

Sustainable Development through Partnership and Clean Technologies

Abu Dhabi National Oil Company (ADNOC) **Sustainability Report 2013 | Executive Summary**

Message from the Director General



"The United Arab Emirates is a responsible hydrocarbon producer. We are committed to finding and adopting real-world solutions that have economic and environmental returns."

H.E. Abdulla Nasser AlSuwaidi, ADNOC Director General

Keynote Address at Signing Ceremony for ADNOC-Masdar Carbon Capture, Usage and Storage Joint Venture Agreement, 10 November 2013 The Emirate of Abu Dhabi is entering a new era of development with great resolve, dedication and determination. It is moving ahead in its journey to success and towards further prosperity and economic development, driven by the inspiration of its leaders and the aspirations of its people. Under the wise leadership of H.H. Sheikh Khalifa bin Zayed Al Nahyan and the oversight of H.H. General Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces, we are already building milestones on the way to achieving the Abu Dhabi Economic Vision 2030, the roadmap for the Emirate's longterm economic growth and progress.

ADNOC is proud to play a central role in helping realise that vision; the role of providing a secure and reliable energy supply to support our nation's development. To meet this commitment in a safe and environmentally responsible manner, and at the scale that will be required, we will build on our strength in developing clean technologies and techniques that will maximise our value, while increasing the safety, efficiency and environmental performance of our operations. Forging strategic partnerships along the way will be integral to our success, as we seek to benefit from applied technologies and to share the expertise and know-how required to manage the complexity of our challenging work environments.

Clean technologies and partnership

The introduction and application of new processes and technologies that can improve the long-term performance of our natural resources and assets, in parallel to delivering energy efficiencies and emission reductions throughout our hydrocarbon value chain, is critical. Across our operations, we are phasing out onsite power generation with more efficient power imports from the national grid.

Approximately 70,000 tonnes of carbon dioxide equivalent (CO₂e) were avoided as a result of adopting this practice in our onshore activities in 2013.

We were also proud to register our second Clean Development Mechanism (CDM) project in 2013, undertaken by ADCO for flare gas reduction at their Shah field. The project will abate approximately one million tonnes of CO₂e over its crediting period of 10 years. Flaring reduction continues to be one of our Group Companies' major priorities. To date we have achieved a 76.4% reduction in flaring across our operations compared to our 1997 levels, despite undergoing significant expansion in our production during this period.

The year 2013 also marked our flagship partnership with Abu Dhabi Future Energy Company (Masdar) for carbon capture, usage and storage (CCUS). The application of CCUS clean technology provides two obvious advantages. Injecting CO₂ safely helps limit emissions in a region that has one of the world's largest carbon footprints per capita. In addition, CCUS enhances oil production through enhanced oil recovery (EOR), while liberating the much needed natural gas to the markets that would otherwise be used for injection into oil fields to maintain production rates and reservoir pressure.

The joint venture is the first phase of an industrial-scale CCUS network planned as part of Abu Dhabi's commitment to decarbonize its economy and create a low-carbon power generation industry. It will also collaborate with ADNOC's Petroleum Institute and Masdar's Institute of Science and Technology

in developing leading edge technologies to optimise CO₂ management in Abu Dhabi.

Going forward, the challenge will be to make CCUS projects both commercially viable and attractive to invest in. To this end, the joint venture between ADNOC and Masdar is a pioneer that will create a benchmark for the technical and commercial delivery of these projects region-wide.

Energy integration

ADNOC's long-term strategy is to move towards greater energy infrastructure integration in Abu Dhabi and the wider UAE. We are beginning to recognise the value that energy integration brings through our major projects that include the Integrated Gas Development (IGD) project, which was fully operational this year, and through our collaborations with other domestic players including Union Railway on the sulphur rail line between Shah, Habshan abd Ruwais, and with International Petroleum Investment Company (IPIC) on the Habshan-Fujairah pipeline.

These projects provide strategic supply routes for our products to global markets, whilst also creating economic benefits for the country as a whole through employment opportunities and boosting the local and regional supply chain for goods and services.

Safe and responsible operation

We have been in the oil and gas business for over 40 years and our priority is to always operate safely and in an environmentally responsible way. Sadly however, eleven workers lost their lives while working for ADNOC in 2013. I would like to express my sympathy and extend our

condolences to the workers' families, friends and to their communities. Our belief that work-related deaths and serious injuries and illnesses are preventable will motivate us to reinforce our emphasis on safety training about hazards on the job and the need for continual vigilance across our operations.

