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Rethinking EU Energy Policies Towards the Southern Mediterranean Region

by Silvia Colombo and Nicolò Sartori

ABSTRACT

Energy is a key factor shaping relations between Europe and North Africa. Due to the Maghreb's strategic role for European energy security, in the last two decades the EU has attempted to promote deeper energy cooperation both with and within the region. The success of the EU's bilateral and multilateral initiatives, however, has been hindered by diverging interests between European countries and their North African counterparts. The upheaval in the region unleashed by the Arab awakening, along with critical socio-economic challenges like population growth and urbanization, are altering this picture. In this context, the EU should urgently rethink its energy cooperation models with the southern partners, seizing the opportunities engendered by the current moment of change in the region.

European Union | North Africa | Energy

keywords

Rethinking EU Energy Policies Towards the Southern Mediterranean Region

by Silvia Colombo and Nicolò Sartori*

Introduction

Southern Mediterranean countries have historically played a strategic role for European energy security. Egypt has a long-standing tradition of oil and gas production and export, which dates back to the end of the 19th century with the first explorations in Ras Gamsah in the Eastern Desert. At the end of the 1950s it was joined by Algeria and Libya, currently fundamental energy partners for the European Union (EU) and, in particular, for its southern Member States.

For decades, the revenues obtained by governments from the export of energy resources contributed to maintaining socio-political stability in these countries.¹ Income derived from energy trade also contributed to shaping North Africa's balance of power, allowing producing countries to promote, project and defend their own national interests through the region.² At the same time, the need of regional non-producers – namely Tunisia and Morocco – to accede to their neighbours' oil and gas resources helped shape regional relations. Convergent interests, therefore, fostered a certain degree of intergovernmental cooperation in the energy domain, strengthening ties between producers and consuming/transit countries.

However, regional energy cooperation never proved to be fully profitable, missing the opportunity to exploit the strong levels of complementarity and interdependence between the different North African actors. In this context, the EU attempted to promote deeper energy cooperation both with and within the region, from which it could significantly benefit in terms of energy security. In the last two decades, Brussels launched a number of bilateral and multilateral initiatives, whose success,

¹ Energy rents can be defined as the financial income obtained by governments through export of oil and gas resources. Also, royalties and extraction fees contribute to form energy rents.

² The region, as considered in this paper, includes Algeria, Egypt, Libya, Morocco and Tunisia.

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however, was hindered by different factors, including the diverging interests of both European countries and their North African counterparts.

The advent of the so-called “Arab Spring,” with the changes it introduced in the political systems of North African countries, might contribute to altering this picture. At present, the trajectories of the unrest and the ensuing political transitions show great uncertainty about the nature, powers, policy and strategic orientations of the new ruling elites on the southern shores of the Mediterranean. Furthermore, some incontrovertible socio-economic and demographic trends may impact on the future of the relations between North African countries and their European partners. Regional energy cooperation is certainly one of the most strategic sectors that could be affected by the new political processes triggered by the Arab uprisings. In this context, intra-Mediterranean and intra-North African energy cooperation is not only fundamental for the EU’s energy security, but also key to ensure strong and sustainable socio-economic transitions in North Africa.

The aim of this background paper is to set out the analytical, empirical and policy underpinnings for the revision of EU-North Africa energy relations by taking into account the needs and priorities of all parties. This exercise moves from the assumption that it is more than urgent to rethink energy relations and cooperation patterns in the southern Mediterranean – both at the intra-regional and at the North-South levels – and to set them on a new course by seizing the current moment of change in the region and the broader shifts taking place at the global level. The transformations that are ongoing on the international energy scene are likely to have major implications in the southern Mediterranean region, which is ultimately becoming a much more globalised and interconnected space. This paper is structured in three sections. The first part sheds light on the pivotal role played by energy in the framework of Euro-Mediterranean relations before the outbreak of the Arab uprisings. The second part delves into the current structural and contingent dynamics that are likely to affect the energy equation in the North African countries by making verifiable transition processes a precondition for sustainability in the region. It also discusses the major global trends in the energy market. Finally, the third part assesses the impact of domestic, regional and global dynamics on the future of Euro-Mediterranean energy cooperation.

1. State of the play: the importance of energy in the Euro-Med equation

1.1 Perspectives from the southern Mediterranean region

Energy resources, and in particular hydrocarbons, are a fundamental factor to explain political, economic and social developments in the North African countries. Energy rents, on the one hand, contributed for decades to sustaining power

structures in exporting countries of the area.³ On the other hand, the reliance on imported oil and gas supplies by non-producing countries such as Morocco and Tunisia is a fundamental factor in explaining the political and economic relations with their neighbours, as well as the complementarities and interdependencies at the regional level. These countries depend on regional gas for more than 50 percent of their domestic consumption, while the stability of transit through their territories is fundamental to ensure exports from North Africa to European markets and to guarantee huge financial inflows for energy producing countries.

