewards and Benefits, and Responsible Business Practices. Conversely, the survey highlighted strengths in Team Leadership and Collaboration, areas where positive feedback was prominently noted. These insights are invaluable in guiding our ongoing efforts to foster a supportive, engaging and rewarding work environment for all our employees.

CULTURE, DIVERSITY, AND INCLUSION

We recognise the critical importance of Culture, Diversity, and Inclusion. Hence, we envision a workplace defined by fairness— one where equality, impartiality, and non-discrimination prevail, and where processes concerning our people are grounded in meritocracy, offering opportunities based on individual ability and skills.

We champion a culture of openness, encouraging our employees to voice their opinions and offer suggestions for future enhancements. This includes providing various channels for reporting and idea submission, aiming to create a more dynamic and innovative workplace. A primary avenue for this exchange is our People Survey, through which we gather and act upon feedback to identify and implement improvements.

In 2023, we initiated a culture transformation journey to redefine our corporate culture, recognising the pivotal role of organisational dynamics and human behaviour in achieving superior business outcomes. This endeavour is focused on identifying the core values, beliefs, mindsets, and behaviours essential for optimising how everyone within our organisation collaborates to achieve PDO’s renewed strategic objectives. This path towards cultural refinement involves a dedicated effort to modify longstanding behaviours, aiming to cultivate an environment that is both safe psychologically and physically and inclusively geared towards fostering ongoing engagement and innovation.

REMOTE WORKING

The post-COVID-19 era has fundamentally transformed our work practices and the Company’s approach to embracing alternative working arrangements, making flexible working a key aspect of life at PDO.

Our journey towards remote working began with the Maktabi Pilot Project in 2017, which involved 300 employees from various technical and non-technical sectors. This initiative fostered a broader understanding and acceptance of remote working within our organisation, highlighting its numerous advantages and integrating it into our corporate culture.

The foundation laid by Maktabi allowed for a swift and seamless transition to remote working across the organisation when the pandemic emerged in 2020. This shift enabled over 4,000 employees to work remotely, utilising advanced digital collaboration tools in adherence to social distancing and lockdown protocols.

By 2022, remote working practices were formalised and became a norm within our operations. We acknowledge the significant sustainability benefits of remote working, such as reduced commutes leading to better air quality, lower greenhouse gas emissions, and an improved work-life balance for our employees.

In September 2022, we officially embraced remote working for most positions at the Coast, adopting a hybrid model where employees are expected to spend three days a week in the office. This approach balances the flexibility of remote work with the essential aspects of face-to-face interactions for team cohesion and connectivity.

To support this new way of working, we developed a comprehensive Work Flexibility Playbook. This guide provides employees with detailed instructions on navigating the hybrid work model, ensuring consistent and fair application across the organisation. It also offers valuable advice on maintaining wellbeing and psychological health.

We are dedicated to continuously evaluating the implementation of remote working,

adapting our approach based on employee feedback, market trends, and business needs. A post-implementation review is planned to assess the effectiveness and impact of these work arrangements, ensuring they meet our goals for flexibility, sustainability and productivity.

TRAINING

Since its launch, the Shababuna programme, previously known as the Graduate Development programme, has successfully seen over **800 staff graduates**, with more than **200 enrolments** last year alone. Initiated in 2013, Shababuna aims to provide structured on-the-job training, monitoring, and assessment for Omani nationals joining PDO post-graduation from universities or colleges with bachelor's degrees or higher. This also extends to specific categories of existing PDO staff who have completed further studies.

Shababuna offers competency-based development encompassing technical, leadership, and soft skills, employing varied learning methodologies: **70%** on-the-job training, **20%** through coaching, mentoring, and social learning, and **10%** via formal training courses. With a forward-looking focus, the Shababuna platform has been automated to enhance business excellence, employee experience and operational efficiency.

In the past year, PDO supported 68 active scholars pursuing degrees in Oman, the UK, and Canada, with **38** celebrating their graduation marking the 35th cohort of PDO sponsored students since our flagship Scholarship Scheme began in the 1980s. These scholars specialised in diverse fields, including Renewable Energy, Advanced Control and Systems Engineering, Applied Geosciences and several additional engineering and geological disciplines.

Moreover, our Distance Learning Scheme annually facilitates **40 staff** members to pursue BScs and MScs, blending academic advancement with ongoing professional responsibilities. Currently, 96 employees are benefiting from this scheme.

In 2023, PDO's Learning and Development Academy executed over **1,000 training programmes** across various specialties, totalling 44,645 mandays. To embed safety as a core value, **4,551** staff underwent HSE training exceeding the target by 316% and **1,894** received process safety training, achieving a **177%** increase over the planned figure.

To further enrich the learning ecosystem, the Academy has integrated specialised e-learning platforms, including LinkedIn Learning, where staff completed over **7,800 courses**, illustrating the feasibility of continuous learning alongside professional duties.

Aiming to enhance well engineering capabilities, our Wells Learning Centre, accredited by the International Well Control Forum, hosted **122** learning events for **513** PDO participants and **112** from other operators and contractors, generating substantial income and savings.

New courses have been developed focusing on high-risk well management and complex control scenarios, covering technical challenges, well barrier management, design principles, human factors, and risk mitigation.

Additionally, our Academy achieved "Gold Star" approval from the Oman Energy Association (OPAL) for in-house delivery of OPAL-unified HSE courses, further underscoring our commitment to comprehensive employee development and safety education.

PDO is in the process of developing an Integrated Talent Management System aimed at offering targeted learning interventions and enabling streamlined, data-driven decisions regarding employee development. This initiative involves the integration of our Learning Management System (LMS) with core HR modules such as Performance Management, Succession Management, Workforce Planning, and Talent Acquisition Management. This comprehensive approach ensures a holistic view of each employee's journey and potential within the organisation.

Additionally, we have introduced a Creative Multimedia Lab (CML) to display and explore cutting-edge technologies such as augmented, virtual, and mixed reality, interactive E-learning, holograms and computer-based training. The CML is designed to increase awareness, expand technological literacy, and demonstrate the application of these technologies to tailor learning programs and enrich the learning experience.

This facility also offers PDO's business units the opportunity to directly engage with these technologies, fostering ideation and visualising the potential for developing customised learning solutions tailored to their specific needs.

Ultimately, the CML is set to propel our academy forward by revolutionising the learning landscape through self-paced, virtual and immersive learning options. This advancement underscores PDO's commitment to leveraging technology in enhancing employee development and facilitating innovative, efficient and engaging learning experiences.

EVOLVING EMPLOYEE VALUE PROPOSITION AT PDO

At PDO, our workforce is a rich tapestry of talent, predominantly comprising Omani nationals, alongside directly hired expatriates and secondees from Shell. We ensure that the benefits extended to these varied groups are in line with the policies and employment terms specific to their classifications, adhering to the Omani Labour Law and benchmarks set within the national and expatriate employment sectors.

