Manama energy storage policy updates

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The latest report by the Arab Petroleum Investments Corporation"s (APICORP) warns that MENA countries must rapidly scale up and integrate variable renewable energy (VRE) - such as solar PV and onshore wind - into their respective power grids if they are to meet their national renewable energy targets in the medium term.

Scaling up renewables requires the deployment of energy storage solutions (ESS) for firming the power capacity, building flexibility, and ensuring power systems stability. ESS also plays a critical role in managing intermittencies of VREs and in mitigating potential power supply disruptions while providing ancillary services.

The report, titled "Leveraging Energy Storage Systems In MENA," lays out ten key policy recommendations to help accelerate the successful integration of energy storage systems into national grids, including guidance on regulatory frameworks, multilateral stakeholder collaboration, and asset ownership across the power value chains.

Renewable energy systems have gained considerable momentum across the MENA region over the past decade, driven by ambitious national renewable energy targets, technology cost declines, and increasing investments in low-cost and low-carbon technologies as part of the energy transition.

The mid- and long-term renewable energy targets for MENA countries - which range from 15 per cent to up to 50 per cent of total electricity generation - show that governments are committed to increasing the share of renewables in the energy mix.

However, because of the intermittent nature of renewable energy sources, ESS - whether electrical, electrochemical (batteries), chemical and thermal - have emerged as the key driver to firming power capacities while providing opportunities for scaling up renewable energy projects into a multi-GW scale.

The pace of integration of ESS in MENA is being driven by three main factors; (1) A technical need associated with the accelerated deployment of renewables, (2) Technological advancements driving cost competitiveness of ESS, and (3) Policy support and power markets evolution that incentivizes investments.

Dr Ahmed Ali Attiga, CEO of APICORP, said, "The need for energy storage solutions in the MENA region is primarily driven by ambitious national renewable energy targets and mounting peak electricity demand as a result of accelerating economic development and diversification of the energy mix. With abundant land and low-cost solar and wind generation capacities, MENA countries have real competitive advantages that enable it to take the lead in energy storage and successfully navigate the energy transition."

Some of the current technologies being used for energy storage in MENA include pumped hydro storage (PHS) and electrochemical energy storage - mainly sodium-sulfur and lithium-ion batteries. Most of the planned and operational projects are in the GCC (Sultanate of Oman, UAE, Saudi Arabia and Qatar), North Africa (Egypt, Morocco, Algeria and Tunisia), with several projects in the Levant - mainly in Jordan, Iraq and Lebanon.

There are 30 ESS projects planned in MENA between 2021 and 2025 with a total capacity/energy of 653 MW/3,382 MWh - out of which 24 projects are for VRE integration and grid firming. The share of batteries out of the total energy storage landscape in MENA is expected to jump from the current 7 per cent to 45 per cent by 2025.

Although the energy storage market in MENA is bound to grow, several barriers hinder the integration of ESS and the ramping up of investments. Financial, regulatory and market barriers must be addressed via policy tools to lay the foundations to an evolved power market for successfully integrating deployed ESS.

"At APICORP, we see ESS as a critical element in the energy transition. In addition to the $1 billion we plan to allocate over the next two years to fund ESG-linked assets, we are also looking at facilitating partnerships between governmental entities, financial institutions and the private sector to make ESS more financially viable to unlock its potential in the region," said Suhail Shatila, Senior Energy Specialist at APICORP and co-author of the report.

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Web: https://kary.com.pl/contact-us/
Email: energystorage2000@gmail.com
WhatsApp: 8613816583346