In 2012 the region's total primary consumption amounted to about 164 million tonnes of oil equivalent (Mtoe) and was largely covered by fossil fuels.⁴ The five North African countries consumed around 2.5 million barrels a day (b/d) of oil (over a total regional production of 4 Mb/d), and 95 billion cubic meters (Bcm) of natural gas (with total production of around 155 Bcm).⁵

Table 1 | Primary energy consumption in North African countries (2012)

	Mtoe	%	Per capita (toe)
Algeria	46	28	1.2
Egypt	84	51	1.0
Libya	11	7	1.8
Morocco	15	9	0.5
Tunisia	8	5	0.8
Total/Average*	164	100	1.06*

Source: Own elaboration on data from EIA and CIA World Factbook.

In absolute terms, Egypt and Algeria are by far the largest energy consumers. Their aggregated demand accounts for almost 80 percent of the total regional consumption, and it is completely covered by domestic production. Being either less blessed in terms of oil and gas resources (Morocco and Tunisia), or smaller in terms of population (Libya), these countries present radically different energy consumption patterns. A closer examination of per capita consumption data, however, shows a clear distinction between energy-rich and energy-poor countries,

³ With regard to energy-exporting countries, they belong to the group of semi-rentier or rentier states. According to the theory named after this definition, (semi-)rentier states tend to display a rather centralised and often opaque management of energy revenues, which tend to be used and redistributed as a mean to control the population and to prevent the demand for more freedom and democracy from arising. See Hazem Beblawi and Giacomo Luciani (eds.), *The Rentier State*, London, Croom Helm, 1987; Giacomo Luciani, "Economic Foundations of Democracy and Authoritarianism: The Arab World in Comparative Perspective", in *Arab Studies Quarterly*, Vol. 10, No. 4 (Fall 1988), p. 457-475.

⁴ US Energy Information Administration (EIA), *North Africa*, <http://www.eia.gov/countries/mena>.

⁵ ENI, *World Oil and Gas Review 2013*, September 2013, <http://www.eni.com/world-oil-gas-review-2013/wogr.shtml>.

with Algerian, Egyptian and Libyan rates significantly higher compared to those of Morocco and Tunisia.⁶

The nature of the different electricity mixes reflects this picture. Producers heavily depend on domestic fossil fuels. In Algeria, natural gas is the primary energy source for electricity generation, contributing to over 95 percent of installed power capacity; while Libya is completely dependent on fossil fuels for its electricity generation, with two-thirds of the existing power stations being oil-fired and a third gas-fired. In Egypt this percentage is slightly lower, as fossil fuels contribute to 86 percent (76 percent gas and 10 percent oil) of the country's total installed capacity.⁷

The situation in Morocco and Tunisia is less homogeneous. While coal-fired plants ensure around 50 percent of Morocco's electricity generation, renewable energy represents a fundamental element of the country's installed capacity. Hydropower is the largest renewable source in Morocco, representing almost one-third of the country's total installed capacity. In addition, Morocco imports significant amounts of electricity from Spain through an offshore link across the Strait of Gibraltar. Tunisia's electricity mix differs from Morocco's, and is more aligned with those of Algeria, Egypt and Libya. The country's primary source of electricity generation is natural gas (90 percent), the majority of which is imported from Algeria. Oil completes the mix, while the contribution of renewables is almost negligible (1 percent).⁸

The value of intra-North Africa energy exchanges, however, appears limited if compared to the region's consumption trends. Regional trade of oil and petroleum products is basically irrelevant: in 2005, it reached 36 thousand b/d, representing only 2.5 percent of total oil exported from the region (around 2 million b/d).⁹ Libya exports small amounts of oil (around 2 percent of its total exports) to Tunisia, its main regional customer: its supplies contribute to around one-fifth of Tunisia's total oil consumption. Oil trade relations between Algeria and Morocco are even more limited, with the latter importing around 10 percent of its total oil needs from its neighbour. The picture does not change much in the natural gas and electricity sectors. Algeria is the sole regional supplier exporting limited quantities of natural

⁶ EIA, North Africa, cit. US Central Intelligence Agency (CIA), *The World Factbook*, <https://www.cia.gov/library/publications/the-world-factbook>.

⁷ Manfred Hafner, Simone Tagliapietra and El Habib El Andaloussi, "Outlook for Electricity and Renewable Energy in Southern and Eastern Mediterranean Countries", in *MEDPRO Technical Reports*, No. 16 (October 2012), <http://www.ceps.eu/node/7356>.

⁸ Ibidem.

⁹ Mustapha K. Faid, "The importance of energy issues in intra-Maghreb relations and in the relationships between the Maghreb and Europe", in *Building Trust can Take the Form of Investment: Energy and Regional Integration in the Western Mediterranean*, Barcelona, CIDOB, October 2010, p. 45-61, http://www.cidob.org/en/content/download/24706/304891/file/5_MUSTAPHA+KAID.pdf.

gas to Morocco and Tunisia in lieu of transit fees.¹⁰ Though limited in absolute terms – 0.6 and 2 Bcm, respectively – this gas contributes to more than 50 percent of both Moroccan and Tunisian gas consumption, creating a relation of dependence between the parties.

