

STARTING A NEW CHAPTER IN EU-ALGERIA ENERGY RELATIONS A PROPOSAL FOR A TARGETED COOPERATION

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EXECUTIVE SUMMARY

This policy paper calls for a more prominent position of Algerian energy and its potential impact on the resilience of the Southern Mediterranean region on the EU agenda. Thereby it suggests the establishment of a targeted energy cooperation aimed at switching Algerian domestic consumption to renewable energy as a potential way of addressing the encountered policy challenges.

Algeria - the State of Affairs

The analysis of the current situation in Algeria points towards a threat of economic and potentially also political destabilization of the country. Due to the high dependency of Algerian economy on the hydrocarbons' revenues this can be at least partly attributed to the critical developments in the energy sector. In particular, rising domestic energy demand and falling natural gas exports decrease the revenues available to the government to buy its way out of political turmoil. The huge renewable energy potential, which could sustainably solve the problem of an ever rising domestic consumption, remains untapped.

If not addressed, the critical developments in Algeria are likely to have a direct impact on the EU: the security of gas supplies, the resilience of the EU's Southern neighbourhood, and potentially also the EU's own security.

Targeted Energy Cooperation: Switching Domestic Consumption to Renewable Energy

”THE EU COULD PLAY
A POSITIVE ROLE BY
SUPPORTING ALGERIA IN
BUILDING ITS OWN ENERGY
TRANSITION”

The EU could play a positive role by supporting Algeria in building its own energy transition aimed at switching domestic consumption, first partly and prospectively fully, to renewable energy. The initiative can be based on the already existing EU instruments: EU-Algeria Energy Business Forum and the reviewed framework of the European Neighbourhood Policy.

- The EU could try to develop the EU-Algeria Energy Business Forum into a permanent platform for supporting Algeria in developing investor-friendly regulation in the energy sector with a particular focus on renewable energy. The objective should be to attract EU investment into Algerian renewable energy sector.
- The proposed energy cooperation could be defined as one of the key partnership priorities under the reviewed European Neighbourhood Policy framework. Italy, Spain, Portugal, France, and Germany could form a 'core group' of the member states most strongly committed to the realization of the Algerian energy transition.

The proposal presented in this paper has a potential of creating a win-win situation, equally benefiting both parties involved. It also provides an opportunity for the EU to make a significant contribution to the objectives of the Paris Agreement.

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1. The forgotten case of Algeria?

Together with Russia and Norway, Algeria represents one of the top three gas suppliers for the European Union (EU). With 53 bcm¹ the existing EU-Algeria pipeline capacity roughly equals the Russian Nord Stream 1 pipeline. The full utilization of this capacity would allow covering around 23% of total EU gas imports². In addition, Algeria provides for 37 bcm of LNG liquefaction capacity³. Nevertheless, the share of Algerian supplies in EU total gas imports has been on decline during the last decade. In 2014, it accounted for only 12.3 %⁴, which is the lowest contribution since 2004 (18%).

The described downward trend seems to go contrary to the objectives of the EU Energy Union strategy, which emphasizes the importance of Algeria and the entire Southern Mediterranean region for the security of energy supply in the EU⁵. In fact, the EU has recently undertaken several steps to strengthen its energy cooperation with Algeria. In May 2015, it established the EU-Algeria Political Dialogue on Energy Matters, which was followed up by the EU-Algeria Energy Business Forum one year later. These initiatives, however, seem to lack a clear vision and fall short of defining concrete short and long term goals.

Three major challenges stand in the way of a strategic EU-Algeria energy partnership. Firstly, the impact of Algerian natural gas supplies on the EU as a whole remains limited due to the lack of gas interconnectors between Spain and France. Secondly, the rapidly rising Algerian energy demand is putting a downward pressure on gas volumes available for foreign exports further decreasing profitability of the Algerian energy sector which is characterized by bad governance⁶. Governmental subsidies for fossil fuels and the untapped potential of renewable energy contribute to the dominant position of natural gas in Algerian energy mix. Finally, Algerian total gas production has been in decline over the past decade as output from large, mature fields is depleting.

”THE EU MIGHT SEE A FURTHER DESTABILIZATION OF THE SOUTHERN MEDITERRANEAN REGION SHOULD ALGERIA ENTER A PERIOD OF POLITICAL AND ECONOMIC TURMOIL”

economic turmoil.

If the EU fails to redefine its approach to energy trade with Algeria, it might encounter several challenges. On the one hand, the EU might be putting at risk the energy security of the member states that are highly dependent on Algerian supplies (Portugal (50%), Spain (40%), Italy (23%), and France (11%)⁷. On the other hand, the EU might be missing out on the opportunity of expanding the share of Algerian gas in its energy imports, thereby reducing the dependency on Russian supplies and/or substituting the use of coal in EU's power generation. Finally and perhaps most importantly, the EU might see a further destabilization of the Southern Mediterranean region should Algeria enter a period of political and economic turmoil.

This policy paper aims at drawing attention to the need of stronger and more targeted bilateral energy cooperation between the EU and Algeria. It addresses current challenges and proposes a policy option aimed at fully leveraging the potential of Algerian resource abundance and EU's technological and regulatory know-how, thus creating a win-win situation.

Building upon the existing initiatives like the EU-Algeria Energy Business Forum and embedding the energy cooperation into the reviewed framework of the European Neighbourhood Policy (ENP), the EU could play a positive role by supporting Algeria in creating its own energy transition. In the short to medium term, the transition to renewable energy in domestic consumption would enable a sustainable development of Algerian energy sector as well as allow securing and/or freeing-up additional gas volumes for exports to the EU. In the long term, the perspective of clean energy export within the Southern Mediterranean region could help Algeria in diversifying

1. Billion Cubic Meters.

2. Eurostat (2016). *Energy Production and Imports*.

3. Aoun, M.C. (2015). *European Energy Challenges and Global Energy Trends: Old Wine in new Bottles?* IAI Working Papers 15 I 03, January 2015. Istituto Affari Internazionali.

4. Eurostat (2016). *Main origin of primary energy imports*.

5. European Commission (2015). *Energy Union Package*. Brussels, 25 February 2015.

6. US Energy Information Administration (2016). *Country Analysis Brief: Algeria*.

7. Colombo, S., Sartori, N. (2014). *Rethinking EU Energy Policies towards the Southern Mediterranean Region*. IAI Working Papers 14 I 14, November 2014. Istituto Affari Internazionali.

its economy and overcoming hydrocarbons' dependency. Perhaps, there is an opportunity of the resulting nomic resilience positively contributing to civic empowerment and democratic development of the country.

