PIONEERING A LOW CARBON FUTURE

WHAT IS NEXT FOR THE MIDDLE EAST AND NORTH AFRICA'S ENERGY TRANSITION?

WHITEPAPER

APRIL 2022

BUREAU VERITAS

PIONEERING A LOW CARBON FUTURE

WHAT IS NEXT FOR THE MIDDLE EAST AND NORTH AFRICA'S ENERGY TRANSITION?

WHITEPAPER

APRIL 2022

CONTENTS

Exclusive insights detailed in this Whitepaper were harvested from Bureau Veritas' roundtable event in March, held by Dubai-based consultancy Gulf Intelligence. Conducted under the Chatham House Rule, senior delegates brainstormed key points regarding the evolution of the energy transition in the Middle East and North Africa (MENA). All quotes are paraphrased and cannot be used in other material. Any future use of this material must cite Bureau Veritas and the title of this Whitepaper in full. This Whitepaper does not attempt to cover all aspects of the energy transition in the MENA, but to reflect delegates' main points – all of which are indicative of the rapid changes underway.

THE ENERGY TRANSITION TAKES SHAPE

The status quo of how we produce, transport, and consume energy is being rewritten by the global energy transition – bringing a tsunami of potential, opportunities, and challenges. The transition centers around the energy sector's journey from the current dominant fossil-based system – oil, gas, coal – towards more sustainable energy resources, like renewables, hydrogen, and nuclear power. This is a vast undertaking; today, the global economy is almost 80% fuelled by fossil fuels.[1]

Countries in the Middle East and North Africa (MENA) – many of them leaders in fossil fuel markets for up to half a century – are increasingly focused on diversifying their energy basket with "greener" options. This push is aimed at ticking two non-negotiable boxes, which currently clash: simultaneously meet rising energy demand and dramatically reduce carbon dioxide (CO_2) emissions by 2050. The Paris Agreement, the world's biggest climate-related deal signed in the French capital in 2015, set out a goal to to limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C 2050. Reaching this target – and thus mitigating the worst impacts of climate change in MENA and beyond – is an enormous task that will require most nations to target net zero CO_2 emissions by mid-century.

RUSSIA-UKRAINE: DOMINO EFFECT

The ongoing crisis between Ukraine and Russia this year has intensified the spotlight on the dynamics between fossil fuels and renewables, i.e., how far has the energy transition advanced in terms of ensuring energy security? The answer is: not far enough, delegates agreed. Jeopardizing the supply of significant energy providers like Russia, previously the world's biggest oil exporter, puts enough strain on the global energy system to make it very clear that renewable energy markets are not yet large enough to take the load.

The ecosystem underpinning energy security must undeniably transition, but it cannot risk a collapse, delegates stressed. Supporting fossil fuel markets remains pivotal to keeping the lights on, literally. This sentiment was echoed by Amin H. Nasser, President and Chief Executive Officer (CEO) of Saudi Aramco, the world's biggest oil producer and most valued company, at a global conference in March.[2] His public comments highlight how prevalent this concern surrounding energy security has become.

This is especially true amid rising energy demand; the Middle East's primary energy consumption will swell by more than 20% up to 2050, for example.[3] And so, a two-pronged approach remains the safest route for now; a strategy the MENA is following. Oil and gas are expected to still play a major role in the region's energy basket by 2050, yet renewables will also grow in the Middle East, for example – by more than twice the global average.[4] "The transition is not just a simple process of substitution – out with the old, in with the new. These very different markets will continue to live side-by-side for a long time," a delegate emphasized.

MENA countries will need to proactively adjust to a major shift in the fuel export market in coming years, including transportation; Norway expects to sell its last car with an internal combustible engine in the second quarter of this year, for example. Such vigor for cleaner energy will only mount among the MENA's energy clients, so exporters must be ready to flex. As the adage goes, in today's energy market, the only certainty is uncertainty – and the MENA is no exception.

