EGYPS 2023 HIGHLIGHTS ENERGY SUSTAINABILITY, **STABILITY IN NORTH AFRICA AND THE MEDITERRANEAN**

he inauguration of Egypt Petroleum Show's (EGYPS 2023) sixth edition was honoured with the presence of Egyptian President Abdel Fattah El Sisi who affirmed the importance of the East Mediterranean Gas Forum (EMGF) and Egypt's efforts to create stability in oil and gas markets.

"The effort [that Egypt] exerts in cooperation with exploration and production companies is a critical element which assists the EMGF in playing its role in mitigating the effects of the [energy] crisis and securing the demand for gas in Europe in the coming period," El Sisi said. "More discoveries, whether in Lebanon, Israel, Egypt or any other country, can provide gas to Europe and hence relieve the demand and pressure created by the Russia-Ukraine conflict [on global energy markets]."

Under the patronage of the Egyptian President, EGYPS 2023 kicked off to a vibrant and stimulating start with emphasis on this year's theme 'North Africa and the Mediterranean: Supporting Sustainable Global Energy Supply and Demand'.

In his speech during EGYPS 2023 opening, the Egyptian Minister of Petroleum

and Mineral Resources Tarek El Molla elaborated further on the importance of this significant occasion. "This edition under the theme of 'North Africa and the Mediterranean: Supporting Sustainable Global Energy Supply and Demand' comes at a critical time as global communities face a wide range of challenges, the consequences of which have affected the whole world, including Egypt."

"In an effort to mitigate the impact of these challenges and work to transform them into opportunities that support the Egyptian economy, the sector has worked to exploit the advantages that Egypt enjoys in overcoming the energy crisis," El Molla added.

El Molla also took advantage of this joyous occasion to announce that next year's edition of the show will be rebranded as Egypt Energy Show (EGYPES). "Starting from the upcoming edition, the conference will become Egypt Energy Show (EGYPES), allowing for the expansion of the conference and exhibition topics to include issues of energy transition, emissions reduction, and hydrogen to keep pace with the rapid global changes in the energy sector'

dmg events President Christopher Hudson also delivered opening remarks saying: "This year's Egypt Petroleum Show is our largest to date. We have 280 speakers across a range of conferences, 500+ exhibitors and 12 international country pavilions. We are anticipating to welcome over 32,000 attendees from more than 70 countries over the next three days to engage in dialogue, build partnerships and advance business opportunities at the local regional and international levels, harnessing Egypt's position as a strategic global energy hub."

In a keynote address by Haitham Al Ghais, Secretary General of the Organization of the Petroleum Exporting Countries (OPEC), talked about the organisation's commitment to the market "OPEC remains committed to supporting oil market stability. OPEC also remains committed to investment in order to meet rising demand and reduce the industry's carbon footprint."

Egypt's efforts in the gas industry will have a positive impact on European countries.

HIS EXCELLENCY **ABDEL FATTAH EL SISI**

President of the Arab Republic of Egypt



Al Ghais highlighted the importance of Egypt's contribution to stabilizing petroleum markets. "Egypt has been a supporter of the Declaration." of Cooperation which has been recognized by the G20 and leading consumer countries for its constructive and positive role in supporting global oil market stability." Moreover, Al Ghais commented on global oil demand noting that "[OPEC's] latest forecast shows that oil demand is on course to exceed pre-pandemic levels this year, reaching almost 102 million barrels a day and further rising to reach 110 million barrels a dav bv 2045.

The EGYPS 2022 opening witnessed a panel discussion between President El Sisi, Minister El Molla. Secretary General of the International Energy Forum (IEF) Joseph McMonigle; bp's CEO Bernard Looney, and Apache Corporation's CEO John Christmann.

El Molla talked about how to deepen international cooperation in the coming period. The Egyptian minister pointed out how the past crisis, COVID and the Russian-Ukrainian war, shed light on energy security challenges. "The recent [global] events revealed that several measures should have been taken that were not

complete at the time of the crisis. These include the value of investments that should contribute to energy transition and decarbonisation" adding that the crisis showed the necessity for injecting "big investments into technologies for energy transition, while [ensuring] sustainability

Looney agreed, stating that "the events of last year taught us that [the world] needs energy transition, and it needs the energy transition to be orderly.

Christmann offered an optimistic outlook on demand in the energy sector for the years to come saying, "We see good long-term demand. Let's not forget that 10% of the world's population still needs access to reliable. affordable energy. In Egypt, a big part of our portfolio we have increased investments based on the vision of His Excellency President Abdel Fattah El Sisi and Minister Tarek El Molla to modernize Egypt. It has given us a platform to triple our investments."

