
With dwindling natural resources and growing demands, securing the supply of energy has become a major preoccupation of many Middle Eastern countries as well as the EU. Yet the energy question in the Mediterranean seems to find itself at a crossroad with hard security: while guaranteeing supply and meeting demand could lead to new forms of cooperation and the development of renewable energies, it could also disrupt the region’s fragile balance and drive nuclear programs forward. This Policy Paper is the outcome of the eleventh workshop of the Expert Advisory Group (EAG) - European and South Mediterranean Actors - Partners in Conflict Prevention and Resolution, held in Berlin, Germany from June 20-21, 2010.

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Introduction
by Sarah Anne Rennick

The securing of energy has emerged in recent years as not only an issue of national economy but also one of national security. This is particularly true in the Euro-Med zone, where the distribution of natural energy supplies often falls on important geopolitical fault lines. For the EU and Mediterranean states with stretched or dwindling natural energy resources, the trend towards ever-increasing demand - as a result of population growth, consumer and industry spendthrift tendencies, or inappropriate pricing and subsidy schemes - threatens to pose important soft and hard security risks. A lack of sufficient energy supply could negatively impact various economic sectors or could lead to food shortages, both of which could stir popular unrest and threaten human security. Likewise, dependence on one energy supplier in particular could threaten balance of power by providing supplier states with a massive leverage tool. Indeed, supply-rich Euro-Med states find themselves as linchpins, a position that some are more than willing to exploit.

This discursive shift in securitizing energy has had a large impact on national energy policies in the Euro-Med zone, as well as on regional cooperation frameworks.
Demand-heavy Mediterranean states, along with the EU, have in most cases sought policies that can guarantee supply with a certain degree of independence, leading them to invest in alternative forms of energy as well as pursue new agreements and frameworks for cooperation with supply-heavy states. Such developments, though, come at a certain cost. Investments in green energy are quite high and necessitate outside financial and technical assistance in certain cases. Perhaps more importantly, the development of nuclear energy in the region – even for purely civilian purposes – embarks us on a path that could lead to serious environmental problems, or worse. As for regional cooperation, the securitizing of energy has spurred new frameworks in the Euro-Mediterranean zone as well as innovative projects and has the potential to not only meet energy needs but also lead to a transfer of technology. Yet for these to be successful, a difficult balancing act must be maintained: suppliers must not be given too much power, or conversely be made to feel exploited, while demanders must make difficult internal adjustments to reduce dependency. Preventing energy issues from escalating to hard security problems should be our focus.

The energy sector plays a major role as both a motor of economic activity and development, and as a potential catalyst to strengthen cooperation. Yet in the economic and energy spheres, the Euro-Mediterranean space presents major disparities, which lie at the heart of the region’s security issue. This is not only true at the global level but also at the level of energy supply in particular.

The fundamental transformations to be brought to the Mediterranean energy system concern the development of renewable energies, such as wind energy, solar energy, hydro power, biomass, and bio-fuels, which are all clean, inexhaustible, and well distributed in the region. However, in spite of their spectacular growth within the last years, their relative part in the energy balance remains modest with regard to their real potential. This has been exacerbated by the prospects of developing nuclear energy, which poses a number of risks.

The Mediterranean Solar Plan, included in one of the priority projects of the Union for the Mediterranean, constitutes an important instrument to exploit the enormous potential of efficiency and renewable energies, in particular wind and solar energy. Likewise, DESERTEC, another solar project consisting of the installation of solar panels all around the Sahara and up to the desert of Arabia, has been designed to produce 15% of the European needs in electricity by the year 2050. These projects envision only the exploitation of new capacities from renewable resources (solar and wind essentially).

Yet paradoxically, it seems that clean energy of solar origin does not adequately satisfy southern Mediterranean decision-makers in their quest for alternative energy. Indeed, the development of the nuclear energy is growing tremendously in the Arab world, with Egypt and Saudi Arabia in advance and the Gulf Cooperation Council (GCC) deciding to launch a common program of civil nuclear energy, in addition to the national nuclear programs of GCC member states. The states of the Maghreb, it seems, are following suit.

