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Natural Gas Contracts

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I hereby declare that the work submitted is mine and that where I have made use of another's work, I have attributed the source(s) according to the Regulations set in the Student's Handbook.

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It is dedicated to my family.

Abstract

This dissertation was written as part of the MSc in Energy Law, Business, Regulation and Policy at the International Hellenic University. Energy is one of the most important factors for the world economy and the well-being of the world population, because without it there can be no economic and social progress. The reduction of available energy sources worldwide combined with the high degree of external dependence and the continuous increase of energy demand by European countries lead to the development of the gas sector. Security of supply, organization of the energy market under competitive conditions and environmental sustainability are the main concern of the European Union in order to safeguard the public interest.

As much as human well-being, industrial competitiveness and society in general depend on secure sustainable and economical energy, legislation is called upon to rectify the problems faced in the energy market and to try to tackle existing functions with immediate intervention. In such a context, the application of competition rules is an extremely useful tool for restructuring the energy market, and in particular the gas market, in terms of long-term contracts and the clauses that govern them. The European Union regulatory framework for energy policy is called upon to emphasize the limits of competition, taking into account the field of security of supply.

Keywords: energy, natural gas, gas, contracts, liberalization, long- term contracts, transactions, clauses, take or pay clauses, European Union, European Commission, European Parliament.

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Introduction

The growing demand for energy combined with the finding of environmental degradation and climate change has led states in recent years to seek solutions that are more closely linked to the idea of innovation and the adoption of the principles of sustainable development. A special manifestation of this environmentally friendly development form are the projects for the rational exploitation of “clean” energy, the utilization of which is supported by the European Union in the context of achieving its environmental objectives and the security of energy supply. They are a clean one primary source for energy production, commercially attractive, with a limited scale of burden-modification of the environment and in principle easily reversible environmental interventions. Public and private companies as well as individuals are the factors that, together with the rapid technological progress, promote the development process under the conditions of international market liberalization and the free movement of capital.

The entry of natural gas into the energy market at European level has highlighted the need to reorganize and delimit the demands of the parties on the energy front. The peculiarity of the European gas market lies in the fact that third-country producers are not subject to direct scrutiny of EU law and as a result there are malfunctions in the energy markets. The European Commission has an intervening role as guardian of competition in the gas market, ensuring the necessary regulatory means to address the shortcomings and consolidate competitive conditions. The prevalence of long-term gas contracts in Europe has piqued the interest of the European Commission, on the one hand due to the lack of adequate and effective regulation, and on the other due to the nature of the contract model with pre-liberal market conditions. Global gas markets have been built through mechanisms of balancing interests and emerging risks, such as the inclusion of clauses that serve objectives such as investment support, the implementation of long-term business plans and the achievement of stability and security.

Chapter 1. The position of natural gas in the energy sector

Natural gas is a combustible gas extracted from the geological formations and consists of a mixture of hydrocarbons, in particular methane hydrocarbons, small amounts of nitric oxide and carbon. The ratio mixture becomes nice due to natural conditions such as cooling or compression¹. Natural

¹ Fortsakis Th.(2009), *Energy Law*, Sakkoulas A., p. 71.

gas has a lower environmental impact than other conventional fuels both in extraction and in use and is therefore considered as ecological. The natural characteristics of natural gas make it affordable in the industrial sector, mainly in power plants which save energy losses and reduce their operating costs².

In the past, natural gas was characterized as energy of the lower class and mainly as a by-product of oil extraction, but over the years it has become an autonomous and primary energy source of a wide range mainly due to strategic factors such as large reserves resulting in energy and coverage of the needs of the planet and its energy and diffusion worldwide. Its use becomes easy mainly due to its transport with a duct indicator. Natural gas, therefore, enters as a basic raw material in all sectors of energy consumption, on the one hand for electricity for heat production as it contributes to the saving of energy losses, and on the other hand for the facilitation of transport³. These properties have made natural gas, at European level, the second most important energy source which corresponds to 23.3% of energy consumption⁴.

1.1 The peculiarities of the gas market

The difference between the structures related to the goods and the production technology, more specifically to the oil and the natural gas, is located in the different possibilities of transport. The transport of oil is usually carried out by special ships or tankers, thus reducing the degree of dependence of producers on a bilateral agreement. However, natural gas is transported both through pipelines at more competitive prices, and by sea by liquefied natural gas (LNG) transport vessels with less geopolitical risk. The direct connection of commercial activities in the context of the gas market with infrastructure and fixed assets of high capital intensity and the need to secure the market from the first stages of an infrastructure project differentiate gas exploration and production from the corresponding activities in the oil market.

Applying a delimitation framework, the gas market consists of four vertically interdependent distinct sub-markets a) the extraction / production market (upstream), b) the network access market or otherwise the transmission and distribution system capacity through high and low pressure pipelines respectively , c) the purchase of storage and d) the purchase of supply to

² Law 2364/1995, Article 3, paragraph 2

³ Chatzopoulos, V. (2001), *The liberalization of the Natural Gas market in Greece*, Court of Justice of the European Union, p. 700.

⁴ EU Energy in Figures: *Statistical Pocketbook* (2004), Office of the EU, p.42.

customers (downstream). There are differences in these markets and for this reason the regulatory - regulatory framework for their release is specialized per market. The delimitation of the relevant markets is particularly important but also imperative due to the different competitive conditions that prevail in each of these markets. In particular, the market access to the network, otherwise the market for gas transmission services, depends on the operation and operation of a network of pipelines and related facilities in the form of a natural monopoly and is an ex ante regulated field under European directives (sectoral regulatory policy)⁵

Group 1	Group 2	Group 3	Group 4
Gas-on-gas markets	Prices indexed to substitute energy prices	Oil-linked price markets	Regulated markets
Liberal markets with volatile prices generally not in 'sync' with other energy sources. – Large number of suppliers and buyers; – Ample storage and transportation systems; – Sophisticated markets with financial instruments.	Gas prices movements in proportion with other fuels (especially oil-based products and coal) – Limited number of suppliers, many buyers; – Storage and transport controlled by few players; – Some financial markets trading gas.	Gas prices linked directly to oil prices. Large proportion of imported gas. – Limited number of suppliers, many buyers; – Storage and transportation controlled by buyers; – No significant financial markets trading gas.	Controlled markets with government mandated prices. – Usually limited number of buyers and sellers; – Most infrastructure controlled by state; – No or limited influence of market forces. Pooled prices often used. Government takes price risk.
US, UK, Canada and NW Europe	Europe (Central, Southern), SE Asia	Japan, Korea, Taiwan, LNG China, LNG India	Middle East, Russia, Non LNG Asia (inc. China, India)

Figure 1: Global gas market (natgas.info)

In particular, the supply of natural gas is the sale, including resale (compressed natural gas and liquefied natural gas), of natural gas to wholesale or final customers, who buy for their own use and as a commercial activity is found both upstream and downstream market. At European level, the procurement undertaking is treated as a commercial activity potentially subject to a licensing regime, as the relevant choice rests with the Member States⁶. Therefore, Member States, when implementing licensing schemes, set out objective and non-discriminatory criteria which must be met by the company requesting the relevant procurement license, but also make public the relevant procedures for achieving the desired transparency.