Echoing the importance of oil in energy markets, International Energy Forum (IEF)

Secretary General Joseph McMonigle asserted that the global oil industry is in dire need of more investments to maintain market stability "Until we address this underinvestment problem, I am afraid the new normal is going to be high prices and volatility"

The conference witnessed the participation of leaders of major international energy organizations, led by OPEC, the International Energy Agency (IEA), the Eastern Mediterranean Gas Forum (EMGF), the Organization of Arab Petroleum Exporting Countries (OAPEC), the African Petroleum Producers' Organization (APPO), the Union for the Mediterranean (UFM), the Mediterranean Energy Observatory (OME), the International Energy Forum (IEF), the International Gas Union (IGU), the International Association of Oil & Gas Producers (IOGP), the African Energy Commission (AFREC), and the World Energy

In all of its editions, EGYPS has enjoyed remarkable success in bringing energy leaders together and standing out as one of the most prominent oil and gas events in the Mediterranean region and North Africa.

EGYPS 2023 STRATEGIC CONFERENCE PROMOTES STRONGER REGIONAL UNITY

s the industry moves from climate commitments to actions and continues efforts to decarbonize its oil and gas operations, the reshaping of markets, driven by new geographical supply and demand dynamics, continues at pace. During EGYPS 2023, the Strategic Conference addressed the current needs of the energy transition, being a key enabler to overcoming climate change and reducing dependence on limited energy sources.

dmg events President Christopher Hudson welcomed the attendees, highlighting the significance of the Egypt Petroleum Show (EGYPS). "No other event in the region brings together global influences on issues of strategic policy, investment, resilience, partnership, evolving energy supply and demand challenges, climate technology, and an acceleration and much more. This is a platform for the conversations that will energize the just energy transition, and a commitment to a sustainable, secure, and affordable low-carbon energy future for all.'

Hudson also announced that the next edition of the conference and exhibition will be Egypt Energy Show (EGYPES) stating that "this will not be forgetting our past, but embracing our future.

During his opening speech, Minister of Petroleum and Mineral Resources Tarek El Molla noted that "EGYPS now is considered an annual global platform to ensure open conversations on an agenda that drives



regulations, investments, security, transition, and innovation."

to turn this crisis into a foundation for a more sustainable energy future."

Meanwhile, the Commissioner for Energy at the European Union (EU.) Kadri Simson, pointed out that "despite prices, we need to keep now a firm eye on where we are going, how

This conference highlighted the energy sector's challenges and opportunities, particularly in Egypt, Africa and the East Mediterranean

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Redrawing the Global Energy Map

After the Strategic Conference opening, El Molla, Simson, along with H.E. Amani Abou-Zeid, Commissioner for Infrastructure and Energy at the African Union Commission (AU), had a remarkable session under the title of 'Managing Supply and Demand in Volatile times - Supporting Global Economies and Energy Security'.

During the session, they discussed the importance of embracing an innovative agenda to support partnerships that drive growth across the energy value chain, supporting global economies and energy security, as they highlighted the geopolitical uncertainty and changing dynamics of the global energy trading system.

The second strategic session of the conference titled 'Redrawing the Global Energy Map - Fast-Tracking Delivery and Creating New Routes to Market' was a critical discussion on how to get new oil and gas supplies to the market in an efficient way, and how economies can safeguard themselves from relying on only one major supplier.

The session brought together distinguished leaders including John Christmann, CEO and President of Apache Corporation; Mario Mehren, CEO of Wintershall Dea; Mansoor Mohamed Al Hamed, CEO of Mubadala Energy; Lorenzo Simonelli, Chairman and CEO of Baker Hughes; and Antonio Pietri, CEO of AspenTech.

The EMGF's Evolution Opens Up New Horizons for Regional Collaboration

Unleashing the great potential of the East Mediterranean Gas Forum (EMGF), an eyeopening discussion titled "New Beginnings
- The Race to Exploiting East Med Gas" took
place as part of the Strategic Conference to dig
deep into the forum's pivotal role in ensuring
energy security, driving mutual economic
prosperity and reducing the regional carbon
footprints. This also goes in tandem with the
forum's broader vision to pave the way for
regional importing and exporting countries to
become partners and suppliers of choice.

The panelists also shared their reflections over the past six years and their aspirations for the upcoming six years in light of the evolving energy market.

During the discussion, Minister of Petroleum and Mineral Resources Tarek El Molla stated that EMGF is a dream that came true through a multi-phase process coupled with adequate infrastructure and policies. "Now, we are having



a model that can be replicated and expanded. We are showing success."

Meanwhile, the session witnessed the participation of Zafer Milhem, Chairman of the Palestinian Energy & Natural Resources Authority, and Walid Fayad, Lebanon's Minister of Energy and Water, who praised

Egypt's tangible efforts to enhance regional

collaboration

The Palestinian official said though Palestine is one of the first countries that discovered natural gas in the East Mediterranean since 1999, its market is still underdeveloped, grappling with numerous challenges. In this regard, the official lauded Egypt's effort to support Palestine, referring to the Memorandum of Understanding to deploy Egyptian companies to develop Marine Gas

Decarbonizing the Industry

The strategic conference program included a global business leaders' session 'Decarbonizing the Industry' which discussed building a winning downstream portfolio as well as the alternatives like renewable feedstocks and where they sit.

The discussion tackled the significance of methanol in today's industries. Sumner indicated that methanol is essential for the renewable sector as it is used in solar panels, wind farms, and electric vehicles.

