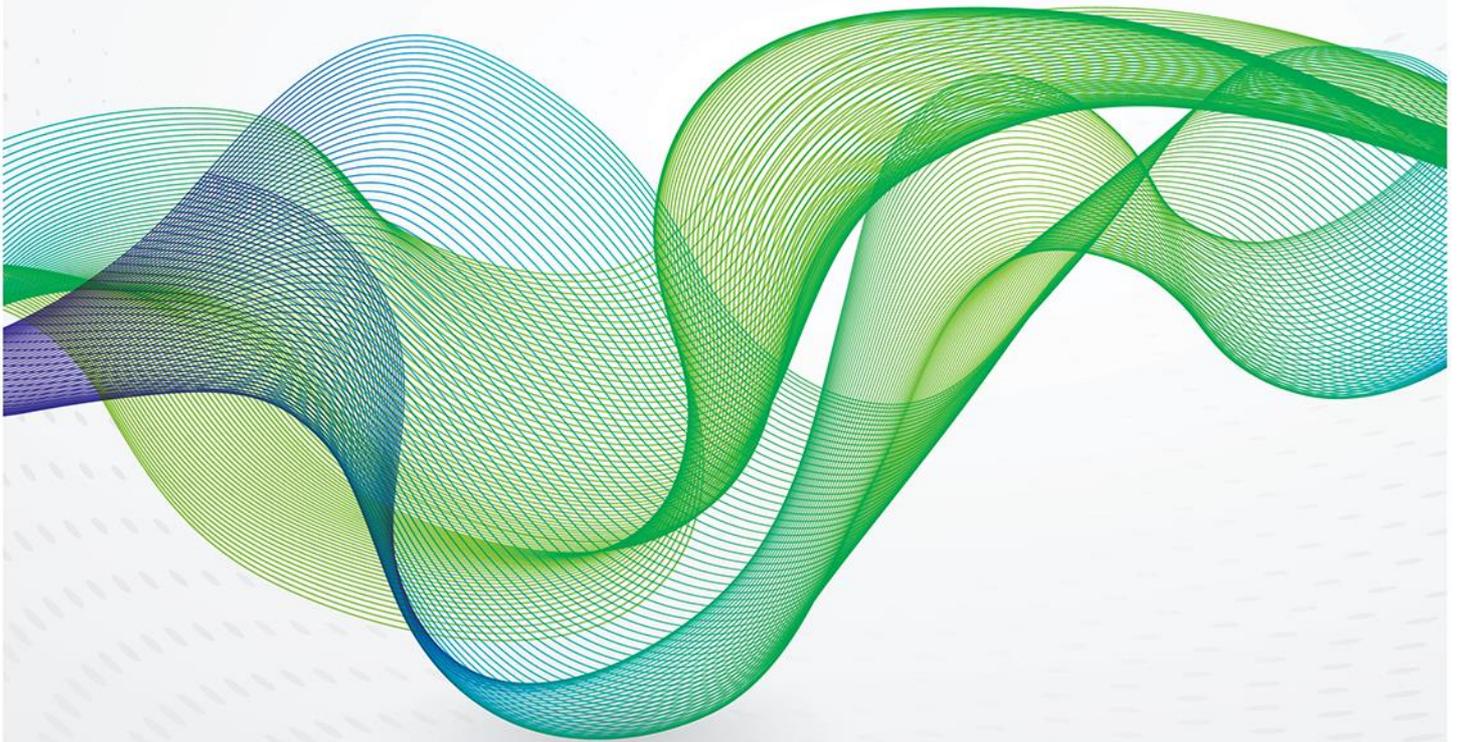


September 2021

## **Gazoduc Maghreb Europe (GME): another gas transit headache for Europe?**





## Introduction

As natural gas hub prices in Europe continue their extremely bullish rally driven by buoyant global gas demand and short-term supply constraints, the last thing European markets need is a choke point emerging along the south-western Mediterranean gas supply routes. In this context, the trade press has raised concerns about a possible non-renewal of the gas transit agreement for the Maghreb Europe gas pipeline (better known by its French acronym of GME) that supplies Algerian gas to the Iberian Peninsula through Morocco and the Straits of Gibraltar. But are these concerns justified? Unless markets tighten up considerably this winter, this OIES Gas Comment argues that they are not justified.

