The Politics of Energy Connectivity in the Middle East and North Africa

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Abstract

This paper examines the rapid expansion of "energy connectivity" in the Middle East and North Africa (MENA) and the political and economic constraints that shape it. Energy connectivity refers to cross-border linkages of resources, power systems, infrastructure, markets, and governance frameworks that enhance the stability, flexibility, and efficiency of energy supply. Drawing on cases in the region, the paper analyzes how regional countries use connectivity to diversify exports, attract investment, and strengthen their geopolitical influence. At the same time, it highlights how intra-regional rivalries as well as domestic demand growth, governance deficits, and infrastructure limitations constrain the realization of these projects. Finally, the paper assesses how regional conflicts, great-power competition, and shifting climate and energy policies in Europe and the United States affect financing and risk perceptions for cross-border energy infrastructure. It argues that expanding connectivity will remain central to MENA's energy security and transition, but its benefits ultimately depend on parallel progress in regional cooperation and domestic reform, as well as more predictable external frameworks.

Key words: energy connectivity, Middle East and North Africa, energy security, international energy politics

1. Overview and Purpose

In the Middle East and North Africa, energy connectivity with neighboring and extra-regional partners has been expanding rapidly through the development not only of conventional fossil fuels but also of renewable energy (hereafter "RE"), hydrogen, and the construction of power grids and transport infrastructure. At the same time, opaque political and security environments and growing domestic energy demand constrain efforts to expand energy development and exports.

Drawing on multiple cases, this presentation analyzes (1) interstate cooperation and competition surrounding the expansion of connectivity, (2) new dynamics created by the energy transition, and (3) the constraints that political instability imposes on connectivity expansion. On this basis, it considers the key challenges for expanding energy connectivity in the Middle East and North Africa.

2. Energy Connectivity and the Middle East and North Africa

"Energy connectivity" is a concept that enhances the stability, flexibility, and efficiency of energy supply and demand across borders and regions by linking energy resources, electricity, infrastructure, markets, and policies. It includes power grids, pipelines, submarine cables, and institutional coordination among multiple countries, and has become an important element for energy security, the energy transition, and the expansion of energy markets.[1)]

The Middle East and North Africa are among the world's richest regions in fossil energy reserves, while in recent years, it has also attracted attention for RE and hydrogen development. In particular, since Russia's invasion of Ukraine in February 2022, the European Union (EU) has sought to reduce dependence on Russian fossil fuels, increasing attention to the region's energy resources.

According to the reference scenario in IEEJ Outlook 2025 (which assumes that no radical energy-saving or low-carbon policies are implemented), oil imports in Asian countries increase from 29.9 million barrels per day (b/d) in 2022 to 41.6 million b/d in 2050. Only the Middle East and North Africa (with estimated exports of 31.8 million b/d in 2050) is capable of meeting this enormous demand.[2)]

As global energy demand expands and the energy transition advances, the region is important both for the short-term role of oil and gas resources and for the medium- to long-term potential of RE and hydrogen. In this context, growing energy connectivity within the Middle East and North Africa and the region's role as a hub for wider connectivity are gaining attention.

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This paper, originally released at the 42nd Conference on Energy Systems, Economy, and Environment, was republished with the permission of the Japan Society of Energy and resources.

3. Cooperation for Expanding Connectivity

In the Middle East and North Africa, cooperation to expand cross-border energy connectivity has progressed. For example, the GCC Interconnection Authority (GCCIA), established in 2001, is an organization aimed at integrating regional power grids and facilitating electricity trade. The GCCIA interconnects the power systems of the six GCC member states—Saudi Arabia, Kuwait, Bahrain, Qatar, the United Arab Emirates (UAE), and Oman—enabling mutual assistance and power exchanges. This regional grid has functioned as a key infrastructure supporting energy security in the Gulf, including preventing large-scale blackouts in the past.[3)] In recent years, efforts have also advanced to create a common power market in the Gulf. Such wide-area interconnections could offer opportunities for Gulf states to accelerate large-scale RE deployment, including exporting surplus electricity and balancing supply and demand within the region.

The Saudi Arabia–Iraq power interconnection project, for which substantive discussions began in 2022, is viewed as politically and geopolitically significant because it aims to connect Iraq's grid to the GCC and reduce Iraq's dependence on Iran. Iraq is reportedly dependent on Iran for roughly 30–40% of its electricity imports.

