CNMC
COMISIÓN NACIONAL DE LOS MERCADOS Y LA COMPETENCIA

CONSULTATION DOCUMENT. IMPACT ASSESMENT OF THE REGULATION ESTABLISHING THE TARIFF STRUCTURE AND THE PRICE METHODOLOGY TO SET UP TRANSMISSION, REGIONAL NETWORK AND REGASIFICATION TARIFFS OF NATURAL GAS

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IMPACT ASSESMENT OF THE REGULATION ESTABLISHING THE TARIFF STRUCTURE AND THE PRICE METHODOLOGY TO SET UP TRANSMISSION, REGIONAL NETWORK AND REGASIFICATION TARIFFS OF NATURAL GAS (ABSTRACT OF TRANSMISSION TARIFFS)

I. SUBJECT MATTER

According to article 92(1) of Law 34/1998, of October 7, on the hydrocarbons sector, a Regulation ("Circular") shall establish the tariff structures and the reference price methodology to set up transmission tariffs, regional network tariffs and regasification tariffs, as well as the transparency requirements that must be met with the publication of prices.

This document is the Impact Assessment of the Circular and its objective is to describe the price methodology and to explain the decisions taken in this regard.

II. BACKGROUND

Directive 2009/73/CE of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC establishes as one of the main elements for the creation of an internal market in natural gas markets the implementation of a system of transmission network access tariffs. Recital 23 and article 41 of the Directive determine the need to adopt measures to "ensure transparent and non-discriminatory tariffs for access to transport" and that National Regulatory Authorities shall have duty to fix or approve, in according with transparent criteria, transmission or distribution tariffs or their methodologies. The Directive also contains provisions concerning monitoring of tariffs on a non-discriminatory basis and ensuring that there are no cross-subsidies between transmission, distribution, storage, LNG and supply activities.

Regulation (EC) 2009/715 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) 2005/1775 aims at setting non-discriminatory rules for access conditions to natural gas transmission systems with a view to ensuring the proper functioning of the internal market in gas. This aim includes the establishment of harmonised principles for network access tariffs or their calculation methods.

Article 13 of the aforementioned Regulation establishes that tariffs, or the methodologies used to calculate them, shall comply with the principles of transparency and non-discrimination among users, will avoid cross-subsidies and provide incentives for investment maintain or create interoperability for transmission networks and facilitate efficient gas trade. Additionally, tariffs for networks shall be set separately for every entry point into or exit point out of the transmission system. Lastly, the Regulation indicates that where differences in tariff structures or balancing mechanisms would hamper trade across

transmission systems, and notwithstanding Article 41(6) of Directive 2009/73/EC, transmission system operators shall, in close cooperation with the relevant national authorities, actively pursue convergence of tariff structures and charging principles, including in relation to balancing.

Regulation (UE) 2017/460, of 16 March 2017, established a network code on harmonised transmission tariff structures for gas, for the purpose of setting the rules to harmonise the transmission tariff structures for gas. National regulatory authorities, according to this Regulation, shall establish the reference price methodology and shall publish the information required, including all the structural aspects. National regulatory authorities, in accordance with Article 30 of Regulation (EU) 2017/460, shall publish, in conjunction with transmission tariffs, the following information:

1. Information on parameters used in the applied reference price methodology.

2. Allowed revenues of the transmission system operators, as well as the information related to changes in the allowed revenues from one year to the next year and the following parameters:

    a) Types of assets included in the regulated asset base.
    b) Cost of capital and its calculation methodology.
    c) Capital expenditures, including the methodologies to determine the initial value of the assets, the methodologies to re-evaluate the assets, the explanations of the evolution of the value of the assets and the depreciation periods and amounts per asset type.
    d) Operational expenditures.
    e) Incentive mechanisms and efficiency targets.

3. The transmission services revenue and the following ratios:

    a) Capacity-commodity split
    b) Entry-exit split
    c) Intra-system/cross-system split.

4. Explanation of the following:

    a) The difference in the level of transmission tariffs for the same type of transmission service applicable for the prevailing tariff period.

    b) The estimated difference in the level of transmission tariffs for the tariff period and for each tariff period within the remainder of the regulatory period.

5. A simplified tariff model, updated regularly, accompanied by the explanation of how to use it, enabling network users to calculate the transmission tariffs applicable for the prevailing tariff period and to estimate their possible evolution beyond such tariff period.

Additionally, the aforementioned Regulation (EU) 2017/460 establishes in article 10, that at the same time that the final consultation process is carried out according to article 26, the National Regulatory Authority will launch a consultation with regard to the principles of an effective compensation mechanism among system operators and its impact on tariff levels. The inter-transmission system operator compensation mechanism shall be applied in accordance with Article 41(6)(a) of Directive 2009/73/EC and published together with the consultation responses received.

On the other hand, article 28 indicates that at the same time as the final consultation carried out in accordance with Article 26(1), the national regulatory authority shall conduct a consultation with the national regulatory authorities of all directly connected Member States and the relevant stakeholders on:

a) The level of multipliers;

b) If applicable, the level of seasonal factors;

c) The levels of discounts applicable to standard capacity products for interruptible capacity and the entry points from LNG facilities, and at entry points from and exit points to infrastructure developed with the purpose of ending the isolation of Member States.

According to article 92(1) of Law 34/1998, of October 7, on the hydrocarbons sector, access tariffs will include the costs incurred by the use of facilities in a way to optimise the use of infrastructures and that could be differentiated by pressure levels, types of consumption and contract duration.

These prices must comply with the principle of economic and financial sustainability of the gas system and must be sufficient to cover the costs for the use of the transmission and distribution network and LNG facilities.

The aforementioned article also establishes that network tariffs shall be fixed in a way that their determination respond, as a whole, to the following principles:

a) To guarantee the recovery of the investments made by the owners during the operational lifetime of the facilities.

b) To allow a reasonable profitability of the financial resources invested.

c) To fix the revenue system of the operating costs in a way that encourages an effective management and an increase of productivity that must have an impact onto the users and consumers.

Finally, as a general fact, network tariffs and general costs of the system will be fixed annually allocating the responsibility to approve network tariffs concerning transmission and distribution networks tariffs in the CNMC.

Law 3/2013, of 4 June, originally empowered CNMC with the duty to establish by Regulation ("Circular"), after public consultation and following criteria of economic efficiency, transparency, objectivity and non-discrimination the structure and the methodology to calculate network tariffs of access services, specifying that calculation methods consisted on an efficient allocation of regulated costs fixed by the Government to the facility users, according to the tariff structure set by the Government.

In fulfillment of this function on January 22, 2014, the "Proposal for REGULATION (CIRCULAR) X / 2014, of the National Markets and Competition Commission establishing the methodology to calculate network tariffs of access services" [1] was submitted to the "Hydrocarbons Advisory Council (hereinafter CCH)" so that they could send the comments they considered appropriate within two months.

The methodology of the proposal defined the allocation criteria of the regasification, transmission, distribution and underground storage costs complying with the principles of objectivity, transparency and non-discrimination, following efficiency criteria in the use of infrastructures, according to the tariff framework in force at the time.

The agents gave a positive feedback on the labor of the CNMC, as it was a thorough work in which the participation of the agents was allowed, in line with the best regulatory practices, and various aspects were analyzed in depth of the methodology. However, some members of the CCH indicated that neither the proposal of Circular nor the moment at which it was carried out seemed appropriate, since it was not coordinated with the reform of the gas sector announced by the Government.

Taking into account the allegations of the members of the CCH and the modification [2] introduced in Law 24/2013, of December 26, in relation to the competences of the CNMC regarding the methodology of calculation of electricity network tariffs, it was decided to postpone the development of the methodology for the determination of tariffs for access to gas infrastructures.

Royal Decree-Law 1/2019, of 11 January, adopting urgent measures in order to assign the CNMC the duties requested by Directive 2009/12/EC and Directive 2009/73/EC of the European Parliament and the Council of 13 July 2009 concerning common rules for the internal market in electricity and natural gas, amended Law 3/2013, of 4 June, for the creation of CNMC; Law 34/1998, of 7 October, on the hydrocarbons sector; and Law 18/2014, of 15 October, on the

[1] File under the number (ENER-18/2012 / REF-PR).

[2] The Fourth Final Provision of Law 32/2014, of December 22, on Metrology, modified Article 16.2 of Law 24/2013, of 26 December, of the Electricity Sector, in order to expressly assign to the Government -and not the CNMC- the competence to establish the structure and conditions of application of network access tariffs, that leaves without effect sections 6 (Definition of transport and distribution tariffs) and 7 (Time periods of transport and distribution tariffs) of the Circular 3/2014 and makes its application impossible.

approval of urgent measures for growth, competitiveness and efficiency, in order to transfer the duties conferred to the National Regulatory Authority by European Law.

Additionally, according to the aforementioned Royal Decree-Law the CNMC must respect the energy policy guidelines set by the Government, establishing a mechanism to settle discrepancies.

In relation to the tariffs for access to gas infrastructure, the modification introduced by the aforementioned Royal Decree-Law 1/2019 empowers the CNMC to establish the structure and the methodology to calculate network tariffs of access services devoted to cover the associated revenue of the use of transmission and distribution network and LNG facilities. To that effect, the CNMC will approve a Circular, after public consultation and following criteria of economic efficiency, transparency, objectivity and non-discrimination as well as the guidelines of the energy policy,

Finally, Order TEC/406/2019, of April 5, which establishes guidelines for energy policy to the National Markets and Competition Commission establishes in its fourth section the guidelines of energy policy that the CNMC must follow in the methodology of tariffs of LNG, transmission and distribution of natural gas. In particular, according to the energy policy guidelines:

1) The methodology to calculate network tariffs should encourage the use of existing infrastructure to preserve economic and financial sustainability of the gas system.

   In the case of the activity of LNG plants and in compliance with the European guidelines on state aids, the methodology of tariffs should promote their use in preference to other international plants with which they compete. It must be taken into account their contribution to the security of supply and that part of the investments in these facilities can be recovered by the use of other infrastructure of the system. The objective should be to ensure that users who introduce natural gas through LNG plants are not penalized against supplies through international connections.

2) The design of the tariffs should prevent short-term multipliers from penalising price formation in the wholesale electricity market as a measure to protect electricity consumer.

3) The design of the tariffs should take into account the competitiveness of the manufacturing sector, in compliance with the European guidelines on state aids.

4) Through the design of the tariffs, the methodology to calculate tariffs should encourage the injection of biomethane and other gases of renewable origin,

thus contributing to the reduction of greenhouse gas emissions and the fight against climate change.

To this effect, Law 3/2013, 4 June, empowered CNMC with the duty to establish by Circular, after public consultation and following criteria of economic efficiency, transparency, objectivity and non-discrimination the structure and the methodology to calculate network tariffs of access services devoted to cover the associated revenue of the use of transmission and distribution network and LNG facilities.

Article 92 of Law 34/1998, of 7 October, on the hydrocarbons sector, points out that access tariffs will include the costs incurred by the use of facilities in a way to optimise the use of infrastructure and that could be differentiated by pressure levels, types of consumption and contract duration.

Additionally, it points out that these prices must comply with the principle of economic and financial sustainability of the gas system and must be sufficient to cover the costs for the use of the transmission and distribution network and LNG facilities. Finally, as a general fact, network tariffs and general costs of the system will be fixed annually assigning the responsibility to approve network tariffs concerning transmission and distribution networks tariffs in the CNMC.

Article 59 of Law 18/2014, 15 October, on the approval of urgent measures for growth, competitiveness and efficiency, lays down that CNMC will determine the methodology for the calculation of network tariffs to transmission and distribution network and LNG facilities abiding by the principle of economic and financial sustainability of the gas system. Tariffs must be also sufficient to cover the associated costs for the use of facilities.

The methodology for the calculation of transmission tariffs fixed in this Regulation ("Circular") consists on the definition of explicit rules in order to allocate LNG, transmission and distribution costs in an objective, transparent and non-discriminatory manner and following efficiency criteria in the use of infrastructures. To this effect, different tariffs are established considering the different services rendered and the affected infrastructures. Moreover, the structure of tariffs is settled taking into account the cost drivers considered for each service provided, individually considered.

III. OPPORTUNITY AND NECESSITY

Royal Decree-Law 1/2019 modifies the duties of the CNMC as National Regulatory Authority regarding the methodology to calculate methodology of tariffs of LNG, transmission and distribution of natural gas. In particular, it empowers CNMC with the duty to establish by Circular, after public consultation, the structure and the methodology to calculate network tariffs of access services

devoted to cover the associated revenue of the use of transmission and distribution network and LNG facilities. The CNMC must follow criteria of economic efficiency, transparency, objectivity and non-discrimination, as well as the guidelines of the energy policy set by the Government.

This duty was foreseen in European rules[3] since 2003, that is why the methodology should be approved as soon as possible.

In this respect it should be noted that, on the one hand, EC initiated procedure against Spain on the transposition into Spanish law of Directive 2009/72/EC and Directive 2009/73/EC. The conclusion was a reasoned opinion for the Kingdom of Spain in September 2016, considering that the directives were not transposed correctly.

On the other hand, on May 31, 2019 entered into force Regulation (EU) 2017/460 of the Commission, establishing a network code on the harmonisation of tariff structure of gas transmission, imposing National Regulatory Authorities some obligations regarding elaboration process of the methodology, tariff structure, supervision of the methodology by ACER and the information that must be published together with the transmission tariffs.

Lastly, taking into account that on January 1, 2021 starts the new regulatory period on transmission and distribution revenues, it is necessary to have an allocation methodology to determine the access tariffs, being consistent with the evolution of transmission and distribution revenues.

This proposal of Circular, foreseen by the Action Plan of the CNMC, according to article 39 of Law 3/2013, respects the principles of sound regulation established by article 129 of Law 39/2015, since it follows criteria of necessity and efficiency. This Circular is the most appropriate instrument to guarantee the achievment of the aims pursued, respecting the guidelines of the energy policy set by the Government.

IV. CONTENT AND LEGAL ANALYSIS

The proposal of Circular consists of five chapters, 37 articles, three additional provisions, three transitory provisions, one final provision and four annexes.

Chapter I, covering general provisions, consists of four articles regarding the scope, the definitions, general principles and methodology to determine equivalent contract capacity.

[3] Directive 2003/55/EC of the European Parliament and of the Council of June 26, 2003, on common rules for the internal market in natural gas and repealing Directive 98/92/EC, included among the powers of the authorities to include at least the setting or approval of tariffs or, at least, the methodologies for calculating transmission, distribution and LNG tariffs.

Chapter II is integrated by thirteen articles (5 to 17), dedicated to the establishment of the transmission tariff structure and the definition of the methodology to calculate transmission tariffs. Chapter III (articles 18 to 26), is dedicated to define the structure of local networks access tariffs, and the methodology to calculate them. Chapter IV (articles 27 to 35) defines the structure and methodology of the tariffs to recover the LNG revenue. Chapter V includes other provisions, containing the information that shall be published together with the Resolution fixing tariff values for transport, LNG and local networks. It also includes annual information requirements to several agents towards CNMC, with the purpose to calculate the tariffs.

First and second additional provisions establish tariff period and regulatory period respectively, whilst additional provision three establishes the settlement system.

Transitorial provisions one and two establish the transitional scheme to adapt the billing systems and the progressive impact of the methodology. Transitorial provision three establishes the within-day multipliers applicable to LNG truck loading service as long as the necessary information is not available.

The final provision establishes the entry into force of the Circular.

Finally annexes I, II and III describe in detail the allocation methodology of the tariffs for transport, local networks and LNG. The Annex IV determines the parameters that shall be applied from January 1, 2020.

V. AFFECTED LAW

This Circular displaces any previous rule that opposes its provisions. In particular it affects to the following rules regarding tariffs for LNG, transmission and distribution:

- Chapter IV (excepting article 32) of **Royal Decree 949/2001**, of August 3, establishing third party access to gas facilities and establishes an integrated economic system in the natural gas sector.
- Articles 4, 9.5, 9.6, 9.7. 9.8 y 9.9,10,11,12 and Annex I (excepting section 6) **Order IET/2446/2013**, of December 27, which lays down the tariffs associated with access by third parties to gas facilities and revenues of the gas sector's regulated activities.
- Article 6 and sections 2 and 3 of Annex of the **Royal Decree 984/2015**, of October 30, regulating the organised gas market and third-party access to the natural gas system's facilities.
- Articles 5.2, 5.3 and 6 of the **Order ITC/1660/2009**, of June 22, which establishes the methodology for calculating the rate of last resort of natural gas.

- Transitorial provision two of the **Order IET/2445/2014**, of December 19, establishing tariffs associated with access by third parties to gas facilities and revenues of the regulated activities.
- Transitorial provision two of the **Order TEC/1367/2018**, of December 20, establishing tariffs associated with access by third parties to gas facilities and revenues of the regulated activities for the year 2019.

VI. DESCRIPTION OF THE PROCEDURE

On February 14, 2019, the CNMC informed the Ministry for the Ecological Transition of the foreseen dates for the development of the procedure regarding the Regulations (Circulars) to be approved by the CNMC in 2019, in accordance with the provisions of Royal Decree-Law 1/2019. Regarding the proposal for a Regulation establishing the methodology for the calculation of regasification, transmission and distribution of natural gas tariffs, the CNMC indicated the following:

Regulation	***Descripción***	***Scheduled date for the start of the procedure (consultation)***	***Scheduled date for the adoption***
Regulation establishing the tariff structure and the price methodology to set up transmission, regional network and regasification tariffs of natural gas.	Methodology and structure of access tariffs to the transmission, distribution and regasification facilities of the gas system, in line with the best regulatory practices in the European environment and in application of EU Regulation 2017/460 on harmonization of the structure of transmission tariffs of gas .	30/06/2019	01/11/2019

Table 1: Extract from the foreseen calendar of Regulations (Circulars) of normative development of the CNMC for 2019 in application of RDL 1/2019 communicated by the CNMC to the Ministry

On February 20, 2019, the CNMC carried out a prior public consultation on the website of the Regulator, about the calendar of Regulations of a regulatory nature, among which the present regulation was foreseen, indicating the necessity, description and objectives of the same, incorporating to the file the observations made by different agents, after the mentioned consultation.

Subsequently, Order TEC/406/2019, of April 5, establishing guidelines for energy policy to the National Commission of Markets and Competition, provides in its fourth section the guidelines of energy policy that the CNMC must follow in the methodology for the calculation of regasification, transmission and distribution tariffs of natural gas. In particular, according to the energy policy guidelines:

1º The methodology for the calculation of tariffs and fees should encourage the use of existing facilities to preserve the economic and financial sustainability of the gas system.

In the case of the activity of LNG plants and in accordance with the Commission guidelines on State aid, the methodology of tariffs and fees should encourage their use with regard to other international plants with which they compete, also taking into account their contribution to the security of supply and also taking into account that part of the investments in these facilities, can be recovered by the use of other facilities of the system. The objective should be to ensure that users who introduce natural gas through LNG plants are not penalized with regard to supplies through international connections.

2º The design of tariffs and fees should prevent short-term multipliers from penalizing price formation in the wholesale electricity market as a measure of consumer protection of electricity.

3º Tariffs and charges design should take into consideration the competitiveness of the industrial sector, in all cases respecting the Commission guidelines on State aid

4º Through the design of the corresponding tariffs, the methodology for the calculation of tariffs and fees should encourage the injection of biomethane and other gases of renewable origin thus contributing to the reduction of greenhouse gas emissions and the fight against climate change.

1. Report of the Ministry for the Ecological Transition

On August 2, 2019, in accordance with Royal Decree-Law 1/2019 of January 11, the draft Circular was sent to the Ministry for the Ecological Transition.

On September 5, 2019, the report issued by the Ministry for Ecological Transition entered the CNMC, indicating that “it has a positive approach towards the Regulation proposal submitted by the CNMC and shares the general principle of tariff development based on an objective allocation of costs. However, it considers that the result of the methodology included in the Regulation proposal is only partially adapted to the energy policy guidelines included in the Order TEC/406/2019, of 5 April, which establishes energy policy guidelines to the National Commission of Markets and Competition”. In particular, the Ministry has indicated that the second and fourth guidelines and partially the first and third guidelines are met.

To that respect, the report of the Ministry points out the following aspects:

- The proposed methodology results in tariffs for the services provided by the LNG plants that exceed the current ones and, consequently, go against the competitiveness of the plants.
- The methodology does not foresee the security of supply.
- The proposed methodology results in tariffs for certain groups connected in design pressure networks greater than 4 bar and less than 16 bar higher than those in force, which could lead to their disconnection, thus implying less use of transmission networks and putting at risk the industrial competitiveness of this group
- The proposed methodology for local networks could jeopardize the economic sustainability of the system, to the extent that demand forecasts are very ambitious.
- There is a decoupling between the proposed remuneration for the distribution activity and the access tariffs to local networks
- The variability of the fixed term of access tariffs to local networks introduces uncertainty about the recovery of income.

On the contrary, it considers the proposal adequate to the second and fourth orientations, insofar as the proposed methodology:

- The short-term multipliers are lower than the current ones and, therefore, will contribute to reducing the cost of gas from the combined cycles with the consequent impact on the electricity market.
- The proposed methodology foresees a 50% discount in access tariffs to local networks for the injection of biogas or other gases of renewable origin. However, the report shows a preference for a 100% discount.

It also indicates as its own competencies the definition of the services provided by transmission facilities, local networks and LNG plants and the regulatory development of the settlement procedure.

Finally, it should be noted that, on January 7, 2020, took place the meeting of the Cooperation Commission established in Royal Decree-Law 1/2019, of January 11, between the Ministry for the Ecological Transition and the CNMC, proceeding, consequently, to amend the text of the draft Regulation according to the conclusions reached in said Cooperation Commission.

In particular, in order to ensure a better fulfilment of the first and third orientations, the following modifications have been agreed:

- A 13.9% discount is established on the entrance tariff to the transmission network from the LNG plants
- The number of supplies is introduced as a cost driver in the allocation of the distribution activity remuneration

- The threshold of the first step of the access tariff to local networks is raised from 3,000 kWh to 5,000 kWh

With regard to the competence aspects, the following modifications are introduced:

- Articles 5 and 18 are modified in order to contemplate that access tariffs apply to users with the right of access under the terms established in Law 34/1998.
- Article 24 is modified in order to incorporate the corresponding normative references in the aspects of the competence of the Government.
- References are introduced in articles 16 and 26 in order to gather that the normative references in relation to the obligations of having metering equipment with capacity to record the maximum daily flow.
- In relation to the settlement system, the draft Regulation, in accordance with the Eighth Additional Provision, second section, letter c) and the Fourth Transitory Provision of Law 3/2013, of June 4, shall establish that the settlement system developed in Order ECO 2692/2002 of October 28, has, in accordance with Regulation (EU) 2017/460, of March 16, the consideration of inter-transmission system operator compensation mechanism and reconciliation of revenue procedure.

  Finally, in relation to the definition of the services offered to the users established in articles 7, 20 and 29 of the draft Regulation, no modification is introduced in the project, in view of the competence of the CNMC on this matter, highlighted by the Council of State, in its Opinion 824/2019

2. ACER report

On July 31, the Regulation proposal submitted to public consultation with its corresponding justification report was sent to ACER so that, in accordance with Article 27 of Regulation (EU) 2017/460, it could issue the corresponding report.

On November 21, 2019, the aforementioned report was received, in which ACER makes the following observations:

- The selected methodology fully complies with the principle of cost reflection, to the extent that the adjustments introduced imply an adequate balance between the cost reflection and simplicity.
- The application of services not associated with transmission is not contemplated in the definition of services.
- The variable term of transmission tariffs meets the criteria established in Article 4 (3) of Regulation (EU) 2017/460.

- Adjustments at entry points from LNG plants, entry and exit points of underground storage and exit points towards national consumers meet the criteria established in the Regulation.
- The assessment of the proposed methodology produces test results below 10%, so its justification does not apply.
- The proposed methodology does not present a volume risk.
- The proposed methodology does not distort cross-border trade
- The reconciliation of revenue should contemplate the mismatch of previous years.
- The consultation document accompanying the Regulation has not been fully translated into English, which makes it difficult to understand.
- The consultation document that accompanies the Circular proposal includes all the required information, with the exception of the comparison with the tariffs of the previous year.

Taking into account the previous observation, ACER makes the following recommendations:

- Include in the consultation document the comparison of transmission tariffs with those of the previous year, indicating the hypotheses considered for this purpose.
- Include in the calculation model the procedure for obtaining the fixed terms per customer.
- Include in the remuneration of the transmission the part corresponding to the mismatches of previous years and the other costs related to access, for the purpose of their consideration in the calculation of transmission tariffs for services associated or not associated with transmission.

3. Consultation to the Member States

Regulation (EU) 2017/460 imposes a series of obligations on the National Regulatory Authority regarding the procedure for establishing the calculation methodology and the information that must accompany the publication of transmission tariffs. Among other aspects, in accordance with Article 28 of the Regulation, the National Regulatory Authority, simultaneously with the final public consultation, should consult the national regulatory authorities of all Member States directly connected on the following aspects:

1º The level of the multipliers used to obtain the prices for the contracts with a duration of less than one year.

2º If applicable, the level of seasonal factors and the calculations established in Article 15 of the Tariff Regulation.

3º The levels of discounts established at the points of entry and exit of underground storage facilities and regasification plants, in accordance with Article 9, and the discounts applicable to standard products of interruptible capacity, in accordance with Article 16.

According to the aforementioned article, on July 31, the CNMC sent the respective writs formally inviting both the Regulatory Authority of France (CRE) and that of Portugal (ERSE) to make the observations they deem appropriate for their condition as a member State connected to the Spanish system.

On September 30, a response was received from the Portuguese regulator stating that it did not comment on the aspects consulted in the scope of article 28. However, it indicated its concern about the impact of the capacity-weighted distance methodology on the entry price for the Iberian VIP and the impact it could have on the Portuguese gas market and the development of MIBGAS. In this regard, the Portuguese regulator proposes either a leveling of prices in interconnections, or a discount on tickets from Portugal, with the aim of reducing the isolation of Member States under Article 9.2 of the Regulation.

To date, no formal reply has been received from the French regulator.

4. Observations received

On July 31, 2019, the proposal for a Regulation laying down the methodology for the calculation of transmission network, local networks and natural gas regasification tariffs and its consultation document was sent to the members of the Hydrocarbons Consultative Council (hereinafter CCH), also subject to public consultation on the website of this NRA. These procedures were completed on September 30, 2019.

It is indicated that 47 agents made comments to the proposal of Regulation.

Many of the agents have positively assessed the opportunity to participate in the development of the methodology for the calculation of transmission network, local networks and regasification of natural gas tariffs, to the extent that it favors transparency and ensures the effective participation of all concerned parties.

Additionally, some of them have shown their agreement with the proposed methodology and appreciated the clarity with which it has been presented despite the complexity of the issue, pointing out two of them as particularly beneficial in reducing the coefficients of application to contracts of less than annual duration.

On the contrary, other agents have strongly criticized the process of developing the tariff methodology, noting that the procedure followed with regard to the Regulations that affect the gas sector is being precipitated and contrary to legal principles and good practices.

Finally, some agents have indicated that it is premature to express themselves on the goodness of the proposed methodology, to the extent that the tariffs resulting from it will depend on the retribution Regulations (Circulars), the values of certain allocation parameters used and the absence of a detailed analysis of the impact on consumers and the competitiveness of gas.

Regarding the allocation methodology for the determination of **transmission tariffs**, some of the agents have expressed their favorable opinion, while others have opposed it because, given the maturity of the Spanish gas system, it is not considered necessary to give signs of location in tariffs and alternatively propose the implementation of a methodology of postal tariffs.

While agreeing with the proposed methodology, the agents have made the following observations:

- Need to perform an impact sensitivity analysis of the input-output distribution.
- Harmonization of the entry-exit distribution with France and Portugal.
- Allocate the cost associated with the excess of capacity of the transmission network to final consumers.
- Implementation of a discount on the entrances to the transmission network from the regasification plants.
- Implement a single multiplier for within-day products.
- Consider a transitional period in the implementation of the methodology.

Regarding the methodology for allocating **access tariffs to local networks,** agents have made the following observations:

- There is no correspondence between the services provided and the allocation methodology.
- Need to clarify the scope of access tariffs to local networks.
- The elimination of pressure levels in the tariffs structure could induce a cross-subsidy between users.
- Some agents have proposed a higher segmentation of tariffs, on the contrary, others consider the segmentation to be excessive.
- Some agents do not consider adequate to use the balances of the day of maximum demand in the allocation.
- Some agents have pointed out the need to review customer load factors without telemetry.
- Some agents have proposed considering the allocation of distribution costs as a cost driver, in addition to capacity, supplies.
- Some agents have indicated that the remuneration of the networks must be recovered through the fixed term, while others have expressed their preference to allocate the remuneration to a greater extent to the variable term.

- Some agents have proposed considering a single multiplier for within-day products.
- Proposals for improvement on billing conditions.

Regarding the methodology for allocating **access tariffs to LNG plants**, the agents have made the following observations:

- Agents have proposed improvements in the definition of services.
- Some agents have pointed out the need to allocate the cost associated with the security of supply that plants offer to final consumers, while others have stated that allocating part of the regasification remuneration to final consumers involves implementing a cross-subsidy between activities.
- Several agents, in accordance with the proposed methodology, point to the need to allocate more compensation to final consumers.
- Some agents have indicated the risk of disconnection that may arise from the tariff resulting from tank loading, proposing in this regard several of them to regulate the transport of tanks by road, in order to avoid competition with the networks.
- Some agents have proposed alternative models for cargo management and tank hiring.
- Regarding the transitory tariff to cover other regasification costs, in general, the agents have proposed their recovery through a fixed term.
- Some agents have proposed considering a single multiplier for within-day products.
- Agents have made proposals for the improvement in the wording on the conditions of application and billing of tariffs.

Regarding the **publication of tariffs**, agents have requested that access tariffs to local networks and regasification plants should be published at the same time as transmission tariffs, that is, 30 days before the start date of the annual capacity auction, as established in Article 11.4 of Regulation (EU) 2017/459.

Regarding the **transitional period**, in general, they have pointed out the need to have a longer period for adapting the systems to the new billing conditions. They have also pointed out the need to collect more clearly the tariffs that will be applicable during the transitional period.

It is indicated that according to Article 26.3 of Commission Regulation (EU) 2017/460 of 16 March 2017, which establishes a network code on the harmonization of gas transmission tariff structures, the allegations received by the agents during the hearing procedure and a summary of them are published in the Commission´s website.

Chapter 7 of the present consultation document annualizes the observations made by agents.

VII. OPINION OF THE COUNCIL OF STATE

On February 7, 2020, a communication from the Ministry of Economic Affairs and Digital Transformation was received in the CNMC Registry, attaching the Opinion 30/2020 of February 6, 2020, issued by the Council of State ('Consejo de Estado') regarding to the present Circular. The most relevant considerations of the Opinion can be summarized in the following terms:

- The text submitted "*has evolved significantly since its initial version, especially after the adjustments made to accept the agreements reached between the Ministry for Ecological Transition and the CNMC within the Coordination Commission referred to in Article 2 of Royal Decree-Law 1/2019, of January 11*".
- The Network Code establishes certain information obligations that include the discounts included in its Article 9.
- As a result of the previous consideration, the establishment of such discounts, "*although permitted by Regulation (EU) 2017/460, is not another element of its regulation, but has a substantial relevance and, therefore, it should be subject to of examination by all interested parties, including the Member States directly connected by pipeline and ACER*".
- In the report sent by ACER on November 21, 2019, an assessment of such an issue was missing as the consultation document did not include that discount. The same applies to the consultation of the Member States directly connected with Spain.
- In view of the foregoing, "*the regulatory file does not meet the information requirements imposed by Articles 26, 27 and 28 [of Regulation (EU) 2017/460]*".
- The energy policy guidelines indicate that security of supply is one of the Union's energy objectives and can support the discounts applicable to tariffs entering the trunk network from the LNG plants: "*However, a justification of that issue must be clearly stated in the communication sent to ACER and to the Member States connected to the Spanish gas system, as well as in the supporting report accompanying the circular*".
- Although this new hearing process will delay the approval of the draft, it is necessary to carry it out, taking into account that "*the CNMC has the possibility of reducing the deadlines (Article 33 of Law 39/2015, of October 1) and preserve the acts of instruction and ordination that may proceed*".
- Notwithstanding the foregoing, as of the date of the Opinion, the draft Circular establishing the remuneration methodology for the distribution activity has not been approved, which is essential to properly assess the new methodology of tariffs.

In view of the foregoing considerations, the Council of State declares that "*the processing of the Circular must continue*" to comply with the required procedural requirements and, in particular, the following:

"a) Observe the information requirements set forth in Articles 26 to 28 of Regulation (EU) 2017/460 regarding the incorporation into the draft circular of a 13.9% discount applicable to tariffs entering the trunk transport network from LNG plants.

b) Incorporate into the report the justification of the discount provided for in Article 9.2 of Regulation (EU) 2017/460, based on the need to secure the supply of natural gas not only at the national level but also in the European distribution system as a whole, through the existence and proper functioning of complementary facilities - gas pipelines and gasification plants - capable of maintaining the supply in a stable manner.

c) Submit to the public hearing process the circular drawn up in view of the substantive modification introduced".

The Council of State adds that, "at the time of issuing this opinion, the circular by which the methodology for the remuneration of regulated natural gas distribution activity is not approved, so it is not possible to assess whether the circular submitted for consultation conforms to the legal principle of economic and financial sustainability or if it complies with the legal mandate of income sufficiency".

Finally, the Opinion concludes that it is not appropriate in this processing state to issue an opinion on the merits. The procedure must continue in the terms set forth.

VIII. CONTENT AND TECHNICAL ANALYSIS

1. Previous Considerations

1.1 Typology of considered costs

Reflection of costs is a basic regulatory principle for setting regulated prices. Tariffs and charges should be sufficient (should allow full recovery of costs) and they should be the result of a cost allocation process that optimizes the use of resources and maximizes social welfare.

In network activities with increasing returns of scale, economic theory shows different methods to set prices that ensure full coverage of costs. Regarding other methodologies based on marginal or incremental costs and Ramsey price allocation of the infrastructure sunk costs, average cost methodologies allow price calculation based on information accessible for the regulator.

It should be noted that cost allocation based on a marginal cost methodology, typical of expanding systems, provides a cost efficiency signal, although it is not exempt of certain problems as the infrastructure sunk cost allocation based on information available by the regulator.

Allocation based on average costs is justified by the lack of information for the calculation of marginal costs of the infrastructures and also for the difficulty when calculating coefficients that allow achieving the sufficiency of the costs in a transparent and objective way. It is also justified because in meshed and mature systems as the Spanish gas system, that also shows excess of capacity, the investment costs imposed by incremental demand is short, as demand growth do not imply additional investment costs. From this perspective, costs allocation requires the application of scale factors to obtain sufficient allocation, which means discretion in the decision [4].

As an alternative to marginal costs, tariffs can be established based on average costs. This alternative is done estimating of the total costs of the assets (valuing the existing asset base, either using the historical or replacement cost), and dividing the estimated cost by the variable that induces the expected cost in a reference period. The main disadvantage of the use of average costs is that they do not reflect the incremental costs caused by users' decisions but an average of the total investment costs incurred in the past that does not necessary coincide with the optimal investment decisions to cover the forecasted demand. However, the main advantage is that average costs-based tariffs are easy to implement and allow recovering all the recognized costs of the activity, with no need of further adjustments.

In the Spanish gas system, with extensive infrastructure development in recent years, the investment cost currently imposed by incremental demand is reduced

[4] From an economic perspective, if the existence of market competence is not feasible, the alternative is to set a regulated price that, if possible, achieves a minimum efficiency loss in relation to what would have been obtain in a perfectly competitive market. The solution to achieve a similar result to the obtained in perfect competition is to set a price equal to the marginal cost.

The regulatory period of tariffs and charges may have implications on whether the cost reflected by marginal prices are short or long term costs. The distinction between these two concepts is due to the flexibility required to respond to a demand increase, more than the time horizon. These costs are difficult to quantify, and mistakes in their measurement could lead to non-cost reflective tariffs and charges.

Tariffs based on short-term marginal costs could be very volatile, being low when the increase in the use of a certain asset does not require additional investments, and being high if the asset is close to its full capacity of use. Additionally, long-term marginal costs correspond to those operational and capital costs incurred in the long term to respond to an increase of demand over a long period. Setting tariffs based on long-term marginal costs is done in practice through the average long-term incremental cost, which is the unit cost of expanding the existing capacity necessary to cover the expected increase in long-term demand.

The main advantage of the use of these costs is the setting of a price signal for users, since they are aware of the cost of an incremental consumption decision. Therefore, an efficient level of consumption is achieved.

In practice, one of the main difficulties that arise when using long-term marginal costs is that there may be various configurations of the gas system that meet the target of supplying an increase of demand, so it is also necessary to simulate the gas system and the supply requirements of the peak demand.

It is also important to highlight the relevance of the expected growth of demand: if a significant increase is forecasted compared to current demand, it would mean that long-term marginal costs would be close to average costs; however, if the increase of demand is small, it would imply that marginal costs would be close to zero.

Finally, in activities with increasing returns of scale, such as gas infrastructures, if the price set is equal to the marginal cost, the regulated company will not recover all of its costs. This situation would force to implement tariff adjustments to allow the recovery of non-marginal costs of the system. These adjustments should be made not to distort the decisions of users.

because the increases in demand do not involve significant additional investments. From this perspective, the use of long-term marginal cost may not be the best alternative for the determination of the regulated price, also taking into consideration the complexity that would be involved in calculating it.

In the current context, the best option to set the regulated price is the use of the average cost complemented by the introduction of efficiency signals in the use of the infrastructure. This is because, on one side, the principle of causality of costs is considered in each tariff and, on the other side, network tariffs are calculated taking into account that the designed capacity per pressure level is established considering the demanded capacity of the users connected in this pressure levels and below.

1.2 Scope of Regulation (UE) 2017/460

The Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and Regulation (EC) 2009/15 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) 2005/1775 establish in the Article 2 that 'transmission' means the transport of natural gas through a network, which mainly contains high-pressure pipelines, other than an upstream pipeline network[5] and other than the part of high-pressure pipelines primarily used in the context of local distribution of natural gas, with a view to its delivery to customers, but not including supply.

The Article 59 of Law 34/1998 establishes that the primary transmission network consists on those high-pressure pipelines with a maximum design pressure of 60 bar or above, distinguishing between the trunk network and the local influence network.

The trunk transmission network includes interconnected primary transmission pipelines essential for the operation of the system and security of supply, excluding the part of the primary transmission pipelines used for the local supply of natural gas. In any case, it includes the international connections of the Spanish gas system with other systems, connections with production facilities or with basic underground storage facilities, with LNG facilities, compression stations and auxiliary elements necessary for its operation.

The local influence network, or not trunk, are the primary transmission pipelines (design pressure equal to or greater than 60 bar) used for the local supply of natural gas.

[5] «upstream pipeline network»: any pipeline network or group of pipelines operated or built as part of an oil or gas production center, or used to transport natural gas from one or more of these centers to a processing facility or a final unloading seaside plant

Finally, the secondary transmission network is formed by the pipelines with maximum design pressure between 60 and 16 bar.

After the amendment of Law 18/2014, local influence networks and secondary transmission networks are assimilated to distribution, therefore Article 60(5) provides for the possibility of establishing a differentiated remuneration scheme for local influence networks and Article 63(3) establishes that secondary transmission facilities that do not have by that time the approval for executing the project, will be considered distribution facilities for the purposes of the remuneration system.

Considering the definition of transmission given in the Directive and the Regulation and the distinctions established in Law 34/1998, it is considered that only the trunk transmission network is in the scope of Regulation (EU) 2017/460. Therefore, users of interconnection points shall only contribute to support the allowed revenues associated with the trunk transmission network, while national customers, should face the allowed revenues for the trunk transmission network and in addition the local influence and secondary transmission network[6].

Next table shows the forecasted allowed transmission revenues for 2020, according to the methodology of Law 18/2014. In 2020 the allowed transmission revenue amount 808,2 M€, of which 71,3% correspond to trunk transmission network, 19,8 correspond to local influence networks y el 8,9% correspond to secondary transmission network.

[6] In this context, within the scope of the reports to be prepared in accordance with Article 27 of Regulation (EU) 2017/460, ACER has indicated to Germany and Italy the need to revise the definition of transmission and distribution networks in order to make them compatible with European regulation.

Table 1. Forecasted allowed transmission revenues for year 2020, estimated according to the methodology established in Law 18/2014

Allowed transmission revenue (€)	Forecast 2020	% over total
Truck network	**593.363.509**	***71,2%***
Investment costs	435.183.402	52,2%
Operational costs	139.052.576	16,7%
Operating Gas	19.127.531	2,3%
Local influence network	**165.775.254**	**19,9%**
Investment costs	110.018.599	13,2%
Operational costs	53.576.919	6,4%
Operating Gas	2.179.736	0,3%
Secondary transmission network	**74.540.643**	**8,9%**
Investment costs	55.730.057	6,7%
Operational costs	17.614.874	2,1%
Operating Gas	1.195.711	0,1%
Total	**833.679.405**	**100,0%**

Source: CNMC

1.3 Consideration of short-term multipliers in the forecasted capacity

The allocation methodology of the "Circular" establishes the capacity components of the corresponding tariffs for the yearly standard capacity product and, additionally, the multipliers, which have to be applied to obtain the corresponding fixed charge for standard capacity products of less than one-year duration.

Incomes resulting from applying tariffs to an activity will depend both on the duration of the contracts and on the short-term multipliers applied to products with less than one year duration. It is necessary to consider this in the calculation of the forecasted capacity in order to avoid excessive collection.

Therefore, the forecasted contracted capacity will be calculated according to the following formula:

$$Q_{s,n} = \sum_{i=1}^{m} \frac{Q_i^d \times D_d}{\sum D} \times C_d$$

Where:

- m: number of contracts
- $Q_{s,n}$: forecasted contracted capacity for service s in year n.
- Q^d_i: forecasted contracted capacity for service s of the contract or group of contracts i with duration d in year n.
- D_d: duration in days of contracts of type i, except for within-day product, which is established in hours.
- D: number of days of the year, which will take the value of 365 or 366 in leap years. In the case of within-day products, the duration of the contract is established in hours, so D will take the value of 8760 or 8784 instead of 365 or 366, respectively.
- C_d: short-term multiplier applicable to contracts with duration d.

  For the above purposes, in case of interruptible products, the multiplier will be the result of considering both short-term multiplier and the discount of the interruptible product over the firm capacity product.

1.4 Allowed revenues considered in the present impact assessment

The purpose of the Circular is the definition of explicit rules for allocating the allowed revenues for transmission, distribution and regasification activities in an objective, transparent, non-discriminatory manner and following criteria of efficiency in the use of infrastructure.

For the purposes of illustrating the procedure, the allocation exercise is carried out in this report with the remuneration established for the year 2020. The remuneration of regulated activities for the year 2020 has been established in accordance with the calculation methodology established in Law 18/2014.

Furthermore, pursuant to Article 30.2 of Regulation (EU) 2017/460, it is necessary to include in the Report the evolution of transmission tariffs by the end of the regulatory period, therefore it has been necessary to estimate the evolution of the allowed revenues for transmission activity in accordance with the methodology set out in Circular 9/2019 of 12 December of the National Commission on Markets and Competition, which establishes the methodology for determining the allowed revenues of gas transmission facilities and LNG facilities considering the demand forecasts set out in Annex I.

Similarly, and following the criteria of good regulatory practices and transparency, the evolution of tariffs of local networks and LNG facilities by the end of the regulatory period are also included in the Report. For this purpose, as set out below in the report, the evolution of the allowed revenues for regasification activity have been estimated considering the methodology of Circular 9/2019 of 12 December, while the allowed revenues for distribution activity have been

estimated in accordance with the Circular Proposal establishing the methodology for the allowed revenues of the regulated activity of distribution of natural gas.

However, it is considered necessary to point out that, the methodology for calculating tariffs is independent of the methodology for calculating the allowed revenues, by means of consisting of the definition of rules for allocating allowed revenues to the different activities (meaning that the allowed revenue is an input data in the procedure of allocation) and therefore does not jeopardise the economic sustainability of the gas system or the sufficiency of the revenue to cover the costs.

In any event, it is stated that the sufficiency of tariffs to cover the allowed revenues for each activity should be assessed annually in the corresponding CNMC's Resolution establishing the values of tariffs for access to transmission networks, local networks and LNG facilities, as provided for in Article 7.1.bis of Law 3/2013 of 4 June.

Finally, it should be noted that the Resolution establishing the specific tariff values may not be published under any circumstances without being previously approved Circular establishing the remuneration methodology for the distribution activity.

1.5 Allocation of underground storage allowed revenues and costs that must be recovered through charges for costs

According to article 92 of Law 34/1998, the CNMC must establish the methodology for calculating tariff access to regasification, transmission and distribution facilities, while the Government must establish the methodology for calculating tariff access to underground storage, as well as the methodology for calculating charges for costs not associated with the use of the facilities.

However, in this Consultation Document that accompanies the Circular Proposal, it has been decided to allocate the remuneration of underground storage and the costs that must be recovered through charges, in order to minimize the impact on users of the proposed methodology, as well as presenting a first outline of the transitory period of convergence, although this will depend on the allocation criteria that the Government finally establishes in the methodology of charges.

In this regard, it is indicated that the allocation contained in the Consultation Document related to those concepts responsibility of the Ministry Methodology does not in any case link to the methodologies that the Ministry must prepare.

Table 2 shows the forecasted allowed revenues for the year 2020 that must be recovered through tariffs and charges for access to gas infrastructure and charges. It is observed that the allowed revenues for regasification, transmission

and local networks activities represent approximately 93% of the planned costs for the year 2020.

Table 2. Forecasted allowed revenues for 2020

Allowed revenues by activity (€)	Forecasted 2020	% over total
Costs associated facilities use	**2.792.231.134**	**95,7%**
LNG Revenue	450.340.618	15,4%
Trunk Transport Network Revenue	593.363.509	20,3%
Local Network Revenue	1.655.396.229	56,7%
Underground Storage Revenue	93.130.778	3,2%
Costs not associated with use	**124.891.637**	**4,3%**
Technical Manager of the Gas System Revenue	26.432.000	0,9%
CNMC and MITECO rate	4.083.972	0,1%
LPG procurement for island supplies	1.005.132	0,0%
Regulated supply Revenue	110.000	0,0%
Annuities due to income mismatches	89.745.027	3,1%
Market Operator Compensation	3.515.507	0,1%
Total	**2.917.122.771**	**100,0%**

Source: CNMC

2. General Principles

The methodology for the fixing of access tariffs to the gas infrastructure is based on the following principles:

a) **Sufficiency**. The tariffs of each of the activities must guarantee the recovery of the revenue corresponding to such activity, in compliance with the forecasts made

b) **Efficiency.** The tariffs calculated with the methodology of this Circular, must allocate the infrastructure costs to each tariff group according to the causality principle, avoiding cross-subsidies between tariff groups and encouraging efficiency in supply.

c) **Non-discrimination** among infrastructure users with the same characteristics, regardless of whether they are located within or outside the national territory**.**

d) **Transparency and objectivity**. The criteria for allocating the allowed revenue to infrastructure, the input information and the parameters applied in the methodology are explicitly defined in this Circular and are public.

e) The allocation methodology will promote **competition and efficient gas trade.**

3. Information required for the application of the methodology

This section summarizes the information required for the setting of the tariffs applicable to regasification, transmission and distribution, the details of which are set out in Annex I. In particular, the methodology for allocating the allowed revenues for transmission, distribution and regasification activities for 2020 and calculating the corresponding tariffs requires the following information:

- Transported natural gas demand, for each entry and exit points, distinguishing between conventional demand and demand for electricity generation
- Annual average contracted capacity, used and invoiced, disaggregated by entry system and exit point.
- Volume of natural gas, contracted capacity and invoiced capacity for customers with standard products of less than one-year duration;
- Contracted capacity and gas volume injected/withdrawn, for each underground storage.
- Forecast for number of customers, contracted capacity and consumption, for each tariff group.
- Daily load profiles for transported demand (combined cycles, conventional thermal power and conventional customers) and daily demand load profiles for customers with remote metering installed.
- Information on the costs of transmission facilities for the period 2008-2011 distinguishing between primary and secondary pipelines, regulating and metering stations and compressor stations, according to the analytical accounts.
- Allowed revenues for transmission activity, for each type of network: trunk, local influence and secondary networks.
- Part of the allowed revenues that shall be recovered through capacity-based transmission tariffs.

In addition, for the estimation of reference prices according to the capacity weighted distance methodology, the following information is required in accordance with Article 8 of the tariff code:

- Simplified network model
- Forecasted contracted capacity at each entry point or cluster of entry points and at each exit point or cluster of exit points;
- Where entry points and exit points can be combined in a relevant flow scenario, the shortest distance of the pipeline routes between an entry point or a cluster of entry points and an exit point or a cluster of exit points;

- Combinations of entry points and exit points, where some of them may be combined in a given flow scenario;
- The entry-exit split referred to in Article 30(1)(b)(v)(2) will be 50/50.
- Transported natural gas, for each entry point and exit point of the system, distinguishing between conventional demand, demand for electricity generation and injections from underground storage
- Annual average contracted capacity, used and invoiced, for each entry and exit point.

4. Allocation of the allowed revenues for the transmission network

4.1 Allowed revenues

Tariff calculation will include the revenues associated to the investment costs and the operating costs of the trunk transmission network forecasted for the period, as well as the amendments of the revenues of previous periods not included in the tariffs of the corresponding period, other costs associated to the transmission network not included in the previous periods and the income deviations of previous periods. Additionally, the premium resulting from capacity auctions at VIPs will be taken into account, if necessary.

Table 3 details the revenues of transmission activity associated to the trunk transmission network foreseen for 2020, resulting from applying the calculation methodology established in Law 18/2014. In particular, in 2020 the expected allowed revenues for the trunk transmission network is 593.3 M€, of which 73.3% corresponds to investment costs, 23.4% to operational costs and 3.2% to the revenues for the operating gas.

Table 3. Allowed revenues for the transmission network foreseen for 2020

Allowed trunk transmission revenues (€)	2020 forecast	% of the total
Investment Costs	435.183.402	73,34%
Operational Costs	139.052.576	23,43%
Operating Gas	19.127.531	3,22%
Total	**593.363.509**	**100,00%**

Source: CNMC

4.2 Transmission and non-transmission services

The Article 4 of Regulation (UE) 2017/460 sets up a given service shall be considered a transmission services where both of the following criteria are met:

a) the costs of such service are caused by the cost drivers of both technical or forecasted contracted capacity and distance;

b) the costs of such service are related to the investment in and operation of the infrastructure which is part of the regulated asset base for the provision of transmission services.

Regarding non-transmission services, the regulation establishes that the corresponding allowed revenues shall be recovered by non-transmission tariffs that shall be cost-reflective, non-discriminatory, objective and transparent.