In a significant move in 2023, the PDO Board gave its support to a new, enhanced Employee Value Proposition (EVP), which includes both monetary and non-monetary improvements. These enhancements are designed to foster continued excellence and reward high achievers within our workforce. Furthermore, the Board has sanctioned a discretionary tool aimed at attracting and retaining talent, specifically addressing the challenge of retaining high-performing individuals. This strategic initiative underscores PDO's commitment to not only attracting the best talent but also ensuring their continued engagement and satisfaction within the organisation, thereby securing a dynamic and motivated workforce aligned with our long-term objectives.

ROAD SAFETY

There were no Motor Vehicle Incident (MVI) related fatalities or Lost Time Injuries and our serious MVI rate per million kilometres fell to **0.034** in 2023 from 0.05 in 2022.

By the end of December 2023, 21 months had passed without any fatalities, with nearly **500 million kilometres** driven.

Such results were underpinned by the steady progress that has been made in relation to our Darb Al Salama (DAS) plan, a three-year initiative, involving our HSE and Operations teams, to bring about safe drivers, vehicles and roads. We have seen a significant uptick in compliance with a **70%** fall in Life Saving Rule driving incidents, underscoring the efficiency of our ongoing

communication, awareness and collaboration campaigns. These included DAS Week, driver forums at all Interior sites, a DAS Oasis roadside campaign and one during the Khareef season in Salalah in partnership with the Royal Oman Police.

Through a combination of road assessment surveys and a meticulous analysis of MVI hotspots, we established a priority list to address high-risk areas. By targeting these critical zones, we are proactively mitigating potential hazards and reinforcing our commitment to a safer road infrastructure.

The extension of the DAS initiative to encompass Ras Al Hamra and staff commuting, has been a pivotal step forward, especially as we sadly experienced two non-work-related private commuting fatalities in 2023.

To sustain these gains, the requirements and recommendations outlined in the plan have been integrated into the latest off-plot development and logistics contracts. This will ensure that non-compliant fleets are phased out in favour of vehicles meeting stringent safety standards, thus enhancing overall road safety.



Rabab Harweel Integrated Project (RHIP)

ENVIRONMENTAL SUSTAINABILITY AND NEW TECHNOLOGY

2023 Highlights

- Solar power introduced at **three** PDO airports.
- Solar rooftop systems commissioned on **six** Mina Al Fahal buildings.
- Tender process launched for **three** major Independent Power Producer projects.
- A record **27** technology trials initiated to tackle corporate challenges.

While oil and gas will continue to be fundamental to our energy mix, we are developing innovative renewable and “green” solutions to create new growth opportunities for the Company as well as for the nation in line with our Low-carbon journey.

This transition to a full-fledged energy company also means leveraging new technology, greater collaboration and improving our overall energy efficiency and water management.

By transitioning to cleaner technologies, implementing rigorous emissions reduction strategies and investing in renewable energy sources, PDO aims to not only reduce its carbon footprint to net-zero emissions (NZE) by **2050** but also set a precedent for sustainable practices within the industry.

Our current power target is to **source 30%** of our power capacity from renewable sources by **2026** and we are aspiring to reach **50% by 2030**.

RENEWABLE ENERGY

Wind Energy (Riyah-1 and Riyah-2) Independent Power Producer Projects

This solution involves using turbines to convert the wind’s kinetic energy into mechanical power which a generator then transforms into electricity.

A 12-month feasibility study, including a site measurement campaign, was conducted to identify the best wind farm lay-out, position and most suitable wind turbine model, and ultimately calculate the expected energy yield.

The study determined our concession area has excellent wind potential with an average wind speed of 8m³/d. As a result, we are now in the development phase of two 100-megawatt capacity wind farm projects at Amin and Nimr West, called “Riyah-1” and “Riyah-2.”

The request for proposal (RfP) documents for Riyah-1 and Riyah-2 were floated in April 2023 and PDO is currently evaluating the technical and commercial bids. The two facilities are expected to be completed by Q2, 2026.

SOLAR ENERGY

North Solar Independent Power Producer (IPP) Project

The project will involve the development of a utility-scale solar photovoltaic (PV) plant that can deliver a maximum 100-MW peak power into our grid during daylight hours. This system will use a PV single-axis tracking system.

This daily cycle will then be repeated for each day of the year throughout the project’s term. The developer will be encouraged to optimise the design of the plant and offer the lowest tariffs for the delivery of electrical energy at the delivery point.

The plant will be located close to Saih Nihayda, next to Qarn Alam airport, in the northern region of Oman, approximately 170 kilometres south of Nizwa. It is due to come on stream in Q4, 2025.

AMIN 100-MW SOLAR PV IPP PROJECT

Our landmark 100-MW Amin Photovoltaic Power Plant started commercial operations in May 2020, having been commissioned three months ahead of schedule.

The IPP near Nimr, provides power to our interior operations and is the world’s first utility-scale solar project to have an oil and gas company as the sole buyer of electricity.

Going into its fourth year of operation, the plant is feeding into PDO’s grid to reduce dependency on fossil fuels and greenhouse gas (GHG) emissions.

MINA AL FAHAL (MAF) CAR PARK PHASE 3

The third phase of the MAF solar car park is being commissioned in 2024 to inject more energy into our HQ power grid. The project will feature a 974-kWdc solar system



Miraah Solar Plant

installed on top of a well-designed car park structure. It is expected to offset more than 1,800 tonnes of CO₂e every year by generating energy from the sun's rays. The project is being executed by a local company that is working for the first time for PDO, and it is progressing as expected.

MAF SOLAR ROOFTOPS

Solar rooftop systems are currently being commissioned on six MAF buildings - the Central Archives, the Clinic, Ras Al Hamra (RAH) School, Bait Saih Al Maleh, Bait Mina Al Fahal and the Learning & Development Centre - with a total installed capacity exceeding 500-kWdc. The project will help to reduce our electricity bills and our carbon footprint.

PROJECT NOOR

In 2022, PDO launched Project Noor for its employees, the largest residential solar scheme in Oman and a landmark in our Energy Transition journey.

The work is being undertaken by a local contractor, with almost 577 staff applications so far, 445 signed agreements for the work to commence and 195 solar installations completed at PDO employee homes.

The manufacture of the solar DC, AC and grounding cables, as well as metering boxes, is all being performed locally.

The Company is providing green funding and contributing to the solar panel installation costs in return for carbon credit ownership for 25 years.

AIRPORT SOLAR GROUND MOUNTED PROJECT

By the end of 2023, we had introduced solar photovoltaic (PV) energy at our airports at Marmul, Fahud and Qarn Alam. The three sites now boast a combined solar capacity of 609 kilowatts peak (kWp) through a total installation of 1,332 PV panels.

The renewable power capacity significantly reduces their reliance on conventional energy sources during daytime and are anticipated to generate 1,227 megawatt hours (MWh) annually. This marks a substantial contribution to the energy needs of the three sites, translating into a reduced dependence on traditional power grids.



By harnessing the sun's power, the airports are set to save approximately 786 tonnes of carbon dioxide (CO₂) emissions per year – the equivalent to the impact of planting 23,000 trees annually. A total of 340.4 standard cubic metres of gas is also forecast to be saved annually.