The Egypt–Saudi Arabia power interconnection project across the Red Sea (total length: 1,350 km) aims to transmit up to 3 GW during 2026. In the future, it is also expected to contribute to broader connectivity expansion by promoting electricity interconnections among the Gulf states, the Eastern Arab states, and Africa. It is noteworthy that this project is supported by the Japan Bank for International Cooperation (JBIC), and that Japanese companies have won contracts for key equipment.

Announced in 2023, the India–Middle East–Europe Economic Corridor (IMEC) is a large-scale development initiative spanning India, the Arabian Peninsula, Israel, and Europe, in which energy connectivity is positioned as a central pillar. In particular, it is expected to develop energy and logistics infrastructure that does not rely on existing chokepoints such as the Strait of Hormuz, as well as wider power grids and supply chains for RE, green hydrogen, and ammonia.[4)]

Projects connecting North Africa and Europe through power interconnections have also progressed. Egypt is advancing submarine cable projects with Greece and Cyprus; Tunisia is developing a power interconnection project with Italy; and Morocco and Spain are planning to reinforce existing submarine cables. Europe seeks to reconcile energy security and decarbonization by investing in and providing technical support for RE and hydrogen infrastructure in nearby North African countries. North African countries, in turn, aim to expand domestic electricity supply while also stabilizing their regimes in both foreign policy and domestic political terms by accepting European cooperation.

4. Competition over Expanding Connectivity

At the same time, connectivity expansion is closely tied not only to cooperation but also to competition and conflict among regional countries. For example, Gulf states are competing to become major exporters of green hydrogen and ammonia—seeking long-term supply contracts in European and Asian markets, reducing production costs, and developing ports and pipelines. Projects such as NEOM (Saudi Arabia), hydrogen projects in Abu Dhabi and Dubai (UAE), and Duqm (Oman) are highly substitutable and target similar markets, intensifying competition. Countries are also stepping up infrastructure investment and diplomacy to establish themselves as hubs for regional and extra-regional power and hydrogen transport.

In the Eastern Mediterranean, natural gas development has been intertwined with geopolitical competition—especially tensions between Turkey and neighboring countries. Since the late 2000s, major offshore gas fields have been discovered off Israel, Cyprus, and Egypt, drawing attention to gas development in the Eastern Mediterranean. The potential for exporting to Europe via pipelines and LNG (liquefied natural gas) also expanded, attracting foreign firms. Egypt in particular, has demonstrated prominence as a hub for gas development and supply, including by hosting the headquarters of the Eastern Mediterranean Gas Forum (EMGF), established in January 2020, and possessing the region's only large-scale LNG liquefaction facilities. Meanwhile, cooperation on Eastern Mediterranean gas development has proceeded in a manner that excludes Turkey. Turkey has political disputes with Egypt and Israel, as well as Greece and Cyprus, and in recent years has conducted unilateral exploration and drilling activities in the Eastern Mediterranean, heightening tensions with neighboring countries. Turkey does not participate in the EMGF.

In the Eastern Mediterranean, many Exclusive Economic Zones (EEZs) among Turkey and Greece/Cyprus, as well as Israel and Egypt/Lebanon, remain undelimited, with numerous contested maritime areas. Moreover, EEZ agreements concluded in recent years—between Turkey and Libya (November 2019), and between Egypt and Greece (August 2020)—were drawn in ways seen as undermining other countries' interests, contributing to heightened tensions.[5)]

In North Africa, while RE and hydrogen cooperation with the EU

and European countries has expanded, countries compete with one another over exports of RE, hydrogen, and electricity to Europe. Morocco supplies roughly half of its power generation capacity from renewables and is advancing cooperation with the EU on renewable electricity and green hydrogen. Egypt has also expanded RE and hydrogen production hubs centered on the Suez Canal Economic Zone and is advancing more than ten large-scale Power-to-X (PtX) projects in cooperation with Europe. Algeria, after increasing gas supply to Europe since the Ukraine war, is now deepening cooperation with Europe on RE and hydrogen.