Consequently, the following services associated with transmission have been considered:

- **Entry to transmission network**: it includes the right to use the facilities needed for transporting gas from the point of entry to the transmission network to the virtual point of the transmission network.
- **Exit from transmission network**: it includes the right to use the facilities needed for transporting gas from the virtual point of the transmission network to the point of exit to the transmission network.

The transmission network does not provide other service not related to transmission. This mean that non-transmission services have not been considered.

4.3 Cost drivers and transmission network tariff structure

Article 4(3) of Regulation (UE) 2017/460 sets up transmission services revenue shall be recovered by capacity-based transmission tariffs. As an exception, part of the transmission services revenue may be recovered by commodity-based transmission tariffs when costs are mainly driven by the quantity of the gas flow.

Considering the above, it has been considered two cost drivers: the contracted capacity (because the design of the network is determined, mainly, by the capacity of injection demanded) and volume (because the operating gas cost depends on the energy transported).

Taking into account the cost drivers for transmission, the following transmission tariffs structure is defined:

a) **Entry to transmission network tariff**: it consists of a fixed charge for contracted capacity, expressed in €/(kWh/day)/year, and a variable charge for volume, expressed in €/kWh, both with six decimals.

b) **Exit from transmission network tariff**: it consists of a fixed charge for contracted capacity, expressed in €/(kWh/day)/year, and a variable charge for volume, expressed in €/kWh.

4.4 Allocation of allowed revenues to the transmission services

According to Regulation (UE) 2017/460, the transmission allowed revenue shall be recovered through entry and exit transmission tariffs. The allowed revenues for transmission services to be recovered through capacity-based transmission tariffs corresponds to the allowed revenues for investment and operating costs. The allowed revenues for transmission services to be recovered through commodity-based transmission tariffs corresponds to operating gas.

On the other hand, in the Proposal 50% of the allowed revenues for investment and operating costs of the trunk transmission network are allocated to entries, in line with the responses received from agents in the previous public consultation about methodology and with the mentioned Regulation (UE) 2017/460, that establishes such value for the purpose of comparison with the contrast methodology.

Finally, according Article 4(3)(a) of the Regulation, the commodity-based transmission tariffs shall be set in such a way that it is the same at all entry points and the same at all exit points. Therefore, the operating gas cost is allocated by service proportionally to the demand injected and withdrawn from the transmission network.

Table 4. Allocation of allowed revenues to transmission services. Year 2020

Allowed transmission revenues (€)	2020 forecast	% of the total
Investment costs	435.183.402 (A)	73,3%
Operating costs	139.052.576 (B)	23,4%
Operating gas	19.127.531 (C)	3,2%
Total	**593.363.509**	**100,0%**

Entry		Exit	
Capacity [(A) + (B)] * 50%	Commodity (C) * (D)	Capacity [(A) + (B)] * 50%	Commodity (C) * (E)
217.591.701		217.591.701	
69.526.288		69.526.288	
	9.598.013		9.529.519
287.117.989	**9.598.013**	**287.117.989**	**9.529.519**

Transported gas through the trunk network (MWh)	2020 forecast	% of the total
Volume of gas injected into the transmission network	390.170.074	50,2% (D)
Volume of gas withdrawn from the transmission network	387.385.717	49,8% (E)
Total	**777.555.790**	**100,0%**

Source: CNMC

4.5 Tariffs associated to each service provided by the trunk transmission infrastructure calculation

In accordance with Regulation (EC) No 715/2009, the tariffs for network users shall be set separately for each entry point or exit point of the transmission system. Particularly, the Regulation provides in its Article 13 that *Tariffs for network users shall be […] set separately for every entry point into or exit point out of the transmission system. Cost-allocation mechanisms and tariffs setting methodology regarding entry points and exit points shall be approved by the national regulatory authorities*."

Therefore, under the mentioned Regulation, the methodology to set up transmission tariffs should be entry-exit methodology. However, there are several methodologies that allow the set-up of entry-exit transmission tariffs. As an illustration, it is indicated that the most used methodologies in the European countries are the postal methodology (Germany, Croatia, Denmark, Slovakia, Estonia, Greece, Holland, Hungary, Northern Ireland, Lithuania, Poland[7], Romania and Sweden), the distance to the virtual point methodology (Austria[8]), the capacity weighted distance methodology (Belgium, the Czech Republic, France[9], Italy, Portugal[10]) and the matrix methodology (Slovenia, Ireland and United Kingdom).

The methodologies above mentioned are those included in the public consultations[11] that countries have carried out in accordance with article 26 of Regulation 2017/460.

The postal methodology consists in applying the same price to all entries and the same price to all exits, regardless of location. It is the simplest of the methodologies and guarantees stability and predictability of rates, by imposing the same price to all entry points and all exit points regardless of the network topology and gas flows. However, it has certain disadvantages with regard to the reflection of costs and location signals to network users.

The capacity weighted distance methodology is based on the principle that the transmission tariff of each point of entry or exit must be established taking into account the contribution to the total costs of the system of that point. In particular,

7 Poland applies the postal methodology, with the exception of the Poland West Europe transit gas pipeline for which the capacity-weighted distance methodology is applied.

8 The description of the distance to the virtual point methodology is that it is presented in the pre-consultation published by the regulatory authority dated 01-31-2019.

9 The Capacity weighted distance methodology is the one presented at the pre-consultation document 2019-06 of March 27,2019.

10 Capacity weighted by modified distance, in order to contemplate the use of the network

11 ACER publishes at its website links to the public consultations the National Regulatory Authorities are carrying out in compliance with Article 26. Available at https://acer.europa.eu/es/Gas/Framework%20guidelines_and_network%20codes/Paginas/Harmonised-transmission-tariff-structures.aspx

the capacity weighted distance methodology establishes the capacity charge of an entry point based on the distance of that entry point to each of the exit points by weighing the distances by the contracted or demanded capacity in each of the exit points considered. Similarly, the capacity charge of an exit point is a function of the distance from this exit point to each of the entry points considered weighted by the capacity contracted or demanded at each entry point. This methodology has the advantage of providing differentiated price signals at the entries and exits and, consistently, reflects the costs better. However, it presents greater price variability, depending on the capacity used.

The distance to a virtual point methodology is similar to capacity weighted distance methodology, although the price relation is obtained by weighing the distance to the virtual balance point by capacity. The virtual point can be calculated mathematically or it can be established geographically. This methodology has the advantage of better reflecting costs, insofar as it takes into account the network topology. The main drawback derives from the definition of the virtual point, since it allows a certain degree of freedom in its application.

Finally, under the matrix methodology the entry and exit transmission tariffs are calculated as the result of an optimization process which minimizes the difference between network charges paid by users and the costs allocated to the different entries and exits (path costs). In this way, the cost of access to the network is determined by the location of the injection point and outflow of the transmission network. The main advantage of this methodology is the reflection of costs, because both the topology of the network and the physical flow of the gas are taken into account. The main drawback derives both from the complexity of its implementation and the price sensitivity to the flow scenario considered.

The choice of one or another methodology depends, fundamentally, on the characteristics of the transmission network (whether it is a meshed network or not), on the characteristics of the gas flows (predominant gas flow pattern vs gas flow pattern unpredictable), the information available for the regulator (the information requirements of each of the methodologies differ from each other) and the objectives that the regulator wishes to achieve (for example, equity vs. efficiency, transparency vs. cost reflection , need to provide location signals, etc.).

It is indicated that, some agents have shown in their responses their preference for a postal allocation methodology, while others, without disagreeing, have indicated their concerns about the impact of the results of the proposed methodology on the international interconnection points and the development of MIBGAS.

This Commission considers that, given the current situation of the gas system with a south-north flow prevails and taking into account the energy policy guidelines concerning the promotion of the use of LNG facilities, it is necessary to give differentiated price signals at the entry points to the transmission network.

Consequently, a postal methodology, which results in a single price for all entry points, is not considered adequate.

In the Spanish case, in which the transmission network is meshed and has a significant excess of capacity, it is considered that the methodology that best reflects the costs is the capacity-weighted distance, to the extent that it introduces price signals differentiated without the need to implement a complex and difficult model to understand for agents, such as the matrix methodology. The reference price methodology proposed is the methodology defined in Article 8 of the tariff network code.

In this regard, it shall be noted that the capacity weighted distance methodology is the contrast methodology provided for in Article 8 of Regulation (EU) 2017/460.

The following points describe in detail the adopted methodology.

4.5.1 Transmission tariffs for yearly standard capacity products for firm capacity

As indicated, capacity weighted distance methodology establishes that capacity-based transmission tariffs for an entry point shall be derived from the distance between such entry point and each exit point weighting the mentioned distances by the forecasted contracted capacity at each exit point. Correspondingly, capacity-based transmission tariffs for an exit point shall be derived from the distance between such exit point and each entry point weighting the mentioned distances by the forecasted contracted capacity at each entry point.

The capacity weighted distance methodology requires hence to determine previously (i) entry points to transmission network, (ii) exit points to transmission network (iii) minimum distance between each entry point and each exit point of the transmission network and (iv) the forecasted contracted capacity for each entry and exit point.

According to the network code on harmonised transmission tariff, entry and exit points can be physical points or be combined in clusters, therefor, the transmission network used to determine the capacity charge may differ from the physical network, meaning a simplified transmision network may be used.

A simplified transmission network makes it easier to apply the CWD methodology, as the number of distances to calculate is reduced, but if it is simplified excessively, it may not reproduce appropriately the real transmission network and therefore, not reflect the costs related to such network.

In addition, the simplification of transmission network requires making decisions about: (i) the procedure to calculate the distance between entry and exit points considered, and (ii) the allocation of the injections and withdraws from the

physical points to the virtual points considered, which allows a certain degree of freedom in its application.

Considering the above and the evolution of current computing techniques, it has been decided to contemplate the physical network. In particular, the existing transmission network[12] at the time of preparation of this report has been considered with the following simplifications.

Consequently, according to the infrastructures in use, the following **entry points to the transmission system** have been considered:

1) International interconnection points with third countries by pipeline (Tarifa, Almería, Badajoz, Tuy, Biriatou and Larrau),
2) Entry points from LNG facilities [13]: Barcelona, Huelva, Cartagena, Bilbao, Sagunto y Mugardos.
3) Entry points from production facilities: Marismas, Poseidón, Viura and Planta de biogás de Madrid.
4) Entry points from underground storage facilities: Serrablo, Gaviota, Yela and Marismas.

On the other hand, the considered **exit points** are:

1) Bidirectional international interconnection points of Badajoz, Tuy, Biriatou and Larrau.
2) Exit points to underground storage facilities: Serrablo, Gaviota, Yela y Marismas.
3) Each exit point to the transmission network to the local network (local influence transmission network, secondary transmission network and distribution network).
4) Exit points to each LNG facility.

Once the transmission network model and the entry and exit points have been defined, the calculation of the **minimum distance**[14] between each entry point and each exit point of the transmission network has been carried out using the Dijkstra[15] algorithm.

[12] Defined in Order IET / 2434/2012, of November 7, which determines the facilities of the basic natural gas network belonging to the trunk network of natural gas.

[13] Provided that is the case Musel LNG facility is put in operation it will be considered as another entry and exit point.

[14] For this purpose, the information required for its calculation has been requested the Technical Manager of the Gas System GTS. In particular, the GTS has provided the distance of each connection point of the transmission network to all connection points adjacent to it. It must be emphasized that according to the information provided by the GTS, the only non-bidirectional pipeline in the transmission network is the pipeline between the compression stations of Córdoba and Almendralejo.

[15] The Dijkstra algorithm is an iterative algorithm that provides the shortest path from a particular initial node to all other nodes in the graph, when all distances are positive.

The **forecasted contracted capacity at each entry point** has been calculated with the following hypothesis (see Annex I for additional details):

a) Based on the forecasted gas volume to be introduced into the system for year 2020, the forecasted entries of natural gas for 2019 are considered.

b) Forecasted contracted capacity for the international interconnection points result from the hypothesis that the load factor of 2019 is preserved.

c) For estimating the contracted capacity at all LNG facilities entry points, the load factor forecasted for 2019 is maintained. The distribution by LNG facility results from considering both the load factor of each LNG facility and that there will be a higher balance between LNG facilities because of the implementation of the single storage tank model.

d) Forecasted contracted capacity for virtual entry points (VIP Pirineos and VIP Iberico) is disaggregated for each physical point according to their technical capacities.

e) Contracted capacity for entry points from underground storages has been estimated considering the real daily withdrawal profile and the effect of the corresponding multipliers for the short-term standard capacity products.

The **forecasted contracted capacity at each exit point** has been calculated according to the following hypothesis (see Annex I for additional details):

a) In the case of virtual interconnection points with France and Portugal, contracted capacities have been disaggregated according to the technical capacities of each physical point.

b) In the case of contracted capacity for exit points to underground storages, forecasts are based on the real injection profile.

c) For exits to LNG facilities, zero contracted capacity has been forecasted considering the characteristics of the service.

d) Regarding the forecasted contracted capacity exits to national customers, it has been disaggregated for each group of customers considering the information available for the CNMC. Particularly, forecasted contracted capacity for customers supplied by networks of pressure higher than 4 bar and customers supplied by networks of design pressure lower than 4 bar and in tariff group 3.5, for who individualized information is available[16], is based invoiced capacity for the last full year available information (2018) of. For other customers, contracted capacity has been estimated at each

[16] It shall be noted that for this group of customers with remote metering installed (consumption higher than 5GWh/year), on one side individualized information in the Settlements Database of the gas sector (SIFCO) is available, and on another, the Technical Manager of the Gas System, GTS, has provided the exit point from where they are supplied.

exit point based on the load factor of each tariff group and the registered consumption for such customers in each municipality[17].

e) The corresponding multipliers have been applied to forecasted short-term standard capacity products for exit points.

Table 5 and Table 6 show the forecasted contracted capacity for each entry point and for each exit point respectively.

Table 5. Forecasted contracted capacity and volume at each entry point of the transmission network. Year 2020

Entry point	Forecasted contracted capacity (MWh/día)	Volume (MWh)
International interconnection points	**583.703**	**164.579.764**
CI Tarifa	145.693	37.838.452
CI Almería	222.166	69.700.918
VIP Pirineos	205.371	55.120.751
VIP Ibérico	10.473	1.919.644
LNG facilities	**669.880**	**214.926.885**
Barcelona	180.913	57.936.552
Cartagena	76.351	22.289.469
Huelva	154.658	51.938.183
Bilbao	147.909	48.320.352
Sagunto	73.966	23.506.653
Mugardos	36.082	10.935.677
Underground storage facilities	**40.372**	**8.971.757**
Serrablo	16.906	3.773.169
Gaviota	13.608	2.934.687
Marismas	5.462	1.257.723
Yela	4.396	1.006.178
Production facilities	**6.453**	**1.691.667**
Marismas	4	848
Poseidon	372	44.551
Viura	5.766	1.546.559
PB Madrid	310	99.709
TOTAL ENTRIES	**1.300.407**	**390.170.074**

Source: CNMC

[17] It is noted that for this group of customers information regarding municipalities supplied from the transmission-distribution network is available in the Settlements Database of the gas sector (SIFCO), and the relationship between exit point of the transmission network and municipality is published at GTS's website: (available at: http://www.enagas.es/enagas/es/Gestion_Tecnica_Sistema/CalidadGas/OtraInformacionCalidadNueva)

Table 6. Forecasted contracted capacity and volume at each exit point of the transmission network. Year 2020

Exit point	Forecasted contracted capacity (1) (MWh/día)	Volume (MWh)
International interconnection points	**140.958**	**3.547.789**
VIP Pirineos	130.897	445.980
VIP Ibérico	10.061	3.101.809
LNG facilities	**-**	**-**
Barcelona	-	-
Cartagena	-	-
Huelva	-	-
Bilbao	-	-
Sagunto	-	-
Mugardos	-	-
Underground storage facilities	**46.834**	**8.707.498**
Serrablo	12.533	2.329.394
Gaviota	27.155	5.047.021
Marismas	3.514	665.541
Yela	3.632	665.541
Exit to national customers (2)	**1.735.232**	**375.130.430**
P > 60 bar	794.801	177.210.715
16 bar < P ≤ 60 bar	121.881	35.975.207
4 bar < P ≤ 16 bar	380.992	95.201.901
P ≤ 4 bar	437.558	66.742.608
TOTAL EXITS	**1.923.023**	**387.385.717**

Source: CNMC
Notes:
(1) Excluding the capacity of customers supplied from satellite LNG facilities
(2) For illustrating purposes national exit points have been aggregated by pressure level to which customers are connected.

As previously indicated, the capacity weighted distance methodology is limited to determining the capacity charge of the entry and exit points of the trunk transmission network. That is, the transmission services revenues to be recovered through capacity-based transmission tariffs correspond to the investment and the operating costs (see section 4.1). In accordance with Article 8(1)(e) of Regulation (EU) 2017/460, 50 % of such costs will be recovered through the entry charge to the transmission network and 50 % through the exit charge of network (see Table 7).

Table 7. Allowed revenues for transmission services to be recovered from capacity-based transmission tariffs. Year 2020

Allowed revenues for transmission services to be recovered from capacity-based transmission tariffs (€)	2020 forecasted	% of the total	Transmission revenues to be recovered through capacity-	
			Entry [(A) + (B)] * 50%	Exit [(A) + (B)] * 50%
Investment costs	435.183.402 (A)	75,8%	217.591.701	217.591.701
Operating costs	139.052.576 (B)	24,2%	69.526.288	69.526.288
Total	**574.235.978**	**100,0%**	**287.117.989**	**287.117.989**

Source: CNMC

Regarding the entry-exit split considered, as previously indicated, some agents have indicated their concern about the impact of the results on international connections points and the development of MIBGAS. This Commission considers that, in accordance with the principles of non-discrimination, transparency and objectivity, the entry-exit split established in that of Regulation (EU) 2017/460 is the most appropriate. However, in order to mitigate the impact on international connections, it would be possible to consider the gradual increase of the current entry-exit split (28% -72%) to reach 50% -50% at the end of the convergence period contemplated in Royal Decree-Law 1/2019.

Table 8 and Table 9 show capacity-based tariffs for each of the considered entry and exit point of the transmission network calculated according to article 8(2) of Regulation (EU) 2017/460, following the adjustments foreseen in Article 6(4) of the tariff code (for further details see section 3 of Annex II). In particular, the following adjustments to the prices resulting from the CWD methodology have been made:

- The entry and exit prices for virtual international interconnections points (VIP Pirineos and VIP Iberico) have been calculated in accordance with the procedure specified in Article 22(b) of the tariff code.
- Considering that the LNG facilities are managed jointly by the GTS without the suppliers having the capacity to decide on the use of a specific facility, it has been decided to apply the same reference prices to all entry points from and exit to LNG facilities, in accordance with the procedure established in article 22(b) of the tariff code.
- Considering that (i) underground storage facilities are not indented to compete with international interconnection points, (ii) underground storage facilities involve less investment in transmission infrastructure, as they contribute flattening the demand profile and (iii) gas injected into underground storage from the transmission network must first pay the entry tariff and gas withdrawn from underground storage would be charged the exit tariff at the exit point, a discount of 100 % is established on capacity-based transmission tariffs at entry points from and exit points to underground storage facilities.

– In the planning document of the electricity and natural gas sectors 2002-2011[18], the need of LNG facilities was pointed out, with the purpose of (i) ensuring natural gas supply at competitive prices and avoiding supplies with oil indexed price formulas, (ii) diversifying gas supply sources in order to avoid reliance on a single supply; (iii) supplying the extreme peaks of winter, characterized by a significant increase of demanded capacity during a concentrated number of consecutive days and (iv) reduce the use of the transmission network as the will be distributed along the Spanish coast.

  In this regard, the aforementioned planning document established as a criterion for the development of the entry points (i) ensure that in the event of a total failure of any one of the entry points, the conventional demand in a winter working day situation can be met (ii) the existence of sufficient overcapacity to ensure the demand can be met in the event that the it increases during several consecutive years at a rate higher than forecasted.

  On the other hand, the Preventive Action Plan of the Spanish Gas System[19], prepared in accordance with the provisions of Regulation (EU) 2017/1938, states that (i) criterion N-1, is incorporated as a design criterion in the Compulsory Planning of the electricity and gas sectors in Spain (ii) with the infrastructures foreseen in the analyzed horizon, the value of the N-1 formula established in Annex I of Regulation 2017/1938 for the Spanish gas system is greater than 100% and (iii) the infrastructure with the highest send out capacity to the network is the Barcelona LNG facility.

  Additionally, article 5.6 of Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017, establishes that "*National regulatory authorities shall take into account the efficiently incurred costs of fulfilling the obligation set out in paragraph 1 of this Article and the costs of enabling bi-directional capacity so as to grant appropriate incentives when fixing or approving, in a transparent and detailed manner, the tariffs or methodologies in accordance with Article 13 of Regulation (EC) No 715/2009 and Article 41(8) of Directive 2009/73/EC".*

  Therefore, compliance with the principle of security of supply and diversification of supply has been achieved with LNG facilities, and hence, in accordance with the provisions of Article 9.2 of Regulation (EU) 2017/460 a 13.9% discount on entry tariffs to the transmission network from the LNG facilities is being considered. This discount corresponds to the average entry

[18]Available at:
https://energia.gob.es/planificacion/Planificacionelectricidadygas/desarrollo2002-2011/Paginas/transporte2002-2001.aspx
[19] For 2014-2017 period available at:
https://energia.gob.es/gas/Legislacion/DatosBibliotecaConsumer/2015/940_Resolucion%20DGPEM%20Plan%20Preventivo%20y%20Plan%20Emergencia.pdf
For 2014-2017 period available at:
https://www.miteco.gob.es/es/ministerio/servicios/participacion-publica/plandeaccionpreventivo2018-2023_consulta_tcm30-486876.pdf.

capacity from Barcelona LNG facility during the regulatory period over the overall entry capacity. It is indicated that it has been considered the entry capacity from the Barcelona LNG facility to the transmission network since it has been designated by Spain for the purpose of complying with criterion n-1, in accordance with Regulation (EU) 2017/1938 of the Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017.

- A single national exit point has been considered.

In this regard, it is indicated that, some agents have pointed out the possibility that the "Circular" contemplates a reduction of the entry tariff from LNG facilities in order to reflect the security of supply and promote competitiveness with Portugal and France LNG facilities. On the other hand, some agents have proposed the leveling of prices at the international connection entry points to the transmission network. Finally, two agents have proposed a reduction in the entry tariffs to the transmission network to injections of manufactured gases and gases from unconventional sources.

This Commission, in line with the agents' and MITECO's responses, contemplates a discount on the entries to the transmission network from the LNG facilities justified by the security of supply that LNG plants provide to the system. Regarding the discount on the entry tariff for injections of manufactured gases and gases from unconventional sources proposed by the agents, considers that it would not comply with the requirements established in the tariff code.

On the other hand, the price leveling of international connections would resemble the result of the proposed methodology to a postal methodology. As indicated, this Commission considers it necessary to introduce locational signals at the entry and exit points of the transmission network.

Table 8. Capacity-based transmission tariff at entry points of the trunk transmission network. Year 2020

Entry point	Forecasted contracted capacity (MWh/day)	Entry capacity-based transmission tariff (€/MWh/day/year)	Total revenues (€)	Variation over average tariff (%)
VIP Francia	205.371	210,79	43.289.276	-7,5%
VIP Portugal	10.473	361,73	3.788.331	58,7%
CI Tarifa	145.693	300,99	43.851.590	32,1%
CI Almería	222.166	271,36	60.287.277	19,1%
LNG facilities	669.880	201,25	134.812.556	-11,7%
Poseidón	372	292,01	108.667	28,2%
Marismas	4	283,38	1.052	24,4%
Viura	5.766	160,63	926.233	-29,5%
PB Madrid	310	170,72	53.007	-25,1%
TOTAL	**1.260.036**	**227,86**	**287.117.989**	**0,0%**

Source: CNMC

Table 9. Capacity-based transmission tariff at exit points of the trunk transmission network. Year 2020

Exit point	Forecasted contracted capacity (MWh/day)	Exit capacity-based transmission tariff (€/MWh/day/year)	Total revenues (€)	Variation over average tariff (%)
National	1.735.232	151,82	263.445.890	-0,8%
LNG facilities (1)	-	182,81	-	19,5%
VIP Francia	130.897	166,23	21.759.594	8,6%
VIP Portugal	10.061	190,09	1.912.505	24,2%
TOTAL	**1.876.189**	**153,03**	**287.117.989**	**0,0%**

Source: CNMC

It is noted that the fixed capacity charge for entry points resulting from the application of the CWD methodology are lower than the fixed capacity charge for entry points resulting from applying the postal methodology for entries from VIP France, the LNG facilities, Viura and Biogas Madrid production facilities, and higher at the other entry points.

Moreover, the fixed capacity charge for exit points resulting from the application of the CWD methodology are higher than the fixed capacity charge resulting from the postal methodology for the exit points of VIP France and Portugal and to LNG facilities, and lower for exits to national customers.

Customers whose annual consumption does not exceed 5 GWh are not required to have an equipment capable of measuring the maximum demanded capacity over a given period, therefore the fixed capacity charge is replaced by a fixed charge per customer resulting from the ratio of the revenues to be recovered by each tariff group[20] over the number of customers that make up such tariff group (see Table 10).

Table 10. Fixed charge per customer for exits from the trunk network calculation. Year 2020

Tariff	Volume (kWh)	Nº customers (A)	Forecasted contracted capacity (MWh/day) (B)	Exit capacity-based transmission tariff (€/MWh/day/year) (C)	Allowed revenues to be recovered through capacity-based transmission tariffs (€) (D) = (B) * (C)	Fixed term for exit transmission tariff (€/customer and year) (D)/(A)
RL.1	C ≤ 5.000	4.536.594	66.858	151,82	10.150.543	2,24
RL.2	5.000 < C ≤ 15.000	2.860.898	144.783	151,82	21.981.250	7,68
RL.3	15.000 < C ≤ 50.000	328.868	46.534	151,82	7.064.879	21,48
RL.4	50.000 < C ≤ 300.000	53.346	37.725	151,82	5.727.488	107,36
RL.5	300.000 < C ≤ 1.500.000	21.957	79.136	151,82	12.014.583	547,18
RL.6	1.500.000 < C ≤ 5.000.000	3.235	45.772	151,82	6.949.257	2.148,38

Source: CNMC

Finally, as stated above, the variable charge should be determined in such a way that it is the same at all entry points and at all exit points, therefore, the operational gas revenues has been allocated to each service proportionately to the injected and withdrawn gas from the trunk transmission network (see Table 11).

[20] Customers have been segmented considering their annual consumption and their load factor. The characterization of customers on the basis of segmentation is presented in Annex III. Each tariff group brings together customers of the same characteristics.

Table 11 . Variable commodity-based transmission tariffs for entry and exit points calculation. Year 2020

	Allowed revenues to be recovered through commodity-based transmission tariffs (€)	
	Entry	Exit
Revenues for operating gas (A)	9.598.013	9.529.519

	Volume (MWh)	
	Entry	Exit
Cost driver (B)	390.170.074	387.385.717

	Commodity charge (€/MWh)	
	Entry	Exit
Commodity charge for transmission tariff (A)/(B)	0,0246	0,0246

Source: CNMC

4.5.2 Transmission tariffs for non-yearly standard capacity products

The Regulation (EU) 2017/460 defines two types of short-term coefficients: multipliers and seasonal factors. The **multiplier** is the coefficient that reflects the proportionality between a standard product of firm capacity of less than one-year duration and a standard product of firm yearly capacity, while the **seasonal factor** is the coefficient that reflects the evolution of demand in the year. Both coefficients can be applied together.

Article 13 of the Regulation (EU) 2017/460 establishes the limits to the level of multipliers and seasonal factors, while in Articles 14 and 15 the methodology for calculating tariffs corresponding to standard products with firm capacity of less than one-year duration is defined in the absence of seasonal factors and with seasonal factors, respectively.

Regarding the **level of the multipliers**, the Regulation establishes that the value shall be no less than 1 and no more than 1.5 for quarterly and monthly standard capacity products, and no less than 1 and no more than 3 for daily and within-day standard capacity products, except in duly justified cases.

Regarding the **level of seasonal factors**, the Regulation establishes that the arithmetic mean over the gas year of the product of the multiplier applicable for the respective standard capacity product and the relevant seasonal factors shall be within the same range as for the level of the respective multipliers.

Regarding the **methodology for calculating short-term tariffs in the absence of seasonal factors**, the Regulation establishes that the price of the short-term product is the result of applying the multiplier to the price of the standard capacity product expressed in days (for the standard products of quarterly, monthly and daily capacity) or hours (for standard within-day capacity products) for the duration of the respective product expressed in days or hours.

Regarding the **methodology for calculating short-term tariffs with seasonal factors**, the Regulation establishes that the tariffs applicable to each period will be the result of applying a differentiated coefficient per period (quarterly, monthly, daily and within-day) to the price of the year standard capacity product expressed in days (for standard products of quarterly, monthly and daily capacity) or hours (for standard products of within-day capacity) for the duration of the respective product expressed in days or hours.

The transmission tariff for monthly standard capacity product will be obtained as a result of multiplying the proportion that represents the month in the computation of the year multiplied by 12 and raised to a power between 0 and 2 and by the corresponding multiplier. The transmission tariffs for quarterly, daily and within-day standard capacity products are obtained as a result of multiplying the monthly coefficients by the corresponding multiplier (quarterly, daily or within-day).

The methodology for calculating tariffs of non-yearly standard capacity products for firm capacity is mandatory at interconnection points with Member States.

The aforementioned methodology is not mandatory at interconnection points with third countries[21], at exit points to final customer, at exit points to the distribution networks, entry points from LNG and production facilities, neither to the entry/exit points from the storage facilities. However, it has been considered appropriate to extend it to these points.

For the calculation of the short-term multipliers that must be applied on the prices of the corresponding yearly product it is necessary, first, to establish the limit of the level of the multipliers. Secondly, analyze whether or not to apply seasonal factors for the calculation of short-term tariffs. Third, if appropriate, calculate the seasonal factors. Finally, determine the tariffs of non-yearly standard capacity products for firm capacity.

[21] Unless the National Regulatory Authority adopts the decision to apply Regulation (EU) 2017/459 to entry points from third countries or exit points to third countries, or both, in which case the calculation methodology will also apply in those points.

I) Level of multipliers

The level of the multipliers must be established in a way that ensures the recovery of the allowed revenues without entailing a barrier to short-term contracting. Consequently, the level of the multipliers for each of the products considered results from the comparison between the billing that would be obtained from contracting yearly capacity with the equivalent from contracting the quarterly, monthly, daily and within-day capacity. The multiplier corresponds to the average of the multipliers that result from the comparison for the years 2015, 2016, 2017 and 2018.

In relation to the within-day multiplier it is indicated that agents have pointed in their responses the complexity of implementing within-day multipliers based on the number of hours of the contract and have shown their preference for a single multiplier applied to within-day contracts, independently of the number of hours the contract extends. Taking into account the observations made, a single multiplier is established for within-day contracts that results from the comparison of the billing that a consumer would obtain in the event of formalizing a daily contract and the billing that would be obtained from combining daily and within-day contracts of 12 hours of duration. It has taken 12 hours to correspond to the median.

Table 12. Multiplier of non-yearly standard capacity products for firm capacity

Non-yearly product	Level of multipliers for entry points	Level of multipliers for exit points
Quarterly	1,20	1,20
Monthly	1,30	1,30
Daily	1,60	1,60
Within-Day	5,42	3,55

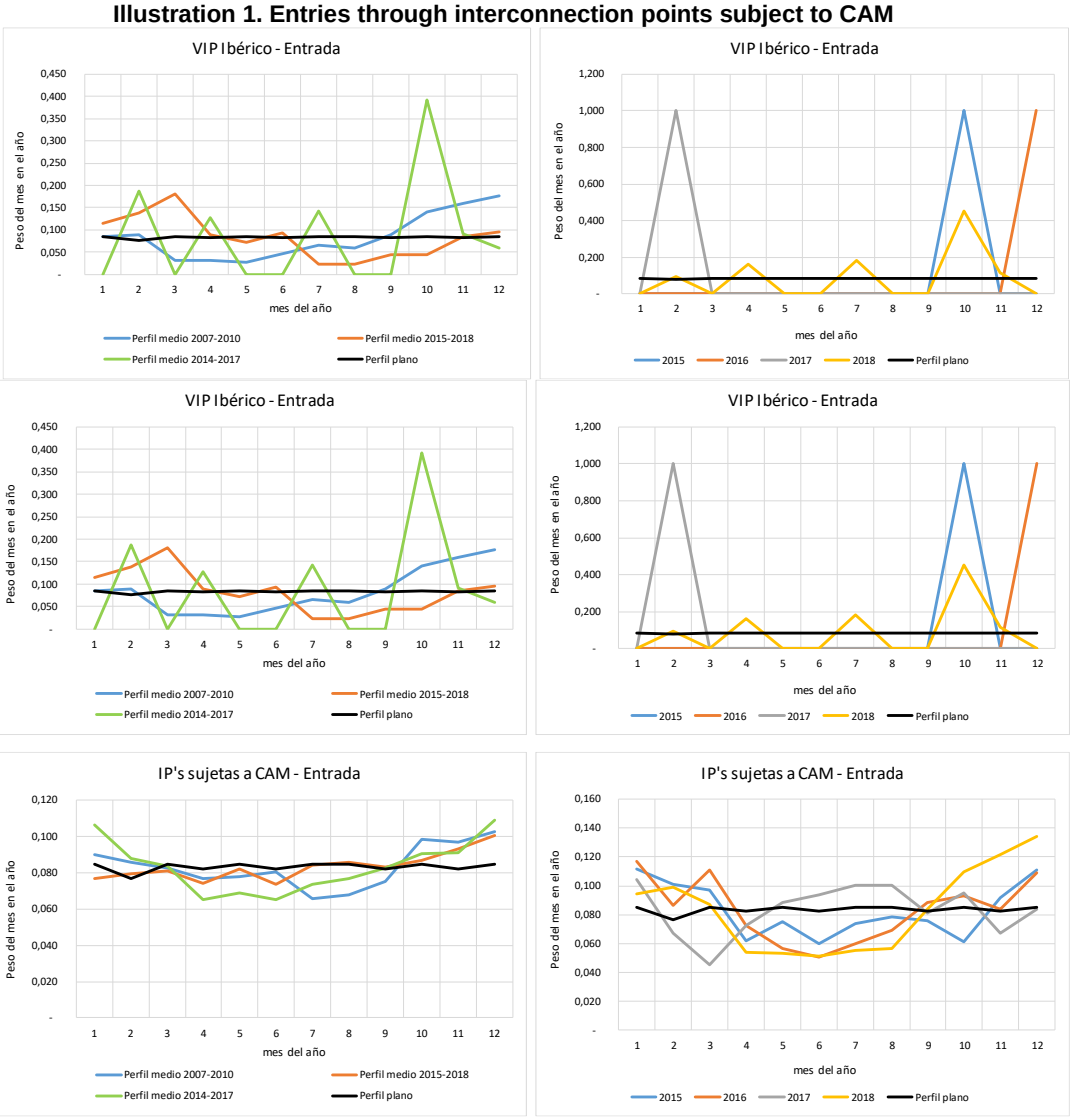
Source: CNMC

II) Analysis of the seasonality

The following illustrations show the profile of each of the entry and exit points, in order to analyze whether or not to apply seasonal factors in combination with the multipliers. For each entry and exit point, the average profile of three periods of four years each and the profile of the last four years with complete information (2015, 2016, 2017 and 2018) are presented. Additionally, the profile for different types of points is presented: Entrances and exits through interconnection points subject to CAM (VIP Pyrenees and VIP Portugal), entry points through interconnection points not subject to CAM (Tarifa and

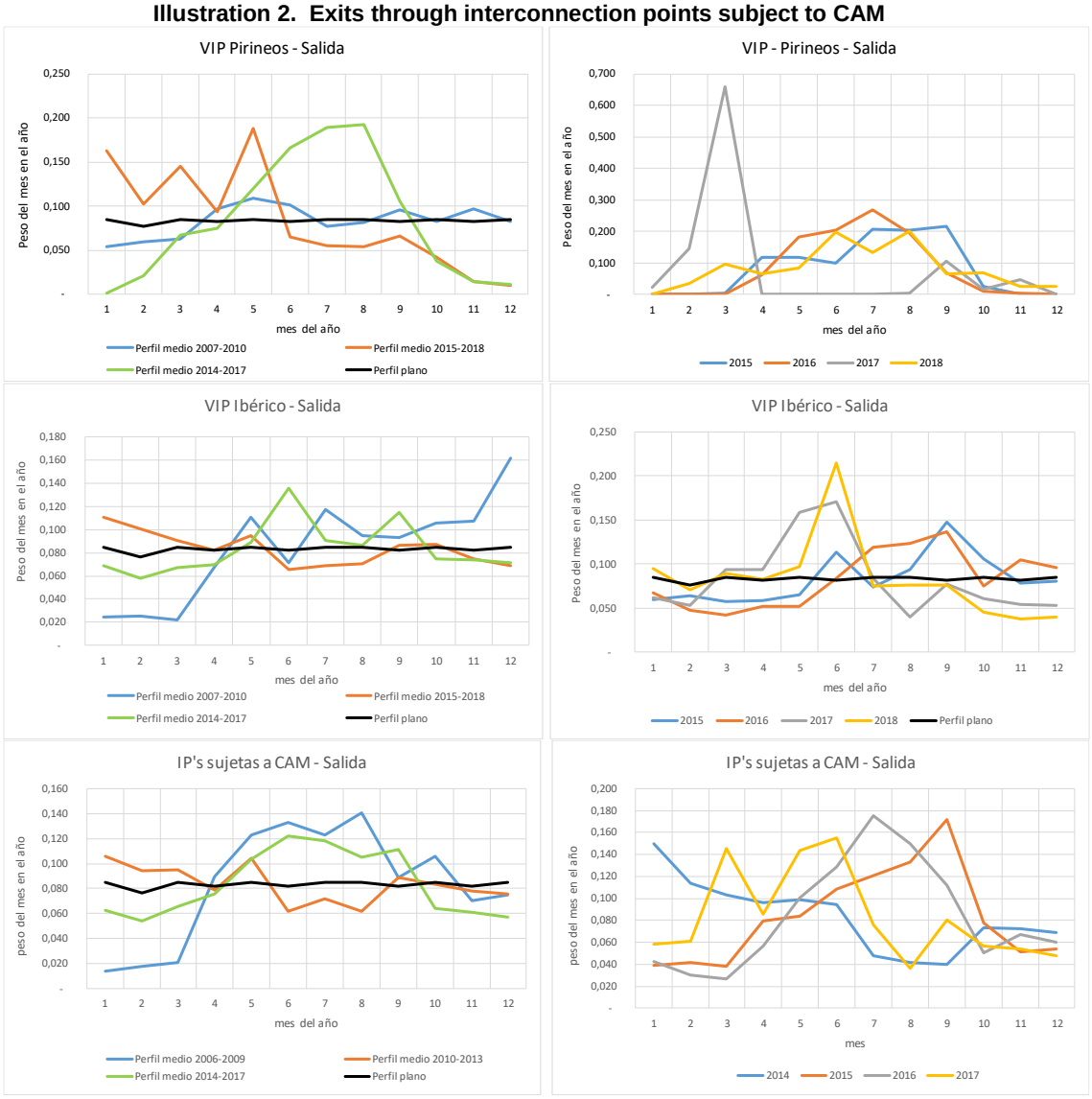
Almería) and entry points from LNG facilities. Finally, the profile for all entry points and all exit points is presented, excluding interconnection points subject to CAM, for which the tariff code prevents from grouping with other entry points.

Illustration 1. Entries through interconnection points subject to CAM



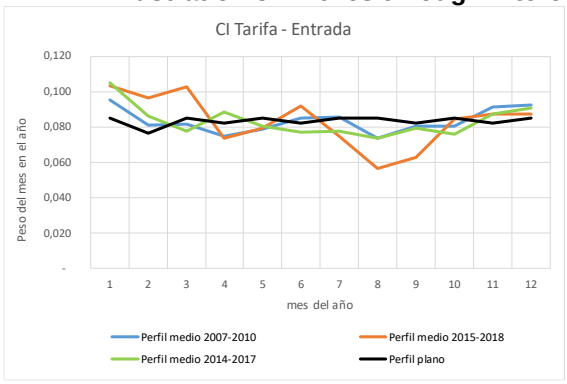
Source: CNMC

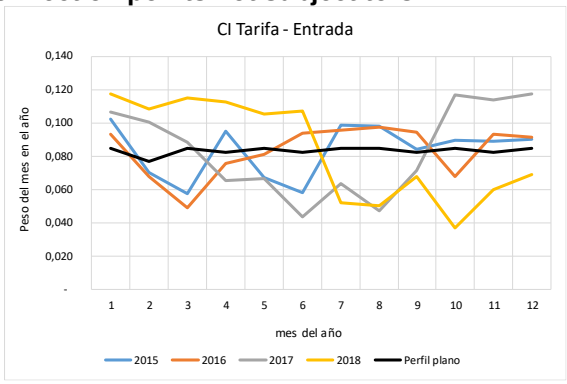
Illustration 2. Exits through interconnection points subject to CAM

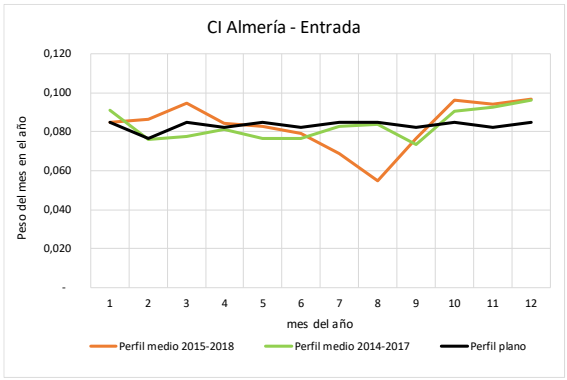


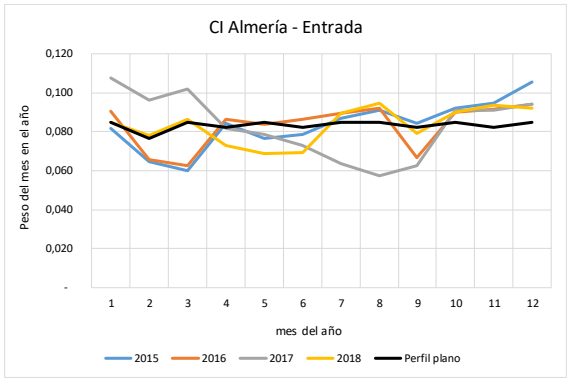
Source: CNMC

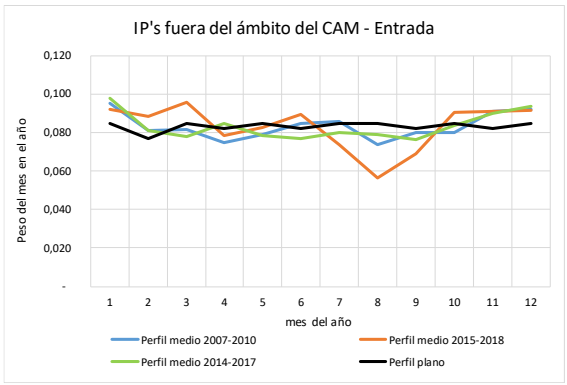
Illustration 3. Entries through interconnection points not subject to CAM

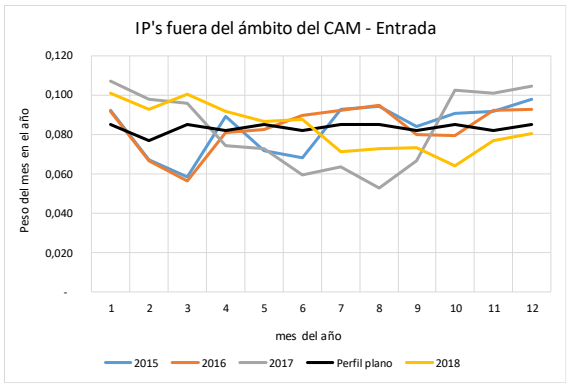






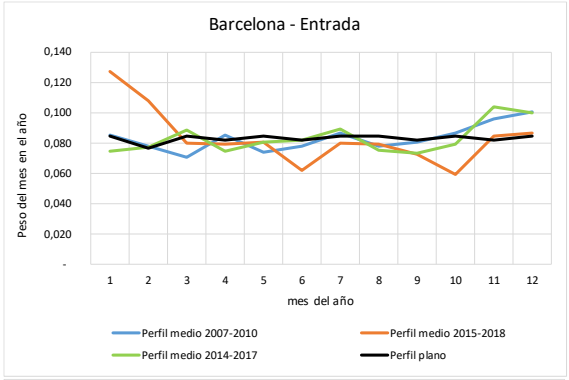


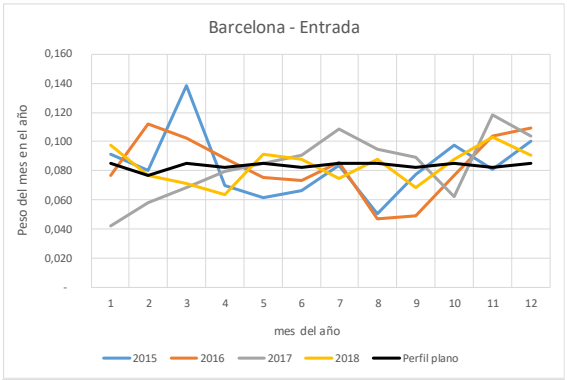


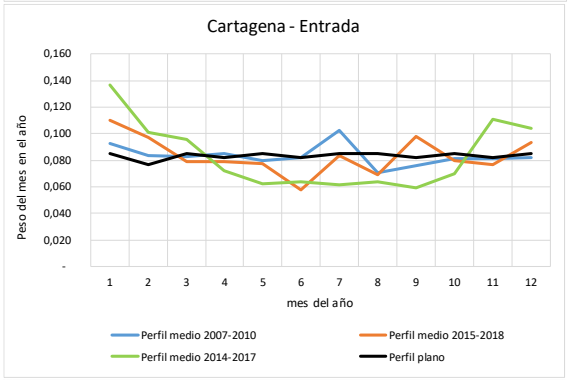


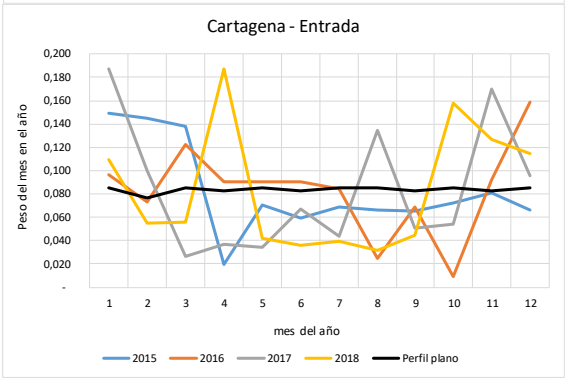
Source: CNMC

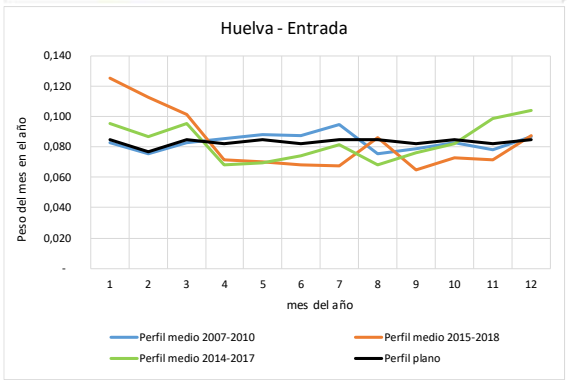
Illustration 4. Entries from LNG facilities

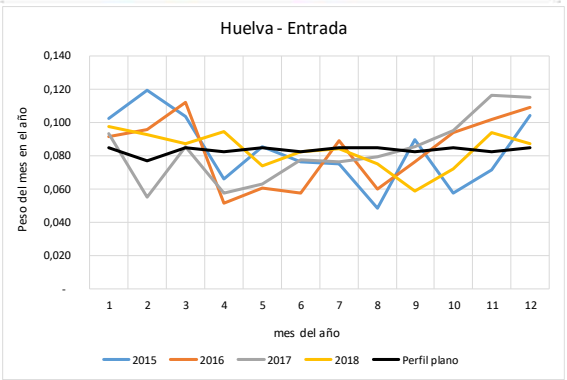


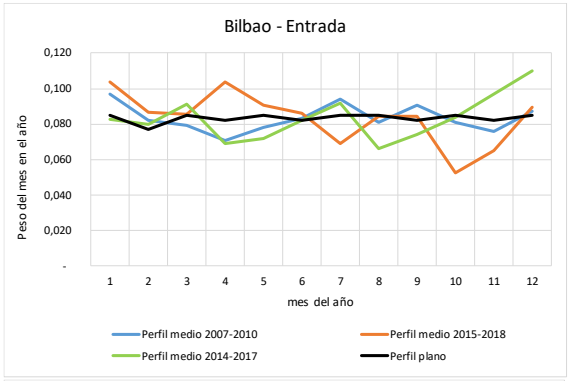


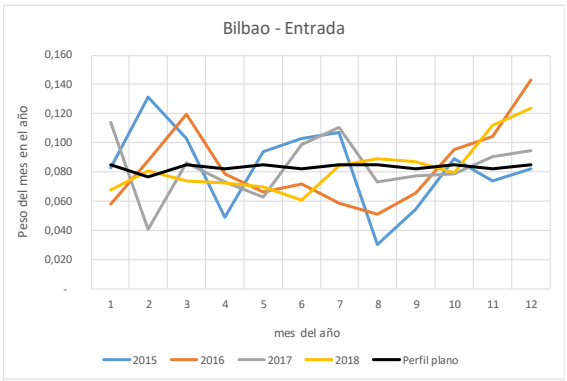


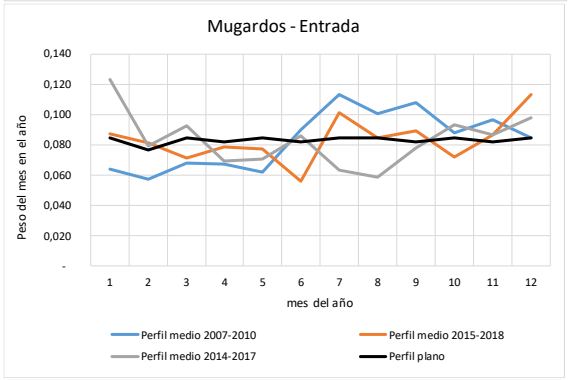


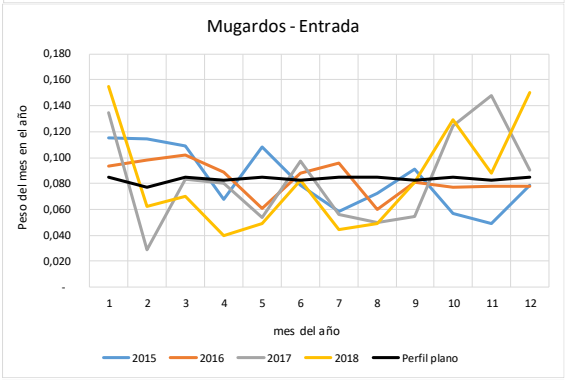


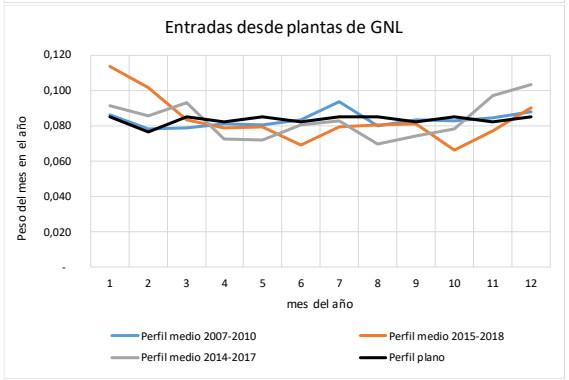


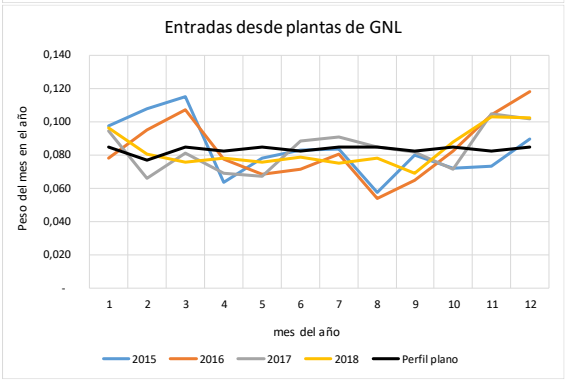






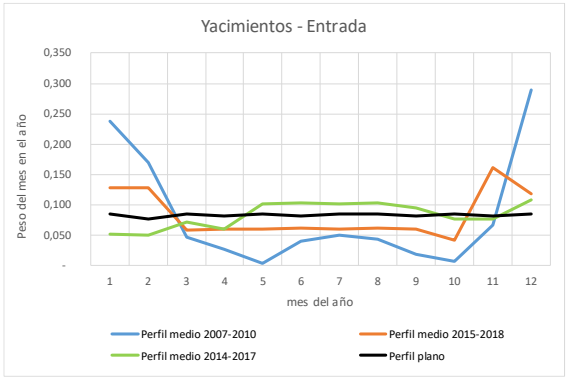


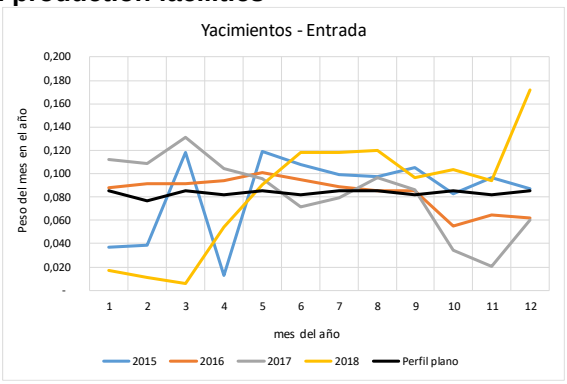




Source: CNMC

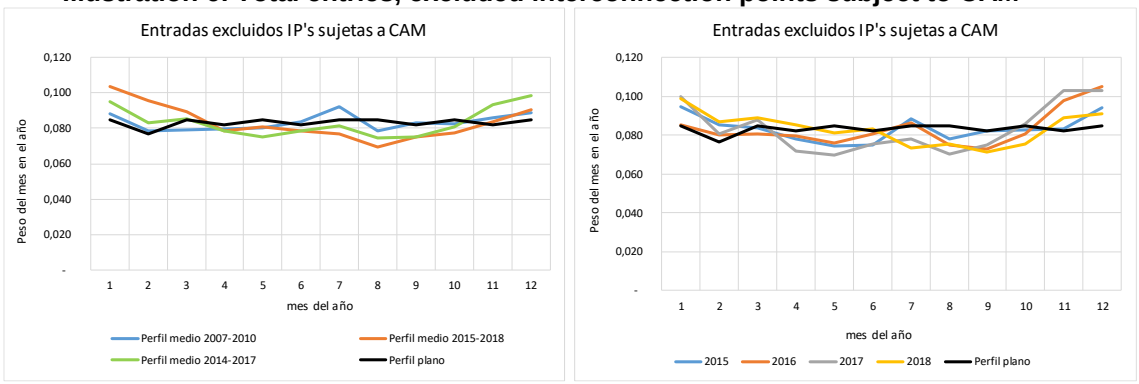
Illustration 5. Entries from production facilities





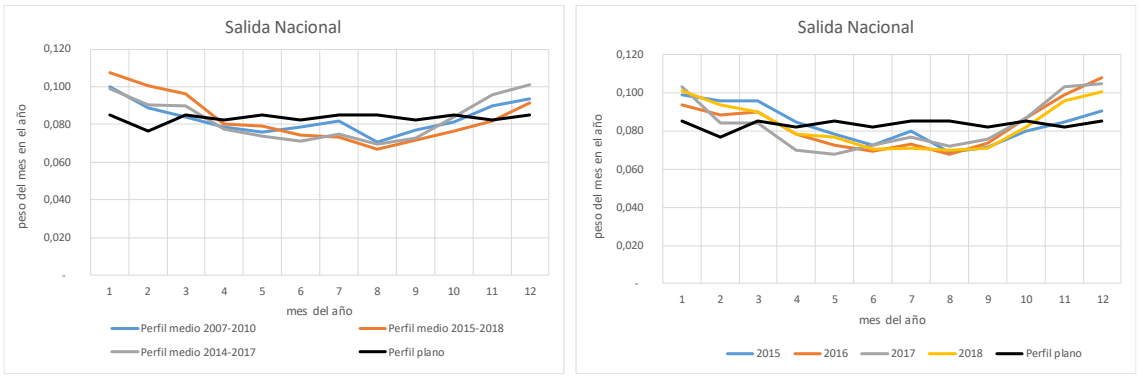
Source: CNMC

Illustration 6. Total entries, excluded interconnection points subject to CAM



Source: CNMC

Illustration 7. Exits to national customers



Source: CNMC

It is noted that, with the exception of the exit to national customers, there is no clear seasonality at the entry points or exit points.

