

Q&A

Driving the energy transition

A bright energy future lies ahead as the world transitions to a low-carbon future, says John MacArthur, Chair, International Energy Week 2022*, and Group Climate Change Officer, ADNOC.

International Energy Week 2022 will take over from the Energy Institute's (EI) longstanding International Petroleum Week event – what does this mean for the global energy industry?

This new name signals our confidence in a bright energy future for everyone involved in the EI and our global energy industry. As an inclusive organisation, it makes sense that our major annual event is called International Energy Week.

The energy skills of the EI's individual members are valuable to building a sustainable energy future. Many of the EI's company members are involved in new energies or are transforming to become international energy companies. The EI is the natural home for energy professionals working in diverse roles. Energy today ranges from geothermal to carbon capture and storage (CCS), green and blue hydrogen, bioenergy, renewable electricity, oil and gas – which remains vital to our modern way of life. I am confident these vibrant energy opportunities will attract the next generation of talent to our industry.

Focusing on ADNOC, what is the company doing in terms of tackling climate change, reducing carbon emissions and developing renewables?

In the early 1970s, ADNOC was one of the first in the world to decide not to flare associated gas and instead export LNG. Our methane emissions intensity remains low today. To tackle climate change, the world must use the lowest-possible emissions petroleum products as a priority.

That leadership foresight continues in ADNOC today. We have pledged to further reduce our greenhouse gas (GHG) intensity by 25% by 2030. ADNOC also operates Al Reyadah, the world's



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first carbon capture, utilisation and storage (CCUS) facility for the iron and steel industry, capturing up to 800,000 t/y of CO₂ before being injected into the Rumaitha and Bab oil fields. Building on its success, we are expanding our CCUS ability to 5mn t/y by 2030. This underscores our commitment to being an industry leader in environmental sustainability.

What can be done to accelerate the pace of change in Middle East energy operations, given the significant dependence on oil and gas-related revenue?

Petroleum is an incredibly useful natural resource that transforms lives, and is also made into numerous useful products, from the face masks worn by medical workers to mobile phones.

Lower carbon intensity petroleum products are also essential to drive the energy transition, to mine minerals, manufacture wind turbines and solar panels. The Middle East will also see greater integration of intermittent renewables with flexible natural gas, CCUS and baseload nuclear in the energy system. The Middle East will increasingly provide low carbon energy products to customers and industry partners. ADNOC is also an early pioneer in the emerging hydrogen market and is embarking on a world-scale 'blue' ammonia production facility.

What do you see as the major areas of innovation in Middle East operations technologically, socially in terms of workforce diversity and global political alliances?

I enjoy working in an industry with so many nationalities involved and diversity in all its individual forms. Our next generation of young professionals will have a strong presence at International Energy Week. We also have outstanding female

leadership role models in ADNOC, with Fatima Al Nuaimi, CEO of ADNOC LNG, recently named CEO of the Year at the Gastech Awards.

Digitalisation is advancing rapidly, from digital measurement of GHG emissions using lasers at ground level or by satellites in space, to automated integration with existing production and financial systems to enhance real-time monitoring and operational excellence. I am also excited by innovation and new business models for low carbon fuels like hydrogen.

As we explore those new low carbon growth opportunities, a strength of ADNOC is its history of collaborating with global partners. That core strength is important as we work with industry partners to help them to thrive in the energy transition.

What are you expecting from COP26 for the energy industry?

Fundamentally, this is the first test of raising our collective global ambition to limit warming to 1.5°C. Another priority is to mobilise climate finance from developed countries to support climate action in developing countries.

I would like to see an agreement on international carbon trading (Article 6 of the Paris Agreement). This mechanism would assist governments to implement their Nationally Determined Contributions (NDCs) more easily by allowing countries with low emissions to sell their excess allowances to larger emitters, within an overall reducing cap of GHG emissions. In other words, states exceeding their NDCs would be able to reduce emissions at the lowest cost carbon price.

A well-designed Article 6 mechanism would establish an international policy foundation for emissions trading systems, which may lead to global or regional carbon prices. Through this flexible, lowest cost approach, GHG emissions would fall faster, with carbon prices stimulating innovation and growing markets for lower carbon fuels and technologies, accelerating the energy transition. ●

*International Energy Week will take place in London as a hybrid (online and face-to-face) conference on 22–24 February 2022. See p19 for details.