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COMISIÓN NACIONAL DE LOS MERCADOS Y LA COMPETENCIA

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STUDY OF THE PIPED NATURAL GAS SUPPLY INSTALLATION INSPECTION MARKET

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TABLE OF CONTENTS

EXECUTIVE SUMMARY

The current Law 34/1998 of 7 October on the Hydrocarbons Sector includes obligations for natural gas distributors and liquid petroleum gas suppliers to make inspection tours of supply installations connected to pipeline networks with the periodicity and under the conditions developed as regulations in RD 919/2006 of 28 July[1]. The inspections must be performed by the distributor every five years[2], at the most, using its own or external resources. The above-mentioned Royal Decree provides that the cost of these inspections will be borne by the owner of the installation. The price that the distributors will charge for carrying out the periodic inspections is to be regulated by the Autonomous Communities.

The purpose of this study is to analyse this regulation in order to make a series of recommendations to the competent national and Autonomous Community authorities, so that the mechanism for periodic inspections of natural gas supply installations connected to distribution networks achieve maximum economic efficiency and, at the same time, meets its goals for installation safety .

This report therefore concludes that, bearing in mind the principles of necessity and proportionality, it is appropriate to open up the periodic inspection market to competition, after assessing the principal benefits that such liberalisation would have for the user. The introduction of competitive pressure into the market would improve the conditions of the inspection service for consumers, leading to a foreseeable drop in the price of inspections in comparison to the current regulated prices and to greater flexibility when booking a visit to the installation by the inspectors. However, the economic assessment has identified the existence of economic externalities related to the safety of the facilities, which must be properly internalised, as well as asymmetric information between the

[1] Royal Decree 919/2006 of 28 July, adopting the technical regulations for the distribution and use of gas fuels and supplementary technical instructions ICG 01 to 11.
[2] In the Basque Country the obligation is every four years.

consumer and the professional that could prevent the proper functioning of the market if they are not corrected.

As a result, the CNMC emphasises that suitable liberalisation must be accompanied by support measures that are introduced at the same time as competition to prevent the imperfections inherent in the market from being able to lead to a reduction in the number of installations. These accompanying measures, such as greater control over facilities that have not been inspected, should maintain the level of safety and ensure the quality of the installations inspected.

Finally, more scope for improvement in the current regulated prices has been identified in the economic and legal analysis of this economic activity. Introducing effective competition into this market would bring obvious advantages in prices and services to the users of the inspection service and the general interest, so that it is recommended that the general and Autonomous Community administrations adopt specific measures to improve the economic efficiency of periodic inspections.

In particular, it is recommended that the advantages provided by the competitive tension that currently exists due to the outsourcing of inspection services by the distribution and supply companies be transferred to the consumer. To do this, the General Administration should **amend the regulations to give users the option of contracting the inspection from the authorised installer of their choice, with pricing freedom**. It is also recommended that installation companies be given access to the information held by each distributor regarding the time elapsed since the last inspection and the supply points that it is planned to inspect on upcoming dates.

In addition, transparent and homogeneous criteria should be drawn up by the Autonomous Communities for setting regulated tariffs that the distributors will charge the users for periodic inspections, so that the pricing effectively reflects the cost of performing the inspections. For inspections of the communal part of the installations, if this is applicable, the regulated tariff should be set uniformly, paying attention to the real costs, and be paid by the residents' association to

which the installation belongs. Similarly, the residents' association should have the option to freely contract the inspection from an authorised installer at a freely agreed price.

Finally, based on the empirical evidence from the different Autonomous Communities, in order to ensure the safety of natural gas installations, it is recommended that the legal criterion for action on all installations be revised so as to base it on the principles of necessity and proportionality, especially in the event of an interruption to the service in the case of the absence of the owner or a lack of permission to access the installations, while always fully complying with the guarantees for the user.

1 INTRODUCTION

The natural gas supply installation periodic inspection service consists of repeatedly checking certain safety-related elements in the user's installation[3].

The ultimate aim of the inspection is to ensure that the installations have the necessary level of safety. Ultimately, it is an economic question of correcting the market failures associated with the positive externality that inspection involves. Due to a lack of knowledge and to the financial incentives that such externalities do not normally include, without regulation, the users of the installation would not freely contract the minimum, socially acceptable maintenance that would prevent the risks associated with a gas installation.

According to current legislation, described in the following chapter, these inspections are mandatory every five years, the responsibility lies with the gas distributor that owns the network to which the installation receiving the supply is connected[4] and the owner of the installation must pay the distributor an official and regulated price. This is therefore a market linked to the distribution market, bestowed on the corresponding distributor, who in turn has recourse to various authorised installation companies to perform the service of inspecting the installations.

Although the current periodic inspection system has provided very good coverage of the installations inspected, over 90%, there is a clear potential for improvements for the users, both in terms of more efficient pricing and a more

[3] This periodic inspection must not be confused with the maintenance of gas installations and appliances, also made compulsory by the Building Thermal Installation Regulations (Spanish initials, RITE, amendment of April 2013), according to which users are required to have a maintenance certificate for their water heater or boiler. In the case of boilers, those over 70 kW must be checked once a year and those up to 70 kW once every two years. In the case of water heaters, maintenance must be done every two years on heaters with a power of up to 70 kW and every five years on those up with a power of to 24.4 kW.

Unlike the gas installation periodic inspection, which is performed by the distributor, for this maintenance to be performed, users must contact the manufacturer's technical support service or an authorised installer.

[4] Or, where this is the case, the company supplying the liquid petroleum gas.

flexible service. Opening up the inspection service to competition between different installation companies would give users the possibility of choosing with which company and under what pricing and scheduling conditions they wish to contract this service, thereby bringing greater economic and service efficiency to the end users of the inspections.

The CNMC understands that within the scope of natural gas installation inspections, together with economic efficiency and the promotion of greater competition, there are important externalities to consider, especially in relation to safety. It is therefore necessary, when assessing the possibilities that further opening of the market would offer users, to take into account how much this liberalisation would affect factors related to the efficiency of the inspections and, ultimately, the safety of the people and goods linked to the installations.

Within this framework, the purpose of this study is therefore to analyse this market from the economic and legal viewpoint in order to offer a series of recommendations to the competent national and regional authorities regarding their respective regulations on periodic inspections of natural gas installations in terms of competition and efficient economic regulation.

In the drafting of this study there has been cooperation with representatives from both the competent national and Autonomous Community administrations, the industry associations and consumer associations[5].

[5] Meetings were held with representatives of the Ministry of Industry, Energy and Tourism Directorate General of Energy Policy and Mines, the Community of Madrid Industry Department, the Spanish Gas Association (SEDIGAS), the Spanish Association of Liquid Petroleum Gas Operators (AOGLP), the National Confederation of Plumbing, Gas, Heating, Climate Control, Fire Protection, Electricity and Similar Company Associations (CONAIF) and the Consumers and Users Organisation (OCU).

2 REGULATORY ASSESSMENT

2.1 General State Administration Legislation

The main regulation that sets up the obligation of performing periodic inspections of natural gas installations connected to distribution networks is **Law 12/2007** of 2 July, amending Law 34/1998 of 7 October on the Hydrocarbons Sector, with the aim of adapting it to the terms of Directive 2003/55/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in natural gas (hereinafter Law 12/2007).

Article 74 sets out the obligations of natural gas distributors. Section p) states that among their obligations is to make visits of inspection to existing installations, with the officially defined periodicity and conditions.

Article 91 on the economic regime for activities included in the Law, states that the Autonomous Communities must set up the economic regime of registration fees for the distributors that operate within their boundaries, as well as the other costs arising from the services needed to attend to the users' supply requirements. This means that the respective Autonomous Communities officially set the price that the distributors collect for carrying out the periodic inspection function.

The regulatory implementation of Law 34/98, subsequently amended by Law 12/2007, came in Royal Decree 919/2006 of 28 July, adopting the technical regulations for the distribution and use of gas fuels and supplementary technical instructions ICG 01 to 11. (R.D. 919/2006). Article 7, on the maintenance of installations and appliances states in sub-section 7.2.1 that:

- Periodic inspections of installations receiving a supply from distribution networks must be performed by the distributor, using its own or external resources.
- Periodic inspections of the common part of the installations must be performed by the distributor, using its own or external resources.

- The owners of the installations will pay the distributor the amount due for the periodic inspections[6].

ITC-ICG-07 on gas fuel installations, contained in RD 919/2006, in sub-section 4.1. on the periodic inspection of installations receiving a supply from distribution networks, lays down that every five years, and within the calendar year in which this period ends, piped natural gas distributors must carry out an inspection of the installations of their respective users, charging them the cost arising from these inspections[7]. It is therefore required that the personnel who make the inspections are trained and qualified under the terms of the Regulation.

This instruction also describes the general procedure for making inspections, based on the following points:

- The distributor must notify the users, at least five days prior to the visit, the date of the inspection, requesting them to provide access to the installation on the date indicated.
- The inspection will be made by the distributor's own staff or a contractor. The personnel contracted must undergo a prior training process to qualify them for this task.
- If it is not possible to make the inspection because the user is absent, the distributor must notify the latter of the date of a second visit.
- In the particular case of installations supplied by distribution networks with a pressure equal to or greater than 5 bar, when the visit leads to a favourable result, an inspection certificate will be completed and handed

[6] Unlike article 7.2.2 on periodic checks: Checks will be performed on all installations that are not connected to distribution networks. It is the obligation of the owner of the installations, or in his absence, the user, to carry out same, for which he must request the services of one of the bodies listed in the appropriate ITC.

[7] Unlike ITC-ICG 07, section 4.2 on periodic checks of installations not supplied by distribution networks states that "*The owners or, in their absence, the current users of installations not supplied by distribution networks are responsible for ordering a periodic check of their installation, using for this purpose the services of a gas installation company authorised in accordance with the terms of ICT-ICG 09*".

to the user. Should any defects be detected among those listed in standard UNE 60670 or UNE 60620, whichever is applicable, a defect report including the minimum information indicated in the appendix to this ITC must be completed and handed to the user. The defects must be corrected by the user. The distributor must inform the supplier monthly, by telematic means, of the defects detected.

- Should a major defect be detected, if this cannot be corrected at that time, the supply of gas must be shut off and the affected part of the installation or appliance affected, as appropriate, sealed. For these purposes, major defects are those contained in standard UNE 60670 or UNE 60620, as appropriate. All leaks detected in LPG installations will be considered major defects.
- In the case of a lack of tightness, which is considered a minor defect, a deadline of fifteen calendar days will be given to it to be corrected. For these purposes, minor defects are those contained in standard UNE 60670 or UNE 60620, as appropriate.
- The distributor shall have a database, constantly updated, that will contain, among other information, the date of the last inspection of individual installations, as well as their result, and shall keep this information for ten years. It must be possible for the entire system to be consulted by the competent body of the Autonomous Community, when the latter deems this necessary.
- The owner or, in his absence, the user is responsible for correcting the defects detected in the installation, including the buried interior connection, and on gas appliances, with the services of a gas installer or technical service, which will give the user a receipt for the correction of the defects and send a copy to the distributor.

ITC-ICG 09 on gas installers and installation companies details the operations that must be carried out by authorised gas installers on natural gas installations, among them the inspection of installations receiving a supply from distribution networks, in accordance with the conditions laid down in ITC-ICG 07.

Royal Decree 559/2010 of 7 May adopting the Regulations of the Integrated Industrial Register provides for the creation of a single, electronically accessible, public register of all authorised installation companies.

Regulation prior to Royal Decree 919/2006

Prior to Royal Decree 919/2006, periodic inspection of natural gas installations was based on a system of tracking final gas installations in which a distinction was made between periodic inspections and periodic checks of the installations.

Decree 2913/1973 of 26 October adopting the General Regulations of the Public Natural Gas Service was the most important of the laws regulating this subject, although it was not the only one, as a large number of laws, adopted over more than a decade, came to complement and integrate the regulations introduced by that law.

Decree 2913/1973 set up a dual periodic inspection and checking system for installations. Article 27, section 5.4 of the decree stated that supply companies must make periodic inspection visits to at least 25% of their subscribers each year. The suppliers were therefore responsible for making periodic inspection visits to 25% of their users. The same law also stated in article 27.7 that the maintenance of installations was the responsibility of the users themselves, who were obliged to have periodic checks made using the services of a professional (an authorised installer), who would issue the corresponding inspection certificate.