Consequently, only seasonal factors for standard capacity products of less than one-year duration with exit to national customers will be considered.

III) Seasonal factors applicable to the exits towards national customers calculation

According to Regulation (EU) 2017/460, the seasonal factors will be based on the expected flow corresponding to each month, unless the amount of gas flow in a month is equal to 0 where in such a case the expected contracted capacity will be taken.

The applicable seasonal factor for the calculation of the monthly standard capacity product will be obtained as a result of multiplying the proportion that represents the month in the computation of the year by 12 raised to a power between 0 and 2 and by the corresponding multiplier.

The seasonal factor for the calculation of quarterly, daily and within-day standard capacity product are obtained as a result of multiplying the monthly coefficients by the corresponding multiplier (quarterly, daily or within-day).

In particular, seasonal factors will be determined according to the following formulas:

a) Monthly coefficient

$$C_{M,m} = [(Q_{m,a} \times 12)^n] \times M_M$$

Where:

$C_{M,m}$: is the seasonal factor to be applied to yearly capacity-based transmission tariff to obtain the monthly standard capacity tariff of the month m.
If the arithmetic mean of the monthly coefficients exceeds the value of the multiplier, they must be adjusted.

$Q_{m,a}$: is the proportion that represents month m in the year a.

n: power, it will take a value between 0 and 2. The value of 1.5 has been taken, so that no coefficient is less than one.

M_M: monthly multiplier;

b) Quarterly coefficient

$$C_{T,t} = C_{T0,t} \times M_T$$

Where:

$C_{T,t}$: is the seasonal factor to be applied to yearly capacity-based transmission tariff to obtain the quarterly standard capacity tariff, of the quarter t.
If the arithmetic mean of the quarterly coefficients exceeds the value of the multiplier, they must be adjusted.

$C_{T0,t}$: is the initial value of the coefficient of the quarter t. It will be taken an initial value, either the arithmetic mean of the respective seasonal factors applicable for the three relevant months, or a value no less than the lowest and no more than the highest of the coefficients applicable to the three corresponding months.

M_T: quarterly multiplier;

c) Daily coefficient

$$C_{D,m} = C_{M,m} \times M_D$$

Where:

$C_{D,m}$: is the seasonal factor to be applied to yearly capacity-based transmission tariff to obtain the daily standard capacity tariff, of the month m.
If the arithmetic mean of the daily coefficients exceeds the value of the multiplier, they must be adjusted.

$C_{M,m}$: is the coefficient to be applied to yearly capacity-based transmission tariff to obtain the monthly standard capacity tariff, of the month m.

M_D: daily multiplier;

d) Within-day coefficient

$$C_{I,m,h} = C_{M,m} \times M_{Ih}$$

Where:

$C_{I,m,h}$: is the coefficient to be applied to yearly capacity-based transmission tariff to obtain the within-day standard capacity tariff, of the month m for a contract of h hours.
If the arithmetic mean of the within-day coefficients exceeds the value of the multiplier, they must be adjusted.

$C_{M,m}$: is the coefficient to be applied to yearly capacity-based transmission tariff to obtain the monthly standard capacity tariff, of the month m.

M_{Ih}: is the level of the within-day multiplier for a contract of h hours;

It is considered that the expected gas flow for the regulatory period will present a profile similar to the average profile recorded in the 2015-2018 period by the demand of national customers, according to the information available in the settlement database.

Table 13 shows the procedure for calculating the monthly seasonal factors to be applied to the prices of the standard yearly capacity product to obtain the price corresponding to the standard monthly capacity product.

Table 13 Seasonal factor for monthly standard capacity product calculation

Monthly multiplier (M_M)	1,30

Month	Proportion that represents month m in the year a $Q_{m,a}$	Initial monthly coefficients $C_{M,m} = (Q_{m,a} \times 12)^{1,5} \times M_M$	Adjusted monthly coefficients $C_{M,m} \times CA$
January	10,2%	1,78	1,76
February	9,1%	1,49	1,47
March	8,7%	1,40	1,39
April	7,5%	1,11	1,10
May	7,1%	1,03	1,02
June	7,2%	1,03	1,02
July	7,5%	1,11	1,10
August	7,1%	1,01	1,00
September	7,4%	1,08	1,07
October	8,3%	1,29	1,28
November	9,7%	1,64	1,63
December	10,2%	1,78	1,77
Average seasonal factors (P)		**1,31**	**1,30**

Adjustment coefficient ($CA = M_M / P$)	0,992

Source: CNMC

As indicated, the seasonal factor for quarterly, daily and within-day standard capacity products are obtained as a result of multiplying the monthly seasonal factor by the corresponding multiplier, adjusting them if necessary.

In the seasonal factor for quarterly products, the average monthly prices have been taken as the initial value of each quarter.

The following tables show the procedure for calculating the quarterly, daily and within-day seasonal factors.

Table 14. Seasonal factor for quarterly standard capacity product calculation

Quarterly multiplier (M_T)	1,20

Quarter	Initial value (average of the months of the quarter) $C_{T0,t}$	Initial quarterly coefficients $CT_{,t} = C_{T0,t} \times M_T$	Adjusted quarterly coefficients $C_{M,m} \times CA$
Q1	1,541	1,85	1,42
Q2	1,045	1,25	0,96
Q3	1,054	1,27	0,97
Q4	1,560	1,87	1,44
Average seasonal factors (P)	**1,56**		**1,20**

Adjustment coefficient ($CA = M_T / P$)	0,77

Source: CNMC

Table 15. Seasonal factor for daily standard capacity product calculation

Daily multiplier (M_D)	1,60

Month	Monthly seasonal factor $C_{M,m}$	Initial daily coefficients $C_{D,m} = C_{M,m} \times M_D$	Adjusted daily coefficients $C_{D,m} \times CA$	Order ETU/1977/2016
January	1,76	2,82	2,17	4,650
February	1,47	2,36	1,81	3,770
March	1,39	2,22	1,71	4,030
April	1,10	1,75	1,35	2,700
May	1,02	1,63	1,25	2,790
June	1,02	1,63	1,26	2,400
July	1,10	1,75	1,35	2,480
August	1,00	1,60	1,23	2,170
September	1,07	1,71	1,31	2,400
October	1,28	2,06	1,58	2,790
November	1,63	2,61	2,00	2,700
December	1,77	2,83	2,17	3,410
Average seasonal factors (P)	**2,08**	**1,60**		**3,024**

Adjustment coefficient ($CA = M_D / P$)	0,77

Source: CNMC

Table 16. Seasonal factor for a standard capacity product of a duration of 12 hours calculation

Winthin-day multiplier for 12-hours contract (M_I)	3,55

Month	Monthly seasonal factor $C_{M,m}$	Initial Within-day coefficients for 12-hour contract $C_{I,m} = C_{M,m} \times M_I$	Adjusted Within-day coefficients $C_{I,m} \times CA$
January	1,763	6,264	4,82
February	1,473	5,236	4,03
March	1,386	4,926	3,79
April	1,096	3,896	3,00
May	1,019	3,620	2,78
June	1,021	3,627	2,79
July	1,096	3,896	3,00
August	1,000	3,554	2,73
September	1,067	3,791	2,92
October	1,284	4,564	3,51
November	1,629	5,789	4,45
December	1,766	6,276	4,83
Average seasonal factors (P)		**4,620**	**3,55**

Adjustment coefficient ($CA = M_D / P$)	0,769

Source: CNMC

IV) Transmission tariffs for non-yearly standard capacity products of firm capacity calculation

As mentioned, only seasonal factors will be considered in the calculation of transmission tariffs for non-yearly standard capacity products of firm capacity at the exit to national consumers. Consequently, transmission tariffs for non-yearly standard capacity products applicable to all entry and exit points, with the exception of exits to national consumers and local networks, will be determined in accordance with the methodology established in Article 14 of the Regulation (EU) 2017/460, while transmission tariffs for non-yearly standard capacity products of firm capacity at the exit to national consumers will be determined in accordance with the methodology established in Article 15 of Regulation (EU) 2017/460.

In particular, the price of the corresponding short-term product applicable to all entry and exit points, with the exception of exits to national consumers and distribution networks, shall be determined in accordance with the following formulas:

a) Quarterly, monthly or daily standard capacity products:

$P = (M \times P_A / 365) \times D$

Where:

P: quarterly, monthly or daily capacity transmission tariff
M: quarterly, monthly or daily multiplier
P_A: capacity transmission tariff for yearly standard capacity product
D: is the duration of the respective capacity contract, in days

For leap years, the figure 365 will be replaced with the figure 366.

b) Within-day standard capacity products:

$P = (M \times P_A / 8760) \times H$

Where:

P: Within-day capacity transmission tariff
M: Within-day multiplier
P_A: capacity transmission tariff for yearly standard capacity product
H: is the duration of the within-day contract expressed in hours

For leap years, the figure 8760 will be replaced with the figure 8784.

Capacity transmission tariffs for non-yearly standard capacity products of firm capacity at the exit to national consumers shall be determined in accordance with the following formulas:

a) Monthly standard capacity products:

$$P_{M,i} = (C_{M,m} \text{ X } P_A / 365) \text{ X } D$$

Where:

$P_{M,m}$: Monthly capacity transmission tariff corresponding to month m
$C_{M,m}$: Seasonal factor to be applied to yearly capacity transmission tariff to obtain the monthly standard capacity transmission tariff, corresponding to month m
P_A: Capacity transmission tariff for yearly standard capacity product;
D: is the duration of the monthly capacity transmission tariff, expressed in days.

b) Quarterly standard capacity products

$P_{T,t} = (C_{T,t} \times P_A / 365) \times D$

Where:

$P_{T,t}$: Quarterly capacity transmission tariff corresponding to quarter t
$C_{T,t}$: Seasonal factor to be applied to yearly standard capacity product to obtain the quarterly standard capacity transmission tariff, corresponding to quarter t
P_A: Capacity transmission tariff for yearly standard capacity product;
D: Duration of the quarterly capacity transmission tariff, expressed in days.

c) Daily standard capacity products

$P_{D,m} = (C_{D,m} \times P_A / 365) \times D$

Where:

$P_{D,m}$: Daily capacity transmission tariff corresponding to month m
$C_{D,m}$: Seasonal factor to be applied to yearly capacity-based transmission tariff to obtain the daily standard capacity transmission tariff, of the month m.
If the arithmetic mean of the daily coefficients exceeds the value of the multiplier, they must be adjusted
$C_{M,m}$: Seasonal factor to be applied to yearly capacity transmission tariff to obtain the monthly standard capacity transmission tariff, corresponding to month m:
P_A: Capacity transmission tariff for yearly standard capacity product
D: is the duration of the daily capacity transmission tariff.

d) Within day standard capacity products

$P_{I,m,h} = (C_{I,m} \times P_A / 8.760) \times h$

Where:

$P_{I,m,h}$: within day capacity transmission tariff corresponding to month m in a contract of h hours of duration;
$C_{I,m,h}$: Seasonal factor to be applied to yearly capacity transmission tariff to obtain the within day standard capacity transmission tariff, corresponding to month m in a contract of h hours of duration;
P_A: Capacity transmission tariff for yearly standard capacity product;
h: is the duration of the within day capacity transmission tariff, expressed in hours.

For leap years, the figure 8760 will be replaced with the figure 8784.

4.5.3 Transmission tariffs for standard interruptible capacity products

The Article 16 of Regulation (EU) 2017/460 establishes the calculation procedure for determining reserve prices for interruptible capacity products for interconnection points. In particular, the national regulatory authority may decide to apply an ex-post discount or an ex ante discount. The ex-ante discount will depend on the probability of interruption and the ex post discount, which can only be used at the interconnection points where the capacity interruption is due to physical congestion, consists of compensation equivalent to three times the reserve price for daily standard capacity products for firm capacity.

The CNMC has decided that an ex-post discount should be applied to all entry and exit points.

4.6 Reconciliation of revenues

According article 10 and articles 17, 18, 19 and 20 of the Tariff network code regarding the compensation between transmission operators operating in the same entry-exit system, and the conciliation of revenues and incomes, it is necessary to establish the following aspects prior to conduct a public consultation:

1st Allowed revenues of each transmission operator
2nd Incomes received by each transmission operator
3rd Difference between allowed revenues and incomes received by each transmission operator
4th Definition of the regulatory account for each transmission operators in which the above aspects are reflected.
5th Compensation mechanism between system operators
6th Destination, if necessary, of the premium obtained in the capacity auction at the virtual interconnection point.

There are two possible scenarios when establishing the relation between regulated incomes and regulated payments among different agents. One possibility is that the prices set to customers correspond to prices charged by the companies, either directly or by third agents. Another possibility is the creation of a reserve for economic compensation, ruled by the Regulatory Authority, in which all incomes are deposited and from where all payments are made to the agents. In the slang of tariff systems this is called “settlement system”. Spanish system is currently organized this way.

The determination of the economic flows between the agents is carried out through the settlement system, to assign them the incomes of the system based

on their allowed revenues. As a result, a matrix of payments and deposits is calculated, specifying the paying agents and the agents with collection rights.

In the regulatory account of each agent, the revenues considered are those invoiced until the settlement month, as well as the allowed settlement costs (linked with the operation of the gas system), obtaining the net settlement income. The amount for each agent is calculated according to the net total incomes of the system, considering the proportional share of their allowed revenues over the total revenues. Taking into account the calculated amount and the net income of each agent, the amount to be settled is determined. This amount is reflected in the regulatory account of each agent, so the deficit or surplus of the regulatory account is the difference between the allowed revenues and the sum of the net settlement income and the amount settled.

Settlement process is done on an annual basis, and it is approved through a definitive settlement every year. In addition, fourteen monthly provisional payments on account of the definitive settlement are made. The first twelve provisional settlements are carried out with the available information until every month of the year and the last two provisional settlements include the invoices made in the first two months of the following year corresponding to gas flows from the year of the settlement.

For all the above, and given the current settlement system is an adequate mechanism for the purpose of complying with the obligations derived from the Tariff Network Code, it is necessary to include in the Circular the general principles of the settlement mechanism, in order to enable the development of the system in the corresponding informative Circular (see section 7).

In this regard, it is indicated that both the Ministry and some agents in their responses to the previous consultation have indicated that the settlement process under Law 34/1998 is Ministry´s competence and therefore should not be established in the Circular.

This Commission considers that, regardless of whether the settlement process is unique, the compensation of payments and the reconciliation of income must be established in the Circular itself, as established in the aforementioned articles 10, 17, 18, 19 and 20 of the Regulation (EU) 2017/460.

In any case, the appropriate modifications should be introduced to adapt the settlement system to the Regulation and to the year of gas, in coherence with the Circulars regarding allowed revenues.

4.7 Cost allocation assessments

The network code on harmonised transmission tariff structures for gas (NC TAR) Commission Regulation (EU) 2017/460 of 16 March 2017, establishes that the national regulatory authority shall carry out a consultation on the cost allocation

methodology and assessment, in order to demonstrate that the proposed methodology complies with the requirements set out in article 13 of Regulation Nº 715/2009 and article 7 of NC TAR.

Additionally, where the proposed reference price methodology is other than the Capacity Weighted Distance, in accordance with article 26(1)(a), the national regulatory authority shall include a comparison between the reference prices subject to consultation and those of the Capacity Weighted Distance methodology.

Finally, the national regulatory authority shall publish the following ratios set out in Article 30(1)(b)(v):

- the breakdown between the revenue from capacity-based transmission tariffs and the revenue from commodity-based transmission tariffs
- the breakdown between the revenue from capacity-based transmission tariffs at all entry points and the revenue from capacity-based transmission tariffs at all exit points
- the breakdown between the revenue from intra-system network use at both entry points and exit points and the revenue from cross-system network use at both entry points and exit points.

In the following sections it is assessed whether the proposed methodology complies with the requirements set out in NC TAR, as well as the aforementioned ratios are published.

4.7.1 Assessment of compliance with the requirements set out in article 13 of Regulation Nº 715/2009 and article 7 of NC TAR

Article 13 of Regulation Nº 715/2009 requires that tariffs, or the methodologies used to calculate them, shall be transparent and non-discriminatory, set separately for every entry point into or exit point out of the transmission system, shall neither restrict market liquidity nor distort trade across borders of different transmission systems while at the same time shall avoid cross-subsidies between network users

In addition to the above requirements, the reference price methodology shall comply with the requirements set out in article 7 of NC TAR. It shall aim at:

a) enabling network users to reproduce the calculation of reference prices and their accurate forecast;

b) taking into account the actual costs incurred for the provision of transmission services considering the level of complexity of the transmission network;

c) ensuring non-discrimination and prevent undue cross-subsidisation including by taking into account the cost allocation assessments set out in Article 5;

d) ensuring that significant volume risk related particularly to transports across an entry-exit system is not allocated to final customers within that entry-exit system;

e) ensuring that the resulting reference prices do not distort cross-border trade.

The above requirements correspond to the general principles set out in the reference price methodology for transmission, distribution, LNG and storage facilities established in Article 3 of the "Circular" and detailed in section 2 of this Consultation document.

The reference price methodology proposed in this public consultation is the Capacity Weighted Distance (CWD), set out in Article 8 of Regulation (EU) 2017/460, with an allocation of 50% of the revenue from capacity-based transmission tariffs at all entry points and 50% at all exit points. This reference prices shall be calculated separately for each entry point and for each exit point, in a transparent way and ensuring non-discrimination and preventing cross-subsidisation between network users. The cost allocation assessments (CAA) proposed in Article 5 indicate the degree of cross-subsidisation between intra-system and cross-system network use. The calculations for the cost allocation comparison indexes do not exceed 10 percent.

Finally, it has been published the Simplified tariff model (Modelo transporte.xls), including an explanation about the use of the document, in order to allow network users to calculate the applicable tariffs until the end of the tariff period.

Following the reasoning provided previously the CNMC is of the view that the proposed reference price methodology complies with the requirements set out in Article 13 of Regulation Nº 715/2009 and Article 7 of NC TAR.

4.7.2 Comparison with the Capacity Weighted Distance

The proposed reference price methodology is Capacity Weighted Distance, so the comparison is not needed.

4.7.3 Cost allocation assessment relating to the transmission services revenue to be recovered by capacity-based and commodity-based transmission tariffs

In the proposed methodology, the allowed revenues for transmission services to be recovered through capacity-based transmission tariffs corresponds to the allowed revenues for investment costs and operational costs. The allowed revenues for transmission services to be recovered through commodity-based transmission tariffs corresponds to the allowed revenues for operating gas. As a result, the breakdown between the revenue from capacity-based transmission tariffs is 96,78% and the revenue from commodity-based transmission tariffs is 3,22%. (See Table 17).

Table 17. Allowed revenues for transmission services to be recovered from capacity and commodity-based transmission tariffs

	Allowed transmission revenues (€)	% of the total
Capacity	574.235.978	96,78%
Volume	19.127.531	3,22%
Total	**593.363.509**	**100,00%**

Source: CNMC

4.7.4 Cost allocation assessment relating to the transmission services revenue to be recovered by entry-exit points

In the proposed methodology, 50% of the referred allowed revenues shall be recovered from capacity-based transmission tariffs at entry points and 50% through capacity-based transmission tariffs at exit points, in accordance general recommendation, the tariff code and with the agent responses to the consultation on "*Regulation x/2014, of x of xxxxx, of CNMC, establishing the methodology to calculate network tariffs for access to gas infrastructures*[22]".

The allowed revenues for operating gas are set in such a way that it is the same at all entry points and at all exit points, in accordance with Article 4(3)(a) of Regulation (EU) 2017/460.

As a consequence of the above, 50,01% of the referred allowed revenues shall be recovered through transmission tariffs at entry points and 49,99% through transmission tariffs at exit points. (see Table 18).

[22] File processed under number (ENER-18/2012/REF-PR).

Table 18. Allowed revenues for transmission services to be recovered from entry-exit transmission tariffs

		Allowed transmission revenues (€)	% of the total
Entry	Capacity	287.117.989	50,01%
	Volume	9.598.013	
Exit	Capacity	287.117.989	49,99%
	Volume	9.529.519	
Total		**593.363.509**	**100,00%**

Source: CNMC

4.7.5 Cost allocation assessment relating to the transmission services revenue between intra-system and cross-system network users

The cost allocation assessment shall indicate the degree of cross-subsidisation between intra-system and cross-system network uses, in accordance with Article 5 of Regulation (EU) 2017/460. The capacity cost allocation comparison index, which is defined in percentage, is calculated as a ratio between the average cost paid by intra-system (national) and cross-system (non-national) network users, according to the following formula:

$$Comp = \frac{2 \times |Ratio_{Nacional} - Ratio_{No\ nacional}|}{Ratio_{\ Nacional} + Ratio_{No\ nacional}} \times 100\%$$

Where:

Comp: Comparison index

Ratio $_{National}$: Is the average revenue obtained from capacity and commodity tariffs charged for intra-system use (national) at entry and exit points.

Ratio $_{Non\text{-}national}$: Is the average revenue obtained from capacity and commodity tariffs charged for cross-system use (non-national) at entry and exit points

For the purpose of estimating the revenue obtained from tariffs charged to non-national users at all entry points, it is considered that the amount of allocated capacity for cross-system network use at all entry points is equal to the capacity for cross-system network use at all exit points, in accordance with Article 5 of Regulation (UE) 2017/460.

As indicated in Article 5(6), where the results of the capacity, or respectively commodity cost allocation comparison indexes, exceed 10 percent, the national regulatory authority shall provide the justification for such results.

According to the cost driver considered in the reference price methodology proposed and taking into account the characteristics of the natural gas transmission network, it has been considered two cost drivers: the forecasted contracted capacity at entry and exit points and the distance.

Table 19 and Table 20 show the results of the capacity cost allocation indexes. The results of the comparison indexes are below 10%, the limit indicated in article 5(6) of Regulation (UE) 2017/460.

Table 19. Cost allocation assessment relating to the transmission services revenue to be recovered by capacity-based transmission tariffs between intra-system and cross-system network users before adjustments of article 6(4) of Regulation (UE) 2017/460

System	Entry/Exit	Capacity by distance (MWh/day x km)	Transmission tariffs revenues (€)	Average income (€/MWh/day/year)	
National (Intra-system)	Entry	832.627.469	255.995.831	0,307	
	Exit	1.282.247.769	264.019.181	0,206	
	Total	**2.114.875.237**	**520.015.012**	**0,246**	(A)
Non-national (Cross-system)	Entry	108.650.442	31.122.158	0,286	
	Exit	114.603.642	23.098.808	0,202	
	Total	**223.254.084**	**54.220.966**	**0,243**	(B)

Comp = 2*|(A) - (B)| / [(A) + (B)]	**1,23%**

Source: CNMC

Table 20. Cost allocation assessment relating to the transmission services revenue to be recovered by capacity-based transmission tariffs between intra-system and cross-system network users after adjustments of article 6(4) of Regulation (UE) 2017/460

System	Entry/Exit	Capacity by distance (MWh/day x km)	Transmission tariffs revenues (€)	Average income (€/MWh/day/year)	
National (Intra-system)	Entry	832.627.469	255.995.831	0,307	
	Exit	1.282.247.769	263.445.890	0,205	
	Total	**2.114.875.237**	**519.441.721**	**0,246**	(A)
Non-national (Cross-system)	Entry	108.650.442	31.122.158	0,286	
	Exit	114.603.642	23.672.099	0,207	
	Total	**223.254.084**	**54.794.257**	**0,245**	(B)
Comp = 2*|(A) - (B)| / [(A) + (B)]				**0,07%**	

Source: CNMC

Table 21 shows the result of the commodity cost allocation index. The result of the comparison index is below 10%, the limit indicated in article 5(6) of Regulation (UE) 2017/460.

Table 21. Cost allocation assessment relating to the transmission services revenue to be recovered by commodity-based transmission tariffs between intra-system and cross-system network users

System	Entry/Exit	Volume (MWh)	Transmission tariffs revenues (€)	Average income (€/MWh/day/year)	
National (Intra-system)	Entry	386.622.285	9.510.739	0,0246	
	Exit	383.837.928	9.442.245	0,0246	
	Total	**770.460.212**	**18.952.983**	**0,0246**	(A)
Non-national (Cross-system)	Entry	3.547.789	87.274	0,0246	
	Exit	3.547.789	87.274	0,0246	
	Total	**7.095.578**	**174.548**	**0,0246**	(B)
Comp = 2*|(A) - (B)| / [(A) + (B)]				**0,00%**	

Source: CNMC

Finally, Table 22 show the revenues to be recovered by capacity and commodity-based tariffs from intra-system (national) users and cross-system (non-national) users.

Table 22. Revenues from intra-system and cross-system users

System		Capacity transmission revenues (€)	Commodity transmission revenues (€)	Total revenues (€)	Percentage
National (Intra-system)	Entry	255.995.831	9.510.739	265.506.570	44,7%
	Exit	263.445.890	9.442.245	272.888.135	46,0%
	Total	**519.441.721**	**18.952.983**	**538.394.704**	**90,7%**
Non-national (Cross-system)	Entry	31.122.158	87.274	31.209.432	5,3%
	Exit	23.672.099	87.274	23.759.373	4,0%
	Total	**54.794.257**	**174.548**	**54.968.805**	**9,3%**

Source: CNMC

4.8 Analysis of the differences between transmission tariffs

Article 30(2)(a) of Tariff network code establishes in epigraph i) that the publication of transmission tariffs shall be accompanied by an explanation of the difference in the level of transmission tariffs for the same type of transmission service applicable for the prevailing tariff period and for the tariff period for which the information is published.

The prevailing access tariffs include the allowed revenues for transmission and distribution activities, for the Technical Manager of the Gas System and other costs, (the charge for the CNMC and MITECO and the annuities for the recovery of the tariff deficit, the remuneration for the Market Operator, the acquisitions of LPG for isolated territories and the remuneration for supply in isolated territories and the revenues for supply regulated tariffs)

The transmission tariffs implicit in the current network tariff have been estimated with the following hypotheses:

a) Implicit transmission tariffs recover only the truck transmission network allowed revenues and are sufficient.

b) It is considered that the allowed revenues for the trunk transmission network, excluding the operating gas, is recovered through the capacity term capacity and allowed revenues for the operating gas is recovered through the commodity term in the exit tariffs.

c) The reservation of capacity tariff for the international points applicable to entries includes in addition to the entry capacity tariff a portion of the costs not associated with the use of the infrastructure. It is assumed that this portion corresponds to 4.3% (percentage that such costs represent over the total allowed revenues, see Table 2). Therefore, the prevailing entry tariff is assumed to be equal to the “reservation of capacity” term established in Order IET / 2446/2013 divided by 1,043.

d) The prevailing exit capacity tariff for international connections is published in the Ministerial Order IET / 2446/2013[23]. It is equally assumed that this term, in addition to the costs associated with the exists from the transmission network includes other costs not associated with the use, so the published tariffs have also been divided by 1,043 to determine the current exit tariffs for international connection points.

e) The exit capacity-based transmission tariff for national customers is obtained as a difference between the total allowed revenues to be recovered and the remuneration that is recovered through the current tariffs considered for the entries and for the exits of international connections points.

On the other hand, the equivalent contracted capacity with the current multipliers has been considered in the calculation of the revenues through the application of current tariffs and the equivalent contracted capacity with the Circular´s multipliers in the calculation of the revenues through the application of the proposed tariffs.

Table 23 compares the implicit entry-exit split in the current tariffs with the one resulting from the proposed methodology. It is observed that, the entry-exit split of the current transmission tariffs is 28/72, with the hypotheses considered, while the proposed methodology contemplates a 50/50 split.

Table 23 Comparison of the current transmission exit tariffs with the tariffs resulting from the methodology. 2020 year

		Current Tariffs		CNMC Tariffs	
		Transmission Revenues (€)	% of the total	**Transmission Revenues (€)**	% of the total
Entry	Capacity	164.122.712	28%	287.117.989	50%
	Commodity charge	-		9.598.013	
Exti	Capacity	410.113.266	72%	287.117.989	50%
	Commodity charge	19.127.531		9.529.519	
Total		**593.363.509**	**100,00%**	**593.363.509**	**100,00%**

Source: CNMC

Table 24 shows the comparison of the application of the current tariffs considered for entries with the hypotheses indicated against the proposed entry tariffs. It is observed that as a result of the variation of the entry-exit split and multipliers, the entry tariffs to the transmission network resulting from the proposed methodology

[23] The exit capacity-based transmission tariff for interconnections points corresponds to the product of 0.7 for capacity-based transmission tariff for consumers connected to 60 bar whose consumption exceeds 1,000GWh/year (called, 1.3). (Article 12 of the Order IET/2446/2013).

increase for all entry points vs the current postal tariffs. Also, it is observed that the tariffs of the entries through the South increase to a greater extent than the entry tariffs through the North.

Table 24 Comparison of the current entry tariffs to the transmission network with the tariffs resulting from the methodology. 2020 year

	Current Tariffs (A)			Transmission tariffs proposal (B)			
Entry points	Forecasted contracted capacity 2020 with current multipliers (MWh/day)	Capacity entry (€/MWh/day/year)	Revenues (€)	Forecasted contracted capacity 2020 with CNMC multipliers (MWh/day)	Capacity entry (€/MWh/day/year)	Revenues (€)	Variation (B) over (A) (%)
VIP Francia	231.683	124,83	28.921.401	205.371	210,79	43.289.276	68,9%
VIP Portugal	15.575	124,83	1.944.252	10.473	361,73	3.788.331	189,8%
CI Tarifa	158.238	124,83	19.753.124	145.693	300,99	43.851.590	141,1%
CI Almería	224.648	124,83	28.043.201	222.166	271,36	60.287.277	117,4%
LNG facility	677.878	124,83	84.620.510	669.880	201,25	134.812.556	61,2%
Poseidón	424	124,83	52.869	372	292,01	108.667	133,9%
Marismas	4	124,83	499	4	283,38	1.052	127,0%
Viura	5.962	124,83	744.202	5.766	160,63	926.233	28,7%
PB Madrid	342	124,83	42.655	310	170,72	53.007	36,8%
TOTAL	**1.314.753**	**124,83**	**164.122.712**	**1.260.036**	**227,86**	**287.117.989**	**82,5%**

Source: CNMC and Order IET/2446/2013

Similarly, Table 25 shows the comparison of the application of the current tariffs considered for the exits with the hypotheses indicated against the proposed exit tariffs. As anticipated, the exit tariffs of the transmission network resulting from the proposed methodology decrease with respect to the exit tariffs implicit in the current tariffs.

Table 25. Comparison of the current exit tariffs from the transmission network with the tariffs resulting from the methodology. 2020 year

	Current Tariffs (A)			Propuesta de peajes de transporte (B)			
Exit Points	Forecasted contracted capacity 2020 with current multipliers (MWh/day)	Capacity Charge (€/MWh/day/year)	Revenues (€)	Forecasted contracted capacity 2020 with CNMC multipliers (MWh/day)	Capacity (€/MWh/day/year)	Revenues (€)	Variation (B) over (A) (%)
National	1.807.956	208,56	377.071.207	1.735.232	151,82	263.445.890	-27,2%
LNG facility	-	n.a.	n.a.	-	182,81	-	n.a.
VIP Francia	132.981	230,84	30.696.826	130.897	166,23	21.759.594	-28,0%
VIP Portugal	10.160	230,84	2.345.234	10.061	190,09	1.912.505	-17,7%
TOTAL	**1.951.097**	**210,20**	**410.113.266**	**1.876.189**	**153,03**	**287.117.989**	**-27,2%**

Source: CNMC and Order IET/2446/2013

4.9 Expected evolution of transmission tariffs during the regulatory period

Article 30(2)(a) of Tariff network code establishes in epigraph ii) that the publication of transmission tariffs shall be accompanied by an explanation of the estimated difference in the level of transmission tariffs for the same type of transmission service applicable for the tariff period for which the information is published and for each tariff period within the remainder of the regulatory period.

Following tables shows the forecasted evolution of the transmission revenues, of the contracted capacity for each entry point and for each exit point and of the gas volumes demanded at entry and exit points of the transmission network. Tables also show capacity charges and their corresponding commodity charge for each entry and exit point that result from the application of the methodology of the Circular until the end of the regulatory period.

Regarding the forecasts related to the evolution of transport remuneration for the period 2021-2026, it has been considered that the methodology established in Circular 9/2019, of December 12, has been considered, considering the demand forecasts set out in the Annex I.

It should be noted that the evolution of the capacity terms at entry and exit points of the transmission network have similar reductions among them and greater than those derived from the evolution of the allowed revenues for transmission during the first two years and during the rest of the regulatory period, motivated by the evolution of the forecasted contracted capacity for the regulatory period, where a reduction is forecasted from year 2022 onwards, justified by an increase of renewable energy. [24].

Likewise, it is observed that the evolution of capacity terms for entry and exit points is similar among themselves, without significant differences between entry points nor exit points. This is because the forecast scenario does not estimate significant variations in the relationship between the entry points or between the exit points.

Finally, in line with the expected evolution of capacity, during the regulatory period it is estimated moderate reductions in the variable terms of the entry and exit tariffs in the first two years and increases from the third year to the end of the period regulatory, justified the evolution of the demand and the maintenance of the compensation associated with the operating gas.

[24] For more details, see the Consultant document that accompanies the Circular Proposal establishing the methodology for the calculation of electricity transmission and distribution tariffs, available at https://www.cnmc.es/sites/default/files /2765529_2.pdf

The evolution of the capacity charge at entry and exit points to the transmission network show similar reductions among them and greater to those derived from the evolution of transmission revenues, motivated by the increase of the forecasted contracted capacity over the regulatory period.

Likewise, the evolution of the capacity charge at entry and exit points to the transmission network are similar among themselves, without significant differences between entry and exit points. This is because the forecasted scenario does not include significant variations among entry points, neither among exit points.

Finally, moderated reductions of the commodity charge are forecasted over the regulatory period for entry and exit points justified by the forecasted demand evolution during the regulatory period and the sustained allowed revenues considered for operating gas.

Table 26.Evolution of the capacity-based transmission tariffs at entry points during the regulatory period

1. Forecasted evolution of allowed transmission revenues

Allowed transmission revenues (€)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
Investment Expenditure	435.183.402	404.825.944	361.618.424	327.870.539	294.119.411	254.614.505	217.629.514
Operational Expenditure	139.052.576	127.703.312	126.087.669	129.003.388	131.636.153	135.657.480	139.145.618
Operating Gas	19.127.531	19.114.359	19.127.531	19.127.531	19.127.531	19.127.531	19.127.531
Total	**593.363.509**	**551.643.615**	**506.833.624**	**476.001.459**	**444.883.095**	**409.399.516**	**375.902.663**
% variation over the previous year		-7,0%	-8,1%	-6,1%	-6,5%	-8,0%	-8,2%

2. Forecasted evolution of the contracted capacity (MWh/day/year) for each entry point

Entry point	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
VIP Francia	205.371	205.371	205.371	205.371	205.371	205.371	205.371
VIP Portugal	10.473	10.473	10.473	10.473	10.473	10.473	10.473
CI Tarifa	145.693	145.693	145.693	145.693	145.693	145.693	145.693
CI Almería	222.166	222.166	222.166	222.166	222.166	222.166	222.166
LNG facility	669.880	692.690	696.250	687.284	662.098	611.337	517.169
Poseidón	372	372	372	372	372	372	372
Marismas	4	4	4	4	4	4	4
Viura	5.766	5.766	5.766	5.766	5.766	5.766	5.766
PB Madrid	310	310	310	310	310	310	310
Total	**1.260.036**	**1.282.846**	**1.286.406**	**1.277.440**	**1.252.254**	**1.201.494**	**1.107.325**

3. Transmission revenues (€) by entry point

Entry point	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
VIP Francia	43.289.276	39.453.299	35.911.641	33.699.268	31.768.937	29.962.923	28.771.688
VIP Portugal	3.788.331	3.447.119	3.144.140	2.959.701	2.797.606	2.645.415	2.561.659
CI Tarifa	43.851.590	39.907.284	36.494.376	34.476.321	32.750.132	31.192.450	30.828.270
CI Almería	60.287.277	55.092.452	50.364.640	47.498.636	45.162.617	43.103.714	42.753.677
LNG facility	134.812.556	127.372.111	117.035.192	108.955.988	99.600.917	87.480.905	72.755.935
Poseidón	108.667	98.803	90.306	85.273	80.901	76.900	75.607
Marismas	1.052	957	875	826	784	745	733
Viura	926.233	844.291	767.794	719.459	676.643	635.799	604.001
PB Madrid	53.007	48.313	44.083	41.492	39.245	37.141	35.994
Total	**287.117.989**	**266.264.628**	**243.853.047**	**228.436.964**	**212.877.782**	**195.135.992**	**178.387.566**

4. Entry capacity-based transmission tariff (€/MWh/day and year)

Entry point	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
VIP Francia	210,79	192,11	174,86	164,09	154,69	145,90	140,10
VIP Portugal	361,73	329,15	300,22	282,61	267,13	252,60	244,60
CI Tarifa	300,99	273,91	250,49	236,64	224,79	214,10	211,60
CI Almería	271,36	247,98	226,70	213,80	203,28	194,02	192,44
Plantas GNL	201,25	183,88	168,09	158,53	150,43	143,10	140,68
Yac. Poseidón	292,01	265,50	242,67	229,14	217,40	206,64	203,17
Yac. Marismas	283,38	257,73	235,62	222,52	211,18	200,77	197,47
Yac.Viura	160,63	146,42	133,15	124,77	117,34	110,26	104,75
PB Madrid	170,72	155,60	141,97	133,63	126,39	119,62	115,92
Average tariff	**227,86**	**207,56**	**189,56**	**178,82**	**170,00**	**162,41**	**161,10**

5. Forecasted evolution of the entry capacity-based transmission tariff

Entry point	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
VIP Francia		-8,86%	-8,98%	-6,16%	-5,73%	-5,68%	-3,98%
VIP Portugal		-9,01%	-8,79%	-5,87%	-5,48%	-5,44%	-3,17%
CI Tarifa		-8,99%	-8,55%	-5,53%	-5,01%	-4,76%	-1,17%
CI Almería		-8,62%	-8,58%	-5,69%	-4,92%	-4,56%	-0,81%
Plantas GNL		-8,63%	-8,59%	-5,69%	-5,11%	-4,88%	-1,69%
Yac. Poseidón		-9,08%	-8,60%	-5,57%	-5,13%	-4,95%	-1,68%
Yac. Marismas		-9,05%	-8,58%	-5,56%	-5,10%	-4,93%	-1,65%
Yac.Viura		-8,85%	-9,06%	-6,30%	-5,95%	-6,04%	-5,00%
PB Madrid		-8,86%	-8,75%	-5,88%	-5,42%	-5,36%	-3,09%
Average tariff		**-8,91%**	**-8,67%**	**-5,66%**	**-4,94%**	**-4,46%**	**-0,81%**

Source: CNMC

Table 27. Evolution of the capacity-based transmission tariffs at exit points during the regulatory period

1. Forecasted evolution of allowed transmission revenues

Allowed transmission revenues (€)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
Investment Expenditure	435.183.402	404.825.944	361.618.424	327.870.539	294.119.411	254.614.505	217.629.514
Operational Expenditure	139.052.576	127.703.312	126.087.669	129.003.388	131.636.153	135.657.480	139.145.618
Operating Gas	19.127.531	19.114.359	19.127.531	19.127.531	19.127.531	19.127.531	19.127.531
Total	**593.363.509**	**551.643.615**	**506.833.624**	**476.001.459**	**444.883.095**	**409.399.516**	**375.902.663**
% variation over the previous year		-7,0%	-8,1%	-6,1%	-6,5%	-8,0%	-8,2%

2. Forecasted evolution of the contracted capacity (MWh/day/year) for each exit point

Exit point	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
National	1.735.232	1.726.318	1.716.188	1.697.725	1.656.065	1.582.490	1.409.544
LNG facility (1)	-	-	-	-	-	-	-
VIP Francia	130.897	128.509	128.551	129.071	129.476	129.257	128.901
VIP Portugal	10.061	22.923	21.127	14.638	15.121	18.037	19.562
Total	**1.876.189**	**1.877.750**	**1.865.866**	**1.841.434**	**1.800.662**	**1.729.784**	**1.558.008**

3. Transmission revenues (€) by exit point

Exit point	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
National	263.445.890	242.259.968	221.760.822	208.134.170	193.339.166	176.090.584	158.821.627
LNG facility (1)	-	-	-	-	-	-	-
VIP Francia	21.759.594	19.955.069	18.634.895	18.018.656	17.290.291	16.493.453	16.769.960
VIP Portugal	1.912.505	4.049.591	3.457.330	2.284.137	2.248.325	2.551.956	2.795.978
Total	**287.117.989**	**266.264.628**	**243.853.047**	**228.436.964**	**212.877.782**	**195.135.992**	**178.387.566**

4. Exit capacity-based transmission tariff (€/MWh/day)

Exit point	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
National	151,82	140,33	129,22	122,60	116,75	111,27	112,68
LNG facility (1)	182,81	169,13	155,65	147,51	140,35	133,60	135,08
VIP Francia	166,23	155,28	144,96	139,60	133,54	127,60	130,10
VIP Portugal	190,09	176,66	163,65	156,04	148,69	141,49	142,93
Average transmission tariff	**153,03**	**141,80**	**130,69**	**124,05**	**118,22**	**112,81**	**114,50**

5. Forecasted evolution of the exit capacity-based transmission tariff

Exit point	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
National		-7,57%	-7,92%	-5,12%	-4,77%	-4,69%	1,26%
LNG facility (1)		-7,48%	-7,97%	-5,23%	-4,85%	-4,81%	1,11%
VIP Francia		-6,59%	-6,65%	-3,70%	-4,34%	-4,45%	1,96%
VIP Portugal		-7,06%	-7,37%	-4,65%	-4,71%	-4,85%	1,02%
Peaje medio		**-7,34%**	**-7,83%**	**-5,08%**	**-4,70%**	**-4,58%**	**1,50%**

Source: CNMC

Table 28. Evolution of the commodity-based transmission tariffs at entry and exit points during the regulatory period

1. Forecasted evolution of allowed transmission revenues

Retribución del transporte (€)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
Investment Expenditure	435.183.402	404.825.944	361.618.424	327.870.539	294.119.411	254.614.505	217.629.514
Operational Expenditure	139.052.576	127.703.312	126.087.669	129.003.388	131.636.153	135.657.480	139.145.618
Operating Gas	19.127.531	19.114.359	19.127.531	19.127.531	19.127.531	19.127.531	19.127.531
Total	**593.363.509**	**551.643.615**	**506.833.624**	**476.001.459**	**444.883.095**	**409.399.516**	**375.902.663**
% variation over the previous year		-7,0%	-8,1%	-6,1%	-6,5%	-8,0%	-8,2%

2. Forecasted evolution of gas volume (MWh)

Volumen demandado (MWh)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
Entry	390.170.074	397.018.736	398.473.279	395.151.824	387.342.449	371.394.603	341.575.865
Exit	387.385.717	394.267.068	395.849.449	392.690.136	385.056.790	369.303.005	339.730.041
Total	**777.555.790**	**791.285.805**	**794.322.728**	**787.841.960**	**772.399.239**	**740.697.608**	**681.305.905**

3. Forecasted evolution of gas volume (%)

Point	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
Entry	50,2%	50,2%	50,2%	50,2%	50,1%	50,1%	50,1%
Exit	49,8%	49,8%	49,8%	49,8%	49,9%	49,9%	49,9%
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**

3. Transmission revenues (€) by entry/exit

Point	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
Entry	9.598.013	9.590.414	9.595.357	9.593.649	9.592.066	9.590.772	9.589.676
Exit	9.529.519	9.523.945	9.532.174	9.533.883	9.535.465	9.536.759	9.537.855
Total	**19.127.531**	**19.114.359**	**19.127.531**	**19.127.531**	**19.127.531**	**19.127.531**	**19.127.531**

4. Commodity-based transmission tariffs (€/MWh)

Point	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
Entry	0,0245996	0,0241561	0,0240803	0,0242784	0,0247638	0,0258237	0,0280748
Exit	0,0245996	0,0241561	0,0240803	0,0242784	0,0247638	0,0258237	0,0280748
Average transmission tariff	**0,0245996**	**0,0241561**	**0,0240803**	**0,0242784**	**0,0247638**	**0,0258237**	**0,0280748**

5. Forecasted evolution of the commodity-based transmission tariffs

Point	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
Nacional		-1,80%	-0,31%	0,82%	2,00%	4,28%	8,72%
Plantas GNL (1)		-1,80%	-0,31%	0,82%	2,00%	4,28%	8,72%
Average transmission tariff		**-1,80%**	**-0,31%**	**0,82%**	**2,00%**	**4,28%**	**8,72%**

Source: CNMC

4.10 Methodology for transmission tariffs calculation

Article 30(2)(b) of Tariff network code establishes that with regard to transmission tariffs a simplified tariff model, updated regularly, shall be published accompanied by the explanation of how to use it, enabling network users to calculate the transmission tariffs applicable for the prevailing tariff period and to estimate their possible evolution beyond such tariff period.