The Rise of Gas, LNG

The conference further tackled the balance between supply and demand, the development of African gas, as well as the rise of gas and LNG, discussing the global scramble in a tight market with soaring prices.

The attendees shared their insights on the current global trading environment. The event also highlighted the region's agreements and partnerships to provide supply and be a hub for energy, as Egypt opens its additional capacity

in the liquefaction plants for other countries in the region to export their production to Europe.

Moreover, the distinguished business leaders talked about pivoting from traditional oil and gas operations to new generation energy solutions - driving change through tough asset portfolio choices

The talks further highlighted new technologies that shape the energy sector's evolving market, drawing attention to the files of CCUS, methane reduction, flare recovery and reinjection, low-carbon hydrogen and energy management and efficiency, bearing in mind that more efforts are being expanded in these areas to increase momentum and advance decarbonization across the oil and gas value chain.

El Molla Calls for More Investments in Entire Energy Mix

At the end of the Strategic Conference at EGYPS 2023, Minister of Petroleum and Mineral Resources Tarek El Molla praised Egypt for hosting the conference, indicating that the "four days of activities are just a reflection of what Egypt is doing in the [realm] of energy."

El Molla praised the country's vision six years back when it called for the Egypt Petroleum Show (EGYPS) to be held in Egypt and succeeded in bringing together many energy leaders in one place for the sixth edition.

Talking about the energy sector's needs for investments, the minister indicated that the entire sector with its diverse energy mix, consisting of both fossil fuels and renewables, needs investments. He pointed out that the world cannot exclusively focus on renewables and ignore other sources of energy, asserting that global markets still need an increase in fossil fuel production to sustain their needs. "Less investments means less production, that means higher prices, and it is going to be a vicious circle." El Molla concluded. "We need the investments in all aspects and I wouldn't prioritize any of them."

DECARBONIZATION, DIGITALIZATION, OPTIMIZING PETROCHEMICAL PRODUCTION BRIGHTEN THE EGYPS 2023 TECHNICAL CONFERENCE

he EGYPS 2023 Technical Conference provided the industry's oil and gas professionals with an unrivaled opportunity to meet face-to-face and learn how to stay technically relevant, digitally competitive, and business resilient, fully embracing the constantly evolving market landscape. The conference program covers subjects from exploration and field development to HSE, digitalization, petrochemicals and biofuels – featuring a wide array of topics that are useful for any professional who wants to keep up with current developments in their specialized field.

The Technical Conference involved 19 technical categories and a thorough two-stage Technical Committee review, comprising over 80 industry specialists. In EGYPS 2023, the technical program features over 180 experts speaking at 45 sessions.

Carbon Emissions Reduction

Under the subject of "Reducing Carbon Footprint and Green House Emissions," a technical session was launched involving four insightful presentations on the importance of carbon emissions and what could be done to address this issue. The first presentation titled "A Pragmatic Transition to Net Zero Energy Production" addressed the ever-growing need to transition to net zero energy production. During the discussion, Yasser Gamal-Eldin from MAN Energy Solutions Egypt stressed the urgency to shift into reducing CO2 emissions, saying "CO2 emissions from power have to decline by around 60% in 2030 in order to reach net zero energy production by 2050". In addition to the need to reduce emissions, renewables in the global electricity supply will increase to 60% by 2030.

During another presentation titled "Reducing Carbon Footprint and Greenhouse Emissions in Few Steps for Quick Results and Fast ROI", Schneider Electric Strategic Account Executive Tiziana Paolicelli talked about what needs to be done to deliver customer-valued sustainable performance by 2025. These objectives include a "100% substitution with SF6-Free medium voltage technologies [and an] increase the green material content in our products to 50%."

Furthermore, the third presentation, which witnessed the participation of Babcock Wilcox Managing Director Wassim Moussaoui, addressed the topic of "Considerations When Co-Firing Hydrogen with Natural Gas or Oil for Carbon Emission Reduction". He mentioned that "Industrial facilities can improve their carbon footprint with the use of non-carbon-based fuels. But to achieve that, a comprehensive evaluation of the overall combustion system is needed to achieve a safe and successful transition to non-carbon-based fuel firing."

Finally, in the fourth presentation titled "Net Zero Carbon Intelligent Campus" delivered by Mostafa Hazem, Solution Director - Oil & Gas Sector for North Africa Region, Huawei, discussed key decarbonization and energy transition methodologies. "From Huawei's perspective; the methodology to achieve energy transition relay on three main aspects which are: net zero transformation, energy transformation, and digital transformation," said Hazem. "The best-case scenario is to balance between these aspects to achieve a net zero smart industrial campus," he added.

Towards a Sustainable Petrochemical Industry

The second day of the EGYPS Technical Conference witnessed a technical session called "Towards a Sustainable Petrochemical Industry. Through four very informative presentations, it discussed the future of petrochemicals, exploring the role of the industry in today's energy sector.

The first presentation was by Mohamed Abdel Atty Ahmed, Ammonia and Utilities Plant Manager at Misr Fertilizers Production Co. (MOPCO), titled "Recovering the Activity of Ammonia Synthesis Catalysts". Abdel Atty gave an overview of his company and its activities in the Egyptian and international markets. He discussed how his company's team tried to recover the ammonia production due to the decline of ammonia synthesis by optimizing the parameters of the catalyst. "The catalyst maintains a very good activity that is even better than expected after 14.3 years of service," he concluded.

