

THE 24TH WORLD ENERGY CONGRESS PREVIEW

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ENERGY FOR PROSPERITY

Energy security: How has it changed and what might it look like in the future?

Optimised energy governance is a juggling act between three key dimensions: security, sustainability and equity. This 'trilemma' helps inform the way we think about the world's energy mix, with the relative importance of each dependent on the lens an individual – or government – is looking through.

In particular, how we look at and evaluate energy security – the uninterrupted access to affordable energy – is changing rapidly. Historically, it has been tied to the geopolitics of any given region, in addition to the supply of oil and gas. Today however, a broader and more complex spectrum of elements are converging to both stabilise and threaten energy security.

The availability of energy sources, when considering both fossil fuels and renewables, is increasing. Today, there are more sources of energy in more countries. Shale oil is now available in abundance in the US, and an increase in production over the past decade has contributed to market fluctuations and instability. Conversely, we have seen the growing availability of renewables in countries that can draw on large supplies of wind and solar energy, like Morocco and Costa Rica for instance.

For traditionally resource-rich countries that have relied heavily on energy exports, the reduction in revenue – and profit – is creating significant challenges. Whilst fossil fuel subsidies can be reduced or eliminated – something we have already seen here in the UAE – falling revenues from oil and gas sales are significantly reducing investments in the wider economy in many of these markets, impacting both the social system and the sustainability of the economy itself



Cooling Towers in Soweto, South Africa

Some countries have begun to pivot for future energy security. The UAE, to use just one example, is developing and deploying renewable (the Mohammed bin Rashid Al Maktoum Solar Park) and nuclear (the Barakah power plant) energy programmes at a breakneck pace, diversifying energy sources, reducing greenhouse gas emissions, and improving system resilience in the process. It is bold action that should pay off in the long run.

Other vulnerabilities in the energy security equation also remain quite pervasive, centred chiefly around the transmission and distribution of energy. For instance, the threats of terrorism – both physical and cyber – are present across the whole energy value chain. Governments are also grappling with the issue of demand management – a concept that has significantly changed in the past 20 years, thanks to the digital connectivity that can help reduce peak demand and balance the grid when there are shifts in demand or supply.

But perhaps most critically, responsible short-term energy provision and longer term planning requires a careful balancing act between the three key dimensions of the trilemma. They can be competing or complementary. And in uncertain times, where the news is dominated by political instability, protectionism, tariffs, trade bloc changes and conflict – it is hard not to unconsciously place energy security before sustainability and equity. It is important not to do so.

The successful balancing of these three dimensions requires realistic long term goals-based collaboration between the whole energy ecosystem (policy makers, investors, producers, the market), and a faith that the technologies of tomorrow will provide questions that cannot be answered today. If they could, everyone would be doing it the same way.

Acting today to meet skills gaps in the future



In the last decades the UAE has been transformed into one of the world's most advanced economies and transformative business environments, through the energy, vision and entrepreneurship of a generation; we are acutely aware that we need to enthuse the next generation to grasp the baton to maintain this progress.

I ever more frequently find conversations with my colleagues at the highest level of both government and business turning towards concern over the future energy professional. There are fears that we are approaching a perfect storm in this area: an ageing population of existing energy professionals (which in some disciplines is frankly alarming); competition from other industries luring young talent with attractive salaries; and a radically shifting business environment that provokes skills uncertainty. How can we prepare a workforce for jobs that don't yet exist? This is not just a UAE problem, it is a global problem.

This gap between the ageing energy workforce and motivating the next generation has to be met to ensure we can realise our long-term strategic energy goals, to reliably meet the energy needs of today, and to provide a healthy pipeline of innovation to transition to into a more sustainable, secure and equitable energy future.

“If you ask me today what a young energy professional should train in, I would volunteer coding, artificial intelligence, autonomous manufacturing and process control systems, social media and digital skills. With equal sincerity my father would have told you to become a process engineer. By the time my children are asked this question - and we will still then be some way short of a world with a perfect balance of energy sustainability, security and equity - I suspect my advice will seem terribly out of date.”

It is my belief that there are at least two critical steps that we must undertake to ensure better human capital health. Firstly, the market needs better PR - to sell being an energy professional as a secure, well-paid job that commands the respect that is only earned by contributing to human progress. Secondly, to develop educational programmes that provide a pipeline of young professionals who

can reinforce technical capability with transferable business skills – skills such as complex problem-solving, communication and negotiation, emotional intelligence, techniques for innovation and creativity, and confident decision-making. There are few jobs in any market that do not reward these skills, and if we can develop programmes that hardwire them into our talent pool then we will ensure the health of both the profession and the market itself.