In compliance, the Circular attaches an Excel file and the corresponding explanations for its use, in which agents can simulate their tariffs during the regulatory period.

5. Allocation of the allowed revenues for local networks

5.1 Allowed revenues

The allowed revenues to local network tariffs include the revenues of the local transmission network, the secondary transmission network revenues and the distribution revenues forecasted for the period, as well as the amendments of the revenues of previous years and the income deviations of previous years.

Table 29 shows the forecasted revenues for the year 2020 of the local influence network, secondary transmission network and distribution network, estimated in accordance with the methodology set out in Annexes IX and X to Law 18/2014. The year 2020 is the first year in which the methodology would apply, so it is not appropriate to attribute deviations from previous years. Therefore, in 2020 EUR 1.665 million is charged to the local network's tariffs, of which 10.0% corresponds to the local influence network, 4.5% corresponds to the secondary transmission network and 85.5% corresponds to the distribution network. It is indicated that the distribution revenues do not include compensation for supply of propane air in island territories or compensation for the tariff supply made by distribution companies in said territories, in accordance with article 59 of Law 18/2014.

Table 29. Revenues allocated to local network tariffs for year 2020

Revenues allocated to local network tariffs	2020 forecast	% over total
Local influence network	**165.775.254**	***10,0%***
Investment Revenues	110.018.599	6,6%
Operational Revenues	53.576.919	3,2%
Operating gas	2.179.736	0,1%
Amendments of the Revenues of previous years	n.a.	n.a.
Secondary transmission network	**74.540.643**	**4,5%**
Investment Revenues	55.730.057	3,4%
Operational Revenues	17.614.874	1,1%
Operating gas	1.195.711	0,1%
Amendments of the Revenues of previous years	n.a.	n.a.
Distribution network	**1.415.080.333**	**85,5%**
Network remuneration	1.415.080.333	85,5%
Amendments of the Revenues of previous years	n.a.	n.a.
Total	**1.655.396.229**	**100,0%**

Source: CNMC

5.2 Scope of application

Considering the comments made by the Stakeholders and the Ministry in their reports, it is clarified that the local network tariffs apply to all consumers, excluding those supplied from their own satellite LNG facility, taking into account the definition of the trunk network established in Order IET/2434/2012, of November 7, which determines the facilities of the basic natural gas network belonging to the natural gas trunk network.

Likewise, in line with the observations received by the agents and the Ministry in their reports, the circular exempts the injections from manufactured gas plants and gases from unconventional sources, such as biogas connected in the local network from the payment of local networks tariffs.

5.3 Definition of services

Consistent with the scope of application of the local network tariffs, a single access service to local networks is defined that includes the right to use the infrastructure necessary to transport the gas from the exit points of the trunk transmission network to final consumers or from LNG satellite facilities to final consumers.

5.4 Determination of service cost drivers and billing variables

Considering the comments made by the stakeholders, the circular considers two cost drivers: capacity, to the extent that the network is sized to cover the maximum demand of consumers, and customers, to the extent that the customers acquisition and commercial cycle (reading, billing and collection) are a function of the number of supplies.

On the other hand, considering that, in general, the fixed costs related to the provision of a service has to be recovered through the fixed charge of the tariff, while through the variable charge must be recovered the variable costs associated with the provision of the service, the circular consider that the most appropriate billing variables are the capacity contracted at the network exit points and the volume of gas circulated at the network exit points.

Consequently, local network tariffs include a fixed charge, expressed in c€/(kWh/day)/month, and a variable charge per kWh transported, expressed in c€/kWh.

However, local network tariffs for supplies that do not contract capacity, for not having the necessary metering equipment, will consist of a fixed charge per customer, expressed in c€/consumer and month, and a variable charge per kWh transported, expressed in c€/kWh.

The methodology does not consider, the introduction of a fixed charge per customer for the purpose of billing those cost components whose cost driver is the number of customers, justified by the increase in complexity of the billing procedure and the increase of associated costs it will introduce, without providing a benefit for customers who have metering equipment that allows the daily registration of the maximum demanded capacity.

5.5 Allocation of revenues to distribution tariffs

The local network revenue allocation methodology takes into account, on one hand, that the infrastructure is dimensioned in order to cover the annual peak demand of the costumers and that each costumer should pay for the costs of the network to which is connected and the costs of the higher-pressure networks necessary for its supply and, by other hand, that some cost components depend on the number of supplies.

However, it should be noted that a tariff structure differentiated by pressure level (such as the prevailing tariffs or those considered by the CNMC in its Circular proposed in 2014), has the disadvantage that customers with the same characteristics pay different tariffs depending on network they are supplied from, which leads, on one hand, to customers requesting disconnections of the network and the connection to a higher pressure networks with the purpose of reducing their tariffs. And, on the other hand, the regulator has to introduce differentiated tariffs for certain groups of customers (e.g. group 2 bis tariffs or tariff 3.5), in order to partly mitigate these differences and to avoid the duplication of networks with the consequent cost for the system[25].

In order to solve this problem, regulators have chosen either to apply a discount on the basis of proximity to upper design pressure networks (in the case of Portugal and the United Kingdom), or to set up a tariff structure which does not consider the supply pressure of the network to the customer (Germany, Italy) or a combination of the two (France).

In view of the above, the Circular establish a local network tariff structure which do not consider the supply pressure network to the customer. For this purpose, natural gas customers have been categorized and segmented according to the cost drivers' variables.

In particular, customers with individualized information[26], have been classified into homogeneous groups using the multivariate statistical analysis technique called "cluster analysis" for the period 2014-2017. The segmentation of customers for whom no individualized information is available has been carried out taking as reference the information available in the settlement database.

[25] This aspect was highlighted by various actors in their comments to the CNMC's proposal of circular of 2014.

[26] Supply points with telemetry equipment installed and operational.

Annex III presents the characterization of customers that has served as the basis for such segmentation

Table 30 shows the tariff structure that results from customer segmentation, as well as the number of supplies, capacity and consumption included in each tariff group. In line with the observations of the Ministry, the first tariff group has been extended to cover supplies which annual consumption is equal to or less than 5,000 kWh.

Table 30. Structure of local networks tariffs and number of supplies, capacity and annual consumption forecasted for the year 2020 in each tariff group

Tariff	Annual consumption (kWh)	Number of supplies	Capacity (kWh/día) (1)	Consumption (MWh)	Load factor (%)
RL.1	C ≤ 5.000	4.640.370	68.437.845	10.719.892	42,9%
RL.2	5.000 < C ≤ 15.000	2.906.238	147.382.237	20.794.338	38,7%
RL.3	15.000 < C ≤ 50.000	334.079	47.368.017	6.675.992	38,6%
RL.4	50.000 < C ≤ 300.000	54.243	38.383.035	6.088.277	43,5%
RL.5	300.000 < C ≤ 1.500.000	22.296	80.520.107	12.641.485	43,0%
RL.6	1.500.000 < C ≤ 5.000.000	3.276	46.418.898	7.890.278	46,6%
RL.7	5.000.000 < C ≤ 15.000.000	1.179	57.409.990	9.987.800	47,7%
RL.8	15.000.000 < C ≤ 50.000.000	712	85.807.711	18.074.325	57,7%
RL.9	50.000.000 < C ≤ 150.000.000	328	104.217.498	25.985.200	68,3%
RL.10	150.000.000 < C ≤ 500.000.000	170	187.565.705	51.306.840	74,9%
RL.11	C > 500.000.000	100	880.112.913	206.265.093	64,2%
Total		**7.962.993**	**1.743.623.955**	**376.429.520**	**59,1%**

Source: CNMC

(1) Invoiced capacity. The customer's capacity for supplies without metering equipment has been estimated on the basis of the load curves year 2018 (see Annex I).

Some agents in their allegations have pointed out that the elimination of pressure levels could lead to cross-subsidization among customers connected to design pressure networks of less than 4 bar and higher design pressure networks, while others have pointed out that the proposed tariff structure could be adequate, to the extent that it has the advantage of discouraging the disconnection of network customers to higher pressure levels, which traditionally had better tariffs. However, these same agents have pointed out the danger of disconnections of small industrialists, if the impact of the methodology is relevant.

This Commission considers the proposed tariffs structure adequate, in order to maximize the use of existing networks, avoid incurring in additional investments that could drive customers to connect to higher-design pressure networks and ensuring that customers with similar characteristics do not pay different tariffs depending on the network to which they are connected.

However, as indicated, in line with the observations made by the agents and the Ministry, the methodology includes the number of supplies as a cost driver. In particular, agents have proposed to allocate costs related to customer acquisition

and the business cycle (reading, billing, default management, emergency response) based on the number of supplies. In this way, the methodology allocates a part of the revenues of the networks according to the number of supplies and a part according to the demanded capacity.

Thus, once the remuneration of the network where the cost driver is the capacity per pressure level is assigned, taking into account the use of the upstream networks of each pressure level, all customers are billed based on the pressure level at which they are connected, they are then grouped according to the defined tariff structure, in such a way that, on the one hand, the costs of the network from where customers are supplied is taken into account and, on the other hand, tariffs differences between customers with the same characteristics are avoided.

On the other hand, the remuneration of the network which cost driver is customers, is distributed by tariff group, depending on the number of customers, allocating to the fixed charge of the local network tariff either by customer, or by flow.

I. Allocation of the revenues by cost driver

Considering the comments made by the agents, the local influence transmission network revenues and the secondary transmission network revenues are allocated considering capacity as the only cost driver, while the revenues of the distribution activity are allocated considering the capacity and the number of supply points as cost drivers. In particular, it is considered that those costs related to the commercial cycle and customer acquisition should be allocated based on the number of supply points and the remaining costs depending on capacity.

Since at the date of the preparation of the present Circular the Regulatory accounting are not available, the distribution revenues have been broken down by cost driver based on the information requested to the distribution companies in the Circular' scope. In particular, on November 18, distribution companies were requested to detail the operational costs (staff expenditure, repairs and maintenance costs, customer service and commercial activity cost, other external services and management cost, and taxes) disaggregated by cost driver (network, number of supplies and indirect costs) according to analytical accounting system, corresponding to the years 2016, 2017 and 2018.

According to the information provided, between 38% and 44% of operating costs have as a cost driver the number of supplies, between 20% and 22% have as a cost driver the networks and between 34% and 42 % are indirect costs (see Table 31).

Table 31. Structure of the distribution operational costs by cost driver. Years 2016, 2017 and 2018.

Concepto	2016				2017				2018			
	Cost drivers				Cost drivers				Cost drivers			
	Indirect	Supplies	Networks	Total	Indirect	Supplies	Networks	Total	Indirect	Supplies	Networks	Total
Staff expenditure	8,2%	8,2%	6,3%	22,6%	10,4%	9,3%	6,7%	26,5%	15,6%	14,1%	8,5%	38,1%
Repairs and maintenance costs	0,0%	2,1%	8,6%	10,7%	0,0%	2,1%	6,4%	8,5%	0,0%	2,0%	6,0%	8,0%
Customer service and commercial activity cost	0,4%	20,8%	0,0%	21,1%	0,1%	16,9%	0,0%	17,0%	0,1%	10,2%	0,0%	10,3%
Other external services and management cost	15,1%	13,1%	6,7%	34,9%	17,4%	13,6%	6,5%	37,5%	15,7%	11,8%	5,8%	33,4%
Taxes	10,6%	0,0%	0,0%	10,6%	10,4%	0,0%	0,0%	10,5%	10,1%	0,0%	0,0%	10,1%
TOTAL	**34,3%**	**44,1%**	**21,6%**	**100,0%**	**38,4%**	**42,0%**	**19,7%**	**100,0%**	**41,5%**	**38,2%**	**20,3%**	**100,0%**

Source: Companies

According to the information provided by the distribution companies the operational cost where the cost driver is the number of supplies represent, on average 14.46% of the allowed revenues for distribution activity and will be allocated proportionally to the number of supply points, while 85.54% of revenues will be allocated based on capacity (see Table 32).

Table 32. Allocation of the distribution allowed revenue by cost driver. Year 2020

	2020 forecast
Allowed revenues to be recovered from distribution tariffs (€) (A)	**1.415.080.333**

Cost driver (B)	% of the distribution revenues by cost driver
Supply points	14,46%
Capacity	85,54%
Total	**100,00%**

Distribution revenues by allocation criteria (€) (A) * (B)	2020 forecast
Distribution revenues to be recovered by supply points	204.617.304
Distribution revenues to be recovered by capacity	1.210.463.029
Total	**1.415.080.333**

Source: CNMC

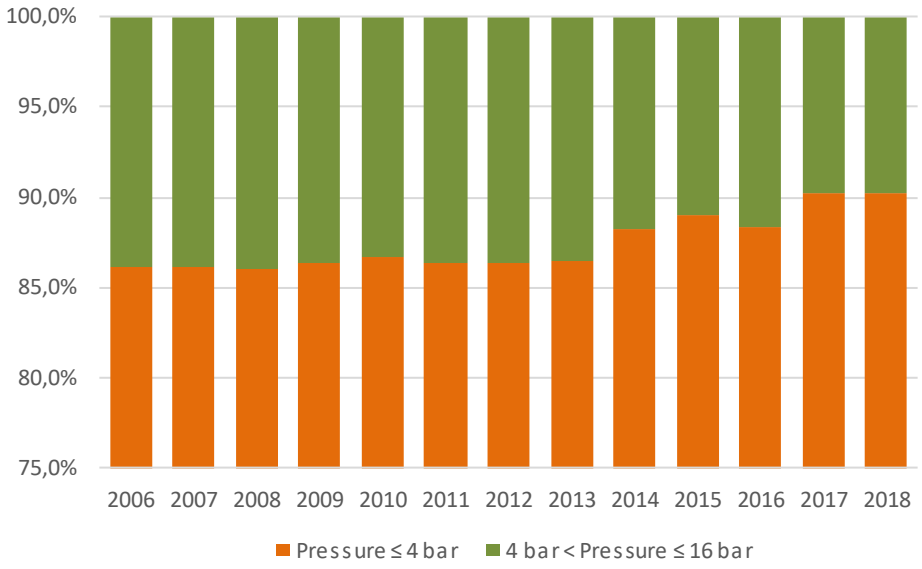
II. Allocation of the allowed revenue where the cost driver is capacity of each pressure level

Users have to bear the cost of the network to where they are connected and the costs of network of higher design pressure needed for their supply, for what it is necessary to break down, first, the distribution allowed revenues into networks

with design pressure equal to or below 4 bar (NP0) and networks with design pressure between 4 bar and 16 bar (NP1).

Similarly, the distribution allowed revenues has been broken down by pressure level on the basis of the information provided by the companies for the tariff reports' scope. Illustration 8 shows the breakdown of the allowed revenues by pressure level between 2006 and 2018. It should be noted that, although there is some stability in the information provided by companies for the regulatory period, the average of the last four years (2015-2018) has been considered, resulting that the 89.5% and 10.5% of the allowed revenues corresponds to networks with design pressure equal to or less than 4 bar and networks with design pressure between 4 bar and 16 bar, respectively.

Illustration 8. Breakdown of the distribution allowed revenue by pressure level. Years 2006 - 2018



Source: Distribution companies

Table 33 shows the result of applying the percentages obtained to the distribution allowed revenue expected for the year 2020 and Table 34 shows local networks allowed revenue by level of pressure allocated to the local networks tariffs. The remuneration assigned to the design pressure networks greater than 60 bar corresponds to the allowed revenues of the local influence transmission network, while the remuneration assigned to the design pressure networks between 16 bar and 60 bar corresponds to the allowed revenues of secondary transmission network, excluding in both cases the operating gas (see Table 29).

Table 33. Allocation of the distribution revenue where the cost driver is the capacity by pressure level. Year 2020

Distribution allowed revenues where the cost driver is the capacity (€) (A)	**1.210.463.029**

% of the allowed revenues of each level of pressure on the total (B)	
4 bar < P ≤ 16 bar	10,5%
P ≤ 4 bar	89,5%

Distribution allowed revenues by pressure level (€) (A) * (B)	
4 bar < P ≤ 16 bar	127.158.243
P ≤ 4 bar	1.083.304.787

Source: CNMC and distribution companies

Table 34. Allocation of the local networks revenues where the cost driver is the capacity by pressure level. Year 2020

Local networks allowed revenues (€)	2020 forecast	% of the total
Pressure (P) > 60 bar	163.595.518	11,3%
16 bar < P ≤ 60 bar	73.344.931	5,1%
4 bar < P ≤ 16 bar	127.158.243	8,8%
P ≤ 4 bar	1.083.304.787	74,8%
Total	**1.447.403.479**	**100,0%**

Source: CNMC and distribution companies

III. Allocation of revenues for each pressure level at the pressure level and at the lowest pressure levels

The local network revenues, excluding the operating gas revenues[27], are allocated by pressure levels considering the gas flow to lower pressure levels on the day of highest demand in the last year with available information. In general, the cost of the network for the level of pressure NPi shall be divided between the pressure levels by $NPj \quad j \leq i$, according to coefficients α_j^i:

[27] As will be seen later, the operating gas revenues is allocated proportionally to the volume.

$$CD_i^{NPj} = CD_i * \alpha_j^i$$

The coefficients α_j^i:

$\alpha_0^0 = 1$

$\alpha_1^1 = \frac{Q_1}{Q_1 + \omega_0^1}$

$\alpha_0^1 = \frac{\omega_0^1}{Q_1 + \omega_0^1}$

$\alpha_2^2 = \frac{Q_2}{Q_2 + \omega_1^2 + \omega_0^2}$

$\alpha_1^2 = \frac{\omega_1^2}{Q_2 + \omega_1^2 + \omega_0^2} * \alpha_1^1$

$\alpha_0^2 = \frac{\omega_1^2}{Q_2 + \omega_1^2 + \omega_0^2} * \alpha_0^1 + \frac{\omega_0^2}{Q_2 + \omega_1^2 + \omega_0^2}$

$\alpha_3^3 = \frac{Q_3}{Q_3 + \omega_2^3 + \omega_1^3 + \omega_0^3}$

$\alpha_2^3 = \frac{\omega_2^3}{Q_3 + \omega_2^3 + \omega_1^3 + \omega_0^3} * \alpha_2^2$

$\alpha_1^3 = \frac{\omega_2^3}{Q_3 + \omega_2^3 + \omega_1^3 + \omega_0^3} * \alpha_1^2 + \frac{\omega_1^3}{Q_3 + \omega_2^3 + \omega_1^3 + \omega_0^3} * \alpha_1^1$

$\alpha_0^3 = \frac{\omega_2^3}{Q_3 + \omega_2^3 + \omega_1^3 + \omega_0^3} * \alpha_0^2 + \frac{\omega_1^3}{Q_3 + \omega_2^3 + \omega_1^3 + \omega_0^3} * \alpha_0^1 + \frac{\omega_0^3}{Q_3 + \omega_2^3 + \omega_1^3 + \omega_0^3}$

Where,

$\alpha\omega_j^i$: Gas Flow from design pressure level i to lower design pressure level j, on the day of highest demand in the last year with available information.

Q_i: Demanded capacity in the pressure level i on the day of highest demand

The allocation coefficients of the revenue of the pressure level i an its own level and at lower pressure levels are obtained from the aggregation of the capacity balances for the day of maximum demand provided by the distribution companies (see Annex IV).

The coefficients α_j^i calculated in accordance with the previous formulation are presented in Table 35. According to the capacity balances for the day of maximum demand, the cost of the NP1 is due in 36.7% to customers connected at the same pressure level and 63.3% to customers connected to networks with design pressure equal to or below 4 bar. Similarly, the cost of NP2 (networks with design pressure between 16 and 60 bar) is due in 37.7% to connected customers at the same pressure level, 21.9% to customers connected to NP1 and 40,8% to connected customers to NP0 and so on. Finally, the cost of NP3 (networks with design pressure greater than 60 bar) is due in 34.9% to customers connected to such pressure level, 5.8% to customers connected to NP2, 21.5% to customers connected to NP1 and 37.8% to customers connected to NP0

Table 35. Allocation coefficients of revenues for tariff pressure level i at its own level and at lower pressure levels j.

Tariff pressure level	$\alpha^i{}_j$	Allocation
NP0 (P ≤ 4 bar)	$\alpha^0{}_{0,p}$	1,0000
NP1 (4 bar < P ≤ 16 bar)	$\alpha^{1\,1}{}_{,p}$	0,3675
	$\alpha^1{}_{0,p}$	0,6325
NP2 (16 bar < P ≤ 60 bar)	$\alpha^2{}_{2,p}$	0,3733
	$\alpha^2{}_{1,p}$	0,2186
	$\alpha^2{}_{0,p}$	0,4080
NP3 (P > 60 bar)	$\alpha^3{}_{3,p}$	0,3486
	$\alpha^3{}_{2,p}$	0,0581
	$\alpha^3{}_{1,p}$	0,2154
	$\alpha^3{}_{0,p}$	0,3779

Source: CNMC

The allocation of the cost of tariff pressure level i to lower pressure levels is obtained as the product of the cost of the tariff level i by the coefficient matrix. Table 36 show the result of the allocation of the allowed revenue associated with each level of pressure to its own level and to lower pressure levels.

Table 36.Allocation of the allowed revenues of the tariff pressure level i where the cost driver is capacity to its own pressure level and to lower pressure levels j

Tariff pressure level	Allowed revenues where the cost driver is capacity at the pressure level, excluding operating gas (Cd_i) (€)	Pressure level to which the remuneration of the tariff pressure level is assigned	$\alpha^i{}_j$	Revenue assigned to each tension level (€)
NP0 (P ≤ 4 bar)	1.083.304.787	NP0	1,0000	1.083.304.787
NP1 (4 bar < P ≤ 16 bar)	127.158.243	NP1	0,3675	46.726.447
		NP0	0,6325	80.431.795
NP2 (16 bar < P ≤ 60 bar)	73.344.931	NP2	0,3733	27.382.074
		NP1	0,2186	16.034.741
		NP0	0,4080	29.928.117
NP3 (P > 60 bar)	163.595.518	NP3	0,3486	57.023.661
		NP2	0,0581	9.499.547
		NP1	0,2154	35.244.223
		NP0	0,3779	61.828.087

Source: CNMC

Finally, Table 37 shows the local networks revenue where the cost driver is capacity to be recovered at each pressure level, resulting from the aggregation of the costs of networks of their own pressure level and higher-pressure levels, as indicated in Annex III of the Circular

Table 37. Local networks revenues to be recovered by each pressure level

Tariff pressure level	Assigned network pressure level	Revenue where the cost driver is capacity to be recovered at each pressure level (€)
NP0	NP0	1.083.304.787
	NP1	80.431.795
	NP2	29.928.117
	NP3	61.828.087
	Total revenues	**1.255.492.785**
NP1	NP1	46.726.447
	NP2	16.034.741
	NP3	35.244.223
	Total revenues	**98.005.411**
NP2	NP2	27.382.074
	NP3	9.499.547
	Total revenues	**36.881.622**
NP3	NP3	57.023.661
	Total revenues	**57.023.661**

Source: CNMC

IV. Breakdown of the revenues to each pressure level where the cost driver is capacity between fixed and variable term.

In the 2014 Circular's proposal, this Commission proposed to recover the fixed costs through a fixed charge and the variable costs through a variable charge, on the understanding that the tariffs should reflect the nature of the costs. However, in the received response to the Circular's proposal the agents, in general, disagreed for various reasons. In particular, some agents indicated that efficient consumption was not encouraged, while others pointed out that charging the fixed charge significantly could induce customers, especially those with less consumption, to replace natural gas with alternative energy sources. Additionally, some of them pointed the lack of audited information on the nature of the costs.

Considering the responses received to the 2014 Circular's proposal and given that in the consultation process the agents, in general, have not made observations, it has been decided to recover through the fixed charge the allowed revenue of the network to where the customer is connected and through the variable charge the revenue of the networks of higher-pressure levels to where the customers are connected (see Table 38).

Table 38. Revenue allocation where the cost driver is the pressure assigned to each pressure level, excluding remuneration associated with the operating gas, to a fixed component and a variable component

Tariff pressure level	Assigned network pressure level	Revenue where the cost driver is capacity to be recovered at each pressure level (€)	Revenue where the cost driver is capacity, excluding the operating gas, recovered through a fixed term(€)	Revenue where the cost driver is capacity, excluding the operating gas, recovered through a variable term(€)
NP0	NP0	1.083.304.787	1.083.304.787	
	NP1	80.431.795		80.431.795
	NP2	29.928.117		29.928.117
	NP3	61.828.087		61.828.087
	Total revenues	**1.255.492.785**	**1.083.304.787**	**172.187.999**
NP1	NP1	46.726.447	46.726.447	
	NP2	16.034.741		16.034.741
	NP3	35.244.223		35.244.223
	Total revenues	**98.005.411**	**46.726.447**	**51.278.964**
NP2	NP2	27.382.074	27.382.074	
	NP3	9.499.547		9.499.547
	Total revenues	**36.881.622**	**27.382.074**	**9.499.547**
NP3	NP3	57.023.661	57.023.661	
	Total revenues	**57.023.661**	**57.023.661**	**-**

Source: CNMC

V. Allocation of fixed revenue where the cost driver is the capacity of each pressure level per tariff group

As discussed earlier, once the network revenue by pressure level has been allocated considering the use of the upstream networks by each pressure level, it is subsequently allocated to each group of customers with similar characteristics, in order to ensure that networks users with the same characteristics are charged similar tariffs. For this purpose, the fixed and variable terms of the tariffs of the corresponding pressure level are calculated first. Secondly, all customers belonging to the same group are billed to the resulting tariff considering the pressure level where they are connected. Finally, the fixed and variable revenues of each tariff group results from adding the fixed and variable billing of customers belonging to the same tariff group.

IV.a) Determination of the fixed and variable unit costs of each pressure level

The fixed unit costs of each pressure level are obtained as the ratio between the revenue that must be recovered through the fixed term and the expected capacity of that pressure level. Similarly, the variable unit costs of each pressure level are obtained as the ratio between the revenue that must be recovered through the variable term and the demanded volume of that pressure level (see Table 39).

Table 39. Determination of fixed and variable unit costs for each pressure level. Year 2020

I. Revenue to be recovered

Pressure level	Revenue where the cost driver is capacity to be recovered through a fixed term (€) (A)	Revenue to be recovered through a variable term (€) (B)
NP0 (P ≤ 4 bar)	1.083.304.787	172.187.999
NP1 (4 bar < P ≤ 16 bar)	46.726.447	51.278.964
NP2 (16 bar < P ≤ 60 bar)	27.382.074	9.499.547
NP3 (P > 60 bar)	57.023.661	-
Total	**1.214.436.969**	**232.966.510**

II. Cost drivers

Pressure level	Invoiced capacity (kWh/day) (1) (C)	Volume (MWh) (D)
NP0 (P ≤ 4 bar)	445.950.079	68.041.697
NP1 (4 bar < P ≤ 16 bar)	380.992.247	95.201.901
NP2 (16 bar < P ≤ 60 bar)	121.881.107	35.975.207
NP3 (P > 60 bar)	794.800.522	177.210.715
Total	**1.743.623.955**	**376.429.520**

III. Fixed and variable unit costs.

Pressure level	Fixed unit cost (€/kWh/day and year) (A) / (C)	Variable unit cost (€/MWh) (B) / (D)
NP0 (P ≤ 4 bar)	2,429	2,531
NP1 (4 bar < P ≤ 16 bar)	0,123	0,539
NP2 (16 bar < P ≤ 60 bar)	0,225	0,264
NP3 (P > 60 bar)	0,072	-

Source: CNMC

(1) Invoiced capacity. The customer's capacity for supplies without metering equipment has been estimated on the basis of the load curves for the year 2018 (see Annex I).

IV.b) Billing of points of supply at tariffs of the pressure level to where they are connected

Once the fixed and variable unit costs are available, customers are billed with the tariffs that would correspond to them given the design pressure to where they are connected.

Table 40. Billing of points of supply at the fixed unit costs corresponding to the pressure level to where they are connected. Year 2020.

Tariff	Customer size (kWh)	Invoiced capacity (kWh/day) (1) (A)			
		P ≤ 4 bar	4 bar < P ≤ 16 bar	16 bar < P ≤ 60 bar	P > 60 bar
RL.1	C ≤ 5.000	68.380.463	56.796	2	584
RL.2	5.000 < C ≤ 15.000	147.367.535	14.659	-	44
RL.3	15.000 < C ≤ 50.000	47.288.764	74.478	3.397	1.379
RL.4	50.000 < C ≤ 300.000	37.915.318	447.463	4.390	15.864
RL.5	300.000 < C ≤ 1.500.000	77.399.241	2.991.901	74.265	54.699
RL.6	1.500.000 < C ≤ 5.000.000	35.069.815	11.015.506	251.446	82.131
RL.7	5.000.000 < C ≤ 15.000.000	18.948.752	36.692.363	1.520.273	248.602
RL.8	15.000.000 < C ≤ 50.000.000	11.667.083	69.812.695	3.666.982	660.950
RL.9	50.000.000 < C ≤ 150.000.000	1.913.109	92.315.285	6.980.264	3.008.839
RL.10	150.000.000 < C ≤ 500.000.000	-	127.655.017	28.631.922	31.278.765
RL.11	C > 500.000.000	-	39.916.084	80.748.166	759.448.663
Total		**445.950.079**	**380.992.247**	**121.881.107**	**794.800.522**

	P ≤ 4 bar	4 bar < P ≤ 16 bar	16 bar < P ≤ 60 bar	P > 60 bar
Fixed unit cost (€/kWh/day and year) (B)	2,4292	0,1226	0,2247	0,0717

Tariff	Customer size (kWh)	Billing (€) (C) = (A) * (B)				Revenue where the cost driver is capacityto be recovered through the fixed term of each tariff group (€)
		P ≤ 4 bar	4 bar < P ≤ 16 bar	16 bar < P ≤ 60 bar	P > 60 bar	
RL.1	C ≤ 5.000	166.110.258	6.966	0	42	166.117.266
RL.2	5.000 < C ≤ 15.000	357.986.158	1.798	-	3	357.987.959
RL.3	15.000 < C ≤ 50.000	114.874.168	9.134	763	99	114.884.164
RL.4	50.000 < C ≤ 300.000	92.104.132	54.879	986	1.138	92.161.136
RL.5	300.000 < C ≤ 1.500.000	188.018.731	366.939	16.685	3.924	188.406.279
RL.6	1.500.000 < C ≤ 5.000.000	85.191.819	1.350.987	56.490	5.893	86.605.189
RL.7	5.000.000 < C ≤ 15.000.000	46.030.430	4.500.101	341.548	17.836	50.889.915
RL.8	15.000.000 < C ≤ 50.000.000	28.341.753	8.562.114	823.832	47.420	37.775.120
RL.9	50.000.000 < C ≤ 150.000.000	4.647.336	11.321.924	1.568.201	215.872	17.753.334
RL.10	150.000.000 < C ≤ 500.000.000	-	15.656.133	6.432.510	2.244.122	24.332.766
RL.11	C > 500.000.000	-	4.895.472	18.141.058	54.487.310	77.523.841
Total		**1.083.304.787**	**46.726.447**	**27.382.074**	**57.023.661**	

Fuente: CNMC

(1) Invoiced capacity. The customer's capacity for supplies without metering equipment has been estimated on the basis of the load curves for the year 2018 (see Annex I).

Table 41. Supplies billing at the variable unit cost corresponding to the level of pressure to which they are connected. 2020 year

Tariff	Customer size (kWh)	Volume (MWh) (A)			
		P ≤ 4 bar	4 bar < P ≤ 16 bar	16 bar < P ≤ 60 bar	P > 60 bar
RL.1	C ≤ 5.000	10.719.884	6	2	0
RL.2	5.000 < C ≤ 15.000	20.794.052	275	-	11
RL.3	15.000 < C ≤ 50.000	6.672.603	2.387	799	204
RL.4	50.000 < C ≤ 300.000	6.023.210	53.946	10.242	878
RL.5	300.000 < C ≤ 1.500.000	12.022.042	599.502	18.761	1.180
RL.6	1.500.000 < C ≤ 5.000.000	5.425.819	2.394.661	63.239	6.559
RL.7	5.000.000 < C ≤ 15.000.000	3.336.388	6.384.865	227.821	38.725
RL.8	15.000.000 < C ≤ 50.000.000	2.512.454	14.714.284	722.156	125.431
RL.9	50.000.000 < C ≤ 150.000.000	535.244	23.091.397	1.732.949	625.608
RL.10	150.000.000 < C ≤ 500.000.000	-	35.945.930	8.222.609	7.138.301
RL.11	C > 500.000.000	-	12.014.647	24.976.628	169.273.817
Total		**68.041.697**	**95.201.901**	**35.975.207**	**177.210.715**

	P ≤ 4 bar	4 bar < P ≤ 16 bar	16 bar < P ≤ 60 bar	P > 60 bar
Variable unit cost (€/MWh)	2,5306	0,5386	0,2641	-

Tariff	Customer size (kWh)	Billing (€) (C) = (A) * (B)				Revenue to be recovered through the variable term of each tariff group (€)
		P ≤ 4 bar	4 bar < P ≤ 16 bar	16 bar < P ≤ 60 bar	P > 60 bar	
RL.1	C ≤ 5.000	27.128.003	3	1	-	27.128.007
RL.2	5.000 < C ≤ 15.000	52.621.941	148	-	-	52.622.090
RL.3	15.000 < C ≤ 50.000	16.885.853	1.286	211	-	16.887.350
RL.4	50.000 < C ≤ 300.000	15.242.485	29.057	2.705	-	15.274.247
RL.5	300.000 < C ≤ 1.500.000	30.423.277	322.912	4.954	-	30.751.143
RL.6	1.500.000 < C ≤ 5.000.000	13.730.711	1.289.845	16.699	-	15.037.255
RL.7	5.000.000 < C ≤ 15.000.000	8.443.147	3.439.104	60.158	-	11.942.409
RL.8	15.000.000 < C ≤ 50.000.000	6.358.079	7.925.611	190.691	-	14.474.381
RL.9	50.000.000 < C ≤ 150.000.000	1.354.503	12.437.808	457.599	-	14.249.910
RL.10	150.000.000 < C ≤ 500.000.000	-	19.361.694	2.171.247	-	21.532.941
RL.11	C > 500.000.000	-	6.471.495	6.595.283	-	13.066.778
Total		**172.187.999**	**51.278.964**	**9.499.547**	**-**	

Source: CNMC

IV.c) Determination of the fixed and variable revenue that must be recovered by each tariff group

The fixed and variable revenue to recover by each tariff group results from adding the fixed and variable invoicing of customers of each tariff group (see Table 42).

Table 42. Revenue to be recovered through the fixed and variable terms for each tariff group. Year 2020

Tariff	Customer size (kWh)	Revenue to be recovered through the fixed term for each tariff group (€)	Revenue to be recovered through the variable term for each tariff group (€)
RL.1	C ≤ 5.000	166.117.266	27.128.007
RL.2	5.000 < C ≤ 15.000	357.987.959	52.622.090
RL.3	15.000 < C ≤ 50.000	114.884.164	16.887.350
RL.4	50.000 < C ≤ 300.000	92.161.136	15.274.247
RL.5	300.000 < C ≤ 1.500.000	188.406.279	30.751.143
RL.6	1.500.000 < C ≤ 5.000.000	86.605.189	15.037.255
RL.7	5.000.000 < C ≤ 15.000.000	50.889.915	11.942.409
RL.8	15.000.000 < C ≤ 50.000.000	37.775.120	14.474.381
RL.9	50.000.000 < C ≤ 150.000.000	17.753.334	14.249.910
RL.10	150.000.000 < C ≤ 500.000.000	24.332.766	21.532.941
RL.11	C > 500.000.000	77.523.841	13.066.778
Total		**1.214.436.969**	**232.966.510**

Source: CNMC

VI. Allocation of fixed revenue where the cost driver is the customer by tariff group

As noted, the revenue of operating costs where the driver is the customers is allocated to the fixed charge of each tariff group proportionally to the number of supplies connected to networks with design pressure less than 4 bar (see Table 43).

Table 43. Allocation of fixed revenue where the cost driver is the number of supply points by tariff group. Year 2020

Distribution allowed revenues where the cost driver is the number of supply points (€) (A)	**204.617.304**
Number of customers supplied from the distribution network (B)	**7.962.717**
Unit cost (€/customer and month) (C) = (A)/(B)	**2,1414**

Tariff	Customer size (kWh)	Number of supplies (D)	Distribution allowed revenues where the cost driver is the number of supplies to be recovered by each tariff group (€) (C) * (D)
RL.1	C ≤ 5.000	4.640.369	119.243.174
RL.2	5.000 < C ≤ 15.000	2.906.237	74.681.347
RL.3	15.000 < C ≤ 50.000	334.072	8.584.631
RL.4	50.000 < C ≤ 300.000	54.234	1.393.640
RL.5	300.000 < C ≤ 1.500.000	22.285	572.660
RL.6	1.500.000 < C ≤ 5.000.000	3.256	83.663
RL.7	5.000.000 < C ≤ 15.000.000	1.145	29.427
RL.8	15.000.000 < C ≤ 50.000.000	679	17.451
RL.9	50.000.000 < C ≤ 150.000.000	303	7.794
RL.10	150.000.000 < C ≤ 500.000.000	124	3.182
RL.11	C > 500.000.000	13	334
Total		**7.962.717**	**204.617.304**

Source: CNMC

VII. Allocation of the operating gas cost to each tariff group

The operating gas is allocated to the variable charge to each tariff group proportionally to the volume (see Table 44).

Table 44. Allocation of the operating gas cost to each tariff group. Year 2020

Operating gas cost (€) (A)	**3.375.447**
Demand supply from local networks (kWh)	**376.429.520**
Unit cost (€/kWh) (C) = (A)/(B)	**0,0007**

Tariff	Customer size (kWh)	Volume (kWh) (D)	Operating gas revenue to be recovered to each tariff group (€) (C) * (D)
RL.1	C ≤ 5.000	10.719.892	96.125
RL.2	5.000 < C ≤ 15.000	20.794.338	186.463
RL.3	15.000 < C ≤ 50.000	6.675.992	59.864
RL.4	50.000 < C ≤ 300.000	6.088.277	54.594
RL.5	300.000 < C ≤ 1.500.000	12.641.485	113.356
RL.6	1.500.000 < C ≤ 5.000.000	7.890.278	70.752
RL.7	5.000.000 < C ≤ 15.000.000	9.987.800	89.561
RL.8	15.000.000 < C ≤ 50.000.000	18.074.325	162.073
RL.9	50.000.000 < C ≤ 150.000.000	25.985.200	233.010
RL.10	150.000.000 < C ≤ 500.000.000	51.306.840	460.069
RL.11	C > 500.000.000	206.265.093	1.849.581
Total		**376.429.520**	**3.375.447**

Source: CNMC

VIII. Fixed and variable allowed revenues to be recovered from the fixed and variable terms of each tariff group

The allowed revenues to be recovered through the fixed term of each tariff group results from adding the fixed remuneration where the cost driver is capacity that have to be recovered through the fixed term and the fixed remuneration where the cost drive is the number of supply points. The remuneration that has to be recovered through the variable term of each tariff group results from the aggregation of the fixed remuneration where the cost driver is capacity that has to be recovered through the variable term and the operating gas revenue to be recovered of each tariff group (see Table 45).

Table 45. Allocation of allowed revenues to the fixed and variable terms of each tariff group. 2020 year

Tariff	Customer size (kWh)	Allowed revenues to be recovered through the fixed term of each tariff group (€)			Allowed revenues to be recovered through the variable term of each tariff group (€)		
		Capacity cost driver	Customer cost driver	Total	Fixed remuneration to be recovered through the variable term of each tariff group	Operating gas allowed revenues to be recovered	Total
RL.1	C ≤ 5.000	166.117.266	119.243.174	285.360.440	27.128.007	96.125	27.224.132
RL.2	5.000 < C ≤ 15.000	357.987.959	74.681.347	432.669.306	52.622.090	186.463	52.808.553
RL.3	15.000 < C ≤ 50.000	114.884.164	8.584.631	123.468.795	16.887.350	59.864	16.947.213
RL.4	50.000 < C ≤ 300.000	92.161.136	1.393.640	93.554.776	15.274.247	54.594	15.328.840
RL.5	300.000 < C ≤ 1.500.000	188.406.279	572.660	188.978.940	30.751.143	113.356	30.864.499
RL.6	1.500.000 < C ≤ 5.000.000	86.605.189	83.663	86.688.852	15.037.255	70.752	15.108.007
RL.7	5.000.000 < C ≤ 15.000.000	50.889.915	29.427	50.919.342	11.942.409	89.561	12.031.970
RL.8	15.000.000 < C ≤ 50.000.000	37.775.120	17.451	37.792.571	14.474.381	162.073	14.636.453
RL.9	50.000.000 < C ≤ 150.000.000	17.753.334	7.794	17.761.128	14.249.910	233.010	14.482.919
RL.10	150.000.000 < C ≤ 500.000.000	24.332.766	3.182	24.335.948	21.532.941	460.069	21.993.010
RL.11	C > 500.000.000	77.523.841	334	77.524.174	13.066.778	1.849.581	14.916.359
Total		**1.214.436.969**	**204.617.304**	**1.419.054.273**	**232.966.510**	**3.375.447**	**236.341.956**

Source: CNMC

5.6 Determination of tariffs

Once the fixed and variable allowed revenues have been allocated to each design pressure level and tariff group based on cost drivers' variables (contracted capacity, number of supply points and energy consumed), fixed and variables tariffs terms for each tariff group are obtained as a result of dividing the allocated fixed or variable cost by the forecast of the fixed or variable invoicing variable, respectively.

Table 46 shows the fixed and variable terms that results from the Circular methodology for year 2020.

Table 46. Fixed and variable terms of the distribution tariffs by pressure level. Year 2020

I. Allowed revenues

Tariff	Customer size (kWh)	Allowed revenues to be recovered through the fixed term of each tariff group (€) (A)	Allowed revenues to be recovered through the variable term of each tariff group (€) (B)
RL.1	C ≤ 5.000	285.360.440	27.224.132
RL.2	5.000 < C ≤ 15.000	432.669.306	52.808.553
RL.3	15.000 < C ≤ 50.000	123.468.795	16.947.213
RL.4	50.000 < C ≤ 300.000	93.554.776	15.328.840
RL.5	300.000 < C ≤ 1.500.000	188.978.940	30.864.499
RL.6	1.500.000 < C ≤ 5.000.000	86.688.852	15.108.007
RL.7	5.000.000 < C ≤ 15.000.000	50.919.342	12.031.970
RL.8	15.000.000 < C ≤ 50.000.000	37.792.571	14.636.453
RL.9	50.000.000 < C ≤ 150.000.000	17.761.128	14.482.919
RL.10	150.000.000 < C ≤ 500.000.000	24.335.948	21.993.010
RL.11	C > 500.000.000	77.524.174	14.916.359
Total		**1.419.054.273**	**236.341.956**

II. Cost drivers' variables

Tariff	Customer size (kWh)	Invoiced capacity (kWh/día) (1) (C)	Volume (kWh) (D)
RL.1	C ≤ 5.000	68.437.845	10.719.892.272
RL.2	5.000 < C ≤ 15.000	147.382.237	20.794.338.250
RL.3	15.000 < C ≤ 50.000	47.368.017	6.675.992.258
RL.4	50.000 < C ≤ 300.000	38.383.035	6.088.276.957
RL.5	300.000 < C ≤ 1.500.000	80.520.107	12.641.485.124
RL.6	1.500.000 < C ≤ 5.000.000	46.418.898	7.890.278.010
RL.7	5.000.000 < C ≤ 15.000.000	57.409.990	9.987.799.509
RL.8	15.000.000 < C ≤ 50.000.000	85.807.711	18.074.324.767
RL.9	50.000.000 < C ≤ 150.000.000	104.217.498	25.985.199.788
RL.10	150.000.000 < C ≤ 500.000.000	187.565.705	51.306.840.123
RL.11	C > 500.000.000	880.112.913	206.265.092.664
Total		**1.743.623.955**	**376.429.519.721**

III. Fixed and variable term tariff

Tariff	Customer size (kWh)	Fixed variable term (€/kWh/day and year) (C) / (A)	Variable fixed term (€/kWh) (D) / (B)
RL.1	C ≤ 5.000	4,170	0,002540
RL.2	5.000 < C ≤ 15.000	2,936	0,002540
RL.3	15.000 < C ≤ 50.000	2,607	0,002539
RL.4	50.000 < C ≤ 300.000	2,437	0,002518
RL.5	300.000 < C ≤ 1.500.000	2,347	0,002442
RL.6	1.500.000 < C ≤ 5.000.000	1,868	0,001915
RL.7	5.000.000 < C ≤ 15.000.000	0,887	0,001205
RL.8	15.000.000 < C ≤ 50.000.000	0,440	0,000810
RL.9	50.000.000 < C ≤ 150.000.000	0,170	0,000557
RL.10	150.000.000 < C ≤ 500.000.000	0,130	0,000429
RL.11	C > 500.000.000	0,088	0,000072

Fuente: CNMC

(1) Invoiced capacity. The costumer's capacity for supplies without metering equipment has been estimated on the basis of the load curves for the year 2018 (see Annex I).

For customers without the obligation to have an equipment capable of measuring the maximum flow demanded in a given period it is necessary to replace the fixed term by capacity by a fixed term per customer. In line with the observations of agents and MITECO, the Circular establishes that customers whose annual consumption exceeds 300,000 kWh must have a metering equipment capable of measuring the maximum demanded capacity in the billing period. However, a fixed charge by customer will also be published for the RL.5 and RL.6 tariff groups, in order to enable their billing as long as the metering equipment is not changed.

For these purposes, it has been proceeded as follows:

1º Determination of the initial fixed charge for each customer

The fixed term for each customer of each tariff group is calculated as the ratio between the remuneration that the fixed term has to recover and the number of supplies in the corresponding tariff group (see Table 47).

Table 47. Initial fixed tariff term for each customer applicable to customers without obligation to have remote metering. Year 2020

Tariff	Customer size (kWh)	Number of supplies (A)	Capacity (kWh/día) (1)	Volume (kWh)	Revenue to be recovered through the fixed term for each tariff group (€) (B)	Fixed term for each customer (€/customer and month) (B) / (A) / 12
RL.1	C ≤ 5.000	4.640.370	68.437.845	10.719.892	285.360.440	5,12
RL.2	5.000 < C ≤ 15.000	2.906.238	147.382.237	20.794.338	432.669.306	12,41
RL.3	15.000 < C ≤ 50.000	334.079	47.368.017	6.675.992	123.468.795	30,80
RL.4	50.000 < C ≤ 300.000	54.243	38.383.035	6.088.277	93.554.776	143,73
RL.5	300.000 < C ≤ 1.500.000	22.296	80.520.107	12.641.485	188.978.940	706,33
RL.6	1.500.000 < C ≤ 5.000.000	3.276	46.418.898	7.890.278	86.688.852	2.205,31

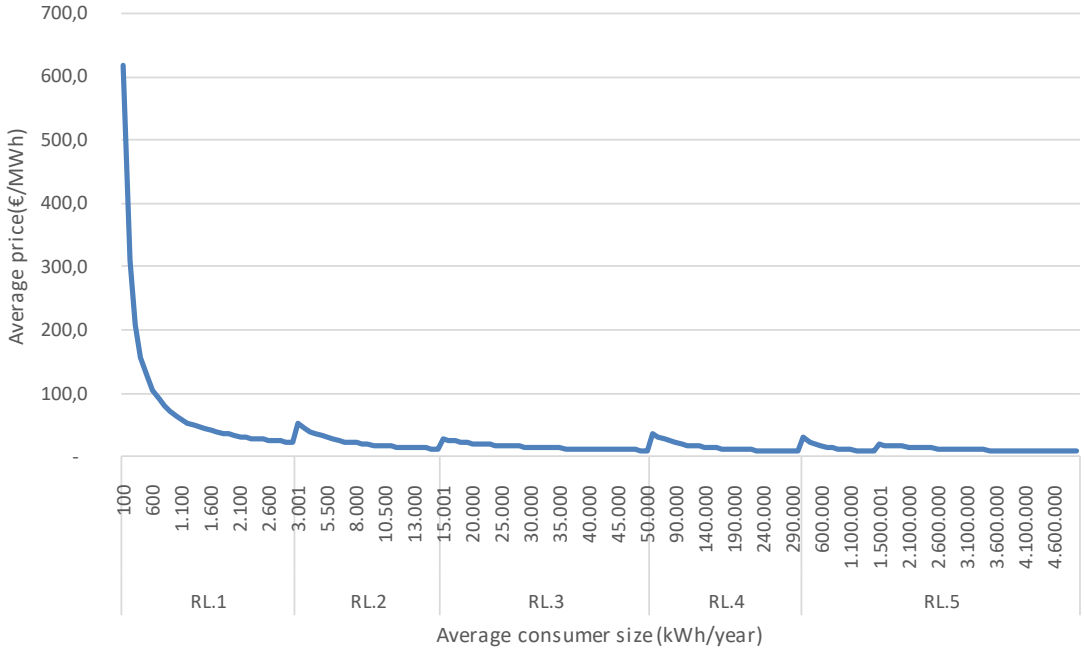
Source: CNMC

(1) Invoiced capacity. The customer's capacity for supplies without metering equipment has been estimated on the basis of the load curves for the year 2017 (see Annex I).

The conversion of a fixed term by capacity into a fixed term for each customer results in relevant discontinuities, as a result of considering the average load factor of each tariff group[28] (see Illustration 9).

[28] This problem has already been highlighted by the agents in their comments to the 2014 CNMC Circular proposal.

Illustration 9. Average price of the local networks tariff based on average consumer size



Source: CNMC

2º Determination of the final term per customer

In order to minimize the discontinuities resulting from the lack of information on load factors, the fixed term of capacity of the smaller customer of a tariff group will be the result of considering the total billing (fixed and variable) of the largest customer of the immediately previous tariff group (see Table 48).

Table 48. Determination of the final fixed term per customer applicable to tariff for customers without the obligation of having a metering equipment capable of measuring the maximum daily capacity. Year 2020

			Initial Billing terms		Billing for access to local networks			Final fixed billing terms
Tariff	Customer size (kWh)	Consumption (kWh) for tariff design purposes (A)	Fixed term by customer (€/customer and month) (B)	Variable term (€/kWh) (C)	Fixed term (€) (D) = (B) * 12	Variable term (€) (E) = (A)*(C)	Total billed (€) (F) = ((D) + (E)	Fixed term by customer (€/customer and month) (F) from previous group /12
RL.1	C ≤ 5.000	5.000	5,12	0,002540	61,50	12,70	74,19	n.a.
RL.2	5.000 < C ≤ 15.000	15.000	12,41	0,002540	148,88	38,09	186,97	6,18
RL.3	15.000 < C ≤ 50.000	50.000	30,80	0,002539	369,58	126,93	496,51	15,58
RL.4	50.000 < C ≤ 300.000	300.000	143,73	0,002518	1.724,72	755,33	2.480,05	41,38
RL.5	300.000 < C ≤ 1.500.000	1.500.000	706,33	0,002442	8.475,93	3.662,29	12.138,22	206,67
RL.6	1.500.000 < C ≤ 5.000.000	1.500.000	2.205,31	0,001915	26.463,73	2.872,14	29.335,88	1.011,52

Source: CNMC

3º Determination of the final variable term per customer

The remuneration allocated to each tariff group not recovered through the fixed term is recovered through the variable charge (see Table 49).