The issue raises the question of whether this is an isolated case of the impact of a political dispute between two neighboring countries or is it symptomatic of a broader unease or disinterest in some cross-border natural gas pipelines?

In addressing these critical questions, it is important to keep in mind that the GME gas transit challenge arises against the background of a much more expanded and flexible international trade of liquefied natural gas (LNG) compared to the era when the GME and similar cross-border gas pipeline projects were launched.

## GME: 25 years of uninterrupted gas supply to the Iberian Peninsula

Since being commissioned in November 1996, the GME has been supplying gas to Algeria's clients without interruptions. However, the recent escalation of political tensions between Algeria and Morocco, which resulted in Algeria breaking its diplomatic relations with its neighbour, is potentially threatening the renewal of the 25-year-old transit agreement that expires on 31 October 2021.

At present, there is no information on the future status of this transit agreement. Algeria has announced that in case of non-renewal, it is ready to rely on the MEDGAZ, a direct gas pipeline from Algeria to Spain, and to some extent on LNG supplies, to transport its gas to the Iberian Peninsula. Morocco, however, would be unable to secure immediate gas alternatives to Algerian gas supplies from the GME, and has therefore stated that it is keen to renew the gas transit agreement. Spain and Portugal, meanwhile, would be content to continue to import Algerian gas supplies through the GME, as long as these supplies remain competitively priced and there are no transit security issues.<sup>1</sup>

It is difficult to ignore the benefits derived from this cross-border gas pipeline in terms of attractively priced gas supplies for Morocco, Spain and Portugal and flexible pipeline access to the Iberian market for Algeria's gas exports. Furthermore, in North Africa, where intra-regional trade of goods and services is very limited, the GME can still play a crucial role in regional economic integration and cooperation.

## ...but the world has changed

Inter-regional cross-border hydrocarbon pipelines, such as the GME, are very difficult to develop and require the long-term political and commercial commitment of all parties involved. However, the current narrow focus on the worsening of the political relationship between the two North African neighbours and speculation about renewal or non-renewal of the transit agreement miss (or willingly ignore) the bigger picture.

The world has evolved since the first molecules of Algerian gas started flowing through the GME in the mid-1990s. The global and intensified fight against the adverse impact of climate change and the emergence of more flexible international LNG transactions, are two key structural transformations, *inter alia*, that are affecting the world of energy. The first is expected to result in a significant reduction of the

---

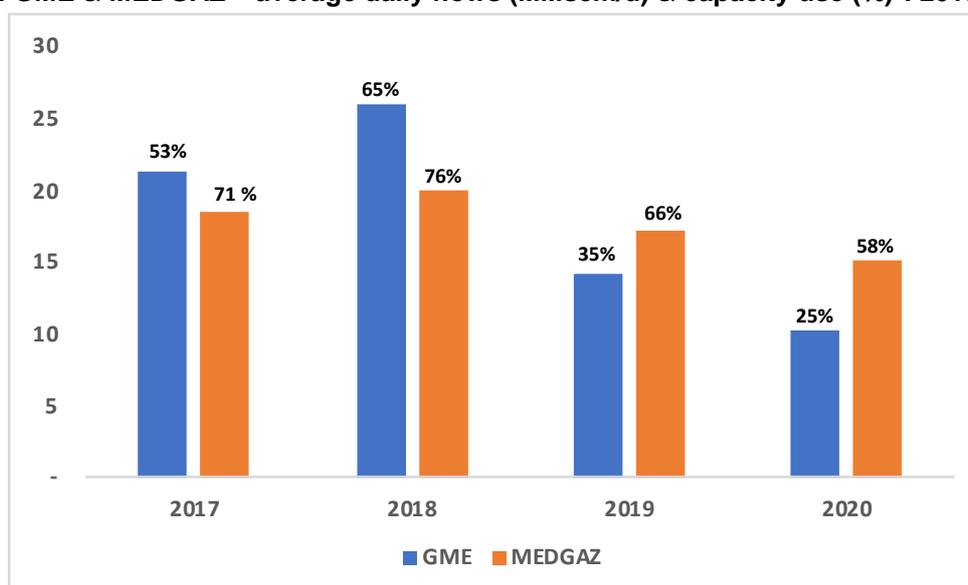
<sup>1</sup> Spain and Portugal may want to diversify gas supply sources to ensure that they have secure LNG alternatives in case of reduced pipeline imports. However, LNG is inherently flexible, as Spanish LNG buyers found in June 2021, when cargoes were allegedly diverted away from the Iberian market and resulted in the Spanish regulator CNMC initiating disciplinary proceedings against companies as it detected the cancellation of unloading of LNG vessels without sufficient notice.