The project was executed by an SME working for the first time with PDO and was completed without any Lost Time Injuries.

STEAM GENERATION USING RENEWABLE ENERGY

Steam generation for enhanced oil recovery (EOR) is considered one of our critical production processes. However, it requires a massive amount of natural gas to generate one tonne of steam. In response, we launched our pioneering Miraah solar project in Amal.

The falling cost of renewable energy has increased the potential to adopt it more widely for steam generation, not only for solar applications but also electrical and molten

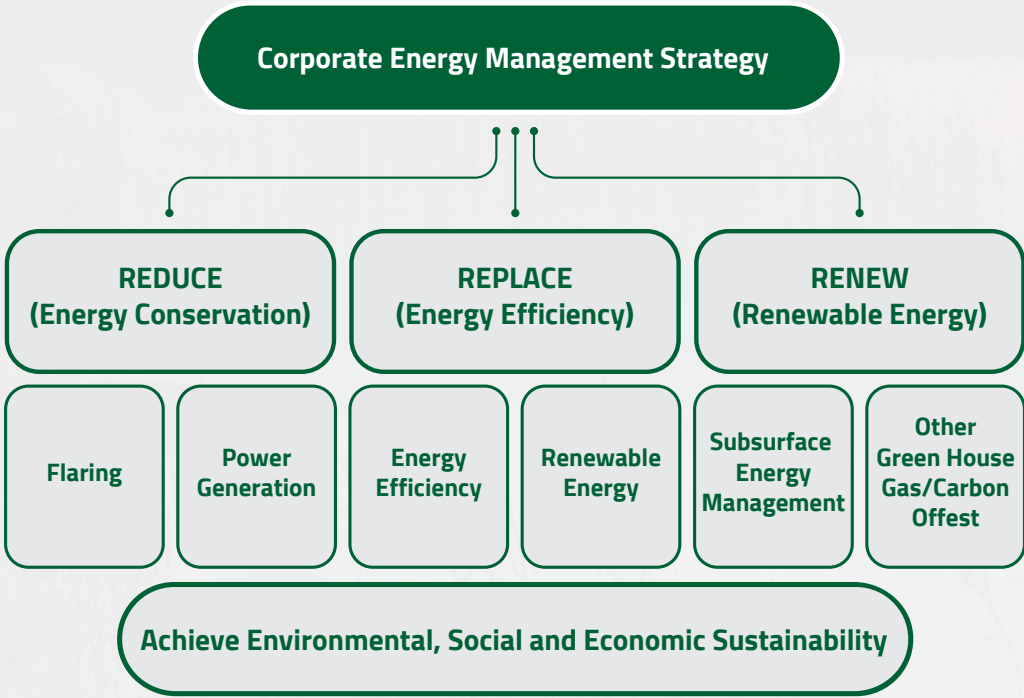
salt heaters. We are currently identifying other viable renewable technologies to generate steam.

ENERGY MANAGEMENT

PDO embarked on a structured optimise energy management programme to reduce demand, enhance energy efficiency and find alternatives for gas and energy supplies. Our carbon reduction target is to achieve net-zero by 2050.

Our Energy Management is based on the “3 Rs”:

- **Reduce:** flare, power consumption, process fuel gas and fuel gas for power generation
- **Replace:** inefficient equipment with more efficient ones
- **Renew:** increase the proportion of renewable energy alternatives



PDO'S ENERGY MANAGEMENT STRATEGY

The Energy Management Strategy "3Rs" outlines further details for each pillar to support the road map towards 2050 Net Zero NZE goal and is applied throughout PDO:

- Reduce dependency on conventional power
- Expand renewables
- Minimise growth in energy consumption (power and steam) and operate our assets efficiently
- Cut water production, and disposal and aquifer abstraction, to as low as reasonably practicable (ALARP)
- Decrease local fuel gas consumption, non-routine, safety and subsurface flaring and other GHG emissions to ALARP
- Achieve zero routine flaring by 2030 as per the Ministry of Energy and Mineral's mandate and the our World Bank commitment
- Offset remaining emissions through carbon capture, utilisation and storage, nature-based solutions and carbon credits.

The Energy Management funnel is healthy and covers a range of aspects and various areas of focus. Improving the GHG emissions performance is a key pillar and one of the main drivers of PDO's energy management efforts. In 2023, PDO's actual GHG emissions were below the set target in 2023 and achieved ~2.4% reduction for scope 1 & 2 compared to 2021 baseline. In addition, PDO achieved Gold Standard on methane emissions reporting with the basis of a credible implementation plan.

ENERGY EFFICIENCY

Improving energy efficiency is a key focus of PDO's Gas Conservation Strategy. PDO continues to mature its efforts to minimise energy requirements by use of waste heat from

power stations. Existing power stations are being converted from open cycle to closed cycle or having cogeneration added to greatly improve the generation efficiency of the overall system.

In 2023, open-cycle power plant stations in Suwaihat and Saih Nihayda were retired, with a plan to withdraw the remaining stations in the next three years. New power stations are designed with cogeneration of steam or heat such as at Qarn Alam, Amal and Yibal Khuff. A new 400 kilovolt overhead line from Nihayda to Suwaihat was commissioned to provide the flexibility for a power transfer between the North and South and integrate renewable energy. The efficiency of our power and steam generation improved from 223 m³ of gas required to generate 1 MWh in 2019 to 163 m³ in 2023 – a 27% fall.

The Energy Efficiency programme ensures that all our facilities are working towards a top-quartile energy efficiency level. Various tools are used to achieve this including regular benchmarking, visual energy efficiency monitoring and continuous opportunity identification reviews. Our Energy Efficiency Surveillance Tool (EEST) is now in operation across all assets. This indicates any operational equipment inefficiencies by issuing an alarm so operators can take the appropriate action to fix any issue.

In parallel, PDO conducts energy assessments, and equipment-based studies, to identify energy optimisation efficiency opportunities for all power consumers in production stations. These are further studied in terms of energy savings, economics and GHG emission reductions.

WATER MANAGEMENT

We have established a comprehensive Water Management Strategy in collaboration with relevant government ministries. This prioritises



a three-pronged approach: Reduce, Reuse, and Relocate (3Rs) for produced water. In 2023, this strategy was refreshed to enable better value creation.

THE 3RS OF PDO'S WATER MANAGEMENT STRATEGY:

- **Reduce:** This principle focuses on minimising water brought to the surface, disposed of, and extracted from aquifers.
- **Reuse:** This approach focuses on maximising the use of produced water for EOR through methods such as water-flooding and steam injection. Additionally, exploration of alternative, energy-efficient and beneficial applications is encouraged.
- **Relocate:** This involves transporting excess produced water from areas with surplus to locations experiencing water scarcity.

All potential options that are considered to be under the 3R's, shall be generating value towards monetising the water resources.

CURRENT WATER PRODUCTION AND ASPIRATIONS

As of the end of 2023, PDO's total daily water production flow-rate stood at approximately 948,600 m³/d. Projections estimate this figure will reach 1.4 million m³/d by 2030.

