

Market power and long-term gas contracts: the case of Gazprom in Central and Eastern European Gas Markets

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Long-term supply contracts (LTCs) in many sectors have been extensively studied using transaction-cost economics. LTCs can serve multiple purposes: (i) protecting buyers and sellers against opportunistic bargaining due to the presence of highly asset-specific investments, (ii) deterring regulatory and political opportunism and ensuring fixed cost recovery, and (iii) distributing risks across the parties. In the gas supply industry, these objectives have taken the form of specific clauses: (i) linking the value of gas to prices of competing fuels (e.g., oil derivative products) in immature markets where wholesale gas trading is limited; (ii) destination clauses and profit-sharing mechanisms to restrict delivery to particular supply points, and (iii) take-or-pay clauses to distribute volume and price risks amongst buyers and sellers.

Since the early 2000s, the European Commission (EC) has sought to exercise its regulatory powers to integrate the European gas market by making LTCs in both upstream and downstream gas markets more competitive and by curbing the market power exercised by dominant incumbents at the national as well as supranational level. The first EC investigation was initiated in 1998, interest accelerated after adoption of the Third Energy Package in 2007 and its implementation in all Member States (MS). The Directorate-General for Competition (DG COMP) has investigated major European national incumbents as well as LTCs with major sellers of gas to the EU for anti-competitive and market segmentation practices. Over the past two decades, this process has led to restructuring LTCs by indexation of gas to traded price indices (e.g., TTF and NBP) in contract price formation, allowing third parties access to the market and the transmission and distribution network, and removing destination restrictions.

In 2012, the EC initiated proceedings into the Russian state-owned producer Gazprom's LTCs with eight Central and Eastern European (CEE) MS - Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and Slovakia. The EC objected to Gazprom's practice of segmenting markets along national boundaries by refusing to change delivery points, using this segmentation and its dominant position in these markets to charge high prices, and obtaining unrelated commitments from its contractual counterparties concerning gas transport infrastructure. In February 2017, Gazprom proposed remedies to address EC objections by removing clauses that restricted re-sale of gas and offering its buyers to change delivery points ('swap deals'), to introduce competitive pricing benchmarks in its contracts and increase frequency of price revisions, and to not claim damages from Bulgaria regarding cancellation of the South Stream project. Following a market test, these commitments were made legally binding on Gazprom for eight years starting in May 2018.

Our analysis adds to existing *ex ante* modelling studies by investigating potential impacts of implementing Gazprom's commitments on CEE and North-Western Europe (NWE) gas markets. We found that Gazprom's commitments and, in particular, possibilities for its CEE customers to change delivery points to new locations may substantially limit Gazprom's potential market power in these markets. This would facilitate regional price convergence and offer a rather efficient way to connect CEE to more liquid markets in NWE. Thus, our results support the EC's conclusion that 'swap deals' facilitate further market integration in CEE, while limiting Gazprom's potential market power there. But "*the devil is in the details*".

First, although swap deals improve market efficiency in CEE by limiting Gazprom's strategic behaviour, they do not improve total social welfare – by acting strategically, Gazprom reduces supplies to CEE, and, while swap deals increases those supplies in CEE close to the level of competitive benchmark, they do so by 'pulling' additional, more expensive, LNG into Europe. This results in loss in welfare for Europe overall. Thus, political solidarity between NWE and CEE has an economic cost when the dominant supplier, Gazprom, withholds supplies even to rather small CEE gas markets.

Secondly, although the ability to change delivery points may have a positive impact on market efficiency in CEE, it also poses policy challenges, namely, gas diversification and energy security for CEE. Swap deals may decrease Gazprom's market share at the expense of its other buyers entering the CEE markets, but this is 'contractual' diversification rather than the physical diversification desired by some CEE countries (e.g., Poland and Lithuania), because swap volumes are still Russian gas.

Indeed, most CEE investments in gas infrastructure (planned or realised) are meant to diversify their gas supply portfolios as well as give them an economic advantage in negotiations with dominant gas suppliers over terms of gas imports and trade. Our modelling results confirm the importance of LNG import terminals (e.g., Klaipeda and Świnoujście) and supply diversification pipelines (e.g., IGB bringing Azeri gas to Bulgaria). They serve as a hedge against Gazprom's strategic

behaviour – when Gazprom exercises market power our modelling shows increased utilisation of these gas infrastructure projects. Further, we show swap deals do not substantially affect project utilisation when Gazprom acts strategically.

