



**2023**  
**February**

## Anticipated Energy Scenarios in a Net-Zero World



CEO Roundtable White Paper

The Al-Attiyah Foundation



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Institutions within academia, research organisations, the private sector, and the energy industry have developed energy scenarios. While these organisations have different methodologies and varying assumptions, most of their scenarios are not optimistic about the world meeting targets set by the Paris Agreement. For the first CEO Roundtable of 2023, international experts, and guests provided insights into short and long-term scenarios and discussed how 2023 might unfold for the energy transition.

## CEO WHITE PAPER

H.E. Abdullah bin Hamad Al-Attiah 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, Members, and Foundation Partners to meet in one room and examine pertinent energy and sustainable development topics.

### Nations Unies Conférence sur les Changements Climatiques 2015

COP21/CMP11

Paris, France





- There is doubt as to whether a suitable "roadmap" for the energy transition will emerge, and if one came to fruition it would be subject to political change, making it unfit for purpose.
- The role of investment in hydrocarbons is critical in maintaining an orderly market for the energy transition. There must be sufficient investment so that shortages or gluts of hydrocarbons do not appear at any point up to 2050 and beyond.
- The technology challenges of implementing the energy transition cannot be underestimated. All methods of reducing emissions will be needed whether it is by increasing the market share of the non-fossil fuel sources or by meeting the technical challenges of carbon capture, direct air capture or economic introduction of hydrogen into fuel cycles.
- There are major opportunities for Gulf countries to produce 'green commodities' such as Liquefied Natural Gas (LNG), fertilisers, steel cement, and aluminium.
- COP27 focused mainly on damage repair and adaption and how it could be financed. While this is undoubtedly important, it is hoped that COP28 will focus more strongly on mitigation – the reduction of CO2 emissions.

### CEO SPEAKERS

#### Moderator:



Mr. Axel Threlfall,  
Editor at Large, Reuters.

#### Speaker



Mr. Alan Gelder,  
VP Refining, Chemicals  
and Oil Markets at Wood  
Mackenzie.

#### Speaker



Dr. Li-Chen Sim,  
Assistant Professor at  
Khalifa University & Non-  
resident Scholar at Middle  
East Institute.

#### Speaker



Mr. Geoff Sinclair,  
Managing Director, and  
majority shareholder of  
Camco, a climate and impact  
fund manager leading the  
clean energy transition in  
emerging markets.

#### Speaker



Dr. James Henderson,  
Director, Natural Gas  
Programme, Oxford  
Institute for Energy  
Studies.

At the start of the Roundtable, His Excellency **Abdullah bin Hamad Al-Attiyah** welcomed members and the guest speakers. H.E. expressed his pleasure at seeing many distinguished individuals and colleagues in attendance. H.E. remarked that the Roundtable was well timed as scenarios for the medium-term and security of supply are of paramount importance at governmental levels, in business and for the wider public. The moderator then asked each of the four speakers to make their opening remarks.

**Geoff Sinclair** emphasised the key role that Africa will play in the renewables market. He noted, Africa's population is set to grow more rapidly than the forecast installation of renewable generation and that something must change if the continent's emissions are to be reduced. He added, renewables lend themselves more readily to distributed transmission of electricity rather than a centralised one meaning the potential to rapidly expand renewables generation must exist. Hydropower has often been used as a standby energy source but as climate change is altering river flows in Africa and elsewhere, it is viewed as unreliable by some. Consequently, gas will continue to be used for standby and peak lopping power, increasing the need for smarter grids.

**James Henderson** spoke of the need to keep rebalancing the "Trilemma for Energy". The balance between sustainability, security of supply and affordability is always present, particularly for Europe. It was thought that the balance may have shifted towards security of supply, with energy security taking a more prominent position alongside affordability, while sustainability is a lower priority in the short-term.

He noted, that this is particularly evident in Europe, where the search for hydrocarbons to replace imports from Russia will continue to be prevalent in 2023. Dr Henderson further highlighted that this rebalancing means different things in different regions of the world, with responses from China, India and Africa emphasizing this. However, 2023 will also be a vital year for pursuing the energy transition agenda ahead of COP28, with electricity market design, the future of nuclear energy, the operationalisation of voluntary carbon markets, the development of GHG emissions standards and further work on climate finance issues, all being priorities.







