**American University Kyiv**

# Strategic Market Entry in a Transforming Energy Sector: The Case of Latvian Natural Gas Industry

# Стратегічний вхід на ринок у трансформованому енергетичному секторі: Приклад газової індустрії Латвії

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**ABSTRACT**

This paper examines how new market entrants can effectively enter Latvia's natural gas sector in the wake of its recent full liberalization and the region's shift away from Russian gas imports. By integrating Porter's value chain framework (firm-level analysis) with Gereffi's global value chain (industry-level perspective), the study identifies key entry strategies—including securing long-term LNG capacities, leveraging the Inčukalns Underground Gas Storage (UGS), and offering innovative digital or green retail services. Findings suggest that while state-monopoly elements in transmission and distribution remain, the fully liberalized retail sector and diversified LNG infrastructure offer compelling opportunities for both large multinational firms and smaller niche suppliers. Ultimately, these insights contribute to ongoing discussions about Europe's energy security, diversification, and the broader Baltic region's path toward sustainable and resilient gas markets. Future research may explore biomethane and hydrogen integration.

Keywords: Latvia natural gas, market entry, liberalization, LNG, value chain

## 1. Introduction

The European natural gas market has recently undergone a profound transformation, driven largely by geopolitical shifts following Russia's invasion of Ukraine. Historically, many European countries—especially in the Baltic region—relied heavily on Russian gas, establishing tight, long-term supply linkages along the value chain. Latvia, for instance, once sourced up to 93% of its gas from Russia. With the onset of the war, however, these countries have moved rapidly to diversify their energy sources, investing in new LNG terminals, seeking alternative contracts, and implementing policy frameworks to reduce dependency on Russian fossil fuels before 2030 (European Commission, REPowerEU 2022).

This study aims to determine how new market entrants can effectively navigate and penetrate the Latvian natural gas sector, a market that has only recently undergone full liberalization in May 2023. The central research question is:

"Which strategies enable a competitive and sustainable market entry for new firms in Latvia's liberalized natural gas sector, given the shift away from Russian gas and the emergence of LNG supply routes?"

To address this question, this capstone integrates two key frameworks: (1) Porter's value chain, focusing on firm-level strategies to optimize cost and differentiation, and (2) Gereffi's global value chain (GVC), highlighting industry-wide governance, cross-border flows, and regional policy influences. By combining these perspectives, we gain a holistic understanding of Latvia's evolving energy landscape and outline actionable entry points for companies—large, mid-sized, and small—seeking opportunities in this dynamic market.

A rich body of research helps clarify this transformation. Gereffi (1994) encourages us to view resource-based industries through global commodity chains (GCC) and global value chains (GVC) (Gereffi, 2021), illuminating how shifts in governance and geography redistribute power and reshape commodity flows. In their analysis of European gas markets, Neumann, Rüster, and von Hirschhausen (2015) highlight how evolving governance structures, contractual arrangements, and market integration patterns influence natural gas distribution. Additionally, Neumann, Rüster, and von Hirschhausen

(2014) demonstrate how long-term contracts traditionally anchored supply relationships, managing risks and providing stability in a volatile industry.

In line with the resource-based view (RBV) of strategy (Barney, 1991), the Underground Gas Storage (UGS) represents a valuable and unique resource that can be leveraged for sustained competitive advantage, enabling collaborative ventures and trade within the Baltic and broader European context. It is also resonate with natural gas monopoly theory. Infrastructure costs—such as pipelines and storage facilities—are subadditive, meaning that a single provider can supply the market more efficiently than multiple competitors (Gordon et al., 2003).

To analyze market entry strategies within this evolving Latvian context, this capstone will integrate firm-level insights from Porter's value (1985) chain framework with industry-level perspectives derived from Gereffi's GVC approach. At the firm level, Porter's framework dissects primary and support activities—such as procurement, storage management, transportation infrastructure, marketing, and technological innovation—to identify where a new entrant can differentiate itself or reduce costs. By understanding these internal value-adding processes, potential market entrants can strategize how best to utilize resources like the Inčukalns UGS or improve customer-facing services to gain a foothold in the Latvian market.

Yet, Porter's value chain analysis alone cannot fully capture the external, industry-wide, and regional complexities that shape a firm's strategic environment. Gereffi's global value chain perspective extends this analysis from the internal firm boundaries to the broader networks of producers, suppliers, and buyers operating across national and regional markets. Through Gereffi's lens, it becomes possible to see how governance structures, long-term contracting norms, EU-level energy policies, and the interplay of different actors—such as upstream suppliers, pipeline operators, and LNG traders—affect Latvia's positioning within a larger, interconnected European value chain. While Porter reveals where along the chain a firm might excel internally, Gereffi helps us understand how external factors and global governance structures influence whether those firm-level strategies will succeed or need adaptation. The next section examines Latvia's specific market context.

### 1.1 Natural Gas Market in the European Union

The European Union's natural gas market evolved through three major phases: pre-war, wartime, and post-war. Before the invasion of Ukraine, EU gas demand hovered around 400 billion cubic meters (bcm) annually, with domestic production accounting for only about 10% of needs (IEA, World Energy Outlook, 2023). In 2021, the EU imported about 150 bcm of Russian gas (both LNG and pipeline), representing roughly 45% of total gas imports (In focus: EU energy security and gas supplies, Directorate-General for Energy). Many countries—such as North Macedonia, Bosnia and Herzegovina, Moldova, Finland, and Latvia—were highly dependent on Russian sources, making them vulnerable to geopolitical shifts in energy supply (Statista, 2021). In the year following the invasion, the EU paid just under €140 billion to Russia for fossil fuels, reflecting the depth of its entanglement with Russian energy supplies (Demertzis, M., & McWilliams, B., 2023).

The conflict prompted a rapid shift away from Russian gas, with EU imports dropping to 43 bcm in 2023 and overall reliance declining from 45% in 2021 to just 15% by 2023. For a snapshot of European countries' reliance on Russian gas before the war in Ukraine, see Appendix D. Under Gereffi's global value chain, this dramatic shift in dependency illustrates how quickly industry-level governance can recalibrate—lessening supplier dominance and creating new avenues for LNG-based imports within the EU market. New patterns of supply emerged as Norway and the United States became more significant contributors, and EU policies like REPowerEU supported the green transition, encouraging diversified sources and more flexible, shorter-term contracts. These changes disrupted established long-term arrangements and signaled a move toward markets where competition, technology, and strategic infrastructure investments (like those at Inčukalns UGS) can influence outcomes.

From a firm-level perspective, these developments mean that potential entrants into Latvia's natural gas market must navigate new conditions. Porter's framework helps identify the internal competencies and activities that can deliver competitive advantages—be it operational efficiency, supply chain control, technological innovation, or improved customer service. However, the feasibility and sustainability of these strategic moves depend heavily on the broader configuration of the EU gas industry,

which Gereffi's GVC perspective helps illuminate. Gereffi's approach situates Latvia's market entry within a larger tapestry of international regulations, supplier dominance, transnational infrastructure development, and evolving energy strategies.

By combining Porter's and Gereffi's frameworks, this capstone aims to produce a more holistic analysis. Porter's lens focuses on how a firm can create and capture value internally, while Gereffi's perspective addresses how that value creation interacts with shifting external conditions—governance structures, market liberalization, environmental targets, and geopolitical reconfigurations—at the industry and regional level. This integrated approach clarifies not only the internal strategic opportunities presented by assets like the Inčukalns UGS but also the external constraints and enablers posed by a transforming European energy landscape.

Ultimately, this synthesis offers actionable insights for firms seeking to enter Latvia's natural gas market. By harnessing the RBV to highlight strategic resources, applying Porter's framework to map out firm-level advantages, and using Gereffi's GVC approach to understand external dynamics, the study provides a multifaceted roadmap. Such a roadmap can guide newcomers in aligning their strategies with both the intrinsic qualities of their operations and the extrinsic forces shaping the wider Baltic and European natural gas industry.

These developments provide crucial context for understanding how firm-level strategies (Porter) are shaped by EU-level market reconfigurations (Gereffi). Latvia, as part of the Baltic region, exemplifies these shifts with its complete ban on Russian pipeline imports and accelerated pursuit of LNG-based diversification.

## 2. Natural Gas market in Latvia

Latvia's natural gas market has witnessed a sharp transition from Russian dependency toward diversified LNG sources. In line with Porter's insights, this transition affects how firms might optimize procurement, storage, and retail operations. Meanwhile, from Gereffi's GVC perspective, Latvia's alignment with EU policy and cross-border integration under the FinEstLat zone reshapes the industry governance—enabling new suppliers to participate more easily in multiple markets (Latvia, Estonia, Finland).