The second insightful presentation titled "OPEC World Oil Outlook (WOO 2022)", was given by Mohammed Attaba, Downstream Oil Industry Analyst at the Organization of the Petroleum Exporting Countries (OPEC). He provided an overview of oil, gas and petrochemicals demand in the global scene and the required investments. Attaba said that "global gross domestic product (GDP) is projected to increase by 3% per annum on average, rising from around \$133 trillion in 2021 to almost \$270 trillion in 2045."Moreover, Attaba elaborated that OPEC expects lower costs for renewables and batteries. "So based on this fact, global primary energy demand is forecasted to continue growing by 23% to reach 351 million barrels of equivalent per day (mmboe/d) in 2045." he said.

Haitham Ramadan Omara, Director of Department at Sidi Kerir Petrochemicals Company (SIDPEC) made a presentation on "Optimization of High Density Polyethylene (HDPE) Reactor Using PSDS of Chromium Catalyst". Omara provided a study on how "to detect the appropriate particle-size distribution of chromium catalyst used for manufacturing high density polyethylene with the required properties and without exposure to high manufacturing risk by high consumption of pre-polymer or elevating the temperature of the final reactor." He concluded that implementing these techniques can increase production at lower costs.

Manu Van Leuvenhaege, Commercial Director, Sulzer concluded with a presentation on "Pygas Maximise Petrochemicals from Your Steam Cracker." He gave a discussion on Pygas and how to use it to maximize petrochemical production from an existing steam cracker. Leuvenhaege also presented the typical Pygas processing steps and discussed how it can help upgrade existing systems to achieve added value and decarbonization objectives. He talked about aromatics extraction stating "Using the efficient solvent is the key to reducing the carbon footprint of an aromatic extraction unit, whether it is the extractive distillation unit or liquid extraction unit."

Role Of Technology to Achieve Operational Excellence

On the third day, several informative presentations were given focusing on production optimization by using digital and intelligent solutions. One of the amazing sessions titled "Intelligent Solutions and The Role Of Technology To Achieve Operational Excellence" featured four innovative ideas for operational excellence.

Gustavo Andres Ariza, Global Product Line Champion - Progressing Cavity Pumping Systems & COROD Continuous Rod at Weatherford delivered the first one on "More Efficiency and Less Power Consumption by Using Permanent Magnet Motor as an Optimized Surface Drive Technology for PCP Wells in a Romanian Field." He talked about the efficiency of deploying permanent magnet motor (PMM) technology to the artificial lift system in a Romanian field as a case study. He explained how it works to save energy, costs, and reduce industrial noise. "PMM reduces noise emissions from 73.2 decibels (db) to 39.85 db, energy usage [by] 9.74%, saves \$5000 in electricity and \$38000 in annual OPEX," Ariza ended.

Also, a presentation titled "Multi-phase Virtual Flow Metering: a Step Change in Production Management" was presented by Shaksham Mishra, Production Operations Engineer at Schlumberger. He discussed OLGA online production management system which uses digital twins and how it efficienctly in improves operational processes. "In a well calibrated system, the digital twin is capable of providing accurate of providing accurate flow estimates for muti-phase flow system," Mishra said. He mentioned the various OLGA applications and how it works.

Rabih Bou Rached, CEO & Founder, FEDS drone Powered Solutions, delivered a presentation on "Inspecting Fare stack while Operational - How Drones are Increasing Flare Stack Inspection Efficiency and Reducing Downtime". He mentioned the key role played by drones to inspect flare gas while it is operating in shorter time saving workers' life. He explained the features of drones provided by his company. "FEDs-drone is more than a service provider. We are in the business of improving operations, saving lives, and eliminating unnecessary downtime," Bou Rached elaborated.

A presentation called "Integrated Technologies for Improving Asset Integrity and Production Enhancement" concluded the session. It was introduced by Aarti Dange, Customer Experience Leader, Emerson Automation Solutions. She explained how integrated technologies can ensure asset integrity and overcome variable corrosion and erosion. Dange mentioned some effective technologies that enable experts to predict possible corrosions, monitor processes, and initiate quick responses to these corrosions. "[Monitoring corrosion helps] increase production by 1% because of decreased planned and unplanned shutdowns," Dange concluded.

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FORWARD-LOOKING PARTNERSHIP MODELS FOR NEW ENERGY INVESTMENT LANDSCAPE

gypt is increasing its liquefied natural gas (LNG) exports to help solve Europe's energy challenges. The Ministry of Petroleum and Mineral Resources declared that Egypt aims to export \$8.5 to \$10 billion worth of natural gas during the fiscal year 2022/23. The third edition of the EGYPS Finance and Investment in Energy Conference provided insights from global energy experts on investment opportunities in light of Egypt's strategic roadmap to establish itself as a regional energy trading hub and exporter of gas and LNG globally.