- **Value Creation:** A significant portion (nearly 70%) of this water resource contributes to value creation, primarily through EOR initiatives.
- **Water Disposal Reduction:** We currently dispose of 13% of the water, representing an area for improvement. We aspire to eliminate water disposal entirely by 2030.
- **Sustainable Surface Water Handling:** The remaining 17% pertain to sustainable surface water management practices, including the use of Nimr Reed Beds and the Rima Water Treatment Plant projects.

HISTORICAL AND PROJECTED WATER MANAGEMENT SUCCESS

Our Water Management Strategy has demonstrably achieved significant progress towards its goals.

- **Eliminating Water Disposal:** A key objective is achieving water disposal elimination by 2030. Since 2009, there has been a 65% reduction.
- **Value Creation from Water Resources:** PDO's 2023 business plan incorporated projects aimed at creating value through salt and mineral extraction. Examples include the Fahud Salt Making project, the Qarn Alam Steam Hypersaline project and the use of surface water for plantation projects.
- **Aquifer Abstraction Reduction:** PDO has demonstrably reduced its reliance on exploitable aquifers. Abstraction has fell from 36,000 m³/d in 2020 to 28,000 m³/d in 2023. This achievement is primarily attributed to the implementation of the Yibal to Lekhwair pipeline, which diverts produced water to replace aquifer abstraction previously used for water injection in Lekhwair.

SUCCESSFUL WATER MANAGEMENT PROJECTS

We have implemented two ground-breaking water resource management projects.

Nimr Reed Beds: This boasts a water handling capacity of 175,000 m³/d and has facilitated the phasing out of eight deep water pumps. This has resulted in substantial energy savings of around 40 MW, translating to an annual reduction of 113,000 tonnes of CO₂ emissions.

Rima Water Treatment Plant: Launched in 2022, this installation uses innovative biological processes. The technology has phased out approximately 40,000 m³/d of deep-water disposal and yielded significant energy savings

of around 10 MW, equating to a reduction of 48,000 tonnes of CO₂ emissions a year.

These projects have garnered recognition for their contributions to environmental sustainability efforts, including the greening desert lands, pioneering water solutions and reducing GHG discharges.

BIODIVERSITY

We have conducted a biodiversity study in Nimr and Marmul to identify, survey and map significant biodiversity areas in clusters.

We agreed to continue such survey as a joint project with the Environment Authority (EA) to cover other clusters, including at Greater Birba and Bahja.

10 MILLION TREES INITIATIVE

In 2020, PDO launched a 10-year initiative to plant 10 million native trees with the EA. This ambitious project aims to:

- Enhance and expand vegetation cover.
- Foster community awareness regarding environmental conservation.
- Optimise the Omani ecosystem for carbon emissions reduction, carbon sequestration, and In-Country Value (ICV) enhancement.

As part of the initiative, PDO has committed to planting 1.5 million trees by the end of 2030. To date, PDO has successfully planted 116,000 trees, distributed 47,000 seedlings and utilised drone technology and traditional methods to sow two million mangrove seeds.

Again, working with the EA, we planted 5,500 trees in Dhofar Governorate and a further 5,000 at the Ras Al Shajer Nature Reserve.

Additionally, in collaboration with the EA, we have supported two public schools in Muscat

to increase vegetation cover by planting trees within their premises.

NEW TECHNOLOGY

The oil and gas industry is undergoing a profound transformation driven by new technologies and innovative solutions. From advanced exploration techniques to digital transformation and energy sustainability, these technologies are reshaping the industry's landscape. Embracing such innovations will play a crucial role as we navigate the evolving energy landscape. By harnessing their power, PDO and the wider oil and gas sector are poised to become more efficient, safer and environmentally responsible in the years to come.

PDO has consistently demonstrated its ability to overcome significant challenges through

its unwavering commitment to explore and adopt new technologies. By continuously evaluating and qualifying innovative solutions, the Company has accelerated value generation and strengthened its position as a leader in the industry.

Behind this success lies a well-established methodology and a value-based approach that has been honed over more than 35 years of experience in implementing new technologies. This extensive track record has allowed us to navigate the complexities of technological advances with confidence, ensuring that every investment in innovation brings tangible benefits to the Company and Oman's economy.

Building on the record-breaking pace of 2022, we further amplified our innovation engine



in 2023, launching a remarkable 27 game-changing technology initiatives to tackle critical corporate technical challenges, representing a 28% increase on the previous year's record. These endeavours promise to revolutionise the way we operate and unlock new avenues for growth.

Additionally, we successfully validated and concluded 19 promising technologies through rigorous trials, paving the way for their seamless integration into, and delivering significant value for, our business. These technologies span a wide range of applications, from enhanced oil recovery techniques to energy efficiency and advanced data analytics. Such an accomplishment showcases our dedication to stay at the forefront of technology advances and our capacity to effectively implement innovative solutions.

Through close collaboration with universities, colleges and other academic and research

institutions, we awarded six ground-breaking joint academia-industry research and development (R&D) projects that exemplified our commitment to foster innovation, partnership. Moreover, we concluded four R&D projects which demonstrated tangible results and showcased the power of collaboration in driving meaningful progress. These achievements serve as a testament to our unwavering dedication to nurturing a culture of innovation, where cross-sector partnerships thrive and transformative solutions are brought to fruition.

In continuation of our commitment to reduce our emissions and our vision for a sustainable future, we have striven to accelerate the progress made in 2023 through our Energy Management programme.

We embarked on five technology initiatives and successfully concluded four, focusing on key areas such as GHG reduction, flaring, energy efficiency renewable energy, power generation and energy intensity.

DEPLOYED TECHNOLOGIES

In 2023, we deployed 16 diverse solutions across various domains. These innovations effectively address critical corporate challenges including HSE, energy management, artificial lifting, well construction and water management.