This section provides an in-depth look at Latvia's natural gas market, tracing its dependency, current supply situation, and recent liberalization. Among the European

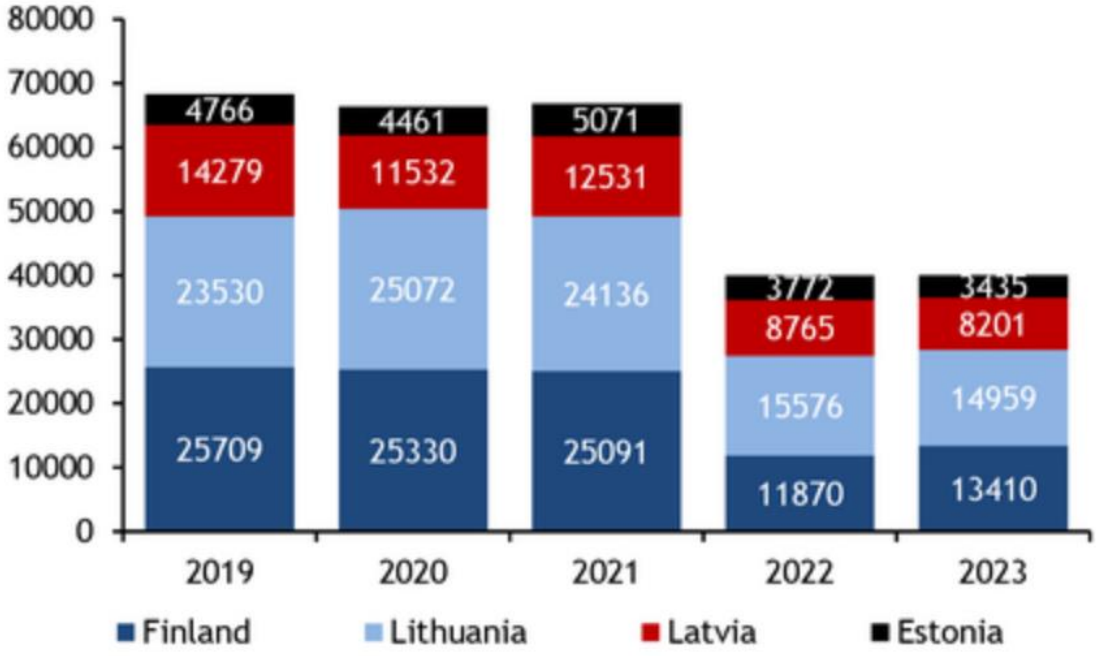
countries not all experienced this transformation in the same way. In the following section, I focus specifically on the Latvian market, which had perhaps the greatest dependence and therefore had to act decisively. For Latvia—this was not merely a challenge but a call to action. The nation's response, marked by agility and strategic foresight, has set the stage for its long-term energy security and energy efficiency. The demand profile demonstrates how sharply consumption was reduced, preferably by decreasing gas-fired power generation. Figure 1 illustrates the decline in Finnish and Baltic gas consumption over time, reflecting the region's shifting supply dynamics (Argus, 2024).

Latvia's journey reflects the principles of resource dependence theory, which underscores how organizations (or nations) must mitigate dependency on external resources to ensure resilience (Biermann & Harsch, 2017). The country's decision to shift away from Russian gas imports puts this theory into action, such as Germany's Energiewende initiative.

By securing a decade-long capacity reserve contract with Lithuania's Klaipeda LNG terminal to cover 70% of its domestic consumption, in Figure 2 Latvia demonstrated a commitment to diversification in response to the price shock (Latvia 2024, IEA, 2024). This strategy not only ensures supply stability but also underscores the importance of regional collaboration in times of crisis.

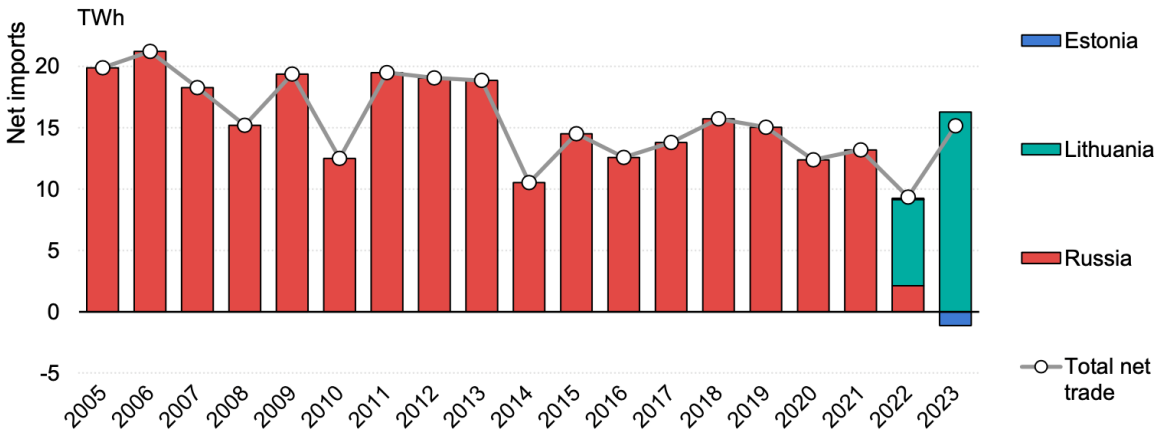
The remaining 30% of Latvia's gas demand is expected to be met through Finnish and Estonian LNG terminals. From Porter's firm-level perspective, sourcing from multiple terminals reduces procurement risk and potentially lowers costs, allowing entrants to differentiate themselves through stable pricing or improved service reliability. In 2022, Latvia considered building its own LNG terminal. However, the government's reluctance to back the project due to its preference for market-based initiatives underscores a classic cost-benefit analysis dilemma (The Corner House 1999). The decision left Latvia reliant on neighboring infrastructure, a move that offers immediate cost savings but potentially limits future strategic autonomy. This situation illustrates how the government might be keeping its options open, allowing flexibility to reconsider building an LNG terminal as market conditions change. By not committing immediately, Latvia can adapt its strategy in response to future developments.

Latvia's state electric utility giant, Latvenergo, has taken a proactive role in securing LNG supplies. Through its agreement with Klaipėdos nafta, the company has locked in a steady annual capacity of 6 TWh of LNG for the next decade. This action aligns with the supply chain integration model, enhancing control over critical resources while ensuring operational continuity for its combined heat and power plants. Latvenergo's strategic move also exemplifies stakeholder theory. By securing LNG capacity, the utility ensures not only its operational needs but also broader national energy security, addressing the concerns of its customers, regulators, and shareholders alike (Klaipėdos Nafta AB, 2023).



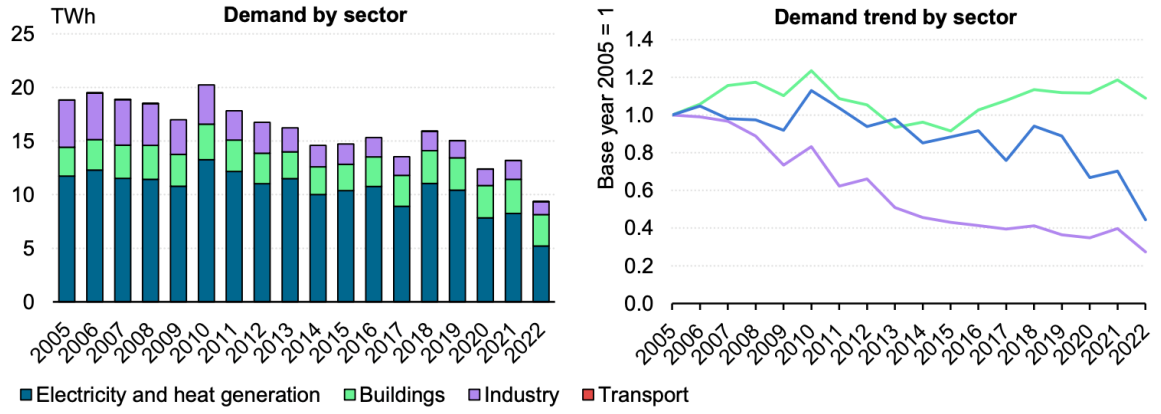

Source: Argus

Figure 1 – Finnish and Baltic annual gas consumption GWh




Source: IEA Report Latvia 2024

Figure 2 – Latvia's natural gas supply by source and net trade, 2005-2022




Source: IEA Report Latvia 2024

Figure 3 – Natural gas demand by sector and its trend in Latvia, 2005-2022

A large chunk of Latvia's total gas consumption comes from power production at the state-owned utility Latvenergo's large combined heat-and-power plants, which have a total capacity of roughly 1 GW. In 2023, these plants generated 1.35 TWh of electricity, recovering from a dip in 2022 but still below pre-crisis levels. At the same time, Latvia's robust hydroelectric output—3.71 TWh in 2023—has cushioned the country from the volatility of gas prices. This dynamic emphasizes the interaction between renewable energy and fossil fuels in ensuring energy system flexibility (Latvia 2024, IEA, 2024).

### 2.1 Liberalization of Latvia's Market

By May 2023, Latvia's market reached full liberalization, removing household tariff regulations (PUC Report, 2023). This reflects broader EU directives favoring competition and regional integration, key elements that Gereffi's approach identifies as drivers for new governance patterns in the energy industry. For individual firms, such liberalization translates into fresh opportunities to differentiate and capture market share in retail.

Liberalised markets, guided by the principles of European Union directives, typically aim to enhance competition, improve efficiency, and reduce monopolistic dominance. However, the realities of transitioning from regulated to competitive market often present challenges, particularly in terms of market entry, licensing, pricing fluctuations, and infrastructure access.

But is this true in practice? For example, in Ukraine, there are still monopolies on the gas market after liberalization and unbundling, although if we evaluate the ease of entry into the market, it is satisfactory. Poland is also an example of a fairly significant state presence in the gas market. The local Orlen claims to be the largest importer and supplier in Poland, 49% owned by the state (Orlen Group Company Overview, 2023).

The Latvian market operates within the FinEstLat Common Natural Gas Market (ACER n.d.), which integrates Latvia, Estonia, and Finland under a single tariff zone. But in November 2024, the Baltic gas transmission system operators, Elering and Conexus, intend to revise the joint regulations governing their transmission system, which will include introducing new provisions for an LNG terminal, as reported by Argus. This setup theoretically reduces barriers to entry by standardising entry tariffs and fostering cost parity across borders. Such measures align with theories on regional integration, which suggest that harmonised regulatory environments can encourage competition by reducing asymmetries in operational costs. Yet, despite these advancements, the dominance of a few key players—Ignitis UAB (28%), Latvijas Gāze AS (17%), Latvenergo AS (15%), and Eesti Gaas AS (14%)—indicates a concentrated market. According to research on oligopolistic market structures, such concentration can lead to strategic behaviour that deters new entrants, especially when existing players possess economies of scale or vertical integration advantages (Bresnahan, 1989).