DO MORE WITH LESS

Greater attention must be given to energy efficiency, including the carbon intensity (CI) of infrastructure for fossil fuels, delegates said. The MENA is home to some of the world's most expansive infrastructure portfolios, so energy stakeholders must start now on this multi-decade effort to make meaningful progress by mid-century.

Low hanging fruit – changes that can be made with relative affordability in a short period of time – can help ease the burden on energy stakeholders grappling with a long list of environmental demands. Exploring the conversion of motor driven compressors into turbine drive operations is an important route, as is replacing old and inefficient units that guzzle energy with more efficient alternatives, plus minimizing flaring, cold vents, and methane leaks. For the latter, consider that nearly 45% of current methane emissions from oil and gas operations could be avoided with measures that would have no net cost – a win-win for the climate and stakeholders under pressure to support decarbonization.[4] The same proactive approach is needed to address CO_2 emissions in all energy stakeholders' buildings, as all buildings globally are responsible for 39% of the world's CO_2 emissions.[5]

[1] https://www.apicorp.org/wp-content/uploads/APICORP-Top-Picks-2022_EN_FINAL.pdf
[2] https://www.aramco.com/en/news-media/speeches/2022/remarks-by-amin-nasser-at-cera-week
[3] https://www.bp.com/content/dam/bp/business-sites/en/global/corporate//energy-economics/energy-outlook/bp-energy-outlook-2022-region-insight-middle-east.pdf
[4] https://www.iea.org/reports/methane-emissions-from-oil-and-gas
[5] https://www.worldgbc.org/embodied-carbon

RENEWABLES MARKET GAINS MOMENTUM

Renewable capacity growth in the MENA is expected to double over the next five years, compared to the last five years, from 15GW to over 32GW. More than three-quarters of the capacity expansion is concentrated in five countries: the UAE, Saudi Arabia, Israel, Egypt, and Morocco. One common driver is the cost-effectiveness of solar photovoltaics (PV) to meet climate goals and fossil fuel diversification needs, especially as the region is already home to some of the world's largest solar projects (Saudi Arabia, UAE, Morocco). Overall, solar PV will account for more than two-thirds of the region's renewable capacity growth by 2026.[1] The MENA receives between 22-26% of all solar energy striking the earth, which translates into huge potential for solar energy per square kilometer per year – equivalent to the energy generated from up to two barrels of oil.[2] The MENA's wind power generation business is also bursting with potential. For one, Egypt's market is expected to grow at a compound annual growth rate (CAGR) of 15% during 2020-2025.[3] But the great potential across the MENA needs equally great financial support. At least $23bn is needed in annual investment in power grids and system flexibility across the region, to reach a pathway well below 2°C. While these initial figures are high, countries can recoup losses via savings on fossil fuel imports and curbing subsidies.[4]

[1] https://enterprise.press/wp-content/uploads/2021/12/Renewables2021-AnalysisandforecasttoTo2026.pdf
[2] World Bank – https://bit.ly/3vdHMzK
[3] https://gwec.net/mena-wind-power-2021/
[4] https://gwec.net/wp-content/uploads/2022/03/GWEC-GLOBAL-WIND-REPORT-2022.pdf

MARATHON, NOT A SPRINT

The actual production and consumption of greener energy is only possible if a vast amount of progress is made beforehand to establish a safe, scalable, sustainable, and commercially viable value chain. Establishing transparent and collaborative regulatory architectures, certifications and verifications, legal frameworks, financial ecosystems, private-public collaborations, inter-nation alliances, plus talent advancements are just some of the boxes that must be ticked in the MENA to make the scale of change required by 2050 a reality. Consider also that reaching climate goals requires the massive deployment of all available clean energy technologies – such as renewables, electric vehicles (EVs), energy efficient building retrofits – between now and 2030. For example, for solar power, reaching climate goals is equivalent to installing the world's current largest solar park roughly every day.[1] As one delegate summarized: "We must remember that it is called a *transition* for a reason."