Morocco and Tunisia exchange small amounts of electricity with Algeria, which account for no more than 1 percent of the electricity consumed in the whole region. In 2009 Algeria and Morocco completed a project to interconnect their grids using a 400kV network; a similar connection has been established between Algeria and Tunisia. The latter is also interconnected to Libya, but due to technical problems the two countries have not yet started exchanging electricity. Finally, Libya is connected to Egypt through a 220kV link that became operational in 2008 and allows small imports of electricity from Egypt.¹¹

The situation of Egypt is completely different, as the country – apart from small deliveries of electricity to Libya – is basically disconnected from the rest of the region. Thanks to significant hydrocarbon reserves, Egypt traditionally relied on domestic production to meet its energy needs. For decades this situation allowed Egypt to be a net exporter, even though it never developed energy trade relations with its North African neighbours. Today, Egypt's energy status has dramatically changed, with oil production progressively declining and barely sufficient to meet the increasing domestic demand. As for natural gas, growing consumption and stagnating production are soon expected to force Egypt to import gas from Israel, once one of its traditional export markets.

1.2 Perspectives from the European Union

Sustained North-South trade across the Mediterranean balances the limited volume of intra-North Africa energy exchanges. The oil and gas sectors absorb the bulk of the energy trade, while electricity deliveries – namely between Morocco and Spain – complete the picture, creating strong interdependence between the EU and North African countries.

Algeria and Libya are fundamental hydrocarbon suppliers for the Mediterranean members of the EU. In 2013, Algeria exported to Europe roughly 35 Bcm of gas, amounting to 45 percent of its domestic production. These volumes contribute to roughly 13 percent of total EU gas imports, and to 50 percent of Portugal's, 41 percent of Spain's, 23 percent of Italy's and 11 percent of France's external supplies.¹²

¹⁰ Part of natural gas exported to Italy, Spain and Portugal is delivered to Tunisia and Morocco as transit fee payment.

¹¹ Manfred Hafner, Simone Tagliapietra and El Habib El Andaloussi, "Outlook for Electricity and Renewable Energy in Southern and Eastern Mediterranean Countries", cit.; Observatoire Méditerranéen de l'Énergie (OME) and MEDGRID, *Towards an Interconnected Mediterranean Grid. Institutional Framework and Regulatory Perspectives*, 2013.

¹² BP, *Statistical Review of World Energy 2013*, June 2013, <http://www.bp.com/content/dam/bp/pdf/>

Algerian gas reaches Europe both via pipeline and via LNG: Spain is connected through two pipelines, one of which crosses the Moroccan territory,¹³ while Italy is linked through the Transmed pipeline, which transits through Tunisia, creating strong interdependence between producer, transit countries and consumers. In addition, Algeria exports around 800,000 b/d of oil, half of which are exported to Europe, as well as an average of 45,000 b/d of petroleum products.¹⁴

Libya exports to Europe roughly 850,000 b/d of crude, accounting for about 10 percent of total EU imports. Mediterranean countries such as Italy, France and Spain are among the key customers of Libya, absorbing 40 percent of its exports.¹⁵ The country is not a major player in terms of gas production and contributes to only 3 percent of EU gas imports. However, it plays a strategic role for Italy's energy security, by providing around 9 Bcm a year, representing more than 10 percent of the country's total consumption.¹⁶

Finally, in 2013 Egypt, which despite relevant oil and gas production is progressively reducing its export capacity due to growing domestic demand, exported only 3.7 Bcm of LNG, of which only 0.2 Bcm reached the EU markets.¹⁷ In the last two years European imports from Egypt dropped significantly, not only due to the limited capacity of the country to expand its production, but also as a result of the contraction of LNG imports in Europe in the wake of the financial and economic crisis and of the increased competition for liquefied gas supplies on the global market.

While confirming the mutual strategic value of Euro-Mediterranean energy cooperation, data also show that North African producers are more heavily reliant on regional oil and gas trade than their northern European neighbours. European Member States – in particular the five Mediterranean countries – have indeed adopted successful supply diversification policies to meet their energy demand. In this context, natural gas imported from North Africa represents around 15 percent of the EU external supplies, while the region's dependency on its exports to European markets is well above 75 percent.

statistical-review/statistical_review_of_world_energy_2013.pdf.

¹³ Algeria exports gas to Spain and Portugal through the Maghreb-Europe pipeline, which transits for around 500 km through Morocco's territory. In addition, Algeria is directly connected to Spain via the Medgaz pipeline.

¹⁴ EIA, *Algeria Country Report*, <http://www.eia.gov/countries/cab.cfm?fips=AG>.

¹⁵ EIA, *Libya Country Report*, <http://www.eia.gov/countries/cab.cfm?fips=LY>.

¹⁶ BP, *Statistical Review of World Energy 2013*, cit.

¹⁷ Ibidem.