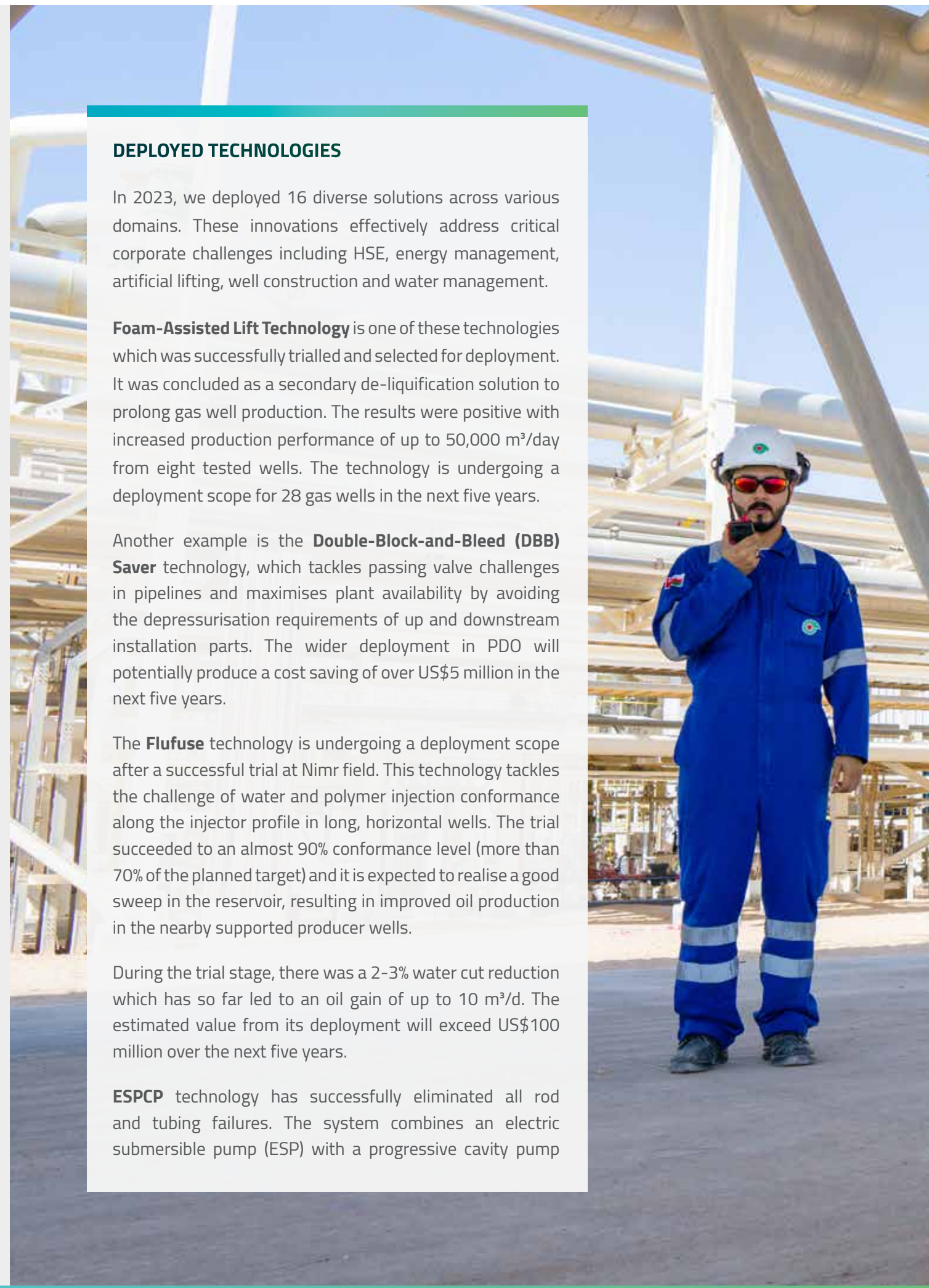
Foam-Assisted Lift Technology is one of these technologies which was successfully trialled and selected for deployment. It was concluded as a secondary de-liquification solution to prolong gas well production. The results were positive with increased production performance of up to 50,000 m³/day from eight tested wells. The technology is undergoing a deployment scope for 28 gas wells in the next five years.

Another example is the **Double-Block-and-Bleed (DBB) Saver** technology, which tackles passing valve challenges in pipelines and maximises plant availability by avoiding the depressurisation requirements of up and downstream installation parts. The wider deployment in PDO will potentially produce a cost saving of over US\$5 million in the next five years.

The **Flufuse** technology is undergoing a deployment scope after a successful trial at Nimr field. This technology tackles the challenge of water and polymer injection conformance along the injector profile in long, horizontal wells. The trial succeeded to an almost 90% conformance level (more than 70% of the planned target) and it is expected to realise a good sweep in the reservoir, resulting in improved oil production in the nearby supported producer wells.

During the trial stage, there was a 2-3% water cut reduction which has so far led to an oil gain of up to 10 m³/d. The estimated value from its deployment will exceed US\$100 million over the next five years.

ESPCP technology has successfully eliminated all rod and tubing failures. The system combines an electric submersible pump (ESP) with a progressive cavity pump



(PCP) installed with a permanent magnet motor (PMM). It has yielded a 10% reduction in artificial lift power consumption and eliminated failures in rod and tubing systems. Moreover, PDO has deployed PMMs to substitute conventional induction motors in ESP and PCP wells, thereby reducing power consumption and enhancing operational reliability. It can be installed at greater depths and run at higher speeds with fewer trips than conventional PCPs, leading to an estimated 10% increase in oil production per well a year.

The deployment scope of an array of other game-changing technologies are progressing and continuing from 2022 as per the set targets, including **Autonomous Inflow Control Device (AICD)**, **Beyond Visual Line of Sight (BVLOS)** drones, **ESP Power Save** and **Sand Guard**.

CONCLUDED TRIALS

Several trials for pioneering technologies were successfully concluded with significant potential value, paving the way for wider deployment and increased efficiency.

A pilot programme at Greater Birba for advanced **Personal Gas Detection Devices** was concluded with live cloud-based data analytics, location tracking and two-way, voice over communication. The new improved technology in this equipment will help optimise operations and maximise HSE performance, especially in critical sour operations areas and remote facilities. The technology has been approved for further deployment across facilities with around 600 devices in the next five years.

To accelerate the restoration and refurbishment of the process vessels in our operating stations, a field trial for the **High Velocity Thermal Spray (HVTS)** technology was successfully conducted at Amal station. This technology enables us to apply claddings with much greater density and decreased

permeability, while keeping internal cladding stresses low. This is the second key factor in creating high-corrosion resistance in a thermal spray cladding. The success has led to a decision to replicate the same solution for other vessels with a potential cost avoidance of more than US\$3.6m for each application.

Dispersion Band technology was also concluded. This addresses the challenge of back-produced polymer that significantly impacts the performance of the crude dehydration process and results in an increased water level of export oil. It offers detailed information on the fluid phases inside test separators and the build-up of the emulsion band and poor separation during back-production of EOR chemicals. Wider deployment within PDO could lead to a potential cost saving of over US\$5 million in the next five years.

Local Expander (LE) technology was also successfully trialled. This offers a cost-effective, time-efficient alternative to current practices of restoring well integrity. This has been recommended for wider deployment as a solution to repair annulus integrity issues. Future candidate wells will be selected based on an approved selection matrix and rational criteria to ensure optimal well integrity and avoid any production impact. It is estimated that more than US\$2 million can be gained in the next five years.

INITIATED TRIALS

A total of 27 new technology trials were initiated to explore impactful solutions in critical areas such as produced water and energy management, artificial lifting, EOR, well construction and production measurement.

One such trial involves the **Octopoda Annulus Intervention System** for well intervention and maintenance activities. It aims at minimising rig time and associated expenses and enables the deployment of intervention equipment and tools via the annulus of a well, negating the need for traditional wireline, coiled tubing or slickline techniques through tubing or workover.

It can reduce the risk of environmental damage or contamination, improving the sustainability of the oil and gas operation by preventing potential well leaks or failures. The estimated potential value exceeds US\$5.1 million over the next five years.

To move away from closed, proprietary, distributed control systems towards a standards-based, open, secure and interoperable process automation architecture, a pilot project was initiated for the **Open Process Automation System (OPAS)**.

