ERF Policy Brief

The Political Economy of Energy Transition

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About the authors

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In a nutshell

- *MENA remains a global outlier in energy trends. Energy intensity in the region has increased by 30% since 1990, in contrast to a global decline of 35%. This is driven by the dominance of fossil fuel subsidies, inefficient public sector structures, and underdeveloped renewable energy infrastructure.*
- *Without urgent action, the region risks falling behind in the global energy transition, with significant economic and political consequences. But such actions must be pursued in ways that align with political incentives as energy transition can have distributional consequences in society. MENA countries should prioritize a phased approach to fossil fuel subsidy reform.*
- *Gradual reductions, coupled with public awareness campaigns and targeted social welfare programs, can mitigate political backlash and build support for clean energy initiatives. Redirecting subsidy savings toward renewable energy projects and introducing carbon taxes to fund these efforts could create a self-sustaining cycle of investment in clean energy.*

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The combustion of fossil fuels for energy is responsible for over 80% of anthropogenic (human-caused) greenhouse gas emissions, meaning that there is no viable pathway to limiting global warming without a fundamental, rapid and deep transformation of the way societies across the world produce and consume energy. The narrative regarding the impact of energy transitions in the prominent producing countries in the MENA region has focused on the potentially adverse effect on economies posed by lower revenues. However, the region's vulnerability to the impacts of climate change means that it has a significant stake in mitigating the rise in greenhouse gas emissions. Some countries, such as Qatar, have already seen average temperature increases above 2° Celsius. Furthermore, climate models predict that the Middle East and North Africa will be one of the regions that will be worst impacted by further rising temperatures, which, among a range of other potential stressors, would exacerbate water shortages in a region that is already designated as the most water-stressed in the world (all of the region's producers have been categorized as "high stress" or "extremely high stress" by the World Resources Institute). According to the World Bank, the economic impact of climate-related water stress alone could reach between 6% and 14% of their gross domestic product by 2050.

The fossil fuel producers of the MENA region are significant users of energy themselves, spotlighting the entire region as being a global outlier in energy and emissions trends. While the world has made strides in reducing the energy intensity of its economy,[1] which has fallen by over 35% since 1990, the MENA region stands out as being the only major part of the world where this trend is reversed. The energy intensity of the economy is 30% higher than it was three decades ago (Al-Saffar and Lebdioui, forthcoming). These trends are partly explained by two prominent and enduring features of the oil and gas-dominated economies of the region: the dominance of the public sector, and the over-exuberant use of fossil fuel subsidies. The dominance of the public sector has dampened labor productivity, discouraged entry of private firms into high productivity sectors and along with oil subsidies have skewed economies towards dependence on high-energy/high-emissions sectors. Fossil fuel subsidies also partly explain why the region has the lowest share of renewables in the power mix, with subsidies incentivizing fossil fuels over highly competitive renewables (even at less than half the average oil price in 2023, solar is able to compete on cost grounds with oil-fired generation, with a similar story being repeated for natural gas).

While efforts to reduce energy subsidies took place in several MENA countries, concern about political unrest particularly following the Arab Spring is perhaps the most important factor underlying why many governments in this region are reluctant to completely phase out these subsidies. (EL-Katiri and Fattouh, 2017). However, the experience of several countries in the region provides valuable lessons on how to reduce these subsidies without jeopardizing political stability. Gradual subsidy reform is particularly effective since the price elasticity of demand for oil is low in the short run and agents incur adjustment costs to shift from oil to other alternatives.

Aside from subsidy removal, modernizing energy infrastructure which encompasses transmission, transformation and distribution infrastructure is essential to the success of energy transition. In most countries of the region, such infrastructure, particularly grid lines and substations are not ready to allow the integration of large shares of renewables. On the other hand, regional interconnections are low. Institutions necessary to facilitate the energy transition are also necessary for the success of this process. Currently, existing institutions in many of the countries in the regions are structured to suit the requirements of energy systems based on fossil fuel. An electricity market that is dominated by the state owned companies in contrast to one that is liberalized- is another impediment to the development of RE in most countries of the region. (Terrapon-Pfaff and Ersoy, 2022).