The functions and obligations of each of the players involved in the maintenance of the installations therefore rested on a scheme of inspection-supplier/check-user-authorised installer. The users were responsible for the maintenance and conservation of their installation, for which they were responsible for having the periodic checks made to which the law obligated them. In these checks, the operation of the consumption appliances that were not checked during the inspection made by the supplier was examined, among other items. It was therefore required that the checks had to be carried out at least by an authorised installer and that the cost be borne by the user. The

installer must issue a certificate in which the results of the check were listed and must give it to the user. The user must show this certificate at the time of the inspection, when the person responsible for the inspection only had to verify whether it existed or not.

Decree 2913/1973 used the term "suppliers" to refer to those responsible for making the inspections since no difference was made between distribution and supply. During the first few years after the enactment of Law 34/1998 of 7 November on the Hydrocarbons Sector, the business of supply was handled by both the suppliers (free market) and the distributors (regulated market) and the responsibility of performing the inspections was shared by both.

Regardless of the wide range of regulations, the activities of the gas distributors were determined by Law 34/1998 of 7 November on the Hydrocarbons Sector, which established their legal duty to construct, maintain and operate the distribution facilities designed to supply the gas to the consumption points. Therefore, within the set of obligations set by current legislation, it is the responsibility of the distributors to inspect their users' gas installations with the periodicity set by the law (article 74.p of the Hydrocarbons Sector Act and article 10 of Royal Decree 1434/2002 of 27 December regulating the transport, distribution, marketing, supply and authorisation procedures for natural gas installations. The regulation of periodic inspections therefore started as a variety of laws that pre-dated the Hydrocarbons Sector Act, which was enacted later.

Finally, it was Law 24/2005 of 18 November on reforms to promote productivity that introduced the obligation of distributors, exclusively, to carry out periodic inspections of all the users connected to their networks, taking this obligation away from the suppliers. As a result, from that time on, as well as being responsible for operating the networks in their distribution area in a proper manner, the distributors were given the linked market of periodic inspections of user installations, which made them responsible for supervising the installations and obtaining the official recompense. The inspection included both checking the visible parts of gas installations and vents such as the outlets from gas appliance combustion products.

2.2 Autonomous Community Legislation

It must be noted that, although Royal Decree 919/2006 was enacted under a state power[8], the Autonomous Communities have the power over its implementation, which is of practical significance.

The major regulatory implementation made by the Autonomous Communities has been setting the regulated prices that each distributor in that particular region charges users for carrying out a periodic inspection[9].

The table below lists the prices currently applicable in each Autonomous Community for each of the categories of tariff with which supply points can be associated:

[8] Final provision one of Royal Decree 919/2006 states that it is an industrial safety regulation issued pursuant to article 149.1.13 (Bases and coordination of general economic planning).

[9] Having the tariffs set by the Autonomous Communities has been the object of attention from the viewpoint of competition. Therefore, in July 2012, the former CNC ruled on disciplinary proceedings S/0256/10 PERIODIC GAS INSPECTIONS against the Spanish Gas Association (SEDIGAS) and the Spanish Association of Liquid Petroleum Gas Operators (AOGLP) for competition-restricting practices because the distributors in these associations had agreed on the costs of the periodic inspections that the distributors would report to the Autonomous Communities. After a contentious-administrative appeal was lodged by SEDIGAS and AOGLP, the CNC's ruling was overturned by the National High Court ruling of 10 March 2014, since it was felt that the appellants had not committed a prohibited practice when making a joint proposal to the Autonomous Communities since it was not proven that said conduct was intended to distort free competition nor was it capable of obstructing, restricting or distorting competition.

Subsequently, in July 2013, the Community of Madrid Office for the Defence of Competition submitted a proposal to the CNC for the ruling on the proceedings arising from a consumer complaint against the distributor Madrileña Red de Gas, as it considered that the price charged by the distributor for periodic inspections was abusive compared to the service performed, with no possibility of selecting another company to perform the inspection. On 12 February 2014 the Board of the CNMC ordered that the case be dismissed since it considered that the distributor had not breached industry legislation and that the tariff charged by this distributor, even though it might be abusive due to being the result of a prior agreement adopted by SEDIGAS, could not be classified as individual abuse, since it is close to the average tariff set by the Autonomous Communities for inspections.

Table 1. Prices for regulated periodic inspections by Autonomous Community and supply point-related tariff category

Tariffs 3.1, 3.2 and 3.3				Other Tariffs				
Autonomous Communities	Periodic Inspection Individual installation	Periodic Inspection Common installation	Periodic Inspection IRF + CRF	Annual Consumption < 5 GWh	Annual Consumption 5-10 GWh	Annual Consumption 10-50 GWh	Annual Consumption > 50 GWh	Community Regulations
Andalusia	48.34		58.24	160.52	208.37	271.75	309.76	Directorate General of Industry and Mines Resolution of 24/02/2013
Aragon	58.08		67.64	144.47	188.76	240.67	281.45	Dept. of Industry, Commerce and Tourism Order of 06/07/2011
Asturias	53.16		62.53	159.93	207.62	210.43	308.62	Decree 79/2005 of 14/07/2005 and Dept. of Industry and Energy Resolutions of 16/11/2007 and 03/03/2008
Balearic Islands			52.03	137.94 + (0.0014 x Cmaxd) with a maximum of €266.20	137.94 + (0.0014 x Cmaxd) with a maximum of €266.20	137.94 + (0.0014 x Cmaxd) with a maximum of €266.20	137.94 + (0.0014 x Cmaxd) with a maximum of €266.20	Dept. of Commerce, Industry and Energy Decree 45/2008 of 11/04/2008
Cantabria	Planned 39.19 User Granted 64.70		Planned 47.12 User Granted 72.03	119.51	159.44	210.20	243.90	Dept. of Industry and Technological Development Order IND/18/2008 of 17/07/2008
Castilla La Mancha	47.19		55.66	139.15	185.13	223.85	269.83	Dept. of Industry, Energy and Environment Decree 13/2010 of 23/03/2010
Castilla- Leon	44.79		53.93	148.45	193.06	251.75	286.98	Directorate General of Industry and Technological Innovation Resolution of 08/02/2013
Catalonia	48.01	56.69		137.94	179.08	233.53	266.20	Dept. of Economy and Finance Resolution ECF/969/2007 of 02/03/2007
Valencian Community	53.52		64.86	153.77	199.63	260.33	296.74	Dept. of Infrastructure and Transport Order of 13/12/2007
Extremadura	51.01	77.87		159.62	207.23	270.23	308.06	Dept. of Industry, Energy and Environment Order of 17/06/2008
Galicia	57.11	93.14		155.01	201.24	262.43	299.14	Directorate General of Industry, Energy and Mines Resolution of 16/07/2007
Navarre	57.73		67.72	150.57	195.49	254.93	290.58	Directorate General of Enterprise Resolution 320/2001 of 16/02/2011
Basque Country	52.89		59.85	153.05	198.69	259.10	295.36	Dept. of Industry, Commerce and Tourism Decree 135/2008 of 15/07/2008
Rioja	41.53		47.71	131.89	176.16	235.22	269.56	Dept. of Industry, Innovation and Employment Decree 20/2010 of 26/03/2010

Source: Compiled by the authors based on information from the Spanish Gas Association (SEDIGAS).
* The prices include VAT.
** In Cantabria there are two regulated tariffs, depending on whether the inspection is scheduled by the distributor or by the distributor and the user.
*** In Ceuta and Melilla there are no piped gas users.

The Autonomous Communities of the Canary Islands[10], Madrid, and Murcia are the only ones that have not adopted regulated tariffs. Therefore, the distributors with supply points in the Communities of Madrid and Murcia (Gas Natural Fenosa and Madrileña de Gas in Madrid, and EDP Naturgas Energía in Murcia) are billing users at a price reported by them to these Autonomous Communities and published on their respective web sites[11].

The regulatory implementation of Royal Decree 919/2006 of 28 July, which was carried out by the Autonomous Communities, affects the specific obligations of the distributor and the monitoring and tracking carried out by the Autonomous Community administrations to oversee this activity. It also affects purely technical questions, such as when and how to shut off the supply in the event of improper maintenance of the installations. There is great disparity between the Autonomous Community regulations, which do not always comply with the principles of necessity and proportionality. For example, while the Basque Country[12] permits the supply to be shut off on installations for which it was not possible to carry out the periodic inspection, in other Communities this is not a

[10] In the Canary Islands users connected to piped networks use LPG as their fuel. According to information provided by the AOGLP, the supplier DISA is not charging its customers for carrying out periodic inspections.

[11] In Madrid, the 2014 price for a periodic inspection of a Madrileña de Gas installation is €62.29, including VAT and the inspection of the common installation. The price is €62.25 with Gas Natural Fenosa. In Murcia, the 2014 price for a periodic inspection published by EDP Naturgas Energía is €59.37, including VAT and the inspection of the common installation.

[12] Autonomous Community of the Basque Country Decree 28/2002 of 29 January regulating the inspection and revision of in-service gas installations intended for domestic, collective or commercial use, amended by Decree 70/2009 of 24 March, states:

Article 18 - Procedure for suspending supply due to failure to complete the inspection.

1.- In the event that, for whatever cause, the inspection cannot be performed on the date scheduled by the gas distribution or supply company, this shall require the owner to, in the term of one month, contact same, for the purposes of indicating, by common accord and during working hours, the day and time for the completion of the check.

2.- If the aforementioned requirement is not heeded, all the actions needed to carry out the checks shall devolve on the owner of the installation, who must carry out all the procedures necessary for the inspection to take place within a maximum of 3 months, counting from the deadline given in the previous section.

3.- After the deadline mentioned in the previous section has passed without the inspection having been performed, the gas distributor shall suspend the supply or remove the containers, pursuant to article 12 of this Decree.

4.- Prior to or during the act of suspending the supply, the distributor or supplier must notify the owner or user of the decision to shut off the supply.

viable option. As a result, supply points that cannot be accessed to carry out the periodic inspection would continue to be supplied even when there is uncertainty as to their safety.

3. PROFILE OF THE PERIODIC INSPECTION MARKET

A description of the major players involved in the periodic inspection market is given below, from the viewpoint of both the demand for and the supply of inspections, including the market supply of installation companies subcontracted by the distributors to perform inspections.

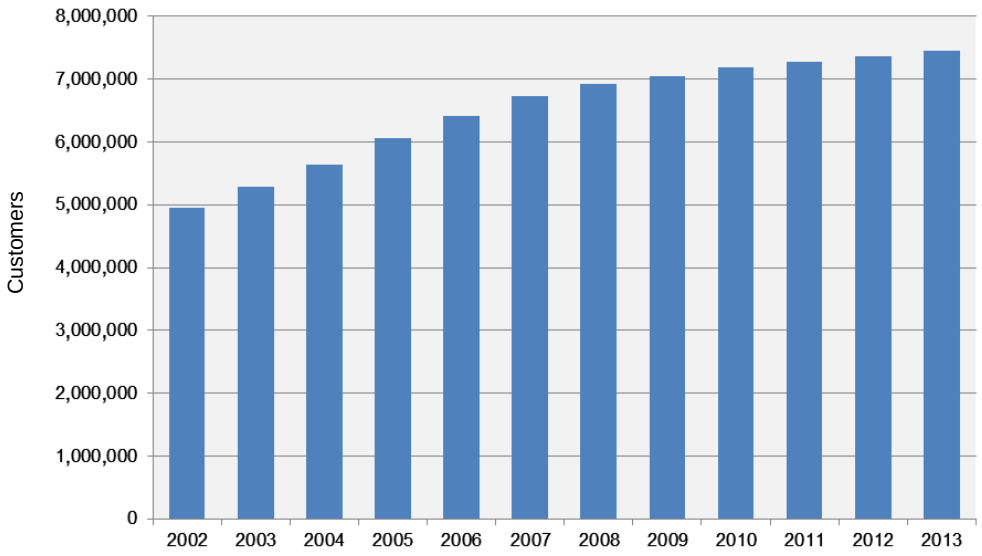
3.1. Demand structure

The demand side of the Spanish natural gas installation periodic inspection market at the end of 2013 consisted of 7,448,827 natural gas supply points and 585,370 consumers of piped liquid petroleum gas.