⁵ RAE Decision 2011/1

⁶ Directive 2009/73 / EP (European Parliament), article 4, paragraph 1

1.2 The European Union's role in the energy sector

The foundation of the legislative initiative on the energy market lies in the search for the body responsible. According to Article 4 TFEU, energy is one of the sectors of the economy which falls under the joint competences of the European Union and the Member States⁷. With the adoption of Article 194 TFEU in 2009, a comprehensive energy policy is being implemented for the first time with the aim of ensuring sustainability, energy security and competitiveness through joint action by Member States. The importance of the adoption of this article lies in its role as a legal basis for the adoption of the necessary measures at Union level in order to introduce specific arrangements in the energy sector and to remove the ambiguity that has prevailed over the division of responsibilities in the energy sector. The European Union's first focus on energy policy can be found in the 1995 White Paper, which aimed to improve security of supply and create an internal energy market⁸.

The main pillars of the emerging energy policy are explicitly mentioned in Article 194 TFEU and are to ensure the functioning of the internal energy market, energy supply, the promotion of energy efficiency and the saving of energy in combination with the development of new and renewable energy sources; and finally promoting the interconnection of energy networks. Linking energy policy to the context of the functioning of the internal market pursued by Article 194 TFEU is in line with the fact that achieving a free and competitive internal energy market is a priority of the European Union. At the same time, the operation of the energy market refers to the existence of competitive conditions that will enable the choice between more suppliers and the access of all companies to the stages of the supply chain of the relevant market. The competitive internal market acts as a link between the above-mentioned fundamental pillars of the European Union's energy policy. Finally, we conclude that the introduction of a specific chapter in the TFEU for energy also has political implications, as it highlights the special importance of the Common European Energy Policy for the European Union and implies a consistent legal nature due to the supremacy of EU treaty law over producer⁹.

⁷ TFEU, Article 2, paragraph 2

⁸ European Commission (1995), *COM95/682*, Available at <https://op.europa.eu/en/publication-detail/-/publication/bc335af2-4ed1-4690-8a0d-797613dbd5f0/language-en> (last access 27/12/2021)

⁹ Fragkakis, N. (2009), *Short Review of Energy Law in Europe*, p. 569.

1.3 The liberalization of the natural gas market

The process of liberalizing the natural gas market is the process of importing the development of competitive conditions in hours which traditionally operated under a state monopoly regime or in a different wording the transition from state-controlled to competitive markets. The principles governing it are market opening to competition, the abolition of the exclusive rights and privileges of former monopoly public undertakings, the prohibition of discrimination between market participants, the gradual granting of customer and supplier choice and the freedom of third-party access to the grid with objectivity, transparency and impartiality. These principles dominate the political liberalization of the market without, of course, the open nature of the market being equivalent to the absence of regulation or the uncontrolled action of the participants¹⁰.

Over the years, the gas market has shifted from a centralized regulator, dominated by a vertical vendor, to an open and competitive two-way market with free choice of suppliers and customers, governed by a new regulatory framework. One of the main demands of competition policy is the release of network industries from the monopoly state base with realistic and economically viable solutions with the ultimate goal of ensuring the freedom of choice of supplier. The free choice of seller and buyer presupposes the free access of suppliers to the networks, the arrangements adopted at EU level focused on opening up the gas market¹¹. In particular, network management companies have historically been vertical because they operated at all levels of production, supply and distribution.

Both theory and jurisprudence treated these companies as national monopolies, which due to their uniqueness and necessity often led to practices of abusing their dominant position. For example, they have implemented certain practices of denying access to the gas network which were judged as attempts to intervene in the conditions of competition in neighboring markets for the benefit of their associated - due to full verticalization - production and supply companies.

The legal-political point of view proved that the environmental, technical and economic factors, the construction of parallel natural gas transmission networks is not possible with the result that the network is a natural monopoly and constitutes the operative cause of the creation of an integrated regulatory supervision system. The creation of parallel networks is economically, technically and environmentally unbearable. The release of accessibility has emerged as the only viable alternative,

¹⁰ Marinos, M. (2003), *Access to energy network*, Sakkoulas A., p.1

¹¹ Panagos, Th. (2012), *The institutional framework of the energy market*, Sakkoulas, pp.193-197

namely the use of existing infrastructure by competitors, which could be achieved after the introduction of a specific regulatory framework¹².

In view of the above and the dependence of the natural gas trade on pipelines, the political liberalization of the energy market and in particular of gas has provided the necessary incentives to adopt regulatory measures across the supply chain in order to ensure access by fair conditions in the domestic market with the ultimate aim of ensuring free competition in the gas trade. The preference for ex ante regulatory intervention marks the replacement of market mechanism by an administrative process of consolidating competition objectives. Regulation represents one of the most powerful forms of intervention in the economy, but it is a major institutional tool in areas that were previously monopolistic. In particular, market dynamics themselves have failed to remove the entrenched structures of natural monopolies and the dysfunctions of vertical integration of energy companies, which were typically under state control, and to consolidate competition. Therefore, this regulation emerged as the only way out to create and maintain competitive conditions¹³.

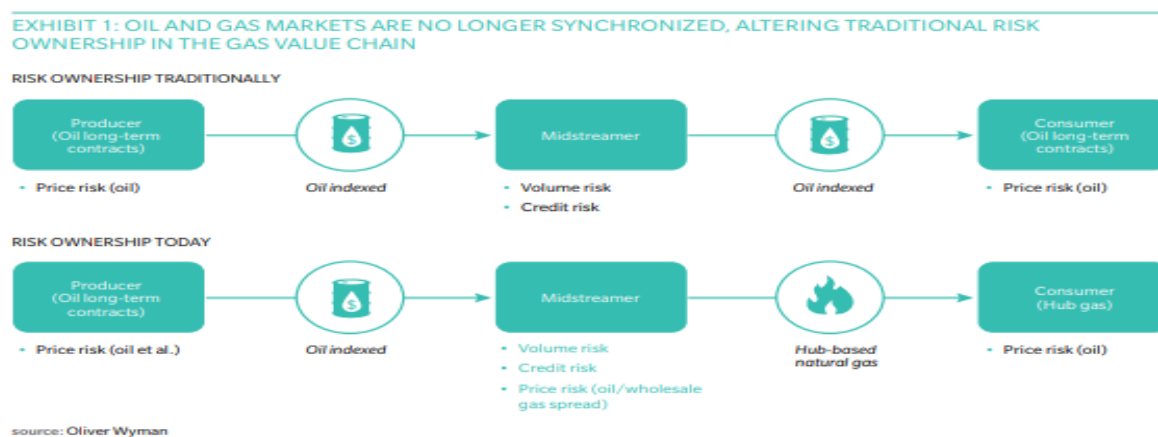


Figure 2 : Oliver Wyman

European Union legislative initiatives have focused on establishing common rules for the internal market, removing national monopolies and stimulating cross-border trade. The arrangements adopted from the outset include the distinction between supply chain activities and sub-market segmentation. In the context of demarcation, the foundation of the special regulatory framework was the distinction in two markets, namely the market of network access and the market of gas supply. This separation principle reflects the need to remove the commercial incentives or interests of network operators in relation to their involvement in gas trading activities. This distinction

¹² Stamati, M. (2009), *The right of third parties to access the gas transmission system*, Energy and Law, tome 12, p. 64.

