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The oil and natural gas industry has historically played a pivotal role in the economies and political power structures of Saudi Arabia and the other Gulf Cooperation Council (GCC) countries, generating fortunes from the export of these fossil fuels and thus enhancing their international influence. However, as the world shifts toward a cleaner, more sustainable future, the GCC states are also embracing this profound transition, moving from oil wells to power cells.

Opportunities and challenges

According to the International Energy Agency, the global energy landscape is presently evolving at an unprecedented pace. Today, due to technological advancements and scale, solar power has become the most cost-effective means of producing electricity in many parts of the world, surpassing traditional methods; and wind power is similarly experiencing dramatic cost reductions. Concurrently, advancements in battery technology are transforming our ability to store and utilize energy efficiently. Together, these developments have set the stage for a "battery boom," with Bloomberg forecasting a tenfold increase in global battery demand by 2030, primarily driven by the rapidly expanding electric vehicle (EV) market.

On the other side of the Gulf, in the United Arab Emirates, similar transformations are afoot. Ambitious projects like the Dubai Self-Driving Transport Strategy aim to convert 25% of total trips in Dubai into ones made by self-driving vehicles by 2030. Since this technology tends to be integrated into electric rather than combustion-engine vehicles, the increasingly heavy reliance on EVs naturally fuels significant demand for high-performance batteries.

Saudi Arabia"s strategic vision and investments

In addition to these efforts, the Saudi Ministry of Industry and Mineral Resources has issued several mining registrations and licenses for extracting key battery minerals. One notable example from the past couple years has been the awarding of a mining license to Alara Resources Ltd., an Australian-based minerals exploration company, to develop the Khnaiguiyah Zinc-Copper Project.

At the same time, Saudi Arabia is actively taking steps to integrate itself into preexisting global battery supply chains. For example, late last month, Manara Minerals, a joint venture between Saudi Arabian Mining Co. (Ma"aden) and the kingdom"s Public Investment Fund (PIF), invested over $2 billion to acquire a 10% stake in Canada"s Vale Base Metals (VBM) Ltd. VBM"s mission aligns perfectly with Saudi Arabia"s economic-energy transition plan, as the Canadian firm is committed to boosting production of crucial minerals necessary for the shift from gasoline-powered to electric vehicles in the auto industry. VBM currently operates in Brazil, Canada, and Indonesia to mine minerals such as nickel and lithium, critical to the production of battery cells.

Global trends: The US surge in battery technology investments

The momentum isn"t confined to the GCC alone. The United States has seen a surge in battery technology startup investments, underpinned by initiatives like the Inflation Reduction Act Battery Fund. This U.S. government-backed fund offers financial assistance to promising companies developing innovative energy storage technologies, accelerating their growth and encouraging advancements in the field.

GCC states are looking to seize these perceived opportunities as well. Saudi Arabia"s sovereign wealth fund, for instance, is making strategic investments in high-tech firms and has already initiated a number of partnerships with leading global battery manufacturers. Its partnership with Lucid Motors, a California-based EV manufacturer that is now 60.46% owned by the PIF, signals the country"s determination to see the further expansion of the battery industry. Lucid Motors has built an EV factory in Jeddah; although the company"s disappointing first-quarter 2023 revenue numbers suggest the path to developing a robust battery sector will not be entirely straight.

The GCC"s shift from oil wells to power cells is more than just an energy transition -- it"s a strategic recalibration. By embracing the potential of battery technology, these nations are not just preparing for a post-oil future but are actively shaping it. The new chapter they write could very well determine the future of global energy. With their vast resources, strategic location, as well as commitment to sustainability, the Gulf hydrocarbon-exporting countries are uniquely positioned to become major players in the global battery supply chain. As the era of oil dominance wanes, batteries are quickly becoming the next "black gold," redefining the political and economic dynamics of the region in ways we are just beginning to understand.

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