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Pushing the Limits of Algeria's Gas Exports to the European Union

Lidia Puka

Although Algeria has exported gas to the European Union for half a century, internal conditions in the country may transform it into an importer over the next decade. Both parties would rather maintain the status quo, in part because Algeria wants the income from these exports and also because the EU wants a diverse number of suppliers in light of the tense relations with Russia. However, the success of this endeavour depends on internal reforms and better investment conditions in Algeria. Moreover, on the EU side, there should be an emphasis on a reduction of domestic gas consumption as well as better access to Algerian gas throughout the continent via market integration with the Iberian Peninsula.

Algeria's Dependence on the EU's Gas Market. Algeria is the largest country in Africa and it is the third-largest exporter of gas to the EU markets, after Russia and Norway. The state has both large gas reserves (4.5 tcm) and a developed and diversified export infrastructure—three pipelines, two to Spain and one to Italy, with a total capacity of over 50 bcm, and the closest LNG terminals to Europe (handling up to 24 bcm, or 8% of the global total).

In 2014, Algerian gas covered 7% of EU demand. Spain, Italy, France and Portugal imported together 30 bcm (of which 10 bcm was LNG). But the European Union is even more important for Algeria because 72% of the country's gas is exported to the bloc. The remaining volume is sent via pipelines to Morocco (4 bcm) and as LNG to Turkey (4 bcm) and Asian markets (2.6 bcm). Still, Algeria has few alternatives to diversify its list of customers outside the EU for three reasons. First, the costs of transportation of LNG are higher to other potential customers. Second, it faces competition from other producers, such as Qatar, Malaysia and Australia. Third, redirecting exports of gas from pipelines to LNG would require the development of additional infrastructure within the country since they would come from different extraction fields.

The importance of the EU is all the greater given that Algeria's public finances are heavily dependent on the sale of hydrocarbons, accounting for 60% of budget revenues and 93% of total exports. The recent drop in oil prices has had an adverse economic impact on Algeria, which like Russia has preferred to sign long-term contracts with an oil-pegged price formula. As a result, from January to April 2015 the country's export revenues have decreased by about 40% to $13.4 billion. There is little Algeria can do to increase the prices. Despite being a member of OPEC, its call for a reduction in production at the organisation's meeting in June this year was a lonely voice. Moreover, its sovereign wealth fund's assets (Fond de Regulation des Recettes), worth $55 billion, will only be a short-term "buffer" to the state budget.

Barriers to Expansion. Despite favourable cost conditions and market dependence, Algeria's gas exports to the EU are declining, including by about 4.5 bcm last year. As a result, in 2014, up to 30 bcm of gas pipeline capacity remained empty, or more than three times the capacity of the EU's Southern Gas Corridor, a project to bring gas from the Caspian Basin to Europe.

The main barriers to further development of cooperation, however, are mainly on the Algerian side. With 83.3 bcm of gas produced in 2014, state exports have now fallen by 17.5% in the last three years due to the maturing of fields, such as the giant Hassi R'Mel, and a lack of new projects.

At the same time, domestic gas consumption is rapidly growing—by 21% over the past three years, to 37.5 bcm. Half of the gas consumed in the country is used to produce electricity, but accounts for 92% of total power production. The growth in gas consumption is driven by a rapid population increase of close to one million people per year and low prices due to government subsidies. Meanwhile, the efficiency of the power sector remains very low, at about 30%. Should forecasts by the Ministry of Energy and Mining of a threefold increase in domestic energy demand by 2040 prove to be correct, Algeria will become a gas importer in a dozen years. This trend may slow but will not stop if a plan for the transformation of the sector is implemented. It assumes a reduction in gas usage for electricity production to 47% by 2040 by increasing the use of renewable energy sources, particularly solar energy (24%), as well as coal (21%) and nuclear energy (8%). Even so, these estimates are too cautious to curb gas consumption growth in absolute terms.

Elimination of the subsidies, even though it would provide incentives for saving energy, is unlikely. President Abdelaziz Bouteflika introduced the subsidies in 2012 to calm public protests. The government uses as much as 10% of its budget for this purpose, however it is a price it seems willing to pay to maintain the political *status quo*. From the point of view of the European Union, Algerian political stability and its large army are important in maintaining regional security, including in the south of the Sahara in the vicinity of Libya, Tunisia, Niger and Mali, where there are large gas deposits.