[1] https://www.iea.org/reports/net-zero-by-2050

ESCALATING PRESSURE

The world is still not on track to avoid the worst that climate change will bring, despite it being seven years on from the monumental climate deal in Paris in 2015. The carbon budget is running out: CO_2 emissions have increased every year since 2015, except in 2020 due to the COVID-19 pandemic. Delaying decisive action to reduce emissions sustainably could lead to significant economic and social costs.[1] This is especially pertinent across the MENA. The world's most water-stressed region[2] is very vulnerable to rising temperatures and extended droughts, in turn magnifying the risk of climate refugees. Urgent, consistent, and innovative action is needed as the region's rising population – 484mn in 2018 could surge to 724mn by 2050[3] – puts additional strain on the energy system. Delegates stressed that time is of the essence, so we must focus on what can be done right now and not get too lost in the theoretical ideas of decades to come.

[1] https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/energy-outlook/bp-energy-outlook-2022-region-insight-middle-east.pdf
[2] https://reliefweb.int/report/qatar/middle-east-and-north-africa-mena-most-water-stressed-region-earth
[3] https://www.statista.com/statistics/978535/mena-total-population/

PIONEERING A
LOW CARBON FUTURE

NEW WORLD OF ENERGY

KEY FIGURES

2

THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE'S (UNFCCC) CONFERENCE OF PARTIES (COP) IS THE WORLD'S BIGGEST CLIMATE CONFERENCE, HELD EVERY NOVEMBER.

The next two events will be held in Egypt (COP27 this November) and the UAE (COP28 next year) – a valuable showcase for the MENA as several countries strive to be leaders in the global energy transition.

3

COUNTRIES IN THE MENA HAVE DECLARED NET ZERO PLEDGES:

the UAE by 2050 and Saudi Arabia and Bahrain by 2060.

60%

CLIMB IN CO_2 EMISSIONS

has been reported in energy and industry since 1992, when the UNFCCC was signed.[1]

$4TRN

OF CLEAN ENERGY INVESTMENT PER YEAR WORLDWIDE

is needed to reach net zero emissions by 2050 – more than tripling current investment levels.[2]

400

MILESTONES HAVE BEEN SET OUT IN THE NET ZERO BY 2050 ROADMAP

by the International Energy Agency (IEA) – illustrating the breadth of the changes ahead.[3]

2050

WILL SEE ALMOST HALF THE REDUCTIONS IN CO_2 EMISSIONS COME FROM TECHNOLOGIES

that are currently at the demonstration or prototype phase.[4]

0

PASSENGER CARS WITH NEW INTERNAL COMBUSTION ENGINES

can be sold anywhere after 2035 if the world wants to meet its climate goals by 2050.[5]

18

YEARS IS THE TIME LEFT

to phase out all unabated coal and oil power plants (by 2040) if countries want to meet climate targets by mid-century.[6]

#1

SOLAR WILL BE THE SINGLE LARGEST SOURCE

of supply by mid-century, including across the MENA.[7]

$649BN

POURED INTO ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) FUNDS WORLDWIDE

by November 2021, up from the $542bn and $285bn that went to these funds in 2020 and 2019, respectively.[8]

10%

OF WORLDWIDE FUND ASSETS ARE NOW ESG FUNDS

– this 'nice to have' is increasingly a must-have, a fact that energy stakeholders in MENA must give more attention to.[9]

40.5MN

MORE PEOPLE WERE INTERNALLY DISPLACED BY CONFLICT, DISASTERS, AND WEATHER-RELATED EVENTS

across the globe in 2020 – the highest annual figure recorded in a decade.[10] This number equates to four times the size of the UAE's population and will rise as climate threats worsen, so mitigation is paramount.[11]

[1-7] https://www.iea.org/reports/net-zero-by-2050
[8-9] https://www.reuters.com/markets/us/how-2021-became-year-esg-investing-2021-12-23/
[10] https://www.unhcr.org/6141fa9d4.pdf
[11] Gulf Intelligence