By undertaking this role the EU could prove itself as the world's leader in sustainable energy and strengthen the impact of its energy diplomacy in line with the objectives of the Energy Union. Finally, by helping Algeria to reduce its use of fossil fuels the EU could make a significant contribution towards the objectives of the Paris Agreement.

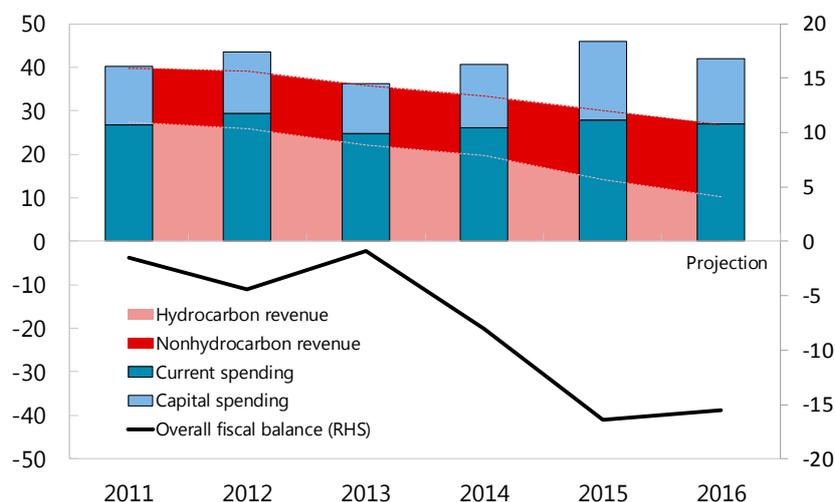
2. Algeria – The State of Affairs

2.1. Economics, Politics, Security

Algeria is the leading natural gas producer and one of the top three oil producers in Africa (OPEC member since 1969). The EU represents the key export market for both energy sources: 76% of total crude oil⁸ and 86% natural gas exports are sent to Europe⁹. The oil and gas revenues are the backbone of the Algerian economy and its hydrocarbon-based growth model.

According to IMF, from 2002 until 2014 (the period of rising oil prices) hydrocarbons on average accounted for 98% of exports earnings, 69% of fiscal revenues, and 36% of the country's gross domestic product (GDP)¹⁰. Consequently in 2015, the oil price slump strongly hit the economy as the oil and natural gas export revenues reduced by 41%¹¹. The foreign exchange reserves helped softening the extent of the economic shock¹², going down from \$194 billion in December 2013 to 153\$ billion in late 2015¹³.

FIGURE 1 ► Overall fiscal balance (in percent of GDP, 2011-2016)



Source: IMF

8. This paper puts an emphasis on natural gas due to its proportionate higher significance for the Algerian economy as well as the EU-Algerian relations. Whereas in 2014 with 12.3% of total imports Algeria was the third major natural gas supplier for the EU, it contributed only around 4% to EU's crude oil imports (according to the Eurostat data).

9. US Energy Information Administration (2016). Country Analysis Brief: Algeria.

10. IMF (2016). Algeria. Country Report.

11. Algerian natural gas contracts are indexed on oil prices.

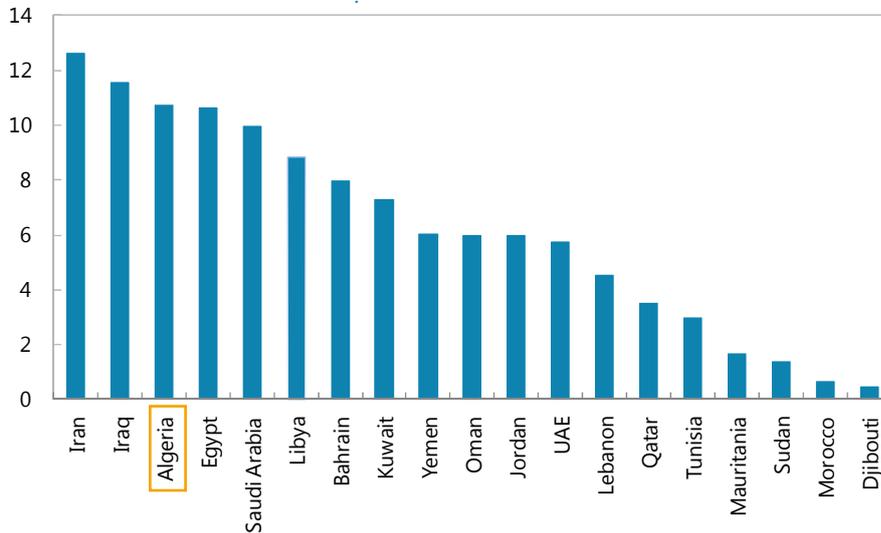
12. KPMG (2015). Economic Snapshot: Algeria.

13. Middle East Economic Survey, "Algeria's Oil & Gas Revenues Plunge 41% in 2015" (January 29, 2016), volume 59, issue 4.

The oil and gas revenues generated during the period of high oil prices partly explain why Algeria remained relatively ‘quiet’ during the Arab Spring. The government could afford boosting wages and financing its vast system of social welfare¹⁴. In addition, the generated surplus could be used to finance the fossil fuel subsidies, which are among the highest in MENA region (Figure 2). According to IMF, in 2011 the pre-tax energy subsidies for petroleum, electricity, natural gas and coal consumed around 11% of Algerian GDP¹⁵. Today, this spending contributes to an ever growing budget deficit (around 16% of GDP in 2015)¹⁶. Youth unemployment is also on the rise. In fear of uprisings that other countries in the region experienced in 2010-2011, Algerian government is currently advocating an urgent boost in oil prices at OPEC.

The opaque political leadership of Algeria puts in question the country’s ability of dealing with the pressing economic issues. Algeria’s president, Abdelaziz Bouteflika, has not been seen in public for over two years. Meanwhile, a “shadowy click” of country’s elites seem to be in charge of running the government¹⁷. It is therefore dubious if they are prepared to introduce reforms needed to diversify and restructure the economy in order to respond to the established low oil price environment.

