

Energy Transition



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SCROLL DOWN

HYDROGEN POLICIES **SHIPPING DECARBONIZATION** **ROBOTICS IN RENEWABLES**

Investors Must Not Miss the Big Picture in GCC Energy Transition

Badar Chaudry

Senior Vice President, Energy Sector, Mashreq Bank

High oil prices certainly help to boost the GCC's financial outlook, but there is more to it. Inevitable economic peaks and troughs mean borrowers with a diverse toolkit and attitude of adaptability will be able to quickly capitalise on investor appetite amid the global energy transition – the greatest challenge in modern history.

The financing yardstick to release capital is surer than ever: proof of concept and the validity of the project must be extremely robust. For example, Mashreq has committed \$30 billion to sustainable financing by 2030 – a vast sum in a very short span of time in a very ambitious space. Yet our challenge is echoed by others in the financial ecosystem: finding the right commercial and environmental destinations to justify allocating the credit.

Essentially, there is no dearth of money across the GCC but borrowers need to strengthen their proposals.



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Streamlining the sell

The momentum to craft a mixed energy basket is picking up but more can be done.

For one, more clarity is needed on the follow-through of climate commitments made at recent Cop climate gatherings.

This applies to COP27 in Egypt, which was held last November, and COP28, which is set to take place in the UAE later this year, as investors are reassured by tangible steps emerging from high-level dialogue. This is especially true for investors who are being sought for big-ticket financing in relatively new energy markets, such as circular markets and green hydrogen.

Other much-needed actions include ironing out policy frameworks and reporting standards, from carbon pricing to carbon capture and storage (CCS) and more. There are far more questions in the energy transition than answers; investors want to see strategies that aim to reverse the global status.

Such frameworks and standards must meet international best practice but it is equally crucial that they factor in local and regional nuances. Not only does this make them more useful and applicable, it also helps borrowers capture the attention of various investor types.

Investors' need for greater visibility extends to the hydrocarbon sector — pivotal to sustaining energy security — especially as the Russia-Ukraine war affects supply-demand dynamics.

With the International Energy Agency expecting global oil demand to rise by 1.9 million barrels per day this year, to a record high of 101.7 million bpd, garnering investor support to both expand and green hydrocarbon operations simultaneously is key.

Ramping up environment, social and governance efforts is another sure route to deepen investors' buy-in. Many corporate clients want to understand how to curate ESG guidelines and policies with long-term relevance — a fair question, considering there are 600 reporting standards worldwide,

according to Ernst & Young. Those who commit to designing the most appropriate and thorough system today will reap the reward as investors are expected to favour ESG credentials, especially from 2025.

Strong growth ahead

The UAE's economy is projected to grow by 7.6 per cent in 2022, the highest in 11 years, driven by both oil and non-oil sectors, according to the latest estimates by the UAE Central Bank. The latest growth forecast is higher than the 5.4 per cent estimate made by the Central Bank in July last year.

Non-hydrocarbon growth in the Emirates this year could climb by 4 per cent, according to the International Monetary Fund, which is an important nod to the breadth of economic potential for Opec's third-largest producer.

Local champions in the GCC, such as Masdar, are also actively playing their part in enticing capital and confidence to the region.

Abu Dhabi's green energy company has set a target of at least 100 gigawatts in renewable capacity and the production of up to 1 million tonnes of green hydrogen by 2030, which is bold, considering today's global green hydrogen market is miniscule.

The fact that the Arab world's two largest economies have committed huge sums to reach their net zero goals — Saudi Arabia will invest \$180 billion by 2060, and the UAE has pledged \$163 billion by 2050 — certainly reinforces investors' willingness to get involved.

Ever-discerning investors seeking holistic progress will force some energy borrowers to really up their game this year, operating more transparently and boldly than ever. The positive squeeze will create stronger capital markets that support the right projects at the right time, enhancing energy security and the climate agenda — both imperative, especially as the UAE prepares to open doors to Cop28.

Source: *The National*

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Joseph Alfred
Founder & CEO
Ally Power Inc.

Energy transition, energy security, and geopolitics are now all intertwined

Energy transition is no longer just a question about sustainability. It's now also a matter of determining how we can actually generate the energy for our current transportation and other energy needs. We also have to remain cognizant of the fact that our focus should be on maximizing in-country energy capacity and minimizing reliance on foreign nations for power generation that may be subject to geopolitical conflicts. Energy transition at the moment is tied to energy security. The approach to in-country energy production is relevant regardless of the type of energy involved – whether electric batteries, hydrogen, or others.

