

# IMPACT ON LIBERALISATION NATURAL GAS PRICES IN THE EUROPEAN UNION

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## **Abstract:**

*This article is part two of a study on energy market liberalization in the European Union. In order to harmonize and liberalize the internal market in natural gas in the European Union, over 15 were adopted three legislative packages successive measures which address market access, transparency and regulation, consumer protection, supporting interconnection and adequate levels of supply. From a macroeconomic perspective empirical evidence suggests that the liberalization of the gas market will bring positive effects in terms of lower prices and better service for consumers. Given the evolution of liberalization, this paper will show that liberalization has not delivered the expected results. European gas market reform was followed by a double approach. First, in accordance with EU directives, Member States were required to take at least a minimum set of key measures for the liberalization of national markets. Secondly, the European Commission has promoted efforts to improve the interfaces between national markets by improving cross-border trading rules.*

**Keywords:** *European Directive; internal energy market; price; vulnerable consumer.*

**JEL Classification:** L11, L12, L51

## **1. Introduction**

The European Union is trying to build a single market, competitive in natural gas until recently was dominated by national players with monopoly power. The ultimate goal is to build medium- and long-term energy market in which consumers can choose, including across borders, and where prices will reach the same level.

## **2. European regulations on the liberalization of the European gas market**

Liberalization of the electricity and gas markets, which are subject to EU energy policy was launched in the early 1990s, when the European Commission has developed a three-step plan. In the first phase they were adopted three Directives that ensure greater price transparency and facilitated the transit through distribution networks, and in the second and third phases was intended to progressively abolish monopoly over the production and distribution of gas (Berinde M., 2003).

The first gas directive, adopted in 1998, established the initial steps for changing industry structure by introducing network access, legal separation and regulating third-party access.

A second gas directive, adopted in June 2003 sought to accelerate liberalization for industrial consumers by 2004 and for all consumers to 2007. It introduced rules on unbundling transport supply.

Regulation 1775 of September 2005 has established detailed guidelines for third party access principles of capacity allocation mechanisms, congestion management procedures and transparency requirements. Lack of support from most European governments prior to 2000, served to slow liberalization.

However, the combination of long-term gas contracts indexed offering to supply a significant proportion of Europe and the lack progress in the liberalization of their gas markets had the consequence phenomenon called vertical foreclosure.

Conducting the survey in 2007 showed that the energy sector the second gas directive did not like the consequences achieve a competitive and transparent internal market, mainly

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for transport capacities and long-term legacy contracts. This gave rise to the third Directive in the gas sector and Regulation 715 adopted in July 2009 (repealing Directive second gas).

The two documents form a broader set of laws on the internal energy market. In February 2011, the European Council set the objective of completing the internal energy market by 2014 and the development of interconnections, to end the isolation of some Member States of European networks for natural gas by 2015 (Article 194 TFEU).

In October 2011 the European Union adopted Regulation (EU) no. 1227/2011 regarding the integrity and transparency of wholesale energy market which seeks to ensure fair trade practices are European energy markets. It gives ACER (Agency for the Cooperation of Energy Regulation) the power to collect, review and disseminate data related to wholesale energy markets, monitor markets and trade, to investigate cases of market abuse and coordinate with Member States applying appropriate sanctions. Responsibility for sanctions applicable to infringements lies with the Member States, however.

The legislative package for consumers are incorporated for "power to choose" allowing consumers to switch providers in a short time. Clearly, the decision to choose a different provider must be based on accurate information and - therefore - insert suppliers obligation to ensure that the information is kept in a transparent manner and as completely as possible. At the same time, providers must establish effective procedures to resolve any consumer complaints.

### **3. The impact of liberalization of gas market**

Liberalization performance can be measured in several ways. The effect on prices is probably the most important indicator.

European single market objective is to have an average price lower natural gas in the European Union and a degree of convergence in prices through increased competition. In contrast to the price of fossil fuels, which are usually traded on global markets with relatively uniform prices, there is a wider range of prices within Member States of the European Union for natural gas. This is, to some extent, influenced by the price of primary fuels and more recently, the cost of carbon dioxide emission certificates.