Capitalizing on Investment Opportunities

The current energy crisis has provided a great opportunity for certain regions to move their resources to the forefront of global energy distribution. Nasser Al Hajri, Senior Vice President Non-Operated Assets for Mubadala Energy provided his insight on this matter and how investing in the right technology is a key factor. Al Hajri says that "by 2050, oil & gas will still represent 50% of the energy mix. The energy transition is not easy, we should rely on technology that helps accelerate the process. All kinds of investments in hardware & software are required".

Engineer Alaa Elbatal, Chief Executive Officer at Egyptian General Petroleum Corporation, provided a deep dive into the potential investment opportunities in the energy landscape. "We are now modernizing our activities to decarbonize our activities, so we are busy working on a lot of angles to fit with all models. We are keen on improving the investment environment & provide facilities to our partners." Elbatal elaborated.

Ross Cassidy, Vice President Middle East, and North Africa for Welligence Energy Analytics, expresses his views on the Egyptian oil and gas landscape by mentioning that "Egypt has long been considered a very attractive investment destination for upstream oil & gas. The importance of the region has grown in the past year given the events and the tightness of the gas market. Digitalization will play a very important role on the emission reductions side."

Solving Europe Gas Supply

While the European Union (EU) has been quick to tap into its natural gas reserves, its ability to maintain robust LNG imports and increase investments in alternative energy sources will be crucial in the coming years. Anastasios Vlassopoulos, CEO and Head of the E&P Business Unit of Hellenic Petroleum Upstream, gives his views on how to examine strategies to solve Europe's gas supply problem over



the short and long term. "We need gas as it is the only fuel that can be used everywhere across the value chain. We want to reduce the reliance on coal. It is important to take into consideration carbon capture & storage (CCS) in any operation," said Vlassopoulos.

Rouzbeh Fazlinejad, Managing Director, and Head of MENA Oil & Gas of Houlihan Lokey provided his insight on the required investment needed to allow Europe to end its dependence on Russia. He indicates that "more investments must be made; however, investors prioritize the projects that they are going to invest in. Governments should put the right incentives into place as investors compare the returns from the traditional sources' projects to source new upcoming projects".

Paul Sullivan, Senior Vice President Global LNG & FLNG of Worley, discussed with other energy leaders the targeted investments needed to solve the European gas crisis. "We have been working on improving the carbon footprint of LNG in terms of production, transportation, and regasification for the last 6-8 years by spending around \$10 billion. Improving technology on Carbon capture is a solution for improving carbon footprint. EU has provided support in many countries in Europe to build their projects".

Dr. Lamia Abo Shahba, General Manager of Gas Market Activities at EGAS, acknowledges the need to secure alternative supplies amidst the current geopolitical unrest. "There is a need to start a dialog with the eastern Mediterranean region. We realized that our aspiration to reach Europe cannot be achieved without having the proper communications to make sure that we are unlocking the gas resources needed".

Accelerating Decarbonization

With the world's energy needs expected to grow dramatically over the next decade, governments are exploring new ways to secure energy supplies and infrastructure. Participants at a panel discussion, under the title "Accelerating decarbonization and energy security through public-private partnerships," examined how public-private partnerships can help build long-term infrastructure projects while minimizing direct state capital spending.

Tameer Nasser, Managing Director Northeast Africa of Baker Hughes, mentioned: "The problem in decarbonization is to have the right business case. In some discussions with banks, the tone is changing toward the transition in the oil and gas field. They are now looking to finance the transition journey as a whole."

Mateus Da Costa, Director of Exploration and Research Innovations of ANPM, stated that "Governments can play an important role by taking part in the direct investment through building partnerships. At the same time, international investors can bring new technology and knowledge to encourage and build these partnerships even more."

David Chi, Vice President of Egypt Assets and Country Manager of Apache, said "Our industry is the main driver in how humanity progresses. We are one of the biggest drivers. We are the foundation for pharmaceuticals, agriculture, and other aspects of life. We need to continue to provide energy and produce it in a responsible manner. Financial institutions should not just demonize us, and everyone needs to look at it from a bigger picture."

EQUALITY IN ENERGY CONFERENCE HIGHLIGHTS GENERATION Z INCLUSION



n the final day of the Egypt Petroleum Show (EGYPS 2023), the event included an Equality in Energy conference, which featured a number of engaging sessions and panels across the day. As the industry walks through its decarbonization journey, the oil and gas existing and future employees remain committed to achieving net-zero ambitions. Therefore, it becomes important to develop the skills of existing employees and to expand the recruitment programs to attract millennial and generation Z graduates, as the industry creates transparent recruitment practices offering its workforce clear career progression, flexibility, and pay transparency.

The conference started with Petra Angstmann, Senior Vice President of Global HR at Wintershall Dea, delivering a speech in which she talked about what the workplace will look like in the future. Amgstmann explained the importance of equal pay. "We pay our employees equally, regardless of gender," she stated, adding that this helps a company gain employees' loyalty and at the same time show stakeholders their commitment to equality.