Supporting a knowledge-based society

As we enter a new era in the oil and gas industry, where the extraction of existing and new hydrocarbon reserves becomes more complex and technically challenging, our requirements for technical experts to support our growing operations across the hydrocarbon value chain becomes increasingly important.

ADNOC places great emphasis on implementing a robust strategy for recruitment, development and retention of human capital. ADNOC is also committed to the development of UAE nationals in alignment with the UAE Government's plan to create employment opportunities for Emiratis, known as 'Emiratization'. Our current five year target is to achieve 75% Emiratization across core company positions by the end of 2017.

With our highly motivated and determined manpower, we are confident that the building blocks assembled year after year will contribute to a bright future for the UAE, and will ensure continued prosperity in the years ahead.

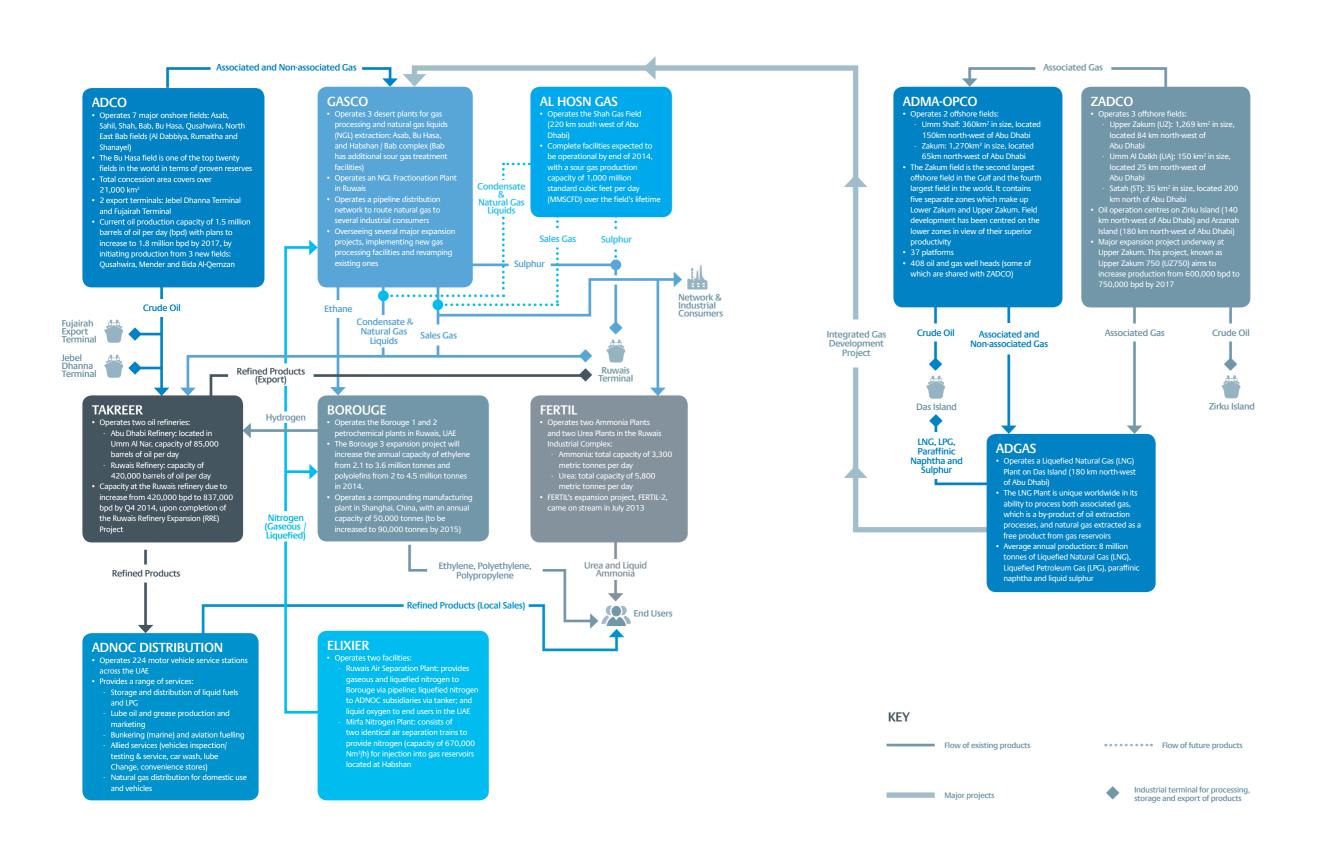


Abdulla Nasser AlSuwaidi Director General

ADNOC Group Companies

ONSHORE

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NDC

- Provides onshore and offshore drilling services to the ADNOC Group Companies
- 2,085,831 feet drilled in 2013
- Operates:
- 13 offshore jack-up drilling rigs and 2 offshore island drilling rigs
- 26 land drilling rigs
- 5 water-well rigs (to survey the quality, quantity and distribution of groundwater in the Emirate of Abu Dhabi)
- 1 multi-purpose service vessel

ADNATCO & NGSCO

- · Provides international marine transportation of LNG, petroleum products, bulk sulphur and polyethylene
- Operates a fleet of:
- 8 LNG Carriers
- 9 Oil & Chemical Tankers
- 7 Bulk Carriers
- 2 Container Vessels
- 1 LEG Carrier

ESNAAD

- Provides a range of facilities, services and supplies to the oil and gas sector, including:
- Offshore marine support services (ESNAAD operates a fleet of 53 vessels)
- Berthing, bunkering and bulk supply
- Port services
- Well services
- Drilling fluids services
- Specialised production chemicals
- Operates a Grinding Plant, Blending Plant and Brine Plant in the Mussafah Offshore Supply Base

IRSHAD

- Provides marine services to the petroleum ports of Abu Dhabi (Ruwais, Jebel Dhanna, Das Island, Zirku Island, Zakum Field and Mubarraz) and Fujairah Port
- Services include:

OFFSHORE

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- Pilotage, berthing / unberthing of O&G tankers and the loading of oil products
- Offshore terminal maintenance. inspection and associated diving operations
- Operational and technical management of a fleet of 50 vessels of which 10 ASD Tugs, 4 tail back boats and 4 pilot boats are ADNOC owned