3.1.1. Natural gas supply points

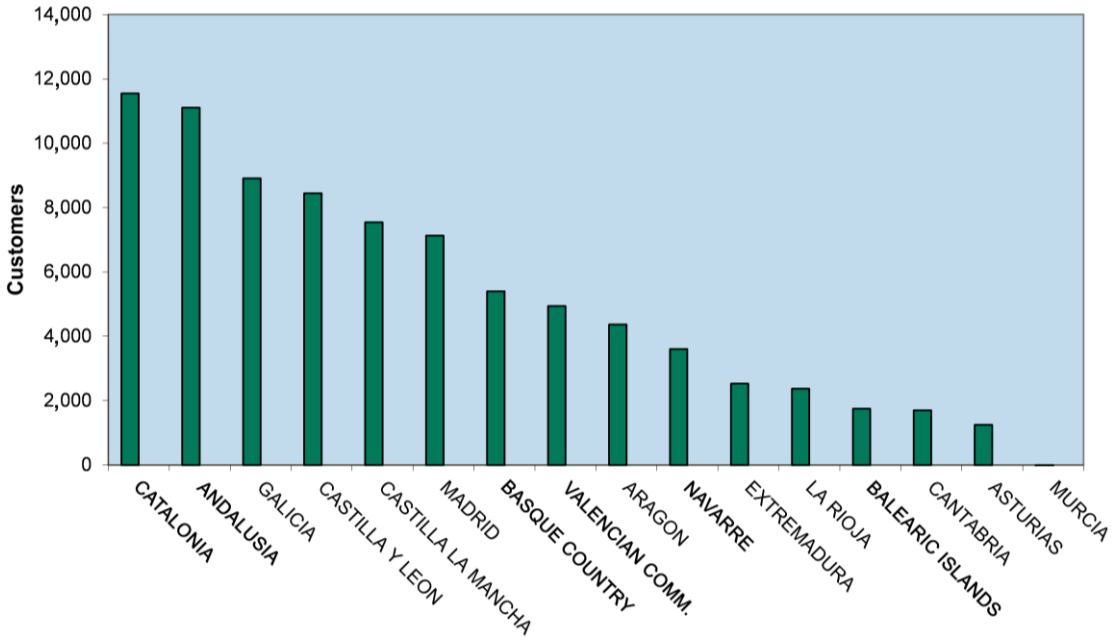
The total of 7,448,827 natural gas supply points recorded at the end of 2013 was an increase of 82,359 from the previous year, continuing the upward trend that has been flattening out since 2007.

Figure 1. Evolution of the number of natural gas customers in Spain



In regard to the number of consumers by Autonomous Community, the Communities of Madrid and Murcia account for 53% of the total number of gas consumers. This is due to the strong deployment of the gas supply in the domestic and commercial sectors.

Figure 2. Net gain in natural gas customers, by Autonomous Community (2013)

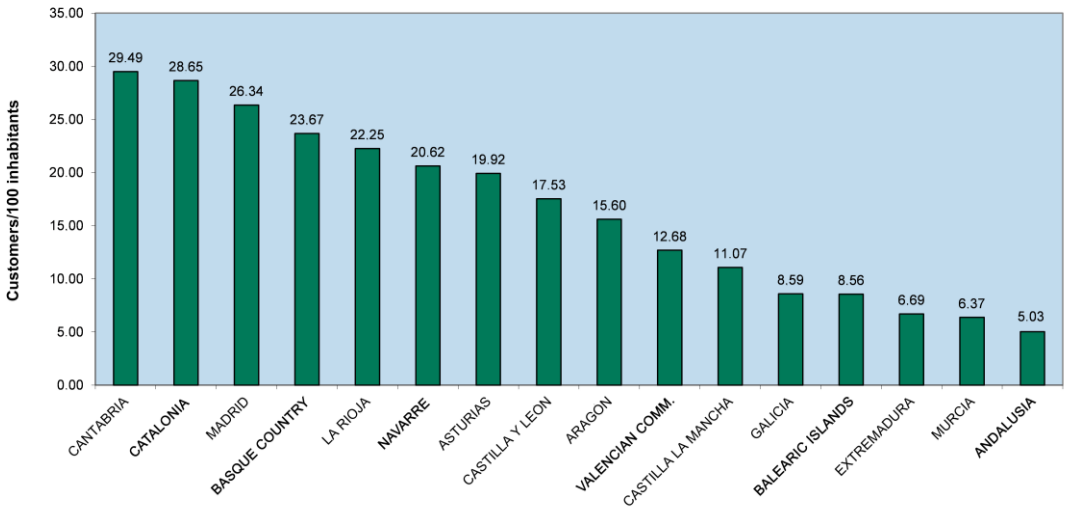


Source: 2013 Supervisory Report on the Retail Natural Gas Market in Spain. CNMC.

To make a comparative assessment of the scope or penetration of the supply of natural gas in Spain, two representative indicators are given below: the number of natural gas supplies per 100 inhabitants[13] and the percentage of main residences[14] with a natural gas supply.

[13] Population figures for 01 January 2013 from the National Institute of Statistics (INE), .
[14] Figures for homes in 2013 from the former Ministry of Housing.

Figure 3. Number of customers per 100 inhabitants.

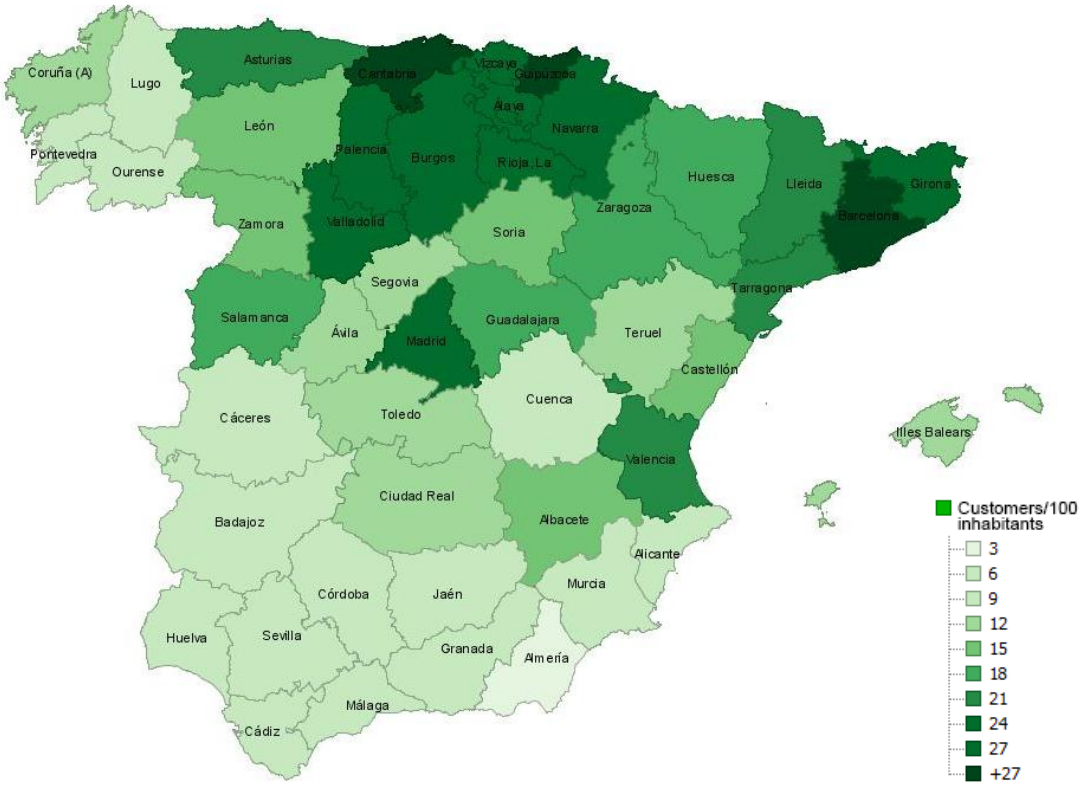


Source: 2013 Supervisory Report on the Retail Natural Gas Market in Spain. CNMC.

In regard to the number of natural gas customers per 100 inhabitants by Autonomous Community at the end of 2013, it can be seen that the Communities of Cantabria (29 supplies per 100 inhabitants), Catalonia (28) and Madrid (26) have the highest number. Other Communities with percentages above the national average are the Basque Country (23), La Rioja (21), Navarre (20), Asturias (20) and Castilla-Leon (18). In contrast, the lowest figures (less than 10 customers per 100 inhabitants) are recorded in the Mediterranean Communities and those where natural gas has only recently been introduced (Andalusia, Balearic Islands, Murcia, Extremadura and Galicia), with Almeria, Jaen, Cadiz and Cordoba as the provinces with the least penetration in Spain, with less than 5 supplies per 100 inhabitants.

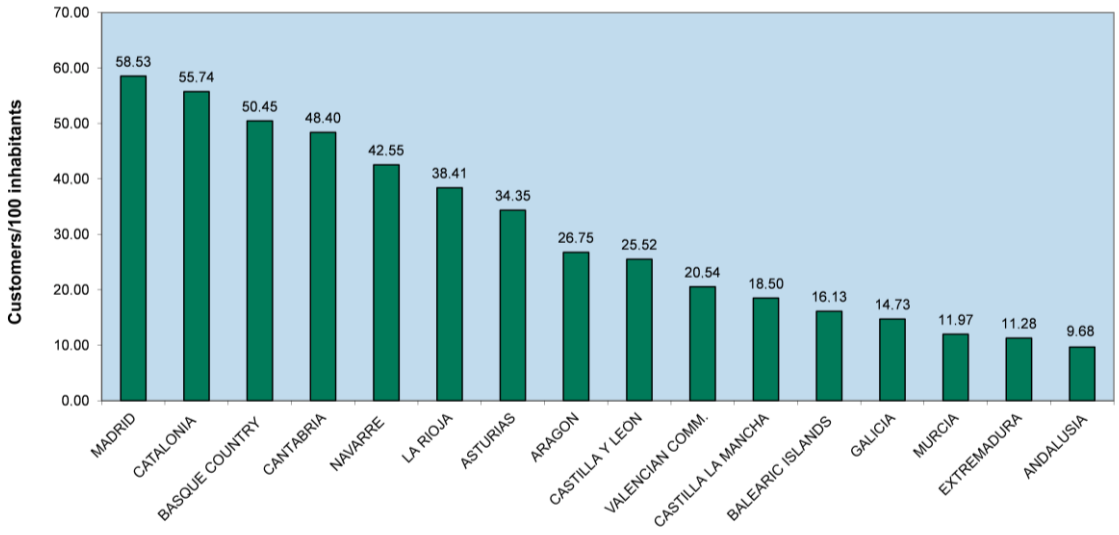
The distribution of customers per 100 inhabitants by province and Autonomous Community can be seen in the following figure.

Figure 4. Number of customers per 100 inhabitants by province and Autonomous Community (2013)



Source: 2013 Supervisory Report on the Retail Natural Gas Market in Spain. CNMC.

Figure 5. Penetration of natural gas by Autonomous Community (2013)

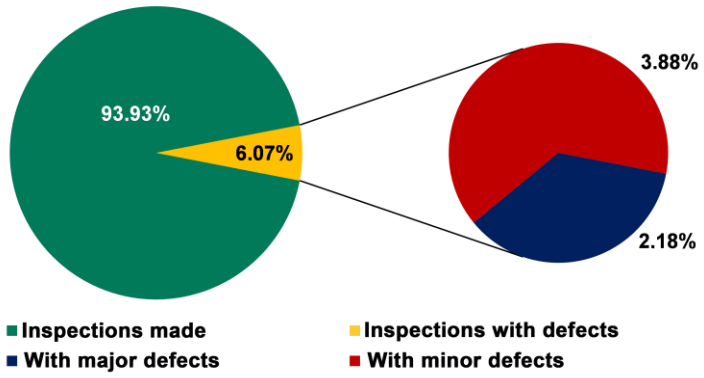


Source: 2013 Supervisory Report on the Retail Natural Gas Market in Spain. CNMC.

