The Energy Transition in MENA Countries: A Multidimensional Challenge

Hatem Mliki
Social Change and Sustainable Development Senior Expert

The energy transition in the MENA (Middle East and North Africa) region represents an environmental, socio-economic, and political challenge that necessitates (i) a high-performance management system, (ii) an effective governance model, and (iii) a structured organization of national, regional, and local actors.

The effectiveness of the management system hinges on multiple factors, encompassing institutional characteristics (organization, resources, and prerogatives of the responsible authority), technical aspects (team qualifications), and scientific capabilities (research, development, and innovation capacities). An appropriate legal framework, substantial technical resources, and easy access to scientific research can significantly enhance the managerial performance of the energy transition. The ultimate goal is to optimize resource allocation based on technically feasible, scientifically innovative, and economically advantageous choices for the country.

The efficiency of the governance model aims to ensure that the entire process—technical, scientific, socio-economic, and political—effectively contributes to inclusive sustainable development. Theoretically, this model must ensure that stakeholder participation, transparency in management actions, and accountability of authorities are guaranteed and effective. In practice, the governance model must ensure that:

i. The adopted approach is integrated, encompassing the energy-environment-economy triad (3E).
ii. The objective of the energy transition is not limited to a shift toward clean and sustainable energy sources that preserve the environment and ecosystems but also pursues financial (state budget) and economic (profitability and competitiveness of enterprises, household purchasing power) goals.
iii. Addressing the energy balance deficit is a primary component of the budget deficit, which leads to high debt levels, limited state contributions to development, and poor quality public services.
iv. Electricity consumption in economic activities (industry, agriculture, tourism, etc.) significantly exceeds that of households, constituting the main component of the desired energy mix.
v. Administrative boundaries do not always align with natural borders. It is crucial to remember that administrative divisions are primarily designed for deploying state services and often reflect political, socio-cultural, and sometimes security considerations, whereas energy transition factors are inherently linked to natural resources such as water, solar energy, climate, and environmental conditions unique to each country.
vi. Stakeholder participation does not compromise the technical and scientific quality of decisions. This does not imply that stakeholders' opinions are disregarded but rather that they are considered without forcing the managerial system to adopt technically subpar decisions.
vii. Transparency in management actions must always be maintained. Given the high costs and significant financial stakes involved in the energy transition—such as technological choices, equipment procurement, land mobilization, and authorization systems for manufacturing, importing, and installing equipment—it is essential that

decisions are clearly explained, justified, and based on objective, publicly accessible criteria. A transition marred by corruption not only poses technical risks but also engenders social tensions, conflicts, and rejection of the process.

viii. Mapping actors provides a profound understanding of each stakeholder's importance and influence. This mapping is dynamic and evolves with the process phases. It is unrealistic to assume that the "noble cause" of the energy transition is universally shared and accepted. Politicians often prioritize short-term considerations, and economic operators are primarily concerned with energy costs and the business opportunities presented by the transition. Media outlets tend to view the topic as complex, elitist, and therefore often inaudible. Consequently, it is crucial at each phase of the transition process to focus on the influence and importance of "opponents" and "champions" to foster a change dynamic conducive to the energy transition.

ix. The participation of the private sector, particularly through Public-Private Partnerships (PPPs), should be strengthened. Such partnerships aim not only to mobilize financial resources but also, and more importantly, to transfer skills to public administrations and ensure the financial viability of projects related to the energy transition. They can also attract larger financial resources through foreign direct investments, encouraged by the involvement of national private sector actors.

Structuring intervention levels is also a key component of governance in the energy transition. While this depends on territorial organization and the level of decentralization in each country, it generally follows common principles:

- The structuring should aim to optimize decision-making processes rather than merely bureaucratic task distribution among intervention levels. Strategic orientations may be defined at the national level, but key performance indicators (KPIs) should be negotiated with regional authorities. Incentive mechanisms can be implemented to foster regional competition that benefits the energy transition.
- Regions, due to their size, are often insufficiently aware of the interrelationship between energy, environment, and economy. Optimization of decision-making must ensure that regional contributions do not jeopardize overall economic stability or environmental ecosystems. Therefore, technical and scientific teams must support regions in bridging "regional knowledge gaps," which stem from limited human resources.
- Conversely, regions are better positioned to promote green, blue, and circular economies due to their proximity. Defining needs, identifying constraints and barriers, and rationalizing incentives in these areas are more effectively done at the regional level rather than nationally. It is essential to develop capacity-building and technical assistance actions tailored to regional actors to better exploit these opportunities.
- The energy transition also entails socio-economic implications that must be taken into account. These include transformations in the labor market, characterized on the one hand by job losses, and on the other by the demand for new skill profiles better aligned with emerging sectors. It is therefore essential that the governance model incorporate mechanisms for capacity building and professional retraining to ensure proper labor market regulation. Local authorities are often better positioned to provide the necessary social support for individuals adversely affected by the energy transition.
- The development of renewable energy units (such as solar and wind) requires large tracts of land**,** which could otherwise serve alternative purposes, particularly in

agriculture. Effective land management should thus be among the key priorities of the governance model guiding the energy transition. It is also crucial to avoid the rent-seeking behavior that this transition might encourage, especially when it comes at the expense of vital and productive economic sectors.

Finally, a successful governance model for the energy transition must incorporate a "Social Behavior Change Plan" (SBCP), operational primarily through local communities and grassroots entities where the population resides and economic activities occur. Local authorities are directly responsible for land use planning—shaping housing, urban mobility, traffic management, green spaces, and other mechanisms that support the energy transition. Moreover, local communities serve as social spaces for dialogue on energy issues, fostering civic engagement toward sustainable and inclusive development.