

Energy Security: Future Demand and Promising Options



The Al-Attiyah Foundation







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2024 June

White Paper

INTRODUCTION 02

The meeting commenced with a customary welcome from H.E. Abdullah bin Hamad Al-Attiyah, extending greetings to members, guests, and speakers gathered for the second CEO Roundtable of 2024. He noted the relevance of the topic. He said that we hear much about the security of supply of fossil fuels, but equally important to suppliers is the security of demand. The topic of energy security has become more prominent in recent years due to many factors impacting on access to reliable and affordable energy.

CEO WHITE PAPER

H.E. Abdullah bin Hamad Al-Attiyah created the Foundation as a platform for knowledge exchange and to support the global community in the quest towards a sustainable energy future.

The CEO Roundtable is an opportunity for CEOs, Foundation members and partners to meet in one room and examine pertinent energy and sustainable development topics.



MODERATOR & SPEAKERS

Moderator:



Axel Threlfall, Editor-at-Large, Reuters

Speaker



Dario Liguti, Director, Sustainable Energy Division, United Nations Economic Commission for Europe

Speaker



Paul Salem, President and CEO, Middle East Institute

Speaker



Rt Hon Charles Hendry, former UK Minister of State for Energy & Climate Change

Speaker



Adam Chase, Partner Lead, Sustainable Energy Solutions, ERM

Speaker



Juan Vazquez, Managing Director and Partner, Boston Consulting Group Axel Threlfall, serving as the Roundtable moderator, introduced five distinguished guest speakers, and invited them to present their perspectives with some initial remarks.

Accompanied presentations are detailed in Appendix A. The speakers offered insights into crucial facets of addressing climate change and advancing sustainable energy solutions.

Rt Hon Charles Hendry, former UK Minister of State for Energy and Climate Change opened the discussion. He discussed what Europe is doing to address climate change. He pointed out that it is important for Europe to develop energy systems that are robust to all conceivable shocks to supply systems. One has to realise that security of supply comes at a cost. Diversity of supply aids security of supply, meaning that the consumer would not only use the lowest cost supplier. Rt Hon Hendry noted that this was a sharp and hard lesson learnt by some European countries recently. Equally important is the ability to be able to respond quickly to supply shocks. He further elaborated the role of renewable energy supply resources in greatly aiding security of supply because renewables are usually domestically sourced. He concluded his opening remarks by pointing out that although solutions for some decarbonisation efforts are already known, the costs for the last 10% of decarbonisation often exceed the costs of the first 90%. He also mentioned that both IOCs and many NOCs possess the skills to deliver on decarbonisation projects that may be currently lacking the required project management skills.

Juan Vazquez, Managing Director and Partner at Boston Consulting Group continued the discussion with a presentation. In his presentation, he emphasised that energy demand will continue to increase, driven by an increasing world population.



He said that for many large economies, the use of gas is still relatively small, as coal remains the leading source of energy, especially for power generation. However, it is expected that oil consumption will peak somewhere between the years 2030 – 2040. As more and more countries reduces their use of coal, gas (including LNG) is expected to continue to grow for some time but at a slow pace. He noted that some forecasts for net zero emissions are just mechanisms to show how that target can be reached. They are not necessarily based on practicable economics. Juan observed that when the Final Investment Decisions (FIDs) for gas projects are reviewed, it is possible that no new gas projects will be needed after 2040, and noted that if however, in the intervening period, supply is short or over contracted values, then consumers will end up paying much higher spot prices for supplies.

Adam Chase, a Partner and Lead Sustainable Energy Solutions at ERM, in his opening thoughts, shared his perspective as an advisor to private and public sector clients on energy transition by distinguishing between, 'what some people want to happen', 'what others think ought to happen', and 'what market dynamics and technology may cause to happen'. He further proceeded to separate these three considerations as follows:

On what some people want to happen – He pointed out that the desire for predictability and acceptable returns from oil & gas suppliers is fully understood, as well as an equivalent plea being made by suppliers of low carbon energy since its emergence; reluctance to change is also natural with shareholders enjoying greater than 15% returns not expected to be easily tempted by renewables that offer only about 5% at the moment; and although the need for a just transition is evident, resistance to change is sometimes disguised as good intentions, such as the need to protect workers and societies.