Restriction to Investment. An increase in output is therefore necessary to reconcile consumption and exports and to maintain the stability of the country's public finances. The main burden of such investments lie with vertically integrated national champion, Sonatrach. It is privileged in many ways—it owns licenses in the resource-abundant eastern Sahara region, and, since 2009, is a majority shareholder in all production licenses in the country.

At the end of 2014, the company announced an ambitious investment plan ($100 billion by 2020). It plans to allocate the funds for gas production in new fields—Tinhert, Hassi Bahamou and Hassi Mena, Touat and North Reggane—and for the modernisation and expansion of transport infrastructure, including construction of the new Galsi gas pipeline to Italy.

Sonatrach also has high ambitions for shale gas exploitation and estimates Algeria's technically recoverable resources to be 21-22 tcm, with total deposits of 150 tcm. Currently, the company is conducting exploratory drilling in Ahnet, near In Salah. Other players in the Algerian shale market are Statoil and Shell (on license to Timissit in Illizi-Ghadames). Sonatrach's mining experience, existing infrastructure and the low population density and geology of the Sahara speak in favour of its plans. However, hydraulic fracturing requires significant water reserves, which are obviously limited in that area. It is therefore too early to assess whether Sonatrach will fulfil its declaration of December 2014 to reach commercial production of shale gas of about 20 bcm by 2022. This is especially unlikely with the drop in oil prices, which have had a negative effect on the company's capitalisation and already forced the postponement of many projects from its $80 billion plan from 2012. Sonatrach must therefore acquire foreign partners to complete its investments.

On the one hand, 35 foreign companies (including BP, Total, Repsol, RWE, Gazprom, and Statoil) are operating in Algeria, but, on the other hand, the factual and legal advantage of Sonatrach significantly limits their market share. This adversely affects their interest in new projects. Little has changed by recent amendments to the mining law of 2013 as they did not liberalise the sector but only reduced some burdens (such as linking taxation to profit rather than the turnover of a company, and by introducing tax relief for investing in unconventional, small, complex, and offshore fields). As a result, in last year's round of concessions only two licenses were acquired—by the consortia of Enel-Dragon Oil and Repsol-Shell.

Also, corruption and a lack of investment stability are further barriers to investments. In May of 2015, the CEO of Sonatrach was replaced along with 22 company managers, the minister of finance, and the energy minister. Algeria remains at the bottom of global "Doing Business" and transparency rankings, reflected in the allegations of corruption between Italian firm Saipem and Sonatrach, and an arrest warrant for former Minister of Energy Chekib Khelil.

Investors also worry about security. Although after the terrorist attack on the In Amenas gas platform in 2013 the government increased the number of troops stationed in the south of the country, tensions remain in the country, compounded by youth unemployment and the risk of an escalation of conflict in the neighbouring countries.

Reaching All of Europe. For Algeria, leveraging its competitive advantages and potential as a partner for gas supplies to the EU depends largely on the action it takes. The country has additional motivation to reform and improve the investment climate with the coming change of president (Boueflika is ill) and the country's proximity to Libya, which is clearly destabilised, and Tunisia, which is in a state of emergency after the most recent terrorist attacks there. Particular effort, however, should be devoted to attracting strategic partners with capital and know-how for development of the industry, including unconventional fields.

Since May this year, and after years of negotiations, the European Union and Algeria signed a memorandum on strategic cooperation. The EU, keen to keep Algeria as an important gas supplier, should aim to fully use Algeria's gas transmission network because it is cheaper than LNG transport. It should also integrate the gas markets of the Iberian Peninsula with the rest of the continent by building the MidCat gas pipeline across the Pyrenees. This will enhance the security of supply in Western Europe and make a positive contribution to the development of the EU's energy union.

Greater interest in Algeria gas in Europe could also be triggered by a change in the pricing formula for gas to a spot-based price, something promoted by the EU anyway. Although Sonatrach opposed these changes in the past, given the current oil prices a spot-price could be more profitable for the company. Another area of cooperation would be EU support via credit and expertise to transform the electricity sector in the country with the aim to redirect freed up domestic gas consumption to exports to the bloc.