**Dr Li-Chen Sim** spoke of the outlook for fossil fuels at COP28, where she believes the focus of the negotiations will shift back again to mitigation against climate change. The outlook for hydrocarbons is complex. In the near-term, gas supply in Europe should meet demand but uncertainty remains for the winter of 2023/24. She hastened to add that demand for gas is weather dependant. The European demand for gas will be reduced by one third by 2030, as part of the efforts to decarbonise the energy markets. Therefore, the prices of gas will be expected to drop in the long-term. This reduction in consumption should be accompanied by increased efforts to replace fossil fuels with renewables, providing business opportunities in many areas. Examples of business opportunities will appear for "green" aluminium, steel, and fertilisers. Also, the opportunities for low-cost producers of

hydrocarbons will be enhanced as the higher cost producers are forced out of the market by lower cost renewables where they exist.

**Alan Gelder** said that the forecast for 2023 is "quiet," as major economies just avoid recession. It should be noted that recessions (or near recessions) are not synchronised i.e., not all economies will be flat at the same time. The effect of inflation on supply chains cannot be ignored so projects for energy supply will be difficult to initiate. The overall consequence is that the energy markets will remain tight despite low overall growth. Caps on Russian energy supplies appear to be working in that major discounts are now being given to reduce Russian state revenues. The forecast for crude for the next few years is \$90 / barrel but it is observed that Russian Urals crude would typically sell at a substantial discount to that figure.

The floor was then opened to other participants of the Roundtable for comments, questions and discussion. The following were some highlights from the session:

- The first question concerned new energy investments and the apparent reluctance to invest in projects. There was a general agreement that many companies are more willing to return funds to shareholders rather than to invest in projects, stoking insecurity of supply and price volatility. However, it was also observed that China typically takes a much longer and more strategic view on such investments.
- A discussion on the roadmap to net-zero by mid-century was prompted after a guest asked about climate change emission reduction and abatement measures. Participants debated whether the parties from various countries across the world could ever agree on a "roadmap", and if they do, how useful it would be, considering that it would emerge from a political consensus that involves many diverse national interests. Some suggested that the sum of individual country's National Determined Contributions (NDCs) was sufficient as a roadmap. However, others pointed out that the sum of individual country's NDCs was insufficient to meet net-zero targets by 2050. Some forecasts now point to a base case temperature of 2.4 C above preindustrial for 2050.





- The issue of long or short-term contracts for LNG was discussed. It was noted that uncertainty surrounding future gas demand moves consumers toward short-term contracts while the need to invest in LNG facilities with extended lifetimes encourages producers to opt for long-term contracts. A guest said that the differing views between all parties would result in a mix of contracts from the very short (spot market) to the very long. It was noted that the attitude of some developed countries ignores the problems of the less developed ones where prorated approach may be different.
- The guests also debated the technologies that will be integral in the energy transition. It was agreed that new technologies such as Carbon Capture Utilisation and Storage (CCUS), hydrogen as a fuel, Direct Air Capture (DAC), and the now more traditional technologies of solar, wind, gas, nuclear and hydro would all play prominent roles in the coming decades. It was noted that to further facilitate the push to net-zero, countries must move away from coal as an energy source. However, many parties are relying on a "Business as Usual" model, coupled with technologies such as carbon capture being used to realise targets for emissions. It was pointed out that carbon capture is not a developing technology but is being implemented in several countries, including Qatar.
- The subject of African Industrial policy was discussed. Opportunities exist for both solar and wind power to be expanded. A guest said that more technically advanced non-fossil fuel technologies would not be viable because of funding requirements.

This is especially true as these power sources do not rely on a sophisticated power grid but are very amenable to localised distribution.

