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 long-term 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 highest standards that will be required, we will build on our strength in developing clean technologies and techniques that will maximise our value, while improving the 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 (Mondar) for carbon capture, usage and storage (CCUS). The application of Clean coal 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 “Emiratisation”. Our current five year target is to achieve 75% Emiratisation 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.

H.E. Abdulla Nasser AlSuwaidi, ADNOC Director General
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 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 IGD Project facilities are targeting production commencement in Q4 2014.

**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. The Shah Gas Development project that aims to extract and process approximately 1,000 MMSCFD of wet gas from the Shah Arab field sour gas reservoir.

**Sahil-Asab-Shah Full Field Development Project**

The Sahil-Asab-Shah (SAS) 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.

**Upper Zakum Full Field Development Project**

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**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, CO₂ will be captured onsite at Emirates Steel Industries (ESI), the UAE’s largest steelmaker facility. Second, the CO₂ will be compressed and transported along a 50 km pipeline to ADGAS’s onshore oil fields. Third, the CO₂ 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 decarbonise 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

Crude oil and condensate
The main onshore grade for our crude oil is Murban. Our offshore 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.
Data on our sustainability performance from 2009 to 2013 is presented below.

**How we operate**

**Our approach**

Having always been rooted home and safe in the oiled world of our childhoods and young years, and having spent their entire working life central to everything we do. Regardless of whether our people are located on the surface or underground, we strive to create a working environment that is free from occupational injuries or illness. This reflects the key principles and requirements for safe, reliable and competent operations are part of our life. Safety and environmental management systems (SAMS) are designed for well operations to ensure their safety and reliability continue to be one of our core business practices. The SAMS provide a framework for identifying, mitigating and managing risks to our people, our operations and the environment. This is supplemented with continuous environmental monitoring during the development and active phases of our projects and through to decommissioning.

**Our approach**

As the national oil company of Abu Dhabi, ADNOC has an important role to play in driving the creation of its 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 content and the local supply chain, developing critical infrastructures to support our economy’s growth and development, and the establishment of oil and gas projects. The broad and long lasting socio-economic benefits generated by our operations are required to be assessed by the environmental risks and impacts of new projects and substantially planned operations. While our risk and our mission are managed to an acceptable level and do not result in unacceptable consequences to our people, our 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.

**Sustainability Performance Summary**

**People**

- **Total employees**
  - **2009**: 20,500
  - **2010**: 32,000
  - **2011**: 33,000
  - **2012**: 37,000

**Revenue (AED million)**

<table>
<thead>
<tr>
<th>Year</th>
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<th>2010</th>
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<th>2012</th>
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<td>75,000</td>
<td>87,000</td>
<td>106,000</td>
<td>112,000</td>
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</table>

**Emirate of Abu Dhabi in 2013**

- **Active scholarships** (number)
  - **2009**: 833
  - **2010**: 964
  - **2011**: 1,236
  - **2012**: 1,497

**Energy savings in 2013**

- **16.9 million GJ**

**GHG emissions (million tonnes)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
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<tbody>
<tr>
<td>ADNOC Group</td>
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<td>0.19</td>
<td>0.14</td>
<td>0.10</td>
<td>0.09</td>
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**Flaring trend**

<table>
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<th>2011</th>
<th>2012</th>
<th>2013</th>
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<tbody>
<tr>
<td>Flaring trend</td>
<td>-75</td>
<td>19</td>
<td>9</td>
<td>70</td>
<td>89</td>
</tr>
</tbody>
</table>

**Pre-completion budget, gas or local supply (AED million)**

<table>
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<tr>
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<th>2011</th>
<th>2012</th>
<th>2013</th>
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<tr>
<td>ADNOC Group</td>
<td>375</td>
<td>709</td>
<td>1000</td>
<td>1075</td>
<td>1192</td>
</tr>
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</table>

**Petroleum institute graduates**

<table>
<thead>
<tr>
<th>Year</th>
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<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADNOC Group</td>
<td>833</td>
<td>964</td>
<td>1,236</td>
<td>1,497</td>
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</table>
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 Emir decree on 25 June 2011 was issued restructuring the SPC with membership from the ADNOC Director General and a further 8 independent members.

ADNOC reports 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.

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.