FIGURE 2 ▶ MENA Pre-Tax Energy Subsidies (in percent of GDP, 2011)



Source: [IMF](#)

An economic and political destabilization of Algeria would have serious implications in terms of the EU’s energy security. It would certainly put Algerian gas exports to the EU at risk. So far, two Islamic militant attacks – on In Amenas in January 2013¹⁸ and In Salah in March 2016¹⁹ – have led to temporary suspensions of fields’ operations and forced western companies BP and Statoil, who jointly operate the fields with Algerian national oil and natural gas company Sonatrach, to withdraw their staff from the facilities²⁰.

The destabilization of Algeria also denotes a serious threat to regional resilience. First, it could have negative spill-over effects on neighbouring countries such as Morocco and Tunisia, where positive political developments have recently become visible, Libya, which is already in a state of turmoil, and Mali, where security situation remains precarious notwithstanding the peace accord of June 2015. The energy security of Morocco and Tunisia – two Algerian gas customers besides the EU²¹ – would be also seriously affected. Finally, migratory flows within the region as well as towards the EU would most likely increase even further.

14. According to Reuters, even today, given the low oil price environment, Algeria has allocated 22% of its GDP to social welfare. Given the growing budget deficit such spending can be seen as unsustainable.

15. IMF (2014). *Energy Subsidies in the Middle East and North Africa: Lessons for Reform*.

16. The World Bank provides a figure of -15.9, whereas the IMF estimated figure is -16.4%.

17. The Economist (2016). *Algeria. Who is in Charge*.

18. Operated by Sonatrach (Algerian company) with Statoil and BP.

19. Natural Gas Europe (2016). *BP, Statoil pull staff from Algeria*.

20. Ibid.

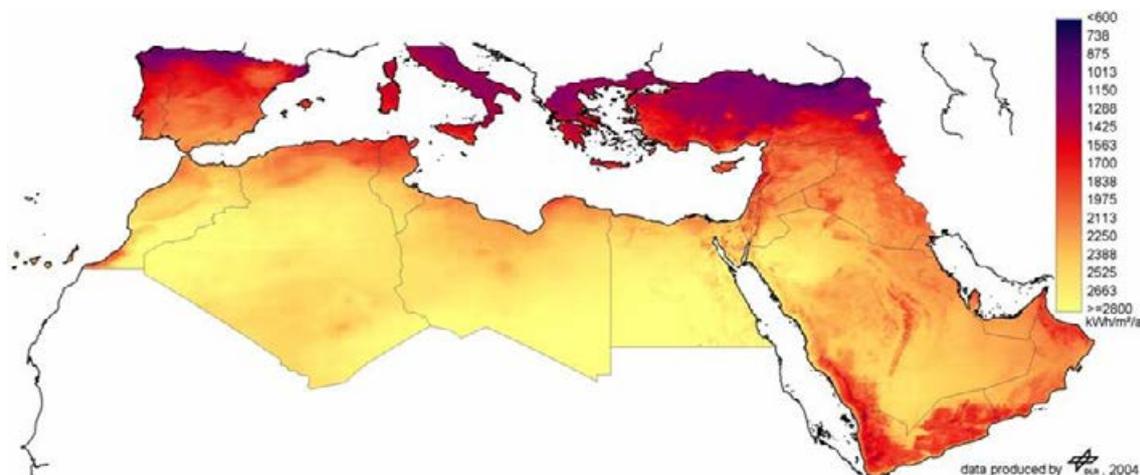
21. Algerian gas supplies contribute to more than 50% in both Moroccan and Tunisian gas consumption.

The government of President Bouteflika is certainly of an authoritarian character and should not be supported²². However, despite its repeated attempts the EU has so far failed to draw Algeria closer to its values. The ENP review of November 2015 recognizes the limitations of the EU's influence on countries such as Algeria and suggests refocusing bilateral relations on mutual interests and joint strategic priorities. Given the risks outlined above, the EU could try to channel its influence through the economic domain, making the energy cooperation one of these priorities. Perhaps, the promotion of sustainable energy could in this context represent a significant value component.

2.2. The Algerian Energy Mix: The Untapped Potential of Renewable Energy

Algeria is a country with an enormous renewable energy (RE) potential. Thereby, it provides for one of the highest solar potentials in the world²³. In 2005, the German Aerospace Center (DLR) carried out a study commissioned by the German Federal Ministry for the Environment, which investigated the concentrated solar power (CSP) potential in the EU-MENA region (Figure 3). With 86% of its territory covered by the Sahara desert, Algeria provides for 2 500 to in some areas 3 600²⁴ annual sun hours²⁵. The corresponding average solar radiation equals 2 000 kWh/m², which is approximately at least two times higher than what can be generated on the European continent (e.g. 1 000 kWh/m² in Germany). The study was carried out for the mega-project named Desertec, which aimed at integrating EU-MENA power systems based on renewable energy. Unfortunately, the project failed due to its large scale, various technological challenges, and high investment risks amongst other factors.

FIGURE 3 ► Annual direct solar irradiance in the southern EU-MENA region



Source: [German Aerospace Center \(DLR\)](#)

Thus, the Algerian abundance with fossil fuels, oil and natural gas in particular, is a blessing and a curse at the same time. Today, the energy demand of Algeria is completely covered by its own production, which is almost fully based on fossil fuels. Natural gas is the primary source of power generation contributing to over 93% of installed power capacity²⁶. The share of RE in the energy mix is only around 3.4% and until recently was largely dominated by hydra power (Figure 4)²⁷.

22. The current [Freedom House Index](#) for Algeria is 35 out of 100.

23. Despite the solar energy having a predominant position, Algerian wind energy potential is also considerably high. Especially the South-Western region of Algeria provides for a high wind deposit. (Source: [Renewable Energy Development Center of Algeria](#)).

