

Background document on Regulation and Investment in Gas Transmission Infrastructure

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1. Introduction

The gas transmission infrastructure is essential for bringing the gas from producing field located sometimes thousands kilometers from gas markets. In liberalized markets the transmission lines form a backbone of secure deliveries and efficient trade and they also facilitate the competition. Therefore sufficient investment in gas transmission systems is essential both for security of supply as well as for development of every gas market.

The importance of new gas infrastructure is underpinned in many region by their growing import dependence and by focus on secure supply and at the same moment on competitive market functioning. In this respect the need for an appropriate regulatory regime taking into account of ensuring security of supply and developing competition is widely acknowledged as a sine qua non condition for efficient and safe gas supply. This document summarizes some parts of discussion on this issue and highlights elements which were considered to impact investment in gas transmission infrastructure.

2. Main elements influencing the investment in gas transmission infrastructure

The demand for gas is expected to increase and the production areas are very often remote from the markets. This leads to the need of relatively huge investments in gas transmission pipelines. There are number of key principles that should be properly reflected within any regulatory regime in order to foster the necessary investment climate. These are among others as follows:

2.1. Clarity on roles & responsibilities

In an open market the responsibility for supply security is no longer linked to one market player or to one single segment of the market. As a result of unbundling and ownership changes as well as regulatory pressures the former role of transmission system operator as mighty arm of incumbent company has dramatically changed. Therefore the regulatory regime must as soon as possible define new respective roles and responsibilities of different market players. These roles must be clearly defined and legally allocated.

For new gas infrastructure the roles and responsibilities should be: The responsibility to ensure there is sufficient gas is with suppliers and producers. The regulatory regime might allow that in some cases it is a legal obligation on the transmission system operator but

then the clear split of transmission to domestic market and gas transit must be accomplished in order to prevent cross-subsides between these two activities. The responsibility to ensure there is sufficient transportation capacity lies primarily with the transmission system operator. In practice due to market opening the information link from the transmission system operator to former incumbent supplier is usually fully dismantled and the supply/demand data are spread among all the suppliers. In results this responsibility is also with the shippers. In planning the transmission capacity the suppliers have a prime responsibility in signaling their future capacity requirements by revealing their real demand for capacity to meet their customers' needs. This ensures that transmission networks are developed consistent with the needs of those sourcing gas supplies.

2.2. Proper and correct investment signals and plans

It is the responsibility of the transmission system operators to develop their networks to meet current and prospective demand of users. In theory the need for investment in new gas infrastructure should be determined through market signals. But the free gas market generally lacks mechanisms to coordinate the investments required by the need to balance gas supply and demand. Shippers and appropriate market players should be required to inform the relevant transmission system operators of their capacity requirements in a timely manner. To ensure this really happens a regulatory framework should be implemented that incentivises shippers, or where applicable other market players, to make financially binding signals for their future capacity needs.

Financially binding signals typically involve shippers contracting for long term capacity rights. However, in the most cases the above defined solution is hard to achieve since long term deals are become less typical as in the past and the focus of many market players is on short-term transactions. This usually leads to a larger proportion of short-term transportation contracts and uncertainty with regard to future capacity bookings. This makes the planning of long-term investment more difficult for transmission system operators, especially given the significant amount of time required for the development of new infrastructure.

In conclusion it is clear that although market signals should be the main element of investment planning, they are unlikely to be sufficient to provide the required level of supply security. The challenge for every regulatory regime is to design the approach to deal with this information gap in investment planning. The solution clearly depends upon the market structure. To ensure that the information is provided and is of an appropriate quality there may need to be information obligations placed on the relevant market players.

2.3. Investment Funding

Next element in ensuring the necessary investment climate is in place is providing appropriate investment funding arrangements. As the investments to be made are long term assets, this factor must be recognized within regulatory frameworks. Based on these requirements, the key principles in relation to investment funding are:

Predictable: To avoid undue risk, transmission system operators and other investors must be assured of the principles behind regulatory treatment for the economic life of the assets. Based on these principles the investment partners can assess the risk profile of the project and determine its viability.

Stable: To provide scope for transmission system operators and other investors to innovate and plan effectively, regulatory regimes should not constantly change and where possible this principle should be recognized explicitly through fixed periods of stability.

Commensurate and complete: In establishing the regulatory framework it is essential to ensure that it is complete and reflects the risks to which investing partners are exposed.

Very practical way is the underpinning of investment by long-term binding commitments, from both the market and regulators, as vital to facilitate investment. Such commitments address the long-term risk the transmission system operators are exposed to through investment, by preventing future alterations in investment conditions. The regulatory regime should encourage system users to make long-term binding commitments for investment (or at least should not prevent from doing so), for example through methods such as open season. The regulators decision on the conditions for investment should be made within a defined period before any commitment to invest is taken by transmission system operator. It must be based on clear rules for investment conditions, and should include the length of the regulatory period, which should be of a long-term nature to allow stability and predictability.

2.4. Transit investments and the important role of derogations

To ensure sufficient transmission capacity is available to meet growing gas demand, new transit pipeline projects connecting gas markets to gas sources are needed. For the huge transit projects a stable and healthy investment climate is required, which can provide a long term and secure income stream for gas transit project parties.