As shown in the previous figure, in the Communities of Madrid, Catalonia, Basque Country and Cantabria, gas is supplied to over 45% of the main residences in existence. In the Communities of Navarre, Asturias and La Rioja the percentage of homes with a natural gas supply is over 29%, which is the national average. The other Autonomous Communities do not reach this threshold, with Andalusia the only Community in which under 10% of homes are supplied with gas.

In regard to periodic inspections of natural gas installations connected to distribution networks, in 2013 1,826,985 inspections were performed by the natural gas distributors, or approximately 25% of the supply points in the national market. 94% of the inspections performed showed no defects[15].

Figure 6. Results of periodic inspections made in 2013.



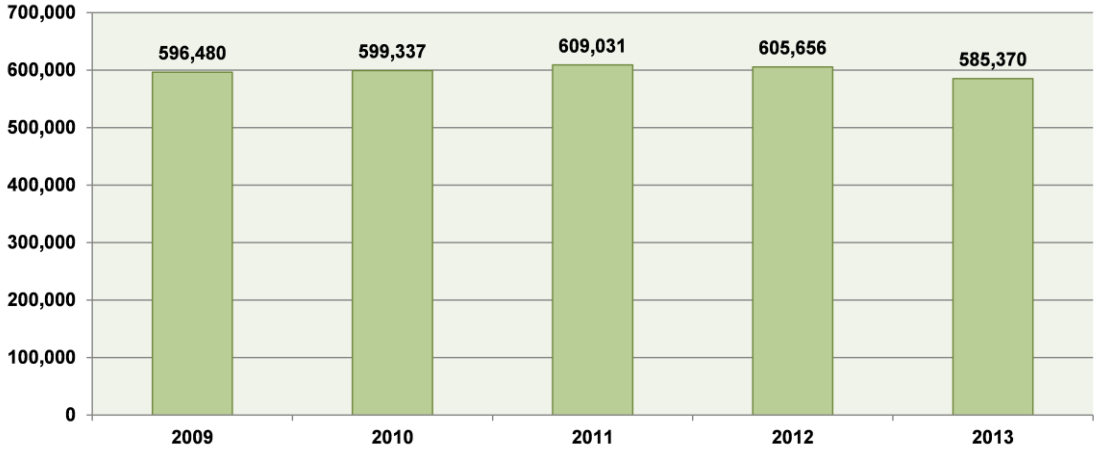
Source: 2013 Supervisory Report on the Retail Natural Gas Market in Spain. CNMC

[15] Major defects that could not be corrected at the time of the inspection meant that the gas installation or device affected had to be sealed, as a safety measure, until they were corrected by an installer. For minor defects, consumers were given a time limit within which to correct them. However, these figures only include the number of inspections that were actually performed, without showing those that could not be made due to not having access to the installation (the owner was absent, etc.).

3.1.2. Piped liquid petroleum gas (LPG) supply points

The characteristics of the supply of piped LPG make this an alternative to the supply of natural gas for small villages or scattered urban centres, far from the natural gas network. The total number of piped LPG consumers at the end of 2013 was 585,370, a decrease of 3.35% from the 605,656 customers at the end of 2012. During the last five years there has been a slight downturn in the number of piped LPG customers, as can be seen in figure 7.

Figure 7. Evolution of the number of piped LPG customers, 2009-2013.

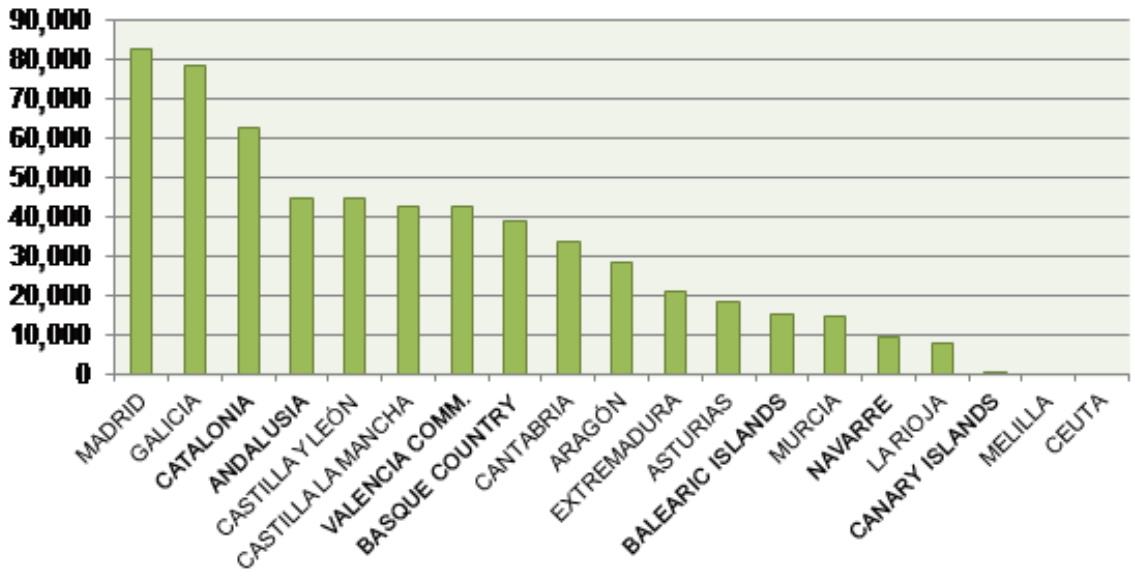


Source: 2013 Supervisory Report on the Retail Natural Gas Market in Spain. CNMC

By Autonomous Community, Madrid, Galicia and Catalonia have the highest number of customers. They are followed by five Communities with between 30,000 and 45.000 customers: Andalusia, Castilla-Leon, Castilla la Mancha, Valencian Community, Basque Country and Cantabria.

The exact distribution of customers by Autonomous Community in December 2013 can be seen in the following figure:

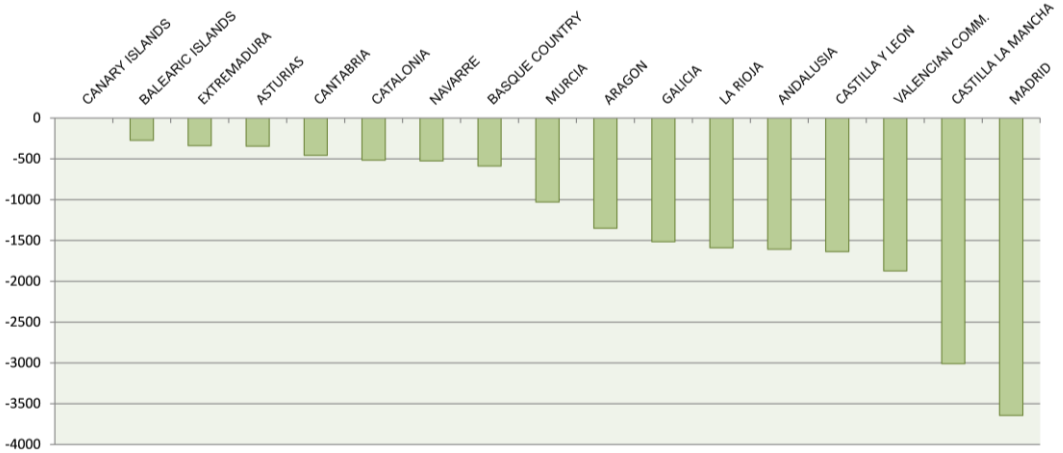
Figure 8. Number of piped LPG customers by Autonomous Community in 2013.



Source: 2013 Supervisory Report on the Retail Natural Gas Market in Spain. CNMC.

In comparison with 2012, the number of piped LPG customers has fallen in most of the Autonomous Communities, except for the Canary Islands, where it has remained stable. The most significant decreases in absolute terms occurred in Madrid (-3.644 customers), Castilla la Mancha (-3.010 customers) and Valencia (-1.873 customers).

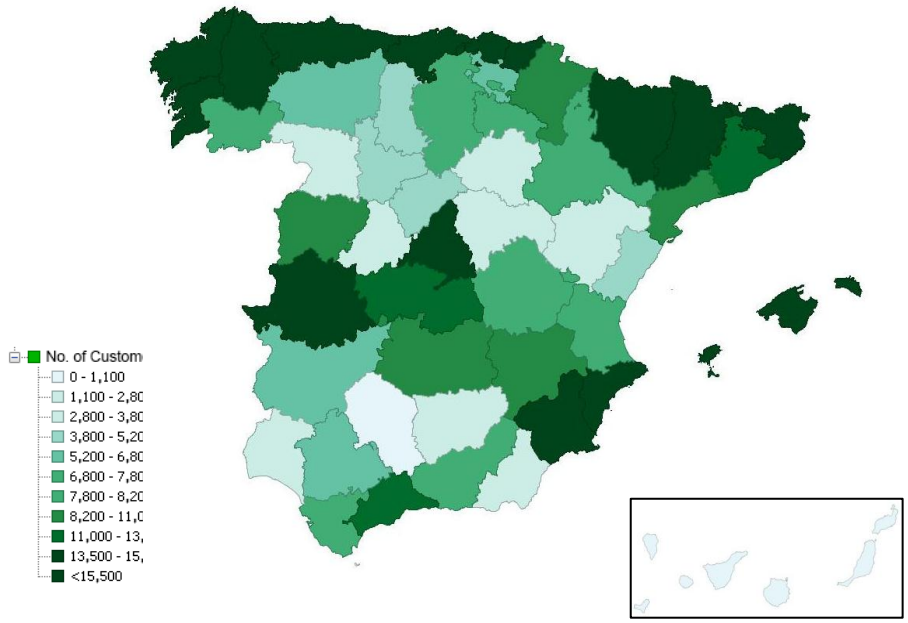
Figure 9. Change in the number of piped LPG customers between 2012 and 2013. 2012



Source: 2013 Supervisory Report on the Retail Natural Gas Market in Spain. CNMC.

As can be seen in the following figure, which shows the distribution of piped LPG customers by province, it is again the province of Madrid that has the highest number of piped LPG customers, with 82,500. This number is very different from Cantabria, Coruña and Alicante. which trail behind with between 34,000 and 30,000 customers. Another six provinces (Girona, Pontevedra, Lleida, Guipúzcoa, Asturias and Huesca) have over 18,000 customers.

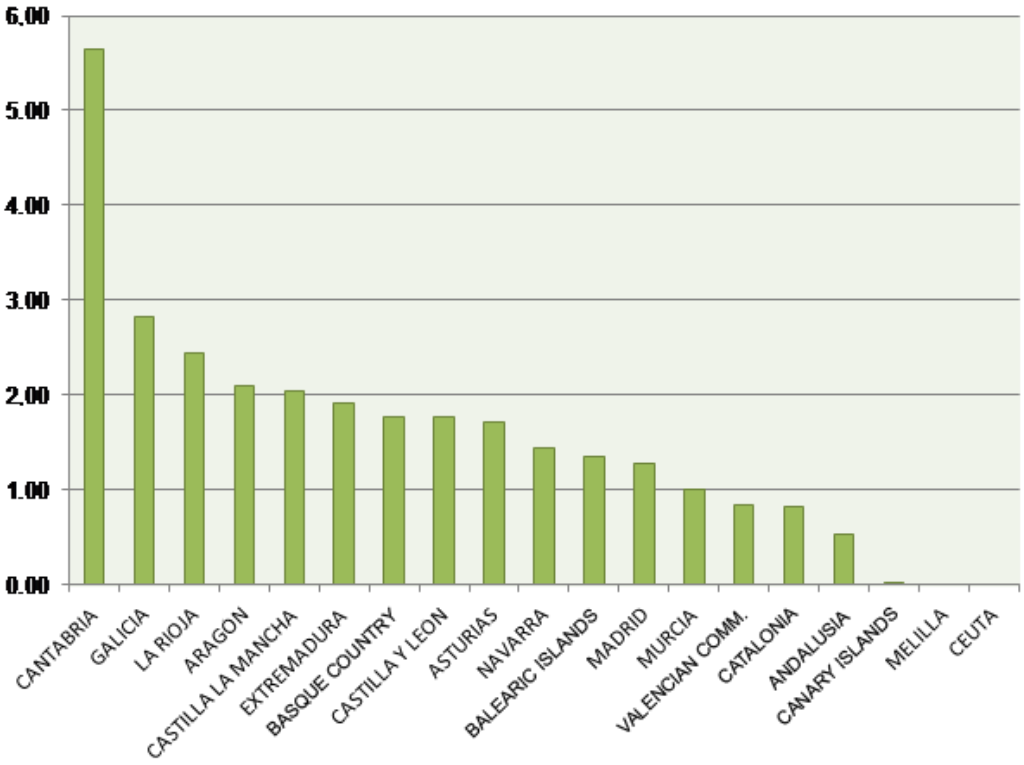
Figure 10. Distribution of piped LPG customers by province (2013).