ADNOC Major Projects

The world will require all forms of energy to meet the increase in demand that will be driven by population growth, improved living standards and expanded urbanisation.

To help meet the rising global energy demand and secure the gas supplies required to fuel the development of our local economy, ADNOC is collaborating with local oil and gas partners including Dolphin Energy, Emirates LNG, and Abu Dhabi Future Energy Company (Masdar). ADNOC is also engaged in a series of strategic projects that will drive production growth by exploring and developing new hydrocarbon resources, as well as improving the long-term performance of our existing fields.

In recent years, our production growth has emphasised natural gas production, where natural gas is seen as a cleaner fuel amidst rising global concerns surrounding climate change and oil dependency. However we recognise that without gains in efficiency throughout the energy value chain, production growth cannot sustainably curb the upward-sloping energy demand curve we are challenged with today.

ADNOC's strategy therefore places emphasis on integrating clean technologies with our operations, of which notably include our on-going Clean Development Mechanism (CDM) projects and our flagship partnership with Abu Dhabi Future Energy Company (Masdar) for carbon capture, usage and storage (CCUS), as well as moving towards greater energy infrastructure integration in

Abu Dhabi and the wider UAE. We are beginning to recognise the value that energy integration brings through our major projects that include the Integrated Gas Development (IGD) project, and through our collaborations with other domestic players including Union Railway on the sulphur rail line to move granulated sulphur from our sour gas fields in Shah and Habshan to Ruwais, and with International Petroleum Investment Company (IPIC) on the Habshan-Fujairah pipeline. These projects provide strategic supply routes for our products to global markets, whilst also creating economic benefits for the country as a whole through employment opportunities and boosting the local and regional supply chain for goods and services.

Integrated Gas Development Project

The Integrated Gas Development (IGD) Project, implemented by ADGAS, ADMA-OPCO and GASCO, is a mega onshore-offshore project that saw full completion in Q3 2013. As part of this undertaking, additional gas wells were drilled at ADMA-OPCO's offshore Umm Shaif field for gas transfer to ADGAS's new facilities on Das Island and then via a 200 kilometres pipeline to GASCO's Habshan plant for further processing.