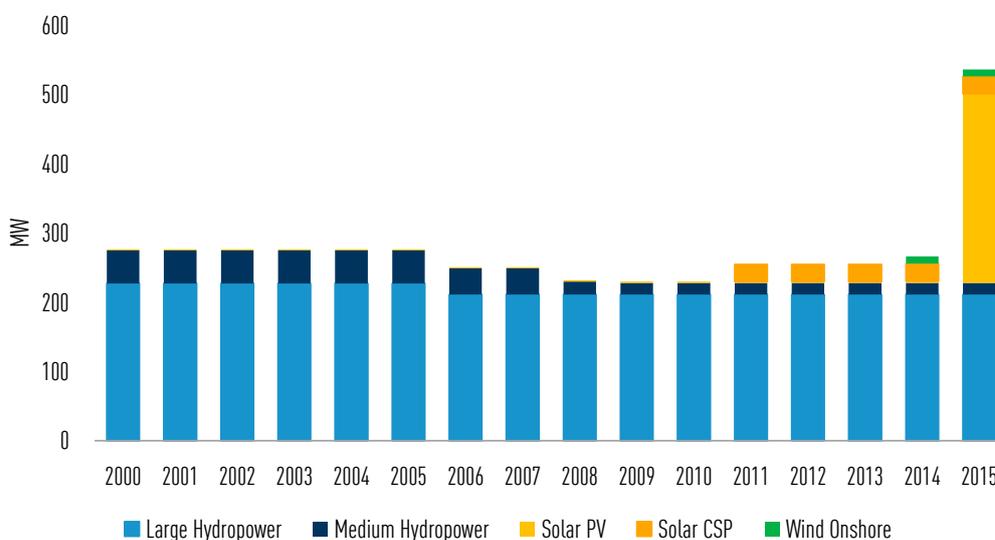
24. According to the Algerian submission on [Intended Nationally Determined Contribution \(INDC\)](#).

25. To compare: According to [Statista](#), Germany, the EU's leader in renewable energy, provides only for 1 723 annual sun hours.

26. IEA (2013). [Algeria: Electricity and Heat for 2013](#).

27. IRENA (2016). [Algeria](#).

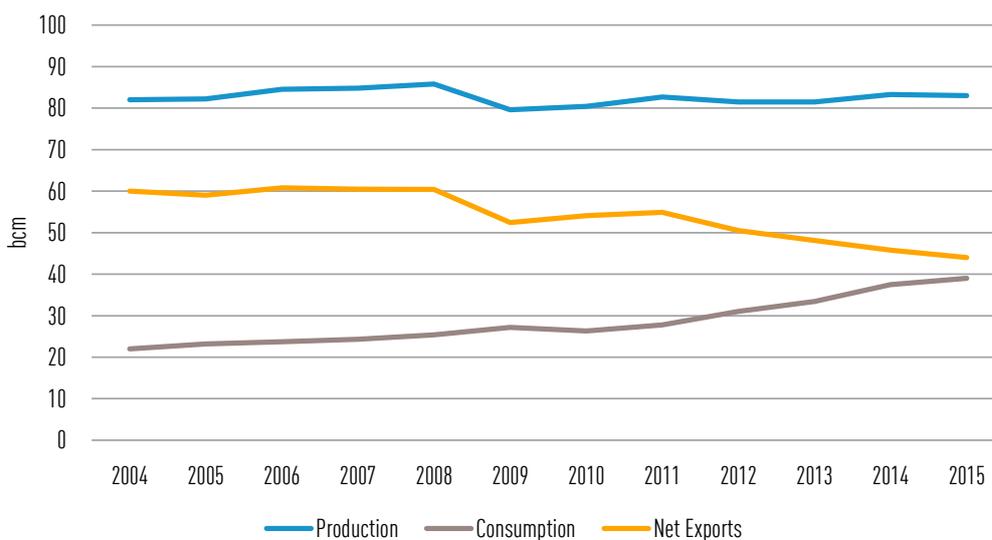
FIGURE 4: Installed Renewable Power Capacity in Algeria



Source: own illustration based on IRENA

In recent years, domestic energy consumption of Algeria has been strongly growing. Over the past decade its gas consumption increased on average 10% a year as electricity use rose 6.6%²⁸. Rapid population growth (in last 15 years the population increased almost by one third reaching nearly 40 million in 2015)²⁹, urbanization and better living standards are some of the natural drivers of energy demand. Besides that, low energy efficiency and fossil fuel subsidies strongly contribute to the unsustainable use of energy not only in Algeria³⁰, but also the entire region. A failure to respond to the rising energy demand in Algeria will most likely result in a continuous reduction of foreign natural gas exports, as previously observed in Egypt, where natural gas supply has been almost completely diverted away from exports to meet domestic demand³¹.

FIGURE 5 ▶ Natural Gas Balances in Algeria 2004 - 2015.



Source: Own illustration based on BP Statistical Review of World Energy 2016.

*Production data excludes gas flared or recycled. Includes natural gas produced for Gas-to-Liquids transformation.

*Consumption data excludes natural gas converted to liquid fuels but includes derivatives of coal and natural gas consumed in Gas-to-Liquids transformation.

28. Slimani, S., Alexander, C. (2016). *New Algeria Energy Minister Is Advocate of Domestic Price Hikes*. In: Bloomberg Business.

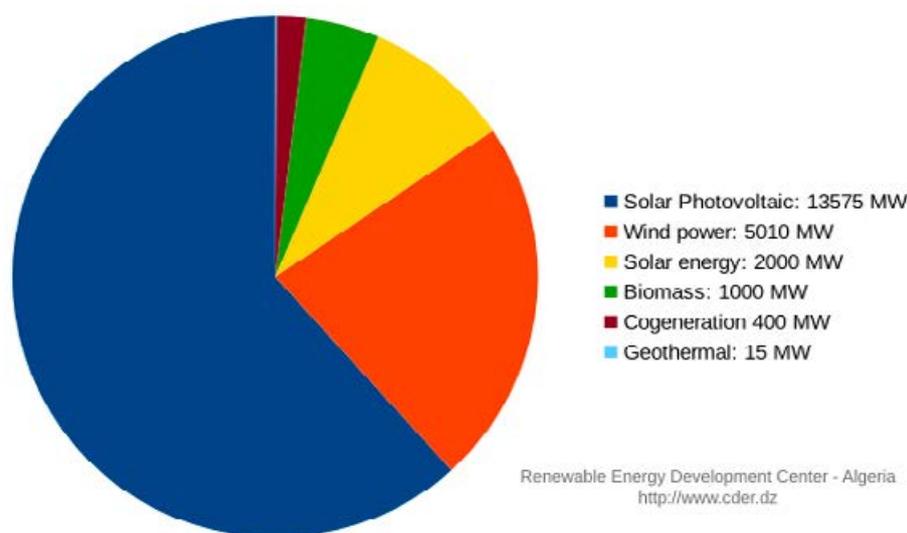
29. The World Bank (2016). *Population, total, Algeria*.

