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Middle East-Asia: Pioneering Low-Carbon Partners

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Image Attribute: Rooftop Solar Panels in Dubai / Source: enerray.com

When a rare ray of certainty shines through the mist of guesswork in the energy markets, we must be proactive. We know that the world's energy market faces its most challenging tightrope yet: meet rising energy demand and simultaneously hit the unprecedented low-carbon targets that are detailed in the Paris Agreement. What isn't certain is how to achieve it. So, now we must pinpoint how the historic alliance between the Middle East and Asia can help producers on both sides of the Indian Ocean achieve the holy grail: affordable low-carbon energy security. Collaboration and innovation are vital tools for producers trying to keep their balance as this 21st-century energy transition gains traction.

BP Outlook expects the Middle East's energy consumption to rise by 54% by 2040. To the east, China and India are two of the world's largest energy markets and the 60% growth in energy demand over the last 15 years in the *Association of Southeast Asian Nations (ASEAN)*, detailed by the *International Energy Agency (IEA)*, is likely to continue. Swelling populations

largely underpin this surge. The *United Nations (UN)* expects Asia will be home to two of the world's biggest populations by 2024, with 1.44 billion people in both China and India. Expanding populations are also forecast across the rest of Asia; Malaysia's population will climb by 32% from 2017 to 41.7 million people by 2050, for example, and in the Middle East, the 39% growth rate in the UAE's population to 13.1 million by 2050 generally echoes across the region.

So, what are the potential release valves to these burgeoning pressure points? The rise of renewable energy, leveraging gas as the 'greenest' fossil fuel and greener enhanced oil recovery (EOR) are on the still-exploratory list.

Renewable energy is a key focus area for both regions. The IEA expects Asia to be home to two of the three countries – China, US, India – that will account for two-thirds of the global renewable expansion up to 2022 and renewables are an integral thread in the energy strategies of most Gulf countries' National Visions. The UAE, long an advocate of solar power, also launched the world's largest *Concentrated Solar Power (CSP)* project last year. Looking ahead, how can the expertise of these renewable pioneers be leveraged so they co-author an even more impressive chapter? And how can new sweet spots in the ancient east-west alliance be leveraged via China's Belt and Road Initiative (BRI), India's Think West policy and Gulf nations' plan to widen their influence outside the Middle East?

Regulatory shifts in the global bunkering market offer another collaborative opportunity in the liquified natural gas (LNG) market. LNG is an increasingly popular option to meet the International Maritime Organization's (IMO) ruling to introduce a 0.5% sulfur cap on bunker fuels, down from today's 3.5%, by the 1 January 2020. Alignment between the two regions on leveraging LNG bunkering makes sense. Maximizing the use of natural gas and LNG, considered the 'greenest fossil fuel', is part of energy strategies in both regions, which are also home to the world's first and second largest bunkering hubs: the Port of Singapore and the UAE's Port of Fujairah, respectively.

We are eager to build on our collaboration with Abu Dhabi-based *Masdar* to pursue opportunities in renewable energy and clean technologies, both locally and internationally. In particular, we want to learn from their experiences in developing solar farms, keeping the overall *levelized cost of electricity (LCOE)* low and their extensive renewable developments outside of the Middle East.

Cutting CO2 emissions from EOR is another vital link in the balancing act, especially as the market expands.

Transparency Market Research expects the global value of the market to soar from $38.1 billion in 2012 to $516.7 billion by 2023. But EOR stakeholders cannot play by the old rules; low carbon operations must be implemented to prevent producers slipping from the tightrope. What lessons can be gleaned across the Middle East and Asia from Oman's ground-breaking Miraah project? The collaboration between state-owned *Petroleum Development Oman (PDO*) and *GlassPoint* has created one of the world's largest solar plants, which generates 6,000 tons of steam a day in support of the sultanate's EOR efforts.

The list of potential synergies goes on. How can a concerted strategy hasten the electrification of energy markets and affordably diversify refineries' crude palette to increase the supply of biofuels? And how to help the aviation industry adjust to the *UN's International Civil Aviation Organization's (ICAO)* new offsetting scheme, the *Carbon Offset and Reduction Scheme for International Aviation (CORSIA)*, from 2021? And how to improve the utilization of wastewater in energy production amid warnings by the World Economic Forum (WEF) that scarcity is a top global risk?

Answering even elements of these multifaceted questions will quicken the Middle East and Asia's journey towards sustainability and showcase their influence as low-carbon pioneers on the global energy stage. Together, they can clear the mist.

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