The IGD project will ultimately

provide up to 800 million standard cubic feet per day (MMSCFD) of gas for domestic supply.

Shah Gas Development Project

The Shah Gas Development (SGD) Project, implemented by Al Hosn Gas, is a technically-challenging project that aims to extract and process approximately 1,000 MMSCFD of wet gas from the Shah Arab field sour gas reservoir – located 210 km southwest of Abu Dhabi city. From this sour feed gas stream (which contains as much as 23% hydrogen sulphide), the project will provide 500 MMSCFD of clean natural gas for the Abu Dhabi market, making it one of the most critical energy infrastructure projects for the Emirate of Abu Dhabi.

The SGD Project facilities are targeting production commencement in Q4 2014.

Sahil-Asab-Shah Full Field Development Project

The Sahil-Asab-Shah (SAS) Full Field Development Project, implemented by ADCO, is one of the company's major projects in ADCO's strategy to increase onshore oil production to 1.8 million barrels of oil per day (bpd) by 2017. The project involves major installations and modifications to surface handling facilities, aimed at increasing the production capacity at Sahil, Asab and Shah – three of

the major oil fields that constitute ADCO's South East Asset. Covering an extensive area of 7,525 km², the South East asset also includes the oil fields Qusahwira and Mender. Collectively, the asset contributes to almost one-third of the company's daily production.

The Qusahwira oil field was commissioned in Q4 2013 with an initial production capacity of 30,000 bpd, increasing to 53,000 bpd by 2017. Production from Mender is targeted in 2017.

Upper Zakum Full Field Development Project

The Upper Zakum Full Field Development Project, implemented by ZADCO, is a mega offshore project that is central to meeting the company's strategic target of increasing production capacity from the Upper Zakum oil field to 750 thousand barrels of oil per day by 2017, sustainable for 25 years. The project, also known as Upper Zakum 750 (UZ 750), is unique in its application of artificial islands as drilling and production centres (instead of conventional well head platform towers), and its utilisation of new technologies in Extended Reach Drilling (ERD) and Maximum Reservoir Contact

(MRC) to effectively develop the entire field. ERD technology enables wells to be initially drilled vertically following which they can be drilled horizontally to target reservoirs up to several miles away; the innovative MRC technology unlocks tighter areas in the reservoir and reduces

the number of new wells required. The first of the four artificial islands that constitute the UZ 750 Project, the South Island (shown in picture below), was fully completed in 2012. The North Island was completed in 2013; the Central and West Islands are due for completion in early 2014.

ADNOC-Masdar Carbon Capture, Usage and Storage Joint Venture

In 2013, ADNOC established a joint venture with Abu Dhabi Future Energy Company (Masdar), the Middle East's first project focused on exploring and developing commercial-scale projects for carbon capture, usage and storage (CCUS). The project consists of three core components. First, $\rm CO_2$ will be captured onsite at Emirates Steel Industries (ESI), the UAE's largest steelmaker facility. Second, the $\rm CO_2$ will be compressed and transported along a 50 km pipeline to ADCO's onshore oil fields. Third, the $\rm CO_2$ will be injected into the oil fields for enhanced oil recovery (EOR), which liberates the much needed natural gas to the markets - that would otherwise be used for injection into oil fields to maintain production rates and reservoir pressure. With demand for electricity on the rise due to industrial development, the CCUS project will allow the UAE to preserve its hydrocarbon gas for domestic power generation as gas is used as a feedstock in all of the Abu Dhabi Emirate's power plants.

The joint venture is the first phase of an industrial-scale CCUS network planned as part of Abu Dhabi's commitment to decarbonize its economy and create a low-carbon power generation industry. The project will sequester up to 800,000 tonnes of CO₂ annually. Project completion is set for early 2016.