A critical factor shaping Latvia's market dynamics is the monopolistic position of JSC Conexus Baltic Grid owned for 68% by state company (JSC „Augstsprieguma tikls"), which owns and operates the transmission system and storage facilities. While third-party access is mandated by the Public Utilities Commission (PUC), the monopolistic nature of infrastructure ownership poses potential risks. Studies on infrastructure-heavy markets highlight that such setups, even when regulated, can create bottlenecks for competition if access costs, technical standards, or operational practices favour incumbent traders (Baumol, Panzar, & Willig, 1982). In fact, in Ukraine, Poland, and Hungary, there were also operators that controlled both the transmission and storage systems. However, this is now almost impossible due to EU regulations, as unbundling must be implemented, as was the case in Ukraine in 2016. After that, it became possible to enter the Ukrainian gas market.

Latvenergo AS and Ignitis UAB, both state-owned entities, play significant roles in the market. Research on the influence of state ownership suggests mixed implications: while state entities may provide stability and policy alignment, their market participation can also skew competitive dynamics. For instance, Ignitis UAB, with its diversified operations spanning electricity and gas, benefits from cross-sector synergies that may be inaccessible to smaller or newer market entrants (Megginson & Netter, 2001).

The removal of household tariff regulation in May 2023 marked the final step in Latvia's market liberalization. While such reforms are intended to open the market, their effectiveness depends on factors like the regulatory framework's adaptability, the transparency of market operations, and the alignment of infrastructure policies with competition goals. Research on liberalization in similar contexts suggests that the presence of dominant players, coupled with infrastructure monopolies, may neutralize the intended benefits of competition unless robust measures are taken to foster a level playing field (Joskow, 2008).

### 3. Theory of the value chain

This section clarifies the two-tiered theoretical lens guiding the analysis. Porter's value chain addresses how a single firm can structure its primary and support activities to gain competitive advantage. Gereffi's global value chain situates these firm-level activities within a larger ecosystem shaped by cross-border infrastructure, policy

regimes, and evolving market governance. In a transforming Latvian context, both perspectives are essential to capture the micro-level operational strategies and the macro-level policy and infrastructure shifts.

Porter's framework focuses on a company's internal activities, dividing them into primary and support functions such as procurement, operations, logistics, marketing, and services. By analyzing each link in this "traditional" firm-level chain, companies can identify where they can reduce costs, differentiate their offerings, or introduce innovations to gain an advantage. In Latvia's evolving gas market, this might mean optimizing how a company procures LNG from neighboring terminals, managing its storage at the Inčukalns Underground Gas Storage (UGS), or improving its customer engagement platforms in a newly liberalized retail segment.

On the other hand, Gereffi's GVC perspective pushes the analysis beyond the boundaries of a single firm. It examines the entire industry landscape, including how international supply chains are governed, how policy frameworks influence production and distribution, and how shifts in regional and global markets redistribute power among various actors. For Latvia, this involves understanding the ripple effects of EU-level diversification mandates, the emergence of multiple LNG import routes, the role of regulatory bodies ensuring third-party access to pipelines and storage, and the move away from Russian pipeline gas.

By integrating Porter's and Gereffi's frameworks, one can see how internal firm strategies—such as cost-effective procurement or exceptional customer service—must align with external factors like changes in EU energy policy, the availability of alternative LNG sources, and the infrastructure constraints imposed by natural monopolies. This dual lens provides a more holistic roadmap for market entrants, showing not only how to build internal competencies but also how to navigate the broader context shaping Latvia's natural gas value chain.

### 3.1 Traditional value Chain firm level

At the firm level, Latvia's natural gas industry can be examined through Porter's value chain model to understand where companies can maximize efficiency, differentiate from competitors, and capture value. Historically, the Latvian market was heavily dependent on Russian gas, leaving limited room for strategic maneuvering.

Today, however, the loss of that single dominant supplier and the subsequent diversification into multiple LNG routes have created an environment in which firms must carefully manage each step of their internal value chains. For a visual depiction of Porter's Value Chain and its primary/support activities as applied in this study, see Appendix C.

Consider procurement as a starting point. A company entering Latvia's market must decide how to secure stable, competitively priced LNG supplies. Some might follow Latvenergo's example of reserving long-term capacity at Lithuania's Klaipeda terminal, ensuring reliable volumes and protection from volatile spot prices (Latvenergo, 2022). Others may choose more flexible contracts to capitalize on market dips or seasonal opportunities. Porter's framework prompts firms to assess these options systematically, weighing cost stability against flexibility and risk.

Operations and storage management also present avenues for differentiation. The Inčukalns UGS facility, one of the largest storage sites in the Baltic region, can serve as a strategic reservoir, allowing companies to buy gas when it's cheaper, store it, and then sell it during periods of higher demand. A firm that invests in sophisticated forecasting tools, data analytics, or strong relationships with the storage operator (Conexus Baltic Grid) can optimize these cycles, turning storage management into a source of competitive advantage rather than just a logistical step.

As gas moves closer to the end consumer, outbound logistics, marketing, and service activities offer additional opportunities. In a more liberalized Latvian retail market—with around 30 active suppliers—innovations in billing systems, customer engagement via digital platforms, or green product offerings (such as integrating biomethane or providing tips on energy efficiency) can set a new entrant apart. Porter's framework helps pinpoint exactly where to invest internal resources: better online customer portals, loyalty discounts, or service bundling could all help secure a foothold in a market where consumers are increasingly willing to switch providers.

In essence, Porter's approach breaks down the firm's activities to reveal specific levers a company can pull. Whether it is negotiating favorable LNG supply terms, mastering the timing of gas storage injections and withdrawals, or tailoring retail services to consumer preferences, these firm-level insights help prospective entrants understand how to craft strategies that exploit current market conditions in Latvia.

### 3.2 Industry level of the value chain

In the natural gas industry, the value chain typically covers exploration and production (upstream), transportation and storage (midstream), and refining, distribution, and retail (downstream). While no single firm may control every link in this chain, especially in liberalized and partially unbundled markets, a close mapping of these segments reveals potential entry points and competitive leverage (Figure 4).

While Porter's framework focuces in on what happens inside the firm, Gereffi's GVC perspective broadens the scope, showing how external forces—governance structures, market integrations, policy shifts, and geopolitical dynamics—shape the entire industry. In Latvia, this broader, industry-level lens is crucial because the gas market's transformation did not occur in isolation. It emerged in response to EU directives emphasizing energy diversification, the expansion of LNG infrastructure in the Baltic Sea region, and the strategic imperative to reduce dependence on Russian supplies.

From an industry-level viewpoint, Latvia is now part of a complex regional ecosystem. No longer does gas flow predictably from a single upstream source; instead, supply comes through multiple gateways—Lithuania's Klaipeda terminal, Finland's Inkoo terminal, and soon Estonia's Paldiski facility—each with its capacity constraints, tariff structures, and maintenance schedules. For an overview of existing and planned LNG terminals across Estonia, Latvia, and Lithuania—including capacities and operational timelines, see Appendix A. Gereffi's perspective helps firms understand how to position themselves in this matrix. If a company sees that EU mandates encourage cross-border trade, it can adjust its procurement strategy to take advantage of harmonized regulations in the FinEstLat common market zone, or use Inčukalns UGS as a regional balancing tool, capitalizing on the broader Baltic-Finnish energy integration.

Governance patterns also become clearer. Transmission and distribution networks often remain natural monopolies due to their high infrastructure costs. While Latvian regulations enforced unbundling and ensure third-party access, these policies create a standardized playing field rather than eliminating monopolistic conditions entirely. By examining these dynamics through Gereffi's lens, a firm can anticipate the constraints imposed by natural monopolies—such as a single transmission operator—and plan accordingly. For instance, it might focus on building strong relationships with Conexus

Baltic Grid to secure transmission capacity or advocate for policies that enhance transparency and non-discriminatory access.

Moreover, Gereffi's framework underscores that long-term competitiveness in Latvia's gas market depends not only on current supply routes and infrastructure but also on the direction of future energy transitions. As the EU moves toward decarbonization, green gases like biomethane or hydrogen may play a larger role. Companies equipped with an industry-level understanding can invest early in technologies or partnerships that align with these trends, positioning themselves as leaders in providing cleaner, more sustainable energy solutions.

In short, Gereffi's industry-level perspective complements Porter's firm-level insights by illuminating the network of external factors that shape the Latvian gas market. It highlights the importance of adjusting internal strategies (detailed through Porter's lens) in response to shifting EU policies, evolving LNG supply patterns, and the regulatory environment governing monopolistic infrastructures. Armed with both sets of insights, a new entrant can better anticipate market changes, reduce risks, and identify strategic paths for long-term growth and resilience.