This will allow for the construction of safe, reliable, secure process automation systems that are scalable from very small to very large. It does not require a system shutdown to perform updates and extensions and it can be applied to existing systems and new construction projects. The OPAS will cut capital and operating expenditure by enhancing the interoperability of different system components and the portability of applications. The new concept will also reduce the hardware requirements for new facilities by at least 30% and the deployment time for process automation systems from nine months to roughly four.



A new **(OSI)** tool trial started for artificial lift systems focusing on downhole chemical treatment to tackle issues such as corrosion, sand control and gas separation.

The proprietary, micro-encapsulation technology enables the most effective oilfield treatment chemistry to be put into solid stick form, placed into specifically engineered tools and installed below the pump intake. It is expected to extend ESP run life by 1.5 times per well, reducing oil deferment and maintaining well potential over a longer period. It will decrease subsurface deferment incurred by scale/gas lock by at least 40% per well, contributing to a potential value of US\$52 million for a five-year deployment scope of 20 wells per year.

Nanospheres (NS) technology was also initiated at Yibal, where two water injector wells and three oil producers were selected. Nanospheres are very small particles of proprietary cross-linked polyacrylamide composition that are used for conformance control deep in formations to improve the oil recovery in heterogeneous reservoirs under water flood. This is accomplished by adjusting the water relative permeability in the reservoir and diverting the flow to unswept zones with by-passed oil.

A potential improvement on the unit operating cost if US\$2-3 per barrel is expected through the implementation of the technology in water-flooded carbonate reservoirs. The technology will further improve the commerciality of growth volumes by up to six million cubic metres of oil from the water-flood carbonate portfolio in our northern fields.

To cut emissions, a project was launched to test **High Pressure Air Assist System (HPAS)** technology for smokeless flaring. This uses air as the primary means of obtaining smokeless performance. The trial aims to ensure HPAS can perform efficiently in stopping smoke at AP flares in line with HSE regulations. If successful, the solution will be replicated across other PDO assets, potentially leading to a cost saving of more than US\$18 million over five years.

RESEARCH AND DEVELOPMENT (R&D)

Our continued R&D focus highlights our unwavering belief that combining academic expertise with industry knowledge is key to driving innovation and building a more cost-competitive, carbon-resilient and energy-efficient company. By actively partnering with Omani universities and academic institutes, we are addressing our own technical challenges and investing in the future of Oman's knowledge economy.

We awarded six joint academia-industry projects to Omani universities (27 in total), prioritising areas crucial for our continued success and Oman's economic diversification. These focus on critical themes including energy efficiency, water management, EOR, bioenergy, material and corrosion science and renewable energy.

One study was a 'local waste to concrete and asphalt' which aims to promote the reuse and recycling of waste as a partial component in concrete and asphalt mixes with a carbon dioxide reduction of up to 30,000 tonnes.

THE FUTURE

Staying ahead of the curve in the technology landscape is a cornerstone of our future growth. Our continued investment in cutting-edge solutions is both a pursuit of efficiency and a commitment to safeguarding the long-term.

PDO's unwavering pursuit of technological excellence aligns seamlessly with Oman Vision 2040. Our investments in cutting-edge solutions are our stepping-stones towards realising the Sultanate's aspirations of becoming a diversified, knowledge-based economy.

We will continue to progress our harmonisation efforts between new technology and digitalisation to capitalise on technological breakthroughs fast-changing industry and world and as an essential enabler of our long-term viability.

Each breakthrough fuels innovation across industries, empowers our workforce and strengthens our nation's position as a global leader in responsible energy development.

ENVIRONMENTAL PERFORMANCE

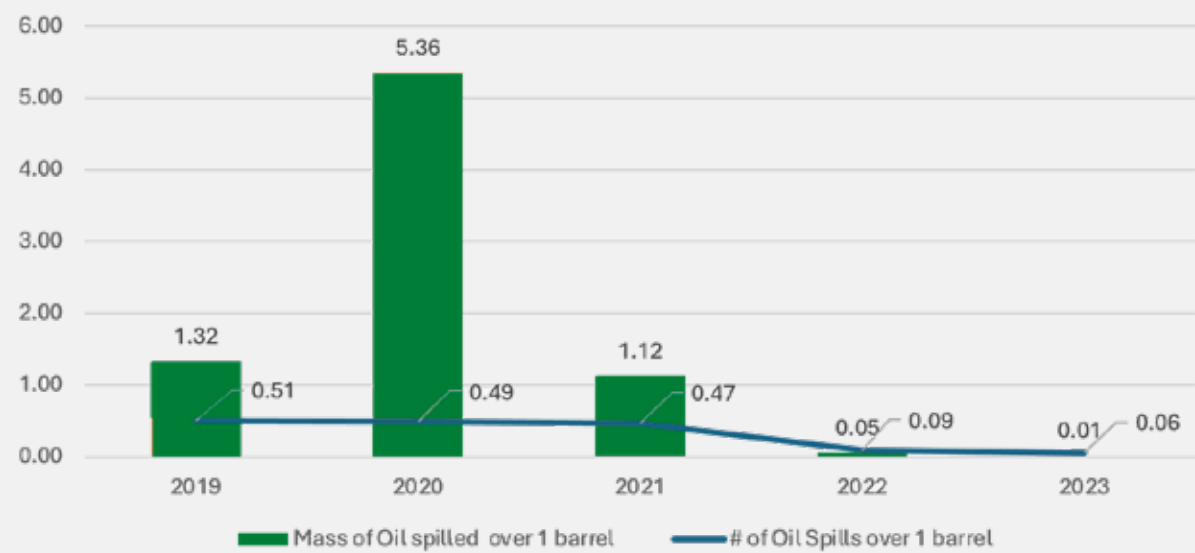
2023 Highlights

- Reduced quantity of oil spilled by **80%**
- Methane leaks repaired and saved **91%** of the fugitive emissions.
- Increased waste recycling by **10.2%**
- Cut greenhouse gas emissions by **1%**

PDO is constantly striving to protect Oman’s environment, reduce our carbon footprint and prevent pollution. In 2023, we improved our environmental performance across many aspects, including oil spills, GHG emissions, flaring and waste management. The achievements are summarised in this chapter.

OIL SPILLS

We have taken significant steps to eliminate oil leaks and no major spill occurred in 2023. Overall, the number of oil spills over one barrel (159 litres) per million tonnes of oil production fell to 0.06 compared to 0.09 in 2022 - a 33% decrease. The quantity spilled also fell to 0.01 tonne per million tonnes of production compared to 0.05 t/Mt production in 2022 - an 80% decrease.



GREENHOUSE GAS (GHG) EMISSIONS

We cut GHG emissions by 1% to 10.4 million tonnes (almost 0.17 million tCO₂e) from our 2022 total. This can be attributed to our efforts in reducing methane discharges and the implementation of flare reduction opportunities, power generation, converting from open cycle to closed cycle gas turbine (CCGT) and renewable energy projects, production water management, energy efficiency projects and other GHG and methane management. Against this, our total GHG intensity increased by ~4% from 0.179 to 0.187.