ADNOC Products and Markets Asia Crude oil and condensate exported ('000 bbl) Total* 527.04 **Europe** Crude oil and condensate exported ('000 bbl) Gas and sulphur exported ('000 tonnes) S Petroleum products exported ('000 tonnes) Jet oil / Kerosene 3,533 Gas oil 83 Gas exported ('000 tonnes) Australia and **New Zealand** Crude oil and condensate exported ('000 bbl) Total* 239 North and **South America Africa** Petroleum products exported ('000 tonnes) Jet oil / Kerosene 214 Gas oil 113 Petroleum products exported ('000 tonnes) Sulphur exported ('000 tonnes) Jet oil / Kerosene 35 Gas oil 215 Sulphur exported ('000 tonnes) Sulphur 1,005

* ADNOC share of products exported in 2013 Crude oil and condensate

The main onshore grade for our crude oil is Murban. Our offshore grades include Umm Shaif, Lower

grades include Umm Shaif, Lower Zakum and Upper Zakum. ADNOC also produces two grades of condensate; Uweinat and Thamama.

ADNOC has plans to blend crude from the Umm Shaif and Lower Zakum oilfields into a new blend, Das Crude, which will replace the existing Umm Shaif and Lower Zakum grades by Q3 2014. The new blend will be introduced based on market demand and in view of ADMA-OPCO's growing oil production.

Currently, crude from the Umm Shaif and Lower Zakum fields is transferred to Das Island for processing, storage and export. Mixing the two crudes and consequently storing it in unified tanks will free up two storage tanks on a busy island and secure the space required for accommodating ADMA-OPCO's additional production.

The new mixture will also save a considerable fraction of the loading time needed compared to pumping two different grades into oil tanks. This will ensure better shipment programming and flexibility, as keeping oil tankers beyond the timeframe allowed for loading is avoided.

Petroleum products

ADNOC's refined products are produced by TAKREER and are sold domestically by ADNOC DISTRIBUTION. Our refined products are also exported to international markets.

Sulphur and gas

Sulphur is a valuable by-product of our operations. Sulphur production is set to increase significantly when production commences from the sour Shah Arab field, currently being developed by Al Hosn Gas. ADNOC also markets its share of Liquefied Petroleum Gas (LPG) and paraffinic naphtha, produced by GASCO and ADGAS.

Petrochemicals

ADNOC petrochemicals are produced by BOROUGE and FERTIL. Borouge is a leading provider of innovative, value creating plastics and has a polyolefins (polyethylene and polypropylene) manufacturing capacity of 2 million tonnes per year (increasing to 4.5 million tonnes by 2014 upon completion of the Borouge-3 project). Borouge's plastics are sold in over 50 countries worldwide, for various applications that include the infrastructure, automotive and advanced packaging industries.

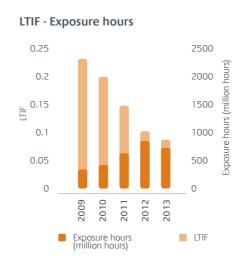
FERTIL manufactures fertilizers for domestic and international consumption. In 2013, FERTIL produced 802,561 tonnes of ammonia and over 1.34 million tonnes of urea.

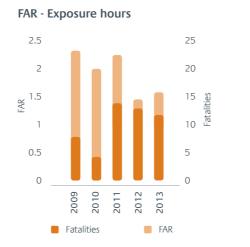
Sustainability Performance Summary

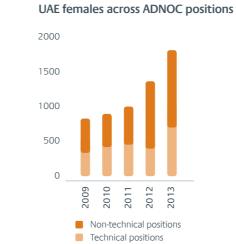
Data on our sustainability performance from 2009 to 2013 is presented below.

PEOPLE	2009	2010	2011	2012	2013
Employees – ADNOC Group	>22,000	>32,000	>33,000	>37,000	>50,000
Women in workforce (%)	6	6	8.5	8.7	8.3
Employee training (thousand man-hours)	705	775	>939.5	1,160	1,900
Employee training (AED million)	-	47.5	78.5	229.5	306
Fatalities – employees	1	2	1	0	2
Fatalities – contractors	6	2	12	12	9
Hours worked (million hours)	313	355	589	865	710
Fatal accident rate (FAR) - per 100 million hours	2.23	1.13	2.21	1.39	1.55
Lost time injury frequency (LTIF) - per million hours worked	0.24	0.19	0.14	0.1	0.09
Tier 1 process safety events ^a	-	25	11	5	28
Tier 2 process safety events ^a	-	55	19	9	38

^a Tier 1 and Tier 2 process safety events are reported as per the American Petroleum Institute Recommended Practice 754 (API RP 754) guidelines.