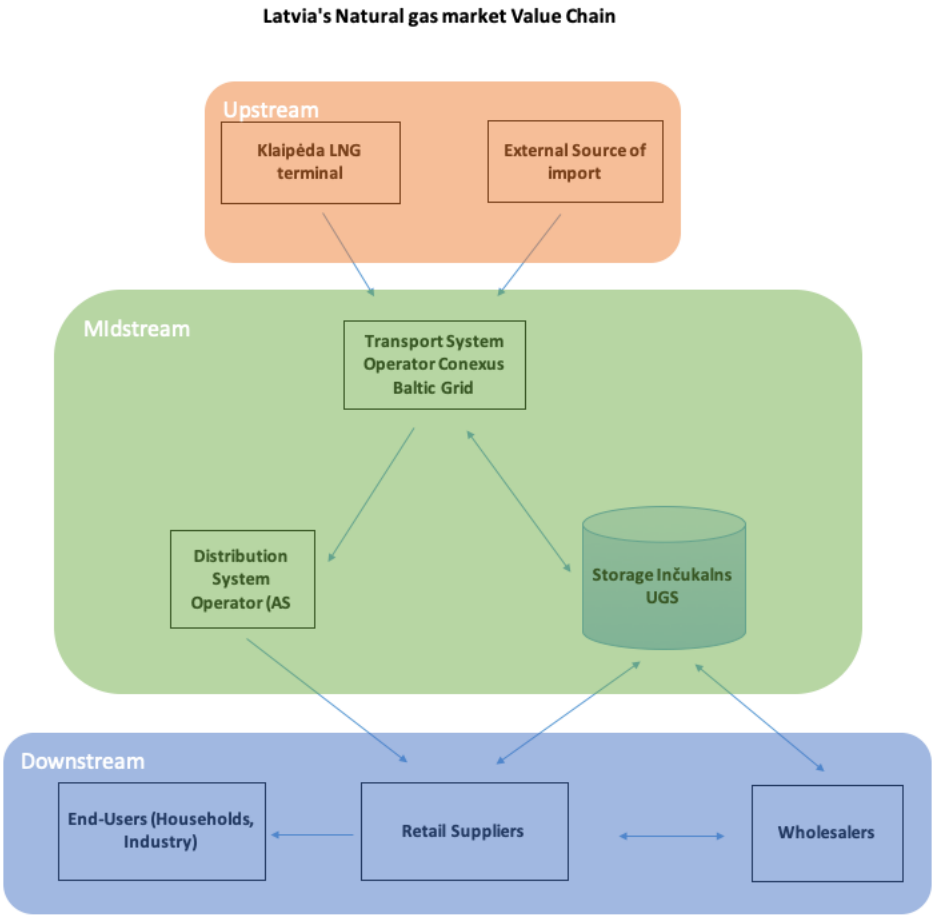



Figure 4 Value chain of natural gas market in Latvia

### 3.3 Natural Gas Value Chain in Latvia

Latvia's natural gas value chain has undergone a remarkable transformation in the wake of geopolitical shifts and policy reforms. Historically, the country was heavily reliant on Russian gas imports, with dependency levels exceeding 90% as recently as 2021. Following the outbreak of Russia's full-scale invasion of Ukraine, Latvia, like other EU members, took decisive steps to diversify its energy sources, integrate more deeply with regional markets, and strengthen energy security. These changes have influenced every stage of the value chain—from supply and transmission to storage, power generation, distribution, and retail—thereby reshaping the opportunities and challenges for existing players and new market entrants. A high-level schematic of the natural gas value chain—covering exploration, production, transmission, and retail—can be found in Appendix E.

A critical asset in Latvia's value chain is the Inčukalns Underground Gas Storage (UGS) facility, one of the largest of its kind in the Baltic region and with potential to become among the largest in the EU. In line with the resource-based view (RBV) of strategy (Barney, 1991), Inčukalns UGS represents a unique, hard-to-imitate resource that contributes to Latvia's competitive position as a regional trading hub. Its substantial storage capacity ensures winter supply security and supports cooperation with neighboring countries, mitigating the risk of over-reliance on any single source of gas. At the same time, the infrastructural characteristics of Latvia's gas sector—large-scale pipelines and storage facilities—lend themselves to natural monopoly conditions, where a single provider can serve the market more efficiently than multiple competitors (Gordon et al., 2003; Joskow, 2008). This natural monopoly must be carefully regulated to balance economic efficiency with consumer protection and supply reliability.

The policy environment has played a pivotal role in these shifts. Key measures have included infrastructure improvements, such as cross-border interconnectors with Lithuania and Estonia, and the creation of the Common Natural Gas Market (FinEstLat) with Estonia and Finland. This integration has enabled tariff-free gas flows and improved market liquidity. The outright ban on Russian pipeline imports effective January 1, 2023, along with the EU's REPowerEU plan, underscores a deliberate move away from Russian hydrocarbons and towards a more open, diversified market. As a result, Latvia's value chain now depends on LNG imports through terminals in Lithuania (Klaipeda) and Finland (Inkoo), with Estonia's Paldiski FSRU expected to provide yet another route. Latvia has considered developing its own LNG terminal, but the Skulte LNG project was deemed financially and practically unworkable.

The evolving environment poses both opportunities and complexities for market entrants. Latvia's newfound reliance on multiple LNG terminals promotes supplier diversification and reduces geopolitical exposure. This flexibility allows entrants adept at navigating global spot markets, securing long-term contracts, or offering innovative services to find a foothold. However, reliance on external infrastructure and capacity allocations—such as Latvenergo's ten-year booking at Klaipeda—may complicate logistics and create competition for terminal access. Moreover, with no domestic production and demand having dropped significantly between 2021 and 2022 (including a 37% decline in the power sector due to fuel switching and renewables uptake), firms

must develop strategies that accommodate a more volatile and sustainability-oriented market.

The interplay of these factors varies along different segments of the value chain:

### 3.3.1 Supply

Latvia's supply landscape has shifted dramatically since the ban on Russian imports. Currently, about 70% of its gas comes through Klaipeda in Lithuania, and 30% from Inkoo in Finland, with Paldiski in Estonia potentially joining as a new route. While this diversification provides resilience, it also means managing intricate cross-border relationships and adjusting to maintenance events—such as the October 2023 damage to the Balticconnector pipeline—which test the system's flexibility. Multiple supply routes reduce dependency on a single partner, and the strategic use of capacity bookings on the LNG Terminals and interconnectors between the Baltics or long-term contracts can create stable supply conditions. Yet, the market's openness to external suppliers also introduces heightened exposure to global price volatility and logistical complexities such as LNG terminal regasification capacities. Under Porter's lens, supply represents a key primary activity where a firm's procurement choices can yield cost or differentiation advantages. From Gereffi's viewpoint, the shift from Russian pipeline gas to multiple LNG gateways redistributes industry power, enabling new entrants to negotiate flexible, short-term contracts.

### 3.3.2 Transmission

JSC Conexus Baltic Grid manages Latvia's transmission network and storage operations. The natural monopoly at this stage—rooted in the high infrastructure costs and the impracticality of duplicating extensive networks—means that competition cannot manifest in parallel pipelines. Still, EU regulations ensure third-party access, transparent tariffs, and regional integration through FinEstLat, enabling new entrants to secure transmission capacity without discrimination. While direct rivalry in transmission infrastructure is impossible, the presence of a regulated, unified market reduces entry barriers downstream by ensuring all suppliers operate under the same conditions.

While a regulated natural monopoly, EU unbundling requirements ensure third-party access (TPA). Gereffi's emphasis on governance clarifies that these rules create

standardized conditions for all. Under Porter, a firm might still optimize access costs, scheduling, or relationships to gain a slight advantage over competitors.

A similar drive toward unbundling and compliance with EU standards is evident in Moldova, where the government has leased the country's gas transmission system to Romanian operator Vestmoldtransgaz for five years. This lease arrangement followed Moldova's challenges in separating transmission operations from its vertically integrated utility Moldovagaz—part-owned by Russia's Gazprom. Vestmoldtransgaz, now responsible for maintenance and servicing contracts, also operates the pipeline connecting Moldova and Romania, facilitating greater regional integration and adherence to the EU's Third Energy Package principles. Over time, the Moldovan government has laid the groundwork to transfer transmission assets to compliant operators, illustrating the broader trend of regulatory-driven restructuring and market liberalization in line with European energy policy goals (Energy Community, 2023).

#### 3.3.3 Storage

The Inčukalns UGS facility is vital for meeting winter demand, stabilizing supply, and providing reserves for emergencies. With a maximum capacity of 4.47 billion cubic meters—of which 2.32 billion cubic meters is continuously injected and potentially expandable to 3.2 billion—this facility can serve not just Latvia but the broader Baltic region and Finland. Strategic gas reserves mandated by Latvia's Energy Law (currently 1.8 TWh) enhance security. While the ownership and operation of Inčukalns remain under one entity state owned JSC Conexus Baltic Grid, this storage capability is a prime leverage point for firms that can negotiate favorable storage contract or offer specialized storage services. Its strategic importance cannot be overstated: controlling or having access to such a facility confers significant competitive advantages within the regional energy market.

#### 3.3.4 Power Generation

Gas-fired power generation, largely under state-owned Latvenergo, remains a challenging segment for new entrants. Given the strategic importance of ensuring stable and affordable energy for citizens, the government maintains control over critical assets. Regulatory constraints, state ownership, and the essential role of these plants in national

energy security render them unlikely arenas for private competition or acquisition. Market participants seeking to enter Latvia's gas sector may find it more feasible to focus on other stages of the value chain, rather than competing for access in this state-protected segment.

In this context, Under Porter's lens, gas-fired power plants would typically offer opportunities for cost leadership or differentiation (e.g., improved efficiency, leveraging advanced technologies), but state control in Latvia's power generation segment restricts the strategic levers new firms can pull.

Under Gereffi's lens, the heavy state involvement in power generation and the sector's national security role represent a high level of governance, meaning that broader policies (e.g., public service obligations) and geopolitical imperatives override typical market forces, limiting open competition for new entrants.

Often, such segments can also be subject to strict state regulation, for example, the provision of Public Service Obligation to state companies for the purchase of raw materials, gas, for example, for thermal stations at preferential prices that will be subsidized from the state budget.

#### 3.3.5 Distribution

Distribution in Latvia exemplifies the natural monopoly scenario at the local level. AS Gaso operates the distribution network, and the costliness of building competing infrastructure makes alternative providers economically unviable. Although unbundling from Latvijas Gāze aligned with EU directives and improved transparency, the fundamental monopoly character persists (Latvijas Gāze report, 2023). Newcomers face insurmountable barriers if they attempt to construct parallel networks.

Consequently, under Porter's lens, distribution activities (akin to outbound logistics) are critical to ensuring that gas delivery is efficient and cost-effective, yet the natural monopoly and high infrastructure costs limit how much a firm can differentiate or reduce costs at this stage.