In the Maghreb, framework agreements on nuclear energy have been initialed since 2008 between France and Algeria, along with Tunisia, Libya, and Morocco. In Algeria, where this development is met with a degree of urgency, a first nuclear power plant should be delivered in 2018, with another one planned in 2020 and two others on the horizon of 2027, thanks to an agreement concluded with South Africa in May, 2010. This is in addition to an agreement Algeria had already concluded on civil nuclear energy with France in February, 2009. These agreements cover all aspects connected to nuclear energy, including exploration and exploitation of deposits of uranium, construction of nuclear power plants, mainte-
finance, etc. Certain experts and observers express concerns over the development of a civil nuclear energy program in Algeria, indicating that the country is hiding ambitions to become the first Arab nuclear power with intentions to develop its capacities beyond peaceful purposes. But beyond this probability, the upcoming proliferation of nuclear power stations in North Africa, sometimes on very small territories, presents enormous risks for the security of the populations of the region.

Policy Recommendations:
- Programs such as the Mediterranean Solar Plan and DESTEREC should use the development of electricity networks (North/South and South/South interconnections) as a means to promote not only energy efficiency but also the transfer of technology. This will allow southern Mediterranean countries to adopt sustainable development.
- Engaging the region in nuclear energy development should be avoided. Solar energy is cleaner, costs less, doesn’t depend on any mineral resources, and the technology is easily mastered. These comparative advantages should be emphasized.

Energy Subsidies and Sustainable Development in Egypt

by Ehab Shalaby
guest contributor

Competitive and efficient energy markets, together with suitable governmental regulations, are considered prerequisites for energy policy to be compatible with sustainable development objectives. Yet this does not go without limitations: public policy - no less than private policy - can err or be inefficient. Indeed, attempting to meet the needs of the most vulnerable groups, to protect the environment, to ensure energy security, and to support other public goods can lead to a host of dilemmas. In this respect, the issue of energy subsidies in Egypt provides a good example.

On the economic front, Egypt’s oil and gas sector is one of the most strategic sectors in the economy, being the single largest industrial activity. On the one hand, the oil and gas sector fulfills around 95% of Egypt’s energy requirements, distributed between oil and natural gas. Electricity generation is the highest consumer of gas, followed by industry, petroleum production, and residential and commercial users. On the other hand, the energy sector is contributing in an important way to major macro-economic variables. Over the past several years, export of crude oil and petroleum products has constituted approximately 40% of Egypt's export returns and around 20% of its GDP. On the social front, energy subsidies are a major part of the social contract in Egypt, and despite the growing population, increasing rates of economic growth, increasing FDI in energy intensive sectors, and decreasing supplies of oil reserves, the government of Egypt is still committed to a great extent to subsidizing energy. On the environmental front, energy consumption is a major source of environmental stress, with 92% dependence on fossil fuels and with the energy sector contributing 71% of the national total GHG (Green House Gas) emissions alone.

Although a debate over energy subsidies has existed for a while, the proven declining oil reserves and increasing amounts of oil imports coupled with large fluctuation in international oil prices have heated the debate to new levels. Those who oppose energy subsidies in Egypt argue that subsidies of petroleum products increased from LE 42 billion in 2005/2006 to LE 65 billion in 2010/2011, which accounts approximately for 70% of the total subsidy bill. These subsidies impose a heavy burden on the government budget, lead to inefficient and irrational consumption and use of energy products, deplete the country’s resources from oil and natural gas, negatively impact the environment, and above all benefit the rich more than the poor. Supporters of energy subsidies raise the argument that eliminating them would raise the CPI (Consumer Price Index) and increase inflation.
Index) by almost 35%, discourage FDI, affect industrial sector comparative advantages, hurt tourism, and above all could lead to social unrest, as the country painfully learned in the 1970s.

The current domestic economic pressures, coupled with international economic and environmental pressures, are escalating in manners that are pushing policymakers in Egypt to phase out energy subsidies. Hence, the debate will soon shift to how to mollify the negative economic and social impacts of such a decision. Much has been recommended on different fronts; but nothing has been recommended in terms of educating consumers who have been taking energy for granted at very low prices for decades.

**Policy Recommendations:**

- Educate consumers about the options available. This will enhance the rational use of energy.
- Move the term "energy efficiency" from the elite academic sphere to the public domain. Mass media has a particular social role to play here if this objective is to be achieved with the desired efficiency and speed.

**Solar Energy in Morocco: New Prospects for Cooperation?**

*by Fouad Ammor*  

The integration of energy markets is a major priority of Euro-Mediterranean cooperation. While such a process encourages huge investment in general, this is especially true with regards to renewable energies. As the EU aims to diversify its energy supply and to reduce its dependence on Russia, Maghreb countries have a good opportunity to expand their supply to Europe over the next few years. And as more and more emphasis is placed on renewable energy in particular, there is increased possibility for Euro-Med cooperation along these lines. The development of solar energy in Morocco provides a good case study for North African renewable energy potential and cooperation with Europe.