Morocco and Algeria also compete over energy connectivity with Africa. While Morocco is promoting the Nigeria–Morocco Gas Pipeline (NMGP) plan (approximately 5,600 km) running along the Atlantic coast through West African countries to Nigeria, Algeria is advancing the Trans-Saharan Gas Pipeline (TSGP) concept (approximately 4,000 km) connecting West Africa and Europe via Algeria. Both countries seek to expand political influence in West Africa and position themselves as energy hubs linking Africa and Europe, vying for leadership in energy connectivity.[6)]

5. Prospects and Challenges for Expanding Connectivity

The Middle East and North Africa are not only one of the world's richest fossil-energy regions but also have significant potential for RE and hydrogen development. Given expected demand growth within the region due to economic growth and population increases, and the region's geographic proximity to markets such as Asia and Europe, expanded connectivity within and beyond the region is anticipated as part of its role as a global energy hub.

Nevertheless, major challenges to expanding connectivity remain. The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) identifies barriers to expanding energy connectivity in Asia such as: political factors (fragmented stakeholder interests, lack of a shared vision, uneven distribution of benefits); uncertainty over upfront investment and limited private-sector participation; and technical and institutional challenges (difficulty managing and operating cross-border connectivity, mismatches in regulatory capacity and governance structures among participating countries, lack of mechanisms to balance benefits and costs, and shortages of human resources). Much of this also applies to the Middle East and North Africa.[7)] In addition, because many countries in the region face conflict, civil strife, and political polarization, heightened regional tensions and instability have hindered connectivity expansion.

For example, since October 2023, tensions between Israel and Palestine and surrounding countries have stalled the gas-development cooperation in the Eastern Mediterranean noted above. In the past, around 2011, a series of attacks involving explosions on pipelines exporting natural gas from Egypt to Israel and Jordan temporarily disrupted exports. In the Ukraine war as well, energy facilities and pipelines have frequently been targeted for attack and sabotage. Thus, political and security instability can be identified as a major impediment to expanding energy connectivity—not only in the Middle East and North Africa, but more broadly.

Algeria and Morocco, after intensifying their confrontation over issues including Western Sahara, severed diplomatic relations in August 2021, and natural gas supply was halted in November of the same year. As of the time of writing (November 2025), no signs of improvement are visible, and this "disconnection" in energy is expected to continue. As noted above, it is important to pay attention to bilateral tensions and rivalry for leadership when analyzing why both countries are pursuing expanded connectivity with Europe, the Middle East, and Africa. In addition, it has been argued that the Moroccan government uses the expansion of wind power projects and phosphate mining in the disputed Western Sahara region to strengthen its control over the territory.[8)]

Beyond political factors, there are also many challenges to expanding production, including rising domestic demand, declining output from major oil and gas fields, and aging infrastructure. Egypt achieved natural gas self-sufficiency in 2018, but production has declined due to the lack of new major discoveries, while domestic demand has increased with population growth, and the slowdown in offshore Israeli gas-field development has tightened supply and demand. In 2023, Egypt suspended LNG exports due to production stagnation and demand surges amid extreme heat, reverting to a net gas importer. In Algeria, gas development has been delayed by restrictions on foreign investment and slow institutional reforms, raising concerns about future export declines. In 2023, the country held an exploration licensing round for the first time since 2014 as part of efforts to expand production.

From a macro-international-political perspective, the emergence of the second Trump administration in the United States has contributed to uncertainty over global investment and technological progress in renewables, which in turn affects connectivity expansion in the Middle East and North Africa. For example, in June 2025, the UK government rejected a project (estimated at £25 billion) intended to transmit electricity generated by solar and wind power in Morocco to southwest England via a submarine cable. The project reportedly aimed to supply electricity to about 7 million households and cover 8–10%

of total UK electricity demand, and it was said to have secured over £100 million in development funding. The UK energy ministry cited reasons such as prioritizing "energy sovereignty," supply risks and vulnerabilities of submarine infrastructure, and unclear cost-effectiveness.

This case suggests that debates over the feasibility of expanding energy connectivity between Middle East and North Africa countries and external partners may also be influenced. Because many countries in the region rely on foreign capital (from Europe, the Gulf, and international institutions) to build energy infrastructure, they are highly exposed to external factors and face risks that project feasibility can become more uncertain.

6. Conclusion

As discussed above, while energy development and connectivity expansion are advancing in the Middle East and North Africa, these trends are deeply intertwined with regional political conditions, intra-regional competition, and shifts in international politics and energy dynamics. Both cooperation and competition shape the political economy of connectivity.

To realize regional stability and economic development through expanded energy connectivity, stakeholders must address multiple challenges in a comprehensive manner—such as easing political tensions, harmonizing energy institutions and regulations, securing stable infrastructure investment, and strengthening domestic supply.

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