

Event Report

Panel on EU-MENA renewable energy cooperation¹

Countries in the Middle East and North Africa (MENA) are blessed with huge and diversified renewable energy potential, in particular wind and solar energy. Given the ever-increasing role of renewable energy sources (RES) in the energy mix of EU Member States and the EU approach to endorse sustainability and climate protection in its external partnerships, renewable energy cooperation has been a major pillar of the EU-MENA partnership. In the run-up to COP22 and the announcement of new RES targets during COP21, this strategic partnership could serve as a major instrument for raising the climate ambition of the countries from these regions, sending a strong signal to investors that the renewable energy transition process is already happening and has a strong institutional backing. In a long-term perspective, this regional energy partnership could lead to an integrated sustainable energy market, improve energy security in the region, decrease vulnerability to external shocks, and bring more benefits for the local population.

In order to explore the potential of EU-MENA cooperation as well as the current situation and ways to move forward, a panel of experts with a variety of backgrounds discussed their different views on the topic. The study “80 Gigawatts of Change: Egypt’s Future Electricity Pathways”, commissioned by the Heinrich Böll Foundation and carried out by the Egyptian Center for Economic and Social Rights (ECESR), served as a basis for the discussion. It outlines seven different options how Egypt’s electricity sector could develop between 2015-2035, if technical, social and environmental constraints and community impacts are taken into account. Its novelty lies in its open and broad participatory approach – the study has equipped civil society actors with hard data to analyse and discuss the impact of different medium-term energy policies.

The study “80 Gigawatts of Change” outlines seven different scenarios for Egypt²

In order to assess the different pathways for Egypt, the study addressed the following factors for each scenario: energy access, costs in terms of necessary financial expenditures as well as environmental and community impacts such as air, water, land pollution, water use, carbon lock-in, and job creation. The first scenario considered was the **business as usual with efficiency measures (BAU)**. This scenario would be cheaper than the *status quo* due to a reduction of 15.4 GW in electricity generation. It could save up to 4.6 billion US\$. At the same time, approximately 214,450 jobs would be created. However, the scenario fails to tackle existing energy access issues across the country. Moreover, due to the high reliance on natural gas, which accounts for 89% of energy produced, the carbon lock-in is very high. A

¹ This report is based on the Panel on EU-MENA renewable energy cooperation that took place on 18 October 2016 in Brussels. The views expressed in this event report do not necessarily reflect the views of the Heinrich Böll Foundation. The study “80 Gigawatts of Change: Egypt’s Future Electricity Pathways” was presented by the authors Isabel Bottoms and Mahmoud El-Refai. This was followed by a panel discussion. The panellists included: Dr. Malek Kabariti, former Minister of Energy and Mineral Resources in Jordan; Hans Van Steen from the European Commission; Dr. Amin Bennouna, Founder of ISTICHAR Consulting/Former Vice president of the Moroccan Solar and Wind Industry Association (AMISOLE); Claude Turmes, Member of European Parliament (The Greens); Dr. James Watson, Executive Director of SolarPower Europe; Dr. Alexandros Yannis from European External Action Service, and Dr. Stephan Singer, Senior Advisor Global Energy Policies in the Climate Action Network International. The event was moderated by Hendrik Kafsack from the *Frankfurter Allgemeine Zeitung*.

² The complete study can be downloaded here: <https://tn.boell.org/fr/2016/04/08/80-gigawatts-change-egypts-future-electricity-pathways>

higher reliance on coal was envisioned in the **business as usual + coal (BAU+COAL)** scenario. It would result in fewer jobs compared to other technologies. In economic terms, it is an inferior option because of expensive infrastructure as well as increased reliance on imports. The total cost of this scenario amounts to 11.5 billion US\$. Moreover, this pathway significantly adds to the current air pollution problem.

By contrast, there are three possible pathways that strive towards a decarbonisation of Egypt's energy sector. Firstly, moving **towards zero carbon (TZC)** as a scenario seeks to use much more renewables. This pathway is state-driven and centralised, which means that it does not stimulate small and medium enterprises and community-owned energy cooperation. In terms of job creation, this option could produce approximately 216,780 jobs and would cost 10.8 billion US\$, which is the cheapest among the seven options after the BAU approach. Secondly, moving **towards zero carbon + nuclear energy (TZC+NUCLEAR)** would add a nuclear component to the energy mix. This option would result in greatly increased costs of 23.7 billion US\$ and little job creation. It would contribute to decreasing emissions but this can also be achieved more cheaply and with community co-benefits through RES. Thirdly, TZC can also be combined with concentrated solar power (CSP). This form of solar power would contribute to the energy mix in addition to conventional photovoltaic (PV). While the **towards zero carbon-concentrated solar power (TZC-CSP)** pathway is likely to create the second-most jobs of all options considered, i.e. approximately 230,670 jobs, it is the most expensive of the seven scenarios, since the CSP technology is not yet fully matured.