Table 49. Determination of the final variable term applicable to tariffs for customers without the obligation of having metering equipment capable of recording the maximum daily capacity. Year 2020

I. Revenues recovered through the fixed term

Tariff	Customer size (kWh)	Number of supplies (A)	Volume (MWh) (B)	Fixed term by customer (€/customer and month) (C)	Customer based billing (€) (D) = (A) * (C) *12
RL.1	C ≤ 5.000	4.640.370	10.719.892	n.a.	n.a.
RL.2	5.000 < C ≤ 15.000	2.906.238	20.794.338	6,18	215.622.946
RL.3	15.000 < C ≤ 50.000	334.079	6.675.992	15,58	62.462.660
RL.4	50.000 < C ≤ 300.000	54.243	6.088.277	41,38	26.932.204
RL.5	300.000 < C ≤ 1.500.000	22.296	12.641.485	206,67	55.295.015
RL.6	1.500.000 < C ≤ 5.000.000	3.276	7.890.278	1.011,52	39.761.906

II. Variable term determination

Tariff	Customer size (kWh)	Remuneration to be recovered by the tariff group (E)	Customer based billing (€) (D)	Remuneration to be recovered by the variable term (€) (F) = (E) - (D)	Variable term (€/kWh) (F)/(B)
RL.1	C ≤ 5.000	n.a.	n.a.	n.a.	n.a.
RL.2	5.000 < C ≤ 15.000	485.477.859	215.622.946	269.854.913	0,012977
RL.3	15.000 < C ≤ 50.000	140.416.008	62.462.660	77.953.348	0,011677
RL.4	50.000 < C ≤ 300.000	108.883.616	26.932.204	81.951.412	0,013461
RL.5	300.000 < C ≤ 1.500.000	219.843.439	55.295.015	164.548.424	0,013017
RL.6	1.500.000 < C ≤ 5.000.000	101.796.860	39.761.906	62.034.953	0,007862

Source: CNMC

4º Determination of the fixed and variable terms applicable to tariff group RL.1

The fixed and variable terms of tariff group RL.1 result of setting the same relationship between the fixed and variable term that resulting relationship for tariff group RL.2 (see Table 50).

Table 50. 4º Determination of the fixed and variable terms for tariff group RL.1. Year 2020

I. Fixed / variable tariff structure RL.2

	RL.2 Total billing (€)	% over total billing (A)
Fixed charge	215.622.946	44,4%
Variable charge	269.854.913	55,6%
Total	**485.477.859**	**100,0%**

II. Determination of RL.1 tariff charges

Revenue assigned to RL.1 tariff (€) (B)	**312.584.572**

	Fixed term	Variable term
Revenue to be recover (€) (C) = (A) * (B)	**138.833.121**	**173.751.451**

	Number of supplies	Volume (MWh)
Billing variables (D)	**4.640.370**	**10.719.892**

	Fixed term by customer (€/customer and month) (C) / (D) /12	Variable term (€/kWh) (C) / (D)
RL.1 tariff	**2,49**	**0,016208**

Source: CNMC

Table 51 shows the fixed and variable terms that result from the circular allocation methodology for year 2020.

Table 51. Fixed and variable term for local networks tariffs. Year 2020

Tariff	Customer size (kWh)	Customers whitout metering equipment for the registration of the maximum demanded capacity		Customers with metering equipment for the registration of the maximum demanded capacity		Average Billing (€/kWh)	% of the fix term
		Fix term by customer (€/customer and month)	Variable term (€/kWh)	Fix term by capacity (€/kWh/day per year)	Variable term (€/kWh)		
RL.1	C ≤ 5.000	2,493	0,016208	4,170	0,002540	0,02916	44,4%
RL.2	5.000 < C ≤ 15.000	6,183	0,012977	2,936	0,002540	0,02335	44,4%
RL.3	15.000 < C ≤ 50.000	15,581	0,011677	2,607	0,002539	0,02103	44,5%
RL.4	50.000 < C ≤ 300.000	41,375	0,013461	2,437	0,002518	0,01788	24,7%
RL.5	300.000 < C ≤ 1.500.000	206,671	0,013017	2,347	0,002442	0,01739	25,2%
RL.6	1.500.000 < C ≤ 5.000.000	1.011,518	0,007862	1,868	0,001915	0,01290	39,1%
RL.7	5.000.000 < C ≤ 15.000.000			0,887	0,001205	0,00630	80,9%
RL.8	15.000.000 < C ≤ 50.000.000			0,440	0,000810	0,00290	72,1%
RL.9	50.000.000 < C ≤ 150.000.000			0,170	0,000557	0,00124	55,1%
RL.10	150.000.000 < C ≤ 500.000.000			0,130	0,000429	0,00090	52,5%
RL.11	C > 500.000.000			0,088	0,000072	0,00045	83,9%

Source: CNMC

5.7 Analysis of local networks tariff variation

Current access tariffs include both transmission and distribution activities consisting of a capacity reserve charge and a conduction charge that include the transmission and distribution exits, without being the corresponding allocation methodology public. Consequently, it is not possible to analyze the variation of the local networks tariff that results from the methodology of the circular with respect to the conduction charge of the current transmission and distribution tariff.

However, for illustrative purposes only, section VIII.2 compares the sum of transmission and local networks tariff, rescaled to recover all the costs associated with the charges, with respect to the conduction charge of the current transmission and distribution tariff.

5.8 Expected evolution of local network tariff during the regulatory period

Table 52 shows the evolution of the local network allowed revenues, the expected billing variables, the result of the allocation and the billing tariffs that result from applying the Circular's methodology by the end of the regulatory period.

Table 52. Evolution of the local network tariffs during the regulatory period

1. Forecasted evoluion of local networks revenue

Local network revenues (€)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
Local influence network revenues	165.775.254	152.471.407	140.979.509	134.508.088	128.061.156	121.460.039	114.966.018
Secondary transmission network revenues	74.540.643	73.766.106	69.289.527	65.696.699	62.121.729	58.470.682	54.872.000
Distribution network revenues	1.415.080.333	1.390.859.045	1.346.836.397	1.297.407.175	1.258.232.146	1.206.977.001	1.166.055.744
Total	**1.655.396.229**	**1.617.096.558**	**1.557.105.433**	**1.497.611.962**	**1.448.415.031**	**1.386.907.723**	**1.335.893.762**

2. Forecasted evolution of the billing variables

Number of customers

Tariff	Customer size (kWh)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
RL.1	C ≤ 5.000	4.640.316	4.655.717	4.676.850	4.694.719	4.708.447	4.717.524	4.720.314
RL.2	5.000 < C ≤ 15.000	2.906.214	2.915.558	2.928.164	2.938.854	2.947.030	2.952.422	2.954.022
RL.3	15.000 < C ≤ 50.000	334.015	335.089	336.538	337.767	338.706	339.326	339.510
RL.4	50.000 < C ≤ 300.000	53.942	54.471	55.149	55.754	56.217	56.517	56.589
RL.5	300.000 < C ≤ 1.500.000	21.535	21.819	22.181	22.507	22.757	22.918	22.956
RL.6	1.500.000 < C ≤ 5.000.000	2.504	2.537	2.580	2.617	2.646	2.665	2.670
RL.7	5.000.000 < C ≤ 15.000.000	434	439	445	451	455	458	459
RL.8	15.000.000 < C ≤ 50.000.000	105	106	107	108	109	109	110
RL.9	50.000.000 < C ≤ 150.000.000	8	8	8	8	8	8	8
RL.10	150.000.000 < C ≤ 500.000.000	-	-	-	-	-	-	-
RL.11	C > 500.000.000	-	-	-	-	-	-	-
Total		**7.959.073**	**7.985.744**	**8.022.022**	**8.052.785**	**8.076.376**	**8.091.947**	**8.096.638**

Contracted capacity (MWh/día)

Tariff	Customer size (kWh)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
RL.1	C ≤ 5.000	68.380.463	67.611.404	66.584.520	65.499.087	64.346.651	63.124.953	61.817.727
RL.2	5.000 < C ≤ 15.000	147.367.535	145.696.327	143.455.704	141.095.998	138.596.207	135.953.008	133.131.674
RL.3	15.000 < C ≤ 50.000	47.288.764	46.752.490	46.033.496	45.276.291	44.474.133	43.625.957	42.720.619
RL.4	50.000 < C ≤ 300.000	37.915.318	37.790.250	37.583.528	37.300.289	36.890.084	36.343.408	35.622.452
RL.5	300.000 < C ≤ 1.500.000	77.399.241	77.278.534	77.020.625	76.587.173	75.854.617	74.799.126	73.330.376
RL.6	1.500.000 < C ≤ 5.000.000	35.069.815	35.018.721	34.907.021	34.716.076	34.390.012	33.917.960	33.259.012
RL.7	5.000.000 < C ≤ 15.000.000	18.948.752	19.025.099	19.111.606	19.164.099	19.156.058	19.080.664	18.916.431
RL.8	15.000.000 < C ≤ 50.000.000	11.667.083	11.776.143	11.915.824	12.039.975	12.134.755	12.196.002	12.210.918
RL.9	50.000.000 < C ≤ 150.000.000	1.913.109	1.930.834	1.953.356	1.973.338	1.988.543	1.998.369	2.000.723
RL.10	150.000.000 < C ≤ 500.000.000	-	-	-	-	-	-	-
RL.11	C > 500.000.000	-	-	-	-	-	-	-
Total		**445.950.079**	**442.879.802**	**438.565.680**	**433.652.326**	**427.831.058**	**421.039.447**	**413.009.931**

Volume (MWh)

Tariff	Customer size (kWh)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
RL.1	C ≤ 5.000	10.719.884	10.599.186	10.437.898	10.267.453	10.086.549	9.894.886	9.689.911
RL.2	5.000 < C ≤ 15.000	20.794.052	20.558.025	20.241.360	19.907.927	19.554.799	19.181.600	18.783.427
RL.3	15.000 < C ≤ 50.000	6.672.603	6.596.864	6.495.249	6.388.254	6.274.939	6.155.183	6.027.413
RL.4	50.000 < C ≤ 300.000	6.023.210	6.002.731	5.969.246	5.923.693	5.858.150	5.771.090	5.656.575
RL.5	300.000 < C ≤ 1.500.000	12.022.042	12.003.458	11.963.825	11.896.896	11.783.437	11.619.655	11.391.520
RL.6	1.500.000 < C ≤ 5.000.000	5.425.819	5.417.770	5.400.387	5.370.711	5.320.065	5.246.722	5.144.351
RL.7	5.000.000 < C ≤ 15.000.000	3.336.388	3.352.007	3.370.362	3.382.903	3.385.026	3.375.490	3.350.521
RL.8	15.000.000 < C ≤ 50.000.000	2.512.454	2.535.934	2.566.000	2.592.722	2.613.121	2.626.302	2.629.511
RL.9	50.000.000 < C ≤ 150.000.000	535.244	540.204	546.505	552.095	556.349	559.098	559.757
RL.10	150.000.000 < C ≤ 500.000.000	-	-	-	-	-	-	-
RL.11	C > 500.000.000	-	-	-	-	-	-	-
Total		**68.041.697**	**67.606.178**	**66.990.832**	**66.282.654**	**65.432.435**	**64.430.027**	**63.232.985**

3. Revenues to be recover by each tariff group

Tariff	Customer size (kWh)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
RL.1	C ≤ 5.000	166.117.266	162.556.742	156.545.692	150.022.831	144.877.767	138.536.563	133.616.087
RL.2	5.000 < C ≤ 15.000	357.987.959	350.281.809	337.263.807	323.162.536	312.040.873	298.357.305	287.747.680
RL.3	15.000 < C ≤ 50.000	114.884.164	112.411.074	108.233.279	103.707.864	100.138.646	95.747.282	92.342.403
RL.4	50.000 < C ≤ 300.000	92.161.136	90.909.861	88.410.989	85.481.130	83.102.995	79.802.379	77.035.781
RL.5	300.000 < C ≤ 1.500.000	188.406.279	186.168.039	181.432.917	175.752.346	171.105.544	164.456.822	158.785.762
RL.6	1.500.000 < C ≤ 5.000.000	86.605.189	85.566.985	83.378.842	80.759.683	78.618.978	75.562.497	72.959.877
RL.7	5.000.000 < C ≤ 15.000.000	50.889.915	50.513.444	49.538.578	48.325.438	47.420.151	45.985.039	44.848.864
RL.8	15.000.000 < C ≤ 50.000.000	37.775.120	37.587.621	36.970.191	36.195.017	35.666.719	34.765.080	34.115.013
RL.9	50.000.000 < C ≤ 150.000.000	17.753.334	17.523.094	17.017.068	16.471.949	16.041.719	15.468.548	15.038.183
RL.10	150.000.000 < C ≤ 500.000.000	24.332.766	23.839.733	22.827.509	21.903.438	21.112.579	20.210.789	19.574.991
RL.11	C > 500.000.000	77.523.841	72.810.752	67.717.653	64.484.897	61.275.591	57.914.805	54.457.160
Total		**1.214.436.969**	**1.190.169.153**	**1.149.336.524**	**1.106.267.130**	**1.071.401.561**	**1.026.807.109**	**990.521.800**

Revenues to be recover by the variable charge

Tariff	Customer size (kWh)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
RL.1	C ≤ 5.000	27.224.132	26.037.262	24.524.859	23.340.854	22.284.893	21.145.109	20.148.648
RL.2	5.000 < C ≤ 15.000	52.808.553	50.501.624	47.559.177	45.256.525	43.203.849	40.990.678	39.057.287
RL.3	15.000 < C ≤ 50.000	16.947.213	16.206.853	15.262.554	14.523.596	13.864.853	13.154.609	12.534.145
RL.4	50.000 < C ≤ 300.000	15.328.840	14.776.330	14.053.609	13.493.204	12.968.448	12.356.978	11.784.992
RL.5	300.000 < C ≤ 1.500.000	30.864.499	29.800.940	28.402.264	27.323.369	26.298.630	25.081.755	23.924.429
RL.6	1.500.000 < C ≤ 5.000.000	15.108.007	14.560.369	13.852.675	13.318.196	12.808.600	12.211.503	11.643.072
RL.7	5.000.000 < C ≤ 15.000.000	12.031.970	11.586.030	11.036.260	10.660.507	10.303.174	9.889.713	9.500.582
RL.8	15.000.000 < C ≤ 50.000.000	14.636.453	14.004.188	13.260.109	12.784.503	12.326.522	11.823.389	11.349.541
RL.9	50.000.000 < C ≤ 150.000.000	14.482.919	13.681.521	12.773.653	12.203.033	11.639.810	11.059.438	10.501.840
RL.10	150.000.000 < C ≤ 500.000.000	21.993.010	20.678.115	19.230.160	18.330.779	17.440.144	16.537.037	15.667.858
RL.11	C > 500.000.000	14.916.359	13.979.212	13.064.198	12.508.226	11.937.124	11.324.358	10.650.637
Total		**236.341.956**	**211.833.231**	**199.955.319**	**191.234.565**	**183.138.922**	**174.250.207**	**166.112.393**

4. Local netwoks tariffs

Customer-based tariff (€/customer and month)

Tariff	Customer size (kWh)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
RL.1	C ≤ 5.000	2,493	2,436	2,342	2,248	2,174	2,084	2,015
RL.2	5.000 < C ≤ 15.000	6,183	6,031	5,790	5,551	5,361	5,134	4,960
RL.3	15.000 < C ≤ 50.000	15,581	15,180	14,557	13,945	13,462	12,889	12,451
RL.4	50.000 < C ≤ 300.000	41,375	40,279	38,603	36,990	35,710	34,206	33,055
RL.5	300.000 < C ≤ 1.500.000	206,671	201,277	193,079	185,297	179,082	171,705	165,996
RL.6	1.500.000 < C ≤ 5.000.000	1.011,518	983,838	942,259	902,945	871,590	834,884	806,629

Capacity-based tariff (€/MWh/day)

Tariff	Customer size (kWh)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
RL.7	5.000.000 < C ≤ 15.000.000	88,694	86,938	84,050	81,101	79,053	76,498	74,853
RL.8	15.000.000 < C ≤ 50.000.000	44,043	43,118	41,630	40,167	39,178	37,970	37,238
RL.9	50.000.000 < C ≤ 150.000.000	17,042	16,551	15,774	15,049	14,513	13,926	13,552
RL.10	150.000.000 < C ≤ 500.000.000	12,975	12,565	11,872	11,286	10,843	10,421	10,314
RL.11	C > 500.000.000	8,808	8,385	7,914	7,704	7,676	7,921	9,544

Commodity-based charge (€/MWh)

Tariff	Customer size (kWh)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
RL.1	C ≤ 5.000	16,208	16,012	15,625	15,195	14,904	14,493	14,232
RL.2	5.000 < C ≤ 15.000	12,977	12,801	12,470	12,111	11,864	11,526	11,312
RL.3	15.000 < C ≤ 50.000	11,677	11,515	11,212	10,883	10,656	10,347	10,149
RL.4	50.000 < C ≤ 300.000	13,461	13,279	12,941	12,583	12,337	11,995	11,777
RL.5	300.000 < C ≤ 1.500.000	13,017	12,821	12,469	12,097	11,839	11,492	11,269
RL.6	1.500.000 < C ≤ 5.000.000	7,862	7,705	7,444	7,175	6,974	6,720	6,534
RL.7	5.000.000 < C ≤ 15.000.000	1,205	1,145	1,074	1,025	0,984	0,942	0,907
RL.8	15.000.000 < C ≤ 50.000.000	0,810	0,762	0,708	0,673	0,642	0,612	0,588
RL.9	50.000.000 < C ≤ 150.000.000	0,557	0,518	0,474	0,447	0,422	0,399	0,379
RL.10	150.000.000 < C ≤ 500.000.000	0,429	0,398	0,365	0,345	0,327	0,311	0,299
RL.11	C > 500.000.000	0,072	0,069	0,065	0,064	0,064	0,066	0,073

5. Evolution of local netwoks tariffs

Customer-based tariff (€/customer and month)

Peaje	Tamaño (kWh)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
RL.1	C ≤ 5.000		-2,3%	-3,8%	-4,0%	-3,3%	-4,2%	-3,3%
RL.2	5.000 < C ≤ 15.000		-2,5%	-4,0%	-4,1%	-3,4%	-4,2%	-3,4%
RL.3	15.000 < C ≤ 50.000		-2,6%	-4,1%	-4,2%	-3,5%	-4,3%	-3,4%
RL.4	50.000 < C ≤ 300.000		-2,7%	-4,2%	-4,2%	-3,5%	-4,2%	-3,4%
RL.5	300.000 < C ≤ 1.500.000		-2,6%	-4,1%	-4,0%	-3,4%	-4,1%	-3,3%
RL.6	1.500.000 < C ≤ 5.000.000		-2,7%	-4,2%	-4,2%	-3,5%	-4,2%	-3,4%

Capacity-based tariff (€/MWh/day)

Peaje	Tamaño (kWh)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
RL.7	5.000.000 < C ≤ 15.000.000		-2,0%	-3,3%	-3,5%	-2,5%	-3,2%	-2,2%
RL.8	15.000.000 < C ≤ 50.000.000		-2,1%	-3,5%	-3,5%	-2,5%	-3,1%	-1,9%
RL.9	50.000.000 < C ≤ 150.000.000		-2,9%	-4,7%	-4,6%	-3,6%	-4,0%	-2,7%
RL.10	150.000.000 < C ≤ 500.000.000		-3,2%	-5,5%	-4,9%	-3,9%	-3,9%	-1,0%
RL.11	C > 500.000.000		-4,8%	-5,6%	-2,6%	-0,4%	3,2%	20,5%

Commodity-based charge (€/MWh)

Peaje	Tamaño (kWh)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
RL.1	C ≤ 5.000		-1,2%	-2,4%	-2,8%	-1,9%	-2,8%	-1,8%
RL.2	5.000 < C ≤ 15.000		-1,4%	-2,6%	-2,9%	-2,0%	-2,8%	-1,9%
RL.3	15.000 < C ≤ 50.000		-1,4%	-2,6%	-2,9%	-2,1%	-2,9%	-1,9%
RL.4	50.000 < C ≤ 300.000		-1,3%	-2,5%	-2,8%	-2,0%	-2,8%	-1,8%
RL.5	300.000 < C ≤ 1.500.000		-1,5%	-2,7%	-3,0%	-2,1%	-2,9%	-1,9%
RL.6	1.500.000 < C ≤ 5.000.000		-2,0%	-3,4%	-3,6%	-2,8%	-3,6%	-2,8%
RL.7	5.000.000 < C ≤ 15.000.000		-5,0%	-6,2%	-4,5%	-4,0%	-4,3%	-3,7%
RL.8	15.000.000 < C ≤ 50.000.000		-5,9%	-7,1%	-5,0%	-4,6%	-4,6%	-4,1%
RL.9	50.000.000 < C ≤ 150.000.000		-7,1%	-8,4%	-5,9%	-5,6%	-5,5%	-5,0%
RL.10	150.000.000 < C ≤ 500.000.000		-7,1%	-8,3%	-5,6%	-5,2%	-4,8%	-3,8%
RL.11	C > 500.000.000		-5,0%	-5,2%	-2,3%	-0,1%	3,2%	11,9%

Fuente: CNMC

6. Allocation of allowed revenues for regasification activity

Tariffs shall reflect the gas system's costs for the using the infrastructures in supplying gas. Considering that the regasification infrastructure covers the provision of several services (ship unloading, LNG storage in tanks, regasification and truck loadings), the cost of each items of infrastructure is allocated to the provided services, for the purposes of determining the corresponding tariffs.

In general, fixed costs related to the provision of a service are recovered through the fixed term of the tariff while the variable term shall recover the variable costs

of providing the service. In addition, in order that tariffs provide an appropriate price signal to the facility users, it is necessary to identify the cost driver for each of the services provided.

The following sections describes the procedure for allocating the forecasted allowed revenues for 2020 for the regasification activity to the corresponding tariffs and charges, as well as forecasted evolution during the regulatory period.

6.1 Allowed revenues included in the tariff calculation

The calculation of regasification activity tariffs includes the forecasted allowed revenues for the activity, amendments of regasification allowed revenues of previous years not provided in the calculation of tariffs and charges for the year concerned, other incomes or costs subject to settlement procedure corresponding to regasification activity (such as imbalances incomes from LNG facilities) and income deviations of previous periods.

Table 53 shows the allowed revenues for regasification forecasted for 2020, in accordance with the methodology set out in Annex XI of Law 18/2014 of 15th of October 2013 approving urgent measures for growth, competitiveness and efficiency.

Other income or cost that can be credited to regasification activities (such as imbalances incomes from LNG facilities) have not been considered due to the fact that they have not been forecasted. However, for informational purposes, the imbalances incomes recorded in 2018 amounted to approximately 0.4 million € (0.1% of allowed revenues for regasification activity).

In addition, it is stated that, in accordance with the settlement system, the revenues from a year invoiced by the end of the month of February of the following year are considered in the settlement procedure of the year, whereas the revenues invoiced in subsequent months are considered in the settlement procedure of the following year. Consequently, the difference between the expected and actual revenue for year n-2 shall be taken into account in the determination of the costs to be recovered through tariffs and charges of regasification activity. However, as year 2020 is the first year for which tariffs and charges will be resulting from the methodology, it is not appropriate to consider deviations from previous years.

As a result, for year 2020, the forecasted allowed revenues for regasification activity amounts to EUR 450.3 M€ million, of which 34.3 % correspond to allowed revenues for investment costs (including allowed revenues for the LNG needed for the minimum required level of tanks), 29.0 % to allowed revenues for fixed operating and maintenance costs, 9.2 % to the remuneration for variable operation and maintenance costs and 19.5% to allowed revenues for continuity of supply. In addition, the allowed revenues for Musel and the impact of the first additional provision of Order ETU/1983/2017 (see Table 53) are included.

Table 53.Forecasted allowed revenues for regasification activity for 2020

Regasification allowed revenue (€)	Forecasted 2020	% over total
Availability remuneration	**326.551.851**	**72,5%**
Investment costs	152.677.365	33,9%
Fixed Operational costs	130.717.724	29,0%
Variable Operational costs	41.247.666	9,2%
Remuneration for LNG needed for the minimum required level of tanks	1.909.096	0,4%
Continuity of Supply remuneration	**88.006.664**	**19,5%**
Musel Remuneration	**23.605.525**	**5,2%**
DA1ª Order ETU/1283/2017	**12.176.578**	**2,7%**
Unbalance incomes	**n.a.**	**n.a.**
Allowed revenues of previous years	**n.a.**	**n.a.**
Total	**450.340.618**	**100,0%**

Source: CNMC

6.2 Definition of the services provided in the facility

The LNG facilities provides the following services:

- **Ship unloading**: The unloading service includes the right to use the facilities needed for unloading LNG from a vessel to an LNG facility.
- **LNG storage**: The LNG storage service includes the right to use the facilities needed for the storage of LNG at LNG facilities.
- **Regasification**: The regasification service includes the right to use the facilities needed for the vaporizing LNG at LNG facilities.
- **Truck loading**: The truck loading service includes the right to use the facilities needed for loading LNG to a tanker truck from the LNG facilities.
- **LNG ship reloading**: This service includes the right to use the needed facilities to load the LNG from an LNG facility to an LNG ship.
- **LNG transshipment:** this service includes the right to use the facilities of the LNG facility needed to transfer LNG from one vessel to another vessel.

- **Cooling down**[29]: this service includes the right to use the facilities needed to put under the appropriate safety conditions of an LNG carrier without cargo to receive LNG from the regasification plants and/or gassing up of the ship. The loaded volume associated with the cooling down service may not exceed the heel of the vessel. The heel is the minimum amount of LNG to be stored in the tanks of an LNG carrier to maintain the operating temperature. This value will depend on the construction characteristics of the tanks and its value may not exceed 2.5% of the total storage capacity of the LNG carrier.
- **Virtual liquefaction**: this service allows a virtual transformation of natural gas from the point of exit from the transmission network to a regasification plant as LNG. LNG shall be recognised in LNG facilities.

In addition, the LNG facilities will offer some of the previous services on an aggregated basis:

- **Ship unloading, LNG storage and regasification** includes the right to use the facilities needed for unloading LNG from a vessel to an LNG facility, storing all or part of the LNG unloaded until it is all vaporized, and the corresponding regasification service at a constant sent out, according to the conditions established in Circular 8/2019, of 12th of December of the CNMC establishing the methodology and access conditions and capacity allocation mechanism of the natural gas system.
- **LNG storage and regasification service:** provides the right to use the facilities needed for storing LNG until it is all vaporized and the corresponding regasification service at a constant sent out, according to the conditions established in Circular 8/2019, of 12th of December of the CNMC establishing the methodology and access conditions and capacity allocation mechanism of the natural gas system.

- **Ship unloading, LNG storage LNG ship reloading:** includes the right to use the facilities needed for unloading LNG from a vessel to an LNG facility, storing the LNG unloaded, to a maximum defined value and to use the facilities needed for reloading the LNG in vessels from such LNG facility, according to the conditions established in Circular 8/2019, of 12th of December of the CNMC establishing the methodology and access conditions and capacity allocation mechanism of the natural gas system.

6.3 Allocation of allowed revenues to provided services

Regarding the allocation methodology subject to a hearing, agents without assessing or being against it, revealed two opposing positions. Some agents pointed the need to allocate more of the regasification allowed revenues to final costumers through the tariff of other regasification costs in order to incentivize the

29 The cooling down operation consists of the inertization, gassing and cooling of the tanks of the vessel to a temperature of -160 °C.

use of the LNG facilities, justifying by security of supply provided by LNG facilities. On the contrary, other agents indicated that allocating costs from regasification activity to the final customers constitutes a cross-subsidy between activities, which would be contrary to Regulation (EU) 715/2009.

The CNMC, taking into account the observations made by the various agents, and considering that all infrastructures are needed to ensure security of supply under the same conditions, has chosen to maintain, in general, the methodology subject to the hearing, incorporating those aspects proposed by the agents which represent an improvement.

The allowed revenues of regasification activity forecasted for year 2020 results from applying the methodology set out in Annex XI to Law 18/2014 of 15 October on the adoption of urgent measures for growth, competitiveness and efficiency.

According to this methodology, the allowed revenues for regasification activity has two components: remuneration for availability and remuneration for continuity of supply. Availability remuneration corresponds to the allowed revenues for each of the investment elements and fixed and variable operating costs. Continuity of supply remuneration, on the other hand, is an additional remuneration concept recognised to the infrastructure holder not directly related to investment costs and operating costs.

Moreover, the availability remuneration includes the financial remuneration and operating costs of the Musel facility. This cost is considered a sunk cost regardless of the use of facilities.

The allowed revenues for the regasification activity forecasted for 2020 results from the application of the methodology set out in Annex XI of Law 18/2014 of 15 October approving urgent measures for growth, competitiveness and efficiency.

Finally, the allowed revenues for the year include, transitionally the impact of the Final Judgment of 24th of October of 2016 from the Third Section of the Administrative-Litigation Chamber of the Supreme Court[30]. The impact of this Judgment is reflected in the first Additional Provision of Order ETU/1283/2017.

Considering the different nature of the components that make up the allowed revenues for regasification activity, it is proposed to recover through the tariffs for the use of LNG facilities the remuneration for investment and for fixed and variable operating costs and through a specific tariff the part of the allowed revenues that are not directly related to investment and operating costs and those

30 The Judgment grants Enagás Transporte S.A.U. the difference between the allowed revenues considered in the Resolution of 26 October 2011, of the Directorate-General for Energy Policy and Mines, for several extensions of LNG facilities hold by Enagás Transporte S.A.U., carried out between 2003 and 2005, with those considered in the Judgment, amounts that should be by the accrued interest since the Resolution took effect.

considered sunk costs (i.e. continuity of supply remuneration, remuneration associated with Musel and the impact of the Final Judgment of 24th of October of 2016 of the Third Section of the Administrative Chamber of the Tribunal) (see Table 54).

Table 54. Allocation of allowed revenues for regasification activities

Regasification allowed revenue (€)	Forecasted 2020	% over total	
Availability remuneration	**326.551.851,07**	**72,5%**	Remuneration to be recovered through regasification tariffs for the use of facilities
Investment costs	152.677.364,75	33,9%	
Fixed Operational costs	130.717.724,33	29,0%	
Variable Operational costs	41.247.665,70	9,2%	
Remuneration for LNG needed for the minimum required level of tanks	1.909.096,29	0,4%	
Continuity of Supply remuneration	**88.006.663,72**	**19,5%**	Remuneration to be recovered through other costs of regasification
Musel Remuneration	**23.605.524,58**	**5,2%**	
DA1ª Order ETU/1283/2017	**12.176.578,33**	**2,7%**	
Total	**450.340.617,69**	**100,0%**	

Source: CNMC

I. Allocation of the remuneration for investment and for fixed operating costs of the regasification activity to each service

The allowed revenues for each regulatory asset for investment and fixed operating costs, shall be allocated to the fixed terms of the tariff for each of the services provided by LNG facilities, considering the following allocating criteria based on the use of infrastructures:

a) **Ship unloading service**: the fixed remuneration will be allocated taking into account that this service includes the conditioning of ports and berths, part of the unloading facilities, part of the LNG pipelines to the tank, part of the LNG tank, part of the torch and combustor, part of Boil-off recovery and treatment facilities, part of the conditioning of land and buildings, part of management and control systems, part of auxiliary services and part of the electricity supply.

b) **LNG storage service**: the fixed remuneration will be allocated taking into account that this service includes part of the LNG tanks, excluding primary and secondary pumps and tanks pipelines to the vaporizers, part of the torch and combustor, part of Boil-off recovery and treatment facilities, part of the conditioning of land and buildings, part of the foundation and civil works for tanks, part of the management and control systems, part of the auxiliary services and part of the electricity supply.

c) **Regasification services:** the fixed remuneration will be allocated taking into account that this service includes vaporizers, metering and odorisation facilities, the secondary pump system, facilities interconnecting tanks with vaporizers, part of seawater intake and discharge, part of the LNG tank, part of the primary pumps, part of the torch and combustor system, part of the LNG pipelines to the tank, part of Boil-off recovery and treatment facilities, part of the conditioning of land and buildings, part of the foundation and civil works for tanks, part of the management and control systems, part of auxiliary services, part of the electricity supply and part of the LNG needed for the minimum required level of tanks.

d) **Truck loading service** the fixed remuneration will be allocated taking into account that this service includes the truck loading station, part of the LNG tank, part of the primary pumps, part of the torch and combustor system, part of Boil-off recovery and treatment facilities, part of the LNG pipelines to the tank, part of the conditioning of land and buildings, part of the foundation and civil works for tanks, part of the management and control systems, part of the auxiliary services, part of the electricity supply and part of the LNG needed for the minimum required level of tanks.

e) **LNG ship reloading service**: the fixed remuneration will be allocated taking into account that this service includes part of the unloading facilities, part of the primary pumps, part of the torch and combustor system, part of Boil-off recovery and treatment facilities, part of the LNG pipelines, part of the conditioning of land and buildings, part of the foundation and civil works for tanks, part management and control systems, part of the auxiliary services, and part of the electricity supply.

f) **LNG transshipment service**: the fixed remuneration will be allocated taking into account that this service includes part of the unloading facilities, part of the torch and combustor system, part of Boil-off recovery and treatment facilities, part of the LNG pipelines, part of the conditioning of land and buildings, part management and control systems, part of the auxiliary services, and part of the electricity supply.

g) **Cooling down service** the fixed remuneration will be allocated taking into account that this service includes part of the unloading facilities, part of the primary pumps, part of the torch and combustor system, part of Boil-off recovery and treatment facilities, part of the LNG pipelines, part of the conditioning of land and buildings, part of the foundation and civil works for tanks, part management and control systems, part of the auxiliary services, and part of the supply electric .

Since the allowed revenues for each regulatory asset in accordance with Order ITC/3994/2006 does not take into account the details needed to carry out the allocation described above, it is first needed to convert the allowed revenues

under Order ITC/3994/2006 to the scheme of Order ITC/3128/2011, for this purpose, replacement value of each LNG facility and the available information from the investment audits for their inclusion in the remuneration schemes have been considered. Particularly, firstly, the replacement value of each plant is calculated (see Table 55).Secondly, the depreciation annuity is calculated given the replacement value (see Table 56).Thirdly, the replacement value of non-standardized units is broken down for each element taking into account the information from investment audits. In addition, the allowed revenues for the tank is broken down between the tank itself and the primary pumps according to the information from the investment audits (see Table 57). Fourthly, considering both schemes, the relationship between them is calculated (see Table 58). Finally, the relationship is applied to the forecasted allowed revenues for the tariff year (see Table 59).

Table 55.Calculation of replacement value of each LNG facility by applying investment values from Orden ITC/2446/2013 according to technical characteristics

	Facility						
	Barcelona	Bilbao	Cartagena	Huelva	Mugardos	Sagunto	TOTAL
Technical characteristics							
LNG facilities							
Number	6	3	5	5	2	4	25
Capacity (m^3)	760.000	450.000	587.000	610.000	300.000	600.000	3.307.000
Secondary pumps							
Number	24	9	12	11	4	8	68
Capacity (m^3)	6.000	2.949	3.480	3.300	1.600	2.320	19.649
Vaporisers							
Sea water							
Number	13	4	9	10	2	5	43
Capacity (m^3)	1.950.000	800.000	1.350.000	1.500.000	412.800	1.000.000	7.012.800
Submerged Combustion							
Number	2	1	2	4	1	1	11
Capacity (m^3)	300.000	200.000	300.000	480.000	206.400	150.000	1.636.400
Truck loading							
Number	3	1	3	3	2	2	14
Capacity (m^3)	51	15	48	51	35	40	
Boil off compressor for reprocessing							
Number	2	3	4	4	3	3	19
Capacity (m^3)	31.323	18.396	30.000	35.000	27.096	34.617	176.432
Boil-off compressor for injections in the network							
Number	2	-	2	2	-	1	7
Capacity (m^3)	3.784	-	2.300	2.300	-	2.550	10.934
Boil-off condenser (kg/h)							
Number	1	1	1	1	1	1	6
Capacity (m^3)	20.830	10.000	19.000	32.230	13.000	25.376	120.436
Torch and combustion							
Number	1	1	1	2	1	1	7
Capacity (m^3)	172.000	185.000	80.000	190.000	15.000	241.500	883.500
Metering Unit	EM G-1.000 EM G-4.000 EM G-6.500 EMU G-6.500	ERM G-2.500 EMU G-6.500	EM G-400 EM G-650 EM G-1.600 EM G-1.600 EM G-2.500 EMU G-2.500	EM G-650 EM G-650 EM G-1.000 EM G-1.600 EMU G-2.500	EMU G-4.000	EM G-6.500	
Replacement value (€)	**668.767.674**	**441.782.108**	**551.132.409**	**574.478.839**	**354.290.110**	**534.850.972**	**3.125.302.112**
Standard Units	**495.952.980**	**268.967.414**	**378.317.715**	**401.664.145**	**181.475.416**	**362.036.278**	**2.088.413.948**
LNG Facility/Plant	348.596.800	206.406.000	269.245.160	279.794.800	137.604.000	275.208.000	1.516.854.760
Truck loading station	5.355.554	1.785.185	5.355.554	5.355.554	3.570.369	3.570.369	24.992.585
Sea water Vaporiser	83.733.000	34.352.000	57.969.000	64.410.000	17.725.632	42.940.000	301.129.632
Submerged combustion Vaporiser	7.368.000	4.912.000	7.368.000	11.788.800	5.069.184	3.684.000	40.189.984
Secondary pumps	21.634.260	10.633.239	12.547.871	11.898.843	5.769.136	8.365.247	70.848.596
Boil-off compressor for reprocessing	12.412.992	7.290.151	11.888.700	13.870.150	10.737.874	13.718.371	69.918.237
Boil-off compressor for injections in the network	12.283.898	-	10.615.689	10.615.689	-	10.896.722	44.411.997
Boil-off condenser	28.329	13.600	25.840	43.833	17.680	34.511	163.793
Torch system	1.874.800	2.016.500	872.000	2.071.000	163.500	2.632.350	9.630.150
ERM /Metering and Odorisation	-	572.032	-	-	-	-	572.032
EM Metering	1.678.640	-	1.780.531	1.243.444	-	-	4.702.615
EMU	986.708	986.708	649.371	572.032	818.041	986.708	4.999.567
Non Standard Units	**172.814.694**	**172.814.694**	**172.814.694**	**172.814.694**	**172.814.694**	**172.814.694**	**1.036.888.164**

Source: CNMC

Table 56.- Annuity calculation of replacement values

	Replacement value	Regulatory Asset Life	Depreciation	% over total
Standard Units	**2.088.413.948**		**121.315.441**	**85,4%**
LNG facility/plant	1.516.854.760	20	75.842.738	53,4%
Truck loading stations	24.992.585	20	1.249.629	0,9%
Seawater Vaporiser	301.129.632	10	30.112.963	21,2%
Submerged combustion Vaporiser	40.189.984	10	4.018.998	2,8%
Secondary pumps	70.848.596	20	3.542.430	2,5%
Boil-off compressor for reprocessing	69.918.237	20	3.495.912	2,5%
Boil-off compressor for injections in the network	44.411.997	20	2.220.600	1,6%
Boil off condenser	163.793	20	8.190	0,0%
Torch and combustion	9.630.150	20	481.508	0,3%
ERM	572.032	30	19.068	0,0%
EM	4.702.615	30	156.754	0,1%
EMU	4.999.567	30	166.652	0,1%
Non Standard Units	**1.036.888.164**	**50**	**20.737.763**	**14,6%**
Replacement Value (€)	**3.125.302.112**		**142.053.205**	**100,0%**

Source: CNMC

Table 57.Allocation of the replacement value of non-standardized units for each element

Non standardized Replacement unit values (€) (A)	**20.737.763**

Remunerated Element	% over total non-standardized according to investment audits (B)	Allocation of the replacement value by remunerated asset (A) * (B)
Natural Gas interconnections	8,9%	1.847.190
LNG interconnections	1,0%	207.261
Land Based Civil Work Facilities	27,0%	5.597.415
Infraestructura terrestre	19,0%	3.948.960
Buildings	*2,2%*	*461.585*
Conditioning of land	*5,7%*	*1.186.870*
Unloading facilites	*26,0%*	*5.394.760*
Management and control systems	6,0%	1.238.830
Auxiliary services	12,3%	2.549.445
Electricy supply System	4,6%	946.666
Seawater intake facilities	12,8%	2.655.482
Foundation and civil works for LNG tanks	1,5%	300.714

Tank replacement Value (€) (C)	**75.842.738**

Remunerated Element	% over total non-standardized according to investment audits (D)	Allocation of the replacement value by remunerated element (C) * (D)
Primary Pumps	3,1%	2.381.614
LNG Tank	96,9%	73.461.124

Source: CNMC and investment audits

Table 58.Calculation of the percentages for converting allowed revenues according to Orden ITC/3994/2006 scheme to Orden ITC/3128/2011 scheme

	Replacement value according to the Remunerated Scheme of Order ITC/3994/2006 (€)				
Replacement value according to the Remuneration Scheme of Order ITC/3128/2011 (€)	Land and Port Civil Work	Truck loading stations	Vaporisers	Tank	TOTAL
Standardized Units	**-**	**1.249.629**	**34.455.368**	**85.591.377**	**121.296.374**
LNG Tanks				75.842.738	75.842.738
LNG Tank				73.461.124	73.461.124
Primary Pumps				2.381.614	2.381.614
Truck loading stations		1.249.629			1.249.629
Seawater Vaporiser			30.112.963		30.112.963
Submerged Combustion Vaporiser			4.018.998		4.018.998
Secondary Pumps				3.542.430	3.542.430
Torch				481.508	481.508
Boil-off compressor for reprocessing				3.495.912	3.495.912
Boil-off compressor for injections in the network				2.220.600	2.220.600
Boil off condenser				8.190	8.190
Metering Systems (1)			323.406		323.406
Non-Standardized Units	**15.343.003**	**-**	**-**	**5.394.760**	**20.737.763**
Gas Natural Inteconnections	1.847.190				1.847.190
LNG Interconnections	207.261				207.261
Land Civil Works facilities	5.597.415				5.597.415
Land Facilities	3.948.960				3.948.960
Buildings	461.585				461.585
Conditioning of Land	1.186.870				1.186.870
Unload Facilities				5.394.760	5.394.760
Management and control Systems	1.238.830				1.238.830
Auxiliary Systems	2.549.445				2.549.445
Electricity Supply System	946.666				946.666
Seawater Intake Facilities	2.655.482				2.655.482
Foundations and civil work associated to LNG Storage	300.714				300.714
Total	**15.343.003**	**1.249.629**	**34.455.368**	**90.986.137**	**142.034.137**

% for the conversion of the Remunerated scheme of Order ITC / 3994/2006 to the Remunerated scheme of Order ITC / 3128/2011			
Land and Port Civil Work	Truck loading stations	Vaporisers	Tank
0,0%	**100,0%**	**100,0%**	**94,1%**
			83,4%
			80,7%
			2,6%
	100,0%		
		87,4%	
		11,7%	
			3,9%
			0,5%
			3,8%
			2,4%
			0,0%
		0,9%	
100,0%	**0,0%**	**0,0%**	**5,9%**
12,0%			
1,4%			
36,5%			
25,7%			
3,0%			
7,7%			
			5,9%
8,1%			
16,6%			
6,2%			
17,3%			
2,0%			
100,0%	**100,0%**	**100,0%**	**100,0%**

Source: CNMC, Order ITC/3994/2006 and Orden ITC/3128/2011

Table 59.Allocation of the forecasted investment and the fixed operational costs for 2020 for each element

	% for the conversion of the Remunerated scheme of Order ITC / 3994/2006 to the Remunerated scheme of Order ITC / 3128/2011 (B)			
Replacement value according to the Remuneration Scheme of Order ITC/3128/2011 (€)	Land and Port Civil Work	Truck loading stations	Vaporisers	Tank
Standardized Units	**0,0%**	**100,0%**	**100,0%**	**94,1%**
LNG Tanks				83,4%
LNG Tank	0,0%	0,0%	0,0%	80,7%
Primary Pumps	0,0%	0,0%	0,0%	2,6%
Truck loading stations		100,0%		
Seawater Vaporiser			87,4%	
Submerged Combustion Vaporiser			11,7%	
Secondary Pumps				3,9%
Torch System				0,5%
Boil-off compressor for reprocessing				3,8%
Boil-off compressor for injections in the network				2,4%
Boil off condenser				0,0%
Metering Systems (1)			0,9%	
Non-Standardized Units	**100,0%**	**0,0%**	**0,0%**	**5,9%**
Gas Natural Inteconnections	12,0%			
LNG Interconnections	1,4%			
Land Civil Works facilities	36,5%			
Land Facilities	25,7%			
Buildings	3,0%			
Conditioning of Land	7,7%			
Unload Facilities				5,9%
Management and control Systems	8,1%			
Auxiliary Systems	16,6%			
Electricity Supply System	6,2%			
Seawater Intake Facilities	17,3%			
Foundations and civil work associated to LNG Stora	2,0%			
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**

Allowed revenue allocation by element according to remuneration scheme of the Order ITC/3994/2006 (€) (A) * (B)				
Land and Port Civil Work	Truck loading stations	Vaporisers	Tank	TOTAL
-	**1.679.875**	**42.033.038**	**191.453.524**	**235.166.437**
			169.647.458	169.647.458
-	-	-	164.320.187	164.320.187
-	-	-	5.327.271	5.327.271
	1.679.875			1.679.875
		36.735.621		36.735.621
		4.902.885		4.902.885
			7.923.820	7.923.820
			1.077.051	1.077.051
			7.819.767	7.819.767
			4.967.109	4.967.109
			18.319	18.319
		394.532		394.532
23.754.508	**-**	**-**	**12.067.172**	**35.821.680**
2.859.877				2.859.877
320.888				320.888
8.666.090				8.666.090
6.113.901				6.113.901
714.640				714.640
1.837.549				1.837.549
			12.067.172	12.067.172
1.917.994				1.917.994
3.947.128				3.947.128
1.465.658				1.465.658
4.111.298				4.111.298
465.575				465.575
23.754.508	**1.679.875**	**42.033.038**	**203.520.696**	**270.988.117**

Source: CNMC

Table 60 shows the forecasted allowed revenues for investment and fixed operational costs for 2020, broken down by element.

Table 60. Forecasted allowed revenues for investment and fixed operational costs for year 2020 per element

Investment costs and Fixed Operating costs broken down by element (€)	Order ITC/3994/2006	Order ITC/3128/2011	Total	% over total remuneration
Standardized Units	**235.166.437**	**10.379.532**	**245.545.969**	**86,1%**
LNG Tank	164.320.187	9.455.757	173.775.944	60,9%
Primary Pumps	5.327.271	306.556	5.633.827	2,0%
Secondary Pumps	7.923.820	348.299	8.272.119	2,9%
Seawater Vaporiser	36.735.621	-	36.735.621	12,9%
Submerged Combustion Vaporiser	4.902.885	-	4.902.885	1,7%
Metering and Odorisation (1)	394.532	-	394.532	0,1%
Torch and Combustor	1.077.051	-	1.077.051	0,4%
Boil-off compressor for reprocessing	7.819.767	268.920	8.088.688	2,8%
Boil-off compressor for injections in the network	4.967.109	-	4.967.109	1,7%
Boil-off condenser	18.319	-	18.319	0,0%
Truck loading stations	1.679.875	-	1.679.875	0,6%
Non-Standardized Units	**35.821.680**	**1.913.788**	**37.735.468**	**13,2%**
Gas Natural Inteconnections	2.859.877	-	2.859.877	1,0%
LNG Interconnections	320.888	159.824	480.712	0,2%
Land Civil Works facilities	8.666.090	-	8.666.090	3,0%
Unload facilities	12.067.172	-	12.067.172	4,2%
Management and control Systems	1.917.994	566.861	2.484.855	0,9%
Auxiliary Systems	3.947.128	309.912	4.257.040	1,5%
Electricity Supply System	1.465.658	542.399	2.008.057	0,7%
Seawater Intake Facilities	4.111.298	-	4.111.298	1,4%
Foundations and civil work associated to LNG Storage	465.575	334.792	800.367	0,3%
Remuneration for LNG needed for the minimum required level of tanks	**1.909.096**	**-**	**1.909.096**	**0,7%**
Metering and Odorisation unit	**113.652**	**-**	**113.652**	**0,0%**
Total	**273.010.865**	**12.293.320**	**285.304.185**	**100,0%**

Source: CNMC

Considering the agents responses and the operational impact on the system, the facilities involved in the provision of different services on plants have been allocated taking into account the following criteria.

In this regard, it is stated that, in the first place, the allowed revenues for the LNG tank should be broken down according to its use, considering the design criterion and then allocating the associated allowed revenue of each element to each service.

a) According to the design criterion of the LNG tank

The technical designed capacity of the LNG tank should be determined as the sum of the minimum required level of LNG in the tank, the security stock, the stock for logistics flexibility (that depends on the scheduled frequency of LNG carriers arrival and scheduled regasification), and, where appropriate, medium term storage.

It is proposed to allocate the allowed revenues for the LNG tank to each service, according to the LNG tank design criterion.

The **minimum required level of LNG in the tank** corresponds to the quantity of gas that can never be reduced, except for putting the take out of service, either temporarily or permanently. It is considered that the minimum required level is necessary for the provision of the services in which the LNG tank is an active

element, and it is therefore proposed to allocate the part of the allowed revenues associated with the storage of the minimum required level to regasification and truck loading services, in proportion to the volume of gas involved in each service. There is no allocation of the allowed revenues associated with the storage of the minimum required level to the rest of the services, to the extent that they are not required for providing such services.

Table 61 summarizes the procedure for determining the proportion of the allowed revenues for LNG tank that is associated with the storage of the minimum required level.

Table 61.Determination of the proportion of the allowed revenues for LNG tank that is associated with the storage of the minimum required level.

Facility	LNG Storage at 31/12/2018 (MWh) (A)	LNG needed for the minimum required level of tanks at 31/12/2018 (MWh) (B)
Barcelona	5.206.000	473.230
Huelva	4.178.500	385.720
Cartagena	4.020.950	356.160
Bilbao	3.078.000	280.233
Sagunto	4.059.000	182.540
Mugardos	2.055.000	123.300
TOTAL	**22.597.450**	**1.801.183**
% of LNG tanks associated with the storage of the minimum required level (C) = (B)/(A)		**8,0%**
LNG tank allowed revenues (D)		**173.775.944**
Proportion of the allowed revenues associated with the storage of the minimum required level (E) = (C) * (D)		**13.902.076**

Source: CNMC

The security stock corresponds to the storage capacity that an LNG facility must have in order to cope with the non-interruptible demand during the maximum number of hours that the LNG facility may be without receiving LNG for unmanageable causes (normally the closure of origin or destination ports).