The Maghreb countries are an important source of oil and gas for the EU-27, responsible for 12% of total oil imports and 17% of natural gas imports. Moreover, North Africa has strong economic potential underpinned by good growth prospects: the sub-region’s countries benefit from an advantageous strategic location, lying at the crossroads of three continents, and sit atop abundant energy resources. Currently, five pipelines transport gas to Europe, four of which have their origin in Algeria.

Given the fossil and renewable energy potential of North Africa, the EU already funds a number of interconnecting Mediterranean energy projects under the Neighbourhood and Partnership Instrument. These include MED-REG II (energy regulators to support the development of a modern and efficient energy regulatory framework); MED-EMIP (Euro-Mediterranean Energy Market Integration Project, a platform for energy policy dialogue and exchange of experiences); MED-ENEC II (encouraging energy efficiency and the use of solar energy in the construction sector); and the Mediterranean Solar Plan (aiming to meet the major energy and climate challenges confronting the region and the EU in the coming decades).

Looking at the Moroccan energy strategy demonstrates how increased regional cooperation can be built from the development of renewable energy. The country’s policy is based on four pillars: energy security, energy access with competitive prices, protection of the environment, and regional integration. To balance its ambition and constraints, Morocco has made the choice to develop solar energy and in this vein has established two new agencies. The project, which is valued at nine billion USD and will be located at five sites over 10,000 hectares, seeks to produce electricity to meet local need and to export, mainly towards Europe. The Moroccan choice to develop solar energy is welcomed by many countries and in particular the UK and Germany. Indeed, those responsible for DESERTEC-Germany are willing to strongly par-
participate in the development of clean energy in the region. And such cooperation may likely prove necessary both to meet costs from the Moroccan end and to meet needs from the European end.

**Policy Recommendations:**

- The Maghreb countries need strong industrial infrastructure and more precisely a good steel industry. They must also strengthen links between themselves for the renewable energy sector to take off.
- More funds in research and development are required, necessitating regional cooperation. More foreign investments must be mobilized to fulfill this promising sector. This requires more political will to overcome the prevalent narrow sovereign approach which characterizes Maghreb countries.
- The competition between some external actors will likely increase in the imminent future in the renewable energy sector. Until now, the presence of mainly Asian actors is relatively limited to Gulf countries; however, this presence is likely to become more substantial in all areas of the North African energy sector over time. This will eventually increase competition with the EU in North Africa. The EU must thus take this factor, along with the cohesion of the North African countries, into account when proposing regional cooperation of energy sectors.

At the moment, the EU’s oil and natural gas supply remains concentrated on the Middle East, North Africa, Norway, and Russia. Yet the Union is in a pressing need for new gas suppliers because of the risks related to undiversified importing and the pressure to meet additional demand. Europe is lucky enough, though, to be situated very comfortably, lying close to the huge natural gas reserves of Russia, the Caspian region, and the MENA zone.

The EU dedicates its energy policy to three aims of equal value: supply security, competitiveness, and sustainability. In their first common Energy Strategy from 2007, member states fixed the ambitious 20-20-20 targets for 2020: reduce greenhouse gas emissions and total primary energy use by 20%; increase the share of renewable energy in total primary energy demand to 20%. Nevertheless, complementary measures will be necessary as the import dependency of fossil fuels will stay high even if these aims are fully implemented. As such, the expansion and diversification of infrastructure is also a crucial issue.

The Commission has proposed six priority infrastructure projects linking the EU with important neighboring transit countries and opening up new supply possibilities, e.g. a southern gas corridor, LNG (Liquefied Natural Gas) terminals, and a Mediterranean energy ring. Partnerships with the countries of the Mediterranean region already support certain steps towards regulatory frameworks encouraging investment, convergence of energy sectors, development of renewable energy production, as well as integration of regional energy markets and infrastructure expansion. From the outset, EU policy makers seek long-term relationships through projects with mutual benefit.

Unfortunately, within the short-term competition of energy consumers, EU policies have only a few “carrots” to offer, which are often limited and inflexible – most notably with regard to the infrastructure projects and funding. Within the new Energy Strategy 2011-2020, the EU wants to replace the current financial instrument with a more strate-
The EU Energy Strategy 2020 and the new Energy Security and Infrastructure Instrument will influence the support and cooperation schemes for the decade to come, be it in the context of the Union for the Mediterranean or the European Neighborhood Policy, providing opportunities to meet needs and increase cooperation given the right configurations.