Two other pathways are proposed that – similar to the other decarbonisation scenarios – entail a high share of RES. Nevertheless, by contrast to the other decarbonisation scenarios, moving **towards energy independence (TEI)** assumes an increased use of biomass. Egypt has a substantial biomass potential due to its agricultural sector. Making use of this resource would reduce dependence on oil imports and promote resilience to external shocks, price volatility and climate change. This scenario also produces the least greenhouse gas emissions and has the third highest job creation rate with approximately 228,980 jobs. The total cost is estimated at 13.2 billion US\$.

Moving **towards decentralised energy (TDE)** also assumes an increased share of energy production stemming from biomass. It is very different from TEI, however, in that it seeks to decentralise energy distribution and consumption. This means that even more solar power will be used, which represents a radical departure from the *status quo* BAU scenario. It is the most costly pathway with 19.5 billion US\$ but also the most empowering one, giving more autonomy to Egyptians with regard to energy production and consumption. Moreover, it is the option that creates the most jobs with an estimated 232.520 annual jobs per GWh.

While the authors do not give an answer to the question which pathway should be chosen, it becomes evident that some pathways (e.g. TEI, TDE) provide better perspectives than others, where the disadvantages clearly outweigh the advantages (e.g. TZC+NUCLEAR).

The focus of EU-MENA cooperation should be on capacity building

The discussion that followed the presentation of the study raised a number of important points regarding the design of EU-MENA renewable energy cooperation. Firstly, the EU focus should be on capacity building rather than simply exporting products and technology. This also means that production should not only take place in the EU but also in MENA countries, which would reduce transport and capital costs, and create jobs in the region. One of the advantages of promoting RES is the reduction of water footprint which is especially crucial for countries in the Global South with water scarcity problems such as Jordan and Egypt.

Secondly, a more cooperative approach of the EU and MENA countries is needed, i.e. ideas and solutions should not simply be imposed but rather adapted to the local context and needs. Consequently, the MENA region cannot simply be treated as one entity but policy solutions need to be tailor-made, i.e. on a country-by-country or case-by-case basis. One has to take into account the diverse interests, structures and political priorities of oil rich countries and import-dependent countries (OPEC countries such as Algeria might see the deployment of RES different compared to for example Morocco). The weak Moroccan Dirham means that oil imports are relatively expensive, which represents an incentive to diversify and increasingly invest in RES based on its huge potential.

Thirdly, regional cooperation should be enhanced – both north-south and south-south cooperation. Some of the primary challenges in the MENA region are related to the implementation of energy efficiency measures and energy security issues, i.e. a reliable energy supply, as well as the heterogeneity of both the EU and MENA countries. The regional cooperation with the EU has influenced to some extent the renewable energy objectives and regulation of the MENA countries, leading to the adoption of national renewable energy targets and the development of pilot projects in the RES sector with the EU. Moreover, the EU could contribute to improving the regional framework of these countries by exporting its Eco-Design Directive and the Energy Labeling Directive. Regional RES cooperation should be a way of promoting sustainability, energy security and thereby forming a resilient system.

Weak regulatory frameworks block potential investments

When it comes to financing the energy transition, the private sector is expected to play a pivotal role. Although the business is willing to engage and invest in the MENA region, insufficient regulatory frameworks and ineffective administrations seem to stifle potential investments. Political stability is a factor taken into account by private businesses when they make investment decisions. In addition, corruption and fragmentation are issues that can seriously hamper potential cooperation. These factors need to be addressed in order to open up the way for new partnerships. While countries from the Eastern Partnership have greatly accepted the EU regulatory framework, this is not entirely the case for the Southern Partnership.

Nevertheless, the panel participants concluded that a generally positive development could be seen as far as the promotion of RES is concerned. The topic has moved into the political mainstream, and energy transition has become a societal imperative. The debate should be held in a bottom-up rather than top-down manner. To democratise renewable energy generation and distribution in the region, it is essential



to embed the right participatory mechanisms and institutional safeguards in those transnational cooperation agreements to ensure that the concerns of civil society actors and marginalised groups are also taken into account in the design of future policy scenarios and energy provisions. This inclusion of citizens into energy planning and consultations is the way to move forward.