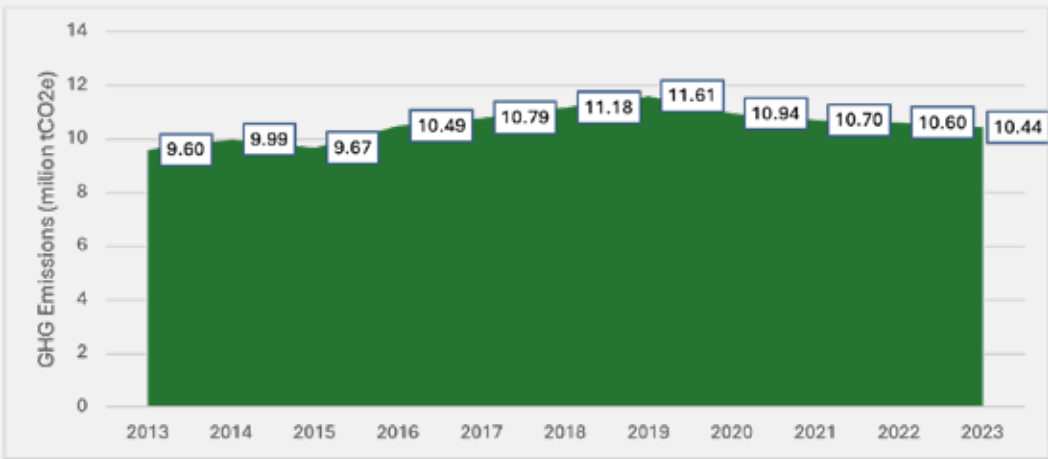
Increased inspections and the greater deployment of drones to remotely collect data

and monitor assets, are leading to lower HSE exposure, fewer emissions, in addition to less deferment.

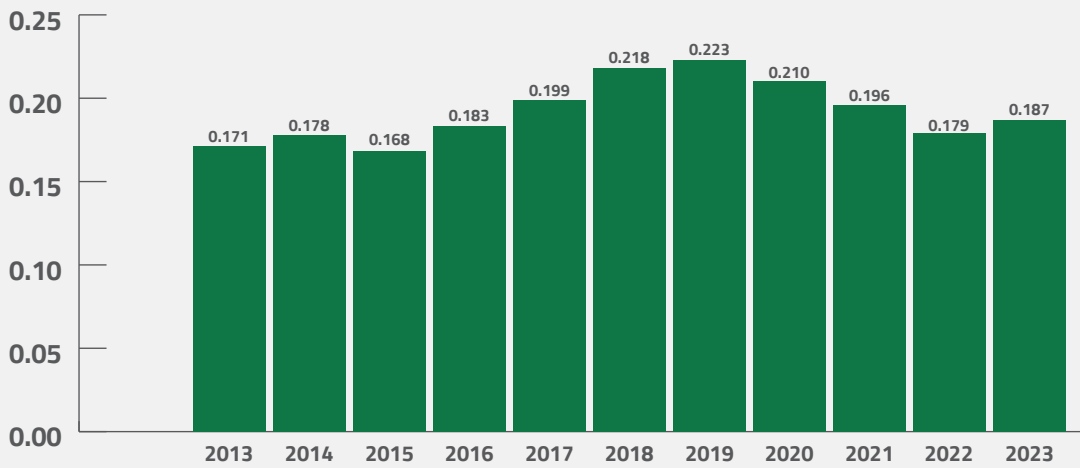
In line with our aspiration to achieve net-zero emissions by 2050, major efforts and measures have been implemented to drive continuous GHG reduction.

These include:

- Setting annual GHG targets
- Establishing energy management and GHG governance
- Regular engagements and reviews



Total GHG Emissions 2013-2023



GHG Intensity 2013-2023
(GHG Intensity includes PDO oil and gas assets and is calculated based on sale hydrocarbons)

- Development of dedicated roadmaps for major GHG sources

ASSURANCE AND VERIFICATION OF GHG DATA

Since 2019, we have independently verified our GHG data annually and last year completed the process for 2022. This was carried out in accordance with the internationally agreed standard ISO 14064 process, which included a review of our emission scope, calculation methodologies and verification visits to a range of facilities.

More generally, PDO was recertified in accordance with the ISO 14001:2015 Environmental Management System.

METHANE MANAGEMENT

We have actively engaged in methane reduction efforts, reflected by our endorsement of a methane emission intensity target of 0.2% by 2025 and near zero methane emissions by 2030. In addition to flare reduction projects, we have undertaken facilities maintenance programmes, equipment electrification and extensive flowlines and pipeline monitoring.

We have employed a focused and tiered methane management campaign using satellite, leak detection and repair (LDAR) and drone surveys. These campaigns have led to reduction of 91% of the fugitive emissions.

In terms of methane reporting, we achieved the Gold Standard Pathway in 2023, as per the United Nations Environment Programme (UNEP)

International Methane Emissions Observatory (IMEO) and the Oil and Gas Methane Partnership 2.0 (OGMP2.0) reporting framework. We joined this initiative in 2021, and our achievements have been highlighted in the "An Eye on Methane: International Methane Emissions Observatory 2023 Report," published by the UNEP.

As part of our ongoing methane management and OGMP2.0 implementation plan, we conducted helicopter and ground-based measurement surveys in collaboration with the German Aerospace Centre (DLR), covering three clusters and 10 facilities. The outcome of the survey will help PDO to benchmark existing detection technologies and achieve the Level 5 Methane Reporting Standard.

Additionally, a flare and combustion efficiency measurement campaign was carried out across our operations which helped us to achieve Level 4 Methane Reporting Standard requirements as per the OGMP2.0 reporting framework and to benchmark the measured source-level efficiency with industry average values. These efforts collectively underscore our dedication to reduce methane emissions and promote sustainable practices within the oil and gas industry.

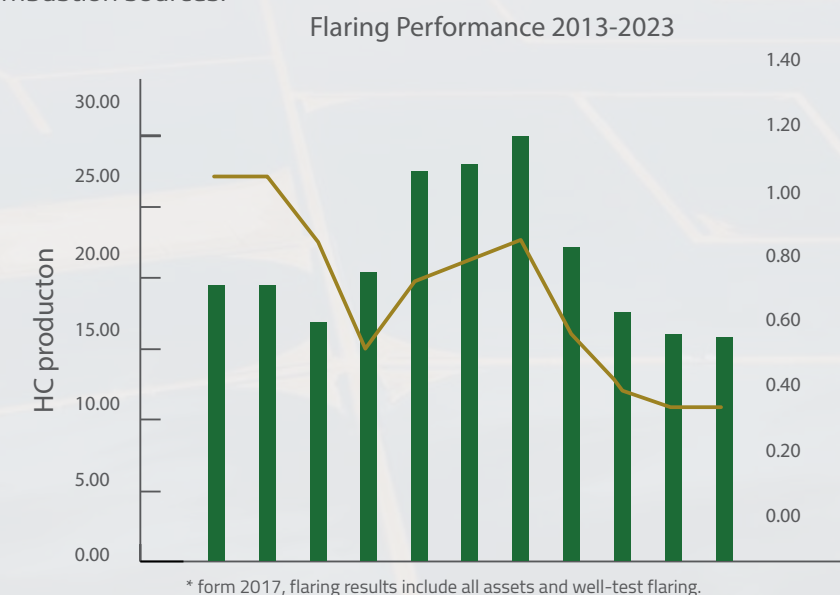
GAS FLARING

We sustained our focus on flare reduction by setting short, medium and long-term targets including projects for the "World Bank Zero Routine Flaring by 2030" initiative.