International trade in natural gas is not practiced in an organized international markets, such as that of oil or coal. The absence of an international organization of manufacturers and exporters to ensure uniform regulation of the issue price, favored the proliferation of a wide variety of trading prices and therefore the formulas are set.

Consequently, we cannot talk about an international market and the international prices of gas, but on a few large markets which gradually to evolving geographic distribution of exploitable reserves and the degree of economic efficiency of the formulation of transport, they were "associated" providing a number of areas. Basically, we can say that while oil markets are globalized, the gas is continental.

In Europe, prevalent are long-term contracts, under which prices are not determined directly based on market conditions' equity (the marginal cost of production in the long term supply-demand ratio, balance of power between buyers and sellers) but indirectly, based on complex formulas that link the gas price with that of oil.

#### **3.1. The impact of liberalization on prices for households**

Progress in the functioning of the internal energy market should have a positive impact by ensuring that wholesale prices have converged across Europe. This has not happened in the case of retail prices, where network distribution systems, energy and climate policies uncoordinated national taxes, charges and network charges vary, leading to a fragmentation of the internal market.

A comparative presentation of average prices (in euro per kilowatt hour) of natural gas for the last three years is given in Table 1.

**Table 1: Gas prices for households in the European Union (€ per kWh)**

	2012	2013	2014
EU 28	0,065	0,067	0,066
Belgium	0,066	0,066	0,058
Bulgaria	0,051	0,049	0,048
Czech Republic	0,064	0,055	0,057
Denmark	0,099	0,091	0,080
Germany	0,066	0,068	0,068
Estonia	0,052	0,049	0,046
Ireland	0,065	0,068	0,067
Greece	0,077	0,072	0,068
Spain	0,073	0,075	0,073
France	0,068	0,070	0,070
Croatia	0,047	0,046	0,047
Italy	0,083	0,080	0,077
Cyprus	-	-	-
Latvia	0,051	0,048	0,050
Lithuania	0,060	0,056	0,042
Luxembourg	0,062	0,053	0,050
Hungary	0,043	0,037	0,035
Malta	-	-	-
Netherlands	0,081	0,080	0,076
Austria	0,077	0,075	0,073
Poland	0,047	0,049	0,050
Portugal	0,084	0,093	0,098
Romania	0,029	0,031	0,031
Slovenia	0,067	0,067	0,068
Slovakia	0,050	0,051	0,050
Finland	-	-	-
Sweden	0,123	0,118	0,113
United Kingdom	0,053	0,060	0,063

Source: Eurostat, 2015

As can be seen in Table 1 the gas price for households has declined but not at the level expected. Lowest price found in Romania (EUR 0.031 / kWh), Hungary (EUR 0.035 / kWh) and Lithuania (EUR 0.042 / kWh). The highest prices are present in Portugal (EUR 0.098 / kWh) and Sweden (EUR 0.113 / kWh).

EU trends hide significant differences between Member States and between different economic sectors. This indicates weaknesses in the internal energy market, with large differences between Member States' policies regarding network costs and low taxes.

### **3.2. The impact of liberalization on prices for industrial consumers**

Gas prices are of particular importance for international competitiveness, as they represent a significant proportion of total energy costs for industrial and service enterprises. Unlike the price of other fossil fuels, which are usually traded on global markets with relatively uniform prices, there is a wider range of prices within the EU member states for natural gas.

Energy prices in the EU depends on a number of conditions of supply and demand, geopolitical situation, import diversification, network costs, environmental costs, severe weather conditions or levels of excise and taxation. Gas prices or price schemes vary from one provider to another. These can result from negotiated contracts, especially for industrial users.

While in Europe the energy has never been cheap in recent years difference in terms of energy prices between the EU and its economic partners major increased further: on average,

industrial prices for natural gas are currently in the European Union three to four times higher than in the United States, India and Russia, exceeding by 12 % the price in China is comparable to those of Brazil and slightly lower than in Japan.