HYDROGEN'S TRUE DAWN
NEEDS GUIDANCE

Much work is needed to unlock one of the energy market's greatest treasure troves: clean hydrogen. While clean hydrogen (green and blue) can undoubtedly be pivotal in enabling the MENA to hit both energy demand and climate targets, delegates highlighted that there is still a long way to go. Today's hydrogen market is dominated by production via fossil fuels (gray hydrogen), which does not support decarbonization. But aspirations to turn the tide and curate a globally competitive and environmentally friendly hydrogen ecosystem in the early 2030s are soaring, with Saudi Arabia and the UAE leading the MENA's charge.

Saudi Arabia, the world's biggest oil producer and OPEC linchpin, plans to be the globe's biggest hydrogen exporter by 2030, with volumes in the neighborhood of 4mn tons, the kingdom's Energy Minister Prince Abdulaziz bin Salman al-Saud said in late-2021.[1] A central part of the kingdom's plans is the development of a major green hydrogen project at its futuristic city of NEOM. The $5bn undertaking is expected to culminate in the world's largest green hydrogen project, supplying 650 tons per day. It will also save 3mn tons of CO_2 per year and eliminate smog-forming emissions and other pollutants from the equivalent of more than 700,000 cars.[2] Meanwhile, fellow OPEC member, the UAE, is targeting a 25% share of the global clean hydrogen market by 2030 – a very short eight years away. Combined, the UAE, Saudi Arabia, and Oman are set to produce 3mn tons per year of hydrogen in the 2030s.[3]

To the west, Morocco's growing appetite for hydrogen saw the release of its National Hydrogen Commission in 2019, followed by a Green Hydrogen Roadmap in January 2021 – marking it as an early mover in the MENA. By 2030, the country envisages a local hydrogen market of 4TWh and an export market of 10TWh, which, taken together, would require the construction of 6GW of new renewable capacity and support the creation of more than 15,000 direct and indirect jobs.[4] And Egypt, in advance of its hosting of COP27 this November, aims to release its $40bn hydrogen strategy, which will include plans for production capacity of 1.4GW by 2030. There are also projects planned in association with the Suez Canal Economic Zone (SCZone).[5]

[1] https://www.reuters.com/business/energy/saudi-arabia-wants-be-top-supplier-hydrogen-energy-minister-2021-10-24/

[2] https://www.airproducts.com/news-center/2020/07/0707-air-products-agreement-for-green-ammonia-production-facility-for-export-to-

[3] https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/electric-power/112221-platts-launches-middle-east-hydrogen-prices-as-mega-projects-underline-regions-ambitions

[4] https://www.irena.org//media/Files/IRENA/Agency/Publication/2022/Jan/IRENA_Geopolitics_Hydrogen_2022.pdf

[5] https://energy-utilities.com/egypt-to-launch-40bn-hydrogen-strategy-before-news116149.html

PIONEERING A
LOW CARBON FUTURE

KEY FIGURES

$44BN
IS THE TOTAL INVESTMENT VALUE OF ANNOUNCED HYDROGEN PROJECTS IN THE MIDDLE EAST,
with $35bn invested in projects expected to be operational by 2030.[1]

20%
OF TOTAL CARBON ABATEMENT CAN BE ACHIEVED
by clean hydrogen by 2050.[2]

90MN
TONS OF HYDROGEN WERE PRODUCED IN 2020,
practically all for refining and industrial applications.[3]

900MN
TONS OF CO_2 EMISSIONS WERE GENERATED BY HYDROGEN PRODUCTION IN 2020[4]
– equivalent to the CO_2 emissions generated by all flights worldwide in 2019.[5] This is because nearly all the hydrogen was produced from fossil fuels.