30. According to *Forbes*, the estimated cost of fossil fuel subsidies in Algeria is around \$22-25 billion.

31. U.S. Energy Information Administration (2016). *Country Analysis Brief: Algeria*. Op cit.

Algeria introduced a Law on Renewable Energy Promotion in the Framework of Sustainable Development already in 2004. Then it emphasized its commitment to expand the use of RE in February 2011, when the Renewable Energy and Energy Efficiency Development Plan 2011-2030 was published³². In 2015, the Plan was revised resulting in some adjustment of the RE targets³³. According to the revised strategy, Algeria aims to add 22 GW of power generation capacity from RE by 2030, with more than 4.5 GW to be realized before 2020. Solar photovoltaic (PV) should constitute the largest share of this capacity expansion (Figure 6). The share of RE in electricity generation should thereby reach 27% (previously 20%) by 2030³⁴.

FIGURE 6 ▶ Share of energy type in planned generation capacity expansion



Source: [Renewable Energy Development Center of Algeria](#).

The achievement of these ambitious targets is certainly a subject to several conditions. So far, progress has been slow. Today, the cumulative renewable power capacity is 528 MW, excluding large hydro – only 316 MW. A considerable share of this capacity was added in 2015, when 273 MW of solar PV was installed³⁵. The increase can be attributed to the eventual implementation of the feed-in-tariff in 2015, which was voted as early as in 2002. Similar as with other regulations in the field of renewable energy, the development of the secondary law, which guides the implementation of general provisions, represents a major obstacle towards expansion of RE in Algeria.

Therefore, the success of the revised Renewable Energy Plan of Algeria will depend on the regulatory landscape (e.g. credible support for renewables, transparent regulations, detailed secondary law) as well as the ability of the Algerian government to attract private investment. According to a research by the Algerian University of Tebessa, around 120 billion US Dollars of investment will be required to achieve the defined RE goals³⁶. The same applies for climate goals. In its Intended Nationally Defined Contribution (INDC)³⁷ Algeria stresses that the achievement of the upper bound of the greenhouse gas (GHG) reduction target (22%) is “conditional on external support in terms of finance, technology development and transfer”. “With national means” only 7% reduction will be achieved.

32. The Ministry of Energy and Mines (2011). *Renewable Energy and Energy Efficiency Program*.

33. Renewable Energy Development Center (2016). *National Renewable Energy program - Algeria (2015 - 2030)*.

34. Ibid.

35. IRENA (2016). *Op cit*.

36. Dib, D., Abdethakim, B., Samir, M., Wissem, G., Youcef, S. (2012). The Algerian Challenge between the Dependence on Fossil Fuels and its Huge Potential in Renewable Energy. *International Journal of Renewable Energy Research*, Vol. 2, No.3.

37. UNFCCC (2016). *INDCs as communicated by Parties*.

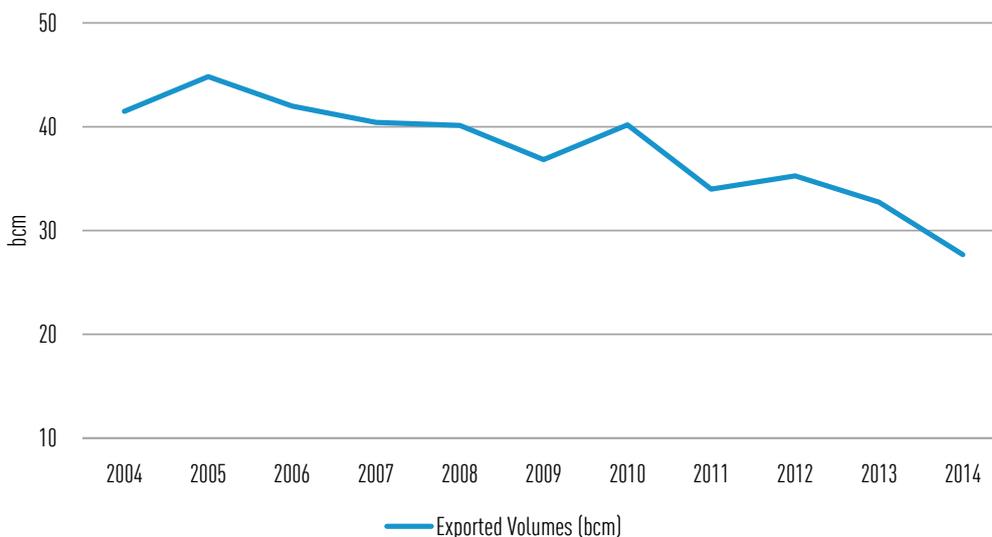
Currently, the investment climate in Algeria can be described as rather unfavourable³⁸. The complicated and opaque permitting process, limited independence of the national regulator, issues with land and reliable grid access are among the key factors, which deter RE investment in Algeria.

2.3. Natural Gas Production and Export

The EU is the primary customer of Algerian pipeline gas (87% of total exports) as well as LNG (84%). In addition, Algeria is exporting natural gas to Morocco (0.6 bcm) and Tunisia (2 bcm) in lieu of transit fees for gas exported to Italy, Spain and Portugal³⁹. The relatively low volumes contribute to more than 50% of both Moroccan and Tunisian gas consumption, leading to a strong dependency on Algerian supplies.

Despite the significance of the EU as an export destination, the natural gas exports from Algeria to the EU have been steadily declining since 2004. As a result, the utilization rate of the existing infrastructure in 2014, for both natural gas pipelines and liquefaction terminals, was only around 50%⁴⁰.

FIGURE 7 ▶ Natural Gas Exports from Algeria to the EU from 2004-2014 (including LNG).



Source: own illustration based on Eurostat Data

There are several potential reasons for the observed downward trend. First, the decline in gas demand from the Southern member states. The main customers of Algerian gas – Spain, Italy, and Portugal – were the member states most severely affected by the Euro crisis. The lack of gas interconnectors between Spain⁴¹ and France has been hindering export of surplus volumes to the markets with higher/more stable demand (e.g. Germany). The construction of the planned MidCat gas connector (capacity of 7 bcm), which should link France and northeast Spain along the Mediterranean coast, could potentially solve this problem. However, despite the status of the EU Project of Common Interest (PCI) and the corresponding financing from the Connecting Europe Facility (CEF) the pipeline is unlikely to be built before 2021-2022⁴², with the French regulator Commission de Regulation de l’Energie (CRE) questioning the benefit of the costly project for the French customers⁴³.