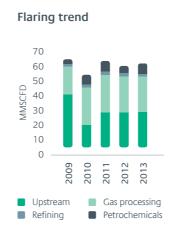




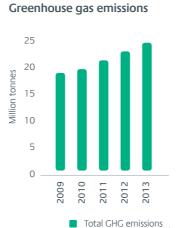
ENVIRONMENT	2009	2010	2011	2012	2013
Flaring (MMSCFD) ^a	65	53	63	60	62
GHG emissions (million tonnes) ^b	19	19.8	21.4	23.2	24.7
Direct energy consumption (million GJ)	-	279.5	450	527	912.6
Indirect energy consumption (million GJ)	-	21	18	21.2	18.6
Energy savings (million GJ)	-	13	14	17.9	16.9
Oil spill incidents – to land and water ^c (number)	-	-	-	25	38
Volume of oil released (boe)	-	-	-	1,125.3	3,715.1
Volume of oil recovered (as a % of the volume of oil released)	-	-	-	77	99.7

^a Minor amendments have been made to ADNOC's 2012 flaring data.

Environmental expenditure (AED million)









Clean Development Mechanism (CDM) projects registered with the UNFCCC to date

76.4%

Reduction in flaring compared to 1995 levels

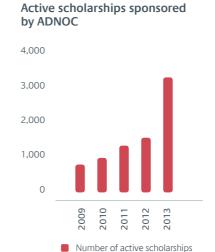
16.9 million GJ

Energy savings in 2013

SOCIETY	2009	2010	2011	2012	2013
Active scholarships (number) ^a	833	964	1,236	1,497	3,289
Petroleum Institute graduates ^b	31	39	47	71	121
Petroleum Institute graduates – Emiratis (%)	-	-	>67	66	43.8
Emiratis in executive and senior management positions (%)	71	84	66.5	65	74
Community investments ^c (AED million)	~ 4.7	19.2	25	106.4	137
Procurement budget spent on local suppliers ^d (%)	-	>75	>77	70	89

^a Scholarships are awarded under ADNOC's Scholarship Programme, which sponsors talented UAE nationals to pursue their post-secondary education in reputable academic institutions in the UAE and abroad, and to specialise in the various technical disciplines essential to the oil and gas industry. b The Petroleum Institute (PI) is one of ADNOC's three academic institutes that offers bachelor and master degrees in several engineering disciplines of





Academic institutes dedicated to providing world-class education and research facilities

AFD 137 million

Community investments within the Emirate of Abu Dhabi in 2013

How we operate

Our approach

Having our people return home safe and well at the end of every work day and enabling them to end their working life fit and healthy is central to everything we do. Regardless of where our people are located or the type of work they undertake, we strive to create a working environment that is free from occupational illness or injury. This is reflected in the processes and controls we have in place throughout our organisation. Our principles and requirements for safe, reliable and compliant operations are part of our Health, Safety and Environment Management System (HSEMS) against which all ADNOC operations are required to align with. Collectively, these requirements are designed to enable our operations to safely return to full function as soon as possible.

Employing and developing talented and motivated people who share our values is critical to our long-term success. We are committed to providing a work environment in which everyone is treated fairly and with respect and has the opportunity to maximise their potential.

People

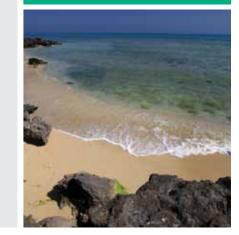


Our approach

While pursuing our goal to be a global leader in the oil and gas industry, ADNOC has an overriding commitment towards environmental protection and stewardship. This commitment is anchored in our HSE policy and will continue to be one of our foremost priorities. We operate our facilities with integrity and with the goal of preventing environmental incidents. The principle of Pollution Prevention and Control (PPC) is central to how we operate, and we concentrate our efforts on taking a proactive approach towards environmental protection rather than one that focuses on remedial efforts alone.

Our operations are required to assess the environmental risks and impacts of new projects and substantially altered existing projects, and ensue our risks are managed to an acceptable level and do not result in unacceptable consequences to our people, environment, assets and our reputation. This is supplemented with continuous environmental monitoring during the development and active phases of our projects and through to decommissioning.

Environment



Our approach

As the national oil company of Abu Dhabi, ADNOC has an important role to play in driving the creation of in-country value. We accomplish this in several ways that include the transfer of knowledge and technology, investing in education and research, job creation and development of local talent and the local supply chain, developing critical infrastructure to support our economy's growth and development, and the establishment of best practices across the oil and gas industry.

