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Energy planning towards sustainability

Anchoring Tunisia's energy transition to the local level

Maurice Döring \ BICC

Policy recommendations

\ Move the energy transition forward as a public development project through multi-stakeholder dialogues and policy harmonization

Re-instate a national body to ensure coordination and harmonization of policies across different sectors, which would help institutionalize a transparent national multi-stakeholder dialogue on energy planning.

\ Strengthen and include domestic expertise in policy design

Include different interest groups in policy consultation and optimize domestic research capabilities to provide innovative solutions and evidence-based policy advice in addressing Tunisia's main energy transition challenges.

\ Integrate energy projects into regional and local development plans and assess social impacts

Assess local socio-economic impacts of energy projects through mandatory social impact studies. Ensure further effective local grievance mechanisms and independent judicial prosecution of pollution and threats to public health.

\ Empower local governments in national energy projects

Legally substantiate local governments' stake in the development and implementation of public and private energy projects with respect to their local impacts and adhere to legally required participatory processes and open governance principles.

\ Move forward with decentralized electricity production

Use the technical potential of renewable energy to increase decentralized electricity production and encourage local communities and local governments to develop their own local energy projects. .

Energy planning towards sustainability: Anchoring Tunisia's energy transition to the local level

The government of Tunisia faces three interconnected challenges regarding the country's capacities to achieve sustainable development and economic growth. The first is overcoming its energy crisis and unsustainable fossil fuel dependency; the second is achieving economic growth to improve people's livelihood, and the third is moving forward with political reforms to reinstate Tunisia's confidence into the state and the political elite. This *Policy Brief* argues for taking a look beyond the boundaries of the Tunisian electricity sector and a broader perspective on how current energy planning relates to the country's political transformation processes.

Tunisia's plans for its energy transition are ambitious, as outlined in the Tunisian Solar Plan and the Strategy 30|30: 30 per cent of electricity is supposed to be produced through renewable energies (RE) by 2030 (1755 MW onshore wind, 1510 MW photovoltaic (PV), 450 MW concentrated solar power (CSP) and 100 MW biomass). Primary energy needs are planned to be reduced by 34 per cent and CO₂-emissions by 48 per cent. Furthermore, the government seeks to lower the fiscal burden of fossil fuel subsidies, diversify its industry and create 12,000 new jobs. To achieve national energy objectives and sustainable development energy planning must be embedded in adequate cross-sector policies and accountable, conflict-sensitive governance approaches which restore trust in state institutions and respond to local development needs. The propositions made in this light come at a particularly opportune time because a) vital energy projects are currently under development; and b) the initiated political decentralization process creates new political dynamics and opportunities to tackle critical challenges to the governance system, which could ameliorate state-society relations and promote sustainable development. The recommendations in this *Policy Brief* primarily address the Tunisian government, particularly those ministries responsible for energy planning, developing strategies for sustainable development and the process of decentralization, namely the Ministry of Energy, Mines and Renewable Energies, the

Ministry for Local Affairs and Environment and their affiliated agencies. Second, the recommendations address German development cooperation as they suggest thematic areas for future cooperation with the Tunisian government.

This *Policy Brief* is based on results and insights gained from empirical field research conducted within the MENA SELECT project.¹ In close cooperation with Tunisian partners, BICC organized a series of seven stakeholder workshops in May and June 2017 with the following six stakeholder groups defined as

- \ policymakers & operators;
- \ finance & industry;
- \ academia;
- \ national NGOs;
- \ local community representatives/local NGOs;
- \ engaged youth/young leaders.

The composition of these groups aimed to reflect different interests and perspectives. Among many other stakeholders, the workshop series included key representatives from the Ministry of Energy, Mines and Renewable Energy, the Tunisian Company of Electricity and Gas (STEG), the National Agency for Energy Conservation (ANME), parliament (ARP), the Ministry for Local Affairs and Environment, the Ministry for Development, Investment and International Cooperation, the Tunisian Institute for Strategic Studies (ITES) and the Tunis International Centre of Environmental Technologies (CITET).² The objective was to discuss and evaluate energy technologies with regard to their capacity to promote the stakeholders' vision of sustainable development and thus achieve their support.