Building a Net-Zero Ready Workforce

In the first panel, Moath Al Rawi, ARGAS' CEO; and Gaydaa Elfakahany, Head of HR and Administration Division at thyssnekrupp Industrial Solutions Egypt, talked about the ways to prepare employees for a net-zero future. Al Rawi talked about the challenges facing the workforce and their reaction to the energy transition. Al Rawi highlighted reaching a net-zero future "to get to that point, we will need qualified people who would be able to develop."

Meanwhile, Elfakahany talked about the skills needed for the transition and ways to retain talent and skills amid the surrounding competition. Elfakahany highlighted the privilege of having young people in Egypt, who can drive the transition. "For Egypt of course there is the opportunity of youth, because 60% of the population is of young age, and that is a big opportunity," she said pointing out that this is a challenge as well. "This young generation

actually needs a specific kind of education to support their upskill for the future and for employment. Vocational learning as well as experiential learning is also something that needs to develop a lot."

Harnessing the Power of Change Management for an Agile Culture

The second panel provided a discussion platform for Brandy Jones, Vice President HR at Apache; Latifa Aal Said, Global DEI Director & TPS HR Director MENATI at Baker Hughes; Edgar da Costa, Director of Finance, Procurement, and Information & Communication Technology at ANPM; Sherif Aboelgheit, General Manager, Procurements and Supervising HR Division at ENPPI; Celestina Raggi, Vice President of HR for Middle East & Africa at Emerson; and Ahmed Farid, Regional HR Manager at Shell.

The session talked about motivating people to join the industry. Moreover, the distinguished panelists highlighted the role of the leader to make the change more successful, assessing the culture, skills, and needs of the workforce to achieve the industry's goals.

Attracting Millennials and Generation Z

This panel featured ways to attract millennials and Gen Z to the energy industry, highlighting their needs for a purpose as well as a flexible work environment. The panelists included

Manal Messiha, Vice President of Customer Satisfaction & Quality at Schneider Electric; Aldo Costantini, General Manager & Managing Director at Energean AQP; Abubakr Ibrahim, Vice President & General Manager at IPR Energy; Salma Al Hajeri, Regional Vice President, East-Med & North Africa, Operations MENA & Russia at Mubadala Energy; and Soukaïna Chefchaouni, Legal Counsel for North Africa, ENGIE.

Chefchaouni, who represented the voice of the youth, talked about their expectations and the challenges they face in the workplace. The panel also featured the importance of inclusion, as having different generations is significant for the development of the energy industry.

Lightening Talks

Another presentation titled "The digital future: closing the skills gap" was presented by Fatema Choudhury, Chief Operating Officer of Magellan X. Fatema discussed how to equip the energy sector's workforce with the digital skills necessary to succeed in the 21st century. "Digital literacy becomes increasingly vital in the ESG space because more companies are recognizing that they have to integrate technology in their operations to make it more efficient, transparent and sustainable, in addition, it helps organizations understand their data and measure their ESG performance," said Fatema.



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A presentation by Juliette Murray Lamotte, Middle East and North Africa Human Resources Managing Director Egypt at Capricorn Energy, Manager at SLB, was titled "Managing the Unconscious Bias in Pay and Promotion" to explore the steps that businesses and individuals can take to ensure unconscious bias is properly addressed, "At SLB, we put people first because people are the spirit and pulse behind everything we do and everything we want to achieve" she explains.

Susanne Mikhail Eldhagen Regional Director UN Women Office for the Arab States discussed "Creating an Equitable, Diverse and Inclusive Culture for a Greener Future." Susanne discussed the MENA region paradox, which is one between educational attainment and employment, explaining "this is a region with a very high educated cadre of women but at the same time a very low labor force participation." According to Susanne, this gap causes not only financial losses but also human development losses overall. The proportion of female graduates from STEM in the MENA region is higher than any other region worldwide, therefore there will be a loss of opportunity unless we pull these educated women into the industry.

the clean energy transition

The final panel of the EGYPS 2023 Equality in Energy Conference was entitled Gender equality and the role of women in the clean energy transition. The panel discussed the importance of equality and women empowerment in promoting a successful transition to clean energy and achieving the United Nation's SDGs.

The panelists included Eleanor Rowley, Amru Alabidi, Senior Vice President Oman. UAE Iraq and North Africa at Worley Lamé Verre, Co-founder & Board Co-chair of Lean-in Equity & Sustainability and Marla Wright Global Business Development Manager at Bechtel.

Lamé starts the discussion by addressing what the workforce of the future looks like for the sector in terms of gender equality, "the workforce of the future is not just a gender question but a talent issue, so it's really about what is the energy industry's value proposition to the market."

Amru discussed his journey through the energy industry and emphasized that it's all about people, beliefs and emotions rather than KPIs and profit. "As a leadership team our responsibility is not to direct and tell people what to do, but rather creating the right environment for individuals to feel comfortable and excited to share their point of view."

Eleanor talked about the opportunities and challenges that women and managing directors face in the region. "I find women at all levels of the organization in Egypt, from entry levels to Gender equality and the role of women in directors. I am not the only female managing director in the energy industry in Egypt, there are three of us" she said.