¹³ See Panagos, Th. (2012), *The institutional framework of the energy market*, Sakkoulas, pp. 21-25.

reflects the different competitive conditions prevailing in the two markets, which are directly interdependent because the operation of one market acts within the operation of the other. In particular, the market for access or transport services is highly regulated, as it is involved in the operation and operation of a pipeline network that has the characteristics of a natural monopoly. However, the supply market, i.e. the sale of natural gas, is minimally regulated, while the gradual granting of the supplier option to eligible customers from the point of view of demand and the abolition of the existing exclusive rights of state-owned enterprises the offer. Furthermore, the market access to the network occupies sub-markets, ie the transmission, distribution and storage of natural gas, while due to the dependence of the European Union countries on external sources and in particular the dependence on third countries that produce natural gas, production control of the European Union and may not be regulated.

Directive 1998/30/EP consolidates the basis of the liberalization policy, due to the fact that it introduced a regulatory licensing framework for the construction and operation of gas stations and networks and laid the foundations for open access to networks with the provision of accounting separation of activities. fully integrated companies to restore market transparency and prevent conflicts of interest. Consequently, the implementation of liberalization was carried out under Directive 2003/55/EP, where competitive conditions for access to the network were pursued through measures of a structural and operational nature. In particular, at the structural level, the distinction and separation - at the level of economic policy decision-making - of energy activities (transmission, distribution, supply) and the appointment of managers for transmission and distribution networks and liquefied natural gas storage facilities. At the operational level, the recognition of users' right of regulated access - without discrimination - to transmission, distribution and storage networks with predetermined tariff criteria was crucial to fostering competition in the gas market. In particular, the regulation of third party access as a means of shaping competitive conditions is a foundation and a central axis of the liberalized gas market, as it is a means of facilitating transit trade¹⁴. In addition, access means the right to use the natural gas networks for a financial consideration, which must be paid by the users to the respective administrator. The access model is based on balancing private and public interest through a set of mandatory arrangements for all participants. The ultimate goals of regulated access are to achieve transparency, non-discrimination in the market and equal treatment of participants - users at

¹⁴ Directive 2003/55 / EP, Article 1, Directive 2009/73 /EU.

reasonable prices, as well as the consolidation of legal certainty for the participation of an individual in an environment where until recently flourished monopoly status¹⁵. Regulated access occupies both demand, with the gradual granting of the right to choose a supplier, and supply, with the abolition of the exclusive rights of the former public monopolies in the field of supply.

Subsequently, the inefficiency and inadequacies of the existing framework led to the adoption of the third energy reform package, which includes Directive 2009/73 /EP as well as EP Regulations 713/2009, 714/2009, and 715/2009, and which aims at the strictest and most efficient separation of gas transmission system operators to ensure independence from production and supply activities through three alternative approaches (proprietary, designation of Independent System Operator or Independent Transmission Operator), making investments, as well as promoting regional cooperation, achieving greater market transparency regarding network operation and procurement.

Finally, it is important to emphasize that a new phase of the energy market liberalization process is already under way. The European Commission has set guidelines for the transition to a new market model and a new correction for the energy sector to interested market participants. These guidelines will form the basis for the forthcoming legislative reforms at EU level, as according to the European Commission, the current market model dates back to a time when central power plants aimed to produce these energy sources on a territorial basis in limited area, usually within the borders of a Member State¹⁶.

Chapter 2. Natural gas contracts and transnational agreements

2.1 The role of transnational agreements

Legislative initiatives to liberalize the natural gas market in Europe have been confronted with the status quo of natural gas supply activities that have traditionally been based on long-term contracts with specific typological features. The European Commission's inquiry has highlighted the contractual relationships of companies operating in the gas market with an emphasis on energy and strategy such as liberalization of energy market notification¹⁷. As a result the problem that arose was the deprivation of the benefits of the new liberalization regime for the parties that remained

¹⁵ See Panagos, Th. (2012), *The institutional framework of the energy market*, Sakkoulas, pp. 195-197.

¹⁶ European Commission (2015), *COM 2015/340*, Available at <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32015R0340&from=EN>, (last access 27/12/2021)

¹⁷ Athanasiou L. (2004), *The liberalization of the natural gas market*, Nomos, p.51

bound by a long-term supply contract. In any case, what needs to be understood is that the liberalization of the natural gas market does not mean the cancellation or non-implementation of existing gas supply contracts, but signals the detection and correction of market defects and the removal of anti-competitive practices¹⁸.

Transnational agreements are the basis on which gas supply contracts are concluded between commercial companies operating in the field of production and companies participating in the gas supply and resale market. The intergovernmental agreements lay the foundations and guidelines for the terms of trade cooperation between gas importing and exporting countries. Greek market included natural gas in the country's energy balance in 1987, when the first intergovernmental agreement was signed between Greece and Russia for the supply of Russian natural gas through pipelines¹⁹. Subsequent agreements were signed between Greece and other gas-producing countries such as Algeria, Azerbaijan and Turkey. In addition, attempts were made to connect Greece with Italy, Albania and Azerbaijan through transnational agreements on promoting cooperation in the field of interconnection and transit of natural gas²⁰.

2.2 The Decision 994/2012/EU as a mechanism for the exchange of information on intergovernmental agreements

The compatibility of the embedded contractual terms with EU law is a major issue that arises as such transnational agreements are concluded between Member States of the European Union and third countries. To address this problem, EU-level Decision 994/2012/EU²¹ established a mechanism for the exchange of information on intergovernmental agreements that have an impact on gas supply. According to the prevailing legal framework, the decision reflected the effort to promote a high level of coordination between the Member States on existing and new Intergovernmental Agreements. In particular, the detection and elimination of cases of incompatibility of provisions of state agreements with EU law has been the ultimate goal and the Member States have been required to report to the European Commission their existing legally binding agreements which affect their operation, in internal energy market or security of energy supply, as well as their new

¹⁸ Pitsos. N. (2011), *Long-term exclusive supply contracts in energy and competition law. Especially the case of “take or pay” contracts in natural gas market*, Energy & Law, t.16, p.30

¹⁹ Government Gazette 66/A/7-4-1995, Law 2299/1995

²⁰ Fortsakis Th., Farantouris N. (2016), Energy Law, NB, pp 62-64

²¹ European Parliament(2012), *DECISION No 994/2012/EU*, Available at <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32012D0994&from=EN> (last access 28/12/2021)

agreements, once canceled, taking into account any confidentiality issues. This mechanism, through the European Commission, carried out compliance checks following the conclusion of such agreements by a Member State and a third country. It also enabled states to inform the European Commission of their negotiations on intergovernmental agreements, to consent to the participation of the European Commission in those negotiations, and to request an audit of the compatibility of the draft Intergovernmental Agreement. The decision states that it is the responsibility of future states to initially evaluate for an Intergovernmental Agreement having an impact on the internal energy market²². This provision reaffirmed the decentralized application of competition rules at Member State level as Member States would have to check whether the terms of a transnational agreement also comply with EU competition law provisions. The decision did not create a disclosure obligation in relation to the respective commercial contracts but provided for the possibility for commercial companies negotiating trade agreements with operators from third countries to seek guidance from the commission in order to avoid possible conflicts with European Union law. It is important to note that this possibility has never been exploited, as no draft agreement has been submitted to the committee on a voluntary basis for ex ante review²³.