The development of alternative or green energy sources can help generate additional export revenues. This creates beneficial political incentives for resource-scarce as well as resource-rich economies of the Middle East. For resource-scarce economies like Morocco, green energy projects raise the possibility of generating additional export earnings through exports to Europe. For the region's oil and gas rich countries, these projects provide an alternative revenue source that can help to diversify the external rent streams away from hydrocarbons. Furthermore, beyond harnessing the export potential, the development of green energy sources, such as solar and renewables, can help to meet domestic demand. Again, this is helpful both for resource-scarce countries, as it will reduce their need to expensive energy imports, and resource-rich countries who will be able to free up precious resources consumed for subsidize local energy provision. For the

[1] This is the amount of energy needed to produce a single dollar of economic output.

latter, more green energy means greater exportable surplus for conventional oil and gas exports. For the region's labor-abundant oil exporters, such as Saudi Arabia and Algeria, this could free up considerable resources. Algeria offers a stark example. About 30 percent of its hydrocarbons are consumed domestically. For a populous country that is struggling to meet its meet its domestic commitments within the available resource pie, the diversion of hydrocarbon resources to domestic consumption carries a high opportunity cost. Although Algeria is still behind the region curve, the development of alternative energy sources is well-aligned with regime incentives.

MENA states face a genuine pressure for reform. Even the resource-rich countries of MENA realize that this might be the time to support an energy transition while there are resources to facilitate this shift. There is also a realization that, besides being an economic opportunity, energy transition is likely to become a political imperative in a growingly de-carbonized world. Most of the region's hydrocarbon exporters recognize that there are going to be real and tangible effects. If energy transition happens globally, it will directly affect the political economy of MENA states, regardless of whether they are oil exporters or oil importers. In a world moving towards decarbonization, MENA oil exporters need to ensure a stable revenue stream for domestic political stability. The region's social contract is largely predicated on stable external revenue streams from oil and gas exports. The prospect of falling hydrocarbon revenues and the risk of local economies not diversifying enough in time carries imminent political economy risks. They have the potential to upend domestic political order in not only in oil exporting states but also in neighboring resource-scarce countries whose social contracts are typically financed through their oil-rich neighbors.

In a nutshell, it is important that countries in the MENA region embark on or accelerate the pace of the energy transition while they have the resources to do so. Renewable resources will provide alternative sources of revenues rendering it possible to maintain the social contract on which political stability rests. Concerns related to the political infeasibility of fossil fuel subsidy removal are to a great extent ill founded. The experience of many countries in the region reveals that it is feasible to phase out these subsidies without jeopardizing political stability. In fact, based on both economic and political considerations, it makes more sense to subsidize renewables rather than energy generated from fossil fuel. Subsidizing renewables can create a constituency which – as opposed to that created as a result of fossil subsidy – will support and lobby for expansion in the use of renewables. Funds necessary to finance subsidies to renewables can be easily raised through imposing a carbon tax.

The MENA region stands at a crossroads. While its reliance on fossil fuels poses significant challenges, the energy transition also offers a unique opportunity to diversify economies, enhance energy security, and mitigate climate risks. By phasing out fossil fuel subsidies, modernizing infrastructure, and leveraging renewable energy, MENA countries can secure a sustainable and prosperous future. Policymakers must act now to ensure the region is not left behind in the global shift toward decarbonization.

ERF at a Glance: *The Economic Research Forum (ERF) is a regional network dedicated to promoting high-quality economic research for sustainable development in the Arab countries, Iran and Turkey. Established in 1993, ERF's core objectives are to build a strong research capacity in the region; to encourage the production of independent, high-quality research; and to disseminate research output to a wide and diverse audience. To achieve these objectives, ERF's portfolio of activities includes managing carefully selected regional research initiatives; providing training and mentoring to junior researchers; and disseminating the research findings through seminars, conferences and a variety of publications. The network is headquartered in Egypt but its affiliates come primarily from different countries in the region.*

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