Stakeholders shared a common understanding that the strategic priorities for the choice of electricity-generating technology are to 1) decrease the country's energy import dependency and 2) ensure the physical safety of the people. Regardless of their different interests, stakeholders perceive these factors as the most critical determinants for Tunisia's pathway to sustainable development. They consider the

1 \ cf. www.mena-select.info

2 \ For more details see Döring et al., 2018b, p. 23f.

development and exploitation of domestic renewable energy (RE) sources to be a step towards more political and economic sovereignty, while it must serve social development goals rather than purely macroeconomic ones. Measured against criteria for sustainable development and stakeholder preferences, electricity production using photovoltaics (PV) is most likely to be broadly supported by society due to its high contribution to national energy planning goals and its low adverse local impacts. Less societal support can be expected for onshore wind, concentrated solar power, hydroelectric power and natural gas. Nuclear, coal and oil are outperformed as reasonable technological choices.

Move the energy transition forward as a public development project through multi-stakeholder dialogues and policy harmonization

For Tunisian stakeholders, RE technologies capture the prospect of using their own capacities to achieve economic and human development. Hence, energy transition in Tunisia is not simply a technical challenge, it also represents hope for substantial societal change. Given the commitment across all stakeholder groups to the transition process, the Tunisian government can capitalize on a strong momentum to introduce necessary reforms. By using a narrative of the energy transition as a joint societal goal for change, the Tunisian government can harness public support for fundamental reform policies in the electricity sector.

Energy planning and promoting sustainable development do not follow technical blueprints. Instead, energy transition towards sustainability must be understood as a societal learning process steered by the state's policies. The challenges to the Tunisian government are twofold. This process is conflictive because it touches the interests, needs and expectations of many different social groups. Unmitigated conflicts

of interests can pose a considerable risk to a successful implementation of energy plans. Nevertheless, the impacts of energy strategies on different social sectors and levels are complex and cannot be accurately predicted. The Tunisian government is advised to take into account different perspectives and approaches when assessing its intended policy impacts and to anticipate bottlenecks and conflicts of interest among social groups when designing policies suitable to address the myriads of socio-economic and social challenges ahead. The establishment of an inclusive multi-stakeholder forum on energy planning is, therefore required to critically reflect on policy choices from different perspectives. Such a format could be administered by a reinstated National Observatory for Sustainable Development (OTEDD), which was originally commissioned to coordinate sustainable development measures and conflate experiences and knowledge for policy recommendations. The current energy strategy has not been subjected to an elaborate consultation process among different ministries, but tailored, cross-sectoral policies need policy harmonization. The National Commission for Sustainable Development (CNDD) under the chair of the prime minister would be a suitable steering committee for this political process.

Strengthen and include domestic expertise in policy design

Policies under the framework of energy transition must be tailored to the needs and resources of the Tunisian society as energy transitions are a fundamental process of societal change. To successfully move the energy transition forward and achieve sustainable development, the Tunisian government needs capable and engaged partners in all realms of society. Engaging with an active and lively civil society is key to an open and constructive public discourse, which is necessary for a sustainable transformation of society.

While there are deeply engaged and active organizations, both well established and newly founded, many lack expertise, professionalism and efficient network structures—which is to be expected in such a short period of time. It is only through inclusion that NGOs can develop the professional capabilities the government needs as constructive counterparts in civil society. With the constitutional right of access to information (Art. 32), the access to information law (Law No. 22-2016), as well as its reform effort to achieve a smart and open government, the government of Tunisia has committed itself to transparency and accountability. Civil society, on the one hand, is encouraged to use this opportunity and become proactive. The state, on the other, is requested to generate and publish the required data on a regular basis, in particular in the environmental sector as there appears to be a lack of reliable official data. Apart from structural reforms, the digitalization and promotion of a citizen-oriented mentality on all levels of administration is vital to this objective.