0.1%
OF TODAY'S HYDROGEN VOLUMES WORLDWIDE ARE CONSIDERED GREEN
(a process that encompasses renewables).[6]

48
NATIONAL HYDROGEN STRATEGIES
could be confirmed this year. The number doubled in 2021, from 13 to 26, with another 22 expected by December.[7]

4
COUNTRIES IN THE MENA FEATURE IN THE TOP 40
of a Hydrogen Investability Index: Saudi Arabia, UAE, Oman, and Qatar, respectively.[8]

1766
WAS WHEN HYDROGEN WAS DISCOVERED IN ITS RAW FORM
by English scientist Henry Cavendish.[9]

[1] https://www.spglobal.com/commodityinsights/en/about-commodityinsights/media-center/press-releases/2021/112321-platts-launches-middle-east-hydrogen-price-assessments

[2] https://hydrogencouncil.com/en/ceo-coalition-to-cop26-leaders-hydrogen-to-contribute-over-20-of-global-carbon-abatement-by-2050-strong-public-private-collaboration-required-to-make-it-a-reality/

[3-4] https://www.iea.org/reports/global-hydrogen-review-2021/executive-summary

[5] https://www.atag.org/facts-figures.html

[6] https://www.woodmac.com/market-insights/topics/hydrogen-guide/

[7] https://about.bnef.com/blog/hydrogen-10-predictions-for-2022/

[8] https://cranmorepartners.com/wp-content/uploads/2021/10/index.png

[9] https://www.britannica.com/biography/Henry-Cavendish

ESTABLISH OFF-TAKES

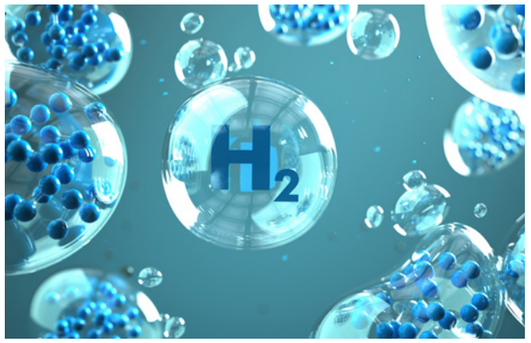
Much attention is currently given to the production of hydrogen, but more is also needed on the demand side, delegates pointed out. Pinning down commercially successful off-takers – both nationally and internationally – will uplift confidence along the value chain, thus unlocking more regulatory and financial support. This would be particularly meaningful for investors new to the energy sphere, i.e., those seeking extra encouragement to financially back the energy transition.

On the demand side, energy stakeholders need to closely examine the potential of industrial usage across the MENA, especially as the region has industrial clusters or areas where facilities are in close proximity, thus reducing the need for new infrastructure and lengthy transport. Strengthening the pillars of the young market – such as standardization, transparency, accountability, policies, funding – is also fundamental to attracting long-term partnerships. Many plans have been announced across the MENA, but confirming long-term off-take agreements still needs to evolve from the theoretical to the tangible, delegates summarized.

THINK BIG

Successful clean hydrogen plans have been achieved "here and there" across the MENA, delegates said. But plans must be more economically sustainable to ramp up production to the level required to play an influential role in the climate agenda, which could take five to ten years to start truly coming to fruition. Consequently, energy stakeholders should simultaneously focus on what more can be done today. Part of this means examining what technologies and infrastructure can be made hydrogen-ready in the near to medium-term.

For example, Europe recently announced plans to make 50,300km of its natural gas pipelines hydrogen-ready by 2040 – an average of 2,777km per year, approximately the distance between Abu Dhabi and Cairo. This undertaking has stretched dramatically in less than two years; a 23,000km target was announced in July 2020, followed by 40,000km last year.[1] Europe's progress certainly cannot be "copy and pasted" to the MENA, but it does offer a springboard for the region to tailor its own system. Consider that the Middle East alone has approximately 160,000km of oil and gas pipelines,[2] albeit far more fragmented than those in Europe. All the pipelines would not be suitable for conversion, especially as oil and gas remain growing markets. But even converting just 25% of the MENA's total would equate to 40,000km – an important consideration to reinforce security of supply, nationally and regionally.[2]