Thus, the only realistic avenue into distribution would involve acquiring the existing operator—an expensive and politically sensitive undertaking. Recent shifts, like the sale of AS Gaso to an Estonian operator (Eesti Gaas), highlight cross-border interest, but such transactions are rare (Eesti Gaas, 2023). According to Gereffi, the governance structures

around infrastructure ownership and unbundling requirements dictate who can operate in the distribution segment, illustrating how industry-wide rules and state priorities shape entry barriers for all potential competitors.

### 3.3.6 Retail

The retail stage of Latvia's gas value chain is the most accessible for new entrants. As of May 2023, Latvia's retail market is fully liberalized, with regulated tariffs for households removed and around 30 active suppliers competing for customers. To compare recent household gas prices across EU member states and better understand Latvia's competitive positioning, see Appendix B. This environment allows firms to enter by acquiring existing retail companies or building operations from scratch. As the most competitive segment post-liberalization, this stage offers direct entry for foreign or domestic players. Porter's "marketing and sales" activity is paramount here—firms can stand out via innovative pricing, green energy products, digital platforms for billing and energy management, or value-added services that appeal to environmentally conscious and cost-sensitive consumers. The intensifying competition in retail empowers customers with choice and encourages suppliers to innovate.

A notable example is Eesti Gaas (Elenger), an Estonian company that expanded into Latvia's retail sector. By leveraging its established LNG supply chains, competitive procurement strategies, and cross-border experience, Eesti Gaas successfully entered a market that had once been dominated by a few players. This real case supports the capstone's analysis by demonstrating how, in a reconfigured Latvian gas market, a well-prepared foreign participant can capitalize on policy reforms, infrastructure access, and the liberalized retail environment to establish a substantial presence. Eesti Gaas's expansion underscores that new entrants, whether through acquisition or strategic market positioning, can navigate the changed value chain conditions and find profitable niches in an evolving and more open Latvian gas industry (Eesti Gaas statement, 2023).

In sum, Latvia's natural gas value chain now presents a complex interplay of structural monopolies, liberalized segments, regional integration, and regulatory adaptations. Firms that can align their strategies with the unique characteristics of each value chain stage—leveraging assets like Inčukalns UGS, negotiating access to LNG

terminals, adapting to natural monopoly conditions in transmission and distribution, respecting state interests in power generation, and innovating in the retail space—stand to benefit. The example of Eesti Gaas's successful market entry reinforces the notion that strategic, informed approaches can unlock opportunities in a sector that, until recently, was tightly controlled and vulnerable to geopolitical influence.

## 4. Potential Market Entry Points into Latvia's Natural Gas Market

### 4.1 Mapping the Value Chain: Key Insights and Preliminary Considerations for Market Engagement

Entering Latvia's retail gas market is a realistic and achievable goal, whether through acquiring an existing supplier or starting a new operation. The liberalized market environment, combined with consumers' willingness to switch providers and a supportive regulatory framework, creates favorable conditions for new entrants. While challenges like market saturation and brand loyalty exist, they can be overcome with innovative services, competitive pricing, and a strong focus on customer experience. By leveraging these strategies, new players can effectively compete and capture market share in Latvia's dynamic retail gas sector. Key Insights at a Glance in the Table 1.

| Factor | Supply | Transmission | Storage (Inčukalns UGS) | Power Generation (Gas-Fired Plants) | Distribution (AS Gaso) | Retail |
|---|---|---|---|---|---|---|
| **Natural Monopoly** | No (Multiple LNG routes, external sources) | Yes (Single TSO, infrastructure high cost) | Yes (Single storage operator, unique resource) | No (Multiple plants possible, but major plants largely controlled by state-owned Latvenergo) | Yes (Local network monopoly) | No (Fully liberalized, multiple suppliers) |
| **State-Owned** | No (Primarily foreign/traded LNG suppliers) | Partially (Conexus partly state-owned) | Yes (Conexus Baltic Grid partly state-owned) | Yes (Key assets owned by Latvenergo, a state-owned utility) | Previously state-linked; now owned by Eesti Gaas, but still monopoly | Some major players state-owned (e.g., Latvenergo as supplier) but also many private entrants |
| **Competition Level** | Moderate/High (competing LNG sources) | Low (Single regulated TSO, no direct competition) | Low (Single storage operator, regulated access) | Limited (Key generation capacity with one major SOE; private entry challenging) | None (Natural monopoly distribution) | High (Approx. 30 active suppliers; competitive) |
| **Market Liberalization Status** | Open (Imports from multiple terminals) | Regulated third-party access (EU mandated) | Regulated third-party access, strategic asset | Partially liberalized; core generation by state entity, no direct retail competition on generation side | Regulated monopoly (unbundled but no competition) | Fully liberalized since May 2023 |
| **Regulatory Oversight** | EU/Latvia energy authorities oversee tariffs, imports | Yes (PUC regulates TSO tariffs and access) | Yes (PUC regulates storage access and rules) | Yes (PUC and government oversight on state-owned generation for energy security) | Yes (PUC regulates distribution tariffs) | Yes (Oversight ensuring fair competition and consumer protection) |
| **Potential for New Entrants** | Moderate (Need LNG supply agreements, infrastructure access) | Limited (No parallel transmission infrastructure) | Limited (Capacity leasing possible, but dominated by existing operator) | Low (State dominance in gas-fired generation, strict regulations, limited privatization) | Very limited (Must acquire incumbent, high cost) | High (Can enter or create a start-up easily; differentiation possible) |

Table 1: Overview of Structural and Regulatory Factors Across the Latvian Natural Gas Value Chain

Latvia's natural gas value chain offers a mix of opportunities and challenges across its stages. The supply stage benefits from diversification and strategic partnerships but

faces infrastructure dependencies. Transmission remains monopolistic, yet regional integration and regulatory support facilitate participation. In storage, purchasing the Inčukalns UGS facility presents a significant opportunity, although with substantial challenges due to existing operator dominance and regulatory complexities.

The power generation stage offers limited competitive opportunities due to state ownership and strategic importance to national security, suggesting that companies may focus on other segments or related energy sectors like renewables. Distribution is characterized by natural monopoly, with impossible entry mainly through acquiring the existing operator, AS Gaso by Estonian Eesti Gaas.

The retail sector stands out as the most accessible stage for new entrants, thanks to full market liberalization and consumer openness to switching providers. Successful cases like Enefit's expansion and Latvenergo's diversification demonstrate viable strategies through acquisitions or building new brands with innovative services.

For companies considering entry into Latvia's natural gas market, it's crucial to thoroughly evaluate the opportunities and obstacles at each stage. For instance, when a mid-sized firm which I would consult for exploring this market, partnering with local entities eased their navigation through regulatory complexities and helped establish trust with local customers. Leveraging enabling factors such as market liberalization, ease to entry, and supportive regulatory frameworks can enhance the likelihood of success. Strategic investments, partnerships, and a focus on innovation and customer service are key to navigating this evolving energy landscape of Latvia.

In sum, Porter’s analysis shows how firms can optimize internal processes to reduce costs or differentiate, while Gereffi’s underscores how EU-level rules and cross-border linkages expand or limit these possibilities. This dual approach reveals both where in the chain a firm may find its niche and how external policy/infrastructure changes shape those niches.

### 4.2. Market entry Points

Building on the dual-framework analysis, this section addresses the central question of how new entrants can successfully establish a presence in Latvia's transformed gas market. This is the contribution of the research: a strategic roadmap informed by Porter's firm-level cost/differentiation drivers and Gereffi's industry-level governance changes.

Let me emphasize why this market is a focus area. The reasons are as follows: it is a young market, having been liberalized only in May 2023. Additionally, there is a 100% dependence on external gas sources. In other words, the country and the region face a constant shortage, requiring daily efforts to secure volumes from external suppliers.

Imagine you are the decision-maker at a natural gas firm looking to set up in Latvia's market or region. In the past, the country's natural gas market was heavily dependent on Russian supplies, leaving limited room for newcomers and little strategic flexibility. Today, that picture is very different. With the EU pushing for greater diversification, the growth of LNG infrastructure, and a fully liberalized retail environment, Latvia is offering multiple paths for companies of various sizes and specialties to find a foothold.

Table 2 illustrates distilled a set of strategies which can cover most of companies.

**Key Takeaways**:

- **Large (International)** firms have the capital and scale to secure upstream (Supply) and storage advantages, and can potentially acquire retail competitors. Their main disadvantage is difficulty accessing power generation or distribution due to state and monopoly constraints (Strategy option matching: 1.1.; 1.2.; 3.1.; 5.2., 6.2.).
- **Mid-Size (Regional)** firms find the best fit in activities like targeted LNG capacity deals, some storage leasing, and especially retail entry. They may also provide specialized services to power generation and distribution (Strategy option matching: 1.2.; 2.1.; 3.1.; 6.1.).
- **Small (Local/Non-Regional)** firms have the most realistic opportunities in the **retail segment**, where the market is fully liberalized. They can focus on niche

services, digital platforms, and green offerings without large infrastructure investments. (Strategy option matching: 4.2.; 6.1.; 6.2.; 6.3.).