According to the planning criteria[31], in order to cope with potential weather events, the dimensioning of the LNG storage capacity of each LNG facility shall include an LNG operational storage capacity (additional to the minimum operational required level) in proportion to constant production rate at nominal capacity, which enables a minimum of a range of 3 days of regasification with 50 % of the tank levels for LNG facilities along the Mediterranean coast, or 4 days along the Atlantic or Cantabrian Sea coasts.

Table 62.Determination of the proportion of the allowed revenues for the LNG tank associated with the security stock

Facility	Maximum Regasification capacity demanded 2013-2018 (MWh/day) (A)	LNG storage capacity 31/12/2018 (MWh) (B)	LNG needed for the minimum required level of tanks at 31/12/2018 (MWh) (C)	Storage days by weather conditions (D)	Security Stock (MWh) (E) = [(A) * (D)] / 50%
Barcelona	382.233	5.206.000	473.230	3,00	2.293.397
Huelva	319.899	4.178.500	385.720	3,00	1.919.396,75
Cartagena	168.170	4.020.950	356.160	3,00	1.009.018,73
Bilbao	178.106	3.078.000	280.233	4,00	1.424.851,29
Sagunto	256.827	4.059.000	182.540	3,00	1.540.964,35
Mugardos	100.484	2.055.000	123.300	4,00	803.868,74
TOTAL	**1.405.720**	**22.597.450**	**1.801.183**		**8.991.497**
% of the tank associated with the security stock (F) = (E) / [(B) - (C)]					**43,2%**
Allowed revenues for the LNG tanks (€) (G)					**173.775.944**
Proportion of the allowed revenues associated with the storage of the minimum required level (€) (H)					**13.902.076**
Proportion of the tank remuneration allocated to security stock(€) [(F)*((G) - (H)]					**69.123.245**

Source: CNMC

It is noted that instead of nominal capacity, the maximum requested regasification capacity recorded during the period 2013-2018 has been considered for the calculation of the security stock, in order to maximize the use of storages and to minimize the impact of the forecast errors on services subject to international competition, which could constitute an entry barrier to the internal market in natural gas.

It is proposed to allocate part of the allowed revenues for the tank associated with the security stock to the LNG storage service.

[31] In addition to the capacity to deal with weather events, in the planning of the gas sector, it is established that LNG facilities must have an LNG storage capacity for which allows at least a range of 3 days of nominal production. However, it is considered that this capacity is not related to the security stock which is not covered by the allocation criterion.

The logistics flexibility stock corresponds to the tank's capacity needed to allow the unloading of ships and the regasification and truck loadings that are required to satisfy demand.

Since in the Spanish case in the planning it was not deemed needed medium term storage for the design of LNG tanks, the remaining allowed revenues for LNG tanks should be associated to logistics flexibility stock.

Table 63.Determination of the proportion of the allowed revenues for the LNG tank associated with the logistics flexibility stock

Allowed revenues for the LNG tanks (€) (A)	173.775.944
Proportion to the tank remuneration allocated to heel gas(€) (B)	13.902.076
Proportion of the tank remuneration allocated to security stock (€) (C)	69.123.245
Proportion of the tank remuneration allocated to logistics stock (€) (D) = (A) - (B) - (C)	90.750.624

Source: CNMC

Taking into account that the logistics flexibility stock is determined to supply national demand, it is proposed to allocate it to regasification and truck loading services, in proportion to the volume of gas involved in the provision of such services.

b) Proportionally to the volume of gas involved in the service

The allowed revenues associated with the portion of the tank to store the minimum required level of LNG in the tank, the portion for logistics stock, the remuneration for the LNG to cover minimum required level and the primary pumps are allocated to the regasification and truck loading services, in proportion to the volume of gas involved in the providing such services (see Table 64).

Similarly, allowed revenues for LNG pipelines are allocated to ship unloading, truck loading, LNG ship reloading, LNG transshipment and cooling down services proportionally to the volume of gas involved in such services (see Table 65).

Finally, allowed revenue for unloading facilities are allocated to ship unloading services, LNG ship reloading, and cooling down services proportionally to the volume of gas involved in such services (see Table 66).

In this regard, it shall be noted that, for the purpose of establishing the prices of each of the services, in the case there is no volume forecasted for the services of LNG ship reloading, LNG transshipment or cooling down 900 GWh, 219 GWh

and 19 GWh volumes would be considered respectively[32], levelling the resulting prices for the purpose of ensuring income sufficiency.

Table 64. Allocation of the allowed revenues for the portion of the LNG tank for storing the minimum required level of LNG in the tank, the portion for storing the logistics flexibility stock, for the LNG needed to cover the minimum level of the tanks and the primary pumps to each service.

LNG Tank remuneration proportionally allocated to the Volume (€) (A)	112.195.623
Logistics flexibility Stock	90.750.624
LNG needed for the minimum required level of tanks	13.902.076
Primary Pumps	5.633.827
Finantial remuneration for LNG needed for the minimum required level of tanks	1.909.096

Service	Forecast Volume 2020 (MWh)	% over the total volume forecast	Volume for the purpose of service allocation (MWh)	Volume for the purpose of service allocation (B)	Allowed Revenue (€) (A) * (B)
Regasification	219.008.844	93,9%	219.008.844	93,9%	105.373.911
Trucks loading	14.178.228	6,1%	14.178.228	6,1%	6.821.712
Total	**233.187.072**	**100,0%**	**233.187.072**	**100,0%**	**112.195.623**

Source: CNMC

Table 65.Allocation of the allowed revenues for the LNG pipelines to each service

LNG Interconnections allowed revenues (€) (A)	480.712

Service	Volume forecast 2020 (MWh)	% over the total volume forecast	Volume for the purpose of service allocation (MWh)	Volume for the purpose of service allocation (B)	Allowed Remuneration (€) (A) * (B)
LNG ship unloading	236.625.045	50,0%	236.625.045	50,0%	240.257
Regasification	219.008.844	46,3%	219.008.844	46,3%	222.370
Trucks loading	14.178.228	3,0%	14.178.228	3,0%	14.396
LNG ship reloading	3.387.313	0,7%	3.387.313	0,7%	3.439
LNG transshipment	-	0,0%	219.000	0,0%	222
Cooling down	27.000	0,0%	27.000	0,0%	27
Total	**473.226.430**	**100,0%**	**473.445.430**	**100,0%**	**480.712**

Source: CNMC

[32] Corresponds to the average over the last four years 2015-2018 for LNG ship reloading and cooling down services and to the average of the only two operations recorded for the ship-to-ship transfer service of ship to ship LNG ship.

Table 66 Allocation of the allowed revenues for the unloading facilities to each service

Allowed Revenues to unloading facilties (€) (A)	12.067.172

Service	Volume forecast 2020 (MWh)	% over the total volume forecast	Volume for the purpose of service allocation (MWh)	Volume for the purpose of service allocation (B)	Allowed Remuneration (€) (A) * (B)
LNG ship unloading	236.625.045	98,6%	236.625.045	98,5%	11.884.686
LNG ship reloading	3.387.313	1,4%	3.387.313	1,4%	170.131
LNG transshipment	-	0,0%	219.000	0,1%	10.999
Cooling down	27.000	0,0%	27.000	0,0%	1.356
Total	**240.039.358**	**100,0%**	**240.258.358**	**100,0%**	**12.067.172**

Source: CNMC

c) Proportionally to the remuneration of the LNG tank allocated to each service

It is proposed to allocate the allowed revenues for foundations and civil works for the LNG tank proportionality to the remuneration of the LNG tank allocated to each of the services.

Table 67.Allocation for service of the remuneration associated with the foundation and civil engineering works of the LNG tank

Foundation and civil engineering works associated to LNG tank (€) (A)	800.367

Tank remuneration by Service	Tank remuneration by Service (€)	% over total remuneration (B)	Allowed revenue by service (€) (A) * (B)
LNG facility	69.123.245	38,12%	305.120
Regasification	105.373.911	58,12%	465.135
Truck Load	6.821.712	3,76%	30.112
Total	**181.318.868**	**100,00%**	**800.367**

Source: CNMC

d) Proportionally to the boil-of produced providing the service

Boil-off gas is the additional of gas produced in tanks to the equilibrium of gas - LNG. This gas must be removed from the tanks in order to maintain the tank pressure.

Boil-off gas is mainly produced in the evaporation of the LNG in the tank as a result of the heat exchange through the surface of the tank and through the movement of the gas in equilibrium while filling the tank.

Boil-off gas is compressed by cryogenic compressors and sent to the BOG condenser where it is brought into contact with LNG, and once condensed sent

again into the process. This avoids the emission to the atmosphere, and the resulting waste.

In exceptional or emergency situations where the compressor and condenser cannot absorb all the evaporated natural gas, the combustor and torch system is available processes the natural gas surplus, preventing the direct emission to the atmosphere.

Considering the above and the responses received from several members of CCH, the torch systems and combustor, the boil- off compressor for reprocessing in the plant, the boil-off condenser and the boil-off compressor for injections in the network are allocated to each of the services proportionally to the volume of boil-off produced in each service. In case there is are no operations forecasted for LNG ship reloading, ÇLNG transshipment, or cooling down, 50, 50 and 40 operating hours respectively are considered for the purpose of tariff calculations, where appropriate, levelling resulting prices to ensure income sufficiency (see Table 68).

The boil off gas volume produced by each service has been estimated taking into account the theoretical production capacity (according to the information provided by companies) and the use of the facilities foreseen for the year.

Table 68.Allocation of allowed revenues for torch and combustor, boil off compressor for reprocessing in plant, the boil-off compressor for injection in the network and the boil-off condenser

Allocation of the allowed revenues proportionally to the volume of Boil-off produced by each service (€) (A)	14.151.167
Torch and Combustor	1.077.051
Boil-off compressor for reprocessing	8.088.688
Boil-off compressor for injections in the network	4.967.109
Boil-off condenser	18.319

Service	Boil off generation by service (GWh/h) (B)	Operation Hours forecast 2020	Operating Hours forecast for the allocation (C)	boil-off forecast 2020 (GWh) (D) = (B) * (C)	% over total (E)	Allowed Revenue (€) (A) * (E)
LNG ship unloading	0,113	4.123	4.123	467	3,73%	527.149
LNG Storage	0,163	52.560	52.560	8.550	68,13%	9.640.953
Truck Loading	0,035	72.048	72.048	2.506	19,97%	2.825.407
Regasification	0,013	52.560	52.560	693	5,52%	780.889
LNG ship reloading	0,218	1.352	1.352	295	2,35%	332.793
LNG transshipment	0,218	-	50	11	0,09%	12.310
Cooling down	0,218	129	129	28	0,22%	31.665
Total				**12.550**	**100,00%**	**14.151.167**

Source: CNMC

e) Proportionally to the allowed revenues for providing other services

It is proposed to allocate the remuneration associated with those elements of the LNG facility involved in the provision of all services, without a clear cost driver, proportionally to allowed revenues for each service. In particular, conditioning of

land and buildings, management and control systems, auxiliary services and the electricity supply system are allocated with this criterion.

Table 69.Allocation of the allowed revenues conditioning of land and buildings, management and control systems, auxiliary services and the electricity supply system

	Allocation of the allowed revenues by service							
Remunerated element	**LNG ship unloading**	**LNG Storage**	**Regasification**	**Truck Loading**	**LNG ship reloading**	**LNG transshipment**	**Cooling down**	**Total**
LNG Tank		69.123.245	98.289.612	6.363.088				173.775.944
Primary Pumps			5.291.280	342.548				5.633.827
Finantial remuneration for LNG needed for the minimum required level of tanks			1.793.020	116.077				1.909.096
Foundation and civil work associated to the LNG tank		305.120	465.135	30.112				800.367
Secondary Pumps			8.272.119					8.272.119
Seawater Vaporiser			36.735.621					36.735.621
Submerged Combustion Vaporiser			4.902.885					4.902.885
Metering and odorisation System			508.184					508.184
Water collection system			4.111.298					4.111.298
Torch and Combustor	40.122	733.777	215.043	59.434	25.329	937	2.410	1.077.051
Boil-off compressor for reprocessing	301.314	5.510.687	1.614.979	446.350	190.222	7.036	18.099	8.088.688
Boil-off compressor for injections in the network	185.031	3.384.008	991.728	274.095	116.812	4.321	11.114	4.967.109
Boil-off condenser	682	12.480	3.658	1.011	431	16	41	18.319
Truk loading				1.679.875				1.679.875
Natural Gas Pipelines			2.859.877					2.859.877
LNG pipelines	240.257		222.370	14.396	3.439	222	27	480.712
Unloading facilities	11.884.686				170.131	10.999	1.356	12.067.172
Total	**12.652.092**	**79.069.317**	**166.276.807**	**9.326.984**	**506.363**	**23.532**	**33.048**	**267.888.144**
% of allowed revenue by service (B)	**4,72%**	**29,52%**	**62,07%**	**3,48%**	**0,19%**	**0,01%**	**0,01%**	**100,0%**

Allocation for the remaining elements by service (A)	**822.542**	**5.140.483**	**10.810.048**	**606.369**	**32.920**	**1.530**	**2.149**	**17.416.042**
Civil Work	409.291	2.557.865	5.378.998	301.725	16.381	761	1.069	8.666.090
Management and control system	117.357	733.425	1.542.337	86.514	4.697	218	307	2.484.855
Auxiliary Systems	201.056	1.256.499	2.642.323	148.216	8.047	374	525	4.257.040
Electricity Supply System	94.839	592.694	1.246.391	69.914	3.796	176	248	2.008.057
Total	**13.474.635**	**84.209.800**	**177.086.856**	**9.933.353**	**539.283**	**25.062**	**35.197**	**285.304.185**

Source: CNMC

Table 70 summarizes the criteria for the allocation of each remunerative element to each service provided at the LNG facility and Table 71 shows the result of the allocation to each service.

Table 70. Allocation criteria for fixed remuneration and fixed O&M.

Remuneration allocation by investment	Allocation criteria by service	LNG ship unloading	LNG Storage	Truck Loading	Regasification	LNG ship reloading	LNG transshipment	Cooling down
Secondary pumps system	Direct				100%			
Seawater Vaporisers	Direct				100%			
Submerged Combustion Vaporiser	Direct				100%			
Metering and odorisation system	Direct				100%			
Water collection system	Direct				100%			
Natural gas pipelines	Direct				100%			
Truck loading	Direct			100%				
LNG Storage Tank								
Security Stock	Depending on the design tanks criteria and direct assignment		100%					
Logistics flexibility Stock	Depending on design tanks criteria and proportional to volume			YES	YES			
Minimum required level of tank	Depending on design tanks criteria and proportional to volume			YES	YES			
Primary pumps	Depending on the volumes involved			YES	YES			
LNG pipelines	Depending on the volumes involved	YES		YES	YES	YES	YES	YES
Unloading facilities	Depending on the volumes involved	YES				YES	YES	YES
Finantial remuneration for LNG needed for the minimum required level of tanks	Depending on the volumes involved			YES	YES			
Foundation and civil work associated to the LNG tank	Proportional to the remuneration for the tanks assigned to each activity		YES	YES	YES			
Torch and Combustor	Depending on the generated boil-off	YES	YES	YES	YES	YES	YES	YES
Internal Plant Boil off compressor	Depending on the generated boil-off	YES	YES	YES	YES	YES	YES	YES
Boil off condenser	Depending on the generated boil-off	YES	YES	YES	YES	YES	YES	YES
Boil-off compressor for injections in the network	Depending on the generated boil-off	YES	YES	YES	YES	YES	YES	YES
Land civil work facilities								
Land Facilities	Proportional to the remuneration assigned	YES	YES	YES	YES	YES	YES	YES
Conditioning of land	Proportional to the remuneration assigned	YES	YES	YES	YES	YES	YES	YES
Buildings	Proportional to the remuneration assigned	YES	YES	YES	YES	YES	YES	YES
Management and control systems	Proportional to the remuneration assigned	YES	YES	YES	YES	YES	YES	YES
Auxiliary services	Proportional to the remuneration assigned	YES	YES	YES	YES	YES	YES	YES
Electricity supply system	Proportional to the remuneration assigned	YES	YES	YES	YES	YES	YES	YES

Source: CNMC

Table 71. Allocation of fixed remuneration and fixed O&M.to each service Year 2020

Provided Service at the plant	Allocated Remuneration by service (€)
LNG ship unloading	13.474.635
LNG Storage	84.209.800
Regasification	177.086.856
Truck Loading	9.933.353
LNG ship reloading	539.283
LNG transshipment	25.062
Cooling down	35.197
Total	**285.304.185**

Source: CNMC

II. Allocation of the allowed revenues for variable operating costs to each service

The variable operating and maintenance costs are allocated to each service in accordance with the percentages set out in section 1.c of Annex I of the Circular. These percentages have been obtained on the basis of the information provided by LNG facility holders to this Commission, in the scope of the report regarding the Orders proposals for setting tariff and charges, once validated with the available information on Circular 1/2015[33].In particular, information on fixed and

[33] Circular 1/2015 of 22 July, the National Commission for Markets and Competition, for the development of regulatory information on costs relating to the regulated transmission,

variable O&M of is available for the years 2006-2017 provided by the companies in the context of the report regarding Orders proposals and information for the years 2016-2017 in the context of Circular 1/2015. According to these sources of information, variable regasification operating costs represent approximately 25% of the operating costs, the being main component the costs for electricity supply and, to a lesser extent, the cost of odorization.

In the calculation of the allocation percentages to each service, the average of the last four years 2014-2017 has been considered. It should be noted that, as there is no information available on the variable costs for LNG transshipments, the percentage corresponding to the cooling down service has been considered.

Table 72 shows the result of applying the allocation percentages to the remuneration associated with the variable operation and maintenance costs expected for the financial year 2020.

Table 72.Allocation the allowed revenues for forecasted variable operating costs 2020 to each service provided at the LNG facility.

Revenues to be recovered for variable operating costs (€) (A)	41.247.666

Allocation of allowed revenues by service	% Variable assigment of the remuneration by service (B)	Allocation of allowed revenues by service (€) (A) * (B)
LNG ship unloading	10,0%	4.122.520
LNG Storage	16,8%	6.926.016
Truck Loading	67,1%	27.672.130
Regasification	5,8%	2.392.996
LNG ship reloading	0,2%	71.550
LNG transshipment	0,1%	58.537
Cooling down	0,0%	3.917
Total	**100,0%**	**41.247.666**

Source: CNMC

III. Allocation of regasification allowed revenues not associated with the use of infrastructure

The remuneration for continuity of supply, the remuneration associated with Musel and the impact of Final Judgment of 24th of October of 2016 from the Third

regasification, storage and technical management activities of the natural gas system and the transmission and operation of the electricity system

Section of the Administrative-Litigation Chamber of the Supreme Court, are sunk costs, which do not depend on demand and to a large extent are transitional costs. In particular, in line with Proposal for Circular establishing the methodology for the remuneration of transmission and regasification activities, the progressive reduction of the continuity of supply remuneration during the regulatory period is envisaged. In addition, under the first Additional Provision of Order ETU/1283/2017, the impact of the Supreme Court Judgment was smoothened in the period 2018-2022.

It is considered that these costs, given their nature, are temporary and taking into account that they are due to national decisions, they should fully be allocated national demand, irrespective of where it is supplied. All this in order to maximise the use of LNG facilities in those services subject to international competition, which in turn will have an impact on the evolution of tariffs for the use of the facilities.

Accordingly, it is proposed to allocate remuneration for continuity of supply, Musel and the impact of the Supreme Court's to national demand through a specific charge consisting of a variable term for customers supplied from their own satellite LNG facility or a fixed term per customers for those supplied from local networks.

6.4 Determination of cost drivers for each service and billing variables

Once the cost of each of the remunerative elements is allocated to each service, the variables that drives costs are identified and the billing variable for the service. In particular, taking into account the agents' responses, the following cost drivers and billing variables for each of the individual service are considered.

- *Ship unloading*
  The service of unloading consists of the right to use the facilities needed for unloading the LNG from a vessel to the LNG facility. The cost of this service includes all the facilities involved in the unloading, which mainly depend on two cost drivers: the size of the ship, as it determines the port´s design and the costs associated with the transmission of LNG to the tanker, which it also depends on the volume of LNG unloaded. Accordingly, a fixed term per ship depending on the size and a variable term per kWh downloaded are the billing variables considered.

- *LNG storage service*

  The LNG storage service includes the right to use the facilities needed for the storing LNG at LNG facilities. The cost associated with the service depend essentially on the maximum volume of LNG that can be stored and the stored volume, consequently the billing variables considered are a fixed term for storage capacity contracted in kWh stored/day and a variable term per KWh stored.

- *Regasification services*

  The regasification service consists of the right to use the facilities needed for the regasification of LNG. It is considered that the cost associated with the facilities involved in the regasification service depend mainly on two variables: the regasification capacity of the plant and the volume regasified. It is therefore considered that the recovery of the costs associated with this service should be carried out through two billing variables: a fixed term per regasification capacity contracted (kWh/day) and variable term per KWh regasified.

- *Truck loading service*

  The truck loading service includes the right to use the facilities needed for loading LNG to a tanker truck to transport it to satellite LNG facility. The cost of the associated facilities depends mainly on two variables: the number of loading bays, that determines the number of trucks that can be loaded at the same time, and which also depend on the trucks capacity, and the costs associated with sending the LNG from the tank to the truck, which depend on the volume of LNG. Accordingly, the billing variable considered are a fixed term for capacity (kWh/day) and a variable term per kWh loaded. It should be noted that, currently, the truck loading tariff consists only of a fixed term depending on the contracted capacity.

- *LNG ship reloading service*

  The LNG ship reloading service includes the right to use the facilities needed to send the LNG from the LNG facility to an LNG carrier. The cost of this service includes all those facilities involved in loading LNG from the tank to the ship, which mainly depend on the costs associated with the transfer LNG from the tank to the ship, which depend on the volume of LNG. Notwithstanding the above, considering that (i) the majority of the remuneration allocated to this service is variable (66.4 %), (ii) the fixed remuneration allocated to the service is according to the volume involved in the service criterion and (iii) the service is subject to international competition, billing variable considered is a variable term per kWh of LNG reloaded.

- *LNG transshipment service*

  The LNG transshipment service includes the right to use the facilities needed to transfer LNG from one ship to another. The cost of providing the service thus includes the cost of the facilities necessary for the berthing of the ship, where the cost drive, as has been stated, is the size of the ship, as it determines the port´s design and the facilities used in transferring the LNG from one vessel to another vessel, where the inducing variable is the volume of LNG transferred. Consequently, two billing variables could be considered: a fixed term per LNG carrier depending on size and a variable term per kWh unloaded. However, as for LNG ship reloading service, and for the same

reasons, the billing variable considered is a variable term per kWh of LNG reloaded.

- *Cooling down service*

  The cooling down service includes the right to use the facilities needed for an unloaded methane vessel to receive LNG from the terminal, under appropriate safety conditions. The cost associated with this service include all those facilities involved in loading LNG from the tank to the ship, which depend, essentially, on the costs associated transferring the LNG from the tank to the vessel, which in turn depend on the volume of LNG loaded. However, as for LNG ship reloading and LNG transshipment services, and for the same reasons, form the billing variable considered is a variable term per kWh of LNG reloaded.

- *Virtual liquefaction service*

  The virtual liquefaction service allows natural gas to be virtually transformed at the exit point of an LNG facility into LNG. As a result, it is a service that lacks a cost-inducing variable. However, since the service involves a reduction in the regasification service, it is proposed as a billing variable a fixed term for contracted liquefaction capacity (kWh/day).

6.5 Determination of tariffs and charges associated with each service provided at the LNG facility

6.5.1 Standard annual firm capacity tariffs

Once the fixed and variable costs of the terminal have been allocated to each service and the billing variables have been determined considering the cost drivers, the tariff for each service is calculated by dividing the fixed or variable cost allocated to each service by the forecasted variable or fixed billing variable, respectively except for the ship unloading tariff, where the fixed remuneration by ship size has been allocated based on the unloading time, and LNG ship reloading, transshipment, and cooling down tariffs where a variable term is considered, in order to promote the use of the services.

Table 73 show the remuneration for regasification activity that is recovered through tariffs for the use of the services provided at LNG facilities, and the following tables show how the terms of the billing variables are calculated for each service.

Table 73. Allocation of the 2020 remuneration to each service provided at LNG facilities

Service	Investment costs and Fixed Operating costs by Service (€)	Variable Operating costs by Service (€)	Allocation of allowed revenues by service (€)
LNG ship unloading	13.474.635	4.122.520	17.597.154
LNG storage	84.209.800	6.926.016	91.135.817
Regasification	177.086.856	27.672.130	204.758.986
Truck loading	9.933.353	2.392.996	12.326.349
LNG ship reloading	539.283	71.550	610.833
LNG transshipment	25.062	58.537	83.599
Cooling down	35.197	3.917	39.114
Total	**285.304.185**	**41.247.666**	**326.551.851**

Source: CNMC

Table 74.Determination of the terms of the billing variables for LNG ship unloading tariff

	Investment costs and Fixed Operating costs (€)	Variable Operating costs (€)	Total Revenues (€)
Revenues to be recovered (A)	13.474.635	4.122.520	17.597.154
%	77%	23%	100%

Billing variables

Ship size (T) (m3)	Nº of ships (B)	Average operating time (hours) (C)	Volume (MWh) (D)
S (T < 40.000 m3 de GNL)	0	11,83	-
M (40.000 m3 de GNL < T < 75.000 m3 de GNL)	52	11,83	27.859.576
L (75.000 m3 de GNL < T < 150.000 m3 de GNL)	150	16,49	152.230.677
XL (150.000 m3 de GNL < T < 216.000 m3 de GNL)	50	17,52	54.237.178
XXL (T > 216.000 m3 de GNL)	1	27,83	2.297.614
TOTAL	**253**	**15,78**	**236.625.045**

Determination of the fixed hourly cost per operation	Investment costs and Fixed Operating costs
Fix remuneration to be recovered (A)	13.474.635
Nº of ships (B)	253
Average operating time (C)	16
Nº operation hours (B) * (C)	3.994
Cost per hour (E) = (A) / [(B) * (C)]	3.373

Billing terms

Ship size (T) (m3)	Fix term (€/ship) (E)* (B)	Variable term (€/kWh unloaded) (A)/(D)
S (T < 40.000 m3 de GNL)	39.902	0,000017
M (40.000 m3 de GNL < T < 75.000 m3 de GNL)	39.902	0,000017
L (75.000 m3 de GNL < T < 150.000 m3 de GNL)	55.631	0,000017
XL (150.000 m3 de GNL < T < 216.000 m3 de GNL)	59.099	0,000017
XXL (T > 216.000 m3 de GNL)	93.891	0,000017

Source: CNMC

Table 75. Determination of the terms of the billing variables for LNG storage tariff

	Investment costs and Fixed Operating costs (€)	Variable Operating costs (€)	Total Revenues (€)
Revenues to be recovered (A)	84.209.800	6.926.016	91.135.817
%	92,4%	7,6%	100,0%

	Contracted Capacity (kWh/día)	Stored Volume (kWh)
Forecasted billing variables (B)	14.463.390.344	4.372.506.361.295

	Fix Term by Contracted Capacity (€/kWh/day and month)	Variable Term(€/kWh stored)
Billing terms (A)/(B)	0,000485	0,000002

Source: CNMC

Table 76 Determination of the terms of the billing variables for regasification tariff

	Investment costs and Fixed Operating costs (€)	Variable Operating costs (€)	Total Revenues (€)
Revenues to be recovered (A)	177.086.856	27.672.130	204.758.986
%	86,5%	13,5%	100,0%

	Capacity to be billed (kWh/day)/month	Regasified Volume (kWh)
Forecasted Billing Variables (B)	706.760.370	219.008.843.649

	Fix term (€/kWh/day/month)	Variable Term (€/kWh regasified)
Billing Terms (A)/(B)	0,020880	0,000126

Source: CNMC

Table 77. Determination of the terms of the billing variables for truck loading tariff

	Investment costs and Fixed Operating costs (€)	Variable Operating costs (€)	Total Revenues (€)
Revenues to be recovered (A)	9.933.353	2.392.996	12.326.349
%	80,6%	19,4%	100,0%

	Capacity to be billed (kWh/día/mes)	Regasified Volume (kWh)
Forecasted Billing Variables (B)	47.944.552	14.178.228.255

	Fix Term (€/kWh/day/month)	Variable Term (€/kWh truck loaded)
Billing Terms (A)/(B)	0,017265	0,000169

Source: CNMC

Table 78. Determination of the terms of the billing variables for LNG ship reloading tariff

	Investment costs and Fixed Operating costs (€)	Variable Operating costs (€)	Total Revenues (€)
Revenues to be recovered (A)	539.283	71.550	610.833
%	88,3%	11,7%	100,0%

	Nº of ships	Reloaded Volume (kWh)
Forecasted Billing Variables (B)	**26**	**3.387.312.839**

	Variable Term (€/kWh reloaded)
Billing Terms (A)/(B)	**0,000180**

Source: CNMC

Table 79. Determination of the terms of the billing variables for LNG transshipment tariff

	Investment costs and Fixed Operating costs (€)	Variable Operating costs (€)	Total Revenues (€)
Revenues to be recovered (A)	25.062	58.537	83.599
%	30,0%	70,0%	100,0%

	Nº of ships	Reloaded Volume (kWh)
Forecasted Billing Variables (B)	**1**	**219.000.000**

	Variable Term (€/kWh reloaded)
Billing Terms (A)/(B)	**0,000382**

Source: CNMC

Table 80. Determination of the terms of the billing variables for cooling down tariff

	Investment costs and Fixed Operating costs (€)	Variable Operating costs (€)	Total revenues (€)
Revenues to be recovered (A)	35.197	3.917	39.114
%	90,0%	10,0%	100,0%

	Nº of ships	Loaded volume associated with the cooling service (kWh)
Forecasted Billing Variables (B)	**3**	**27.000.000**

	Variable Term (€/kWh)
Billing Terms (A)/(B)	**0,0014487**

Source: CNMC

Table 81. Determination of the terms of the billing variables for virtual liquefaction tariff

Total regasification allowed revenues (€) (A)	**177.086.856**
Remuneration associated with those elements involved in all services (€) (B)	**10.810.048**
Remuneration associated with those elements involved in all services over total (%) (C) = (B)/(A)	**6,1%**
Fix term of the regasification tariff (€/kWh/day) (D)	**0,020880**
Fix term of the virtual liquefaction tariff (€/kWh/day) (D) * (C)	**0,001275**

Source: CNMC

Finally, tariffs applicable to aggregated services are determined adding the tariffs included in the provision of the corresponding service (see Table 82, Table 83 and Table 84).

Table 82. LNG ship unloading, LNG storage and regasification tariffs

Individual Service	€/Ship	Fix Term (€/kWh/day and month)	Variable Term (€/kWh)
LNG ship unloading			
S (< 40.000 m3 de GNL)	39.902		0,000017
M (40.000 m3 de GNL < T < 75.000 m3 de GNL)	39.902		0,000017
L (75.000 m3 de GNL < T < 150.000 m3 de GNL)	55.631		0,000017
XL (150.000 m3 de GNL < T < 216.000 m3 de GNL)	59.099		0,000017
XXL (T > 216.000 m3 de GNL)	93.891		0,000017
LNG storage		0,000485	
Regasification		0,020880	0,000126

Source: CNMC

Table 83. LNG storage and regasification tariffs

Individual Service	Fix term (€/kWh/day and month)	Variable Term(€/kWh)
LNG storage	0,000485	
Regasification	0,020880	0,000126

Source: CNMC

Table 84.LNG ship unloading, LNG storage and LNG ship reloading tariffs

Individual Service	€/Ship	Fix Term (€/kWh/day and month)	Variable Term (€/kWh)
LNG ship unloading			
S (< 40.000 m3 de GNL)	39.902		0,000017
M (40.000 m3 de GNL < T < 75.000 m3 de GNL)	39.902		0,000017
L (75.000 m3 de GNL < T < 150.000 m3 de GNL)	55.631		0,000017
XL (150.000 m3 de GNL < T < 216.000 m3 de GNL)	59.099		0,000017
XXL (T > 216.000 m3 de GNL)	93.891		0,000017
LNG storage		0,000485	
LNG ship reloading			0,000180

Source: CNMC

6.5.2 Tariffs for non-yearly standard firm capacity

According to Circular 8/2019, of 12th of December of the CNMC establishing the methodology and access conditions and capacity allocation mechanism of the natural gas system, the services offered on LNG facilities of less than a year duration are summarised at Table 85.

Table 85.Services offered at LNG facilities with less than year duration

Less than one year duration services	Annual	Quarterly	Monthly	Daily	Within-day
I. Non associated services					
LNG ship unloading	✓	✗	✗	✗	✗
LNG storage	✓	✓	✓	✓	✓
Regasification	✓	✓	✓	✓	✓
Truck loading	✓	✓	✓	✓	✓
LNG ship reloading	✓	✗	✗	✗	✗
LNG transshipment	✓	✗	✗	✗	✗
Cooling down	✓	✗	✗	✗	✗
Virtual liquefaction	✓	✓	✓	✓	✓
II. Associated services					
Unloading/storage/regasification	✓	✗	✗	✗	✗
Unloading/store/loading	✓	✗	✗	✗	✗
Storage/regasification	✓	✗	✗	✗	✗

Source: CNMC

As mentioned, the level of multipliers must be established in such a way as to ensure the recovery of allowed revenues without providing a barrier to short-term procurement. Consequently, in a similar to transmission activity, the level of multipliers for each product under consideration results from the comparison between the billing that would be obtained contracting yearly capacity with the equivalent from contracting quarterly, monthly and daily capacity. In line with the agents' responses, a single multiplier is proposed for the within-day product, regardless of the duration of the contract. The within-day product multiplier has been calculated so that the daily and within-day product billings are equivalent given a contract duration of 12 hours.

The following table show the multipliers obtained for each service for the period 2014 - 2018. It is indicated that the proposed multipliers correspond to the average for the period 2015-2018, rounded to one decimal point, with the exception of the applicable to the LNG storage service where 2018 value is proposed, because it is the only year that considers the impact of the winter plan, and the applicable to truck loading service, where it has been established the same multiplier as for the regasification service providing that the information necessary for its calculation is not available.

Table 86.Level of quarterly, monthly and daily product multipliers

	Regasification multipliers			
Multiplier	**Storage**	**Regasificación**	**Truck loading**	**Virtual liquefaction**
Quarterly	**1,20**	**1,20**	**1,10**	**1,20**
2014	1,19	1,26	1,14	
2015	1,27	1,17	1,06	
2016	1,12	1,24	1,10	
2017	1,13	1,29	1,08	
2018	1,24	1,17	1,11	
Monthly	**1,50**	**1,40**	**1,20**	**1,40**
2014	1,28	1,48	1,23	
2015	1,46	1,33	1,09	
2016	1,22	1,42	1,15	
2017	1,26	1,56	1,12	
2018	1,47	1,26	1,16	
Daily	**1,80**	**2,00**	**1,80**	**2,00**
2014	1,52	2,18	1,87	
2015	1,76	1,93	1,72	
2016	1,46	2,04	1,78	
2017	1,56	2,14	1,80	
2018	1,81	1,70	1,78	
Within-Day	**n.a.**	**6,80**	**6,80**	**6,80**

Source: CNMC

6.5.3 Standard tariff for interruptible capacity

According to Circular 8/2019, of 12th of December of the CNMC establishing the methodology and access conditions and capacity allocation mechanism of the natural gas system, interruptible capacity regasification tariffs are available for daily and within-day regasification, truck loading and virtual liquefaction services.

Similarly to the interruptible tariffs of transmission activity, it is proposed to apply an ex-post discount of three times the reserve price of the corresponding product by the number of hours of the interruption. Particularly it is proposed:

$$DI = \frac{3 * Tf_S * V * N}{T}$$

Where,

DI: Discount for interruptible
TF_S: Fixed term of the corresponding tariff (daily or within-day)
V: volume not served
N: number of hours of interruption
T: total duration of the contract

6.6 Determination of the tariff for the recovery of other regasification activity

As mentioned, the remuneration associated with costs of a sunk nature that do not depend on the use of the facilities is recovered through a specific transitional tariff, in order to maximise the use of LNG facilities.

In line with the CCH members' responses and taking into account the nature of costs, the remuneration associated with the recovery of other regasification costs is allocated to a fixed term, with the exception of customers supplied from their own satellite LNG facility, where a variable term applies because information on the capacity demanded is not available.

In particular, first, the remuneration associated with other regasification costs is allocated to consumers supplied from local networks and to customers supplied from their own satellite LNG facility proportionally to volume (see Table 87).

Table 87 Variable term associated with the recovery of other regasification costs tariff. 2020

Revenues to be recovered (€) (A)	**123.788.767**
Allowed revenues for continuity of supply	88.006.664
MUSEL remuneration	23.605.525
Final Judgment 2278/2016 of Supreme Court	12.176.578
Convergence impact	

Forecasted Billing Variables (kWh) (B)	**388.112.595.947**
National customers demand connected to T&D network	375.130.429.918
National customers demand connected to distribution satellite facilities	1.299.089.804
National customers demand connected to uniclient satellite facilities	11.683.076.226

	Variable term (€/kWh)
Billing terms (A)/(B)	0,000319

Source: CNMC

It is indicated that the resulting variable term will be the one applicable to suppliers for their customers supplied from their own satellite LNG facility.

Secondly, the remuneration to be recovered through the fixed terms of consumers supplied from local networks is allocated to each tariff group proportionally to the number of supplies.

For consumers who have metering equipment allowing the daily recording of the flow rate the fixed term (€/kWh/day)/year is calculated dividing the remuneration to be recovered by each tariff group by the forecasted capacity of such tariff group.

For consumers without obligation to have a metering equipment recording the maximum flow rate, the fixed term results from the ratio between the remuneration to be recovered through each tariff group and the number of supplies in such group.

Table 88 shows the calculation of the fixed terms of the tariff associated with the recovery of other regasification costs for consumers connected to local networks for 2020.

Table 88. Fixed term associated with the recovery of other regasification costs tariff applicable to customers connected to local networks. 2020

National customers connected to local networks demand (kWh) (A)	**376.429.519.721**
National customers connected to T&D networks demand	375.130.429.918
National customers connected to uniclient satellite facilities demand	1.299.089.804
Other Regasification Costs Varible Term (B)	0,000319
Revenues to be recovered by customers connected to local networks (€) (C) = (A)*(B)	120.062.442

Tariff group	Number of Supplies (N)	% Number of supplies (D)	Revenues to be recovered by tariff group (€) ($RV_{OC,RL,GTK}$) (E) = (D) * (C)	Contracted Capacity (kWh/day) (F)	Term by Client (€/year) (E) / (N)	Invoiced Capacity Term (€/kWh/day)/year (E) / (F)
RL.1	4.640.370	58,274%	69.965.420	68.437.845	15,077552	1,022321
RL.2	2.906.238	36,497%	43.818.958	147.382.237	15,077552	0,297315
RL.3	334.079	4,195%	5.037.099	47.368.017	15,077552	0,106340
RL.4	54.243	0,681%	817.859	38.383.035	15,077552	0,021308
RL.5	22.296	0,280%	336.168	80.520.107		0,004175
RL.6	3.276	0,041%	49.390	46.418.898		0,001064
RL.7	1.179	0,015%	17.776	57.409.990		0,000310
RL.8	712	0,009%	10.739	85.807.711		0,000125
RL.9	328	0,004%	4.952	104.217.498		0,000048
RL.10	170	0,002%	2.568	187.565.705		0,000014
RL.11	100	0,001%	1.511	880.112.913		0,000002
Total	**7.962.993**	**100%**	**120.062.442**	**1.743.623.955**		

Source: CNMC

6.7 Analysis of the variation in regasification tariffs

Table 89 shows the result of applying the prevailing tariffs and tariffs from the Circular to the billing variables for the forecast 2020. It is noted that as a result of applying the methodology of the Circular, all access tariffs to LNG facilities would benefit from a reduction of between 6.0 % and 70.8%, with the exception of the regasification service where there is an increase of 6.8 %. Since the methodology

for calculating the prevailing regasification tariffs is not public, it is not possible to justify the reason such differences.

It should be noted that the billing resulting from the application of the regasification tariffs resulting from the Circular recover 72.5% of the allowed revenues for regasification activities provided for year (EUR 450.3 M), while the billing resulting from the prevailing tariffs account for 84.3%.

Table 89.Prevailing regasification tariffs and regasification tariffs resulting from the circular for the use of facilities. Year 2020

Service	Forecasted Billing Variables 2020			Billing (€)			Average Billing (€/MWh)		
	Nº ships	Annual average invoiced capacity (MWh/day)/month	Volume (MWh)	CNMC Methodology	Order ETU/1367/2018	Difference	CNMC Methodology	Order ETU/1367/2018	Rate of change (%)
LNG ship unloading	253		236.625.045	17.601.660	24.925.878	- 7.324.218	0,07	0,11	-29,4%
LNG storage		14.463.390	4.372.506.361	91.159.154	141.669.206	- 50.510.052	0,02	0,03	-35,7%
Regasification		706.760	219.008.844	204.811.418	191.736.838	13.074.580	0,94	0,88	6,8%
Truck loading		47.945	14.178.228	12.329.506	18.997.566	- 6.668.060	0,87	1,34	-35,1%
LNG ship reloading	26		3.387.313	610.989	2.093.598	- 1.482.609	0,18	0,62	-70,8%
Cooling down	3		27.000	39.124	118.701	- 79.577	1,45	4,40	-67,0%
LNG transshipment	-		-	-	-	-	n.a.	n.a.	n.a.
Virtual liquefaction			-	-	-	-	n.a.	n.a.	n.a.
Total (1)			**233.187.072**	**326.551.851**	**379.541.788**	**- 52.989.937**	**1,40**	**1,63**	**-14,0%**

Source: CNMC

(1) For the purpose of determining total average billing, the total volume corresponds to the sum of the regastified volume and the volume loaded in tanks.

6.8 Expected evolution of regasification tariffs and charges during the regulatory period

Table 90 shows the evolution of the allowed revenues for regasification activity, forecasted variables and tariffs for the use of LNG facilities by the end of the regulatory period. It is noted that, with the exception of the regasification service tariff for the 2020, tariffs of regasification activity are reduced during the first years of the regulatory period.

Table 90.Evolution of regasification tariffs for the use of LNG facilities during the regulatory period

1. Forecasted regasification allowed revenues

Regasification allowed revenues (€)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
Investment costs	154.586.461	157.488.436	154.111.954	149.510.690	141.543.934	134.403.294	121.789.775
Fix O & M Costs	130.717.724	132.657.179	137.247.127	142.171.927	146.879.127	151.368.727	155.640.727
Variable O & M Costs	41.247.666	24.679.225	19.250.000	19.500.000	20.000.000	20.500.000	21.000.000
Allowed revenues for continuity of supply	88.006.664	84.826.642	70.405.331	57.204.331	44.003.332	30.802.332	17.601.333
MUSEL remuneration	23.605.525	23.605.525	23.605.525	23.605.525	23.605.525	23.605.525	23.605.525
Final Judgment 2278/2016 of Supreme Court	12.176.578	12.168.193	12.134.969	3.058.673	-	-	-
Total	**450.340.618**	**435.425.198**	**416.754.906**	**395.051.146**	**376.031.917**	**360.679.878**	**339.637.360**
	-	-	-	-	-	-	-
		-3%	-4%	-5%	-5%	-4%	-6%

2. Revenues to be recovered by service

Fix revenues

Revenues to be recovered (€)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
LNG ship unloading	13.474.635	13.457.937	13.266.163	13.126.267	12.767.605	12.433.928	11.689.035
LNG storage	84.209.800	84.215.579	83.393.678	82.725.931	80.756.061	79.127.276	75.364.131
Regasification	177.086.856	182.111.181	184.180.908	185.047.351	183.917.776	182.638.018	177.820.375
Truck loading	9.933.353	9.621.848	9.579.619	9.693.928	9.777.274	10.239.184	11.104.349
LNG ship reloading	539.283	679.637	880.492	1.031.647	1.148.193	1.278.002	1.397.926
LNG transshipment	25.062	24.565	24.062	23.886	23.575	23.817	24.376
Cooling down	35.197	34.868	34.159	33.606	32.576	31.795	30.310
Total	**285.304.185**	**290.145.615**	**291.359.081**	**291.682.617**	**288.423.061**	**285.772.021**	**277.430.502**

Variable revenues

Revenues to be recovered (€)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
LNG ship unloading	4.122.520	2.466.578	1.923.951	1.948.938	1.998.911	2.048.883	2.098.856
LNG storage	6.926.016	4.143.961	3.232.324	3.274.302	3.358.259	3.442.215	3.526.171
Regasification	27.672.130	16.556.736	12.914.391	13.082.111	13.417.550	13.752.988	14.088.427
Truck loading	2.392.996	1.431.773	1.116.795	1.131.299	1.160.306	1.189.314	1.218.322
LNG ship reloading	71.550	42.810	33.392	33.825	34.693	35.560	36.427
LNG transshipment	58.537	35.024	27.319	27.674	28.383	29.093	29.802
Cooling down	3.917	2.344	1.828	1.852	1.899	1.947	1.994
Total variables	**41.247.666**	**24.679.225**	**19.250.000**	**19.500.000**	**20.000.000**	**20.500.000**	**21.000.000**

3. Forecasted Billing Variables

Service	Variable	Unit	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
LNG ship unloading	Nº of ships	Ships	253	261	263	259	250	233	200
	Volume	MWh	236.625.045	243.999.691	245.597.825	242.348.494	234.172.732	217.833.063	187.293.083
LNG storage	Capacidad contratada	MWh/day/month	14.463.390	14.992.350	15.132.259	14.999.000	14.452.537	13.322.844	11.235.692
Regasificación	Capacidad contratada	MWh/day/month	706.760	730.746	735.039	726.139	698.902	643.862	542.265
	Volume	MWh	219.008.844	225.434.193	225.455.181	221.440.432	212.807.601	196.019.778	165.041.979
Truck loading	Capacidad contratada	MWh/day/month	47.945	48.243	48.671	49.093	49.500	49.880	50.230
	Volume	MWh	14.178.228	14.266.609	14.393.149	14.517.892	14.638.322	14.750.654	14.854.070
LNG ship reloading	Nº de Ships	Ships	26	34	44	54	63	73	82
	Volume	MWh	3.387.313	4.247.491	5.697.938	6.338.938	6.676.394	7.013.850	7.351.307
LNG transshipment	Nº de Ships	Ships	-	-	-	-	-	-	-
	Volume	MWh	-	-	-	-	-	-	-
Cooling down	Nº de Ships	Ships	3	3	3	3	3	3	3
	Volume	MWh	27.000	27.000	27.000	27.000	27.000	27.000	27.000
Virtual liquefaction	Capacidad contratada	MWh/day/month	-	-	-	-	-	-	-
	Volume	MWh	-	-	-	-	-	-	-

4. Regasification tariffs

Service	Variable	Unit	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
LNG ship unloading	Fix Term	€/Ship	53,259	51,582	50,514	50,652	50,988	53,381	58,366
	Variable Term	€/MWh	0,017427	0,010111	0,007835	0,008043	0,008537	0,009407	0,011208
LNG storage	Fix Term	€/(MWh/day)and year	6,30275	5,89476	5,72554	5,73468	5,82102	6,19866	7,02268
Regasificación	Fix Term	€/(MWh/day)and year	250,63	249,26	250,61	254,88	263,20	283,71	327,98
	Variable Term	€/MWh	0,12638	0,07346	0,05729	0,05909	0,06306	0,07017	0,08538
Truck loading	Fix Term	€/(MWh/day)and year	207,24	199,48	196,86	197,49	197,55	205,31	221,11
	Variable Term	€/MWh	0,16882	0,10038	0,07760	0,07794	0,07928	0,08064	0,08203
LNG ship reloading	Variable Term	€/MWh	0,18038	0,17012	0,16042	0,16811	0,17720	0,18731	0,19515
LNG transshipment	Variable Term	€/MWh	0,38183	0,27214	0,23465	0,23547	0,23729	0,24164	0,24743
Cooling down	Variable Term	€/MWh	1,44903	1,37845	1,33309	1,31349	1,27709	1,24991	1,19669
Virtual liquefaction	Fix Term	€/(MWh/day)and year	0,12749	0,12176	0,12092	0,12263	0,12787	0,13863	0,16463

5. Forecasted evolution of regasification tariffs

Service	Variable	Unit	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
LNG ship unloading	Fix Term	€/Ship		-3,1%	-2,1%	0,3%	0,7%	4,7%	9,3%
	Variable Term	€/MWh		-42,0%	-22,5%	2,7%	6,1%	10,2%	19,1%
LNG storage	Fix Term	€/(MWh/day)and year		-6,5%	-2,9%	0,2%	1,5%	6,5%	13,3%
Regasification	Fix Term	€/(MWh/day)and year		-0,5%	0,5%	1,7%	3,3%	7,8%	15,6%
	Variable Term	€/MWh		-41,9%	-22,0%	3,1%	6,7%	11,3%	21,7%
Truck loading	Fix Term	€/(MWh/day)and year		-3,7%	-1,3%	0,3%	0,0%	3,9%	7,7%
	Variable Term	€/MWh		-40,5%	-22,7%	0,4%	1,7%	1,7%	1,7%
LNG ship reloading	Variable Term	€/MWh		-5,7%	-5,7%	4,8%	5,4%	5,7%	4,2%
LNG transshipment	Variable Term	€/MWh		-28,7%	-13,8%	0,3%	0,8%	1,8%	2,4%
Cooling down	Variable Term	€/MWh		-4,9%	-3,3%	-1,5%	-2,8%	-2,1%	-4,3%
Virtual liquefaction	Fix Term	€/(MWh/day)and year		-4,5%	-0,7%	1,4%	4,3%	8,4%	18,8%

6. Average billing (€/MWh) of the regasification tariffs

Service	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
LNG ship unloading	0,074	0,065	0,062	0,062	0,063	0,066	0,074
LNG storage	0,021	0,019	0,019	0,019	0,019	0,021	0,023
Regasification	0,935	0,881	0,874	0,895	0,927	1,002	1,163
Truck loading	0,869	0,775	0,743	0,746	0,747	0,775	0,830
LNG ship reloading	0,180	0,170	0,160	0,168	0,177	0,187	0,195
LNG transshipment	-	-	-	-	-	-	-
Cooling down	1,449	1,378	1,333	1,313	1,277	1,250	1,196
Virtual liquefaction							
Total (1)	**1,400**	**1,313**	**1,295**	**1,319**	**1,356**	**1,453**	**1,659**

7. Forecasted evolution of the average billing of regasification tariffs

Service	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
LNG ship unloading	-29,4%	-12,2%	-5,2%	0,6%	1,4%	5,4%	10,7%
LNG storage	-35,7%	-6,5%	-2,9%	0,2%	1,5%	6,5%	13,3%
Regasification	6,8%	-5,7%	-0,8%	2,3%	3,6%	8,0%	16,1%
Truck loading	-35,1%	-10,9%	-4,1%	0,3%	0,2%	3,7%	7,1%
LNG ship reloading	-70,8%	-5,7%	-5,7%	4,8%	5,4%	5,7%	4,2%
LNG transshipment	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Cooling down	-67,0%	-4,9%	-3,3%	-1,5%	-2,8%	-2,1%	-4,3%
Virtual Liquefaction	n.a.						
Total	**n.a.**	**-6,2%**	**-1,4%**	**1,8%**	**2,8%**	**7,2%**	**14,2%**

Source: CNMC

(1) For the purpose of determining the total average billing, the total volume corresponds to the sum of the regasified volume and the loaded volume to trucks.