GOALPOSTS URGENTLY NEEDED

Establishing a consensus on the fundamental building blocks of a clean hydrogen market is essential. The timelier the action, the more sustainable the market growth. Currently, different companies and countries have varying methodologies, best practices, training, and knowledge-sharing models, as well as different ideas on certification and verification. "Regulations in Morocco could be totally different to Egypt and then totally different to the UAE. So, what do we all agree on? This level of consensus is missing from the market," a delegate said, reflecting other voices at the roundtable. This all amounts to guesswork and in turn, dents confidence, builds blockages in the system, and stymies growth. More efforts are quickly needed, for the climate crisis intensifies as decision-making lingers.

[1] https://gasforclimate2050.eu/ehb/

[2] https://www.statista.com/statistics/1124254/middle-east-length-of-midstream-oil-and-gas-pipes-by-country/

STRATEGICALLY MANAGING CARBON

How we count, track, verify, and report CO_2 emissions are questions that need answering – and soon. Being able to use a financial metric in association with reducing CO_2 emissions can be a giant leap towards greater transparency and in turn, market confidence, delegates shared. Valuable parameters include project assessments, regulatory compliance, and risk management. Reconsidering financial models to include more incentives will also help drive progress.

"The carbon market will be very important, but it is still in its infancy. So, reducing the big bottlenecks by working out parameters will be extremely helpful, especially as there could be a high risk of fraud as the market booms," a delegate said, echoing broader concerns. Equally, energy stakeholders must remember that carbon pricing is not a panacea for decarbonization in the MENA – it is a vital pillar, but not the only one.

KEY FIGURES

1st

ABU DHABI GLOBAL MARKET (ADGM) HAS PARTNERED WITH AIRCARBON EXCHANGE (ACX)
to create the world's first fully regulated carbon trading exchange and carbon clearing house, which will be established in Abu Dhabi.[1]

5

LEADING SAUDI ARABIAN BUSINESSES
– Aramco, SAUDIA, ACWA Power, Ma'aden, and ENOWA – signed a Memorandum of Understanding (MoU) to become the first potential partners of a voluntary carbon market for MENA.[2]

$1BN

WAS THE VALUE
of the world's voluntary carbon market in 2021 – a record high.[3]

[1] https://wam.ae/en/details/1395303034820
[2] https://www.pif.gov.sa/en/Pages/NewsDetails.aspx?NewsId=210
[3] https://www.ecosystemmarketplace.com/articles/voluntary-carbon-markets-top-1-billion-in-2021-with-newly-reported-trades-special-ecosystem-marketplace-cop26-bulletin/

PRICING CARBON

The European Union's Emissions Trading Scheme (EU ETS) is the world's oldest carbon pricing and trading platform – at just 17 years old, highlighting how recent carbon pricing is. The EU ETS has experienced its share of trial and error, including plummeting prices and concerns over verification, such as double counting. Still, these peaks and troughs have undoubtedly paved the way for many other schemes to emerge. Today, there are 65 carbon pricing initiatives worldwide (versus two in 1990), covering 21.5% of global greenhouse gas (GHG) emissions in 2021.[1] However, while there are various plans afoot, there is not one formal carbon pricing initiative in the MENA[2]– a point that must improve in the 2020s.

[1-2] https://carbonpricingdashboard.worldbank.org/

UNDERSTANDING THE NEW WORLD OF NET ZERO

Net zero pledges are a very recent development and as such, delegates feel far more clarity is needed on how such goals are verified and tracked. Some delegates doubt countries' abilities to realize their pledges, with one adding that countries' goals will rely too heavily on carbon offsets. Better monitoring, accounting and transparency of these goals will significantly help mitigate concerns that some pledges lack depth and commitment. So far, 131 countries have committed to net zero, with 234 cities, 116 regions, and 696 companies doing the same. This is out of 198 countries, 1,177 cities, 713 regions, and 2,000 companies being tracked.[1]

"Governments have been clear for a long time what they wanted us to achieve and by when. There has been a push towards that, with it being silently reinforced, i.e., there will be a penalty at some point if you do not do it. That sense is now intensifying," one delegate detailed.