Source: 2013 Supervisory Report on the Retail Natural Gas Market in Spain. CNMC.

To make a comparative assessment of the scope or penetration of the supply of piped LPG in Spain, the representative indicator presented is the number of piped LPG supplies per 100 inhabitants.

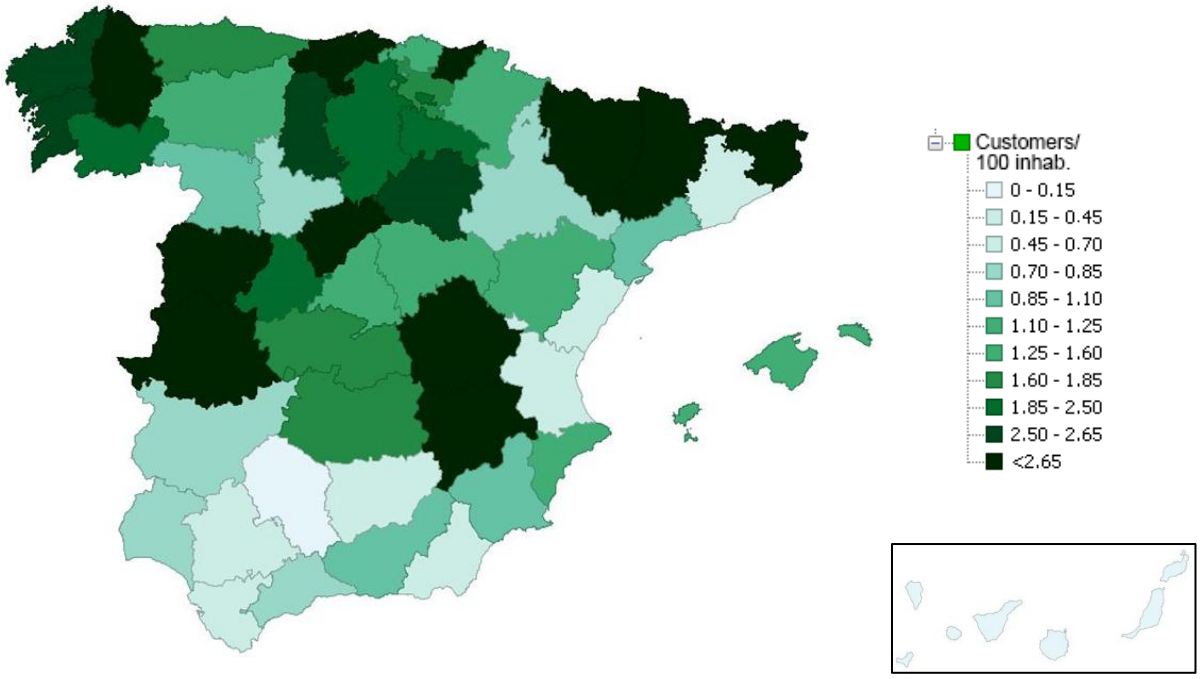
Figure 11. Number of piped LPG customers per 100 inhabitants.



Source: Supervisory Report on the Retail Natural Gas Market in Spain 2013. CNMC.

As can be seen in the figure, the Autonomous Community with the greatest penetration of piped LPG is Cantabria, with almost 6 customers per 100 inhabitants. Next come Galicia (2.83), La Rioja (2.43), Aragon (2.09) and Castilla La Mancha (2.04). The other Communities have fewer than 2 customers per 100 inhabitants.

Figure 12. Distribution of the number of customers per 100 inhabitants by province in 2013.



Source: Supervisory Report on the Retail Natural Gas Market in Spain 2013. CNMC.

As can be seen in Figure 12, the leading Spanish province in customers per 100 inhabitants is Huesca, with 8.24, followed by Cantabria (5.65), Lugo (4.74) and Lleida (4.53).

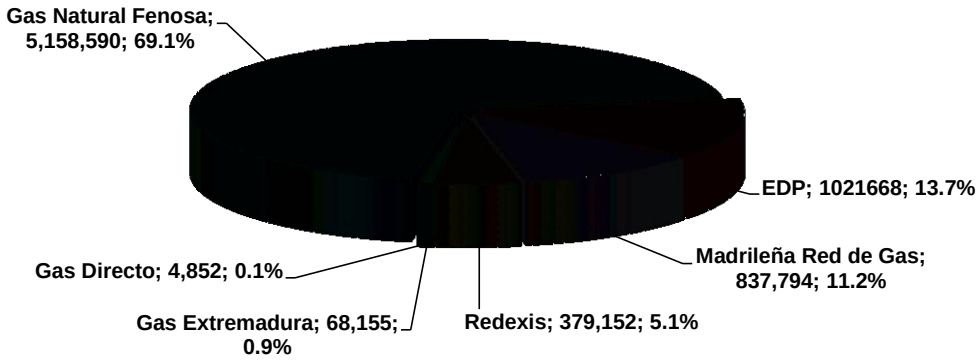
3.2. Supply structure

The supply side of the periodic inspection market is determined by the natural gas distributors and piped natural gas supplier corresponding to the supply point, since they are obliged to perform the inspections. However, included in the supply of inspections are the authorised installation companies that carry out the inspections in the field as the subcontractors of the distributors.

3.2.1 Natural gas distributors

At the end of 2013, the largest distributor, in terms of supply points, was Grupo Gas Natural Fenosa, with 69%, followed by EDP (14%), Madrileña Red de Gas (11%), Redexis (5%), Gas Extremadura (1%) and Gas Directo (0.1%) All other supply points were connected directly to the transport network.

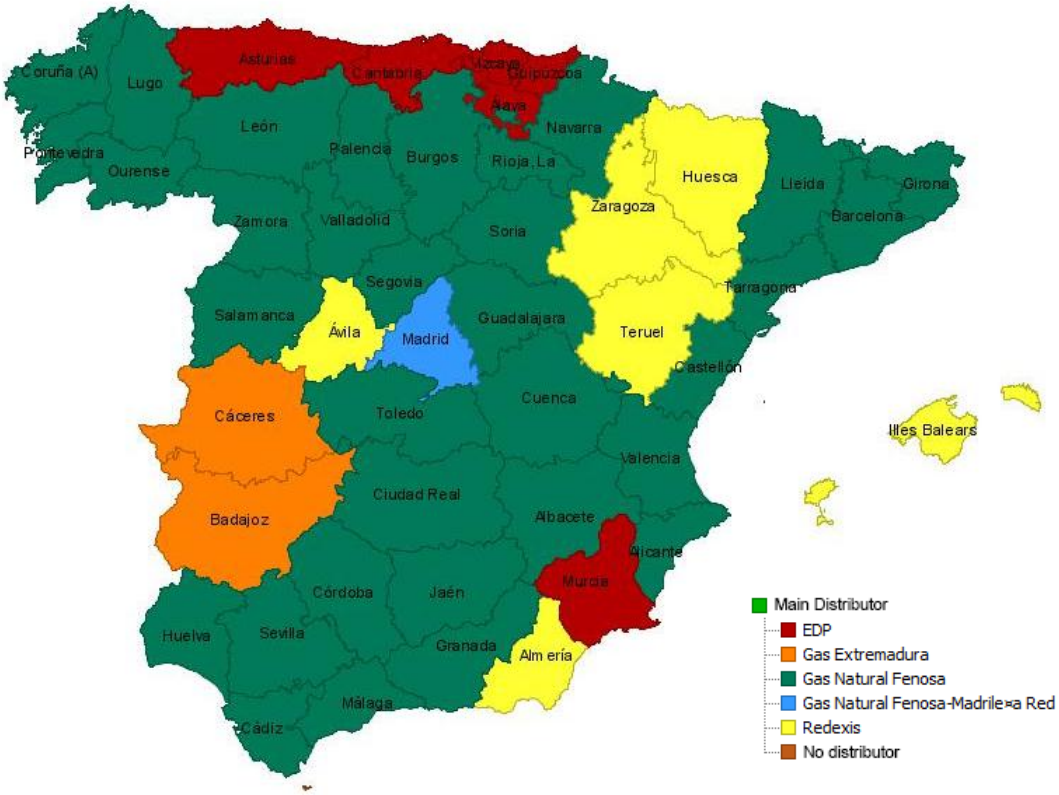
Figure 13. Market share of natural gas supply points - 2013.



Source: 2013 Supervisory Report on the Retail Natural Gas Market in Spain. CNMC.

The following map shows the geographical distribution of natural gas customers by distributor (wholesale distributor).

Figure 14. Geographical distribution of natural gas customers by distribution company (wholesale distributor).

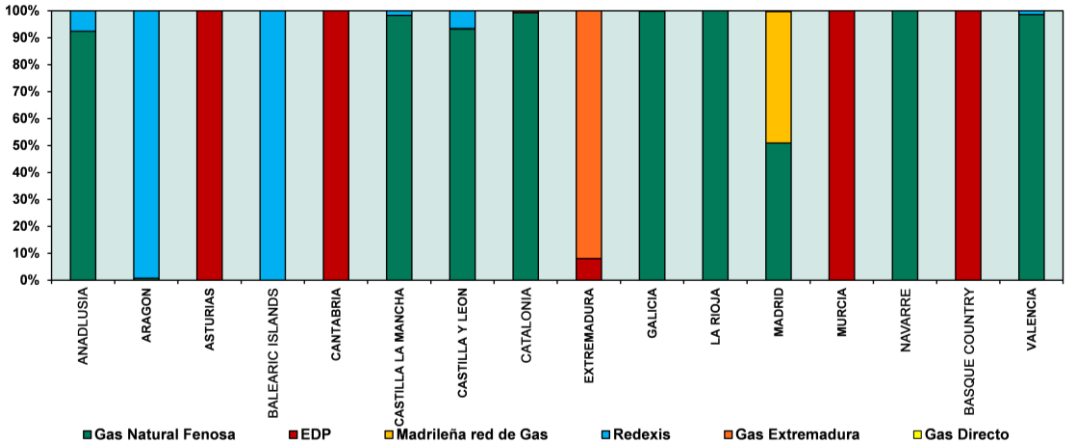


Source: 2013 Supervisory Report on the Retail Natural Gas Market in Spain. CNMC.

It can be seen that the groups that are integrated vertically into gas distribution and supply have a significantly greater market share in the Autonomous Communities in which they are the owners of the gas distribution networks.

Figure 15 shows the market shares by number of natural gas supply points on 31 December 2013, by Autonomous Community and distributor.

Figure 15. Share of natural gas supply points on 31 December 2013, by Autonomous Community and distributor.



Source: 2013 Supervisory Report on the Retail Natural Gas Market in Spain. CNMC.

After Gas Natural Fenosa disposed of its distribution networks in Madrid to Madrileña Red de Gas, and Endesa disposed of its to Redexis, there were three distribution groups with separate ownership of distribution and supply that did not have a presence in retail supply in Spain:

- Madrileña Red de Gas, which belongs to the Morgan Stanley group, with 833,215 supply points in the Autonomous Community of Madrid
- Redexis, which belongs to the Goldman Sachs group, with 379,152 supply points in the Balearic Islands (100%), Aragon (99%) and with a presence in Andalusia (8%), Castilla-Leon (7%), Castilla La Mancha (2%) and Valencia (1%).
- Gas Extremadura (DICOGEXSA), which belongs to the Cristian Lay group, with 68,155 customers in Extremadura.