Although, this control system was useful for obtaining information on identifying problems that arise between legal systems, it was ultimately insufficient to resolve the incompatibility problem. The result was that it was difficult to renegotiate the agreements as the positions of the signatories had already been determined, which created political pressure to prevent any aspects of the agreement from being amended. In addition, intergovernmental agreements often do not contain appropriate termination or adjustment clauses that could allow Member States to remove the compatibility within a reasonable time. Due to the apparent ineffectiveness of these arrangements, it was crucial to institutionalize the European Commission's mediation prior to the conclusion of agreements between a Member State and a third country through the ex ante enforcement of relevant drafts to ensure legality²⁴. The analysis of the contracts notified to the European Commission showed that about one third of the contracts were incompatible with European Union law, while today no contract has been successfully renegotiated. The European Commission's

²² European Commission (2015), *COM 2013/638/EU*, Available at <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32013D0638&from=EN> (last access 28/12/2021)

²³ European Parliament, Council of Europe (2012), *DECISION No 994/2012/EU*, Available at <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32012D0994&from=EL> (last access 28/12/2021)

²⁴ Itkonen A.K. (2016), *Intergovernmental agreements in energy*, European Commission - Fact Sheet, Available at https://ec.europa.eu/commission/presscorner/detail/en/MEMO_16_309 (last access 28/12/2021)

antitrust inquiries into gas supply contracts have highlighted the need to revise this decision in order to achieve greater transparency²⁵.

2.3 The Decision (EU) 2017/684

A new regulation replaces existing decisions and includes a mechanism for the exchange of information between Member States and the European Commission, as well as a mix of optional standard clauses and guidelines for Intergovernmental Agreements, which will help prevent cases from incompatibility with the European Union at an earlier time point. It is a regulation you enter with the publication of the new decision (EU) 2017/684²⁶, which mobilizes the control tools at an earlier point, introducing the obligation of the Member States to inform the European Commission of their intention to start negotiations with a third country for concluding new intergovernmental agreements or amending existing ones.

The European Commission acquires a new intervention role of particular importance as the ex ante examination of intergovernmental agreements reflects a comprehensive effort to supervise and regulate the practices of foreign companies by preventing the exploitation of their bargaining power to circumvent negotiation of energy contracts. This development results in security of supply, due to the strategic role of natural gas companies, which often operate as new “political weapons” of the states. We conclude that it is a decision that will be the most binding measure for external energy and policy, which will contribute to the best coordination of achieving cohesion to strengthen their negotiating influence on the external contractual relations of the Member States.

Chapter 3. The model of long-term natural gas contracts

3.1 The dynamics of the model of long-term gas contracts in the European Union

Natural gas trade in Europe was based on the model of long-term supply contracts, which provided the advantage of continued availability of gas at prices acceptable and predictable by the parties. The required stability occurred after securing the delivery of a specified quantity of natural gas

²⁵ European Parliament, Council of Europe (2012), *DECISION No 994/2012/EU*, Available at <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32012D0994&from=EL> (last access 28/12/2021)

²⁶ European Parliament, Council of Europe (2012), *DECISION (EU) 2017/684*, Available at <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32017D0684&from=EN> (last access 28/12/2021)

through long-term contractual relationships in a market characterized by dependence on external suppliers. A key feature of long-term contracts is their long validity, which in some cases reaches up to fifty years. Economic risks and the construction of the necessary infrastructure for the commercial activities of production, transmission, distribution, supply, and storage have led to the reconstruction of cross-border gas trade. At the same time, the parties' trade relations were determined by specific mechanisms that balanced the risks and reciprocal incentives. There is a global pattern of this balancing act, which has resulted from the conclusion of long-term supply contracts, which are vertical links between companies producing and supplying gas and which differ from vertical integration, as they lack direct control and operational management of networks. The inclusion of mandatory purchase terms regardless of receipt (take or pay clauses) and gas pricing based on international petroleum prices (oil indexation) are the main features of these contracts, which aim to hedge risks and ensure a continuous supply of the buyer with gas but also as collateral to producers.

3.1.1 The commitment of the parties as the most important condition of long-term gas contracts

The most important condition of long-term gas contracts is the commitment of the parties to a business transaction that involves a degree of security, as the parties choose to expose themselves to legal sanctions in case of non-compliance with their commitments. The contractual relationship achieves the sharing of risks and the alignment of mutual incentives after negotiation of the contractual terms by the parties. The long-term supply contract de facto reflects the needs of both parties in the gas market and aims to ensure access to the infrastructure of the production units and the formulation of long-term supply contracts which with the incorporation of special contractual conditions will ensure the service the interests of the project owner (production unit or pipeline network), who bears the burden of business risk and the fixed costs of operation and management of its facilities²⁷.

²⁷ Papamixalopoulos K. (2008), *Negotiating a new generation of energy contracts*, Energy & Law, p.27

3.1.2 The long-term contracts in the upstream and in the downstream market

The conclusion of long-term contracts that are found in the *upstream market* where the company is active in the field of production and contracts with companies that undertake the import of natural gas in the markets of the European Union is also a common practice of companies operating in the *downstream market*. In particular, in downstream market is observed between the supplier-importer relationship with customers within the Member State. *Long-term downstream contracts* mean that the buyer - gas imports - passes on to its customers the clauses on long-term and mandatory purchase of a quantity of natural gas, so that the demand is completely identical with the supply to avoid the possibility of quantity. Following an investigation, the European Commission found that this mechanism could lead to disastrous consequences for the consumer, as long-term downstream contracts minimize supplier choice and consequently reduce the potential for a dynamic competitive market.

3.1.3 The long-term supply contracts as an integral part of the European natural gas market

It is important to note that at least 90% of natural gas imports to the Member States of the European Union are carried out under long-term supply contracts, which makes this contractual structure an integral part of the European natural gas market²⁸. In particular, the gas market in Europe until 2000 was characterized by national monopolies and a lack of competition. Long-term contracts have always been the means of ensuring the distribution of market risks throughout the supply chain. Security of supply then created a wide network of natural gas transmission and distribution pipelines, thus establishing the model of concluding long-term supply contracts, the aim of which is the agreement of the parties, since their configuration is not dictated by market's forces. In the case of Greece, the main supplier of natural gas in the Greek market, as well as mainly the import of natural gas and liquefied natural gas remains today the public gas company (DEPA), which has as object a) the sale of natural gas to large, mainly industrial consumers, b) the sale of natural gas to local gas supply companies, c) the distribution of natural gas in areas where gas

²⁸ Neuhoff K., von Hirschhausen Chr. (2006), *Long-term vs. Short-term Contracts :A European Perspective on Natural Gas*, CWPE 0539, p.2-4

supply companies have not been established and d) the sale of natural gas for the movement of vehicles²⁹.