1.3 North-South energy cooperation

Despite strong interdependence, the EU has demonstrated a limited capacity to engage North African partners on energy issues. Indeed, the attempts of some European countries to maintain the privileged bilateral country-to-country ties developed in the last decades,¹⁸ have hindered the EU efforts to define a unique approach towards energy cooperation with the region.¹⁹

The result is the limited success of the various initiatives launched at the EU level to engage Mediterranean countries on energy matters. In 1995 the EU launched the Euro-Mediterranean Partnership (EMP) – also known as the Barcelona Process – through which it tried to develop a multilateral approach towards the region. In 2008 the Union for the Mediterranean (UfM) re-launched the idea of multilateral cooperation by placing it within an intergovernmental framework. Energy cooperation was put at the core of the UfM initiative, and particular emphasis was put on the attainment of the Mediterranean Solar Plan (MSP), which was included among the six priority areas identified in the final declaration of the Paris Summit of July 2008. So far, the future of this ambitious project remains uncertain, and despite the direct support of the European Commission, the milestones identified by the mid-term roadmap are far from being achieved.

In parallel, energy cooperation was developed through the European Neighbourhood Policy (ENP), which put strong emphasis on bilateral cooperation between the EU and single Mediterranean countries.²⁰ The tools developed by the EU to foster dialogue and cooperation are the Action Plans, which define the steps to be taken to achieve political and economic reforms in the short to medium term.²¹ Despite the great emphasis attached to energy cooperation in the ENP Action Plans, in reality these documents provide more a wish list of goals and aspirations rather than practical measures and mechanisms to ensure their actual implementation.

Since this top-down approach failed to deliver tangible results, the EU has turned to a more pragmatic bottom-up approach.²² The new effort covers a wide range of issues – from energy legislation and regulatory measures that facilitate

¹⁸ The relations established by Italy with Libya starting from the 1950s are a case in point.

¹⁹ In general, the difficulties of the EU in developing effective external energy policies are reflected in the introduction of Art. 194 in the Lisbon Treaty, which envisages shared competences between the EU and its member states in the energy domain, allowing national governments to defend their own interests.

²⁰ Judith G. Kelley, "New Wine in Old Wineskins: Promoting Political Reforms through the New European Neighbourhood Policy", in *Journal of Common Market Studies*, Vol. 44, No. 1 (March 2006), p. 29-55, <http://dx.doi.org/10.1111/j.1468-5965.2006.00613.x>.

²¹ The EU has signed bilateral action plans with Egypt, Morocco and Tunisia. Quite significantly, however, the limits of the ENP approach are witnessed by the fact that the two key energy exporters of the region – Algeria and Libya – have not yet agreed an action plan with the EU, and thus energy cooperation with these countries remains outside the ENP framework.

²² Manfred Hafner, Simone Tagliapietra and El Habib El Andaloussi, "Outlook for Electricity and Renewable Energy in Southern and Eastern Mediterranean Countries", cit.

foreign investment to energy security and efficiency. Its main goal is to engage neighbouring countries at the regulatory and technical levels, in order to encourage them to harmonise their procedures with the EU's internal energy market rules. The creation of the Association of Mediterranean Energy Regulators (MedReg) in 2006, followed by the establishment of Med-TSO, a platform to coordinate the activities of Mediterranean transmission system operators, represent the most successful examples of the new EU approach towards energy cooperation in the region.

The success of these institutional initiatives, increasingly matched by complementary efforts put in place at the industrial level, might be affected by the changing energy landscape in the region as a result of the Arab uprisings, requiring some necessary adjustments in the way EU-North Africa energy relations are driven forward.

2. A changing energy landscape: global, regional and domestic factors

2.1 The southern Mediterranean region in turmoil and the impact of energy dynamics

The Arab uprisings that took place in some countries of the southern Mediterranean in 2011 have changed the set of challenges and opportunities confronting Euro-Mediterranean energy cooperation in general and EU-North Africa energy relations in particular. The preceding paragraphs have shed light on the pivotal role played by energy as a cornerstone in the development of the countries of the southern Mediterranean region either directly or indirectly. Against this backdrop, an in-depth understanding of evolving energy dynamics, in terms of needs, policies and cooperation initiatives, has to start from the assessment of the broader social, political and economic features of the context in which energy trends and relations are embedded.

In 2011, the Arab world was shaken by the sudden and unanticipated outbreak of the largest popular protest movements seen in the history of this region. Starting from Tunisia and reaching as far as the Middle East and the shores of the Arabian Gulf Peninsula, the so-called "Arab Spring" represented the point of arrival of a long-lasting process of growing political and socio-economic unsustainability in the relations between the state and its citizens. The Tunisian case is illustrative of the huge impact that social and economic factors had on the chain of events that led to the Arab Spring. In many respects, Tunisia was officially hailed as an economic success story, with sustained annual GDP growth, relatively high standards of living compared to its neighbouring countries and a sizable middle class. In spite of this largely positive macroeconomic picture, Tunisia perfectly exemplified the situation of growing unsustainability at the socio-economic level, which fed the popular unrest that toppled one of the most long-lasting and stable governments in the Arab world. A first element to be underscored is the fact that market-oriented

reforms did not contribute to creating sustainable development, in particular failing to open sufficient employment opportunities for the burgeoning educated youth that were entering the job market as well as for the interior, marginalised regions. The reasons for these shortcomings can be identified in the following points:

- the skewed nature of the export market, where most of the investments were made in low-skilled activities, such as clothes production and agricultural products;
- the country's strong dependence on the EU for exports, tourism revenues, remittances and foreign direct investment (FDI) flows, and the consequent vulnerability to fluctuations in EU growth;²³
- the widespread corruption that – in some cases – characterised the provision of social welfare and contributed to fuelling frustration and dissatisfaction, particularly among the youth.