38. KPMG (2015). Op cit.

39. Colombo, S., Sartori, N. (2014). Op cit.

40. Own calculations based on Eurostat data.

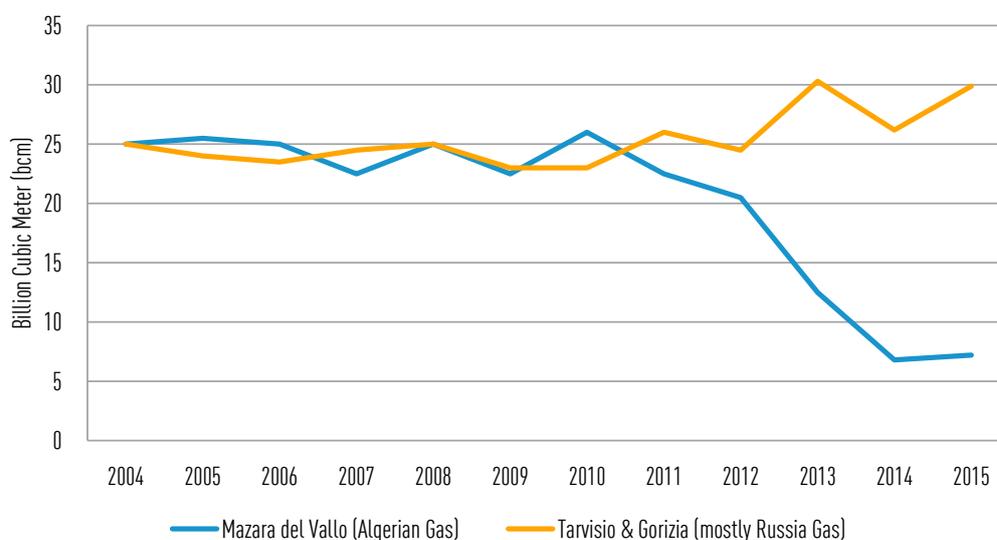
41. The combined import capacity of LNG terminals and gas pipelines from Africa of Spain is around 80 billion cubic meters (bcm) of gas per year, which is more than three times Spain’s annual consumption.

42. Smedley, M. (2016). MidCat ‘won’t open before 2022’. In: Natural Gas Europe.

43. Reuters (2016). French regulator doubts need for France-Spain Midcat gas pipeline.

Another potential reason is the poor management of Algerian oil and gas production which has led to a significant loss of Sonatrach's market share in the EU. Plagued with corruption⁴⁴, Sonatrach has no margin to act commercially in its competition versus Russian Gazprom, Norwegian Statoil, as well as the Dutch GasTerra in the EU market. Sonatrach has experienced one of the strongest setbacks in Italy, one of the major Algerian export markets, where a large market share was lost to Gazprom. Until 2011, each of the two companies accounted for around one third (around 23-24 bcm) of the Italian gas imports^{45,46}. In 2013, Algerian imports decreased to 12.5 bcm, reaching an absolute low of 6.8 bcm in 2014, and then slightly recovering at 7.2 bcm in 2015. At the same time, Italian gas imports from Russia increased at least by 30% since 2011⁴⁷ (Figure 8).

FIGURE 8 ▶ Natural gas imports to Italy at two major entry points 2004-2015



Source: own illustration based on Data from [Oxford Energy Studies](#).

Sonatrach's failure to maintain its oil and gas production volumes has been contributing to company's decreased competitiveness. Algerian gas production⁴⁸ has been decreasing since the last seven years as the output from country's large, mature fields is depleting⁴⁹. The largest Algerian gas field Hassi R'Mel, which holds over half of the proven reserves and is also used for LNG sourcing, is in urgent need of development and maintenance⁵⁰. Several new fields were planned to be brought on stream in recent years in order to compensate for production loss. However, most of the planned projects have been delayed due to slow governmental approval for projects, lack of investment partners, as well as technical and infrastructure issues⁵¹.

The heavily subsidized domestic market with an ever rising demand can be thereby seen as an additional burden on Sonatrach's stagnating revenues. As previously observed in other markets, "export of gas rather than its domestic use is the inevitable driver for the development of new gas resources"⁵².

44. Reuters (2016). *Algerian court jails six in oil firm corruption case*.

45. IEA (2014). *Energy Supply Security 2014*.

46. Aissaoui, A. (2016). *Algerian Gas: Troubling Trends, Troubling Policies*. The Oxford Institute for Energy Studies.

47. Italy receives the Russian gas at the Tarvisio & Gorizia entry point at the Austrian border, which also includes some spot trading from the Austrian Virtual Trading Point (VTB) hub. Therefore, it is difficult to provide the exact figure for gas volumes supplied by Gazprom. In 2015, Italy received 29.9 bcm gas via Tarvisio & Gorizia entry point, whereas in 2011 – only 23 bcm. *ibid*.

48. The same also applies for oil. Algeria's largest oil fields are mature and currently no major crude oil projects are scheduled to come on stream.

49. Aoun, M.C. (2015). *Op cit*

50. Clemente, J. (2016). *Will Algeria Be Able To Export More Natural Gas And LNG?* In: *Forbes Energy Power Up*.

51. US Energy Information Administration (2016). *Country Analysis Brief: Algeria*. *Op cit*.

52. Andoura, S., Koranyi, D. (2014). *Energy in the Eastern Mediterranean – Promise or Peril?* Joint Report by the Egmont Institute and the Atlantic Council.

Interim Conclusion of Chapter 2

The analysis of the current situation in Algeria points towards a threat of economic and potentially also political destabilization of the country. Partly this can be attributed to the critical developments in the energy sector - the rising domestic energy demand and falling natural gas exports in particular. The huge renewable energy potential, which could sustainably solve the problem of an ever rising domestic consumption, remains untapped.

If not addressed, the critical developments in Algeria are likely to have a direct impact on the EU: the security of gas supplies, the resilience of the EU's Southern neighbourhood, and potentially also the EU's own security. Therefore, a timely EU response based on a concrete set of measures is urgently required. The identified challenges deserve a prominent position on the EU's agenda. The following chapter will describe one of the potential policy options in this regard.

3. Targeted Energy Cooperation: Switching Domestic Consumption to Renewable Energy

Since 2015, the EU has already made some significant steps towards strengthening its energy cooperation with Algeria. In May 2015, Miguel Arias Cañete, European Commissioner for Climate Action and Energy, and Yousef Yousfi, Minister for Energy and Mines of Algeria, launched an EU-Algeria political dialogue on energy matters⁵³. In May 2016, the first EU-Algeria Energy Business Forum took place. Despite focusing on some crucial topics (e.g. attracting EU investment) the initiative seems to lack a clearly defined objective. It does not have a short-, medium- or long-term vision. Perhaps, such 'light' instruments aimed solely at dialogue and exchange might not be enough to respond to currently encountered policy challenges.