Long-term contracts bind the seller and the buyer to a bilateral agreement with a duration that usually ranges between 15-30 years and includes predetermined obligations from both parties³⁰. It is common for the duration of this type of supply agreement to accurately approach the service life of the relevant production units to be a network of gas pipelines. In the upstream market they are considered as the safest source of supply for European countries while at the same time they have significant legal, economic and political implications. The dominance of this model of transactions in the gas industry is indisputable, which records after analyzing 426 long-term gas supply contracts concluded between 1960 and 2014³¹.

3.2 Energy hubs as an alternative selling method

The constantly changing conditions of the natural gas market have highlighted the development of an alternative method of selling gas that takes place through transaction nodes(energy hubs)³², where the supply takes place within an opportunistic market, i.e. a direct delivery market (spot market)³³. Knotting negotiations are essential for the development of a fluid and integrated market, because they shape their volatile gas prices, which are inextricably linked to the fundamental principle of supply and demand (gas to gas competition)³⁴. The model of trading nodes in the early stages of its operation takes over the management function as it ensures the balancing of quantities and the coverage of the demand on a short-term basis. In this case, the transfer of ownership of natural gas can take place more than once, a fact that increases liquidity in the market, while at the same time, through the existence of a central control of all transactions, the transparency of any natural gas is enhanced. It is important to note that the characteristics of the trading nodes are a) the possibility of alternation of the counterparties, b) their short-term nature, as the quantities of gas usually concern immediate delivery within the same or the next day, c) the

²⁹ DEPA, Available at <https://www.depa.gr/fysiko-aerio> , (last access 27/12/2021)

³⁰ Neuhoff K., von Hirschhausen Chr. (2006), *o.p.*, p.2

³¹ Neumann A. (2015), *Wither Long-Term Contracts?*, Available at <https://energieclimat.hypotheses.org/25646> (last access 27/12/2021)

³² Farantouris N. (2014), *Energy, Energy, Networks and Infrastructure*, NB, p.268

³³ Neumann A. (2015), *Wither Long-Term Contracts?*, *o.p.*

³⁴ Farantouris N., Shoina M.(2014), *Energy, Networks and Infrastructure, Energy hubs in natural gas - Function and Perspectives*, NB, p.183

possibility of differentiation of gas sources and d) the accessibility of a large number of buyers and sellers.

However, the adoption and prevalence of this trading model in the gas industry was difficult due to the small number of participants, the high cost of investments and the low degree of interconnections. Although nodes help to increase competitiveness and liquidity, their operation can only be effective within a mature and open market. The European market does not yet have the necessary degree of maturity and competitiveness for trade nodes and their advantages to find ground in all European countries. The nature of the transaction nodes faces obstacles because it presupposes the existence of a single gas network, the provision of a corresponding pricing system and a regulatory framework that will set new operating rules. Enhancing the credibility of traders in the system of nodes is necessary to ensure through adequate capacity the system and through equal access of market participants. Node transactions lead to costly and ongoing negotiations between the parties and thus increase transaction costs³⁵.

The coexistence of the trading hub and the model of concluding long-term contracts create challenges in the modern gas industry. The price of natural gas as a consequence varies depending on whether the change is made through a node I am a direct contract and can tear strong pressures on companies that sell at non-competitive prices. In addition, price differences - between the opportunity and the oil-indexed price - can affect the gas terminals resulting from a long-term contract and lead to a possible breach of the mandatory purchase terms regardless of receipt. According to the above, in recent years there has been the opening of negotiations between suppliers and buyers in terms of redefining the minimum received quantity, while at the same time the price adjustments of the coupling with the price of oil tend to adapt to changing conditions.

3.3 Characteristics of long-term natural gas contracts

The long-term sales contract is widely known as the *Gas Sales Agreement (GSA)*, and it provides for the sale and purchase of gas between the parties for a stated period of time. In addition to mentioning the two parties, namely the seller and the buyer, the GSA recites the essential components of their commercial relationship which will comprise at the minimum, the aggregate quantity of gas to be sold, the price payable, the required specification of gas, the intended delivery

³⁵ Farantouris N. (2014), *Energy, Energy, Networks and Infrastructure*, NB, p.283

point, the mechanics of transportation and delivery, the sanctions for non-performance and the circumstance in which the agreement can be terminated³⁶.

3.3.1 The provision of specific time and quantity and the consequent promotion of investments

The main advantages of long-term contracts are the provision of specific time and quantity and the consequent promotion of investments. Yet, as long as demand is inelastic and market concentration remains high, existing certainty leads the parties to vertical agreements with solid foundations. In addition, the long-term contract contributes to the construction of the market but also to the consolidation of stability in general because there are stable and there is a flow of energy sources for the benefit of the public interest. The need to finance the construction of infrastructure and pipeline networks occurs through the mandatory purchase clauses of long-term gas supply contracts and thus ensures their continued and predictable revenue stream. The long duration of these contracts allows the lender to recover investments, while the mandatory purchase clause guarantees the profitability of the project. In this sense, the mandatory market clause is the basis for business decision-making and financing of a large-scale pipeline network³⁷.

3.3.2 A provision of energy sources with a predetermined price formation mechanism

One of the most important features of long-term contracts is the provision of energy sources with a predetermined price formation mechanism, which protects against price fluctuations, which consolidates security of supply. In addition, energy market countries face different price and quantity risks depending on their position in the supply chain³⁸. The conclusion of long-term contracts facilitates the optimal distribution of risks between the parties and in particular the transfer of any risk to the party, which has the ability to manage it. This risk-sharing supports the business activity of the parties, as on the one hand the seller is protected from excessively low

³⁶ Azaino E.(2012), *Natural Gas Contracts: Do Take or Pay clauses fall foul of the rule against penalties?*, Available at https://www.academia.edu/10666060/Natural_Gas_Contracts_Do_Take_Or_Pay_Clauses_Fall_Foul_of_The_Rule_Against_Penalties, p.7

³⁷ Hauteclocque A., Glachant J.M. (2009), *Long-term energy supply contracts in European Competition Policy: Fuzzy not crazy*, European University Institute, Available at <https://cadmus.eui.eu/handle/1814/15548>, p. 1, (last access 28/12/2021)

³⁸ Hauteclocque A., Glachant J.M. (2009), o.p., p.2

prices and the absence of demand and on the other the buyer is protected from the risk of high pricing policies and the absence of available quantities of energy market. In this way, long-term contracts function as a mechanism to secure the active parties in the energy market.

