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Executive Summary

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The context surrounding East Med gas has fundamentally changed over the past few years in terms of the geopolitics, the gas market fundamentals, the market structure, the pricing structure, and the challenges facing the oil and gas industry and utilities.

To appreciate some of these structural transformations, they will be discussed in the context of Europe. Why Europe? Because the alternative to Russian supply has always been presented as a powerful argument for East Med gas. Russian gas is dominant in central/south Eastern Europe. Political arguments against Russian dominance in gas are very important in Brussels, many EU capitals, and the US, especially in the current context of heightened geopolitical tensions. US President Trump has grown increasingly vocal in his opposition to the Nord Stream 2 project taking Russian gas to Germany and Europe, threatening to impose sanctions against the project developers. East Med gas is presented as one of the ways for Europe to diversify its supply sources away from Russia.

The Changing Global Context

European market fundamentals have become highly uncertain:

High gas prices during 2011-14 (especially in relation to coal and renewables with government support) and low carbon prices have affected gas demand. Gas demand has picked up in the last couple of years but the growth in residential, commercial and industrial demand remains constrained due to efficiency measures and growth in renewables driven by government support. European demand is expected to rise marginally under the IEA's New Policies Scenario. Under the Sustainable Development (SD) scenario, the picture for gas is more challenging. Gas demand declines only marginally under the SD scenario in 2030, but post-2030, demand decline becomes more severe if carbon reduction targets are to be met.

On the supply side, European domestic production is falling but countries have access to ample supplies. The decline in domestic supply (especially and most recently in the Netherlands and the UK North Sea) means that Europe will need more gas imports, sooner, than was expected a few years ago. But Russian pipeline gas (and now LNG), and massive spare capacity, could come at the market in a short period of time; Russian supplies and European gas supplies have increased substantially and are expected to continue to increase as European production falls. European LNG Imports have also increased significantly in 2019 as new US LNG is coming online destined originally for Asia will now be increasingly looking for home in Europe and Qatar LNG displaced in Asia as Australia ramps up its production could also be looking to Europe for a home.

It appears Europe will be the sinking ground for gas while demand is expected to increase only marginally or flat-line in the 2020s. Russia's gas strategy is key to determining gas market dynamics. If Russia decides to compete on volumes rather than price and Qatar diverts LNG to Europe, there would be fierce competition, with low cost producers (Russia and Qatar) gaining advantage. With the exception of Poland, the Baltic countries and Ukraine, it is unlikely that European importers will be



willing to pay a premium to diversify away from Russia gas.

- In a liberalised market and globalised LNG market, there is reluctance to sign 20-25 year contracts. The old days of financing and shifting risks towards consumers are gone. Without long-term contracts, financing new greenfield LNG projects becomes more challenging.
- It is unlikely that anyone will sign an oil price-linked contract; hub prices are the `market price'; sellers get netback from hub and take risk. Even in Asia, expansion of spot pricing will put continued pressure on JCC-based long term contracts, especially if oil prices increase.
- Pipelines have become very difficult due to geo-politics and transit costs; Very few major new
 pipelines other than Russia to Europe and Asia are likely to go ahead any time soon. LNG
 projects will dominate future gas trade. By 2020 there are likely to be 18 LNG cargoes on the
 water every day and thus access unlikely to be a problem. This will make signing long-term
 contracts even more difficult.

What do these trends mean for East Med gas?

East Med is a new area with relatively small reserves and relatively higher cost of production (say than Qatar or Russia or the US). If Europe becomes the sinking ground for gas and low gas prices in Europe become the norm, the cost of new LNG projects at around ~\$6-\$8/Mmbtu may be too high for many markets, including Europe. Margins would be made, but these would be small. It is important that East Med governments don't hype expectations about the size of the potential rent from the recent gas discoveries.

The development of gas reserves could in principle help meet regional domestic demand. Regional energy demand is still rising. In some countries, there is supressed power demand that needs to be met. Lack of reliable power supplies in some countries is affecting economies, businesses and frustrating citizens. Also the share of gas in power sector is low or non-existent in many countries (for instance Lebanon and Cyprus), thus any shift to gas will bring huge environmental benefits.

There are also benefits of utilising common infrastructure to reduce costs, especially if the gas finds are small. For instance, LNG facilities in Egypt are under-utilised and some pipeline infrastructure already built. But the fundamental issue is the commercial feasibility of gas re-exports from Egypt, which at the moment and possibly for a while, is extremely challenging. Under current international market conditions, it is highly unlikely that any third party gas supplies could be re-exported from Egypt's LNG infrastructure and make a return.

So in theory, the case for East Med gas to be traded within the region is very strong, especially if the size of the gas finds are relatively small. However, geopolitical factors and domestic factors will most likely prevent this from happening.

- Geopolitical factors: East Med is not a region; geographically, it is; but the countries can't be
 further apart politically. Gas will not bring the countries closer together. The 'gas dividend' is
 not big enough to overcome the historic and deep-rooted problems. In fact, historical
 evidence shows that with resource discovery come conflicts. There is no reason to think that
 this region in particular will buck the trend.
- Security of supply issues: Countries will be keen to diversifying their sources of supply and they will be reluctant to be locked in by pipeline gas. Jordan is a good example where it is building FSRU to import LNG and securing pipeline gas from Israel.
- Pricing issues: Would domestic 'almost bankrupt utilities' willing and capable of pay market prices? Lebanon is a good case where the state-owned utility continues to make losses in part due to subsidised electricity prices and very low collection.
- The push towards LNG: IOCs seem to be content to sell gas to Egypt's domestic gas market since supply prices paid by the government to IOCs have been significantly increased and debts are being repaid. But they will continue to push for LNG as their preferred choice and push for shared facilities to reduce costs with the ambition to create a gas hub. Eventually,



the LNG option will dominate with some gas being supplied to local markets. If every country goes its own way, the region will become less attractive. Also the political risk is too high and many companies will be reluctant to take these risks on top of commercial risks.

To conclude, East Med is not a game changer at the global level. The idea that East Mediterranean gas could impact the European energy balance in such a way as to dent Russian market share is not realistic. The impact is more regional (if regional gas trade picks up and countries share common infrastructure) and most likely would be a game changer for the individual countries if the reserves eventually get developed and monetised.