”THE EU COULD SUPPORT ALGERIA IN DEVELOPING ITS OWN ENERGY TRANSITION AIMED AT SWITCHING DOMESTIC CONSUMPTION TO RENEWABLE ENERGY”

Instead, the goal of the EU-Algeria energy cooperation should be concretely defined. One possibility could be for the EU to support Algeria in developing its own energy transition aimed at switching domestic consumption, first partly and prospectively fully, to renewable energy. A transition to renewable energy in domestic consumption would allow Algeria to gradually phase-out fossil fuel subsidies and free-up natural gas volumes for foreign export. The resulting increased profitability of the natural gas sector would foster the necessary investment into exploration and development of new gas fields, increasing the attractiveness of such projects for international partners.

A transition to renewable energy would require a considerable reform effort and significant private investment. The low oil price environment, which currently puts Algerian government under pressure, represents a favourable momentum for the EU to push for both. The huge financing gap currently experienced by the energy sector in Algeria can be covered only with help of international loans or/and investment⁵⁴. Thus, the Algerian government might show a higher readiness to implement reforms aimed at improving the local investment climate. In addition, the EU could offer the support for the expansion of renewables as a part of a broader package deal, which would also include cooperation in gas and oil sector.

A targeted EU-Algeria energy cooperation, aimed at enabling a transition to renewable energy in Algeria's domestic consumption, could be based on the already existing EU instruments: the EU-Algeria Energy Business Forum and the reviewed framework of the European Neighbourhood Policy.

⁵³. European Commission (2015). *EU and Algeria to cooperate on energy*.

⁵⁴. Reuters (2016). *Algeria Sonelgaz looks to foreign loans after oil price drop*.

3.1. Providing a Shape to EU-Algeria Energy Business Forum

The EU-Algeria Energy Business Forum, which came as a follow-up of the EU-Algeria Political Dialogue on Energy Matters in May 2016, brought together “European and Algerian energy companies, industrial and financial associations to discuss ways to facilitate much-needed investment in Algerian gas exploration and exploitation, renewable energy and energy efficiency sectors⁵⁵.” So far, it has been a one-time event with no clearly communicated outcome or agreed next steps.

”THE EU SHOULD DEVELOP THE FORUM INTO A PERMANENT PLATFORM FOR SUPPORTING ALGERIA IN DEVELOPING INVESTOR-FRIENDLY REGULATION IN THE ENERGY SECTOR”

The EU should develop the Forum into a permanent platform for supporting Algeria in developing investor-friendly regulation in the energy sector with a particular focus on renewable energy⁵⁶. The objective thereby should be to attract EU investment into the Algerian renewable sector⁵⁷. High upfront costs and a long project lifetime (up to 20-30 years) “entail that sponsors and lenders must base their investment decisions on a risks analysis of over two to three decades, rendering such investments particularly vulnerable to regulatory changes and political instability⁵⁸.” The EU and Algeria could set up permanent working groups, which would regularly meet in order to develop, discuss and potentially monitor implementation of regulatory reforms aimed at expanding renewable energy in Algeria. The participation of private sector representatives, both from the EU and Algeria, should be seen as a crucial component of the Forum’s activities.

As demonstrated in Table 1, Algeria has in fact already introduced several essential regulations, which should foster private investment in renewable energy. However, the detailed secondary law necessary to make the general provisions operational is often missing. The resulting regulatory fragmentation contributes to the lack of transparency in the permitting process, which is named as one of the most significant hurdles for private investment in Algeria⁵⁹. The EU-Algeria Energy Business Forum could be used to support Algerian experts in developing these legal provisions in detail.

TABLE 1 ► Power Sector Regulation in Algeria

POWER SECTOR REGULATION IN ALGERIA	
National Utility	Sonelgaz
Independent Regulator	CREG
Renewable Energy Agency	CREDEG, APRUE, CDRE
First steps unbundling	Yes
Single buyer	Distributors (Sonelgaz)
Self-production from RE	Foreseen
Bilateral supply agreements	Allowed
Priority access	Foreseen
Feed-In-Tariff	Implemented
Export by Independent Power Producers (IPPs)	Allowed
Regulated Third Party Access (TPA)	Regulated

Source: DII

55. European Commission (2016). *First ever EU-Algeria Energy Business Forum*.

56. The natural gas sector should not be disregarded. The Algerian side will perhaps mostly be interested in attracting EU investment into exploration and development of new gas fields as such would represent a quick fix in the observed situation. The EU could attempt to balance between pursuing the goal of the Algerian energy transition in the medium-term, while catering the short-term interests of the Algerian side in the short term.

57. Nevertheless, the oil and gas sector should not be disregarded.

58. DII (2013). *Desert Power: Getting Started. The manual for renewable electricity in MENA*. p. 116.

59. KPMG (2015). *Op cit.*

The independence of the national regulator Commission de Régulation de l'Electricité et du Gaz d'Algérie (CREG) represents another serious issue, as the Ministry of Energy can in a highly discretionary measure decide to overrule the regulator's decision. The clear definition of CREG's powers might be another topic for the Forum, which could be addressed in collaboration with the Association of Mediterranean Energy Regulators (MedReg).

Last but not least, the working groups could use the Forum as a platform for discussing and developing financing models for renewable energy projects. Currently, according to the survey by the World Economic Forum, access to financing is seen as "the most problematic factor for doing business" in Algeria⁶⁰. Generally, the RE projects cannot obtain a higher credit rating than that of the country they are performed in, making it difficult to mobilize commercial financing⁶¹. One possible option would be for the EU to back the guarantees of the Algerian government provided to EU investors. In this context, the European Bank for Reconstruction and Development (EBRD) could expand its region of cooperation to Algeria⁶². In addition, the member states should be invited to look for ways to scale up the activities of their development banks in Algeria.

3.2. Embedding the initiative within the reviewed ENP

In order to make sure that the concepts agreed at the EU-Algeria Energy Business Forum are actually implemented, a political framework for the aspired energy cooperation will be required. Strong government commitment from both sides will be crucial in fostering investors' confidence. Potentially, the EU and Algeria could jointly set objectives for the expansion of renewable energy in Algeria in order to increase credibility of RE targets in eyes of the EU investors.