Celebrating Diversity: Equality in Energy

The equality in Energy Conference was concluded by the Equality in Energy Awards Ceremony. The awards were divided into three categories, celebrating outstanding talents in the industry.

The first category of the awards was the Women in Leadership, which recognizes exceptional women leaders in the energy industry with proven leadership and project management skills for their growth and success personally and professionally. The winner was Shahira Osman, Regional Branded Workshops Channel Manager Chevron The winner of the highly commended award was Omnia Bekheit, Investment and Financial Planning General Manager ANOPC

The Award for STEM Star of the Year was awarded to Marwa Maghraby Process Engineer at ENPPI, Meanwhile, Mariam Shreif, Imperial College student, was named as the highly commended finalist. This award category recognizes high potential female students from across the world who are currently pursuing a degree in Science, Technology, Engineering, and Mathematics (STEM) with an active interest to pursue a career in the energy sector.

The final category of awards was the Nex-Gen Female of the Year, which was awarded to Lamees Sultan, Offshore Site Engineer at bp. The highly commended award for this category was awarded to Maureen Amir, Completions Engineer at bp. This award category recognizes high performing individuals from the global energy industry with demonstrated potential for being a future leader within the business

PAVING THE WAY FOR SUSTAINABILITY IN THE ENERGY SECTOR'S FUTURE

he EGYPS 2023 Sustainability in Energy Conference has been an international platform that brings together global energy leaders as well as sustainability and HSE experts. It was a perfect venue for exploring how oil and gas operators are integrating sustainability practices into their business models and workplaces ensuring a positive impact on the planet, their employees, and the communities in which they operate.

The EGYPS 2023 Sustainability in Energy Conference began with a keynote speech by Ali Abo Sena, Chief Executive Officer of Egypt Ministry of Environment, who shed light on Egypt's strategy to achieve its Sustainable Development Goals in line with Vision 2030 and the upcoming developments that will be on focus during the next COP 28 in the UAE. Abo Sena referred to the success of the COP 27 in Sharm El Sheikh. "We were able to establish the loss and damage fund which have been discussed over the last 17 years, said Abu Sena.'



Sameh Sabry, Senior Vice President & Managing Director of Wintershall Dea Egypt gave another interesting keynote speech on "Driving sustainable performance in challenging market conditions." Sabry stresses that more resolute actions need to be taken to maintain. a sustainable future in this challenging market. "In Wintershall Dea, we think we need to do more for the future. We believe that carbon management and storage, as well as hydrogen production, could be one solution which is helpful for the survival and existence of our industry in the future. This is an area where we think our industry should evolve into.'

Sabry concluded his keynote speech, stating that sustainability is a key to competitiveness not only the survival of the industry.

Streaming Operations to Tackle Climate Change, Net-Zero Target

A series of panel sessions took place throughout the day. The first panel discussion was titled "Streaming Operations to Tackle Climate Change and Net-Zero Target". During the panel, Denisse Abudinen, CEO of ENAP Sipetrol and General Manager (GM) at ENAP Sipetrol Egypt, indicated that "From the beginning, the shareholders need to understand that trying to be easy going on the environmental sustainability is not a luxury investment. It is a part of the business."

Paul Mayland, Chief Operating Officer of Capricorn Energy, has pointed out that "Stakeholders, governments, and investors are more receptive to understanding the role of offsets when they see the backdrop when

you're trying to do everything you possibly can within your control to control your own emissions and reduce them over time. But to achieve net zero vou face certain challenges and that's where a meaningful goal for offsets can be placed."

Continuing the discussion, Anas Aljuaidi, Chief Executive Officer of MMEC Mannesmann. said "Egyptian people have a very open mindset when it comes to the construction. We achieved [a] 35% [reduction] of construction activities and carbon emissions by implementing very smart technologies to reduce emissions."

Digitalization as an Enabler of Decarbonization

Another panel discussion discussed the role of "Digitalization as an Enabler of Decarbonization". "Digitalization is revolutionizing the industry. It is a journey, and we are learning, our customers and suppliers are learning. What is vital in the future is how do we shape the public and private relationship and understanding towards the upcoming solutions to make things work as fast as we like them to work," said Alexander Kajos, Vice President for Downstream at Nalco Water.

Steve Freeman, Head of Energy Transition, SLB carried on the discussion by stressing that "We need to be able to bring out more energy with zero emissions. We need the technology to do that and so therefore digital is essential to do

Furthermore, Samir Elkareish, Vice Chairman Energy Transition of the Egyptian Natural Gas Holding Company stated that "We consider that digitalization can provide a comprehensive platform to afford the solutions of the decarbonization to reduce the carbon footprint of the oil and gas industry. We expect to leverage the vision of our colleagues to assist us and accelerate the energy transition in the oil and gas sector."

Abderrezak Benyoucef, Head of the Energy Studies Development of OPEC pointed out that "digitalization will be very important in the

near future based on two fronts. The first front will be measurement of the emissions and the second front will be tracking and reporting. Digitalization is one of the best solutions to provide the transparent data but also contribute to reduce emissions in an effective

The Road to North African and East **Mediterranean Cooperation**

Another panel of the conference titled "Building partnerships to drive CSR progress across Sub-Sahara Africa, North Africa and the East Mediterranean" was moderated by Ali Hegab, Oil and Gas Consultant. The panellists strategized on how to cross-collaborate to promote CSR initiatives, give back to the community, and assist governments in North Africa and the East Mediterranean with economic and social reform.