In Europe the granting of exemption from the third party access provisions of the gas directive is an important element for the feasibility of many projects. The granted exemptions provide for the preservation of long term contracts, which underpin the significant investments required for pan European projects. Majority of these projects will not be limited to one state and will require a coordinated approach from more than one transmission system operator and other gas industry players.

2.5. Treatment of gas transit

The mainly linear transit systems which are necessary to transmit gas to consumer markets from distant gas fields are increasingly confronted with the issue of regulation of transit lines, especially if they serve in a limited scale also for the import to domestic markets. The main issue here is whether the standard gas transmission regulatory regime is also suitable for gas transit. The dogmatic European approach that there shall be no difference between

regulatory rules for transit and for transmission of imported gas looks theoretically well justified but in practice frequently creates many artificial distortions and various sorts of cross-subsidies. Postponing the debate on the issue whether gas transit of huge volumes over long distances is the same type of product as monopolistic gas transmission within one country can increase the risk of underinvestment in gas transit infrastructure. The regulatory regime should react in flexible way and allow the solutions which best facilitates the investments in transit lines.

2.6. Competition in gas transit

The gas transmission projects, especially transit pipelines have always high costs and long repayment periods. The risk of investment being stranded will definitely block the investment or at least increase the risk premium for investors. Although there is only limited number of cases when transmission pipelines got stranded, there is a trend of growing competition in gas transit in some parts Europe. This can happen despite uncertainties in gas transit regulations, since all of these lines are either unregulated offshore pipelines or unregulated pipelines with granted derogation. Although this leads to more flexibility in choice of gas transit routes and positive effects of competition are indisputable, it also increases the risk for existing investors as well as future projects. The transmission networks on national level are usually natural monopoly activities but in case of competing gas transit routes the possibility to compensate the lost volumes are minimal. The inevitable consequence is instability of transmission tariffs and decreased economical viability of gas transit projects. Finding the right balance in competition between transit lines when positives effects of competition do outweigh the negative consequences is an important challenge for regulatory regimes.

2.7. Need for strengthening of multilateral cooperation

The regulatory framework is not only the national framework but also a set of treaties and obligations in which individual countries have entered. The most important for gas transit is the Energy charter treaty, a multilateral treaty regulating the energy sector. Article 7 of the Energy charter treaty on transit aims at establishing a multilateral framework of rules governing transit flows of energy. On the basis of the principle of freedom of transit and non-discrimination embodied in GATT Article V, the Energy charter treaty is the first multilateral treaty specifically addressing energy transit through fixed infrastructure. The provisions of article 7 require the Parties to modernize and develop the transport facilities. This article also covers situations of lacking infrastructure or insufficient available capacity for transit. If and when transit through existing capacity cannot be achieved on commercial terms, creation of new capacity, either through establishment of new transit facilities or through modification of existing transit facilities, should not be prevented by a party. It is of utmost importance to support the implementation and monitoring of compliance with the Energy charter treaty provisions in the future and strengthen and enlarge the provisions and scope of such multilateral platforms in order to minimize the project risks and political risks in many investment projects all over the world.

2.8. Tariffs which incentivise the investment

Where a regulatory authority is responsible for determining economic criteria (for example rate of return and economic model parameters), which influence the overall viability of new infrastructure investment, these criteria must provide sufficient incentive in relation to the risk for the investing company to make the investment. The criteria included also have to be complete or else they will not fully reflect the risks to which the investing company is exposed. The correct setting of transmission tariffs which attract the investors and give them also a sort of guarantee of return of investment is essential. The most simple way is usually the offer of a higher rate of return for a new investment or allowing for example the shorter depreciation schedule on new investment. Although fully reasonable these approaches indirectly indicate that the regulatory regime for existing infrastructure is not sufficient to attract capital, what is a signal of significant market deformation caused by regulatory regime and this usually also indicates the unfair distribution of rent in gas sector. Regulatory regime must ensure the right balance.

2.9. Gas pricing, non-payment and the impact on investment

There is strong evidence of a link between the deformed gas pricing and the underinvestment in transmission systems and other gas infrastructure. The problem ceased to exist in liberalized markets and those markets with clear separation between gas trade/supply and gas transmission. Nonetheless the problem is very visible in parts of the world where the companies operate bundled gas supply/production and transmission arms. If the gas price for political and/or social reasons does not correctly reflect market value of the commodity then the system usually leads to various forms of cross-subsidies between activities. Usually profits from gas production and from the operation of transit infrastructure subsidize the domestic prices. Apart from the multiple negative economic effects for the society and economy of the country the inevitable consequence in a medium run is the underinvestment in gas infrastructure and even problems with reliability of the network. The regulatory regimes must be fully aware of this risk and as much as possible resist the temptation of unidirectional distribution of the rent in form of subsidy for gas price.

2.10. Decreasing the investment needs

The experts on energy efficiency are fully aware that “the cheapest energy is the energy you do not consume” Similarly the best infrastructure is the infrastructure which is not needed. Prior to any new investment the regulatory regimes must ensure the efficient utilization and efficient operation of existing gas transmission infrastructure. The facilitation of competition and better network utilization in relation to new gas infrastructure consists of many elements, from which of the utmost importance are capacity congestion mechanisms, facilitating secondary markets by the transmission system operators, application of use-it-or-lose-it principle, offer of interruptible products, offer of

short term products and online booking. The regulatory regimes should maximise the benefits for the market gained in implementation of these measures in form of various released capacities and new products.