As a result of these trends, Tunisia experienced a rapid and marked deterioration of socio-economic conditions, whose signs were captured by the dramatic rise in youth unemployment, the pronounced regional disparities with a stronger incidence of poverty in the south and centre-west of the country, and the erosion of the purchasing power of middle class households due to rising food prices and declining wages in the public sector.²⁴ The issue of youth unemployment deserves to be further stressed in light of the tremendous implications it had in preparing the ground for the popular uprising. According to the official estimates of the Ben Ali era, unemployment among the youth, particularly those with higher education, increased from 8.6 percent in 1999 to 19.0 percent in 2007. New figures released after the fall of the government have, however, revealed a far more dramatic rise, from 22.1 percent in 1999 to 44.9 percent in 2009.²⁵

To complete this picture, the situation in the energy market played an important, albeit indirect, role in triggering the Arab uprisings. The impact of energy cannot be considered in isolation from the broader socio-economic conditions sketched above and from long-term demographic trends. A number of studies project populations in the MENA region to grow from 280 million in 2010 to a figure of between about 395 million and 426 million in 2050, depending on the prevailing socio-economic and political conditions.²⁶ Significant variations among countries

²³ Maria Cristina Paciello, "The Impact of the Economic Crisis on Euro-Mediterranean Relations", in *The International Spectator*, Vol. 45, No. 3 (September 2010), p. 51-69.

²⁴ Jane Harrigan and Hamed El Said, *Economic Liberalisation, Social Capital and Islamic Welfare Provision*, Basingstoke and New York, Palgrave Macmillan, 2009.

²⁵ Azzam Mahjoub, "Labour Markets Performance and Migration Flows in Tunisia", in Philippe Fargues and Iván Martín (eds.), "Labour Markets Performance and Migration Flows in Arab Mediterranean Countries: Determinants and Effects, Vol. 2, National Background Papers Maghreb (Morocco, Algeria, Tunisia)", in *European Economy Occasional Papers*, No. 60 (April 2010), p. 163-222, <http://dx.doi.org/10.2765/67768>.

²⁶ George Groenewold and Joop de Beer, "Population Scenarios and Policy Implications for Southern Mediterranean Countries, 2010-2050", in *MEDPRO Policy Papers*, No. 5 (March 2013), p. 8, <http://www.ceps.eu/node/7852>. These projections are calculated with reference to the 11 countries of the MENA region, including Turkey.

notwithstanding, these long-term demographic projections will have a strong effect on economic growth, via the increasing share of working-age population and the growing energy demand.

Overall, empirical studies demonstrate that the share of the working-age population over the total population is expected to change dramatically between 2010 and 2050, with large differences across countries depending on the timing of the ongoing demographic shifts. Going back to the example of Tunisia, the country had already reached the peak-level demographic dividend of 70 percent, i.e., the share of working-age population, in 2010. This level, however, is projected to remain high, at least up to 2035, after which working-age population will rapidly decrease and the population of elderly people increase.²⁷ This explains the high rate of unemployment mentioned above, caused by the fact that the economic growth experienced by the country was not able to absorb growing numbers of people entering the labour market.

This fast demographic growth coupled by the booming urbanisation trend contributed to altering the energy fundamentals of the region. On the eve of the Arab Spring, the energy situation in the southern Mediterranean countries was characterised by the rapid increase of energy demand. Available figures expect the total energy demand in the southern Mediterranean to increase by 70 percent by 2020, of which fossil fuels will cover 91 percent, leaving a still negligible share of around 4 percent for renewable energy.²⁸ It is calculated that the total energy investment needed in the MENA region to cope with the expected increase in energy demand amounts to about 3 percent of the region's total projected GDP up to 2040.

If one considers the situation of North Africa's net energy importers, rising energy demand meant a heightened dependence on imports and an additional burden on fiscal balances due to the volatility of global prices for energy commodities and their relatively high levels in recent years. Fuel prices, in particular Liquefied Petroleum Gas (LPG, used for cooking and heating) and diesel (very important for transport and agriculture), rapidly increased over the period 2007-2011 as a result of the international oil price surge.²⁹ The same happened to electricity bills in most countries. No demand-driven mechanisms, which tend to be largely unpopular, were introduced to ease this situation. Indeed, low energy efficiency and artificially-capped domestic energy prices – due to extensive, universal and expensive energy subsidies – put pressure on existing infrastructure leading to chronic energy cuts and blackouts and to worsening poverty. The issue of energy subsidies is of particular importance in light of its impact on energy use and prices.