size of Europe's future domestic gas demand through strict international decarbonization measures.<sup>2</sup> Whilst the impact of the second is already manifesting itself with an increased and fiercer competition among existing and new LNG exporters to Europe. These two fundamental developments will inevitably impact potential gas pipeline supplies to Europe that could be transported through the GME.

## Gas supply implications for Europe

There are two cross-border gas pipelines linking Algeria to Spain: the GME via Morocco and the direct MEDGAZ pipeline. The combined export capacity of these two pipelines is presently about 20 billion cubic meters (Bcm) (12 Bcm for GME and 8 Bcm for MEDGAZ). With the completion of the MEDGAZ expansion to 10.5 Bcm in November 2021, total gas pipeline export capacity to Spain will increase to over 22 Bcm. This capacity is well above Algeria's existing contractual gas export commitments to Spain and Portugal. In fact, in recent years, these two international gas pipelines have never been operated at their full capacities, as shown in the figure below.

**Figure 1: GME & MEDGAZ – average daily flows (MMscm/d) & capacity use (%)<sup>3</sup>: 2017–2020**



Source: ENTSOG, 2021

Algeria's long-term gas pipeline export contracts with Spain and Portugal total 11.5 Bcm per annum (p.a.) (9 Bcm to Spain and 2.5 Bcm to Portugal). These contracts, which were signed over the last three years, will expire in less than 10 years. Their total volume is equivalent to about a third of the two countries' total gas imports in 2020 and less than four per cent of Europe's total gas imports for the same year.

In case of non-renewal of the GME gas transit agreement, Algeria could still honour these export commitments through the expanded MEDGAZ pipeline and possibly with some LNG cargoes during the winter's peak demand. This would, of course, depend on the terms and conditions of existing contracts; supply nominations; gas infrastructure capacity availability from the MEDGAZ's landfall point in Spain to off-takers; and possibly gas supply swaps within the Iberian Peninsula.

Thus, for Europe, the impact of a scenario of non-renewal of the GME transit agreement is limited. It would only be a short-term preoccupation if Algerian gas supplies to Spain are not quickly re-routed, and this situation takes place during a tight gas supply period.

<sup>2</sup> This is especially the case in Algeria's key export market of Spain which has a high penetration of renewables in its energy mix.

<sup>3</sup> It should be noted that ENTSOG uses higher capacity figures than those published by Algeria's Sonatrach.

It could be argued that the renewal of the GME gas transit agreement could provide Algeria with additional export capacity flexibility to supply Europe's south-western Mediterranean gas markets. This flexibility could help reduce the short-term volatility of gas prices during tight gas supply situations like the current one. Although, when considering that European gas demand is set to decline substantially from 2030 onward, a non-renewal of the GME transit arrangement may well be a non-issue.

On the supply side, Algeria would find it difficult to significantly expand its gas export potential to Spain and Portugal to the combined capacity of both the GME and MEDGAZ.<sup>4</sup> Furthermore, international competition among new gas exporters to capture a share of this shrinking European gas market will severely intensify and put more pressure on existing gas exporters, such as Algeria.

Even though Algerian gas supplies should continue to be cost competitive for gas exports to southern European gas markets, Algeria will also need to react rapidly and strategically to such competition with realistic export terms and conditions that reflect the transformations in today's international gas markets. But are cross-border gas pipelines, such as the GME, the only way or best way to quickly seize gas sales opportunities in today's changing European gas markets?