Upstream flaring fell from 0.89 million tonnes in

2022 to 0.88 million and flaring intensity also dropped from 9.93 tonnes of 1,000 tonnes of hydrocarbons produced to 9.86.

We completed a flare efficiency measurement campaign across PDO using video-imaging spectro-radiometry (VISR) technology. Based on the initial results, most of the flares have a methane destruction efficiency of more than 98%. The same technology was also used to survey the efficiency of 21 combustion sources.



WASTE MANAGEMENT

There was a marked improvement in waste management compared to 2022. Waste recycling increased by 10.2% (10,787 tonnes) against the previous year and we also launched automated waste tracking software.

Total waste generated was 1,038,764 tonnes, out of which 22,067 tonnes were recycled.

HAZARDOUS WASTE MANAGEMENT

There was an increased focus on the reuse and recycling of hazardous waste.

We used treated contaminated soil in levelling non-hazardous waste yards at Marmul, Bahja and Nimr and auctioned 525.9 tonnes of decontaminated ESP cable reels at Bahja, where a decontamination unit for naturally occurring radioactive material (NORM) is starting.

In parallel, we established a reuse option for treated contaminated soil in the graded road re-sheeting within Block 6 to minimise the creation of additional borrow pits and our overall environmental footprint. All other cleaned waste, including batteries, empty drums and plastic, have been recycled by SMEs.

We have initiated a study of the reuse industrial grit blasting with the Environment Authority and 1,230 tonnes was sent to the Raysut cement company for a trial.

There was an improvement in oil recovery from oily sludge in Marmul, Nimr and Rima via gravity separation and the direct pumping of recovered fluid to production stations. This prevents road transportation of oily sludge waste in vacuum tankers, thereby reducing emissions and minimising road traffic exposure.

Oil-based mud (OBM) treatment started for new incoming OBM through microemulsion injection and separation technology at Fahud and for legacy OBM through a dissolving process at Bahja.

NON-HAZARDOUS WASTE MANAGEMENT

Comprehensive clean-up strategies were implemented across various dumpsites. This involved the use of machinery, manual labour and proper waste disposal methods.

Significant progress was made, with the Qarn Alam, Bahja and Lekhwair dumpsites achieving a remarkable 100% clearance rate. Additionally, substantial progress was seen at the Marmul, Fahud and Nimr dumpsites, with clearance rates of 95%, 99%, and 85% respectively.

We commissioned additional organic composter machines for Marmul, Nimr, Bahja, Fahud and Lekhwair, this is in addition to the one already at Qarn Alam, to efficiently handle food waste.

These are capable of handling up to 85% of food waste through innovative processing techniques, generating fertiliser as a by-product.

In terms of In-Country Value, numerous Omani SMEs were introduced under our contract with the Oman Environmental Services Holding Company (be'ah). These firms were involved in the recycling of various materials such as tyres, plastic, paper and wood and were provided with the opportunity to collect recyclable materials.

We effectively managed construction and demolition (C&D) waste by crushing and processing it within designated staging points.

We launched a "Cover All Recycling" initiative in collaboration with be'ah and Renaissance Sager Environmental Solutions (RSES). To kickstart the process, SMEs were enlisted to gather scrap metal from waste yards and transport it to iron factories. This ensured a steady supply of suitable materials for fabrication of boxes, which will be used to collect clothing to be distributed to those in need.



Rima Water Treatment Plant

Environmental Data-PDO								
	2016	2017**	2018**	2019**	2020**	2021**	2022**	2023**
Greenhouse gas emissions (GHGs)								
Total GHGs (million tonnes CO ₂ equivalent)	10.49	10.79	11.18	11.60	10.87	10.70	10.60	10.44
Greenhouse gas intensity ratio (tonne of CO ₂ equivalent / tonne of HC)	0.183	0.199	0.218	0.223	0.210	0.196	0.179	0.187
Flaring								
Flaring (upstream) (million tonnes flared)	0.88	1.19	1.21	1.29	0.96	0.75	0.69	0.68
Flaring intensity (tonne/1,000 tonnes of HC)	12.86	17.90	19.07	20.52	14.37	10.95	9.93	9.86
Energy intensity								
Upstream (gigajoules per tonne production)	1.46	2.31	2.58	2.62	2.67	2.73	2.47	2.52
Acid gases and VOCs emissions per unit of HC production								
Sulphur oxides (SOx) (tonnes per thousand tonnes)	1.03	2.50	2.63	2.32	1.90	1.43	1.13	0.59
Nitrogen oxides (NOx) (tonnes per thousand tonnes)	0.31	0.45	0.47	0.49	0.44	0.45	0.50	0.52
Volatile organic compounds (VOCs) (tonnes per thousand tonnes)	0.21	0.29	0.29	0.28	0.23	0.20	0.16	0.15
Spills and discharge								
# of oil spills > 1 barrel (0.16m3) per million tonnes of production [No/Mt production]	1.97	1.57	0.65	0.66	0.49	0.47	0.09	0.06
Quantity of oil spilled > 1 barrel (0.16m3) per million tonnes of production [t/Mt production]	32.00	3.46	0.46	2.05	5.36	1.12	0.05	0.01

Oil in effluents to surface environment (OIW to sea) thousand tonnes	0.010	0.008	0.022	0.007	0.007	0.004	0.006	0.006
Water								
Water consumed from desalination units (million cubic metres)	6.88	7.03	7.06	7.73	6.50	8.28	9.73	8.59
Produced water handled 1,000 m³/day	803.97	855.52	908.95	927.54	856.86	917.53	937.04	948.6
Produced water used for injection activities 1,000 m³/ day	412.84	449.50	484.21	495.9	504.87	684.65	581.98	703.52
Produced water used for disposal activities 1,000 m³/ day	348.81	336.96	329.22	300.18	206.85	154.02	193.24	152.64
Waste generation								
Hazardous (thousand tonnes)	225.9	222.00	383.69	268.95	282.45	232,975	315.942	703.68
Non-hazardous (thousand tonnes)	41.5	62.15	76.47	135.63	102.97	91,818	118.588	122.13
Total waste (thousand tonnes)	267.4	284.15	460.15	404.58	385.42	324,793	434.530	825.81

*From 2016, data includes gas asset performance, while earlier years only present the data from oil assets except for total GHG and GHG intensity ratio which are estimated based on an ISO14064 audit.

** From 2017 onwards, emissions figures have been back-calculated based on an ISO14064 audit.