On the other hand, Table 91 shows the evolution of the remuneration to be recovered through the tariff associated with the recovery of other regasification costs, the forecast of the billing variables and the evolution of the billing terms of such tariff by the end of the regulatory period. The average billing for each tariff group percentage changes and are also indicated.

Table 91 Evolution of the tariff associated with the recovery of other regasification costs during the regulatory period

1. Forecasted revenues to be recovered for the tariffs for other regasification costs

Revenues to be recovered for the tariffs for other regasification costs (€)	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
Allowed revenues for continuity of supply	88.006.664	84.826.642	70.405.331	57.204.331	44.003.332	30.802.332	17.601.333
MUSEL remuneration	23.605.525	23.605.525	23.605.525	23.605.525	23.605.525	23.605.525	23.605.525
Final Judgment 2278/2016 of Supreme Court	12.176.578	12.168.193	12.134.969	3.058.673	-	-	-
Total	**123.788.767**	**120.600.359**	**106.145.825**	**83.868.529**	**67.608.856**	**54.407.857**	**41.206.857**

2. Forecasted billing variables

Level of demand	Variable	Unit	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
National customers connected to local networks			**376.429.519.721**	**374.655.510.283**	**373.008.656.880**	**369.539.374.407**	**360.742.815.162**	**344.613.972.977**	**315.021.529.664**
RL.1	Volume	kWh	10.719.892.272	10.599.194.397	10.437.906.169	10.267.461.263	10.086.557.759	9.894.894.463	9.689.919.662
RL.2	Volume	kWh	20.794.338.250	20.558.316.040	20.241.657.362	19.908.228.750	19.555.104.615	19.181.907.372	18.783.734.129
RL.3	Volume	kWh	6.675.992.258	6.600.301.490	6.498.743.010	6.391.792.357	6.278.510.121	6.158.774.677	6.031.012.451
RL.4	Volume	kWh	6.088.276.957	6.068.839.024	6.036.563.069	5.991.961.691	5.927.085.800	5.840.394.243	5.725.932.211
RL.5	Volume	kWh	12.641.485.124	12.634.213.321	12.607.641.771	12.550.933.464	12.444.693.204	12.285.009.595	12.057.775.580
RL.6	Volume	kWh	7.890.278.010	7.927.282.794	7.961.918.543	7.972.900.727	7.950.847.668	7.893.518.195	7.794.220.926
RL.7	Volume	kWh	9.987.799.509	10.122.581.797	10.278.707.859	10.398.310.080	10.473.744.928	10.501.732.251	10.475.244.554
RL.8	Volume	kWh	18.074.324.767	18.375.162.063	18.725.757.225	19.002.727.342	19.197.692.080	19.305.968.735	19.317.693.199
RL.9	Volume	kWh	25.985.199.788	26.423.917.749	26.932.591.840	27.328.775.855	27.599.197.509	27.735.342.380	27.718.515.896
RL.10	Volume	kWh	51.306.840.123	51.919.145.269	52.644.401.566	53.161.467.442	53.360.164.684	53.175.055.958	52.370.472.532
RL.11	Volume	kWh	206.265.092.664	203.426.556.338	200.642.768.466	196.564.815.436	187.869.216.795	172.641.375.107	145.057.008.524
Customers connected to their own satellite LNG facility	**Volume**	**kWh**	**11.683.076.226**	**11.770.699.298**	**11.888.406.291**	**12.007.290.353**	**12.127.363.257**	**12.248.636.890**	**12.371.123.258**
Total Demand	**Volume**	**kWh**	**388.112.595.947**	**386.426.209.581**	**384.897.063.171**	**381.546.664.761**	**372.870.178.419**	**356.862.609.866**	**327.392.652.922**

Number Supplies	Variable	Unit	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
RL.1	Supplies	Number	4.640.370	4.655.771	4.676.905	4.694.774	4.708.503	4.717.580	4.720.371
RL.2	Supplies	Number	2.906.238	2.915.582	2.928.189	2.938.879	2.947.055	2.952.447	2.954.048
RL.3	Supplies	Number	334.079	335.154	336.603	337.833	338.773	339.393	339.578
RL.4	Supplies	Number	54.243	54.774	55.456	56.064	56.530	56.832	56.908
RL.5	Supplies	Number	22.296	22.586	22.956	23.289	23.546	23.715	23.761
RL.6	Supplies	Number	3.276	3.315	3.364	3.410	3.447	3.474	3.486
RL.7	Supplies	Number	1.179	1.190	1.204	1.217	1.229	1.239	1.248
RL.8	Supplies	Number	712	718	725	732	740	746	753
RL.9	Supplies	Number	328	331	334	337	341	344	347
RL.10	Supplies	Number	170	172	173	175	177	178	180
RL.11	Supplies	Number	100	101	102	102	103	104	105
Total Supplies	**Supplies**	**Number**	**7.962.993**	**7.989.692**	**8.026.010**	**8.056.812**	**8.080.443**	**8.096.054**	**8.100.785**

Invoiced capacity	Variable	Unit	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
RL.1	Capacity	kWh/day	68.437.845	67.669.242	66.642.757	65.557.423	64.404.761	63.182.499	61.874.355
RL.2	Capacity	kWh/day	147.382.237	145.711.131	143.470.587	141.110.884	138.611.018	135.967.669	133.146.111
RL.3	Capacity	kWh/day	47.368.017	46.832.182	46.113.484	45.356.182	44.553.537	43.704.487	42.797.900
RL.4	Capacity	kWh/day	38.383.035	38.260.443	38.055.442	37.771.428	37.357.499	36.803.920	36.072.521
RL.5	Capacity	kWh/day	80.520.107	80.418.879	80.175.394	79.740.762	78.991.333	77.903.428	76.387.114
RL.6	Capacity	kWh/day	46.418.898	46.456.000	46.421.788	46.252.155	45.889.681	45.323.491	44.513.464
RL.7	Capacity	kWh/day	57.409.990	58.135.967	58.973.156	59.620.313	60.019.625	60.146.860	59.949.589
RL.8	Capacity	kWh/day	85.807.711	87.213.806	88.847.316	90.152.094	91.078.432	91.599.153	91.654.187
RL.9	Capacity	kWh/day	104.217.498	105.920.279	107.928.733	109.505.772	110.582.279	111.123.269	111.016.083
RL.10	Capacity	kWh/day	187.565.705	189.749.914	192.307.100	194.104.864	194.743.390	193.977.675	189.823.856
RL.11	Capacity	kWh/day	880.112.913	868.339.420	855.687.286	837.014.829	798.287.277	731.145.023	570.566.214
Total invoiced capacity	**Capacity**	**kWh/day**	**1.743.623.955**	**1.734.707.264**	**1.724.623.042**	**1.706.186.708**	**1.664.518.833**	**1.590.877.474**	**1.417.801.394**

3. Tariffs for other regasification costs

Service	Variable	Unit	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
Tariffs for other regasification costs	Variable Term	€/ kWh	0,000319	0,000312	0,000276	0,000220	0,000181	0,000152	0,000126
	Fix term by cliente	(€/year)	15,07755	14,634709	12,816739	10,082050	8,094844	6,489632	4,894560
	Fix capacity term RL. 1	€/ (kWh/day) and year	1,022321	1,006896	0,899463	0,722007	0,591798	0,484554	0,373404
	Fix capacity term RL. 2	€/ (kWh/day) and year	0,297315	0,292831	0,261586	0,209976	0,172107	0,140918	0,108593
	Fix capacity term RL. 3	€/ (kWh/day) and year	0,106340	0,104733	0,093555	0,075095	0,061551	0,050396	0,038836
	Fix capacity term RL. 4	€/ (kWh/day) and year	0,021308	0,020951	0,018677	0,014965	0,012249	0,010021	0,007722
	Fix capacity term RL. 5	€/ (kWh/day) and year	0,004175	0,004110	0,003670	0,002945	0,002413	0,001976	0,001523
	Fix capacity term RL. 6	€/ (kWh/day) and year	0,001064	0,001044	0,000929	0,000743	0,000608	0,000497	0,000383
	Fix capacity term RL. 7	€/ (kWh/day) and year	0,000310	0,000299	0,000262	0,000206	0,000166	0,000134	0,000102
	Fix capacity term RL. 8	€/ (kWh/day) and year	0,000125	0,000120	0,000105	0,000082	0,000066	0,000053	0,000040
	Fix capacity term RL. 9	€/ (kWh/day) and year	0,000048	0,000046	0,000040	0,000031	0,000025	0,000020	0,000015
	Fix capacity term RL. 10	€/ (kWh/day) and year	0,000014	0,000013	0,000012	0,000009	0,000007	0,000006	0,000005
	Fix capacity term RL. 11	€/ (kWh/day) and year	0,000002	0,000002	0,000002	0,000001	0,000001	0,000001	0,000001

4. Forecasted evolution of the tariffs for other regasification costs

Servicio	Variable	Unit	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
Tariffs for other regasification costs	Variable Term	€/ kWh		-2%	-12%	-20%	-18%	-16%	-17%
	Fix Term by client	(€/year)		-3%	-12%	-21%	-20%	-20%	-25%
	Fix capacity term RL. 1	€/ (kWh/day) and year		-2%	-11%	-20%	-18%	-18%	-23%
	Fix capacity term RL. 2	€/ (kWh/day) and year		-2%	-11%	-20%	-18%	-18%	-23%
	Fix capacity term RL. 3	€/ (kWh/day) and year		-2%	-11%	-20%	-18%	-18%	-23%
	Fix capacity term RL. 4	€/ (kWh/day) and year		-2%	-11%	-20%	-18%	-18%	-23%
	Fix capacity term RL. 5	€/ (kWh/day) and year		-2%	-11%	-20%	-18%	-18%	-23%
	Fix capacity term RL. 6	€/ (kWh/day) and year		-2%	-11%	-20%	-18%	-18%	-23%
	Fix capacity term RL. 7	€/ (kWh/day) and year		-3%	-13%	-21%	-19%	-19%	-24%
	Fix capacity term RL. 8	€/ (kWh/day) and year		-4%	-13%	-22%	-20%	-20%	-24%
	Fix capacity term RL. 9	€/ (kWh/day) and year		-4%	-13%	-22%	-20%	-19%	-24%
	Fix capacity term RL. 10	€/ (kWh/day) and year		-3%	-13%	-21%	-19%	-19%	-22%
	Fix capacity term RL. 11	€/ (kWh/day) and year		-1%	-10%	-19%	-15%	-12%	-3%

5. Forecasted evolution of the tariffs for other regasification costs (€)

Billing (€)		Billing variable	2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
Customers connected to their own satellite LNG facility		kWh	3.726.325	3.673.536	3.278.551	2.639.346	2.198.935	1.867.447	1.557.076
National customers connected to local networks	RL.1	Supply	69.965.420	68.135.859	59.942.669	47.332.946	38.114.598	30.615.358	23.104.140
	RL.2	Supply	43.818.958	42.668.698	37.529.830	29.629.923	23.855.947	19.160.294	14.458.765
	RL.3	Supply	5.037.099	4.904.878	4.314.156	3.406.044	2.742.313	2.202.537	1.662.084
	RL.4	Supply	817.859	801.605	710.759	565.237	457.600	368.821	278.541
	RL.5	Supply	336.168	330.534	294.215	234.801	190.605	153.905	116.301
	RL.6	Capacity	49.390	48.507	43.121	34.381	27.904	22.544	17.064
	RL.7	Capacity	17.776	17.409	15.425	12.269	9.948	8.044	6.108
	RL.8	Capacity	10.739	10.505	9.294	7.385	5.986	4.844	3.685
	RL.9	Capacity	4.952	4.843	4.283	3.403	2.759	2.233	1.701
	RL.10	Capacity	2.568	2.510	2.220	1.763	1.429	1.157	881
	RL.11	Capacity	1.511	1.475	1.302	1.031	834	674	512
Total			**123.788.767**	**120.600.359**	**106.145.825**	**83.868.529**	**67.608.856**	**54.407.857**	**41.206.857**

6. Average billing of the tariffs for other regasification costs (€)

Average billing (€/kWh)		2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
Customers connected to their own satellite LNG facility		**0,000319**	**0,000312**	**0,000276**	**0,000220**	**0,000181**	**0,000152**	**0,000126**
National customers connected to local networks	RL.1	0,006527	0,006428	0,005743	0,004610	0,003779	0,003094	0,002384
	RL.2	0,002107	0,002075	0,001854	0,001488	0,001220	0,000999	0,000770
	RL.3	0,000755	0,000743	0,000664	0,000533	0,000437	0,000358	0,000276
	RL.4	0,000134	0,000132	0,000118	0,000094	0,000077	0,000063	0,000049
	RL.5	0,000027	0,000026	0,000023	0,000019	0,000015	0,000013	0,000010
	RL.6	0,000006	0,000006	0,000005	0,000004	0,000004	0,000003	0,000002
	RL.7	0,000002	0,000002	0,000002	0,000001	0,000001	0,000001	0,000001
	RL.8	0,00000059	0,000000572	0,000000496	0,000000389	0,000000312	0,000000251	0,000000191
	RL.9	0,00000019	0,000000183	0,000000159	0,000000125	0,000000100	0,000000081	0,000000061
	RL.10	0,00000005	0,000000048	0,000000042	0,000000033	0,000000027	0,000000022	0,000000017
	RL.11	0,00000001	0,000000007	0,000000006	0,000000005	0,000000004	0,000000004	0,000000004

7. Forecasted evolution of the average tariff for other regasification costs

Evolution of the average tariff for other regasification costs		2020	Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
Customers connected to their own satellite LNG facility			-2,2%	-11,6%	-20,3%	-17,5%	-15,9%	-17,4%
National customers connected to local networks	RL.1		-1,5%	-10,7%	-19,7%	-18,0%	-18,1%	-22,9%
	RL.2		-1,5%	-10,7%	-19,7%	-18,0%	-18,1%	-22,9%
	RL.3		-1,5%	-10,7%	-19,7%	-18,0%	-18,1%	-22,9%
	RL.4		-1,7%	-10,9%	-19,9%	-18,2%	-18,2%	-23,0%
	RL.5		-1,6%	-10,8%	-19,8%	-18,1%	-18,2%	-23,0%
	RL.6		-2,2%	-11,5%	-20,4%	-18,6%	-18,6%	-23,3%
	RL.7		-3,4%	-12,7%	-21,4%	-19,5%	-19,4%	-23,9%
	RL.8		-3,8%	-13,2%	-21,7%	-19,8%	-19,5%	-24,0%
	RL.9		-3,8%	-13,2%	-21,7%	-19,7%	-19,4%	-23,8%
	RL.10		-3,4%	-12,8%	-21,4%	-19,2%	-18,8%	-22,7%
	RL.11		-1,0%	-10,5%	-19,1%	-15,4%	-12,1%	-9,6%

Source: CNMC

7. Settlement system

At present, CNMC is entitled to carry out the settlement of incomes and costs of natural gas system the function of liquidating the regulated activities of the gas sector is being carried out by the CNMC. The settlement of regulated activities of the gas sector is being carried out by the CNMC in accordance with of the eighth additional provision (2) (c) and the fourth transitory provision of Law 3/2013, of June 4, creating The National Markets and Competition Commission, as well as

the sixth transitory provision of the Royal-Decree 657/2017, approving the Organic Structure of The National Markets and Competition Commission.

Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas provides in articles 10, 17, 18 ,19 and 20, on the one hand, the existence of inter-transmission system operator compensation mechanism where there is more than one, and the unique methodology for determining tariffs, and on the other hand, the reconciliation of transmission system operators revenues for under- or over recovery of the remuneration for the transmission services.

Considering all the above, the third additional provision establishes that in application of the provisions of Article 10 and Chapter IV of Regulation (EU) 2017/460, of 16 March, the settlement system established in Order ECO/2692/2002, of 28 October, is considered to be a compensation mechanism between transmission system operators and a procedure for the reconciliation of revenues.

8. Regulatory period and tariff period

Regarding the duration of the regulatory period, the methodology of the Circular will be valid for six years, according with the regulatory period established in Article 60 of Law 18/2014, of October 15, on the approval of urgent measures for growth, competitively and efficiency of regulated activities.

However, a longer duration of the first regulatory period is proposed, intended to match the next regulatory periods giving the difference between the expected date of application of the methodology establishing the transmission, distribution and regasification tariffs and the methodologies establishing the respective revenues.

Regarding the tariff period, access tariffs for transmission, distribution and regasification infrastructure are established for the gas year, in accordance with Article 91 of Law 34/1998, being valid for one year.

9. Transitional period

The allocation of the allowed revenues established by the Circular in its methodology, is different from the implicit one in the current tariffs. Therefore, it is necessary, according to the third final provision of Royal Decree-Law 1/2019, to define a transitional period so that the variation of all the tariffs and charges resulting from the corresponding methodologies is absorbed gradually over a period of four years.

Moreover, the methodology set out in the Circular introduces changes to the current access tariff structure. In particular, on the one hand, new tariffs are

defined as a consequence of the introduction of new services and, on the other hand, changes in the structure of the existing regasification, transmission and distribution tariffs.

It is therefore necessary to provide agents with a sufficient period of time to adapt to the changes introduced by the Circular.

In particular, the following aspects are covered:

1. Period of gradual convergence of current tariffs and charges to the resulting tariffs and charges from the methodologies set by the CNMC and by the government.
2. Adaptation of contracts to the new tariff structure

   The modification of the tariff structure has come implications for the contracts signed by the agents prior to their entry into force, therefore it is necessary to define a period to allow agents the possibility to adapt their annual contracts to the new price signals, regardless of whether the contracted capacity is contracted or modified, with the exception of contracts referring to international connections.

3. Adapting billing systems

   The modification of the tariff structure makes it necessary to adapt the company's invoicing systems to the new tariff structure.

It is therefore necessary to include in the Circular a transitional provision setting out the above aspects and to enable the Commission to develop it in the Resolution establishing the relevant access charges for regasification, transmission and distribution infrastructure.

Taking into account the comments of the agents during the hearing procedure, it is established that the tariffs resulting from the application of the methodology of the Circular do not apply until 1 October 2020, by linking them to the beginning of the gas year.

Finally, a transitional provision is included relating to the tariffs that would apply if the judgment provided for in Article 36 of the Circular were not published within the time-limits laid down in Articles 29 and 32 of Regulation (EU) 2017/460. This transitional period, if applicable, would affect only the gas year 2020-2021.

According to that provision, in the absence of publication of Resolution fixing tariff values within the time-limits, the transmission network charges applicable to international connections with France and Portugal shall be those established in Order IET/2446/2013 of 27 December 2013. On the other hand, the same transitional provision clarifies that access tariffs for transmission networks other

than previous ones, as well as access tariffs for local networks and regasification plants, will be published, in any case, before September 1, 2020.

IX. IMPACT ANALYSIS OF THE CIRCULAR

As mentioned above, in accordance with Article 92 of Law 34/1998, the Government is responsible for establishing the methodology for calculating tariffs for access to underground storage facilities and charges for costs not associated with the use of the facilities. In this report it has been opted to make an allocation of the costs to be recovered through charges, in order to be able to analyze the impact on users of the methodology established in the Circular.

It is pointed out that the impact analysis has considered the LNG storage service established in the Proposal for an Order establishing the underground storage allowed revenues and the tariffs and charges associated with access by third parties to gas facilities for the year 2020.

Consequently, the allocation of the costs to be recovered through charges is described before proceeding to the analysis of the impact of the Circular. It is emphasized that the allocation exercise carried out does not bind the Government in any way in the definition of the methodologies for the establishment of charges.

1. Allocation of costs associated with charges

1.1 Applicable quota to the provision of services in the gaseous hydrocarbons sector

The fixed and variable terms of tariffs and charges associated with the access of third parties to gas facilities will be increased by 0.140, as a result of applying the quota corresponding to the provision of services in the gaseous hydrocarbons sector, as established in point I.4.2 of the Annex to Law 3/2013.

1.2 Technical Management of the System

The proposed Circular of the National Commission for Markets and Competition, which establishes the methodology for the remuneration of the technical manager of the gas system, establishes that the annual remuneration of the GTS for the regulatory period 2021-2023 is between 25,935 thousand euros (in a scenario of minimum compliance with incentives) and 26,925 thousand euros (in the case of maximum compliance with incentives). Without considering incentives, the annual remuneration is 26,432 thousand euros. Of this amount, 1,667 thousand euros per year from the regulatory account will be subject to documentary accreditation of the incurred costs.

For the purposes of assessing the impact on consumers, an average level of compliance with incentives and the use of the total regulatory account are considered. Bringing the GTS's remuneration in 2021-2023 to 26,432 thousand euros. For the following years, this same amount is considered to be the best available forecast at the current date.
The allowed revenues for the Technical System Operator are allocated as a uniform quota on the tariffs and charges for access to gas infrastructures. Therefore, the fixed and variable terms of tariffs and charges for access to gas facilities will be increased by 0.900% (it can be observed in Table 92).

Table 92. Allowed revenues for Technical System Management

Revenues from tariffs and charges for basic services (€) (A)	**2.792.231.134**
Regasification	450.340.618
Transmission	593.363.509
Distribution	1.655.396.229
Underground storage	93.130.778
Allowed revenues for Technical System Management (€)	**26.432.000**
Technical System Management Quota (%) (B)/(A)	**0,900%**

Source: CNMC

1.3 Annuities for the recovery of previous years' deficits and remainder of cost to be recovered from charges

The fixed and variable terms of tariffs and charges associated with third party access to gas facilities will be rescaled by 3.400%. In order to ensure the recovery associated with the market operator's remuneration, of the annual deficits of previous years, the remuneration for tariff supplies and the cost associated with the acquisition of LPG for island supplies (see Table 93).

Table 93. Allocation of annuities for the recovery of previous years' deficits and remaining cost to be recovered from charges

	2020
Revenues from tariffs and charges for basic services (€) (A)	**2.792.231.134**
Regasification	450.340.618
Transmission	593.363.509
Distribution	1.655.396.229
Underground storage	93.130.778
Annuities and other costs to be recovered from charges (€)	**94.375.665**
Prior year mismatch annuities	**89.745.027**
Temporary imbalances prior to 31/12/2014	71.900.274
Temporary imbalace 2016	17.844.753
Organized Gas Market Operator	**3.515.507**
Tariff Supply	**110.000**
LPG Procurement for Island Supplies	**1.005.132**
Quota associated with charges (%) (B)/(A)	**3,400%**

Source: CNMC

2. Economic impact

The resulting tariffs from the methodology of the Circular imply a different allocation between entry[34] and exit[35] tariffs with respect to the current access tariffs. In particular, according to the methodology of the Circular, the retribution of the trunk transport is allocated between entrances and exits at 50% which implies an increase of the entrances with respect to the current tariffs. Furthermore, the allocation of the regasification retribution to regasification tariffs resulting from the Circular differs from that in force. Consequently, it is not possible to assess what will be the impact of the different allocation between entries and exits resulting from the methodology, insofar as it is the suppliers who transfer the cost of the regasification and entry tariffs to the final customers.

[34] The tariffs for regasification facilities services and the tariff for entry into the transmission network are invoiced by infrastructure operators to the suppliers.

[35] The exit tariffs from the transmission network and the tariffs associated to the local networks are invoiced by transporters and distributors to the retailers, taking into account the characteristics of each of the supply points.

Moreover, the impact on the different final customer groups resulting from the CNMC's methodology will depend on the methodology of allocation of the charges defined by the Government.

Nevertheless, for the purpose of minimizing the impact of the Circular on the different groups of customers, the following hypotheses have been developed:

a) The same cost of energy is considered for all customers, regardless of the consumption profile. In particular, the cost of energy corresponds to the price of natural gas recorded between August 2018 and July 2019 (20.03 euros/MWh).
b) The same average entry tariffs are applied to all customers, regardless of their consumption profile.
c) The exit from the transmission network and local networks includes the tariff associated with the recovery of other regasification costs.
d) The tariffs resulting from the methodology of the Circular are rescaled to cover the rate applicable to the provision of services in the gaseous hydrocarbons sector, the technical management of the system allowed revenues and the annuities.

2.1 Resulting economic impact on customers supplied from the transmission and distribution network

Table 94 shows the results of the forecasted billing variables for 2020 year at the tariffs resulting from the Circular and at the current tariffs. It can be seen that, with the previous hypotheses, the billing for smaller and larger customers (combined cycles and large industries operating in the chemical, paper and construction sectors, among others) are 1.4% to 6.8% lower, while for medium-sized customers (which represent 0.3% of supplies and 5.4% of total consumption) are 7.7% to 15% higher.

Considering the evolution of the remuneration of regasification, transmission and distribution activities during the regulatory period, it is indicated that for the tariff period from October 2025 to September 2026 tariffs for intermediate size customers would increase from 2.8% to 8.0% (see Table 95).

Table 94. Billing for customers supplied by the transmission-distribution network at current tariffs and at the tariffs resulting from the Circular. Year 2020. No transitional period

1. Billing Variables

Tariff	Size (kWh)	Nº of Customers	% over total Nº of customers	Volume (MWh)	% over the total volume	Capacity (€/MWh/day)	% over the total capacity
RL.1	C ≤ 5.000	4.536.594	58,1%	10.490.052	2,8%	66.858	3,9%
RL.2	5.000 < C ≤ 15.000	2.860.898	36,6%	20.459.366	5,5%	144.783	8,3%
RL.3	15.000 < C ≤ 50.000	328.868	4,2%	6.568.503	1,8%	46.534	2,7%
RL.4	50.000 < C ≤ 300.000	53.346	0,7%	5.969.372	1,6%	37.725	2,2%
RL.5	300.000 < C ≤ 1.500.000	21.957	0,3%	12.391.673	3,3%	79.136	4,6%
RL.6	1.500.000 < C ≤ 5.000.000	3.235	0,0%	7.772.073	2,1%	45.772	2,6%
RL.7	5.000.000 < C ≤ 15.000.000	1.169	0,0%	9.885.898	2,6%	56.900	3,3%
RL.8	15.000.000 < C ≤ 50.000.000	710	0,0%	18.036.360	4,8%	85.627	4,9%
RL.9	50.000.000 < C ≤ 150.000.000	328	0,0%	25.985.200	6,9%	104.217	6,0%
RL.10	150.000.000 < C ≤ 500.000.000	170	0,0%	51.306.840	13,7%	187.566	10,8%
RL.11	C > 500.000.000	100	0,0%	206.265.093	55,0%	880.113	50,7%
Total		**7.807.377**	**100,0%**	**375.130.430**	**100,0%**	**1.735.232**	**100,0%**

2. Billing at current tariffs (€/MWh)

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transmission network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	0,975	0,251	0,437	41,955	43,618	20,030	63,647
RL.2	5.000 < C ≤ 15.000	0,975	0,251	0,437	31,656	33,318	20,030	53,348
RL.3	15.000 < C ≤ 50.000	0,975	0,251	0,437	25,440	27,103	20,030	47,132
RL.4	50.000 < C ≤ 300.000	0,975	0,251	0,437	20,711	22,373	20,030	42,403
RL.5	300.000 < C ≤ 1.500.000	0,975	0,251	0,437	13,932	15,594	20,030	35,624
RL.6	1.500.000 < C ≤ 5.000.000	0,975	0,251	0,437	10,485	12,148	20,030	32,177
RL.7	5.000.000 < C ≤ 15.000.000	0,975	0,251	0,437	5,689	7,351	20,030	27,381
RL.8	15.000.000 < C ≤ 50.000.000	0,975	0,251	0,437	3,766	5,428	20,030	25,458
RL.9	50.000.000 < C ≤ 150.000.000	0,975	0,251	0,437	2,996	4,658	20,030	24,688
RL.10	150.000.000 < C ≤ 500.000.000	0,975	0,251	0,437	2,562	4,224	20,030	24,253
RL.11	C > 500.000.000	0,975	0,251	0,437	2,301	3,963	20,030	23,993
Total		**0,97**	**0,25**	**0,44**	**6,51**	**8,17**	**20,03**	**28,20**

3. Billing at the resulting tariffs from Circular (€/MWh)

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transmission network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	0,879	0,251	0,791	38,300	40,221	20,030	60,250
RL.2	5.000 < C ≤ 15.000	0,879	0,251	0,791	27,747	29,668	20,030	49,698
RL.3	15.000 < C ≤ 50.000	0,879	0,251	0,791	23,917	25,838	20,030	45,868
RL.4	50.000 < C ≤ 300.000	0,879	0,251	0,791	19,867	21,788	20,030	41,818
RL.5	300.000 < C ≤ 1.500.000	0,879	0,251	0,791	19,276	21,197	20,030	41,227
RL.6	1.500.000 < C ≤ 5.000.000	0,879	0,251	0,791	14,457	16,378	20,030	36,408
RL.7	5.000.000 < C ≤ 15.000.000	0,879	0,251	0,791	7,532	9,453	20,030	29,483
RL.8	15.000.000 < C ≤ 50.000.000	0,879	0,251	0,791	3,810	5,731	20,030	25,761
RL.9	50.000.000 < C ≤ 150.000.000	0,879	0,251	0,791	1,958	3,880	20,030	23,909
RL.10	150.000.000 < C ≤ 500.000.000	0,879	0,251	0,791	1,549	3,470	20,030	23,500
RL.11	C > 500.000.000	0,879	0,251	0,791	1,171	3,092	20,030	23,122
Total		**0,88**	**0,25**	**0,79**	**5,63**	**7,55**	**20,03**	**27,58**

4. % variation between billing at the resulting tariffs from the Circular and at current tariffs

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transmission network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	-9,8%	0,0%	81,1%	-8,7%	-7,8%	0,0%	-5,3%
RL.2	5.000 < C ≤ 15.000	-9,8%	0,0%	81,1%	-12,3%	-11,0%	0,0%	-6,8%
RL.3	15.000 < C ≤ 50.000	-9,8%	0,0%	81,1%	-6,0%	-4,7%	0,0%	-2,7%
RL.4	50.000 < C ≤ 300.000	-9,8%	0,0%	81,1%	-4,1%	-2,6%	0,0%	-1,4%
RL.5	300.000 < C ≤ 1.500.000	-9,8%	0,0%	81,1%	38,4%	35,9%	0,0%	15,7%
RL.6	1.500.000 < C ≤ 5.000.000	-9,8%	0,0%	81,1%	37,9%	34,8%	0,0%	13,1%
RL.7	5.000.000 < C ≤ 15.000.000	-9,8%	0,0%	81,1%	32,4%	28,6%	0,0%	7,7%
RL.8	15.000.000 < C ≤ 50.000.000	-9,8%	0,0%	81,1%	1,2%	5,6%	0,0%	1,2%
RL.9	50.000.000 < C ≤ 150.000.000	-9,8%	0,0%	81,1%	-34,6%	-16,7%	0,0%	-3,2%
RL.10	150.000.000 < C ≤ 500.000.000	-9,8%	0,0%	81,1%	-39,5%	-17,8%	0,0%	-3,1%
RL.11	C > 500.000.000	-9,8%	0,0%	81,1%	-49,1%	-22,0%	0,0%	-3,6%
Total		**-9,8%**	**0,0%**	**81,1%**	**-13,5%**	**-7,6%**	**0,0%**	**-2,2%**

Source: CNMC

Table 95. Billing for customers supplied by the transmission-distribution network at current tariffs and at the tariffs resulting from the Circular. October 2025-September 2026

1. Billing Variables

Tariff	Size (kWh)	Nº of Customers	% over total Nº of customers	Volume (MWh)	% over the total volume	Capacity (€/MWh/day)	% over the total capacity
RL.1	C ≤ 5.000	4.607.458	58,1%	9.467.689	3,0%	60.347	4,3%
RL.2	5.000 < C ≤ 15.000	2.904.959	36,6%	18.461.450	5,9%	130.646	9,3%
RL.3	15.000 < C ≤ 50.000	333.936	4,2%	5.927.595	1,9%	41.996	3,0%
RL.4	50.000 < C ≤ 300.000	55.914	0,7%	5.607.922	1,8%	35.420	2,5%
RL.5	300.000 < C ≤ 1.500.000	23.380	0,3%	11.808.191	3,8%	75.004	5,3%
RL.6	1.500.000 < C ≤ 5.000.000	3.440	0,0%	7.675.523	2,4%	43.865	3,1%
RL.7	5.000.000 < C ≤ 15.000.000	1.237	0,0%	10.366.311	3,3%	59.406	4,2%
RL.8	15.000.000 < C ≤ 50.000.000	751	0,0%	19.275.995	6,1%	91.455	6,5%
RL.9	50.000.000 < C ≤ 150.000.000	347	0,0%	27.718.516	8,8%	111.016	7,9%
RL.10	150.000.000 < C ≤ 500.000.000	180	0,0%	52.370.473	16,7%	189.824	13,5%
RL.11	C > 500.000.000	105	0,0%	145.057.009	46,2%	570.566	40,5%
Total		**7.931.707**	**100,0%**	**313.736.675**	**100,0%**	**1.409.544**	**100,0%**

2. Billing at current tariffs (€/MWh)

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transmission network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	0,920	0,270	0,445	43,601	45,236	20,030	65,265
RL.2	5.000 < C ≤ 15.000	0,920	0,270	0,445	32,874	34,508	20,030	54,537
RL.3	15.000 < C ≤ 50.000	0,920	0,270	0,445	25,877	27,511	20,030	47,540
RL.4	50.000 < C ≤ 300.000	0,920	0,270	0,445	21,548	23,182	20,030	43,212
RL.5	300.000 < C ≤ 1.500.000	0,920	0,270	0,445	14,064	15,698	20,030	35,728
RL.6	1.500.000 < C ≤ 5.000.000	0,920	0,270	0,445	10,197	11,831	20,030	31,861
RL.7	5.000.000 < C ≤ 15.000.000	0,920	0,270	0,445	5,566	7,201	20,030	27,230
RL.8	15.000.000 < C ≤ 50.000.000	0,920	0,270	0,445	3,763	5,397	20,030	25,427
RL.9	50.000.000 < C ≤ 150.000.000	0,920	0,270	0,445	2,995	4,629	20,030	24,659
RL.10	150.000.000 < C ≤ 500.000.000	0,920	0,270	0,445	2,571	4,206	20,030	24,235
RL.11	C > 500.000.000	0,920	0,270	0,445	2,169	3,803	20,030	23,833
Total		**0,92**	**0,27**	**0,44**	**7,01**	**8,65**	**20,03**	**28,68**

3. Billing at the resulting tariffs from Circular (€/MWh)

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transmission network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	0,955	0,270	0,579	30,516	32,320	20,030	52,349
RL.2	5.000 < C ≤ 15.000	0,955	0,270	0,579	23,336	25,140	20,030	45,170
RL.3	15.000 < C ≤ 50.000	0,955	0,270	0,579	20,608	22,412	20,030	42,441
RL.4	50.000 < C ≤ 300.000	0,955	0,270	0,579	17,309	19,113	20,030	39,143
RL.5	300.000 < C ≤ 1.500.000	0,955	0,270	0,579	16,746	18,550	20,030	38,579
RL.6	1.500.000 < C ≤ 5.000.000	0,955	0,270	0,579	12,096	13,900	20,030	33,929
RL.7	5.000.000 < C ≤ 15.000.000	0,955	0,270	0,579	6,151	7,955	20,030	27,985
RL.8	15.000.000 < C ≤ 50.000.000	0,955	0,270	0,579	3,056	4,860	20,030	24,890
RL.9	50.000.000 < C ≤ 150.000.000	0,955	0,270	0,579	1,468	3,272	20,030	23,302
RL.10	150.000.000 < C ≤ 500.000.000	0,955	0,270	0,579	1,162	2,967	20,030	22,996
RL.11	C > 500.000.000	0,955	0,270	0,579	0,964	2,768	20,030	22,798
Total		**0,96**	**0,27**	**0,58**	**5,08**	**6,88**	**20,03**	**26,91**

4. % variation between billing at the resulting tariffs from the Circular and at current tariffs

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transmission network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	3,9%	0,0%	30,2%	-30,0%	-28,6%	0,0%	-19,8%
RL.2	5.000 < C ≤ 15.000	3,9%	0,0%	30,2%	-29,0%	-27,1%	0,0%	-17,2%
RL.3	15.000 < C ≤ 50.000	3,9%	0,0%	30,2%	-20,4%	-18,5%	0,0%	-10,7%
RL.4	50.000 < C ≤ 300.000	3,9%	0,0%	30,2%	-19,7%	-17,6%	0,0%	-9,4%
RL.5	300.000 < C ≤ 1.500.000	3,9%	0,0%	30,2%	19,1%	18,2%	0,0%	8,0%
RL.6	1.500.000 < C ≤ 5.000.000	3,9%	0,0%	30,2%	18,6%	17,5%	0,0%	6,5%
RL.7	5.000.000 < C ≤ 15.000.000	3,9%	0,0%	30,2%	10,5%	10,5%	0,0%	2,8%
RL.8	15.000.000 < C ≤ 50.000.000	3,9%	0,0%	30,2%	-18,8%	-9,9%	0,0%	-2,1%
RL.9	50.000.000 < C ≤ 150.000.000	3,9%	0,0%	30,2%	-51,0%	-29,3%	0,0%	-5,5%
RL.10	150.000.000 < C ≤ 500.000.000	3,9%	0,0%	30,2%	-54,8%	-29,5%	0,0%	-5,1%
RL.11	C > 500.000.000	3,9%	0,0%	30,2%	-55,6%	-27,2%	0,0%	-4,3%
Total		**3,9%**	**0,0%**	**30,2%**	**-27,6%**	**-20,4%**	**0,0%**	**-6,2%**

Source: CNMC

2.2 Economic impact by level of pressure on customers supplied from the transmission and distribution network

Table 96, Table 97, Table 98 and Table 99 show the results of the forecasted billing variables for 2020 year at the tariffs resulting from the Circular and at the current tariffs, for pressure levels of more than 60 bar, between 16 bar and 60 bar, between 4 bar and 16 bar and less than or equal to 4 bar, respectively.

It can be seen that, on the basis of the above assumptions and in general, the resulting tariffs from the methodology are lower than the current tariffs, with the exception of medium-sized customers (between RL.5 and RL.6).

In particular, the billing for customers connected to design pressure levels greater than 60 bar is lower, in average terms, by 3.4%, with some exceptions at supply points with reduced load factor (24 points of supply with a consumption that represents 0.1% of the forecasted consumption for this level pressure). It is indicated that these supplies are compression stations and natural gas transmission centers, with the exception of a single supply for transporting passengers (see Annex III).

In addition, the billing of customers connected to networks with a design pressure between 16 and 60 bar is, in average, 3.7% lower. Although the larger customers (RL.9, RL.10 and RL.11) are reduced by between 2.9% and 4.3% (representing 40% of supplies and 97% of the total volume at this pressure level), while smaller customers would increase their billing cost from 10% to 45% (representing 60% of supplies and 3% of the volume at this pressure level). It should be pointed out that, after the modifications introduced in the allocation criteria for local networks proposed by the agents, the resulting access tariff billing for this group has been reduced between 15% and 30% compared to the proposal in the public consultation.

Similarly, the billing for customers connected to networks with a design pressure between 4 bar and 16 bar shows reductions compared to those resulting from the application of the current tariffs. With the exception of customers from the RL.5, RL.6 and RL7 tariffs, which show increases between 13% and 30%, lower than those resulting from the methodology submitted to the public consultation.

Finally, the billing for customers connected to networks with a design pressure of less than 4 bar resulting from the application of the tariffs of the Circular is reduced, on average, by 1.5%, with reductions in all tariff groups with the exception of RL.5 and RL6 tariffs (which represent 0.3% of supplies and 26% of the total volume at this pressure level) whose billing would increase by 8.7% and 15.1%, respectively.

Table 96. Billing for customers connected at a pressure of more than 60 bar supplied from the transmission-distribution network at current tariffs and at the tariffs resulting from the Circular. Year 2020. No transitional period

1. Billing Variables

Tariff	Size (kWh)	Nº of Customers	% over total Nº of customers	Volume (MWh)	% over the total volume	Capacity (€/MWh/day)	% over the total capacity
RL.1	C ≤ 5.000	1	0,6%	0	0,0%	1	0,0%
RL.2	5.000 < C ≤ 15.000	1	0,6%	11	0,0%	0	0,0%
RL.3	15.000 < C ≤ 50.000	6	4,5%	204	0,0%	1	0,0%
RL.4	50.000 < C ≤ 300.000	8	6,4%	878	0,0%	16	0,0%
RL.5	300.000 < C ≤ 1.500.000	1	0,6%	1.180	0,0%	55	0,0%
RL.6	1.500.000 < C ≤ 5.000.000	2	1,3%	6.559	0,0%	82	0,0%
RL.7	5.000.000 < C ≤ 15.000.000	3	2,5%	38.725	0,0%	249	0,0%
RL.8	15.000.000 < C ≤ 50.000.000	4	3,3%	125.431	0,1%	661	0,1%
RL.9	50.000.000 < C ≤ 150.000.000	8	6,8%	625.608	0,4%	3.009	0,4%
RL.10	150.000.000 < C ≤ 500.000.000	21	17,0%	7.138.301	4,0%	31.279	3,9%
RL.11	C > 500.000.000	70	56,3%	169.273.817	95,5%	759.449	95,6%
Total		**124**	**100,0%**	**177.210.715**	**100,0%**	**794.801**	**100,0%**

2. Billing at current tariffs (€/MWh)

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transmission network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	0,975	0,251	0,437	790,669	792,332	20,030	812,361
RL.2	5.000 < C ≤ 15.000	0,975	0,251	0,437	2,638	4,301	20,030	24,330
RL.3	15.000 < C ≤ 50.000	0,975	0,251	0,437	3,834	5,497	20,030	25,526
RL.4	50.000 < C ≤ 300.000	0,975	0,251	0,437	9,418	11,080	20,030	31,110
RL.5	300.000 < C ≤ 1.500.000	0,975	0,251	0,437	21,322	22,985	20,030	43,014
RL.6	1.500.000 < C ≤ 5.000.000	0,975	0,251	0,437	6,380	8,043	20,030	28,072
RL.7	5.000.000 < C ≤ 15.000.000	0,975	0,251	0,437	3,250	4,912	20,030	24,941
RL.8	15.000.000 < C ≤ 50.000.000	0,975	0,251	0,437	3,078	4,740	20,030	24,770
RL.9	50.000.000 < C ≤ 150.000.000	0,975	0,251	0,437	2,908	4,570	20,030	24,600
RL.10	150.000.000 < C ≤ 500.000.000	0,975	0,251	0,437	2,350	4,013	20,030	24,042
RL.11	C > 500.000.000	0,975	0,251	0,437	2,317	3,979	20,030	24,009
Total		**0,97**	**0,25**	**0,44**	**2,32**	**3,98**	**20,03**	**24,01**

3. Billing at the resulting tariffs from Circular (€/MWh)

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transmission network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	0,879	0,251	0,791	123,956	125,877	20,030	145,906
RL.2	5.000 < C ≤ 15.000	0,879	0,251	0,791	20,943	22,864	20,030	42,894
RL.3	15.000 < C ≤ 50.000	0,879	0,251	0,791	18,572	20,493	20,030	40,523
RL.4	50.000 < C ≤ 300.000	0,879	0,251	0,791	19,902	21,824	20,030	41,853
RL.5	300.000 < C ≤ 1.500.000	0,879	0,251	0,791	123,552	125,473	20,030	145,503
RL.6	1.500.000 < C ≤ 5.000.000	0,879	0,251	0,791	28,447	30,368	20,030	50,398
RL.7	5.000.000 < C ≤ 15.000.000	0,879	0,251	0,791	8,252	10,173	20,030	30,203
RL.8	15.000.000 < C ≤ 50.000.000	0,879	0,251	0,791	4,133	6,054	20,030	26,084
RL.9	50.000.000 < C ≤ 150.000.000	0,879	0,251	0,791	2,227	4,149	20,030	24,178
RL.10	150.000.000 < C ≤ 500.000.000	0,879	0,251	0,791	1,763	3,684	20,030	23,713
RL.11	C > 500.000.000	0,879	0,251	0,791	1,226	3,147	20,030	23,177
Total		**0,88**	**0,25**	**0,79**	**1,26**	**3,18**	**20,03**	**23,21**

4. % variation between billing at the resulting tariffs from the Circular and at current tariffs

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transmission network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	-9,8%	0,0%	81,1%	-84,3%	-84,1%	0,0%	-82,0%
RL.2	5.000 < C ≤ 15.000	-9,8%	0,0%	81,1%	693,8%	431,6%	0,0%	76,3%
RL.3	15.000 < C ≤ 50.000	-9,8%	0,0%	81,1%	384,3%	272,8%	0,0%	58,7%
RL.4	50.000 < C ≤ 300.000	-9,8%	0,0%	81,1%	111,3%	97,0%	0,0%	34,5%
RL.5	300.000 < C ≤ 1.500.000	-9,8%	0,0%	81,1%	479,4%	445,9%	0,0%	238,3%
RL.6	1.500.000 < C ≤ 5.000.000	-9,8%	0,0%	81,1%	345,9%	277,6%	0,0%	79,5%
RL.7	5.000.000 < C ≤ 15.000.000	-9,8%	0,0%	81,1%	154,0%	107,1%	0,0%	21,1%
RL.8	15.000.000 < C ≤ 50.000.000	-9,8%	0,0%	81,1%	34,3%	27,7%	0,0%	5,3%
RL.9	50.000.000 < C ≤ 150.000.000	-9,8%	0,0%	81,1%	-23,4%	-9,2%	0,0%	-1,7%
RL.10	150.000.000 < C ≤ 500.000.000	-9,8%	0,0%	81,1%	-25,0%	-8,2%	0,0%	-1,4%
RL.11	C > 500.000.000	-9,8%	0,0%	81,1%	-47,1%	-20,9%	0,0%	-3,5%
Total		**-9,8%**	**0,0%**	**81,1%**	**-45,9%**	**-20,2%**	**0,0%**	**-3,4%**

Source: CNMC

Table 97. Billing for customers connected at pressure between 16 and 60 bar supplied from the transmission-distribution network to the current access tariffs and tariffs resulting from the Circular. Year 2020. No transitional period

1. Billing Variables

Tariff	Size (kWh)	Nº of Customers	% over total Nº of customers	Volume (MWh)	% over the total volume	Capacity (€/MWh/day)	% over the total capacity
RL.1	C ≤ 5.000	1	0,4%	2	0,0%	0	0,0%
RL.2	5.000 < C ≤ 15.000	-	0,0%	-	0,0%	-	0,0%
RL.3	15.000 < C ≤ 50.000	1	0,9%	799	0,0%	3	0,0%
RL.4	50.000 < C ≤ 300.000	2	1,2%	10.242	0,0%	4	0,0%
RL.5	300.000 < C ≤ 1.500.000	10	6,6%	18.761	0,1%	74	0,1%
RL.6	1.500.000 < C ≤ 5.000.000	18	12,1%	63.239	0,2%	251	0,2%
RL.7	5.000.000 < C ≤ 15.000.000	31	20,2%	227.821	0,6%	1.520	1,2%
RL.8	15.000.000 < C ≤ 50.000.000	29	19,1%	722.156	2,0%	3.667	3,0%
RL.9	50.000.000 < C ≤ 150.000.000	17	11,0%	1.732.949	4,8%	6.980	5,7%
RL.10	150.000.000 < C ≤ 500.000.000	26	16,8%	8.222.609	22,9%	28.632	23,5%
RL.11	C > 500.000.000	18	11,6%	24.976.628	69,4%	80.748	66,3%
Total		**152**	**100,0%**	**35.975.207**	**100,0%**	**121.881**	**100,0%**
		-		-			

2. Billing at current tariffs (€/MWh)

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transmission network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	0,975	0,251	0,437	4,685	6,347	20,030	26,376
RL.2	5.000 < C ≤ 15.000							
RL.3	15.000 < C ≤ 50.000	0,975	0,251	0,437	14,666	16,328	20,030	36,358
RL.4	50.000 < C ≤ 300.000	0,975	0,251	0,437	3,217	4,880	20,030	24,909
RL.5	300.000 < C ≤ 1.500.000	0,975	0,251	0,437	5,397	7,060	20,030	27,089
RL.6	1.500.000 < C ≤ 5.000.000	0,975	0,251	0,437	4,655	6,317	20,030	26,347
RL.7	5.000.000 < C ≤ 15.000.000	0,975	0,251	0,437	5,989	7,651	20,030	27,681
RL.8	15.000.000 < C ≤ 50.000.000	0,975	0,251	0,437	3,788	5,450	20,030	25,480
RL.9	50.000.000 < C ≤ 150.000.000	0,975	0,251	0,437	2,944	4,607	20,030	24,636
RL.10	150.000.000 < C ≤ 500.000.000	0,975	0,251	0,437	2,566	4,228	20,030	24,258
RL.11	C > 500.000.000	0,975	0,251	0,437	2,204	3,866	20,030	23,896
Total		**0,97**	**0,25**	**0,44**	**2,38**	**4,05**	**20,030**	**24,08**

3. Billing at the resulting tariffs from Circular (€/MWh)

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transmission network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	0,879	0,251	0,791	30,656	32,577	20,030	52,607
RL.2	5.000 < C ≤ 15.000					-		
RL.3	15.000 < C ≤ 50.000	0,879	0,251	0,791	12,643	14,564	20,030	34,594
RL.4	50.000 < C ≤ 300.000	0,879	0,251	0,791	14,204	16,125	20,030	36,155
RL.5	300.000 < C ≤ 1.500.000	0,879	0,251	0,791	12,919	14,840	20,030	34,870
RL.6	1.500.000 < C ≤ 5.000.000	0,879	0,251	0,791	10,419	12,340	20,030	32,370
RL.7	5.000.000 < C ≤ 15.000.000	0,879	0,251	0,791	8,528	10,449	20,030	30,479
RL.8	15.000.000 < C ≤ 50.000.000	0,879	0,251	0,791	4,014	5,935	20,030	25,965
RL.9	50.000.000 < C ≤ 150.000.000	0,879	0,251	0,791	1,964	3,885	20,030	23,915
RL.10	150.000.000 < C ≤ 500.000.000	0,879	0,251	0,791	1,498	3,419	20,030	23,449
RL.11	C > 500.000.000	0,879	0,251	0,791	0,912	2,833	20,030	22,862
Total		**0,88**	**0,25**	**0,79**	**1,23**	**3,15**	**20,030**	**23,18**

4. % variation between billing at the resulting tariffs from the Circular and at current tariffs