The panellists included Nael Darwish, Chairman of the South Valley Egyptian Petroleum Holding Company (GANOPE); Brad Boyd, Senior Vice President of Corporate Resources at Methanex Corporation; and Dalia Wahba, Deputy CEO and Chief Investment Officer at Hassan Allam Utilities. They began by sharing their respective company's successful CSR initiatives and projects.

Blake Gendron, Vice President of Investor Relations & ESG IMPACT Segment at NESR, commented on the role of government in fostering better cooperation between companies and communities. "We need governments to provide geo-political and regulatory stability," he said.

Nicolas Katcharov, Country Manager of Energean Egypt, added: "CSR gets people closer, improves loyalty, moral satisfaction which keeps them focused on what they have to do every day in their profession.'

For her part, Laila Chemane-Chilemba, Vice President Socioeconomic Development -Mozambique LNG Project at TotalEnergies pointed out that the companies have the investment but the communities have the know-how



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Enhancing HSE through R&D

Undoubtedly, safety hazards have been a concern within the oil and gas industry due to their ability to cause lost income and most importantly fatalities or injuries to workers onsite. In this sense, a panel titled "Scaling R&D to unlock technology and enhance industry safety", highlighted the role technology can play in creating safer worker environments.

The panel was moderated by Ali Hegab, Oil and Gas consultant and comprised HSE executives and digital energy leaders including Mohammed Bahatem, Senior Vice President of HSSE & Asset Integrity Management at Mubadala Energy, James Garvie HSE Advisor at Cheiron and Mathew Thomas, Senior Industry Consultant at Hexagon.

Mohammed Bahatem gave a few remarks on technology tools that achieve autonomous work including virtual reality, robotics, machine learning and augmented reality. He said, "Digitalization is not an objective it is an enabler."

When asked about one important thing that enhances safety, Mathew answers: "Leveraging the potential of the data that is available to us is the key factor in enhancing safety."

James Garvie discussed the four main themes that Cheiron consider when it comes to health and safety; communication, automation, inspection and new process and materials.

Dialogue on Developing the Oil and Gas Safety Culture

The final panel of the conference discussed "Advancing the Oil and Gas Safety Culture" and was moderated by Hussein El Ghazzawy, Chairman of Coxswains for Marketing & Commercial Training. In this session, panellists discussed what are the key indicators of a strong safety culture and how they are working towards a safety program that emphasizes on the health and safety of employees.

Yasser Hassan, Safety and Environment Manager at Shell Egypt initiated the discussion by commenting "We have to learn how to fail safely. It's important to put all controls in to place and that we try standardize our



system with the industry and international organizations."

Alexandra Thomas, Managing Director Egypt at Neptune Energy, discussed how to create the right safety culture and environment where people feel safe. "In Egypt, Neptune has first set the expectations, secondly, make sure people are recognized for their competence and thirdly, properly embedding the system."

Wael Amin, Head of HSE at Kuwait Energy Egypt, started with alarming statistics from the International Labour Office concerning health and safety. Wael then insisted that it is the managers role to lead by example. "The fastest way to destroy safety culture is when managers don't walk the talk, the credibility of the safety culture will then be in danger," he added.

Jessica Jackson, Vice President of Environment, Health and Safety at Apache Corporate, stated that "If you look at the lifecycle of an oil and gas worker, becoming complaisant is a problem, especially that many have been on the jobs for years." Jessica added that this is not a "one size fits all challenge; every culture and operating are being different."

Global Sustainability in Energy Awards

The Sustainability in Energy Conference was concluded by the Sustainability in Energy Awards Ceremony.

The awards were divided into five categories, addressing the oil and gas sector's successful projects and leaders that aim at creating a better and safer future.

The first category of the awards was for the Best Environmental Project of the Year.

The winner was Petrobel which was awarded for the desalination plant freshwater withdrawal reducing project. The winner of the highly commended award was Baker Hughes for their integrated watershed management and soil carbon content enhancement project.

The award for Best CSR Project of the Year was awarded to ANOPC for their corporate social responsibility project. Chevron won the award for its highly commended project for empowering women to be future innovators.

Badr El Din Petroleum Company was awarded the Best Health Project of the Year for its initiative in food safety and hygiene management in remote locations. The highly commended project award was given to Rashid Petroleum Company for their health risk assessment (HRA) project.

The Best Safety Project of the Year was awarded to TotalEnergies for their Suez Depot technical truck inspection centre project. Meanwhile, Methanex got the highly commended project award for its process safety management framework created for the Egyptian oil and gas sector project.

The last category of the awards was for the Best Digitalization Project of the Year. The winner was the Egyptian Liquified Natural Gas (ELNG) company for the HSE barrier management dashboard project. Meanwhile, Baker Hughes won the highly commended award for their multi-sensor data assimilation and model-driven analytics project.





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