While there must be a cohesive, collaborative approach across the MENA, we must also remember that every country is different – socially, economically, politically, and environmentally, delegates said. Inspired commitments to bolster the growth of renewable energy, including clean hydrogen, are very valuable and should not be automatically discounted in comparison to net zero.

[1] https://zerotracker.net/

ROUNDTABLE DELEGATES

- Ahmed ElSerry, Head of Generation, Siemens Energy
- Ali Abdallah, Regional Director for BD, Saipem
- Andras Feher, MEA Director of Product Management & Business Development, Emerson
- Andre Kriel, CEO, Schmidt ME
- Andrew Dennant, Vice President and General Manager, HIMA Middle East FZE
- Anuj Tyagi, New Business Development, Mubadala Petroleum
- Ashish Gupta, VP of Business Development, Middle East, Technip Energies
- Asma Almarzooqi, Corporate Communications and Societal Manager, TotalEnergies
- Brennan Campbell, Director, Occidental Petroleum
- Christof Rühl, Senior Research Scholar, Center on Global Energy Policy, Columbia University (former BP Chief Economist)
- Cornelius Matthes, CEO, Dii Desert Energy
- Dyala Sabbagh, Partner, Gulf Intelligence
- Ebubekir Koyuncu, CEO, Air Products
- Elias Kassis, President, TotalEnergies EP UAE and Country Chair, UAE TotalEnergies
- H.E. Yousif Ahmed Al Ali, Assistant Undersecretary for Electricity, Water and Future Energy Affairs, Ministry of Energy and Infrastructure, UAE
- Hanan Bakr, Director and Sector Head, Energy and Sustainability, MENAT, HSBC
- Kate Dourian, FEI, MEES Contributing Editor and Non-Resident Fellow, The Arab Gulf States Institute in Washington
- Maher Ayad, Regional Director Energy Transition: Hydrogen, Carbon Capture and Storage, Geothermal in Middle East, Africa, India, Russia and CIS Regions, BakerHughes
- Marcel Hochar, Senior Vice President, Middle East and Central Asia, Bureau Veritas
- Masoud Al Hamadi, Exploration and Production Director, Sharjah National Oil Corporation (SNOC)
- Mohamad El Nahi, Regional Business Development Manager, Saipem
- Mohamed Hasan, Industry Executive, Head of Energy and Sustainability, Middle East, Africa and Turkey, Microsoft
- Nahla Abid Gribaa, Director of Sales and Marketing, Middle East Region, Bureau Veritas
- Saad Al Hajeri, SVP Operations Systems and Unconventional, Mubadala Petroleum
- Siavash Alishahpour, Managing Director, VTTI
- Slim Hbaieb, Manager, Research & Innovation Center, Research and Development Function, ADNOC
- Sofien Masmoudi, Vice President for Oil, Gas and Chemical Market, Middle East Operating Region, Bureau Veritas
- Walter Simpson, Managing Director, CC Energy Development
- Wassim Mourtada, Director, Crystal Point Partners

SHAPING A WORLD OF TRUST

Bureau Veritas is a Business to Business to Society company, contributing to transforming the world we live in. A world leader in testing, inspection and certification, we help clients across all industries address challenges in quality, health & safety, environmental protection and social responsibility.

For more information
contact Bureau Veritas Middle East:
contact.middleeast@bureauveritas.com

Al Hudaiba Awards Building
Block C, 2nd Floor
Jumeirah Road with
2nd December Interchange

P.O. Box 9110
Dubai - United Arab Emirates

Tel :+971 (0) 4 3074400

https://middle-east.bureauveritas.com

BUREAU VERITAS

Shaping a World of Trust

Editorial & Design: thegulfintelligence.com / Image credits: Shutterstock