Increasing energy costs but independently, developments in national, regional or European sector-specific market structure, market strategy of a company etc. can all determine the success, or failure of the competitiveness of companies and the economy. Indispensable in certain sectors, energy (be it gas or electricity) can contribute directly to increasing or decreasing production costs, with direct implications for the competitiveness of businesses (Table no. 2).

**Table. 2: Gas prices for industrial consumers in the European Union (€ per kWh)**

	2012	2013	2014
EU 28	0,041	0,040	0,037
Belgium	0,040	0,032	0,029
Bulgaria	0,036	0,035	0,032
Czech Republic	0,034	0,032	0,030
Denmark	0,045	0,037	0,036
Germany	0,048	0,045	0,040
Estonia	0,038	0,035	0,036
Ireland	0,042	0,041	0,039
Greece	0,053	0,045	0,042
Spain	0,039	0,037	0,037
France	0,041	0,039	0,038
Croatia	0,046	0,042	0,039
Italy	0,042	0,038	0,035
Cyprus	-	-	-
Latvia	0,038	0,035	0,035
Lithuania	0,044	0,041	0,028
Luxembourg	0,051	0,043	0,040
Hungary	0,041	0,040	0,037
Malta	-	-	-
Netherlands	0,040	0,042	0,039
Austria	0,044	0,043	0,040
Poland	0,036	0,038	0,036
Portugal	0,042	0,043	0,042
Romania	0,028	0,030	0,030
Slovenia	0,049	0,043	0,037
Slovakia	0,037	0,037	0,035
Finland	0,049	0,047	0,045
Sweden	0,055	0,050	0,045
United Kingdom	0,035	0,037	0,036

Source: Eurostat, 2015

For industrial consumers Table. 2 prices are the lowest in Lithuania (EUR 0.028 / kWh) and Belgium (EUR 0.029 / kWh), followed by Romania and the Czech Republic (EUR 0.030 / kWh). The first are Finland and Sweden (EUR 0.045 / kWh).

As shown in the two tables reveals that, at the end of liberalization, gas prices are lower in Eastern Europe, and the highest prices remain in western and northern Europe.

In recent years, the annual consumption of natural gas decreased, then stabilized, on the one hand the economic crisis, which resulted in reduced industrial consumption, but also due to structural changes in the European economy (lower share of heavy industry), increase the share of renewable energies and improving energy efficiency.

So far, the EU has kept its global leadership in energy-intensive exports of goods. But it is possible that European industry should be required to make greater efforts to offset higher costs for energy by continuing improvement in efficiency, taking into account physical

limitations, given that competitors strive for greater efficiency and the European industry decides to invest abroad to be as close in expanding markets (COM 2014).

The worst affected were units and steel industries of metallurgy, machine building, chemical, glass and ceramics, in which spending on gas and electricity are an important in production costs. Returning Customer losses were difficulties in marketing products, reduced production capacities, were carried restructurings and layoffs, some units have ceased production activity. The current difficulties through which the industry is reflected in the continued decline in natural gas consumption.

### **3.3. The impact of liberalization on vulnerable consumers**

Due to the economic crisis, especially the number of customers on low incomes rose sharply and vulnerability to high prices of natural gas went up. Because of specific problems faced by Member States of high unemployment and poor economic conditions in general, it is difficult to identify the most vulnerable beneficiaries and clients. In the Gas Directive the European Commission seeks to protect vulnerable consumers.

### **4. The impact of liberalization of gas market in Romania**

In Romania liberalization has meant, in theory, competition between suppliers to provide consumers quality services at affordable prices, but economically justified. This can happen only when consumers are informed about alternatives, they are aware that they can change their supplier and know under what conditions. It is not enough only the existence of regulations on switching, consumers need information to allow a decision as to their advantage.

Law electricity and natural gas (Law 123/2012) mentioned in Articles 3 to 16, tied vulnerable consumers: "The end customer household customers belong to a category that, for reasons of age, health or low income are the risk of social exclusion and to prevent this risk, benefit from social protection measures, including financial ones. Social protection measures and eligibility criteria are established by these acts. "The scheme consists of state subsidies. Estimates on the number of vulnerable consumers on the Romanian market amounted to 1.15 million from 8.36 million domestic consumers of electricity and gas. Gas prices are to liberalize by 2021 for residential customers.