In contrast, Gas Natural Fenosa, the industry leader with 69.1% of supply points and EDP, the second largest group in Spain, with 13.7%, are continuing to keep a presence in both supply and distribution simultaneously[16]:

- Grupo Gas Natural Fenosa, with 4,376,405 customers and 5,158,590 supply points, has a bigger market share in nine of the fifteen Autonomous Communities on the peninsula, with market shares of between 50% and 85% for supply and 51% and 100% for distribution.
- Grupo EDP, with 796,.293 customers and 1,021,668 supply points in the retail market, is the second largest distribution company and the third largest supply company by number of customers in Spain. EDP's geographical distribution shows that it is the major supplier and distributor in Asturias, the Basque Country, Murcia and Cantabria after it was transferred Gas Natural Fenosa's customers in 2011.

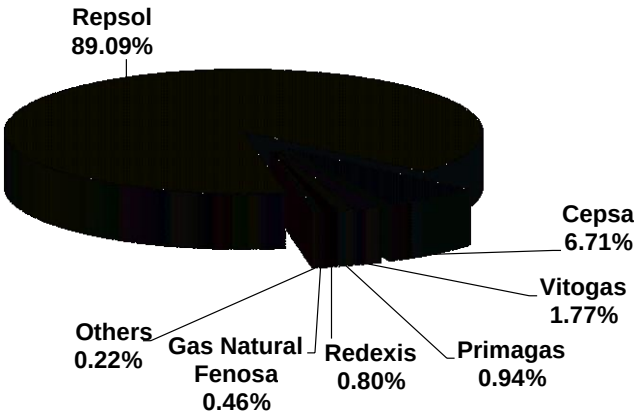
3.2.2 Piped LPG suppliers

The piped LPG supply business is not liberalised, so that all the customers are supplied by the distributor that owns the distribution network to which they are connected, at regulated prices.

In the national market, the biggest piped LPG supply group by number of customers is Repsol Butano, with 89.9%, followed by Cepsa Gas Licuado (6.71%), Vitogas (1.77%) and Primagas with 0.94%, respectively.

[16] In fact, according to the data in the 2013 Supervisory Report on the Retail Natural Gas Market in Spain (CNMC), an analysis by Autonomous Community shows that the supplier's share of these companies is much higher in the provinces in which it has distribution networks.

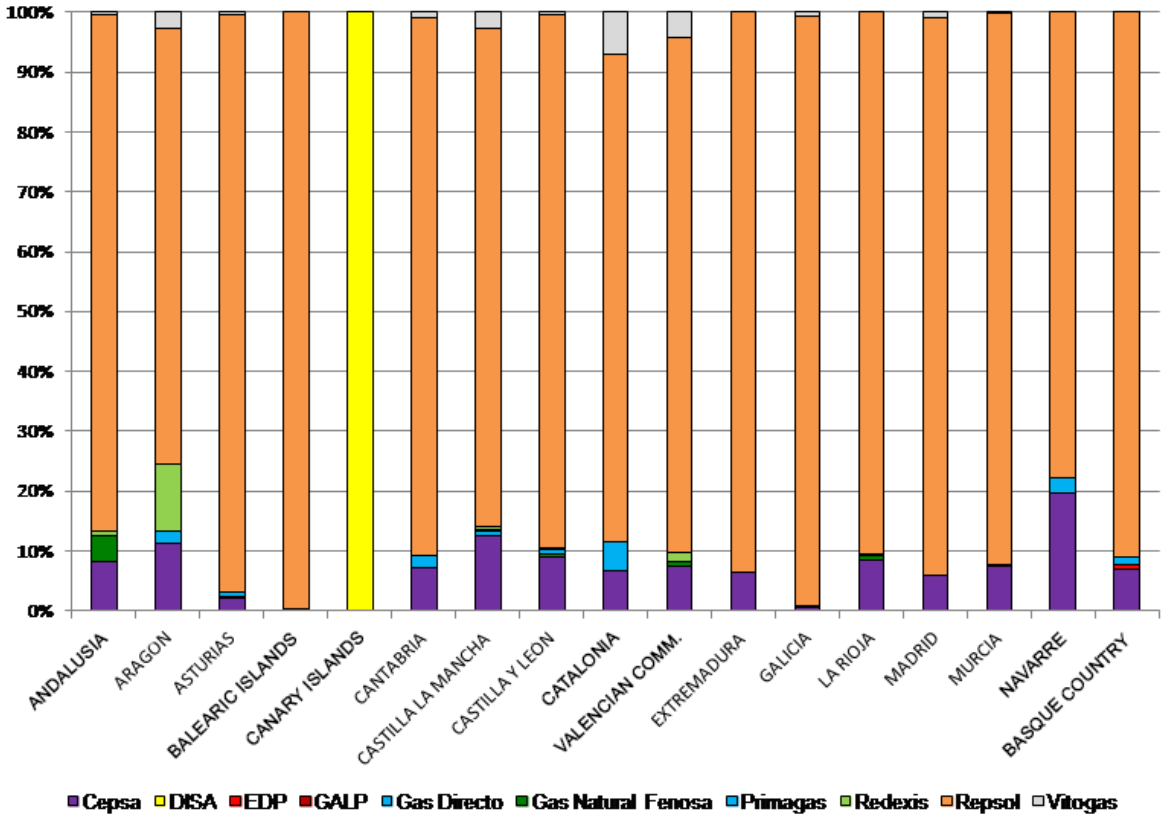
Figure 16. Market shares by number of piped LPG customers in 2013.



Source: 2013 Supervisory Report on the Retail Natural Gas Market in Spain. CNMC.

By Autonomous Community, in 2013 the market shares by number of piped LPG customers were as follows:

Figure 17. Market shares of piped LPG by Autonomous Community in 2013.



Source: 2013 Supervisory Report on the Retail Natural Gas Market in Spain. CNMC.

With the exception of the Canary Islands, where Disa is the only distributor, Repsol is the company with the biggest share in each region, with over 70% in all the Autonomous Communities.

As a conclusion to the above, it can be said that the piped LPG sector is characterised by strong market concentration, both in terms of customers and energy sales. Repsol Butano is the company with the majority share in both cases.

3.2.3 Authorised installers

In Spain there are approximately 23,000 installation companies that do business in the gas, heating, air conditioning, electricity, sanitation, plumbing, fire protection and renewable energies sectors.

The industry, which employs 120,000 people, is mainly composed of small and medium sized companies, with an average workforce of five. However, a number of larger companies are also regularly involved in the work of periodic inspection as subcontractors of the above-mentioned distributors and suppliers, on whom the obligation falls.

Approximately 65% of these companies, some 15,000, perform natural gas installations,[17] but not exclusively, and are therefore qualified to carry out the activities included in gas installation periodic inspections.

Installation companies that wish to set up as gas installation companies must, before starting up these activities, submit a Statement of Responsibility to the competent body of the Autonomous Community in which they are established.

After submitting this statement of responsibility, the competent body of the Autonomous Community will automatically assign an identification number to the company, whereby the company is authorised to perform this activity all

[17] Any physical person or legal entity that performs the activities of assembly, repair, maintenance and periodic checks of gas installations and meets the requirements set in ITC-ICG 09 of the Regulations is considered to be a gas installation company.

over the country since it submitted the statement of responsibility. It must also meet the following requirements:

a) Have documentation that identifies the gas installation company, which, in the case of a legal entity, must be set up legally.
b) Have personnel on the payroll that carries out the activity in conditions of safety, with a minimum of one gas installer, from category A, B or C.
c) Have taken out professional civil liability insurance or another equivalent guarantee to cover the damage that could be ceased when performing the service for a minimum of €900,000 (category A), €600,000 (category B) or €300,000 (category C) per claim.

Have the technical resources needed to carry out this activity in conditions of safety.

For a company to be qualified to be a gas installer, it must comply with ITC-ICG 09 throughout the entire time that it performs this activity.

To carry out inspections of installations supplied by the distribution networks it will be necessary for the installation company to have a Category A installer.

4. ANALYSIS FROM THE VIEWPOINT OF COMPETITION AND EFFICIENT ECONOMIC REGULATION

It can be concluded from the previous sections that periodic inspection services for natural gas installations connected to distribution networks are performed under a national legal framework, in homogeneous conditions in all the Autonomous Communities and that the corresponding distributor has a monopoly over the carrying out of these inspections.

It is therefore important to analyse the restrictions that govern this monopoly from the viewpoint of efficient regulation, in other words, to analyse the necessity and proportionality of the restrictions on competition. This analysis will permit us to draw conclusions and make recommendation on the optimum configuration from the perspective of competition and economic efficiency.

The restriction on essential access imposed by national legislation through the Hydrocarbons Act and the subsequent regulatory implementation of DR 919/2006 consists of the requirement for periodic inspections of natural gas installations connected to distribution networks to be performed by the distribution company that owns the distribution network to which the installation is connected, using its own or external resources.

An assessment of the appropriateness of this requirement starts with examining its necessity. The periodic inspection market does not have the characteristics of a natural monopoly that would justify restricting access to it. A possible economic justification would be the existence of externalities regarding the safety of the owner and of third parties that were not considered by the user when contracting the services, as well as the asymmetry of information that makes it difficult for the average user to find out when the installation requires inspection. Taking into account these market failures, it could be considered that centralising the responsibility for carrying out periodic inspections in one single player facilitates better coverage of the installations inspected, and the safety of people and goods close to this installation, when this is the case.

A conscious or unconscious decision, therefore, not to have a periodic inspection of the installation has negative externalities that could not be

adequately internalised by the free market, involving, where relevant, the assumption of a socially inefficient level of risk for the safety of people and goods. A requirement that increases the number of installations inspected would therefore, *ceteris paribus,* lessen this externality. However, an assessment using the principles of necessity and proportionality requires that the same objectives be attained in a less distortionary manner, which would permit the opening up to competition of periodic inspections at the same time as adopting certain measures that would minimise the possible safety-related externalities. This could mean that the monopoly over inspection was unnecessary, or at least not proportionate.

In addition, the Law requires that the inspection of an installation be performed with the company's own resources or external ones, by trained personnel qualified under the terms of ITC-ICG 09 on gas installers and installation companies in the technical regulations.

The need to set up requirements for the personnel who perform inspections would have an economic explanation in the asymmetry of the information on the training and real knowledge of the personnel who will carry out the inspection that is available to the typical user and, to a lesser extent, that available to the distribution company that subcontracts out these services. Therefore, compliance with the above-mentioned requirements, when necessary and proportionate, would make it easier for those who go out to the installation to have the training appropriate for carrying out the task.

An additional requirement is keeping a constantly updated database that will contain, among other information, the date of the last inspection of individual installations, as well as their result, and saving this information for ten years. The competent body of each Autonomous Community will have unceasing access to this data base.

5. ANALYSIS OF THE CONSEQUENCES OF GREATER MARKET COMPETITION

Eliminating the market exclusivity of each natural gas distribution company's performance of mandatory installation inspections would mean that the obligation to contract an authorised installer to perform the inspection would be transferred to every owner of an installation. As a result, users would be obliged to have an inspection and, at the same time, have the freedom to contract the authorised installation company of their choice. The contract decision would depend on the conditions (price, flexibility of the schedule, etc.) offered by the company, as well as other variables that could be developed due to the greater incentives to innovation brought about by competition[18].

This would mean the introduction of competition into an inspection market that, under current regulations, assigns this duty to the corresponding distributor as a monopoly. The monopolist receives a regulated price that is officially set by each Autonomous Community. In turn, the distributor pays the installer who, as a resource external to the distributor, performs the inspection and is contracted by the distributor through a tendering process.

[18] In its Study of the technical vehicle inspection market (E/CNMC/0001/14), the CNMC has characterised the market as: i) an excessively regulated market; with ii) the existence of a number of geographical markets that are closed to new operators for long periods of time; iii) a strong geographical component that limits the availability of consumers to travel for the periodic check; and iv) fixed rates in most of the country. These characteristics, with the exception of the geographical component, are reproduced in the periodic gas inspection market.