On what others think ought to happen – Adam highlighted that climate change creates a need to achieve a secure and affordable transition to low carbon energy, soon with more focus



on area under the emissions curve as first priority, rather than meeting targets late in the period; and gas plays a vital and – relative to oil – increasingly important role as a partner to enable renewables.

With regards to what market dynamics and technology may cause to happen, he provided the following elaborations: policies, markets, investors and technologies typically play a much larger role than the desire of climate activists; several of these (CBAM, disclosure requirements, financing frameworks etc) are already showing signs of making a difference; and technology is increasingly playing a role in offering consumers efficiency (energy demand destruction) and arbitrage (energy demand choice).

He summed up his initial thoughts by pointed out that the concept of a "just transition" is paramount because without it some countries will simply not be able to change the sources of their energy. The role of technology is important, and this should lead to demand destruction for fossil fuels. We should see many opportunities for arbitrage across geographical areas which may lead to more efficient uses of energy. What companies need above all else is predictability of policies which in turn will lead to predictable returns on investment. Without that, companies will be reluctant to invest. He concluded his opening remarks by pointing out that the Cross Border Adjustment Mechanism (CBAM) that the EU is introducing will bring about some changes in investments for those companies wishing to trade with the EU.

Dario Liguti, Director of the Sustainable Energy Division of the United Nations Economic Commission for Europe (UNECE), highlighted some of the work the UNECE is doing on supporting the building of resilient energy systems in the region (which includes North America, Europe, the ex-Soviet Union, Türkiye and Israel) in the context of the recent political crises, including major initiatives aimed at addressing the energy trilemma.

On energy trilemma – the need for secure supplies of energy whilst keeping costs affordable and also reducing CO2 emissions – he talked of the need to satisfy all three aspects of the trilemma and the mechanisms that may do that. Energy efficiency is an example as such improvements cheapen energy by reducing the amount used, are inherently secure and emissions are reduced again as less energy is used. Increased use of gas (within coal to gas switching for generation) is another such mechanism as long as gas is cheaper than coal on an energy basis. Electrification will improve both efficiency and affordability but only if the electricity is green or blue and relatively cheap. He further noted that the issue of methane emissions needed to be tackled on an urgent basis.

Paul Salem, President and CEO of the Middle East Institute, commented on the political landscape for energy in the USA. The cost of gas (i.e. gasoline) is a major political issue in the USA in the run up to the USA elections. The relatively new legislation – the Inflation Reduction Act (IRA), is causing some shifts in investments but if the presidency and congress changes then much of the climate change stance in the USA may also change. However, in further discussion, it was observed that successive governments may not find it easy to reverse the key aspects of the IRA.

He pointed out that he had always held the view that ten suppliers are better than nine! When he was Minister of Energy for the State of Qatar, he frequently gave 'free' advice to prospective customers not to 'put their eggs in one basket'. The negative impact of the Russia-Ukraine war on energy supply to Europe has now shown that such advice was indeed a good one.

The moderator then opened the floor to other participants of the Roundtable for comments, questions, and discussion.



07

The following were some highlights from the session:

- Gas supplies from Russia to Europe are now unlikely to resume in the near future except perhaps for a few eastern Europe "special cases".
- The Trilemma is always with us but some forecasting sources do point out how this may be achieved in some scenarios;
- Hydrogen always remains a possible clean source of energy, but costs remain high at the moment:
- In Europe, strong policies need to be formulated within which climate change actions may be developed;
- Realistic temperature forecasts need to be produced now. The 1.5C target has already been exceeded;
- Many new partnerships of common interests need to be developed on an international basis:
- Currently, the USA and Europe remain the leaders in creating policy;
- Many supply chains for critical materials and equipment go through China.
 The trading relationship with China is therefore important;
- Coal production will peak as the effects of alternative sources for electrification are felt;
- The pace of energy transition will be different for different countries. However, all countries need to be able to protect themselves against "Black Swan" events;

 Many speakers and other attendees spoke of the need for the oil and gas companies to use their undoubted project management skills to implement energy transition projects.