Since the 2009 Ukraine gas transit disruption, European authorities and MS regulators have been working to prevent a repeat of disruptions by ensuring all cross-border interconnection points have physical reverse capability. Our modelling underscores the importance of having such capability: we found reverse flow from Germany may be effective in putting competitive pressure on Gazprom's supplies into Poland and the Baltics. In fact, when Gazprom exercises market power, Poland becomes a transit hub, transporting gas from Germany to the Baltics. Further, bi-directional flow capability enhances cross-border gas trade in the Baltic region. Thus, in addition to having direct access to the LNG market, which has been the paramount goal of gas diversification policy for many CEE and Baltic states, more interconnected markets become critical in case Gazprom acts strategically by withholding supplies to increase its revenue.

The flipside is that LNG and interconnection in the Baltics increase regional gas security of supply in case of gas flow disruption from Russia. In this regard, access to LNG markets via import terminals at Świnoujście (PL) and Klaipeda (LT) is essential but insufficient to counterbalance Gazprom's strategic behaviour; the region should also be well interconnected with bidirectional flow capability. In practice, this means that national regulatory authorities should ensure non-discriminatory access to gas infrastructure for all suppliers not just their national gas suppliers (e.g., suppliers in Latvia should be able to book capacity in Polish LNG terminal but also capacity to bring that LNG back home via LT/GIPL or indeed German suppliers having non-discriminatory access to reverse capacity to bring gas into Poland and further up north to the Baltics when needed).

Further, well interconnected markets in CEE and the Baltic region is important not just for security of supply but they also ensure that the proposed swap deals are utilised in the most efficient way – this is because swap deals allows gas flows in Europe to be re-optimised in response to Gazprom's strategic behaviour and thus well interconnected markets allows for this flow optimisation. This is evident from our modelling where swap deals allowed trade and counter-trade between various markets in CEE, Baltics and NWE.

While our modelling show that in the next five years swap deals could have a marginally negative impact on utilization of CEE strategic assets, there is a risk that, once Gazprom's commitments expire in mid-2026, utilization of these strategic assets will fall considerably, especially if Gazprom withhold supplies to CEE and the Baltics. This may have 'unintended' consequences in terms of disintegrating CEE and Baltic markets from the rest of Europe. For example, GIPL interconnector's utilization rate falls dramatically should Gazprom withhold supplies to the region; absent swap deals, utilisation will not improve. This potentially means an increase in the cost of using the gas system in the CEE because the European regulatory model socialises gas assets and gas tariffs might not be cost reflective (see Chyong, 2019).

The cost of cross-border trading between these small markets and the rest of Europe would then be hampered by these additional costs.

Thus, the only unambiguously positive outcome of the commitments is the certainty that Russian gas prices will become more competitive once priced against competitive NWE against NWE competitive benchmarks, and the socialised cost of gas systems (which would then include all strategic assets deployed against Gazprom's monopoly power). It is a vicious circle in the sense that these projects were publicly financed for security reasons in the expectation they would be used should Gazprom exercise its market power. Now that Gazprom has committed for a short period of time (until mid-2026) to changes to its contractual and sales practices to ensure competitive markets and prices, these assets will not be utilised or they will be utilised much less than envisaged, but the costs still need be allocated to all users of their gas systems beyond the commitment period.

More generally, in light of declining gas demand relative to the size of the gas systems and the widely divergent competitive landscape across European markets, our results reveal fundamental challenges in completing the project of a single European market for gas in the next decade. Addressing these challenges may require further gas market reforms, particularly, the current market design for gas transportation: potential policy options range from retaining the existing entry-exit regime to more drastic reforms such as redefining market zones with a gradual shift to nodal pricing. Ultimately, achieving the most efficient tariff structure goes far beyond a narrow discussion around security of gas supply since establishing efficient price signals will allow our energy system to be fully decarbonised at least cost.