In the vehicle inspection (Spanish initials, ITV) market it can be seen that, compared to models of direct public provision, concessions or authorisation that is limited or subject to conditions, the Autonomous Communities that are governed by an authorisation system, i.e., Castilla la Mancha and Madrid, have experienced a significant increase in the number of ITV stations, more extensive opening hours, a range of complementary services and a great variety of discounts. The Study therefore notes that "*A model subject to significant operational requirements and based on direct provision by the Administration or through concessions with long periods of exclusivity limits supply and restricts innovation. Reducing the requirements, in terms of physical requirements or in terms of incompatibilities, has demonstrated that supply increases, bringing it closer to and making it fit the needs of the consumer. It is also probable that this greater ease could contribute to lowering the absentee rate."* In regard to a liberalised market, the Study notes that the competent Autonomous Community body should "*strengthen and adapt its supervision, inspection and sanctioning of the operators' activities*".

Hence, it is necessary to analyse whether, with competition, this economic activity would present significant market failures that could make it necessary to set up, *ex ante* or *ex post*, additional measures that, where appropriate, were simultaneous with the opening-up process.

The analysis of the foreseeable consequences arising from liberalising this market is mainly made from the viewpoint of the domestic consumer. It is non-professional users who, due to their greater exposure in economic terms and their lack of information, will be most benefited or harmed from a change in the regulations on the periodic inspection market.

5.1 Benefits of competition

5.1 1 Price

Currently, although the current regulations allow inspections to be made with own resources, in almost all cases, natural gas distributors and LPG suppliers subcontract out the periodic inspection service to authorised installation companies. According to information provided to the CNMC by the distributors, in the tendering processes held by the distributors for this subcontract, a limited number of large installation companies take part, around five companies. Even with this number of contenders, it has been found that this liberalised subcontracting market has competitive tensions that result in significantly lower prices than the officially regulated prices that the users of the inspection service pay. The distributors do not pass on the static and dynamic efficiencies of these tendering processes to the users of the installations inspected, since the price that the users pay for inspections is officially regulated in all the Autonomous Communities (except Madrid and Murcia. In these Communities the price notified by the distributor to the administration is applied). The distributor, since it has a monopoly over the inspection service, does not have sufficient incentives to notify efficient prices, based on its subcontracting costs. Also, the monopoly held by each distributor in its area and the asymmetrical information available to users and the administration lead to additional economic

inefficiencies. Firstly, the distributor always covers the costs of the inspections, since it does not have any static incentives to disclose them nor, in particular, to lower them dynamically. It can absorb the difference between the competitive price that it pays to the installation companies and the regulated price that it receives. Secondly, the information advantage can be used by the distributor to influence the fixed price for the service, which is set outside the market by the competent administration.

Therefore, the greater price efficiency produced by competition in the inspection subcontracting market solely benefits the distributor, which, without any competitive tension to lower prices for the users, collects a fixed, regulated price set by the corresponding Autonomous Community.

The introduction of competition into the contracting of periodic inspections by the consumers who own the installations would foreseeably lead to two possible effects on pricing. On the one hand, the competitive pressure generated by the effective or potential supply of 23,000 authorised installation companies would lower the final price that consumers could obtain for the performance of periodic inspections on their installations. On the other hand, liberalising the periodic inspection market could lead to less advantage arising from economies of scale[19]. Under current regulations, economic efficiency and an interest in maximising profits should lead distributors to organise inspections by geographical area so that they group together the performance of the inspections, thereby optimising travel costs for the personnel who work in the field. However, in a context of subcontracting and total coverage of costs, this incentive may not be operating to a sufficient extent.

It must be borne in mind that a major cost of performing inspections is the professionals' travel expenses. From the moment this cost is shared among a

[19] In the former CNC's Resolution S/0256/10 Periodic gas inspections, it was established that in regard to the possible existence of economies of scale: "There is a total consensus that the geographical distribution of the installations to be inspected is a key factor in the costs to be borne by the distribution companies, so that this aspect is decisive for the existence of economies of scale". It also added that "the biggest companies could benefit from certain economies of scale since the cost of the scheduling and administrative management of the periodic inspection process can be higher in the case of distributors who do not have a significant number of supply points (for example, fewer than 100,000 supply points)".

number of inspections, grouped together under one trip, the unit cost per inspection could fall. The management and organisation of inspections also represents a significant cost for distribution companies[20].

In any case, it must be emphasised that under current legislation the economies of scale that could indeed arise from the distributors' grouping inspections together are not transferred to the owner of the installation inspected since these are official prices set by the competent Autonomous Community administration.

Ample proof that the economies of scale are not reflected in the regulated prices for inspections is the fact that there is no anticipated correlation between the geographical distribution of the supply points and the regulated price of the inspections. In fact, since the content of periodic inspections is laid down in the law, and it is common to all supply points in all Autonomous Communities, the element that should make a difference between the average costs of periodic inspections for the different Autonomous Communities is the number of inspections that it is possible to perform during each individual trip. This number is obviously determined by the average geographical distribution of the supply points. The CNMC finds that, for example, in the Community of Madrid, which has one of the highest geographical concentrations of supply points, the distributors that operate in the Community have notified a higher price per inspection[21] than the average for the other Autonomous Communities[22].

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20 In the above-mentioned Resolution S/0256/10, the costs associated with periodic inspections (PI) of natural gas installations are grouped into three broad groups: i) the services of the inspection personnel (scheduling, preparation and tracking of PIs); ii) the services of the administrative personnel (data entry, documentation and customer support); iii) the services of inspection and quality control (performance and quality control of PIs); and iv) documenting the inspection process (creating forms and documents). According to the Resolution, "it can be deduced that the prices paid by the distributors to their subcontractors for performing periodic inspections would match the line item corresponding to the inspection and quality control service. This item is the one that the SEDIGAS and AOGLP reports assign more weight (around 60% of the total cost)".

21 In the Community of Madrid, the price has not been regulated; it is simply reported by the distributor.

22 Looking only at regulated inspection prices, the expected correlation is not found either. For example, the Autonomous Community of Catalonia, with a density of 67.4 points per km^2, has set a regulated inspection price of €48.01, while the Community of the Basque Country,

In the event that the owners of installations could freely contract installation companies, these companies could also organise and offer their inspections in a manner that would optimise the travelling involved, thereby obtaining economies of scale. These economies could even be greater if the installation companies had access to information on the dates on which each supply point must be inspected in order to comply with the regulations, so that the companies could address their offers to the owners of these installations.

The regulated prices, as well as setting a tariff for the inspection of an individual installation, include an additional inspection tariff when the supply point has part of the installation in common with other supply points, as for example, in a residential community. This additional tariff for inspecting the common part of the installations is charged to each individual user, regardless of the number of users who share the common installation, which can result in an excessively high cost for common installation inspections. This is particularly true if we take into account the fact that this inspection is limited to the visible, accessible parts, which, in many cases, barely exist. It can be stated, therefore, that the part of the tariff corresponding to common installations are also not sufficiently related to the costs of the activity, as it would be in a competitive environment.

Similarly, some Autonomous Communities set regulated prices for periodic inspections that are indexed to the Consumer Price Index (CPI)[23]. From the viewpoint of costs, it would make more economic sense if these prices fell due

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with an area almost five times smaller and a higher supply point density, of 7.17 points per km^2, has set a regulated inspection price of €52.89.

This empirical evidence shows that once more price liberalisation in a monopolistic context is leading to economically worse, more damaging situations for consumers and users than a monopoly with regulated prices, however inefficient it may be. Also, when this monopoly is not justified, as in this case, in terms of necessity or at least of proportionality, the introduction of competition is a clearly preferable solution from the viewpoint of the general interest.

[23] The current regulatory context, within the framework of the Draft Bill on de-indexing, promotes the unlinking of monetary values from price indexes or formulae that contain them. In December 2013 the CNMC therefore published Draft Legislation Report 111/13 on the Draft Bill on the De-Indexing of the Spanish Economy, which states that *"the elimination of the automatic updating of said amounts through the use of price indexes or, in the final instance, the revision of same through formulae that contain only the costs directly related to the goods and services to which they are linked will permit the elimination or mitigation of the aforementioned negative effects, as well as to contribute to improving competition through the economic stakeholders' pricing".*

to the required optimisation of inspections because of the new techniques available (GPS, use of portable devices, database-driven communications in the field, etc.).

It can therefore be concluded that, with the liberalisation of the mandatory inspection market, most owners of installations could obtain competitive prices, lower than those now officially set[24]. In contrast, in areas where the supply points are very scattered geographically, the drop in prices due to competitive pressure might not compensate for the increase in travel costs. In this case, which of the two effects would prevail would come from empirical data, although it must be remembered that having no cross subsidies between the users of supply points in areas of low and high population density would be more efficient economically. Finally, it could be appropriate to set up, at least temporarily, maximum prices per type of installation during the introduction of competition, until the proper functioning of the new market was proven. In this case, it would be advisable to analyse the behaviour of the economic stakeholders in regard to these prices and the effects of the law on the defence of competition.

5.1.2 Flexibility for users

Currently, the distributor schedules inspections in the manner it considers appropriate and, in theory, with an eye to minimising its inspection costs. It therefore informs the users of the day and time slots for the visit by letter and a notice posted at the entrance to the building, in the case of supply points located in residential communities. The days set by the distributors are normal working days and the timeslots in which the inspectors can pay their visit are ample and in working hours. In many cases it is impossible, difficult or at the

[24] Currently, the existence of regulated prices for the distributor could explain why the prices offered by gas installers for voluntary revisions vary very little from the reference prices. The introduction of competition creates an incentive to compete in the market on, among other variables, prices, in order to attract a greater number of customers.

least inconvenient for users to stay at home waiting for the inspector sent by the distributor.

Under current legislation, Autonomous Communities like Cantabria give users the option of agreeing on the day and time with the distributor[25]. This flexibility leads to an administrative surcharge being added to the price of an inspection scheduled unilaterally by the distributor. 53% is added for an individual inspection and 62% to an individual inspection that includes the inspection of the collective part of the installation. This option is not considered to be ideal since, as well as paying a surcharge to have flexibility, it could create economic incentives for the distributor not to perform the notification of the planned inspection as thoroughly, increasing the probability of an inspection being scheduled subsequently at the higher, administered price. The CNMC has noted that the surcharge for flexibility would not be economically indispensable and that the economic incentive exists: in most cases, the contract between the distributor and the subcontracted installer sets inspection prices that are independent of the grouping of inspections.

If users were able to freely contract periodic inspections, they could come to an agreement with the installation company on the day and specific time for the inspection or, at least, a more limited and convenient time slot. Or even, for greater efficiency, the inspection could be contracted jointly by a residential community so that the installation company could go to the homes at the most convenient time for the users. This greater flexibility could reduce the number of inspections that are not made due to its being impossible to enter the home.

5.2 Risks assessed

5.2 1 Safety

Under the previous regulatory framework, the distributors (or suppliers, where appropriate) performed the "inspection of the fixed elements of the installation",

[25] In this case, Grupo EDP.

leaving the user responsible for the revision of gas burning appliances. This meant that many users, even though they gave access to their installations to the technicians sent to perform the inspection that is the responsibility of the distributor, did not contract an installation company to check their appliances.

The current system, which unifies the inspection activities into one single action by the distributor, has led to some Autonomous Communities having very high percentages of inspections. This is the case of the Community of Madrid, for example, where the figure was 44% under the previous legislation and 92% under the current legislation. This has undoubtedly led to an improvement, from the point of view of installation safety.

Where the responsibility for periodic inspections falls on the user rather than the distributor, the number of points inspected could lower, if it is not accompanied by measures that incentivise the performance of inspections. This could lead to a worsening of safety of people and installations.

A closely related point of reference is the case of installations supplied with bottled liquid petroleum gas (LPG), where the users are responsible for having an authorised company check their installation every five years. However, the percentage of inspections made of this type of installation is low, less than 40%[26]. Since these installations are not connected to a distribution network, it is difficult to monitor the status of installation inspections. This figure contrasts with the percentage of piped LPG installations inspected, over 85%[16].

The possible decrease in the inspection rate might not occur if incentives to inspections are given, through measures such as the shutting off of the supply. The distributors would continue to open up their supply point inspection databases to the Autonomous Communities and, therefore, the latter could take action against supply points that have not had a periodic inspection. However, in this regard there would not be the necessary and proportionate legal criteria in all the Autonomous Communities. Only a few of them have legislation permitting the shutting off of the supply to supply points that have not had their

[26] Source: Spanish Association of Liquid Petroleum Gas Operators (AOGLP)

mandatory periodic inspection, after the legal guarantees in defence of the user have been offered.