Ongoing background conversations are redirecting investments towards hydrogen

In terms of mobility, hydrocarbons are for the foreseeable future going to play a significant role, especially when heavy industry is involved. While, in our day to day, whether we're taking trains, planes, boats, or cars, we're just thinking about what will get us to where we need to go, we still have to home in on that transition to hydrogen. Even if our day-to-day transportation routine hasn't changed, that doesn't mean that there aren't ongoing conversations in the background that are recalibrating investment strategies toward cleaner energy sources. As we advance toward solutions that will simultaneously address our energy security and energy transition concerns, those solutions should be structured to maximize clean energy availability and the number of consumers that utilize all these various sources of energy.

**Paraphrased Comments*

Source: Microsoft MEA Sustainability Leaders Forum

WEEKLY SOUNDING



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“Some vessel owners are doing fleet rejuvenation when they can find yard space, because with all these transitions, the types of ships that are being built in the shipyards are more modern and fuel efficient to reduce emissions. We are also seeing more ships being constructed as gas carriers, because a lot of the new fuels are going to require a different type of tonnage. Ammonia-based fuel, for instance, requires a much different type of vessel than an oil tanker. We are seeing this transition happen, not only in tankers, but in dry bulk and in containers. It's likely going to continue for the next five or ten years as we start getting new technologies.”

Rustin Edwards
Head of Fuel Oil Procurement
Euronav NV

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Robotics & Automation: Accelerating the Transition to Renewables



Dr Fadi Ghaith

Head of the School of Engineering and Physical Sciences
at Heriot Watt University

With diminishing supplies of oil and the need to reduce carbon emissions, the adoption of automation technologies such as robotics can be an important catalyst for the transition to renewable energy. Currently, the MENA region is faced with the challenge of diversifying energy sources away from oil and gas, reducing CO₂ emissions, while ensuring the needs of growing populations and expanding economies are met.

Research reveals that robotics and automation help simplify the processes involved in support of renewable energy generation, especially for solar energy sources, resulting in cost savings and increased productivity.

From utility-scale maintenance to construction assistance, robots and automation proved to be helpful to the solar industry. Outdoor, autonomous robotic technology has proven to make the process for solar field assembly significantly more efficient. For example, autonomous technology can save a lot of time and effort when it comes to vegetation maintenance. Additionally, high-speed impact robots are gentler and

more suitable than manual handling. This is critical considering the fragile nature of solar cells and wafers, which helps ensure higher output with better yield. Overall, this enables utility-scale contractors to reduce the frequency of their involvement in repetitive tasks, contributing to productivity and bolstering worker safety.

Moreover, crucial tasks such as removing dust from solar cells can be automated with the help of self-cleaning robots which is otherwise risky for people. Dust removal is critical in high dust-density regions such as the Middle East to ensure the solar panels provide the maximum power output and energy yield. Autonomous robots travel across both fixed-tilt and tracking systems to clean panels without water. This can save billions of litres of water over the lifetime of a plant situated in arid regions.

Finally, robots in the PV manufacturing process make a significant contribution due to their ability to reduce costs and enhance precision and accuracy compared with human intervention. Manufacturers can deploy robots and automation to make smarter production decisions, which

increases precision, reduces the cost of production, and improves productivity.

One of the main challenges of integrating robotics into the renewable energy industry is the power grid, which is primarily designed to transport energy from large, centralized power plants fuelled by non-renewable sources such as natural gas and oil. Hence, the current power grid requires an overhaul before solar and other forms of distributed renewable energy can be truly integrated as a viable source of power.

As such, transitioning to renewable energy in the future requires new approaches to the power grid design. Smart power grids can integrate various renewable energy sources and help utility companies achieve greater efficiency and sustainability.

An increase in the integration of robotics and automation in the renewable energy industry could lead to an eventual shift from other sources of energies such as oil to greener alternatives such as solar. This will spur the creation of “jobs of the future” – especially in high-growth data, digital and robotics engineering.

WEEKLY SOUNDBITE



**“Differences Between US and EU
Hydrogen Policies Determine Pace
of Growth in Investment”**

Emanuele Bianco
Associate Programme Officer, IRENA

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Hussein Fouad El Ghazzawy
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