²⁷ Ibidem, p. 10.

²⁸ Emmanuel Bergasse et al., "The Relationship between Energy and Socio-Economic Development in the Southern and Eastern Mediterranean", in *MEDPRO Technical Reports*, No. 27 (February 2013), p. 3, <http://www.ceps.eu/node/7706>.

²⁹ Ibidem, p. 11.

In most countries of the region, prices are held artificially low for all customers for social and political reasons. Not only do universal price subsidies distort the domestic energy market by posing heavy burdens on state budgets, but they also represent strong disincentives to a more rational and efficient use of energy and investment in the energy sector.³⁰ Furthermore, they did not help avert the popular upheavals as they ultimately contributed to widening the gap between the rich and the poor.

According to statistics provided by the International Energy Agency (IEA), only 8 percent of the fossil fuel subsidies deployed in the region went to the households most in need. Energy poverty increased especially among the most vulnerable segments of the population, who saw their overall socio-economic development deteriorate. Some of them live in isolated rural areas or urban slums and hence do not have access to electricity grid connections. All in all, more than triggering the Arab uprisings per se, changing domestic energy trends thus represent a fundamental structural challenge confronting the countries in the region in the post-Arab Spring phase. The way in which this challenge will be tackled will shape the future stability of the region (or lack thereof) and will influence the pattern of its relations with external partners, including the EU.

2.2 Regional political instability and the new geopolitics of energy

As a result of the sudden transformations triggered by the upheavals of 2011, North Africa is today coping with multifaceted transition processes, in which factors of change coexist with elements of continuity. In light of the *longue durée* that characterises such processes, it is not possible to anticipate the final outcome. A reliable projection of future developments is made even more complex by the interlocking effect of domestic, regional and global dynamics. Three trends can be mentioned here that will have an impact on the southern Mediterranean picture in the years ahead. At the domestic level, the bulk of the transition and of the ensuing struggles for power has in the past three years focused on purely political and institutional issues, namely the revision of the constitution and of the electoral laws, and the holding of elections or referendums. While this is largely consistent with what is argued in the literature on (democratic) transition processes in other geographical and historical contexts, the huge socio-economic challenges, by and large representing the root causes of the Arab uprisings, have so far been neglected. This means that no major overhaul of the pre-existing economic development paradigms has taken place. The situation of unsustainability at the socio-economic level, including the issues that need to be addressed to cope with the indispensable

³⁰ The annual fiscal burden related to subsidies and other social benefits has indeed been aggravated since 2011. For example, Egypt's 2014-2015 fiscal budget, which came into effect on 1 July 2014, showed an increase by one percent compared to last year's spending, with the total amount of subsidies and social benefits amounting to 31 percent of the budget. See Tom Rollins, "Sisi's Economic Call to Arms", in *Sada Analysis*, 24 July 2014, <http://carnegieendowment.org/sada/?fa=56245>.

energy transition, has had no clear answers so far in most countries of the region.

Turning to the regional level, the growing fragmentation of the southern and eastern Mediterranean makes prospects for regional cooperation and integration a hard challenge. This applies also to the regional energy framework, with some of the plans and projects for greater interconnection and better integration put on hold as a result of the different transition paths experienced by the countries in the region. Complex transition processes and the emergence of domestic sectarian fault lines as well as divisions between Islamist and secular forces have reflected and have been accentuated by parallel divisions at regional level.

Finally, these developments at the domestic and regional levels interact with the powerful global push-and-pull factors that are reshaping the geopolitics of energy. Overall, while the implications of the so-called "global energy revolution in-the-making"³¹ are still difficult to grasp to their full extent, some transformations in the international energy landscape are already under way. On the one hand, in terms of energy production, the United States has become the world's largest oil producer in 2014, even surpassing Saudi Arabia, and the dominant player in global energy markets. Since 2008, the country has seen a rise of more than 60 percent in its crude production and in 2010 Washington took over Moscow as the main natural gas producer globally. On the other hand, there is the growing relevance of the Asian continent in general (and of China and India in particular) in energy flows. Endowed with fast-developing economies, the Asian G20 members still suffer from significant energy poverty and badly need to secure new energy supplies. China has already surpassed the United States in its scale of oil imports, much of which comes from the broader Middle East.

All this ends up in a "risk pivot" as a result of the resources pivot.³² Indeed, the "pivot to Asia," which has by now become so well-established in the rhetoric of US foreign policy, means first and foremost a shift in the risk exposure associated with energy production and transit towards Asia. This leads one to argue that the hydrocarbon producing countries in the Middle East, Saudi Arabia *in primis*, will retain their influence on global energy dynamics, irrespective of where its exports are destined. A corollary of this is that it is inconceivable for the United States to disengage from the Middle Eastern region any time soon. In other words, the United States cannot insulate itself from global energy markets, despite being projected to become increasingly self-sufficient in energy terms, as its economy is nevertheless trade dependent. This transformation is affecting other energy exporting countries as well, chiefly Saudi Arabia and Russia. In particular, Moscow expects to export a

³¹ "America's energy future: Meet the frackers", in *The Economist*, 15 June 2013, <http://econ.st/11XkaDl>.