Opening up the market to competition, therefore, accompanied by mechanisms to ensure the performance of periodic inspections would foreseeably result in more efficient prices for users, while maintaining the level of safety.

5.2 2 Fraud

In a context of asymmetric information, one of the possible issues facing consumers is the risk of fraud in the offer of maintenance, inspection and checking services, which, at times, are presented as being compulsory, with a threat of the supply being shut off. In very many cases, sufficient guarantees that the services are being provided by qualified personnel have not been clearly defined or given.

Under current legislation, mechanisms have been introduced to reduce fraud. For example, notices in a letter or on a poster[27], which lessen the ability of third parties to intervene in a fraudulent manner. These procedures would protect users from fraud and contribute to decreasing complaints and claims regarding periodic inspections, especially complaints regarding installations not connected to distribution networks.

One of the irregular practices that generates the most complaints at this time regarding inspections of installations not connected to distribution networks is the offer to correct defects supposedly found during the inspection. In this way, although the cost offered for the inspection may be moderate, the final bill paid by the user may be much higher due to intervention and repairs to the installation that, in many cases, prove to be unnecessary. If the user could contract periodic inspections, so as to minimise cases of this kind, the establishment could be weighed of an incompatibility between performing the

[27] Another mechanism included in the current legislation consists of the supplier's billing the inspection together with the gas consumption.

inspection and correcting the defects that might have been found during the inspection.

The public administrations could also sponsor user information campaigns to publicise the compulsory nature of the inspections and the need to contract qualified installation companies, especially among the sections of the population most vulnerable to this type of fraudulent practices (the elderly, etc.).

5.2.3 Distributing the responsibility for inspections and monitoring installations

The current model unifies the monitoring of and responsibility for inspections in the distributor, as long as access is given to the installation. Although the distributor can perform inspections using its own or external resources, subcontracting out some or all of the supply point inspection tasks, the responsibility for the inspection centres on the distributor, from notifying the users of the need for an inspection to its performance. The distributor must also track the status of all supply points, know when to perform an inspection, its results, the possible need for corrections or the impossibility of gaining access to the installation due to the absence of or a lack of authorisation from the owner.

If users had to contract the periodic inspection service from the installer of their choice, an additional stakeholder would be introduced, in addition to the user and the distributor. This situation would require more coordination between the stakeholders to find out the status of the inspection on the supply point.

It would be necessary for the distributor to continue to notify users that the five-year deadline is approaching and that it must inspect their installation in compliance with the law. It should also inform them that this activity can be contracted from any qualified company[28][29]. In addition, it would be necessary to

[28] The former CNC highlighted the risk that certain strategic behaviours on the part of distributors during the user notification process would impose restrictions on competition. Pursuant to article 12.3 of Law 15/2007 (now article 5.4 of Law 3/3012 of 4 June) on the creation of Spain's Authority for Markets and Competition), the CNC lodged a contentious-

ensure that the authorised installation company that has performed the inspection notifies the distributor of the result of the inspection, indicating if the result was positive or, if there were defects, how serious they are.

5.2.4 Quality of the inspections

In principle, the current inspection system, managed by the distributors with its own or external personnel leads to homogeneity in the way in which inspections are performed. For this reason, the distributors have set up a special quality

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administrative appeal with the Supreme Court against Final Provision Four of Royal Decree 1623/2011 of 14 November regulating the effects of the entrance in operation of the link between the peninsular electrical system and the Balearic subsystem and amending other provisions on the electricity sector.

The new regulation adopted in Royal Decree 1623/2011 obliges the distribution company, the only one qualified to perform the work of the restricted activities in its geographical demarcation, to simultaneously present a quotation for work in the associated electrical installation market that can be done by any authorised installer, creating an inequality between the operators in the market.

The CNC considered that "*The simultaneous, compulsory sending out by the distributor of a quotation for non-restricted activities would perpetuate the inequality between the distributor and the other installers in regard to gaining customers in this market, a situation that constitutes a restriction on competition not existing in the regulations prior to this amendment*". In addition, the quotation offered would be produced in a situation in which the customers are particularly receptive to it, since it comes from the same corporate group that provides it with technical information on the installations that need to be undertaken. This effect is strengthened by the image of the distributor's trademark, which gives its quotation more possibilities of success, since its status as the local distributor gives it greater recognition and it is possible that the customer perceives the distributor to be the more reliable operator for performing the work, rather than an authorised installer.

According to the CNC, the desirable situation in terms of competition would consist of equal treatment for all the operators in the market.

This neutrality will only be guaranteed if:

1) having received only the technical conditions, customers freely request the quotations they consider appropriate, both from the distributor and third-party installers, and decide which they prefer to perform the work, or

2) the installers are able to access the requests for a new supply point at the same time as the distributor receives them and can know the technical conditions set by the distributor in time to send a quotation to the customer for the liberalised activities, at least at the same time as the distributor.

[29] The CNC also took a stance in IPN 60/11 DRD Connection of low power electricity production facilities, IPN 63/11, DRD Transport, distribution, marketing and authorisation procedures for electrical installations and IPN 64/11, DRD Transport, distribution, marketing and authorisation procedures for natural gas installations.

system for the inspection business[30], so that when they subcontract installers to perform the inspections, they are required to comply with these quality requirements, which are more stringent than the requirements that a company must meet for be an authorised installer. The quality system is also linked to a certain degree of supervision over the subcontractor's personnel who perform the inspections.

Current legislation requires that installation companies have a statement of responsibility for compliance with certain requirements, such as having a certain number of qualified installers or civil liability insurance, which are less stringent requirements than those of the inspection quality system. For this reason, it would be appropriate to analyse these requirements and, where appropriate, to require that installation companies that wish to perform periodic inspections meet the applicable quality requirements, which will be proportionate, so as to ensure that there is no loss of efficiency in the quality of service, which could affect the safety of the installations.

30 The distributor's industry association, SEDIGAS, carries out the task of certifying the professional training in accordance with the rules established for performing these activities. The certification falls under the accreditation given by the National Accreditation Body (ENAC) for compliance of the requirements in standard UNE EN ISO/IEC 17024 “Assessment of compliance. General requirements for bodies that certify individuals". SEDIGAS is therefore currently an accredited body that certifies, among others, the inspectors who perform periodic inspections.

6. CONCLUSIONS

Bearing in mind the above analysis of the consequences that opening up the periodic inspection of installations connected to the distribution networks would have due to transferring the responsibility for having them performed to the user, it can be concluded that:

- The current periodic inspection system results in a high percentage of installations being inspected in the timeframe and manner laid down in the law. There is a low incidence of fraud in comparison with other similar activities, such as the inspection of installations not connected to distribution networks or combustion appliance maintenance services, which are also mandated by the corresponding legislation.
- However, there is an ample margin for the competitive pressure that is currently found in the subcontracting of installers by the distributors to be transferred in the form of more efficient pricing to the end users, who, in the final instance, are the ones who pay for periodic inspections. It is also possible to improve the flexibility given to users of scheduling appointments for inspections. Other, unforeseen innovations would be possible, resulting from free competition. In the end, it is possible to have a more efficient service for users.
- Liberalising the periodic inspection market would benefit users and the general interest. However, the economic failures inherent in this market, in the form of externalities regarding safety and asymmetrical information, could lead to risks. To prevent or reduce those dangers, the liberalisation should be accompanied by simultaneous actions.
- One suitable way of improving competitive pricing and contract flexibility, while at the same time avoiding the risks involved in transferring the responsibility for inspections from the distributor to the consumer, would be to give users the option of contracting an authorised installer during the period prior to the inspection planned by the distributor for that supply point.

With this alternative, when users receive notification from their distributor of the need for a periodic inspection on a certain date, they would also be informed of their options for contracting an authorised installation company, under freely set conditions.

If the user exercised this option and contracted the periodic inspection with competition, the installer would have to inform the distributor of the result of the inspection so that the latter could enter this fact into its database. It would be the user who assumes the responsibility for the inspection being performed.

It is advisable that, regardless of the user's option to contract an authorised installer, the distributor would continue to be obliged to notify users of the mandatory nature of having their installations inspected and the scope of these inspections. The distributor would also continue to have obligations for the not inspected installations.

In this way, a high index of coverage of periodic inspections would be maintained, since the distributor would perform the inspection (except in cases of obstruction or absence) if the user has not contracted a qualified installer. The distributor would also notify users in advance of the need for an inspection and its scope.

The distributor would also continue to keep a database of the status of supply points inspections, regardless of whether inspections were performed by an installer contracted by the user or by the distributor. There would continue to be a centralised tracking of the status of supply points, avoiding the dispersion and inefficiencies of previous legislation.

7. RECOMMENDATIONS

In light of the previous conclusions, the following recommendations are given to the competent public administrations:

- To move forward towards the liberalisation of the natural gas and liquid petroleum gas installation inspection services, in order to transfer the benefits of greater competitive pressure to consumers. To attain this goal, it is recommended that:
    - Users be given the option to freely contract an authorised installer to perform the inspection in the period prior to the distributor's mandatory inspection. If this option is exercised, the contracted installer would have to inform the distributor of the result of the inspection and the user would be responsible for the inspection being performed. The Draft Bill amending Law 34/1998 of 7 October on the Hydrocarbons Sector and regulating certain fiscal and non-fiscal measures relating to hydrocarbon exploration, investigation and exploitation, published in the Official Parliamentary Gazette on 16/01/2015, amends paragraph p) of article 74 as recommended by the CNMC, so that it reads as follows:

        p) To notify the users connected to their network, with the officially defined periodicity and conditions, of the need to perform an inspection of their installations.

        Said notice shall inform the users that they may perform this inspection through a qualified natural gas installation company, in which case they must submit the corresponding inspection report, or through the distributor, in which case , the distributor shall inform them of the date and cost of the aforementioned inspection."

    In order to comply with the recommendation in this document, this amendment to the law must be accompanied by appropriate

changes to the regulations, which must be subject to a report from the CNMC.

- To facilitate access by the authorised installers to the data held by the distributor on the last inspection performed, as well as on the supply points that have an inspection scheduled[31].

- Given the asymmetric information favouring the distributor, the vulnerable nature of some consumers and bearing in mind that some areas where the supply points are more scattered geographically could have insufficient competitive pressure, it would be advisable to:
  - Prevent the distributor from competing under advantageous conditions when offering the inspection service, directly or indirectly. It would therefore be advisable to regulate the contents of the notification that the distributor will send to users connected to its network regarding the need to perform an inspection of their installations and
  - Set maximum tariffs for the inspection market according to the type of installation, temporarily where appropriate.

- In order to promote efficient economic regulations that favour the principles of necessity and proportionality in the regulations and set some cost-based pricing criteria, it is recommended that:
  - The General State Administration establish homogeneous, transparent, non-discriminatory criteria so that the Autonomous Communities set, where appropriate, maximum regulated tariffs that the distributors may charge those users who do not freely

[31] It is appropriate to quote the Resolution of 19 December 2013 of the Competition Chamber of the Board of Spain's Authority for Markets and Competition (CNMC) on Proceedings VS/0513/01 TUBOGAS-REPSOL, in regard to access by installation companies to the data on LPG cylinder supply points, which concludes that "*Repsol Butano shall make the details corresponding to the name and surnames, address, telephone number and date of the last inspection of customers in the province(s) in which the installer in question is authorised to do business available to the installation companies registered with the corresponding Registers of the General State or Autonomous Community or Autonomous City Administration*."

contract their periodic inspection from an installer in due time and form. These prices must efficiently reflect the cost of the inspection.

- Set a single, maximum regulated tariff for inspecting the common part of the installations, which could be temporary, when an authorised installer is not freely contracted. This tariff will take into account the real costs and must be paid by the residents' association.

- To ensure the ultimate aim of periodic inspections, which is the safety of natural gas installations, it is recommended that:
  - A legal criterion for action, based on the principles of necessity and proportionality, should be established for the Autonomous Communities for supply points that was not possible to inspect, due to the absence of the owner or the lack of permission from that person to access the installations. In particular, the liability arising from the appearance of defects after the performance of the inspection must be laid down, in order to avoid possible abuse of the consumer.
  - In these cases, measures must be established so that, with all guarantees for the user, it is possible to shut off the supply to installations that have not been inspected, when necessary.

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