3.3.3 The incorporation of contractual terms

Another very important advantage of long-term contracts is the incorporation of contractual terms that provide for the possibility of renegotiating specific provisions of the contract in the future as it provides the required flexibility as it reduces the transaction costs of the new negotiations of the parties. In terms of cost-effectiveness, concluding long-term contracts provides incentives for long-term planning because the producer is able to plan its production in the long run and enables high-cost investments at all stages of the supply chain as cash volatility decreases. Furthermore, given the high degree of dependence on gas imports, long-term contracts are inextricably linked to security of supply policy and the uninterrupted supply of different energy sources. Therefore the risks associated with dependence on external sources are reduced while ensuring a stable availability of energy sources³⁹.

3.4 Financial basis of long-term contracts

The prevalence of long-term bilateral gas supply contracts at the international level undermines the *transaction cost theory*, due to the necessity of significant investments both on the part of the seller-producer and on the part of the buyer. According to Williamson, a long-term contract is one of the many forms of vertical coordination and in particular an intermediate state between spot market transactions and complete verticalization between seller and buyer. The most important feature of infrastructure related to the energy sector and in particular gas is the significant investment of capital in large-scale projects such as facilities, mining and gas transmission and distribution networks. Investments in this type of infrastructure are long-term and fully dependent on the producer-supplier business relationship and cannot be diverted in order to use the fixed assets to which they relate, in a different way⁴⁰. At the same time, the investments are not easily accessible because their cost recovery is not possible in the short term, which results in the

³⁹ See Hautesclocque A., Glachant J.M. (2009), o.p., p. 3

⁴⁰ Williamson O. (1979), *Transaction Cost Economics: The Governance of contractual Relations*, The University Press of Chicago Press, Available at <https://www.journals.uchicago.edu/doi/abs/10.1086/466942> , p. 233 (last access 29/12/2021)

enhancement of the risk of hostage situation (hold-up). The specific investments related to these trade relations prove the asymmetry between the parties as a consequence of the unilateral placement of large amounts of funds in investments that contain non-recoverable costs (sunk costs). In this light, we understand that bilateral contracts are a way of reducing transaction costs for both parties as well as a measure to avoid the phenomenon of hostage-taking, without resorting to vertical integration, but through a special design that refers to the conclusion of clauses concerning determining the duration, price and quantity⁴¹.

In particular, a long-term contract (the hybrid form between direct delivery and vertical integration markets) is a cost-cutting tool, such as the cost of negotiating, monitoring, executing, renegotiating a contract, and the cost of the particular dependency that develops as a result of specialized high-cost investments. In addition, in the event that a transaction involves the contracting of a party's capital in an investment which, if it has little value before its use, causes significant loss, the counterparty often acquires enhanced bargaining power and develops a strong incentive to appropriate the benefits. contractual relationship, through adoptions opportunistic behavior as happens when we have a change in the price he intends to pay to charge. These benefits, which consist of the added value that a party thus acquires, have the meaning of a quasi rent. The risk of this appropriation depends on the temperament of the investment, ie on the degree of specialization - function of the investment with the transaction relationship. This risk increases when investments are made to support a specific contract beyond which it would be unprofitable to undertake, such as when a party has made a large capital investment (gas extraction facility, pipeline, power plant)⁴². The amortization of the investments extends over time and is based on the proper performance of the contractual obligations of the other party⁴³. The financial viability of an investment requires long-term business relationships that will be able to support the investment project throughout its life.

This phenomenon is known as the phenomenon of hold-up problem, which jeopardizes the value of the investment and the viability of the business as it is the lever for concluding long-term contracts between buyers and sellers. In order for the risk of insufficient investment to be a consequence of

⁴¹ Arora V. (2012), *A note on Natural Gas Market Evolution in Light of Transaction Cost Theory*, University Library of Munich, Available at <https://econpapers.repec.org/paper/pramprapa/54974.htm> , p.1 (last access 29/12/2021)

⁴² See Williamson O. (1979), *Transaction Cost Economics: The Governance of contractual Relations*, o.p., p. 235

⁴³ European Commission (2010), *SEC(2010) 411 final COMMISSION NOTICE Guidelines on Vertical Restraints*, Available at <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52010SC0411&from=EN>, pp.37- 39 (last access 29/12/2021)

the hostage problem, the investment must be linked to a specific contractual relationship, be impossible to recover in the short term and be asymmetric, meaning that one party contributes the whole or the significant part. Initially the prevailing model for avoiding this risk was vertical integration, which minimizes business capital costs due to reduced exposure to market volatility risk. However, in order to alleviate the problem of the inflexibility of these contracts in terms of supply and demand fluctuations, special conditions are included, such as the mandatory purchase clauses of independent receipt. As a result, long-term contracts can be described as a tool to avoid the risks of opportunistic behavior, as the protection they provide consists in agreeing on a minimum amount of natural gas to be paid⁴⁴.

3.5 Long-term contracts for the supply of natural gas from an economic point of view

A long-term natural gas supply contract could be aimed at equitably sharing the risks borne by the parties and ensuring the uncertainty of their obligations and the stability of their trade relations. The economic feasibility on the part of the buyer aims at the basic parameter of protection of price flexibility, so that there is a possibility of reselling gas in the next stage market. The sellers, having invested significant funds, which mostly come from bank loans to complete the infrastructure projects, require a continuous flow of income. For this reason, sellers ask buyers to take the risk of quantity through the case law of mandatory purchase clauses, thus ensuring a minimum percentage of contractually defined - guaranteed input. In practice, we observe that the parties usually agree on an initial price, which is the threshold of the contract and which is reformulated by mechanisms contained in the contract, such as the year-round increase clause or the oil price coupling clause, in combined with clauses that make it possible to renegotiate the terms of the contract at predetermined time points, both in terms of price and volume. In a broad sense, long-term gas supply contracts contain mandatory purchase terms regardless of receipt, while providing security of demand for the producer and security of fixed supplies for the buyer. Therefore, the main goal of a long-term contract is to align the interests of the parties and fulfill their commitments.

⁴⁴ Neuhoff K., von Hirschhausen Chr. (2006), Long-term vs. Short-term Contracts :A European Perspective on Natural Gas, CWPE 0539, p.3

The goal of the producer-seller is to ensure a continuous flow of income because through the certainty of the demand he can plan his investment needs in the long run and mainly to fulfill, regardless of the gas demand, the contractual commitments he has made to his creditors in funding framework. In this respect, the mechanisms of long-term gas supply contracts reduce the financier's exposure to credit risk. The buyer, on the other hand, intends to secure a continuous supply because only if the agreed quantity is always available to him will he be able to adopt an equally long-term strategy in the downstream market. From this point of view, the interests of both sides are identified and the desired stability is achieved. At the same time, a long-term contract aims to protect lenders' investments in the gas industry, which, given the high cost of gas extraction, processing and transportation infrastructure, require the producer to ensure the recovery of the money invested. Ensuring the reverse flow of investment is based on a long-term contract⁴⁵.