Interdisciplinary research plays a critical role in evaluating policy impacts and making applicable recommendations for evidence-based policy formation. Universities can serve as innovation hubs through fruitful linkages with industrial players to jointly develop sustainable solutions. In order to fulfil this function, the Tunisian system of higher education requires substantial structural, administrative and programmatic reforms to improve research capabilities and knowledge-generation. The Tunisian government, in cooperation with international development agencies, should transparently and strategically assess the challenges in higher education and university administration and modernize reforms to better enable future-oriented research.

Integrate energy projects into regional and local development plans and assess social impacts

Socio-political tensions in Tunisia are marked by regional disparities, namely between the privileged northern coastal region (Bizerte, Tunis and Sahel) and

the politically and economically neglected inland and southern regions of the country. Most of the planned RE projects are located in the southern and inland regions. Despite general hopes, RE technologies are not technical fixes to economic or socio-political problems. It will be essential to obtaining local public support to design national energy projects in a way that they can offer new economic prospects in a given region and to local communities that live close to the project through sustainable development measures (i.e. not with short-term buy-in-measures). Hence, national energy projects should be part of regional and local development plans, accompanied by integrated developmental initiatives. Unemployment is a primary challenge to the Tunisian government, and the generation of jobs is a top priority. Accordingly, the current energy strategy 30|30 focusses on beneficial social impacts only in terms of the number of jobs created. The diversification of the Tunisian economy and the creation of jobs in its wake depends on enabling new businesses, innovation and including domestic capacities in project development and implementation. The share of the Tunisian private sector in national energy projects, therefore, should be increased to open up market opportunities to domestic businesses.

However, the Tunisian social developmental paradigm must move beyond the primary concern of job-creation to initiate other social benefits. While environmental impact assessments (EIA) are obligatory, social impact studies (SIA) are not. EIAs do not include social aspects like ramifications for public health, socio-cultural ties, economic capacities and prospects or communal lifestyle, let alone an assessment of needs and expectations.³ It should further be noted that according to Decree No. 2005-1991, EIAs are obligatory for energy projects of at least 300 MW. Because RE projects typically have lower installed capacities, this stipulation must be amended. In some cases, international donors require project developers to conduct SIAs, but this does not replace the need for national legislation that thoroughly takes social impacts into account.

³ \ The previous Decree no 91-362 referred vaguely to socio-economic impacts, environmental impacts with adverse impacts on people and the living environment. These references were omitted in the Decree no 2005-1991.

SIAs should thus be made mandatory and regulated and administered like EIAs for which the National Agency for Environmental Protection (ANPE) is responsible. In compliance with the mandate of local governments and the guiding principles of inclusive local development planning, SIAs should be conducted using participatory methods and in close cooperation with local authorities and should require their final approval. Making SIAs mandatory and specifying their scope, content, quality as well as monitoring and evaluation procedures would be a crucial step towards accountability and committing to local development. German development cooperation can assist in setting up assessment and quality standards, methods and monitoring mechanisms.

A particularly important issue is environmental pollution and its public health risks. Currently, ANPE as a state agency has the mandate to sanction violations of companies in an administrative process. Local communities (i.e. citizens, civil society associations, municipalities) need easier access to such administrative procedures to file complaints and get a clear ruling, which then is publicly reported and followed-through. Administrative processes, however, can be subjected to conflicts of interest between state actors, so that environmental regulations are undermined at the expense of people and ecosystems. To avoid this, the Tunisian government could consider strengthening a jurisdiction independent from the state to prosecute environmental cases. Such an independent legal process would be indispensable to ensuring that the rule of law and the development of effective legislation is a priority and to restoring public trust in the state.