| Value Chain Stage | Possible Strategies/Opportunities | Large (International) | Mid-Size (Regional) | Small (Local/Non-Regional) |
|---|---|---|---|---|
| 1. Supply | **1.1. Secure long-term LNG capacity at Klaipeda** to ensure stable supply and price hedging | High (ample capital and leverage for long-term contracts) | Moderate (might need joint ventures or credit lines) | Low (complex negotiations, large volume requirements) |
| | **1.2. Flexible spot market trading**leveraging multiple LNG routes to arbitrage seasonal price differences | High (global portfolio and liquidity) | Moderate (may need careful timing and smaller volumes) | Low (limited access to wholesale markets) |
| | **1.3. Partnerships with established LNG suppliers** to gain entry without building own infrastructure | High (can form strategic alliances) | Moderate (can partner regionally) | Low (hard to attract strong suppliers) |
| 2. Transmission | **2.1. Obtain firm transmission capacity bookings** to secure reliable transport | Moderate (may require negotiation and established relationships) | Moderate (feasible with some capital and planning) | Low (costly and complex; limited scale) |
| | **2.2. Participate in FinEstLat capacity auctions** to optimize flow routes | Moderate (benefit from integrated market) | Moderate (regional presence helps) | Low (complex, limited leverage in auctions) |
| 3. Storage (Inčukalns UGS) | **3.1. Long-term storage capacity leasing**for seasonal arbitrage and security | High (large firms can afford big capacity blocks) | Moderate (affordable smaller allocations possible) | Low (high financial commitment, complex forecasting) |
| | **3.2. Offering balancing and flexibility services** to other market participants | Moderate (can leverage portfolio flexibility) | Moderate (can find niche services) | Low (requires storage access and advanced capabilities) |
| 4. Power Generation | **4.1 Partial stake or JV with Latvenergo or other plants** (if ever allowed) | Low (state dominance and strategic interests limit opportunities) | Low (difficult without state support) | Low (beyond the reach of small entrants) |
| | **4.2. Provide efficiency/green solutions** to existing generators (e.g., CHP optimization, consulting) | Moderate (large sustainability expertise) | Moderate (regional service contracts possible) | Moderate (small specialist firms could offer niche services/tech) |
| 5. Distribution | **5.1. Acquire the existing distribution operator (AS Gaso)** | Low (very capital-intensive and politically sensitive) | Low (cost and regulatory approval daunting) | Low (unrealistic for small entrants) |
| | **5.2. Technology partnerships for network modernization** (smart grid tech) | Moderate (if they have tech resources and relationships) | Moderate (regional tech partnerships possible) | Low (hard to influence monopoly operator) |
| 6. Retail | **6.1. Start a new retail supplier operation**focusing on digital platforms, eco-friendly products, and excellent customer service | Moderate (brand building needed but feasible) | High (well-positioned regionally with moderate capital) | High (lowest entry barrier, can differentiate with services) |
| | **6.2. Acquire an existing retail supplier** to gain immediate customer base | High (ample funds to buy established player) | Moderate (may afford smaller targets) | Moderate (small firms could buy a niche retail player) |
| | **6.3. Offer bundled services (gas + green electricity + efficiency services)** to differentiate | High (can integrate offerings from multiple sources) | High (enhances regional presence and brand) | High (low capital needed if services are digital and outsourced) |

Table 2 Possible Market Entry Strategies and Feasibility Across Latvia's Natural Gas Value Chain

One of the most direct ways in is through the region's LNG network. Latvia doesn't have a major LNG terminal of its own, but the nearby Klaipeda terminal in Lithuania and the Inkoo terminal in Finland have become vital sources of non-Russian gas for the Baltic region. If you're a larger player with solid financial backing, you might negotiate long-term capacity reservations at Klaipeda—mirroring Latvenergo's ten-year deal—to ensure a steady flow of LNG into Latvia. This approach provides a dependable supply foundation and the chance to lock in stable prices. As the Estonian Paldiski terminal comes online, there's even more room for maneuver. By spreading risk across multiple terminals, you can brace yourself against unexpected pipeline maintenance disruptions or sudden political events that might limit gas flows.

To offer more value than competitors, consider establishing long-term LNG supply contracts based on TTF (Title Transfer Facility) price indexes with the mix of fixed product with producers from countries like the United States, Norway, Qatar. These agreements provide price stability and enhance supply security—crucial factors highlighted by past issues like the maintenance problems with the Balticconnector pipeline.

Latvia's integration into the FinEstLat gas market is another avenue. By participating in this three-country trading zone (Latvia, Estonia, Finland), you can source gas from whichever point offers the best price and then move it freely to where demand is strongest. For a medium-sized trading firm, this environment is particularly attractive: buy low across the border, store gas at Latvia's Inčukalns Underground Gas Storage when prices are favorable, and sell high during winter peaks. The freedom to shift volumes smoothly across borders and exploit seasonal swings turns the Baltic region into a flexible staging ground for making margins, even without controlling upstream. This can be significant investments, in the nutshell for storing 100 mcm of gas as of price of TTF on December 2024 around 50 mln eur excluding VAT and injection and storing costs.

If your company has the capital and appetite for infrastructure investments, influencing the value chain directly is another route. Consider exploring opportunities related to Inčukalns UGS, a critical piece of Latvia's energy puzzle. Gaining partial ownership or a long-term leasing agreement might be challenging—given regulatory scrutiny and the strategic importance of this facility—but if achieved, it offers

exceptional leverage. You'd not only ensure your own supply security but also become a key player in providing balancing services and strategic reserves to others in the region. This kind of asset control can turn you from just another supplier into a cornerstone of Baltic energy reliability.

Considering national security concerns that might limit foreign ownership of such critical infrastructure and private domestic interests. However, it is not necessary to directly absorb this asset, it is enough to buy long-term capacities for withdrawal and injection, which will allow you to control most of the volume to cover demand in Latvia and the region.

For smaller firms or startups eager to make their mark, Latvia's newly liberalized retail segment is where creativity and innovation can shine. With roughly 30 suppliers already on the playing field, standing out demands more than a good price. Could you bundle gas with energy-saving consultations, smart home solutions, or green electricity? Maybe your online platform makes switching suppliers painless, or your customer support is more responsive and transparent than the established giants. Such value-added services, digital tools, and eco-friendly packages can win the loyalty of consumers who are increasingly interested in sustainable energy and better user experiences. Instead of competing head-on with larger incumbents, focus on the modern consumer's needs—ease, choice, and trust.

Beyond these traditional entry points, consider the future direction of Latvia's and Europe's gas markets. The EU's decarbonization drive, the potential blending of biomethane or hydrogen into existing grids, and the rise of digital marketplaces are all signals that today's landscape is not static. By exploring agreements with local farms for biomethane production, investing in hydrogen pilot projects, or offering digital analytics tools that help customers optimize their energy usage, you position yourself at the cutting edge of change. This forward-thinking stance can attract the attention of policymakers, earn credibility among environmentally conscious customers, and help you shape a market that will increasingly reward low-carbon solutions and data-driven efficiency.

In essence, entering Latvia's natural gas market now is like stepping onto a playing field with multiple entryways, each suited to different strengths and strategies. Larger firms might assert themselves by locking in LNG capacity or influencing storage

infrastructure. Nimble traders can leverage the FinEstLat zone and storage capacities to capture seasonal opportunities. Smaller, service-oriented newcomers can shine in the retail space by focusing on user experience, brand differentiation, and eco-friendly offerings. Across all these paths, staying agile, fostering partnerships, and paying close attention to shifting policies and sustainability goals are key. By understanding the market's new fluidity and embracing a flexible approach, you can discover the perfect niche to build a lasting presence in Latvia's evolving natural gas ecosystem.

These entry point strategies advance the literature on energy market liberalization by synthesizing firm-specific tools (Porter) with structural considerations (Gereffi). While previous studies often focus on either internal optimization or external policy shifts, this capstone combines both to illustrate practical pathways in a formerly monopolistic market that is now open and regionally integrated.

## 5. Conclusion

Latvia's rapid shift from Russian gas dependency to a diversified LNG-based supply underscores the complex interplay of state regulation, infrastructure ownership, and geopolitical pressures. This capstone demonstrates how two analytical lenses—Porter's value chain and Gereffi's global value chain—together illuminate where entrants can achieve cost advantages or differentiation in Latvia's gas sector and how regional integration reshapes these opportunities.

Why is this important? As the EU pushes for decarbonization and energy security, Latvia illustrates how smaller markets can pivot swiftly by embracing liberalization, diversifying supply, and cooperating regionally. Policymakers can harness these insights to enhance unbundling policies, encourage storage investments, and promote competitive retail structures. Firms can tailor strategies by securing stable LNG contracts, focusing on niche retail innovations, or pioneering green solutions that align with consumer demand and sustainability goals.

*Key Takeaways for Policymakers and Industry Players*

*Prioritize Strategic Storage:* Expanding underground gas storage capacity mitigates seasonal price volatility and empowers both new and established firms to stabilize supply—a point that highlights Porter's cost management approach and Gereffi's emphasis on infrastructure governance.

*Support Retail Market Differentiation:* With full liberalization, smaller entrants can excel by bundling digital services, offering green packages, or simplifying supplier-switching—reflecting Porter's focus on innovation and customer value.

*Leverage Cross-Border Integration:* Harmonized EU rules and unbundling norms reduce barriers to entry but also require navigating evolving policies—mirroring Gereffi's insight that global governance structures can enable or constrain market participation.

Future Research could examine the role of biomethane or hydrogen in Latvia's decarbonization, applying the same dual-framework approach to find out whether low-carbon transitions present similar entry opportunities. Further empirical studies, such as interviews with regulators or key market actors, would validate these findings and refine strategies for broader adoption across EU transitioning natural gas markets.

**References**


1. European Commission. (2022). *REPowerEU plan*. Retrieved from https://energy.ec.europa.eu/repowereu_en

2. Gereffi G., Korzeniewicz M. (1994). Commodity Chains and Global Capitalism. Bloomsbury Academic

3. Gereffi G. (2021). Global Value Chains and Development. Redefining the Contours of 21st Century Capitalism.

4. Neumann, A. and C.v. Hirschhausen (2015): Natural Gas: An overview of a lower-carbon transformation fuel. Review of Environmental Economics and Policy, 9(1): 64-84.

5. Neumann, A., Rüster, S., & von Hirschhausen, C. (2014). Long-term contracts in the natural gas industry: A literature survey and data on 426 contracts (1965–2014). DIW Berlin Data Documentation; 2015/77

6. Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99–120.