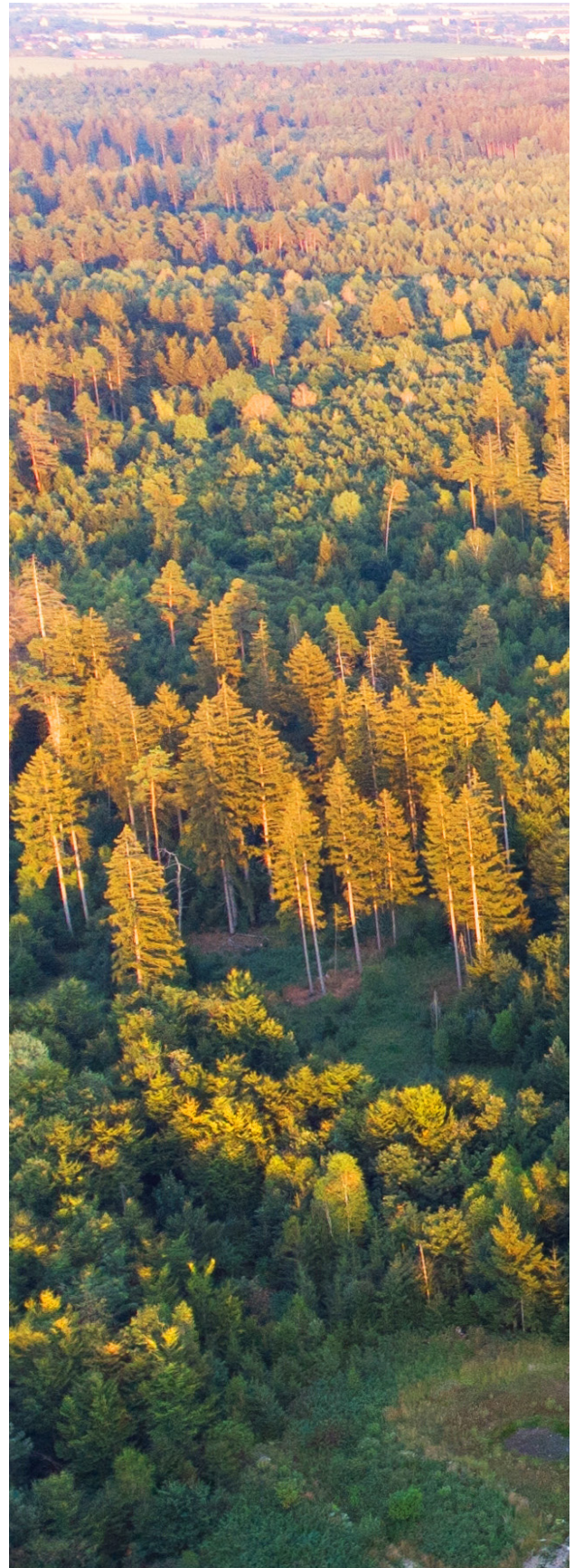
- It was observed by some attendees that support for nature-based solutions (more trees etc.) was emerging. However, others pointed out that this approach will be insufficient to meet current targets. Others commented that one should not confuse targets with aspirations and that current targets may be unachievable. The danger of reaching tipping points is very real and that climate change is moving to its own timetable and not to a man-made one.



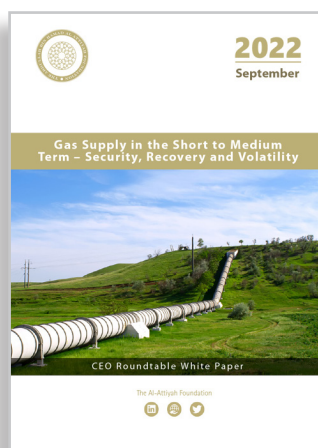


The moderator concluded that the world is going through an interesting period of rapidly changing landscape of the global energy system. It is important that those involved in the energy industry continue to watch the space and remain ahead of the game.

In closing, H.E. Abdullah bin Hamad thanked the speakers and guests for their attendance and contributions to the discussion and said he is very much looking forward to the next CEO Roundtable scheduled for June 2023.



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](http://www.abhafoundation.org/publications)



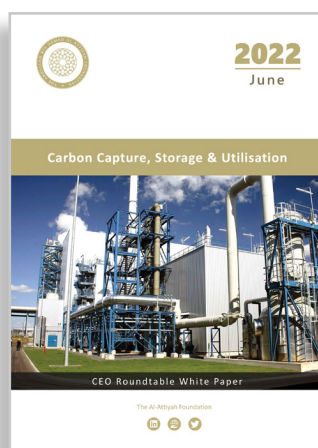
### September – 2022

#### Gas Supply in the Short to Medium Term – Security, Recovery and Volatility

One may be forgiven for believing that the recent spike in gas prices and shortening supply are unheralded. However, some facets of the current situation could have been forecast with a quick analysis of trends from the previous decade.



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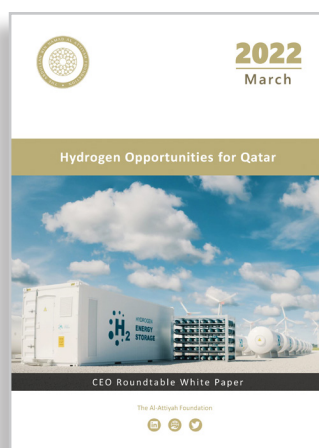
### June – 2022

#### Carbon Capture, Storage & Utilisation

Carbon capture and storage (CCS), or carbon capture, utilisation, and storage (CCUS), is a suite of technologies to capture CO<sub>2</sub> from carbon-emitting. CCUS involves three steps aimed at reducing the release of anthropogenic CO<sub>2</sub> emissions into the atmosphere.



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### March – 2022

#### Hydrogen Opportunities for Qatar

The race towards carbon neutrality by mid-century has certainly gathered momentum in the past few years. Netzero carbon aspirations are now increasingly common for countries, subnational regions, and companies, with about 70% of the global economy now covered by firm or indicative net-zero targets.



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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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