Empower local governments in national energy projects

Article 139 of the Tunisian Constitution stipulates that citizens and civil society must be guaranteed participation in the design and execution of development plans through open government and participatory mechanisms. The mandate of local authorities over

local development is further declared in Section III Chapter IV of the “Code des Collectivités Locales”. The national strategy for sustainable development 2014–2020 emphasizes the importance of including local knowledge and expertise through participatory governance and transferring responsibility for development to the regional and local levels. The previous recommendation strongly suggests integrating national energy projects into local development plans. By extension of the logic of municipal sovereignty over local development plans, monitoring local impacts of national energy projects and streamlining beneficial synergies therefore also falls within the responsibility of local governments and should be part of the larger decentralization process.

Three conclusions can be derived from these legal considerations. First, local governments are co-owners of national energy projects, as far as benefits for local sustainable development, preventing adverse impacts, ensuring participatory governance and the inclusion of local knowledge is concerned. Local governments should thus be vested with the mandate to monitor and influence national energy project implementation in correspondence with their responsibility enshrined in the law.

Second, national state actors must abide by the same legal and procedural rules as those set for local governments. Otherwise, there would be two contradictory legal systems on the local and the national level, with the latter violating the constitution. These legal principles have to be translated into clear regulations, also for private project developers, including clearly defined rights of intervention and sanctions of the state in case of infringement. In essence, this means that the central government needs to relinquish power to local governments to co-administer and monitor energy projects of both state and private developers. German development cooperation could be of crucial support to newly established local government bodies to become well-equipped and trained for their responsibility.

Third, with the establishment of a sovereign local political body, it is essential that the constitutional court be put in place (Loi organique No. 2015-50) and be made responsible for settling disputes over competencies between national and local authorities according to Art. 134 of the Constitution. The decentralization process, however, does not relieve national state actors from the responsibility to govern locally. Central state authorities, too, must physically move closer to the people by establishing a more efficient local infrastructure with offices and decentralized decision-making procedures.

Anchor energy transition to decentralized electricity production

Sustainability needs local solutions. To truly anchor energy transition to the local level, local governments need to be given the mandate to develop their own energy projects feeding in local electricity supply. RE technologies like smaller wind farms, solar parks or rooftop photovoltaic offer the opportunity for local electricity production and local grids. Unlike other countries in the region, Tunisia has planned to install 640 MW in rooftop PV and has thus acknowledged the paramount importance of capitalizing on the decentralized capacities of RE technologies. It benefits from indispensable experiences already gained with decentralized energy production. The successful “Programme Solaire” (Prosol) for solar water heaters on residential rooftops is followed by “Programme Solaire – Electrique” (Prosol-Elec) for rooftop PV. Tunisia has regulations and systems in place that can be the basis for a decentralized, local energy production, both residential, commercial and industrial (440 MW installed capacity of co-generation planned for 2030). The decentralization of electricity production means a substantial transformation of sector governance and infrastructure development. The Tunisian government should carefully consider moving further along this track in the longer term. Now that cost-competitive, easily applicable and manageable RE technologies are available, enabling local energy projects for municipal auto-production is a promising step towards implementing the country’s ambitious energy plans by 2030 and beyond.

FURTHER READING

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Further information and all reports for download can be found on the project’s homepage www.mena-select.info

About MENA SELECT

The interdisciplinary research project “Middle East and North Africa - Sustainable ELECTricity Trajectories” (MENA SELECT) is funded by the German Ministry for Economic Cooperation (BMZ) for the period of 2015 to 2018. It aims to identify electricity trajectories until 2050 that are cost-effective, capable of advancing the national development objectives and most in line with societal preferences as judged by the different stakeholder representatives in the country (i.e. conflict sensitive). It is conducted by five research institutes: BICC, Germanwatch, International Institute for Applied Systems Analysis (IIASA), the Wuppertal Institute for Climate, Environment and Energy, and Europa-Universität Flensburg.

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