7. Gordon, D. V., Gunsch, K., & Pawluk, C. V. (2003). A natural monopoly in natural gas transmission. *Energy Economics, 25*(5), 473–485. https://doi.org/10.1016/S0140-9883(03)00057-4

8. Porter, M. E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. Free Press.

9. International Energy Agency (IEA). (2023). World Energy Outlook 2023. Retrieved from https://iea.blob.core.windows.net/assets/86ede39e-4436-42d7-ba2a-edf61467e070/WorldEnergyOutlook2023.pdf

10. Directorate-General for Energy (European Commission). (n.d.). *In focus: EU energy security and gas supplies.* Retrieved from https://energy.ec.europa.eu

11. Statista. (2021). *Russian gas dependence in Europe by country.* Retrieved from https://www.statista.com/statistics/1201743/russian-gas-dependence-in-europe-by-country/

12. Demertzis McWilliams (2023). *How much will the EU pay Russia for fossil fuels over the next 12 months?* Retrieved from

https://www.bruegel.org/analysis/how-much-will-eu-pay-russia-fossil-fuels-over-next-12-months

13. Brendan A'Hearn (2023). Finnish and Baltic gas consumption stable in 2023. Argus. Retrieved from https://www.argusmedia.com/en/news-and-insights/latest-market-news/2527299-finnish-and-baltic-gas-consumption-stable-in-2023

14. International Energy Agency (2024). Latvia 2024. Energy Policy Review Retrieved from https://iea.blob.core.windows.net/assets/40d40536-4044-459e-9891-d586f1977bfd/Latvia2024.docx.pdf

15. Biermann, R., & Harsch, M. (Eds.). (2017). *The Palgrave handbook of inter-organizational relations in world politics*. Palgrave Macmillan.

16. Corner House. (1999). *The cost-benefit analysis dilemma*. The Corner House Briefing Paper.

17. Klaipėdos Nafta AB. (2023). *Klaipeda LNG terminal capacity allocated for 2024*. CE Energy News. Retrieved from https://ceenergynews.com/lng/klaipeda-lng-terminal-capacity-allocated-for-2024/

18. Public Utilities Commission of Latvia (2023). ANNUAL REPORT FOR 2023 Retrieved from https://www.sprk.gov.lv/sites/default/files/editor/PUC_Annual%20report_2023.pdf

19. Orlen Group. (2023). *Company overview*. Retrieved from https://www.orlen.pl/content/dam/internet/orlen/pl/en/investor-relations/about-the-company/company-overview/ORLEN_Company_Overview_EN_06_2023.pdf.coredownload.pdf

20. Baltic Regional Gas Market Coordination Group (n.d.). EU Agency for the Cooperation of Energy Regulators (ACER) Retrieved from https://www.acer.europa.eu/gas/network-codes/gas-regional-initiatives/baltic-regional-gas-market-coordination-group

21. Timothy F. Bresnahan (1989), Chapter 17 Empirical studies of industries with market power, Handbook of Industrial Organization, Elsevier, Volume 2, , Pages 1011-1057,

22. Baumol, William J., Panzar, John C., and Willig, Robert D. 1982. Contestable Markets and the Theory of Industry Structure. New York: Harcourt Brace Jovanovich, Inc.

23. Megginson, W. L., & Netter, J. M. (2001). From state to market: A survey of empirical studies on privatization. *Journal of Economic Literature, 39*(2), 321–389.

24. Joskow, P. L. (2008). "Lessons learned from electricity market liberalisation." *The Energy Journal*, 29(Special Issue), 9–42.

25. Latvenergo. (2022). *Klaipedos Nafta AB and Latvenergo strengthen energy security in the Baltic region*. Retrieved from https://latvenergo.lv/en/jaunumi/preses-relizes/relize/klaipedos-nafta-ab-and-latvenergo-strengthen-energy-security-baltic-region

26. Secretariat welcomes landmark progress in the unbundling of Moldova's gas TSO (2023) Energy Community.

27. Latvijas Gāze JSC (2023). *Annual report for 2023*. Retrieved from https://lg.lv/uploads/IFRS-Latvijas-Gaze-ANNUAL-REPORT-2023.pdf

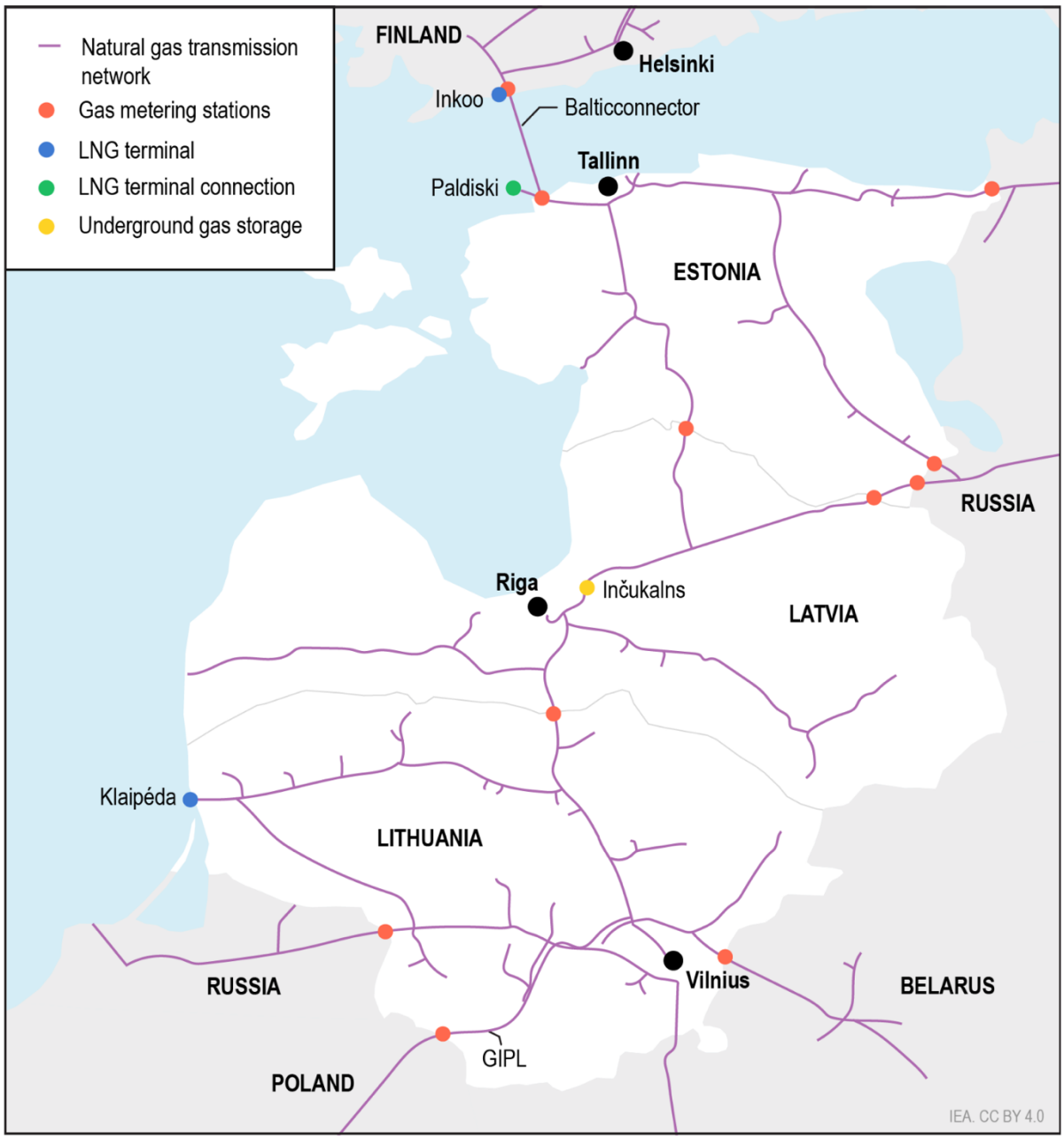
28. News.err.ee. (n.d.). *Eesti Gaas signs agreement to buy Latvian gas network*. Retrieved from https://news.err.ee/1608948701/eesti-gaas-signs-agreement-to-buy-latvian-gas-network

29. Eesti Gaas. (2023). *Eesti Gaas expands to the Latvian household gas market*. Retrieved from https://www.gaas.ee/en/eesti-gaas-expands-to-the-latvian-household-gas-market/