³² Bruce Jones, David Steven and Emily O'Brien, "Fueling a New Order? The New Geopolitical and Security Consequences of Energy", in *Brookings Project on International Order and Strategy Papers*, March 2014, p. 2, <http://brook.gs/1sylvFu2>.

quarter of its energy to the Asia Pacific region by 2035.³³

These meaningful transformations of the energy dynamics at the global level have represented the background against which the ongoing Russian-Ukrainian crisis has taken place. The latter's broad repercussions have already been felt in Europe and the crisis has reignited the debate about the old continent's energy security, should the instability on its eastern borders deteriorate. The pending risk of major interruptions in the supply of Russian gas to Europe – much of which transits through the Ukraine – makes the prospects for reinvigorating EU-North Africa energy cooperation even more appealing, not to say urgent.

In conclusion, these domestic, regional and global trends provide the defining features of the new, evolving framework to assess the future of the southern Mediterranean region's energy landscape in terms of needs, policies and prospects of cooperation. In particular, by highlighting the importance of the geopolitical dimension of energy security, they alter the constraints and opportunities facing Euro-Mediterranean energy cooperation. In light of the growing need to diversify and secure energy imports affecting most European countries, albeit to different degrees, ensuring a viable, effective and sustainable energy transition in the southern Mediterranean becomes of paramount importance.

3. The impact of these trends on Euro-Mediterranean energy relations

The Arab upheavals have introduced essential political and socio-economic challenges into the southern Mediterranean. These challenges could potentially alter the energy landscape in the region as well as the stability of the long-standing energy cooperation models between North African producers and European consumers.

At the domestic and regional levels, the energy picture in the southern Mediterranean is evolving rapidly. The growth of energy demand, largely driven by heavily subsidised prices and poor performance in terms of energy efficiency, is putting pressure on the sustainability of the countries' energy models and their public finances, potentially impacting future economic development, social stability and security across the region. According to data provided by the Observatoire Méditerranéen de l'Énergie (OME), the combination of demographic growth, urbanisation and economic development will dramatically impact on the primary energy consumption of the whole southern Mediterranean region. From 2010 to 2030 energy consumption will grow from 335 Mtoe to 660 Mtoe, registering an astonishing 100 percent increase. While the contribution of renewables to the total energy mix is expected to increase, heavy reliance on fossil fuels will remain

³³ Ibidem, p. 13.

a fundamental trait of the region's energy picture. Even more exceptional will be the growth of electricity demand. In the next two decades electricity consumption is expected to increase 170 percent, from 570 TWh in 2009 to 1,565 TWh foreseen in 2030. Despite the progressive introduction of renewables in the electricity generation mixes of North African countries, in 2030 fossil fuels will contribute to more than 80 percent of the total electricity generation capacity.

In this transition phase, North African countries urgently need to find new energy models to ensure strong and sustainable economic development and guarantee socio-political stability. The energy consumption trends highlighted above risk impacting on the traditional ways North African governments approached energy issues domestically as well as in the regional context. Growing energy demand, indeed, questions the sustainability of: redistribution policies made possible by big revenues obtained by exporting fossil fuels; cheap energy ensured by heavily subsidised prices of oil and gas; low levels of energy efficiency determined by negligence in terms of investments in the energy sector.

This situation poses two main challenges to regional actors. The first one concerns the domestic stability of North African countries. In order to meet the growing demand, they are expected to secure energy supplies and to expand their electricity generation capacity. Given the current structure of their energy mixes, the easiest way to achieve these objectives would be to increase the use of fossil fuels, in particular to run electricity plants. A similar strategy could be sustainable – even though with relevant setbacks – if undertaken by producing countries such as Algeria and Libya. Its viability, however, would be largely questioned in the case of Egypt, Morocco and Tunisia. In both cases, the decision to meet the growing energy demand by expanding the use of fossil fuels might produce destabilising effects. In the case of producers, burning valuable oil and gas resources to generate electricity represents a sub-optimal strategy, since it would necessarily determine a contraction of exports and, consequently, a reduction of the energy revenues collected by the governments. For non-producers, a similar approach would mean increasing their imports of fossil fuels from regional partners or from abroad, with negative effects on the balance of payments, and, in general, on the sustainability of public finances. In any case, financial constraints determined by the increased use of fossil fuels in the energy mix would reduce the capacity of governments to ensure those welfare measures and benefits necessary to help keep the domestic situation stable.

In a broader Mediterranean perspective, North Africa's skyrocketing energy consumption trends might put at risk the region's traditional role as energy supplier for European consumers. If not accompanied by significant efforts to expand the current oil and gas capacity, the potential overdependence on fossil fuels for electricity generation risks threatening the region's capacity to sustain the current level of oil and gas exports. In particular, although Europe's demand is not expected to rise dramatically in the years to come, these new energy trends would put at risk North Africa's traditional role as an oil and natural gas provider to its European neighbours, whose energy security appears increasingly threatened

by the Ukraine-Russia conflict and the deterioration of energy relations between Moscow and its EU partners.