### Cross-border gas pipelines: challenging endeavors?

The GME conundrum raises wider questions about the existing and future role of cross-border gas pipelines in regions such as the Middle East and North Africa (MENA) and Sub-Saharan Africa, where regional gas trade projects have been promoted as means of regional economic integration and cooperation. But political, commercial and gas supply conflicts and challenges have limited the number of such schemes; in fact, have made it worse for the existing ones as some countries supplied through these pipelines have ended up opting for LNG as an import alternative.

In the MENA region, the Arab Gas Pipeline (AGP) inaugurated in 2003 and initially planned to supply Egyptian gas mainly to Jordan, with pipeline extensions to other Middle Eastern countries, is presently operating at a fraction of its gas transmission capacity. The AGP was idle for a long period of time because of a previous severe shortage of gas in Egypt. This pushed Jordan to develop an LNG import project to meet its gas needs. In the Gulf Cooperation Council (GCC) area, the Dolphin Energy gas pipeline commissioned in 2007 supplies Qatari gas to the UAE and Oman. Despite the location of Qatar's huge natural gas reserves being a short distance from all GCC countries, this cross-border gas pipeline is still operating below its potential capacity, whilst in neighbouring Kuwait, one of the world's largest LNG import terminals is being developed. Thus, Kuwait will continue to receive Qatari LNG<sup>5</sup> rather than Qatari pipeline gas.

In Sub-Saharan Africa, the West African Gas Pipeline (WAGP) commissioned in 2009 to supply Nigerian gas mainly to Ghana, with small volumes allocated to Benin and Togo, has never been able to meet the full contractual volume of gas to Ghana because of Nigeria's failure to supply. Although Ghana has developed its own indigenous gas supplies and gas imports through the WAGP have recently increased, it has nevertheless developed a new LNG import project. Whether Ghana needs this LNG import project or not is a different debate.<sup>6</sup>

It seems clear from these examples that the emergence of a more flexible LNG market and increased LNG supply competition has reduced drastically the attractiveness of cross-border gas pipeline projects in some regions or sub-regions where political, commercial, and non-commercial risks are too challenging to manage and mitigate.

---

<sup>4</sup> Ouki, M. (2019). 'Algerian Gas in Transition: Domestic transformation and changing gas export potential', Oxford Institute for Energy Studies, NG 151, October. <https://www.oxfordenergy.org/publications/algerian-gas-in-transition-domestic-transformation-and-changing-gas-export-potential/?v=79cba1185463>

<sup>5</sup> Both Kuwait and the UAE already import LNG supplies through floating, storage and regasification units (FSRUs).

<sup>6</sup> Fulwood, M. (2021). 'Does Ghana need LNG?', Oxford Institute for Energy Studies, July. <https://www.oxfordenergy.org/wp-content/uploads/2021/07/Does-Ghana-Need-LNG.pdf>

## Concluding thoughts

Focusing back on gas to Europe, it is tempting to draw a parallel between Algeria's stance on the GME gas transit issue and that of another gas supplier to Europe, namely Russia. Both countries could rely on direct gas pipeline export routes to avoid transit through a third country for their exports to Europe. In the case of Russia, the Nord Stream pipelines were conceived/ designed to avoid or to diversify away from transit through the Ukraine.

In the case of Algeria, the MEDGAZ pipeline was conceived to by-pass transit via Morocco and export Algerian gas directly to the Iberian Peninsula. Given the much bigger size of existing and potential gas volumes involved in the case of Russia and the different geopolitical nature underlying this issue, the Russian gas impact could be profound. In contrast, the non-renewal of the GME gas transit agreement would have a limited impact on European gas markets, if at all.

More importantly, though, the GME gas transit issue could lead to adjustments of both Morocco and Algeria's natural gas strategies, among other things. Morocco will likely fast-track its on-going plan to import LNG supplies. While Algeria will likely focus more on how to improve the use of its LNG export infrastructure and leverage its cost competitiveness advantage vis a vis southern European gas markets to quickly capture more gas trade opportunities, especially in the form of spot and short-term gas sales. Finally, strategic and sustainable adjustments to these cross-border natural gas trade issues should be considered within the longer-term context of energy transition and the prospects of much lower natural gas demand levels, especially in Europe.