In this regard, the reviewed European Neighbourhood Policy (ENP) provides an adequate framework. The EU-Algeria relations under the ENP have been pursued since 2002, when the Association Agreement (AA) was signed (in force since 2005)⁶³. In 2008, Algeria became a member of the Union for the Mediterranean (UfM), which was established as an intergovernmental framework under the ENP, bringing together the EU member states and 14 Mediterranean countries. The energy cooperation represents one of the key elements of the UfM. However, the mutual ownership of its objective has not been achieved. In eyes of the local governments the proposed energy policy packages failed to address individual countries' needs and served the interests of the EU only⁶⁴.

”THE DESCRIBED ENERGY TRANSITION IN ALGERIA COULD BE DEFINED AS ONE OF THE KEY PARTNERSHIP PRIORITIES UNDER THE ENP FRAMEWORK”

The “pragmatic re-conception of ENP”⁶⁵ addresses the earlier shortfalls and suggests that the ENP action plans should be replaced with narrower agreements on so-called ‘partnership priorities’⁶⁶. Thus, the described energy transition in Algeria could be defined as one of the key partnership priorities under the ENP framework. Through its contribution to diversification of Algerian economy it would address one of the key policy areas prioritized by the reviewed ENP – the economic development for stabilization. In the long term, the resulting higher equality of wealth distribution could potentially foster economic and societal resilience of Algeria.

The reviewed ENP suggests that mutual ownership can be achieved through a “stronger role of the Council, joint programming and the nomination of member states as ‘lead partners’ for selected initiatives or reform efforts.”⁶⁷ There are several countries that could potentially fulfil this role. For example, Spain as one of the largest importers of Algerian gas within the EU could use its solar PV and windmill industry know-how in taking the lead of the

60. Ibid.

61. Worth noticing that Algeria is not rated by any of the three major international credit rating agencies (Standard & Poor's (S&P), Moody's, and Fitch Group).

62. The researchers of Bruegel institute have recently proposed the establishment of “Sustainable Energy Funds” with selected Southern Mediterranean countries by EBRD.

63. European Commission (2013). *Memo. ENP Package Algeria*. Press Release Database.

64. Tagliapietra, S., Zachmann, G. (2016). *Energy across the Mediterranean: a call for realism*.

65. Koenig, N. (2016). Op cit.

66. The replacement of the action plans with narrower agreements mainly addresses the countries, which previously remained “at the margins of ENP” like Algeria, Belarus, Azerbaijan, Syria. For countries like Ukraine, Moldova and Georgia little will change under the new approach. Ibid.

67. Ibid.

initiative. On the other hand, Germany could apply its regulatory expertise in renewable energy gained through the still ongoing implementation of the German 'Energiewende'. However, whereas it is important to capitalize on strengths of the individual member states, it is also crucial that the EU acts united towards Algeria. Italy, Spain, Portugal, France, and Germany could form a 'core group' of the member states most strongly committed to the realization of the Algerian energy transition.

” IF IMPLEMENTED SUCCESSFULLY, AN ENERGY TRANSITION IN ALGERIA COULD MAKE A SMALL BUT NOTABLE CONTRIBUTION TOWARDS RESILIENCE OF THE SOUTHERN MEDITERRANEAN REGION”

Putting the targeted energy cooperation at the core of the EU neighbourhood relations with Algeria is in line with the Energy Union strategy, which emphasizes the external dimension of EU's energy policy and stresses the importance of the Mediterranean region. The significance of state and societal resilience in the Southern EU neighbourhood is also emphasized by EU's new strategic document "A Global Strategy for the European Union's Foreign and Security Policy" (EUGS). Therefore, the presented proposal offers the EU an opportunity to prove the impact of its Energy Diplomacy. If implemented successfully, an energy transition in Algeria could make a small but notable contribution towards resilience of the Southern Mediterranean region.

The prospects of the proposed targeted energy cooperation could be discussed at the UfM Regional Forum, which is due in November this year.

4. Leveraging the Benefits of the Win-Win Situation

The proposal presented in this paper has a potential of creating a win-win situation, equally benefiting both sides involved. The pay-offs of the EU-supported energy transition in Algeria, however, differ depending on the perspective taken (Algeria or the EU) as well as the time horizon observed.

For Algeria, the most obvious benefit is the opportunity to ensure the profitability of its natural gas exports by reducing the burden of the ever rising domestic consumption. The economic benefits of the aspired energy transition should be used as the central argument in EU's negotiations with Algeria. By emphasizing the short and medium term tangible gains for Algeria, the EU could raise the chance of establishing a mutual ownership of the suggested proposal. Also, presenting the initiative as a part of a broader deal, which would also include cooperation in oil and gas sector, could increase the interest on the Algerian side. In addition, the creation of local jobs triggered by the EU investment, which could help solving the pressing issue of youth unemployment, should be underlined as another important benefit of the targeted energy cooperation.

Prospectively, when the required level of renewables is achieved and technological and regulatory know-how is locally assimilated, Algeria could start exporting clean electricity to its neighbours. This would require an expansion of regional transmission networks, and therefore close collaboration between the countries. The regional export of clean energy could help Algeria reduce its dependency on hydrocarbons' revenues and thus, diversify its economy. Potentially, such a development accompanied by a growing cooperation between the Southern Mediterranean countries could have a positive impact on the entire region.

While the positive contribution of the EU-supported energy transition to societal and state resilience of Algeria would prove the impact of EU Energy Diplomacy, there are also more tangible short-term benefits of the presented proposal also for the EU. First and foremost - the security of the EU gas supplies. By indirectly helping Algeria to improve the competitiveness of its natural gas production, the EU would ensure that Algeria fulfils its contractual supply obligations with EU member states. If MidCat interconnector is completed, the EU could try to achieve a more balanced dependency in its natural gas import structure by increasing the Algerian share in its total imports.

In addition, by working on the creation of a favourable investment environment in Algeria the EU would open up a new market for its energy companies. In doing so, the EU could enhance its role as a global leader in sustainable energy. Given its vast potential in renewables, Algeria could be of interest to other international investors, such as the Chinese, Indian or the US. The untapped market potential points towards the need for the EU to act quickly if it is willing to capitalize on the lucrative opportunity.

Shaping the way towards an energy transition in Algeria is certainly just one option for the EU to pursue its relations with Algeria. It is important that alternative ways of implementing the proposed energy transition are considered. However, regardless of the chosen approach the topic of Algerian energy and its potential impact on resilience in the Southern Mediterranean region as well as on the EU itself deserves a prominent position on the EU's policy agenda.

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