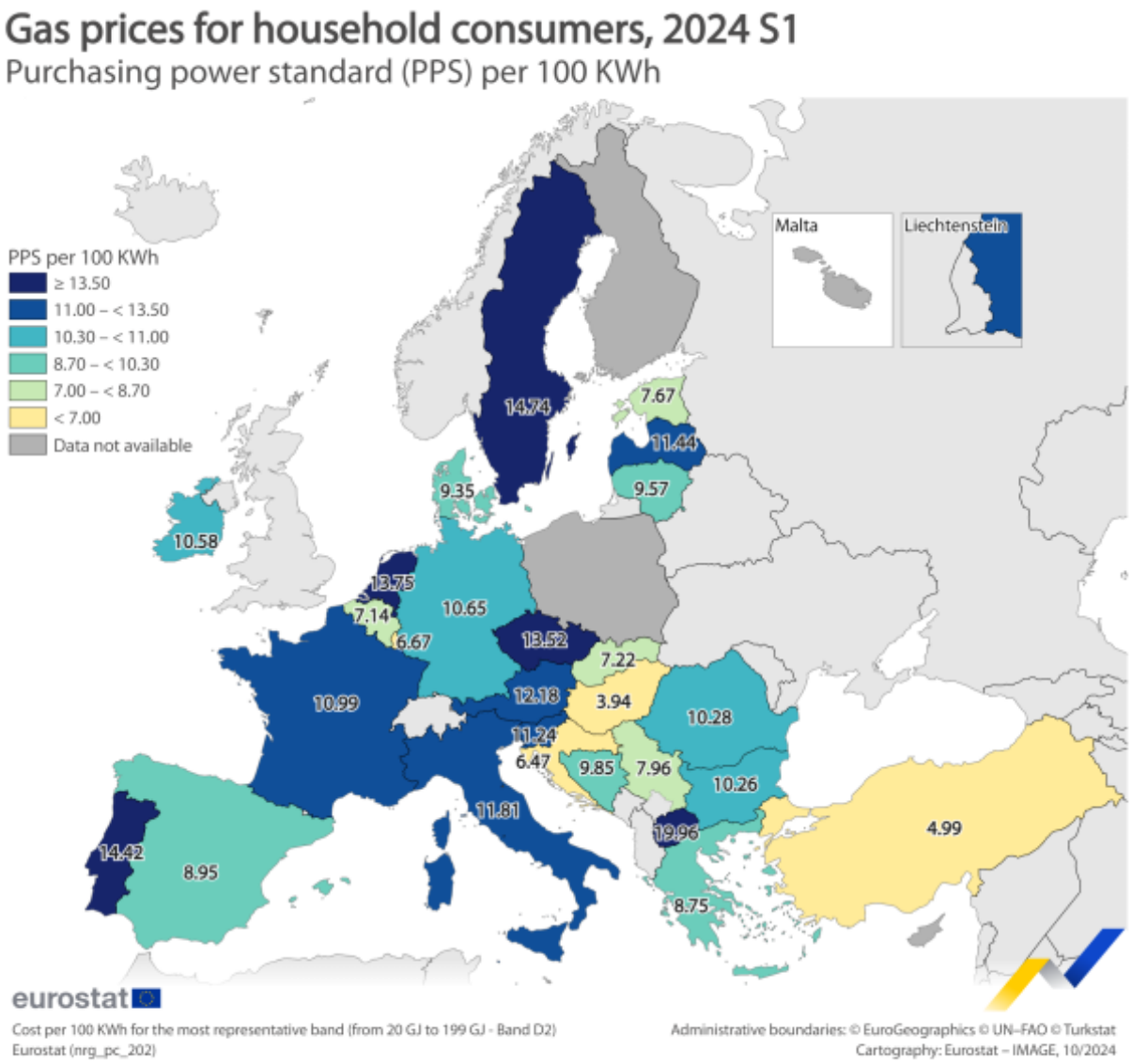
30. Heather, P. (2020). *European traded gas hubs: The supremacy of TTF.* Oxford Institute for Energy Studies.

## Appendices

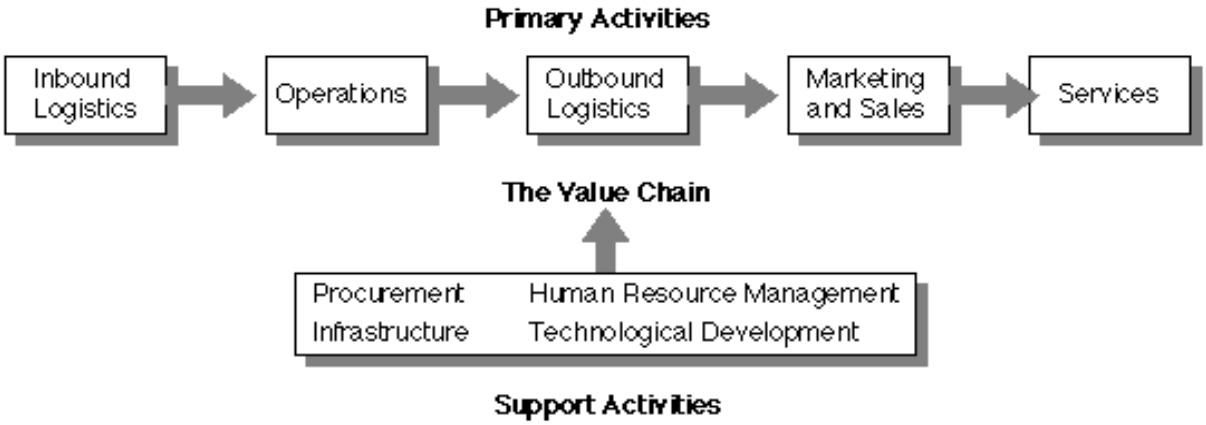
### Appendix A – LNG Terminals in Estonia, Latvia and Lithuania



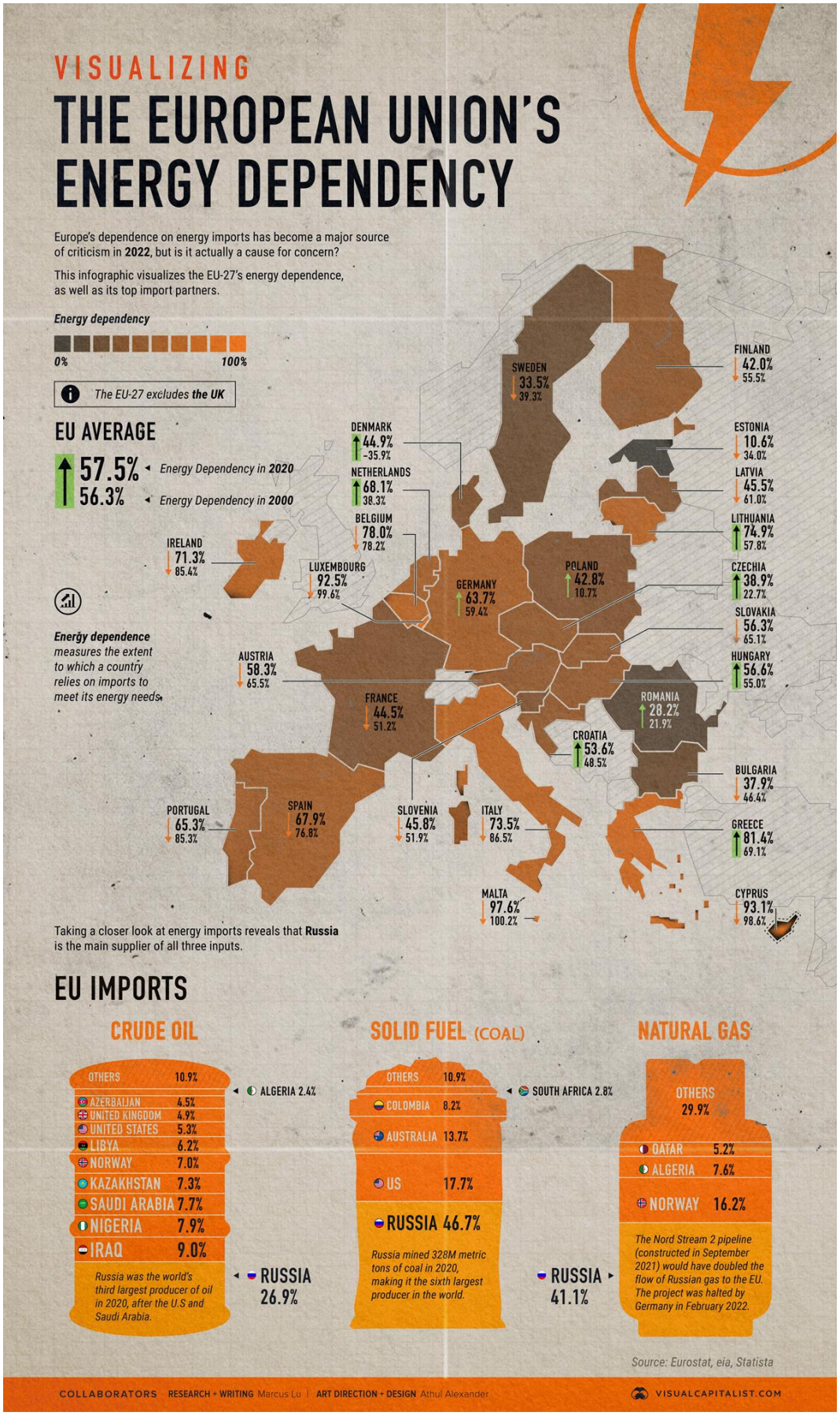
**Appendix B – EU Households prices, 2024**



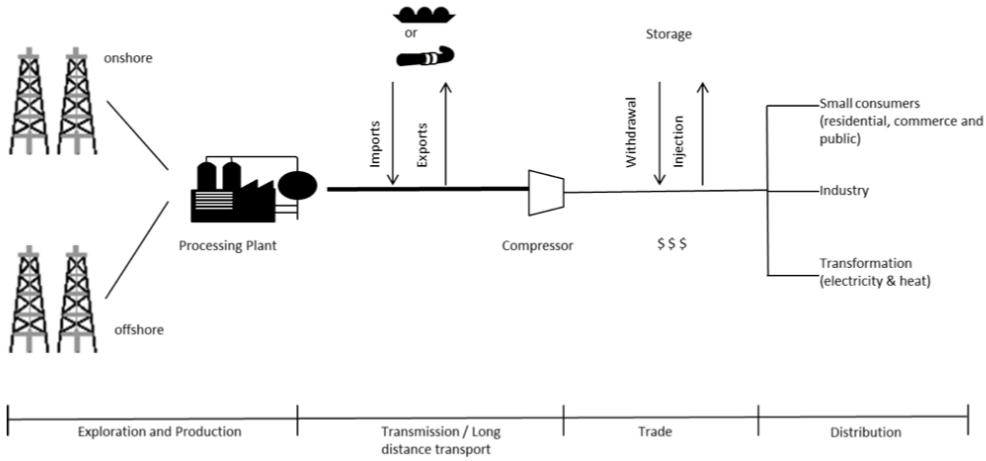
**Appendix C- Porter's Value chain**



## Appendix D – Russian gas dependence of EU



## Appendix E – Natural Gas Value Chain




Source: Neumann, A., Rüster, S., & von Hirschhausen, C. (2014)