After two years of gradual liberalization and after full liberalization of non-household consumers as of January 2015, the representatives of ANRE (National Agency for Energy Regulation) estimates that 24% of the total consumption of households accounted for approx. half (representing approx. 20% of total households) is the consumption of households who could afford the real price of gas, a price by about 20% over today's final price including network charges and fees. The other half of domestic consumption (approx. 80% of households) would require a social aid scheme to support this growth. Over time there have been many ways to build such a scheme, to enable accelerated market liberalization.

Alternatives that the government has had over time for social support of households suggests that households were not the real reason for postponing liberalization.

If instead to subsidize consumption by low prices, it builds a social policy that the poorest are supported with income support and the prices get to the real market, there are several advantages. Consumers can decide which sources of energy (heating, electric heating, gas, wood stoves, etc.) that is most advantageous price / quality ratio. Higher price for natural gas will make consumers and dissipate less power. Today, support through low prices benefit not just those who are very poor that neither can connect to natural gas. With an income support, these households could connect to the gas network if they wish.

The major argument against liberalization is the affordability of price increases, especially given that low natural gas prices in recent years have made a significant number of households to disconnect from the heating and switch to natural gas heating own. However,

postponing liberalization will exacerbate the problem, because households off further if cheap gas remains a better alternative for consumers than a service heating still remained at a quality / price more disadvantageous delays sector reform district heating.

Currently, the average annual disconnection from heating systems is 4% and there is a tipping point at which district heating systems in the cities come to abolish. Due to disconnection of heat in recent years, a number of consumers even among the urban population, middle-income, substituting district heating with individual central gas will be strongly affected by the price increase without necessarily category so "vulnerable customers" as defined in the Directive and the Romanian legislation. A World Bank study estimated that for the increased price for gas at market level, compared to 2012, it would be appropriate to extend the number of beneficiaries of aid heating by 30-40% (PSIA 2013).

Liberalization for households should take account simultaneously purchasing power and consumption structure thereof, to build a scheme fairer than today and to benefit more poor consumers or "vulnerable" by rising prices. One can conceive a billing system to better distribute the expense over the year to avoid price shocks winter.

Eliminating social tariff should be conditional on other financial measures "to replace the facility provided by this tariff low-income customers.

A solution that would provide subsidies for about 60% of the population, according to estimates of the Ministry of Energy market in Romania, is the granting of the EU budget. Romania proposed the European Commission in 2014 adopted a European definition of the concept of vulnerability in the context of the European Energy Union formation. The proposal is likely to be accepted if it is still actively supported. Greece is among the countries that joined the Romanian approach. The proposal has the support of other countries, particularly new member states of the European Union. But even if the project will be accepted by most Member States, the legislative process will take years.

## **5. In conclusion**

Completing the internal market of the European Union requires the removal of numerous obstacles and trade barriers, harmonization of policies and fiscal measures, pricing regarding rules and standards. The objective is to ensure a functioning market characterized by fair access to the market, a high level of consumer protection, interconnection and high levels of production capacity.

Liberalization of gas market in the European Union has brought positive effects in terms of lower prices and better services, but not at the expected level.

The benefits of liberalization of natural gas to final consumers were rather limited, given some great prices on the market.

Liberalization, like globalization, should be well understood so that you can adapt the interest of the state, region, company or individual. We start from the premise that this process has not been initiated and is not directed against consumers, but is designed for them to be the main beneficiaries of quality services at a fair market price, sustainable and more accessible.

Contrary to the expectation that the European Union by aligning gas prices in Europe, prices will not rise in Romania, as in other countries, energy prices are in a process of growth.

Law electricity and natural gas in Romania defines vulnerable consumer as end customer belonging to a category of household customers who, because of age, health, low income, are at risk of social exclusion and to prevent this risk, benefit social protection measures, including financial ones. In this context they need to identify and help vulnerable consumers directly, fairly and transparently. Other consumers who are "vulnerable" if you are concerned about the value of natural gas bill must, first of all, to consume more efficiently and eliminate waste through energy efficiency investments.

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