Chapter 4. “Take or pay” clauses – The mandatory purchase clause

Long-term take-or-pay contracts (ToP) link sellers and buyers for a long period into a bilateral monopoly, generally 15 to 20 years, during which both of them have strictly defined obligations⁴⁶. The take or pay clause is a contractual condition under which the buyer undertakes either to pay the contractual consideration and receive a minimum, contractually specified quantity of gas or services, or to pay the contractual consideration for this quantity regardless of receipt· even if he is not willing or unable to pick up the quantity due to inability to resell it in the upstream market. In this sense, in the event of non-receipt of the quantity of natural gas specified in the contract, the buyer's obligation to pay is reduced to a financial commitment that bears similarities with the concept of divorce liability. On the other hand, the seller undertakes to always make available to the buyer the specified quantity of gas or services. This clause is found mainly in the long-term supply contract but also for the transportation of natural gas⁴⁷.

The inclusion of take or pay clauses in the supply contract is linked to the long-term business plans of those active in the market. In the field of natural gas, the purchase obligation concerns a

⁴⁵ See Hauteclouque A., Glachant J.M. (2009), *Long-term energy supply contracts in European Competition Policy: Fuzzy not crazy*, o.p., pp. 2-4, (last access 01/01/2022)

⁴⁶ Langridge, A. (1998), *European Regimes for ‘Take or Pay’ Contracts*, 10, OGLTR, , p.372

⁴⁷ See Neuhoﬀ K., von Hirschhausen Chr. (2006), *Long-term vs. Short-term Contracts :A European Perspective on Natural Gas*, o.p, pp.2-5

minimum percentage either of the extraction of natural gas which ranges between 75-95% of the contractually determined quantity (Annual Contract Quantity, ACQ)⁴⁸, or of the underground reserves of a deposit which is completely bound by the said contract. The minimum contractually determined quantity to be received is periodically adjusted per year (Minimum Annual Quantity, MAQ), three-month period, month or even day⁴⁹.

Another key feature of a take or pay clause is the ability to adjust and increase the quantity that is ultimately received due to the incorporation of conventional terms of flexibility. A very typical example is the fact that the parties often agree that the buyer has the ability to buy in the quantities of natural gas up to a certain percentage that exceeds the contractually specified quantity by compensating the additional quantity he receives with reduced extraction in the future. The qualification included for any reason within the specified period is usually incorporated into the contractual clause allowing the quantity of gas paid to be received at a later time. In addition, the amounts of natural gas are conventionally dependent on specific external factors conditions. According to the signed contract, the quantities of natural gas are removed, which a) the seller did not make available to the buyer, b) the buyer rejected due to non-compliance with the quality characteristics and c) the buyer could not receive due to force majeure. According to the above cases, the basic principle is deduced that a buyer cannot be obliged to pay for a commodity which could not be delivered for reasons outside its sphere of influence⁵⁰.

A corresponding possibility of adjustment is provided for the pricing of contractually determined quantities of natural gas. The revision of the price is either provided for in a contractual clause, in which case it is regular, i.e. carried out at predetermined periods of time during the validity of the supply contract, or presupposes the substantiation of a serious reason by one of the parties, in which case it is negotiated or arbitrated dispute resolution.

The receipt of the quantity of natural gas by the buyer can be determined by determining either a specific amount on the production within a certain period of time or on the basis of a percentage on the production volume of a specific gas field. Both the gas reserves and the production volume are examined periodically by the parties so that the annual extractions are modified and absorbed

⁴⁸ Williams, H.R., et al. (2000), *Manual of Oil and Gas Terms, 11th Ed.*, New York: Lexis Publishing, , pp.1083-4

⁴⁹ Celli M. (2016), *External VS. Internal Audit in the Accounting of Complex Contractual Instruments: A Survey on EU Firms*, International Journal of Business and Management; Vol. 11, No. 5; 2016 ISSN 1833-3850 E-ISSN 1833-8119 Published by Canadian Center of Science and Education, p.23

⁵⁰ Celli M. (2016), *o.p.*, p.25

at a later time. In addition, the unconditional undertaking of the purchase obligation is a guarantee for the seller and a possible risk for the buyer. The incorporation of contractual terms is aimed at achieving flexibility in the quantity not received by the buyer under the contract, while it can be offered to other potential buyers only if this alternative channeling is achieved, then the original contracting buyer released from the obligation to pay.

4.1 The practical incorporation of “take or pay” clauses in long-term natural gas contracts

The main purpose of the receiving or paying clause is mainly to guarantee the minimum cash flow to the seller who needs this security to achieve the banking capacity of the production. It offers to the investors the assurance of recovering their investment in the respective gas project and at the same time provides assurance to the buyer regarding the security of supply of the agreed quantity of natural gas by the seller. Compulsory market provisions appear as a necessary allocation mechanism by taking significant risks both on the part of the seller-producer who has invested in infrastructure, which entails high costs, and on the part of the buyer aiming at price flexibility, by enabling the possibility its ability to resell in the next stage market, according to the amount it has paid as value⁵¹.

The “take or pay” clause can also function as a penal clause which implies the payment of a lump sum, due to the breach of the contractual obligation to purchase the predetermined amount of natural gas. In this sense, its primary objective is to limit the liability of the obligated buyer and not to repair the actual damage suffered by the seller. The incorporation of this clause helps to control the buyer's liability report despite the fact that further claims of the seller are not excluded. In addition, the clauses can act as a guarantee of good performance of the contract with respect to the contracting citizen and as a guarantee of the financing of infrastructure projects that concern the financiers. As a result, in addition to the viability of the project, it is necessary to take into account future cash flows. One of the main conditions for financing gas infrastructure projects is to ensure sufficient demand for the quantity produced that buyers will commit to long-term contracts. Therefore, the inflow of revenue is the most necessary condition for the financing of a project and

⁵¹ Creti A., Villeneuve B. (2003), *Long-term contracts and take-or-pay clauses in natural gas market*, University of Toulouse (CEA, IDEI and LEERNA), pp.2-3

consequently for its viability, because it provides security in terms of extraction and pricing at all stages from exploration and production to pipeline or gas liquefaction facilities⁵².

4.2 The “take or pay clauses” & the Greek Legislator

Plenty of evidence shows that most of the long-term gas contracts entered into between the seller and the buyer have ended up in litigation in European level. In cases of "take or pay" disputes between the seller and the buyer, the buyer may request a number of defenses. The submitted document should state as defensive lines the following: a) commercial impossibility, b) force majeure and c) non-enforceable penalty. These defenses are important because most litigation they take on or pay for revolves around them⁵³.

The legal nature of the “take or pay” clause regardless of receipt has not occupied the Greek Legislator as well as there are no references either in theory or in Case Law. This contractual term can be based either on a) by virtue of the validity of the contract, or b) on the provisions of the Civil Code, or c) on the provisions relating to the penal clause of the same legislation. We could broadly support the fact that the legal nature of the clause is a matter of interpretation of the contract and in particular of the content of the clause itself and should be assessed ad hoc based on the structure of the clause in view of the ultimate purpose pursued to take advantage of the parts. Examining the take or pay clauses, according to the competition law we notice that the natural gas contract is defined as a civil contract from which legally binding consequences derive. In addition, it potentially falls within the scope of application of article 101 par. 2 TFEU.