My role as Chairman of the 24th World Energy Congress Organising Committee is not to provide answers, or to simply shine a light on the issues facing the global energy market today, but to invite the world's leading authorities to meet and address these issues. It is an honour to be hosting the World Energy Congress in the Middle East for the first time in its 95-year history, and I am confident that you will join us to ensure that this is marked in history as an event that shaped the future of energy.

Dr. Matar Al Neyadi
Chairman, 24th World Energy Congress;
Undersecretary, UAE Ministry of Energy
and Industry

The 24th World Energy Congress Programme



The Congress programme has been developed to provide an environment to provoke the world's energy leadership to re-evaluate their strategic planning. Although we expect to welcome 4,000 delegates, the programme is designed with an audience in mind that consists of just four people – an energy minister, a producer CEO, a user CEO and a bellwether financier. The programme only consists of content that motivates and deserves the interest of these representatives of the industry's top leadership. If you are a leader in the energy market, or want to share the information that influences these leaders' decision making, you will attend the Congress programme.

Under the theme of "Energy for Prosperity", the main four-day Congress programme has over 70 sessions that address the critical issues across all sectors and regions in the energy market. It focuses on prosperity for nations, for corporations, for societies, the environment and individuals.

Content is driven by cold facts and case studies, and coloured by provocative opinion from experts from every side of the debate to ensure an inspiring, informative and

unique content experience. With no agenda, political affiliation, sectoral bias or preconceptions, the programme will deliver the information and interpretation that allows better decisions to be made. The programme looks at the energy market in the realistic context of economic uncertainty, political instability, material possibility and opportunity.

The reality is that tomorrow's energy goals cannot be realized with the tools, technologies and trading environment that is in place today. These goals will require radical thinking that provides a secure, environmentally-sympathetic and prosperous transition. The programme focuses on how the entire global energy ecosystem may work together to ensure a regulatory, investment, technological and skills environment that delivers real change.

Running under the aegis of the main Congress programme are a series of side events, co-produced with hand-picked partners from thought, investment, innovation and business leadership. These side events allow delegates to dive deeper into topics of interest, and enter into detailed debate with top experts, market influencers and visionaries.

The programme has been curated to deliver an experience that requires the attendance of industry's leadership. Do not expect to agree with everything you hear, but do expect to have to evaluate whether your existing values and beliefs are correct.

Side Events



Strategic Partnerships



Welcome to Abu Dhabi

Proudly modern and cosmopolitan, Abu Dhabi is the UAE's forward-thinking business heart, where nothing stands still.



Louvre Abu Dhabi

In just a few generations, Abu Dhabi has transformed itself from a small island settlement into a thriving international business hub. Capital of the United Arab Emirates, Abu Dhabi is a dynamic modern city, at the forefront of global green initiatives and planning for the next generation's transformation.

Located on an island on the coast of the Arabian Gulf, Abu Dhabi is the largest of the seven emirates that make up the UAE and has a highly diverse population, with residents from 120 countries making up 80 percent of its population.

Due to the vision of the UAE's leaders and the abundance of oil and natural gas reserves, Abu Dhabi has grown to become one of the largest and most strategically-important energy producers. While recognising the success of the oil and gas sector, Abu Dhabi is working hard to reduce its reliance on hydrocarbons and broaden the emirate's economy. This is part of a progressive agenda that encompasses economic and environmental sustainability, education and human development,

healthcare and the arts. Investment in all these areas – as well as infrastructure, transport and tourism - is continuing, in line with the Abu Dhabi Government's 2030 economic plan.

Tourism has also played an integral role in Abu Dhabi's economic development. The emirate has many things to offer to visitors: direct flights to the world's business and population centres, a range of world-class hotels, a versatile landscape, and one of the lowest crime rates in the world.

This September, join us in Abu Dhabi as we welcome each one of you to the 24th World Energy Congress which takes place in the Gulf States for the first time in the Congress's 95-year history. The Congress will deliver an inspirational programme that will challenge your thinking, get you ahead of the curve, and give you both the courage to set ambitious targets and the tools to achieve them.

***Early bird delegate discount ends 28th February 2019. Register now to get 20% off!**

Register now to avail exclusive attendee offers!



Fly Etihad and get 15% off on direct flights on the Etihad Airways network to Abu Dhabi.



Enjoy a wide array of 3, 4 and 5 star hotels to pick from at heavily discounted rates.



Make the most of each day by booking a cultural or an adrenaline-packed tour.

GET INVOLVED