**Policy Recommendations**

- The EU and its members, as the world’s largest regional energy market, should implement a common Foreign Policy on Energy to present Mediterranean partners coordinated offers and clear expectations.
- Foreign Policy on Energy will present to Mediterranean partners an offer to create the world’s largest regional energy market. The Union should ensure that such an offer meets expectations in order to be implemented.
- As energy demand in the Southern Mediterranean countries is projected to double by 2020 and costs to increase considerably in some places, additional measures for energy demand management, energy efficiency, and energy savings will need to be integrated into the cooperation.
- The concrete configuration and financial status of the new financial instrument for infrastructure remains unclear. The EU should work to correct defects and shortcomings in order to place itself in a competitive position.

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**Turkey’s Energy Policy as Leverage for Regional Cooperation**

by Cagri Erhan

Turkey is geographically located in close proximity to 72% of world’s proven gas and 73% of oil reserves. As such, the country has argued since the 1990s that it can serve a key role in promoting regional cooperation and peaceful relations. And although this role as an “energy bridge” has not opened the gates to the EU, some important energy projects are enthusiastically presented to the interest of European partners.

Within this framework, Turkey attaches the utmost importance to a set of pipeline projects, under the umbrella of the “East-West Energy Corridor,” linking the oil and gas rich countries of Central Asia and the Caucasus to Europe. Its backbone is the Baku-Tbilisi-Ceyhan (BTC) oil pipeline, which allows for the transfer of oil without transiting over the Turkish Straits. Growing concerns over a human and environmental disaster in the densely populated city of Istanbul has indeed pushed Turkey to develop more by-pass alternatives to reduce the usage of the Straits for oil shipment.

In addition, Turkey wants to serve as a transit route for natural gas to Europe. Azeri, Kazakh, and Turkmen natural gas is to be supplied to Europe by connecting the Baku-Tbilisi-Erzurum Gas Pipeline to the Southern Europe Gas Ring. Moreover, the most comprehensive gas pipeline project, Nabucco, aims to supply Europe with not only Azeri and Central Asian gas, but also Egyptian, Iranian and Iraqi natural gas resources. According to the Turkish Government, “Turkey’s objective is to become Europe’s fourth main artery of energy supply following Norway, Russia, and Algeria through the realization of these projects. This will open up a new avenue for cooperation between Turkey and the EU that will also reinforce Europe’s ties to Asia.”

Finally, Turkey has also engaged in more politicized pipeline projects, such as the Trans-Anatolian Pipeline and the
Bluestream Gas Pipeline, which brings Turkish, European and Russian firms together and constitutes an important example for the transport of mainly Russian energy to the European market through Turkey.

Yet political difficulties, rather than the financial problems, render Turkey’s projects slow to be realized. Ankara gives Moscow a privileged status in these initiatives, although pleasing Russia does not necessarily facilitate the regional political situation. For instance, the current Iranian nuclear crisis could possibly prevent Iranian natural gas from being transported by Nabucco. Likewise, the ambiguity over the future of Iraq and the lack of a final agreement between the Kurdish government and Baghdad over the use of oil and gas reserves inhibit entrepreneurs from investing. Despite Ankara’s continuous emphasis on energy cooperation in its relations with Syria, Iraq, and Egypt, it is quite difficult to predict the success of such endeavors due to the unstable political situation in the region.

Moreover, there is a competition between European energy firms to reach more resources in Eurasia and the Middle East. Sometimes, as seen in the short history of Nabucco, rivalry between European firms, supported by their respective governments, might delay Turkey’s efforts to build new pipelines. While Turkey tries to present itself as an indispensable element of European energy security, there are also some circles in the EU which do not support its cause and totally reject any initiative that could make Turkey’s EU accession closer.

Nevertheless, the country lies geographically between those who supply energy and those who want it. Ankara will continue to use its location as an advantage to secure its domestic energy needs and to play a role in the fulfillment of European energy security.

Policy Recommendations

- Source diversification is an important component of energy sustainability, and joint ventures like Nabucco can be used as a tool to increase interdependence among the beneficiaries. As such, the cost of pipelines should not be taken as the major determinant of energy maintenance projects.
- Bearing in mind China’s day-by-day increasing energy demand, European governments should guarantee their energy requirements by supporting synchronized East-West pipelines before all energy transit routes are monopolized.

Conclusions by Antje Nötzold

Energy policy and supply security are forward-pressing issues for all countries in the Euro-Med zone. However, this topic is characterized by different perceptions and approaches on the two shores of the Mediterranean.