4.3 The downside of long-term natural gas contracts

The biggest problem posed by the prevalence of long-term supply contracts is the risk of exclusion of other market participants, especially when it comes to the initial stage of market building. In particular, when the demand side remains committed in the long run, customers are not able to take advantage of future and perhaps more favorable offers from new entrants. In this way, concluding long-term contracts can restrict the entry of competitors in either the upstream market

⁵² Creti A., Villeneuve B. (2003), o.p., pp. 4-5

⁵³ Bulama B.J., *TAKE OR PAY' OBLIGATION IN NATURAL GAS CONTRACTS: ANY RESPITE FOR THE BUYER?*, Available at https://www.academia.edu/11036248/TAKE_OR_PAY_OBLIGATION_IN_NATURAL_GAS_CONTRACTS_ANY_RESPITE_FOR_THE_BUYER, p.6

or the downstream market and bring about negative results in terms of competition. The result of a long-term energy contract in relation to the competition gives the following results. The combination of the terms a) duration, b) the binding quantity and c) the content of the contract leads the one party to have a monopoly position in the market.

At the same time, contractual terms of duration and effectiveness can have a negative effect on competition, because a "freeze" on the market equates to a loss to the detriment of consumer welfare. It is, therefore, very difficult to achieve a new natural gas plant in conjunction with the right balance between contract duration and free competition. In addition, use-limiting clauses, which used to be the main contract of all long-term contracts until a few years ago, reduce the free development of competition and have already been banned.

Take or pay clauses mainly include the duration and binding nature of the terms of the contracts and their maximum influence on the formation of business liabilities. In the event that market prices for the sale of natural gas are lower than the contractually set new prices and when the buyer is unable to resell the quantity of the contract he remains bound by the take or pay clauses and as a result the existing supply contracts are inevitably amended to burdensome financial obligations and burden the financial statements of companies. Finally, when long-term contracts do not contain specific terms related to the possibility of renegotiating in a specific future period and there is a lack of cooperation and adaptability to changing circumstances, this is an equally important disadvantage for both parties.

Chapter 5. The European Commission's attitude towards long - term gas contracts

The European Commission applies competition rules as a means of liberalizing the market over long-term gas contracts, emphasizing contractual duration and third-party competitors' access to existing networks and giving birth to the market. In this way, the European Commission achieves the consolidation of legal certainty and the existence of a more competitive gas market in Europe. In addition, the European Commission aims to eliminate existing legal certainty and address competition issues arising in the energy market, with a view to enhancing consistency in the sectors of the economy. The European Commission's main concern is to highlight the difficulties that competition authorities are trying to address in relation to the liberalization of the network industries. Proposed measures are the right to terminate the contract, the structural changes, the renegotiation of contractual terms, which are not a novelty of the European Commission's

competition policy because they are found in most decisions of the process of modernizing the analysis of each constraint. The Decisions of the European Commission prove that its aim is to create and introduce specific percentages that will serve as a "starting point" between the activity that is considered anti-competitive and the activity that is considered permissible⁵⁴. The introduction of these criteria strengthens in some way the legal certainty because the market parties are now able to predict how the European Commission will analyze the long-term contracts, as well as to speculate on the measures to be taken and finally to make corresponding investment decisions⁵⁵.

Chapter 6. What could be the future of long-term natural gas contracts in the European Union?

Market liberalization efforts in Europe date back to the late 1980s. The intensification of these liberalization efforts through European Union regulatory interventions was implemented with the aim of creating a market. The regulatory interventions did not come from the existing market. European gas markets have the following characteristics. First, with regard to existing gas supply contracts, the market liberalization process has led to the renegotiation and modification of contractual terms such as pricing, duration and quantity. In particular, the levels of gas extraction applications under long-term contracts have been reduced by at least 70% in recent years, while the percentage of gas volumes payable under the mandatory purchase clause has been reduced from 80-90% to 50%-60%. This downward trend will continue until the year 2030 while at the same time the average duration of contracts has been reduced from 30 to 15 years between 1980 and 2003-2003. The reduction in the duration of long-term contracts was achieved as a result of their pre-quantitative analyzes as early as 2004, after the first step towards market liberalization in 1998⁵⁶. In addition, oil price conjugation tends to disappear, as it is gradually being implemented the model to adjust on a floating basis. The city was influenced by this fact because you are against the European Commission in evaluating the cases that occupied it.

⁵⁴European Commission (2010), E.ON. Gas (COM/39.317) , Available at https://ec.europa.eu/competition/antitrust/cases/dec_docs/39317/39317_1942_3.pdf , (last access 14/01/2022)

⁵⁵ European Commission (2009), Gaz De France Suez (COM/B-1/39.316) , Available at [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52009XC0709\(06\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52009XC0709(06)&from=EN) , (last access 14/01/2022)

⁵⁶ Neuhoff K., von Hirschhausen Chr. (2006), *Long-term vs. Short-term Contracts :A European Perspective on Natural Gas*, CWPE 0539, pp.6-21

Today there is a short-term combination in the new contracts, which do not exceed five years with flexible pricing terms and reduced contract quantity, which allows for sufficient quantities of gas to be traded in the immediate markets of the spot markets. Finally, there is the fact of appearance of the short term trading, but this fact cannot be considered as a sign of the disappearance of long-term contracts, but we may be able to envision the transition of the gas market to coexistence⁵⁷. The consequences of switching to shorter-term contracts could lead to higher prices, which will result in a reduction in gas supply. In this case, the parties to the gas market will seek to re-enter into long-term contracts to compensate for the loss. Therefore, the favorable price incentive will be the key to establishing long-term contracts and will never disappear.

Conclusions

In the light of the foregoing, the European and Greek experience shows that the evolution of the natural gas market is slow, full of challenges and contradictions. A thorough study of the case of natural gas contracts is useful in appreciating what should be borne in mind when drafting gas contracts provisions. The regulatory framework established by the European Union for the control of gas contracts in terms of their competitive form is presented as relatively complete in its key points, although, as discussed at some points above, it has significant potential for systematization, clarification and development; in particular as regards balancing and protection of the parties.

An important point of physical development, after the strengthening of long-term natural gas contracts, is the establishment of controls over competition, either for balancing purposes or for the purpose of serving a complete gas trading platform for all purposes, including the establishment of appropriate rules of operation and transparency. This is, after all, a necessary (*sine qua non*) step towards the goal of achieving a healthy and competitive market, coupled with safety requirements, which will allow the consumer to reap the best services, in the most economical conditions, without forgetting the securing and promoting the necessary investments. It is noted, however, that the investigation of its evolution based on the model of long-term gas contracts proves that it is possible to produce the intended results, but this does not necessarily prove the superiority of this model. Managers must be non-dogmatic and adapt the regulatory framework to market needs.

⁵⁷ Neuhoff K., von Hirschhausen Chr. (2006), o.p., pp.5-16

The present study aims to shed light on the field of contracts in the natural gas market. Fortunately, in a few years, the contracts will be governed by more favorable rules for the parties in accordance with the principles of competition. The structure of contracts may have changed and long-term contracts after their terms may be a thing of the past. In this case, the study will have become obsolete. But if so far, it has been useful to a reader or, even better, if it has been an opportunity for reflection and criticism, I will be happy.

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