As a way to restructure these imbalances and address impending challenges, North African countries will be called to review their traditional energy practices and launch an effective energy transition. In this context, enhanced EU-Mediterranean cooperation could be applied to various aspects of the energy sector, including development of renewables, energy efficiency technologies and demand-side policies. Sustainability and efficiency are certainly the domains where the EU support for these countries could bring added value. North African countries, indeed, need better and more efficient electricity generation capacity (both fossil- and renewable-based); reliable energy transportation infrastructure (i.e. electricity grids); improved technology, for example, in the building sector, and so forth. In this context, EU-sponsored initiatives could introduce more effective schemes to increase public and private investments, transfer technologies and best practices, and finance bottom-up projects at the national and regional levels.

Major investments in the renewable energy sector should be prioritised, particularly by seeking access to the technical assistance programmes made available by the EU. Given the heavy reliance on fossil fuels for electricity generation, such an effort would provide benefits in terms of energy diversification, thus contributing to satisfying the rapidly growing domestic demand for energy in a more sustainable way. In light of the broader socio-economic challenges confronting the countries in the region in the aftermath of the Arab uprisings, renewable energy projects could also lead to local job creation in new industry and service sectors developed thanks to this additional investment. This should be part of a long-term strategy for domestic socio-economic development, including – among other things – enhanced institutional and economic governance measures and poverty reduction strategies. In addition, governments in the region will have to make greater efforts to reduce energy subsidies, a heavy burden for the economies of these countries. The adoption of these measures, however, while ensuring a more efficient use of resources and consequently decelerating the growth of energy demand, may risk exacerbating short-term social instability, as energy subsidies have been largely used in the past as a fundamental tool to support households and economic growth.

Along with these efforts, the EU could intervene at the regional level by promoting regulatory harmonisation, legislative coordination, technical and standard convergence, and policy cooperation on issues such as renewables, efficiency and subsidies. Aimed at promoting energy market liberalisation, European initiatives should also be aimed at ensuring transparency on the activities of state-owned companies, removing trade barriers and creating interconnected energy markets in the region. At the same time, European efforts cannot avoid looking at the development of North Africa's hydrocarbon sector, which is expected to remain fundamental for economic development and social stability on the northern rim of the Mediterranean. In a context of increasing international competition over the region's energy resources, the EU should attempt to introduce new ways and models to exploit and export the region's oil and gas reserves. Better transparency

and market access on the producers' side should be paid off with concrete tools to ensure capital and investments, guarantee technology transfers, promote security and operational best practices, and provide measures to manage the energy rents in light of the evolving socio-economic challenges.

Conclusions

The situation in North Africa is today politically and socio-economically very heterogeneous. However, energy dynamics, which played an important – albeit indirect – role in triggering the uprisings across the region, remain a key factor for the economic and socio-political stability in North Africa as well as for the future of the relations between the region and the European Union.

If not addressed accordingly, issues such as social imbalances, widespread poverty and structural unemployment can generate further instability. Energy is certainly part of this equation, as the current patterns of supply and consumption have a fundamental impact on the main regional macroeconomic parameters, such as fiscal balances and economic performances. The proper management of energy resources (i.e. the reduction of subsidies; the rational use of fossil fuels) is fundamental to spur development and growth, and to avoid political tensions and social pressures. Serious inefficiencies in the energy sector currently consume from public budgets huge financial resources that could be better allocated in order to foster employment-generating economic activities.

This aspect is even more relevant when considering the energy consumption patterns foreseen for the next decades, which are expected to skyrocket due to rapid population growth, progressive electrification and growing urbanisation. These trends suggest that, without significant changes in the management and use of energy resources, the sustainability of the current socio-economic model and the stability of the governments might be at risk. For this reason, the region urgently needs a rapid push towards a sustainable energy transition, not only for its own political stability and social cohesion but, to a certain extent, also for Europe's energy security, which is heavily reliant on North African supplies, and – linked to that – also particularly concerned by the turbulence on the southern rim of the Mediterranean.

From a European perspective, the energy transition in North Africa is necessary for two main reasons. On the one hand, the stability in the Mediterranean would benefit the security picture in the area and the development of the whole region. On the other hand, uncontrolled consumption of fossil fuels and inefficient energy policies in North Africa would significantly impact on European markets, with serious consequences for the security of supply of European consumers, Italy *in primis*.

Rethinking EU Energy Policies Towards the Southern Mediterranean Region

The policy tools adopted so far by the EU to engage North African neighbours on energy issues can be improved. The lessons learnt from the past, along with the need to act urgently to avoid new explosive developments in North Africa, should encourage key institutional stakeholders from both sides to develop a more coherent and effective scheme for regional energy cooperation; one that, by taking into account the peculiarities of each country in the region, might provide mutual benefits to both sides of the Mediterranean in terms of energy security, sustainable development, economic growth and job creation.

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