European policy to secure energy supplies is primarily market-orientated and can be characterized by four guiding principles. First, prioritization is not mandatory. European energy policy vacillates in an area of tension between three equal aims - supply security, sustainability, and competitiveness - which sometimes interfere with one another. Nevertheless, the Commission believes that all can be achieved in unison, as many measures oriented towards one indirectly make contributions to at least one other. But this triangle of peer aims in fact stands for the “lowest common denominator” of the EU member states to counterbalance the different priorities within the Union.

Second, demand management is dominant. The EU believes only active and intense demand management can ensure the achievement of all three objectives in the long run. Regarding the allocation of rights and duties between the European and the national levels, the EU is equipped with energy relevant competences in the fields of the single market, of competition, and of environmental policy. But as common foreign policy is an intergovernmental constituted field, energy policy related to external action

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is subject to the diversity of national energy interests.

Third, the EU deeply trusts the market mechanism. The European energy policy is borne of the belief that a free and fair market, combined with unhindered competition, ensures energy supplies at the most favorable prices for all consumers. Securing supplies is devolved to private sector economies within the liberalized market of the EU. The public sector assumes its responsibility to set the legal parameters for a market free from disturbance and discrimination and to prepare instruments in case of crisis.

Fourth, demand management and the market mechanism are promoted worldwide. The last guiding principle is connected with the two former ones as the EU promotes active demand management and market mechanisms within its cooperative relations with third countries and organizations. In accordance with its integration principles, the EU seeks to export the system of interdependence by incorporating its own understanding and concept of energy policy within European foreign and cooperation policy. Technical and financial assistance is oriented towards the propagation of transparent, free markets and common standards.

In contrast, quite a number of Europe’s neighboring countries consider energy supply security as an indispensably important issue and pursue a rather strategic approach characterized by state control and management.

In contrast, quite a number of Europe’s neighboring countries consider energy supply security as an indispensably important issue and pursue a rather strategic approach characterized by state control and management. Although the region of the Middle East holds the largest remaining reserves of crude oil and natural gas, many Mediterranean countries have scarce fossil resources. Moreover, the region is marked by quick population growth and rising energy demand. To avert high dependency on oil and gas import and keep production free for export, the MENA countries are considering two possible paths: renewable or nuclear energy.

The EU seeks to promote the development of renewable energies in its southern neighborhood through ambitious projects like the Mediterranean Solar Plan and the energy ring around the Mediterranean. Europe also offers cooperation and know-how transfer in the fields of energy efficiency, renewable energies, and alternative technologies. The Union seeks to spread its standards and principles to integrate its neighborhood in a common energy market. Nevertheless, the attractiveness of the European approach will be the crucial factor: the EU is not the only player in the world resource market, and is not very flexible in its cooperation possibilities. Furthermore, it is precarious: the EU campaigns for the liberalization of energy markets but has not fully implemented the same principle within its own single market. In addition, being the global leader in sustainable energy requires more than ambitious aims and announcements to set an example for others. Europe needs to take the strategic approach of its southern neighbors into account and adjust its instruments and incentives.

Progress in and benefits from renewable energies have to be not only available but appreciable for the MENA countries, as these governments do not fear the nuclear alternative. However, as the case of Iran shows, the use of nuclear energy – even in a civilian program – is a highly sensitive issue, especially in conflict-ridden regions like the Middle East. Even the civilian use of nuclear energy carries the risk of shifting the already fragile regional balance. MENA countries should be aware that Europe perceives such decisions as potential risks, and support instead the development of renewables. Furthermore, nuclear energy would generate another import dependency, such as on fossil fuels, as nuclear fuels and fuel rods need to be imported. A massive extension of renewable energy production would in contrast help to satisfy energy needs and in the long run offer a promising potential for energy exports to Europe.
About the Expert Advisory Group (EAG)

This project aims to explore a constructive and sustained relationship between European and South Mediterranean actors in Conflict Prevention and Resolution, in the context of past and present collaborative efforts in the Middle East and North Africa. The main objective is to create a knowledge-based network in order to advise relevant actors from both shores of the Mediterranean on current political and security developments on an ad-hoc basis.

The Konrad-Adenauer-Stiftung and the members of the group agree with the general thrust of this policy paper but not necessarily with every individual statement. The responsibility for facts and opinions expressed in this policy paper rests exclusively with the contributors and their interpretations do not reflect the views or the policy of the publishers.

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