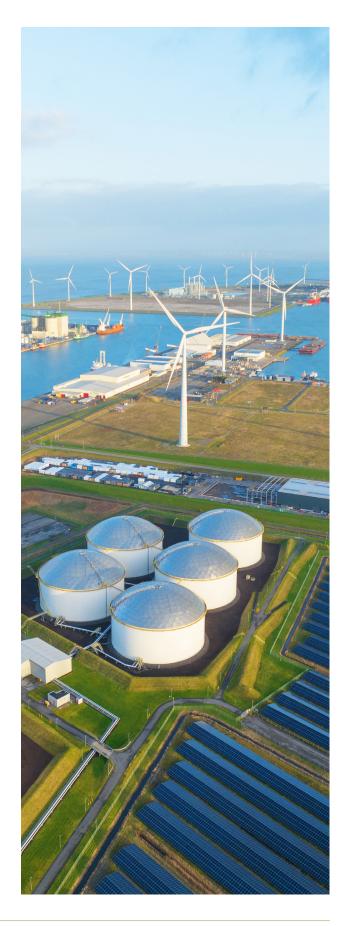
CLOSING POINTS FROM THE FLOOR AND EXPERT SPEAKERS

- Policies need to be put in place that are flexible to change. Adherence to rigid and dated policies only cause errors which endanger both security of supply and the climate change aspirations;
- In many countries, the younger generation is becoming more vocal;
- Higher temperatures, droughts, flooding and major storms are impacting the lives of peoples, who are now making their voices heard;
- The public should not be misled about the effects of climate change;
- Diversity of supply is important to ensure security of supply;
- Partnerships across companies and nations are important to ensure that opportunities for sustainable investment are captured.

CONCLUSIONS 08

In closing, Axel Threlfall emphasised the significance of the energy transition as a "noble cause" that demands relentless pursuit. He reiterated the imperative for collective action and collaboration in addressing the complex challenges posed by climate change and transitioning to sustainable energy systems.

Following Mr. Threlfall's remarks, H.E. Abdullah bin Hamad Al-Attiyah further underscored the gravity of the situation and the need for action by all parties. Furthermore, H.E. Al-Attivah expressed heartfelt gratitude to the Foundation's member companies for their support and invaluable contributions to the Roundtable. He noted that their dedication and commitment to driving positive change were instrumental in fostering meaningful dialogue and actionable solutions during the session. H.E. Al-Attiyah also expressed his thanks and appreciation to the expert speakers for their commitment to the Al-Attiyah Foundation, and for taking time, either in person or virtually, to share their insights with the participants.



Do you want to keep up-to-date with the latest developments in energy? All past issues of the Al-Attiyah Foundation's Research Series, both Energy and Sustainability, can be found on the Foundation's website at www. abhafoundation.org/publications



March - 2024

Impediments and Opportunities for the Energy Transition

The meeting commenced with a customary welcome from H.E. Abdullah bin Hamad Al- Attiyah, extending greetings to members, guests, and speakers gathered for the inaugural CEO Roundtable of 2024. He noted the timeliness and relevance of the chosen topic, resonating with all present.



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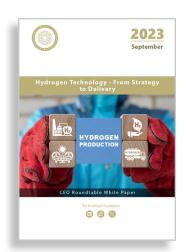
December - 2023

The Year That Was - Reflecting on 2023 and Plotting Climate Action in 2024

The Al-Attiyah Foundation's fourth CEO Roundtable of the year was held on December 6. The Trilemma for Energy, encompassing Energy Affordability, Energy Sustainability, and Energy Security, formed the basis of the session's analysis of trends witnessed over the past 12 months and predictions for 2024.



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September - 2023

Hydrogen Technology - From Strategy to Delivery

Hydrogen is the most abundant element in the universe and also burns without producing carbon dioxide. Due to these properties, many experts have claimed that it is the "wonder fuel" and could play a major role in the race to net-zero emission by mid-century.



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OUR PARTNERS 10

Our partners collaborate with the Al-Attiyah Foundation on various projects and research within the themes of energy and sustainable development.











































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