The broad and long-lasting socio-economic benefits generated by our operations are never delivered at the expense of our commitment towards being a responsible corporate citizen. We strive to demonstrate this commitment through practical actions undertaken in partnership with our stakeholders to ensure that our operations are aligned with their interests and that we continue to build mutually beneficial relationships. Our aim is to create opportunities that positively enhance the lives of people who work for us and live near our operations, as well as the society overall.

Society



^b GHG emission values are based on equity share approach and derived using the Intergovernmental Panel for Climate Change (IPCC) 100-year Global Warming Potentials (GWP).

^c Oil spill incidents reported are those that exceed one barrel of oil equivalent (boe).

c Data excludes ADNOC's broad infrastructure investments which are difficult to quantify because of their wide-ranging scale and diversity. ^d ADNOC defines local supplier as a provider of materials, products and services that is based in the UAE or has a local sponsor in the UAE. The sponsorship arrangement often requires the sponsor to share a percentage of the contract with their sponsor, ensuring that a portion of the contract value is realised locally. Cautionary statement: Where '-' is stated, the data is either not available for the reporting year or has been disclosed in the respective ADNOC sustainability report in a manner that is not consistent with collection and reporting methodologies that have taken effect after the data's disclosure. In the latter case, the data has been omitted from this publication as it is not comparable with data reported for later years under revised reporting protocols

About ADNOC

Abu Dhabi National Oil Company (ADNOC) was established in 1971 to pioneer the petroleum industry in the Emirate of Abu Dhabi, and to develop the in-country value of the United Arab Emirates (UAE) as a whole. Today, ADNOC is one of the world's leading oil and gas companies, with an annual production of over 2.7 million barrels per day (bpd) and an integrated energy infrastructure comprised of 15 specialist subsidiary

and joint venture companies, collectively known as the ADNOC Group Companies.

Thriving on a spirit of enterprise and a commitment to safely and reliably deliver energy to our domestic and global consumers, our Group Companies' operations cover all aspects of the hydrocarbon value chain, including crude oil and natural gas exploration, production, refining, processing, global

marketing, maritime services and the manufacture of petrochemicals.

ADNOC's headquarters are located in Abu Dhabi, UAE. Our major operations are based in the UAE, although some of the ADNOC Group Companies have offices in other countries, such as Borouge, which has marketing operations and representative offices in various countries worldwide.

Our leadership

The Supreme Petroleum Council (SPC) was established under law No. 1 of 1988, which stipulates that the Council is the superior authority responsible for the petroleum industry in the Emirate of Abu Dhabi.

The Council formulates Abu Dhabi's petroleum policy and follows up its implementation across all areas of the petroleum industry to ensure that the set goals are accomplished.

The SPC functions as ADNOC's governing board and oversight committee. H.H. Sheikh Khalifa Bin Zayed Al Nahyan, the president of the UAE and Ruler of Abu Dhabi, is the Chairman of the SPC.

Under H.H. Chairmanship, the Emiri decree on 25 June 2011 was issued restructuring the SPC with membership from the ADNOC Director General and a further 8 independent members.

ADNOC reprts directly to the SPC on matters of its financial performance, which are regarded as highly confidential under both ADNOC and Abu Dhabi protocols. An external audit committee, chaired by a member of the SPC, provides independent assurance over ADNOC's financial performance and reports directly to the SPC.



15 GROUP Companies

that cover all aspects of the upstream and downstream petroleum industry



>2.7 MILLION

barrels of oil production per day (bpd)



>4.2 BILLION

standard cubic feet per day of net gas production

About this publication: This is the fifth year that ADNOC has reported on its sustainability efforts. This publication provides an executive summary of ADNOC's 2013 operations in the United Arab Emirates and ADNOC's sustainability performance for the five year period starting from 1 January 2009 to 31 December 2013. To view our full ADNOC 2013 Sustainability Report, which has been prepared in accordance with the Global Reporting Initiative (GRI) Generation 3.1 (G3.1) Sustainability Reporting Guidelines (including the Oil and Gas Sector Supplement), please visit www.adnoc.ae/sustainability.

Please direct any questions regarding this publication or the full ADNOC 2013 Sustainability Report to:

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