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transmission network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	-9,8%	0,0%	81,1%	554,4%	413,3%	0,0%	99,4%
RL.2	5.000 < C ≤ 15.000							
RL.3	15.000 < C ≤ 50.000	-9,8%	0,0%	81,1%	-13,8%	-10,8%	0,0%	-4,9%
RL.4	50.000 < C ≤ 300.000	-9,8%	0,0%	81,1%	341,5%	230,5%	0,0%	45,1%
RL.5	300.000 < C ≤ 1.500.000	-9,8%	0,0%	81,1%	139,4%	110,2%	0,0%	28,7%
RL.6	1.500.000 < C ≤ 5.000.000	-9,8%	0,0%	81,1%	123,8%	95,3%	0,0%	22,9%
RL.7	5.000.000 < C ≤ 15.000.000	-9,8%	0,0%	81,1%	42,4%	36,6%	0,0%	10,1%
RL.8	15.000.000 < C ≤ 50.000.000	-9,8%	0,0%	81,1%	6,0%	8,9%	0,0%	1,9%
RL.9	50.000.000 < C ≤ 150.000.000	-9,8%	0,0%	81,1%	-33,3%	-15,7%	0,0%	-2,9%
RL.10	150.000.000 < C ≤ 500.000.000	-9,8%	0,0%	81,1%	-41,6%	-19,1%	0,0%	-3,3%
RL.11	C > 500.000.000	-9,8%	0,0%	81,1%	-58,6%	-26,7%	0,0%	-4,3%
Total		**-9,8%**	**0,0%**	**81,1%**	**-48,3%**	**-22,0%**	**0,0%**	**-3,7%**

Source: CNMC

Table 98. Billing for customers connected at pressure between 4 and 16 bars supplied from the transmission-distribution network to the current access tariffs and tariffs resulting from the Circular. Year 2020. No transitional period

1. Billing Variables

Tariff	Size (kWh)	Nº of Customers	% over total Nº of customers	Volume (MWh)	% over the total volume	Capacity (€/MWh/day)	% over the total capacity
RL.1	C ≤ 5.000	53	1,4%	6	0,0%	57	0,0%
RL.2	5.000 < C ≤ 15.000	23	0,6%	275	0,0%	15	0,0%
RL.3	15.000 < C ≤ 50.000	57	1,6%	2.387	0,0%	74	0,0%
RL.4	50.000 < C ≤ 300.000	291	8,0%	53.946	0,1%	447	0,1%
RL.5	300.000 < C ≤ 1.500.000	750	20,6%	599.502	0,6%	2.992	0,8%
RL.6	1.500.000 < C ≤ 5.000.000	751	20,6%	2.394.661	2,5%	11.016	2,9%
RL.7	5.000.000 < C ≤ 15.000.000	712	19,5%	6.384.865	6,7%	36.692	9,6%
RL.8	15.000.000 < C ≤ 50.000.000	574	15,8%	14.714.284	15,5%	69.813	18,3%
RL.9	50.000.000 < C ≤ 150.000.000	295	8,1%	23.091.397	24,3%	92.315	24,2%
RL.10	150.000.000 < C ≤ 500.000.000	124	3,4%	35.945.930	37,8%	127.655	33,5%
RL.11	C > 500.000.000	13	0,4%	12.014.647	12,6%	39.916	10,5%
Total		**3.644**	**100,0%**	**95.201.901**	**100,0%**	**380.992**	**100,0%**

2. Billing at current tariffs (€/MWh)

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transmission network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	0,975	0,251	0,437	23.630,895	23.632,557	20,030	23.652,586
RL.2	5.000 < C ≤ 15.000	0,975	0,251	0,437	139,768	141,430	20,030	161,460
RL.3	15.000 < C ≤ 50.000	0,975	0,251	0,437	89,848	91,510	20,030	111,540
RL.4	50.000 < C ≤ 300.000	0,975	0,251	0,437	23,550	25,213	20,030	45,242
RL.5	300.000 < C ≤ 1.500.000	0,975	0,251	0,437	7,210	8,872	20,030	28,902
RL.6	1.500.000 < C ≤ 5.000.000	0,975	0,251	0,437	5,131	6,793	20,030	26,823
RL.7	5.000.000 < C ≤ 15.000.000	0,975	0,251	0,437	4,416	6,078	20,030	26,108
RL.8	15.000.000 < C ≤ 50.000.000	0,975	0,251	0,437	3,664	5,326	20,030	25,356
RL.9	50.000.000 < C ≤ 150.000.000	0,975	0,251	0,437	2,985	4,647	20,030	24,677
RL.10	150.000.000 < C ≤ 500.000.000	0,975	0,251	0,437	2,602	4,265	20,030	24,294
RL.11	C > 500.000.000	0,975	0,251	0,437	2,280	3,943	20,030	23,972
Total		**0,97**	**0,25**	**0,44**	**3,05**	**4,71**	**20,030**	**24,74**

3. Billing at the resulting tariffs from Circular (€/MWh)

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transmission network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	0,879	0,251	0,791	478,118	480,039	20,030	500,069
RL.2	5.000 < C ≤ 15.000	0,879	0,251	0,791	22,134	24,055	20,030	44,085
RL.3	15.000 < C ≤ 50.000	0,879	0,251	0,791	17,806	19,728	20,030	39,757
RL.4	50.000 < C ≤ 300.000	0,879	0,251	0,791	17,581	19,502	20,030	39,532
RL.5	300.000 < C ≤ 1.500.000	0,879	0,251	0,791	15,625	17,546	20,030	37,575
RL.6	1.500.000 < C ≤ 5.000.000	0,879	0,251	0,791	11,736	13,657	20,030	33,686
RL.7	5.000.000 < C ≤ 15.000.000	0,879	0,251	0,791	7,523	9,444	20,030	29,473
RL.8	15.000.000 < C ≤ 50.000.000	0,879	0,251	0,791	3,808	5,729	20,030	25,759
RL.9	50.000.000 < C ≤ 150.000.000	0,879	0,251	0,791	1,954	3,875	20,030	23,905
RL.10	150.000.000 < C ≤ 500.000.000	0,879	0,251	0,791	1,518	3,439	20,030	23,469
RL.11	C > 500.000.000	0,879	0,251	0,791	0,934	2,855	20,030	22,885
Total		**0,88**	**0,25**	**0,79**	**2,66**	**4,58**	**20,030**	**24,61**

4. % variation between billing at the resulting tariffs from the Circular and at current tariffs

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transmission network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	-9,8%	0,0%	81,1%	-98,0%	-98,0%	0,0%	-97,9%
RL.2	5.000 < C ≤ 15.000	-9,8%	0,0%	81,1%	-84,2%	-83,0%	0,0%	-72,7%
RL.3	15.000 < C ≤ 50.000	-9,8%	0,0%	81,1%	-80,2%	-78,4%	0,0%	-64,4%
RL.4	50.000 < C ≤ 300.000	-9,8%	0,0%	81,1%	-25,3%	-22,6%	0,0%	-12,6%
RL.5	300.000 < C ≤ 1.500.000	-9,8%	0,0%	81,1%	116,7%	97,8%	0,0%	30,0%
RL.6	1.500.000 < C ≤ 5.000.000	-9,8%	0,0%	81,1%	128,7%	101,0%	0,0%	25,6%
RL.7	5.000.000 < C ≤ 15.000.000	-9,8%	0,0%	81,1%	70,3%	55,4%	0,0%	12,9%
RL.8	15.000.000 < C ≤ 50.000.000	-9,8%	0,0%	81,1%	3,9%	7,6%	0,0%	1,6%
RL.9	50.000.000 < C ≤ 150.000.000	-9,8%	0,0%	81,1%	-34,5%	-16,6%	0,0%	-3,1%
RL.10	150.000.000 < C ≤ 500.000.000	-9,8%	0,0%	81,1%	-41,7%	-19,4%	0,0%	-3,4%
RL.11	C > 500.000.000	-9,8%	0,0%	81,1%	-59,0%	-27,6%	0,0%	-4,5%
Total		**-9,8%**	**0,0%**	**81,1%**	**-12,7%**	**-2,7%**	**0,0%**	**-0,5%**

Source: CNMC

Table 99. Billing for customers connected at a pressure equal to or lower than 4 bar supplied from the transmission-distribution network to the current access tariffs and tariffs resulting from the Circular. Year 2020. No transitional period

1. Billing Variables

Tariff	Size (kWh)	Nº of Customers	% over total Nº of customers	Volume (MWh)	% over the total volume	Capacity (€/MWh/day)	% over the total capacity
RL.1	C ≤ 5.000	4.536.540	58,1%	10.490.044	15,7%	66.801	15,3%
RL.2	5.000 < C ≤ 15.000	2.860.874	36,7%	20.459.080	30,7%	144.769	33,1%
RL.3	15.000 < C ≤ 50.000	328.804	4,2%	6.565.114	9,8%	46.455	10,6%
RL.4	50.000 < C ≤ 300.000	53.045	0,7%	5.904.305	8,8%	37.257	8,5%
RL.5	300.000 < C ≤ 1.500.000	21.196	0,3%	11.772.230	17,6%	76.015	17,4%
RL.6	1.500.000 < C ≤ 5.000.000	2.463	0,0%	5.307.614	8,0%	34.423	7,9%
RL.7	5.000.000 < C ≤ 15.000.000	424	0,0%	3.234.487	4,8%	18.438	4,2%
RL.8	15.000.000 < C ≤ 50.000.000	103	0,0%	2.474.490	3,7%	11.486	2,6%
RL.9	50.000.000 < C ≤ 150.000.000	8	0,0%	535.244	0,8%	1.913	0,4%
RL.10	150.000.000 < C ≤ 500.000.000	-	0,0%	-	0,0%	-	0,0%
RL.11	C > 500.000.000	-	0,0%	-	0,0%	-	0,0%
Total		**7.803.458**	**100,0%**	**66.742.608**	**100,0%**	**437.558**	**100,0%**
		-		-			

2. Billing at current tariffs (€/MWh)

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transport network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	0,975	0,251	0,437	41,943	43,605	20,030	63,635
RL.2	5.000 < C ≤ 15.000	0,975	0,251	0,437	31,655	33,317	20,030	53,347
RL.3	15.000 < C ≤ 50.000	0,975	0,251	0,437	25,419	27,081	20,030	47,111
RL.4	50.000 < C ≤ 300.000	0,975	0,251	0,437	20,717	22,379	20,030	42,409
RL.5	300.000 < C ≤ 1.500.000	0,975	0,251	0,437	14,287	15,950	20,030	35,979
RL.6	1.500.000 < C ≤ 5.000.000	0,975	0,251	0,437	12,976	14,638	20,030	34,668
RL.7	5.000.000 < C ≤ 15.000.000	0,975	0,251	0,437	8,209	9,871	20,030	29,901
RL.8	15.000.000 < C ≤ 50.000.000	0,975	0,251	0,437	4,401	6,063	20,030	26,093
RL.9	50.000.000 < C ≤ 150.000.000	0,975	0,251	0,437	3,742	5,404	20,030	25,434
RL.10	150.000.000 < C ≤ 500.000.000					-		-
RL.11	C > 500.000.000					-		-
Total		**0,97**	**0,25**	**0,44**	**24,77**	**26,43**	**20,030**	**46,46**

3. Billing at the resulting tariffs from Circular (€/MWh)

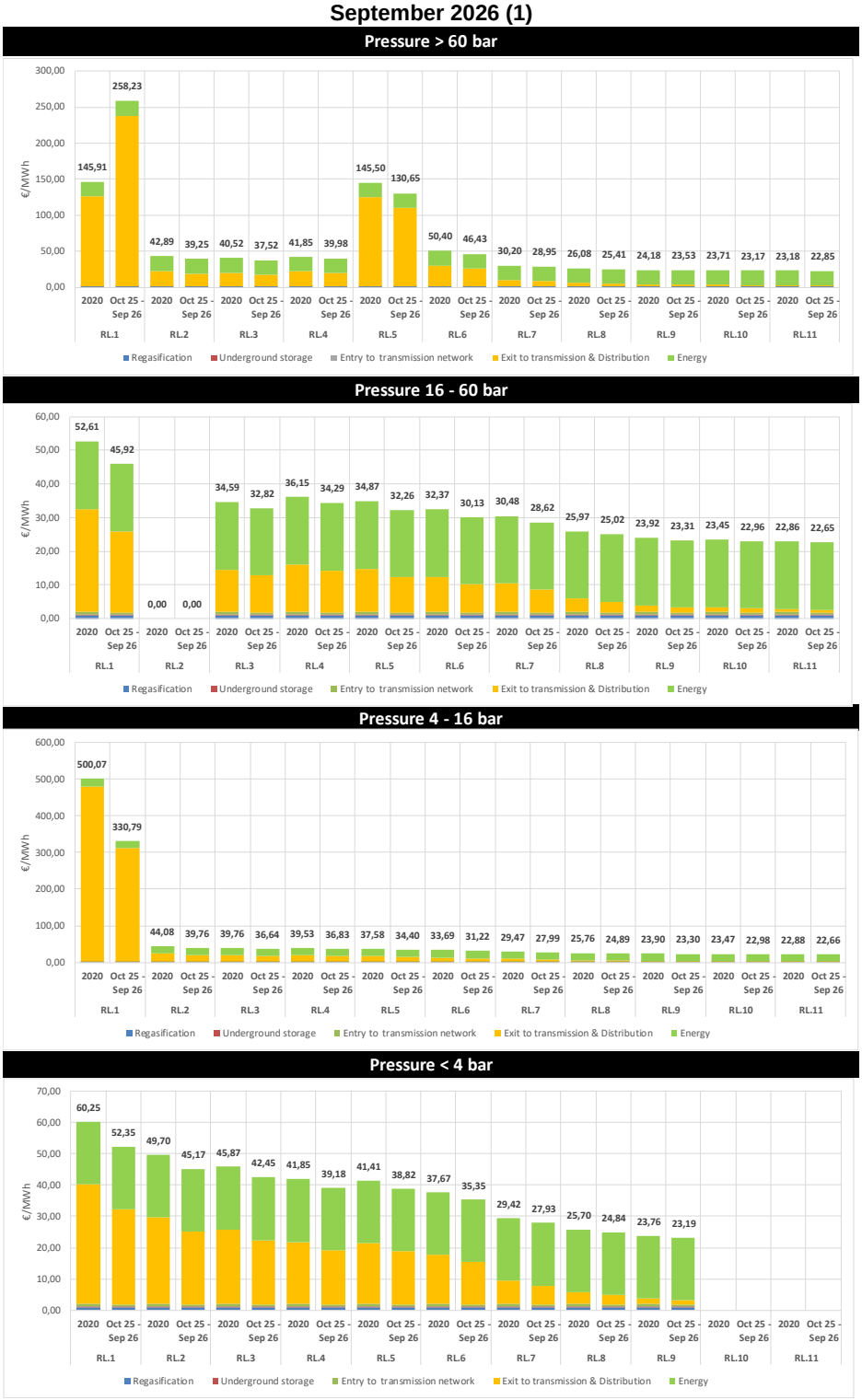
Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transport network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	0,879	0,251	0,791	38,299	40,221	20,030	60,250
RL.2	5.000 < C ≤ 15.000	0,879	0,251	0,791	27,747	29,669	20,030	49,698
RL.3	15.000 < C ≤ 50.000	0,879	0,251	0,791	23,921	25,842	20,030	45,871
RL.4	50.000 < C ≤ 300.000	0,879	0,251	0,791	19,898	21,819	20,030	41,849
RL.5	300.000 < C ≤ 1.500.000	0,879	0,251	0,791	19,462	21,383	20,030	41,413
RL.6	1.500.000 < C ≤ 5.000.000	0,879	0,251	0,791	15,716	17,637	20,030	37,667
RL.7	5.000.000 < C ≤ 15.000.000	0,879	0,251	0,791	7,473	9,394	20,030	29,424
RL.8	15.000.000 < C ≤ 50.000.000	0,879	0,251	0,791	3,744	5,666	20,030	25,695
RL.9	50.000.000 < C ≤ 150.000.000	0,879	0,251	0,791	1,812	3,733	20,030	23,762
RL.10	150.000.000 < C ≤ 500.000.000					-		
RL.11	C > 500.000.000					-		
Total		**0,88**	**0,25**	**0,79**	**23,84**	**25,76**	**20,030**	**45,79**

4. % variation between billing at the resulting tariffs from the Circular and at current tariffs

Tariff	Size (kWh)	Regasification	Underground storage	Entrance to transport network	Transmission exit & Distribution	Total access	Energy	Total
RL.1	C ≤ 5.000	-9,8%	0,0%	81,1%	-8,7%	-7,8%	0,0%	-5,3%
RL.2	5.000 < C ≤ 15.000	-9,8%	0,0%	81,1%	-12,3%	-11,0%	0,0%	-6,8%
RL.3	15.000 < C ≤ 50.000	-9,8%	0,0%	81,1%	-5,9%	-4,6%	0,0%	-2,6%
RL.4	50.000 < C ≤ 300.000	-9,8%	0,0%	81,1%	-4,0%	-2,5%	0,0%	-1,3%
RL.5	300.000 < C ≤ 1.500.000	-9,8%	0,0%	81,1%	36,2%	34,1%	0,0%	15,1%
RL.6	1.500.000 < C ≤ 5.000.000	-9,8%	0,0%	81,1%	21,1%	20,5%	0,0%	8,7%
RL.7	5.000.000 < C ≤ 15.000.000	-9,8%	0,0%	81,1%	-9,0%	-4,8%	0,0%	-1,6%
RL.8	15.000.000 < C ≤ 50.000.000	-9,8%	0,0%	81,1%	-14,9%	-6,6%	0,0%	-1,5%
RL.9	50.000.000 < C ≤ 150.000.000	-9,8%	0,0%	81,1%	-51,6%	-30,9%	0,0%	-6,6%
RL.10	150.000.000 < C ≤ 500.000.000							
RL.11	C > 500.000.000							
Total		**-9,8%**	**0,0%**	**81,1%**	**-3,8%**	**-2,6%**	**0,0%**	**-1,5%**

Source: CNMC

Figure 10. Final billing (euros/MWh) for customers supplied from the transmission-distribution network, by pressure level, to the tariffs resulting from the Circular. Year 2020 vs. October 2025-September 2026 (1)



Source: CNMC

(1) Excluding taxes and shipping margin

2.3 Economic impact for customers connected to local networks supplied from satellite LNG facilities

Table 100 shows the billing for customers connected to supply networks from satellite LNG facilities to the variables for the year 2020 at the resulting tariffs from the Circular and at the current tariffs.

The impact does not consider the transmission service from the regasification plant to the satellite LNG facility, unloading at the satellite LNG facility and operation of the satellite LNG facility, in accordance with the economic conditions freely established by each distribution company. It is noted that distribution companies provide the transmission services from the regasification plant to the satellite LNG facility, unloading at the satellite LNG facility and operation of the satellite LNG facility, in accordance with the economic conditions freely established by each distribution company. The prices charged for these services usually consist of a term based on the distance between the satellite LNG facility and the regasification plant, although they also usually incorporate fixed terms[36]. This Commission does not have the necessary information to estimate the average cost of road transporting per tariff group, and is therefore excluded from the analysis.

It can be seen that the resulting billing from the application of the tariffs in the Circular is between 6.4% and 25.4% higher than the one resulting from the application of the current tariffs, with the greatest impact on smaller customers.

It should be noted that the average access billing of customers connected to local networks supplied from satellite LNG facilities at current access tariffs is between 39.6% and 55.3% lower than those of customers connected to local networks supplied from the transmission network. The average access billing for customers supplied from satellite LNG facilities at the resulting tariffs of the Circular is 7.9% to 26.4% lower than those of customers connected to local networks supplied from the transmission network (see Figure 11).

[36] By way of example, the conditions applicable by some of the distribution companies are as follows: Nedgia (https://www.nedgia.es/comercializadores/servicio-de-descarga-en-plantas-gnl/), Nortegas (https://www.nortegas.es/informacion-util/), Redexis (https://www.redexisgas.es/colaboradores/servicios/servicio-de-descarga-en-plantas-de-gnl/).

Table 100. Billing for customers connected to local networks supplied from satellite LNG facilities to the current access tariffs and tariffs resulting from the Circular. 2020 year. No transitional period

1. Billing Variables

Tariff	Size (kWh)	Nº of Customers	% over the total customers	Volume (MWh)	% over the total volume	Capacity (MWh/day)	% over the total capacity
RL.1	C ≤ 5.000	103.776	66,7%	229.841	17,7%	1.580	18,8%
RL.2	5.000 < C ≤ 15.000	45.340	29,1%	334.972	25,8%	2.599	31,0%
RL.3	15.000 < C ≤ 50.000	5.211	3,3%	107.489	8,3%	834	9,9%
RL.4	50.000 < C ≤ 300.000	898	0,6%	118.905	9,2%	658	7,8%
RL.5	300.000 < C ≤ 1.500.000	339	0,2%	249.812	19,2%	1.384	16,5%
RL.6	1.500.000 < C ≤ 5.000.000	41	0,0%	118.205	9,1%	646	7,7%
RL.7	5.000.000 < C ≤ 15.000.000	10	0,0%	101.901	7,8%	510	6,1%
RL.8	15.000.000 < C ≤ 50.000.000	2	0,0%	37.964	2,9%	181	2,2%
RL.9	50.000.000 < C ≤ 150.000.000						
RL.10	150.000.000 < C ≤ 500.000.000						
RL.11	C > 500.000.000						
Total		**155.616**	**100,0%**	**1.299.090**	**100,0%**	**8.392**	**100,0%**

2. Billing at current tariffs (€/MWh)

Tariff	Size (kWh)	Regasification	Underground storage	Exit Local network	Total access	Energy	Total
RL.1	C ≤ 5.000	0,9746	0,2507	26,0227	27,248	20,030	47,278
RL.2	5.000 < C ≤ 15.000	0,9746	0,2507	19,2761	20,501	20,030	40,531
RL.3	15.000 < C ≤ 50.000	0,9746	0,2507	15,5640	16,789	20,030	36,819
RL.4	50.000 < C ≤ 300.000	0,9746	0,2507	13,3319	14,557	20,030	34,587
RL.5	300.000 < C ≤ 1.500.000	0,9746	0,2507	10,0038	11,229	20,030	31,259
RL.6	1.500.000 < C ≤ 5.000.000	0,9746	0,2507	8,8915	10,117	20,030	30,146
RL.7	5.000.000 < C ≤ 15.000.000	0,9746	0,2507	3,7498	4,975	20,030	25,005
RL.8	15.000.000 < C ≤ 50.000.000	0,9746	0,2507	1,4826	2,708	20,030	22,738
RL.9	50.000.000 < C ≤ 150.000.000						
RL.10	150.000.000 < C ≤ 500.000.000						
RL.11	C > 500.000.000						
Total		**0,975**	**0,251**	**15,153**	**16,378**	**20,030**	**36,41**

3. Billing at the resulting tariffs from Circular (€/MWh)

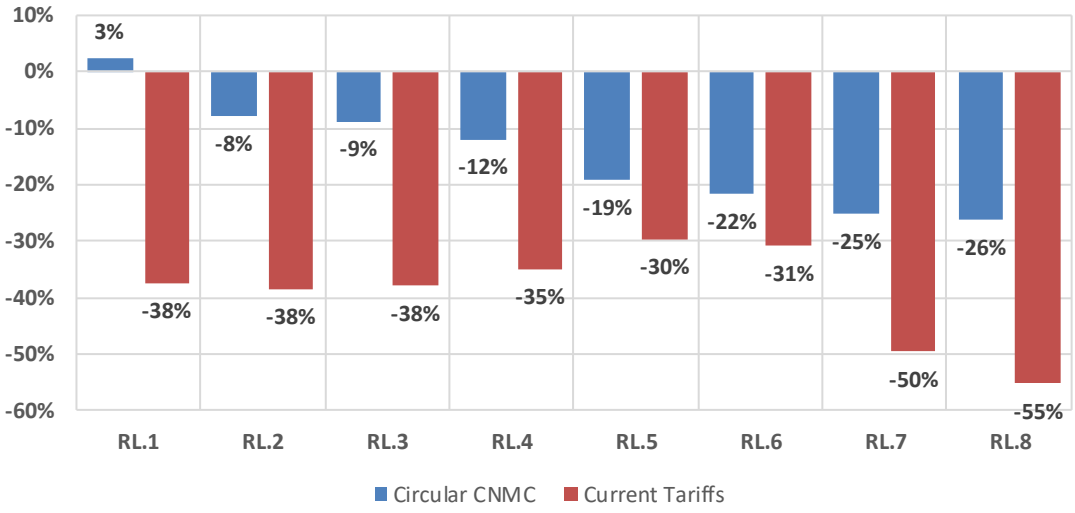
Tariff	Size (kWh)	Regasification	Underground storage	Exit Local network	Total access	Energy	Total
RL.1	C ≤ 5.000	0,8790	0,2507	38,1584	39,288	20,030	59,318
RL.2	5.000 < C ≤ 15.000	0,8790	0,2507	26,1814	27,311	20,030	47,341
RL.3	15.000 < C ≤ 50.000	0,8790	0,2507	22,4321	23,562	20,030	43,591
RL.4	50.000 < C ≤ 300.000	0,8790	0,2507	18,0968	19,227	20,030	39,256
RL.5	300.000 < C ≤ 1.500.000	0,8790	0,2507	16,1563	17,286	20,030	37,316
RL.6	1.500.000 < C ≤ 5.000.000	0,8790	0,2507	12,6756	13,805	20,030	33,835
RL.7	5.000.000 < C ≤ 15.000.000	0,8790	0,2507	5,9005	7,030	20,030	27,060
RL.8	15.000.000 < C ≤ 50.000.000	0,8790	0,2507	3,0429	4,173	20,030	24,202
RL.9	50.000.000 < C ≤ 150.000.000						
RL.10	150.000.000 < C ≤ 500.000.000						
RL.11	C > 500.000.000						
Total		**0,879**	**0,251**	**21,826**	**22,96**	**20,030**	**42,99**

4. % variation between billing at the resulting tariffs from the Circular and at current tariffs

Tariff	Size (kWh)	Regasification	Underground storage	Exit Local network	Total access	Energy	Total
RL.1	C ≤ 5.000	-9,8%	0,0%	46,6%	44,2%	0,0%	25,5%
RL.2	5.000 < C ≤ 15.000	-9,8%	0,0%	35,8%	33,2%	0,0%	16,8%
RL.3	15.000 < C ≤ 50.000	-9,8%	0,0%	44,1%	40,3%	0,0%	18,4%
RL.4	50.000 < C ≤ 300.000	-9,8%	0,0%	35,7%	32,1%	0,0%	13,5%
RL.5	300.000 < C ≤ 1.500.000	-9,8%	0,0%	61,5%	53,9%	0,0%	19,4%
RL.6	1.500.000 < C ≤ 5.000.000	-9,8%	0,0%	42,6%	36,5%	0,0%	12,2%
RL.7	5.000.000 < C ≤ 15.000.000	-9,8%	0,0%	57,4%	41,3%	0,0%	8,2%
RL.8	15.000.000 < C ≤ 50.000.000	-9,8%	0,0%	105,2%	54,1%	0,0%	6,4%
RL.9	50.000.000 < C ≤ 150.000.000						
RL.10	150.000.000 < C ≤ 500.000.000						
RL.11	C > 500.000.000						
Total		**-9,8%**	**0,0%**	**44,0%**	**40,2%**	**0,0%**	**18,1%**

Fuente: CNMC

Figure 11. Differential in billing for customers supplied from satellite LNG facilities and customers supplied from the transmission-distribution network, disaggregated by tariff group, at current tariffs and at the resulting tariffs from the Circular. Year 2020.



Source: CNMC

2.4 Impact on the structure of exit tariffs from the transmission and distribution network to final consumers

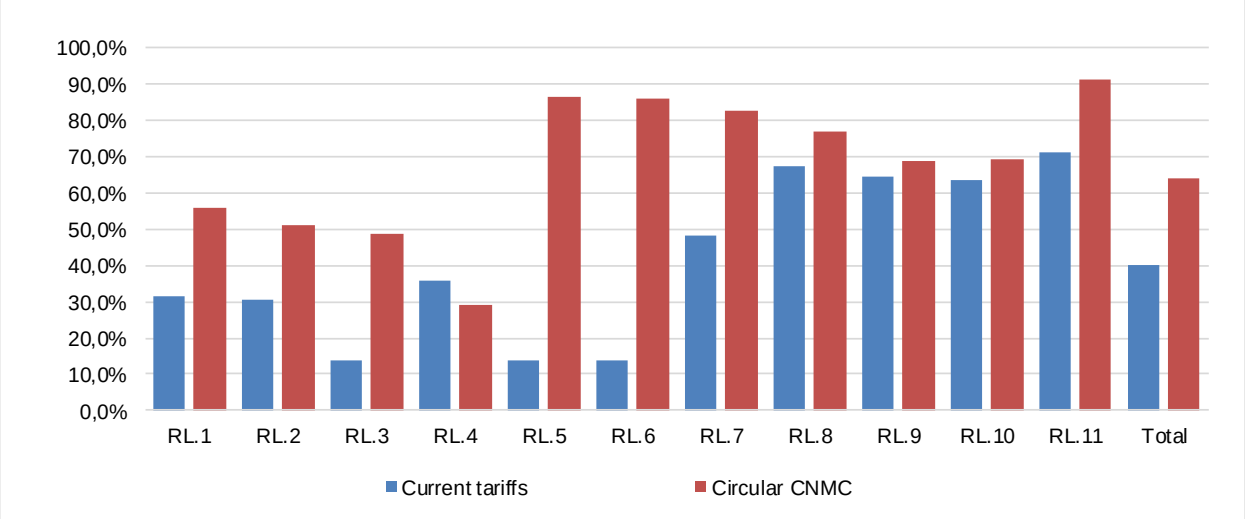
Some agents in their responses have pointed out that taking into consideration the nature of the costs, access tariffs to local networks should only consist of a fixed term.

Likewise, MITECO has pointed out in its report that the proposed tariff methodology increases the volatility of revenues, motivated by the fact that the percentage of network tariff revenues that are recovered for the fixed term is lower than that resulting from considering the term of the current tariffs.

Figure 12 compares the proportion of the billing for the term of the current tariffs with the proportion of the billing obtained through the fixed term of the exit tariffs from the transmission network, the tariffs for access to the local networks and tariffs associated with the recovery of other regasification costs resulting from the Circular, increased, as indicated, by the percentages to recover the charges. It is observed that, with the exception of the tariff group RL.4, the proportion of the invoicing recovered through the fixed term resulting from the tariffs of the Circular exceeds that resulting from considering the current tariffs.

Additionally, Figure 13 shows the same comparison disaggregated by pressure level.

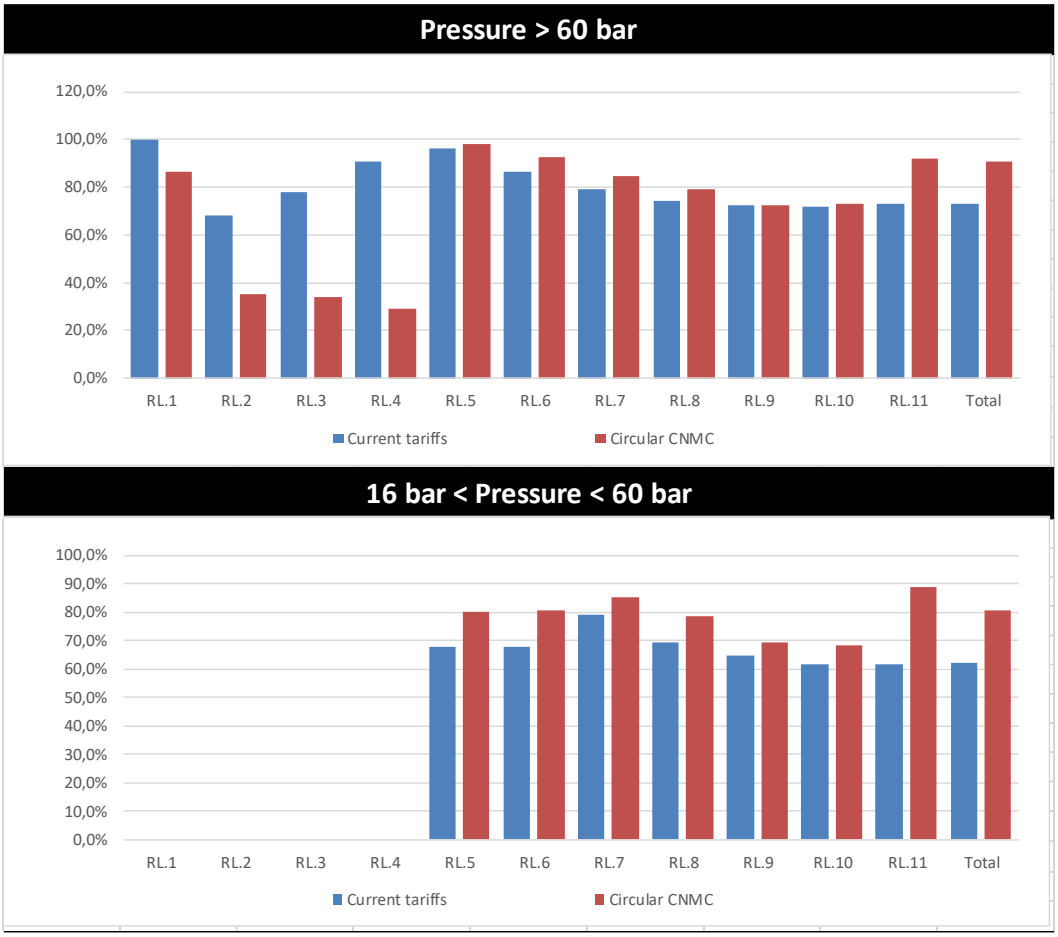
Figure 12. Proportion of the billing of the capacity term of the current tariffs and of the tariffs of the Circular (1) recovered through the fixed term. Year 2020.

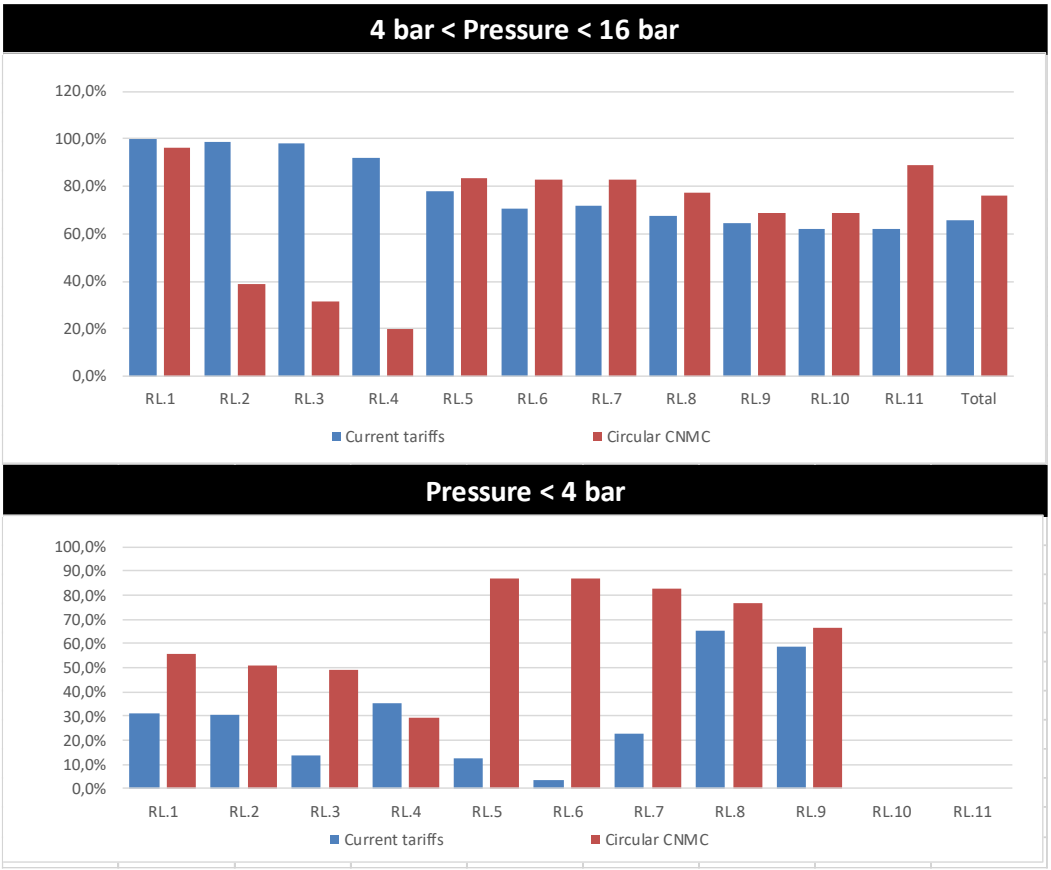


Source: CNMC

(1) It includes the billing for the exit from the transmission network, local networks and tariffs associated with the recovery of other regasification costs resulting from the Circular.

Figure 13. Proportion of the billing of the capacity term of the current tariff and of the tariff of the Circular (1) recovered through the fixed term, disaggregated by pressure level. Year 2020.





Source: CNMC

(1) It includes the billing for the exit from the transmission network, local networks and tariffs associated with the recovery of other regasification costs resulting from the Circular.

2.5 Economic impact by sector of activity

In order to assess the impact of the Circular's tariffs on the different economic sectors, customers have been billed with individualized information in the database of settlements for the access tariffs of the Circular and the current access tariffs corresponding to the 2018 year, and a comparison has been made between the access billing and the total billing (for access and energy, excluding supplier margin and taxes) resulting from considering the current access tariffs and the resulting tariffs from the Circular.

It is indicated that customers supplied by satellite LNG facility (7) and customers without classification by activity according to CNAE classification (288) have been excluded from the analysis. In particular, 4 279 supply points have been billed for which individualized information is available.

Billing for supply of electricity sector is reduced by 24% in average terms compared with the current tariffs. Only 4 out of 39 supply points increase their billing.

In the case of the other sectors of activity, it is stated that 30% (1,257) of customers whose consumption represents 88% of total consumption would experience reductions in their access billing, in average terms, of 20%. On the other hand, 70% of customers (2,978), whose consumption represents 12% of total consumption, would increase 35% their billing, in average terms. The table below shows the detail by activity.

Table 101. Billing for customers access with individualized information corresponding to the year 2018 to the current access tariffs and tariffs resulting from the Circular for the year 2020. No transitional period

				Billing (miles de €)		Average price (€/MWh)		Variation rate: proposed circular vs. Current
CNAE	CNAE Sectors	Supply points	Consumption (GWh)	Current	Porposed Circular	Current	Porposed Circular	
A	AGRICULTURE, LIVESTOCK, FORESTRY AND FISHERIES	47	2.116	9.638	8.633	4,55	4,08	-10,4%
01	*Agriculture, livestock, hunting and related services*	*45*	*1.922*	*8.757*	*7.908*	*4,56*	*4,11*	*-9,7%*
	Other activities	*2*	*194*	*881*	*725*	*4,54*	*3,74*	*-17,7%*
B	EXTRACTING INDUSTRIES	24	2.367	10.116	8.713	4,27	3,68	-13,9%
C	MANUFACTURING SECTOR	2.896	156.060	657.806	585.951	4,22	3,75	-10,9%
10	*Food industry*	*617*	*15.380*	*77.510*	*75.856*	*5,04*	*4,93*	*-2,1%*
11	*Beverage manufacturing*	*51*	*1.252*	*6.334*	*6.265*	*5,06*	*5,00*	*-1,1%*
13	*Textile industry*	*162*	*1.711*	*9.953*	*11.840*	*5,82*	*6,92*	*19,0%*
17	*Paper industry*	*154*	*15.636*	*62.786*	*53.121*	*4,02*	*3,40*	*-15,4%*
20	*Chemical industry*	*256*	*32.046*	*127.300*	*104.596*	*3,97*	*3,26*	*-17,8%*
21	*Pharmaceutical manufacturing*	*67*	*1.164*	*5.858*	*6.295*	*5,04*	*5,41*	*7,5%*
22	*Manufacture of rubber and plastic products*	*118*	*2.569*	*11.890*	*12.022*	*4,63*	*4,68*	*1,1%*
23	*Manufacture of other non-metallic mineral products*	*418*	*25.220*	*110.014*	*97.895*	*4,36*	*3,88*	*-11,0%*
24	*Metallurgy; manufacture of iron, steel and ferro-alloy products*	*258*	*15.810*	*68.309*	*60.403*	*4,32*	*3,82*	*-11,6%*
25	*Manufacture of metal products, except machinery and equipment*	*306*	*2.810*	*15.053*	*17.505*	*5,36*	*6,23*	*16,3%*
28	*Manufacture of machinery and equipment n.e.c.*	*179*	*2.892*	*16.518*	*15.848*	*5,71*	*5,48*	*-4,1%*
29	*Manufacture of motor vehicles, trailers and semi-trailers*	*55*	*424*	*2.751*	*3.266*	*6,49*	*7,70*	*18,7%*
	Other activities	*255*	*39.146*	*143.531*	*121.040*	*3,67*	*3,09*	*-15,7%*
D	ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY	146	28.883	111.490	92.297	3,86	3,20	-17,2%
E	WATER SUPPLY, SANITATION, WASTE MANAGEMENT AND	55	2.691	11.853	10.456	4,40	3,89	-11,8%
F	CONSTRUCTION	61	6.471	27.141	23.303	4,19	3,60	-14,1%
41	*Construction of buildings*	*22*	*184*	*1.346*	*1.400*	*7,31*	*7,60*	*4,0%*
42	*Civil Engineering*	*11*	*1.096*	*4.648*	*4.064*	*4,24*	*3,71*	*-12,5%*
43	*Specialized construction activities*	*28*	*5.191*	*21.148*	*17.839*	*4,07*	*3,44*	*-15,6%*
G	WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND	234	2.640	15.133	15.510	5,73	5,87	2,5%
H	TRANSPORT AND STORAGE	136	2.116	11.110	11.555	5,25	5,46	4,0%
49	*Land and pipeline transport*	*51*	*1.154*	*5.759*	*5.475*	*4,99*	*4,74*	*-4,9%*
52	*Storage and ancillary transport activities*	*84*	*911*	*5.005*	*5.812*	*5,49*	*6,38*	*16,1%*
	Other activities	*1*	*50*	*345*	*267*	*6,88*	*5,32*	*-22,7%*
I	HOSPITALITY	45	130	1.027	1.087	7,90	8,37	5,9%
J	INFORMATION AND COMMUNICATION	11	18	187	220	10,71	12,58	17,5%
K	FINANCIAL AND INSURANCE ACTIVITIES	14	498	2.394	2.216	4,81	4,45	-7,4%
L	PROPERTY BUSINESS	16	74	602	694	8,08	9,32	15,3%
M	PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES	22	359	2.200	2.378	6,12	6,62	8,1%
N	ACTIVIDADES ADMINISTRATIVAS Y SERVICIOS AUXILIARES	39	338	2.273	2.541	6,72	7,52	11,8%
O	PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL	33	207	1.804	1.765	8,70	8,51	-2,2%
P	EDUCATION	20	141	1.467	1.466	10,41	10,41	-0,1%
Q	HEALTH AND SOCIAL SERVICES ACTIVITIES	114	1.351	9.929	9.325	7,35	6,90	-6,1%
R	ACTIVIDADES ARTÍSTICAS, RECREATIVAS Y DE ENTRETENIMIENTO	17	94	827	825	8,81	8,79	-0,2%
S	OTHER SERVICES	88	776	5.293	5.597	6,82	7,21	5,7%
94	*Association activities*	*23*	*367*	*2.501*	*2.295*	*6,82*	*6,26*	*-8,3%*
96	*Other personal services*	*65*	*410*	*2.792*	*3.303*	*6,82*	*8,06*	*18,3%*
T	DOMESTIC ACTIVITIES	214	1.170	8.293	8.362	7,09	7,15	0,8%
U	ACTIVITIES OF EXTRATERRITORIAL ORGANISATIONS AND BODIES	7	114	791	747	6,93	6,54	-5,7%
TOTAL		4.239	208.614	891.375	793.640	4,27	3,80	-11,0%

Source: CNMC

Finally, considering that the impact of the tariffs of the Circular depends on what access represents on the total bill of the consumer. The total bill (i.e. access bill + energy cost) resulting from considering the current tariffs and the tariffs from the Circular is compared.
In the case of supplies whose activity is the generation of electrical energy, the total invoicing of considering the tariffs from the Circular would be, in average terms, 4.4% lower than that which would result from considering the current tariffs.

In the case of the other sectors of activity, the total billing of consumers for whom access billing is reduced would fall, on average, by 3.4%. While the total billing of consumers for whom access billing would increase would rise, on average, by 8%. The table below shows the impact on total turnover by sector of activity.

Table 102. Total billing (access + energy) of customers with individualized information corresponding to the year 2018 to the current access tariffs and tariffs resulting from the Circular for the year 2020. No transitional period

CNAE	CNAE Sectors	Supply points	Consumption (GWh)	Billing (miles de €)		Average price (€/MWh)		Variation rate: proposed circular vs. Current
				Current	Porposed Circular	Current	Porposed Circular	
A	AGRICULTURE, LIVESTOCK, FORESTRY AND FISHERIES	47	2.116	52.026	51.021	24,58	24,11	-1,9%
01	*Agriculture, livestock, hunting and related services*	*45*	*1.922*	*47.262*	*46.413*	*24,59*	*24,14*	*-1,8%*
	Other activities	*2*	*194*	*4.764*	*4.608*	*24,57*	*23,77*	*-3,3%*
B	EXTRACTING INDUSTRIES	24	2.367	57.517	56.114	24,30	23,71	-2,4%
C	MANUFACTURING SECTOR	2.896	156.060	3.783.632	3.711.778	24,24	23,78	-1,9%
10	*Food industry*	*617*	*15.380*	*385.558*	*383.904*	*25,07*	*24,96*	*-0,4%*
11	*Beverage manufacturing*	*51*	*1.252*	*31.411*	*31.343*	*25,09*	*25,03*	*-0,2%*
13	*Textile industry*	*162*	*1.711*	*44.222*	*46.109*	*25,85*	*26,95*	*4,3%*
17	*Paper industry*	*154*	*15.636*	*375.961*	*366.297*	*24,05*	*23,43*	*-2,6%*
20	*Chemical industry*	*256*	*32.046*	*769.177*	*746.472*	*24,00*	*23,29*	*-3,0%*
21	*Pharmaceutical manufacturing*	*67*	*1.164*	*29.164*	*29.600*	*25,06*	*25,44*	*1,5%*
22	*Manufacture of rubber and plastic products*	*118*	*2.569*	*63.354*	*63.486*	*24,66*	*24,71*	*0,2%*
23	*Manufacture of other non-metallic mineral products*	*418*	*25.220*	*615.160*	*603.041*	*24,39*	*23,91*	*-2,0%*
24	*Metallurgy; manufacture of iron, steel and ferro-alloy products*	*258*	*15.810*	*384.976*	*377.070*	*24,35*	*23,85*	*-2,1%*
25	*Manufacture of metal products, except machinery and equipment*	*306*	*2.810*	*71.331*	*73.783*	*25,39*	*26,26*	*3,4%*
28	*Manufacture of machinery and equipment n.e.c.*	*179*	*2.892*	*74.453*	*73.783*	*25,74*	*25,51*	*-0,9%*
29	*Manufacture of motor vehicles, trailers and semi-trailers*	*55*	*424*	*11.243*	*11.758*	*26,52*	*27,73*	*4,6%*
	Other activities	*255*	*39.146*	*927.622*	*905.131*	*23,70*	*23,12*	*-2,4%*
D	ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY	146	28.883	690.013	670.820	23,89	23,23	-2,8%
E	WATER SUPPLY, SANITATION, WASTE MANAGEMENT AND	55	2.691	65.757	64.360	24,43	23,91	-2,1%
F	CONSTRUCTION	61	6.471	156.745	152.906	24,22	23,63	-2,4%
41	*Construction of buildings*	*22*	*184*	*5.034*	*5.088*	*27,34*	*27,63*	*1,1%*
42	*Civil Engineering*	*11*	*1.096*	*26.594*	*26.011*	*24,27*	*23,74*	*-2,2%*
43	*Specialized construction activities*	*28*	*5.191*	*125.117*	*121.807*	*24,10*	*23,47*	*-2,6%*
G	WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND	234	2.640	68.014	68.391	25,76	25,90	0,6%
H	TRANSPORT AND STORAGE	136	2.116	53.488	53.933	25,28	25,49	0,8%
49	*Land and pipeline transport*	*51*	*1.154*	*28.881*	*28.597*	*25,02*	*24,77*	*-1,0%*
52	*Storage and ancillary transport activities*	*84*	*911*	*23.257*	*24.064*	*25,52*	*26,41*	*3,5%*
	Other activities	*1*	*50*	*1.351*	*1.272*	*26,91*	*25,35*	*-5,8%*
I	HOSPITALITY	45	130	3.630	3.691	27,93	28,40	1,7%
J	INFORMATION AND COMMUNICATION	11	18	538	571	30,74	32,61	6,1%
K	FINANCIAL AND INSURANCE ACTIVITIES	14	498	12.365	12.187	24,84	24,48	-1,4%
L	PROPERTY BUSINESS	16	74	2.093	2.185	28,11	29,35	4,4%
M	PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES	22	359	9.400	9.577	26,15	26,64	1,9%
N	ACTIVIDADES ADMINISTRATIVAS Y SERVICIOS AUXILIARES	39	338	9.045	9.313	26,75	27,55	3,0%
O	PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL	33	207	5.957	5.918	28,73	28,54	-0,7%
P	EDUCATION	20	141	4.288	4.287	30,44	30,44	0,0%
Q	HEALTH AND SOCIAL SERVICES ACTIVITIES	114	1.351	36.981	36.377	27,38	26,93	-1,6%
R	ACTIVIDADES ARTÍSTICAS, RECREATIVAS Y DE ENTRETENIMIENTO	17	94	2.708	2.706	28,84	28,82	-0,1%
S	OTHER SERVICES	88	776	20.840	21.144	26,85	27,24	1,5%
94	*Association activities*	*23*	*367*	*9.843*	*9.637*	*26,85*	*26,29*	*-2,1%*
96	*Other personal services*	*65*	*410*	*10.997*	*11.508*	*26,85*	*28,09*	*4,6%*
T	DOMESTIC ACTIVITIES	214	1.170	31.718	31.788	27,12	27,18	0,2%
U	ACTIVITIES OF EXTRATERRITORIAL ORGANISATIONS AND BODIES	7	114	3.079	3.034	26,96	26,57	-1,5%
TOTAL		4.239	208.614	5.069.835	4.972.100	24,30	23,83	-1,9%

Source: CNMC

2.6 LNG facilities and international connections entries to the transmission network.

The table below compares average access billing for the average supplier forecast for 2020, in order to analyze the impact of the proposed methodology on the access billing differential resulting from introducing gas into the system via LNG facilities or international connections. It can be seen that the average differential is 18.6% lower than that resulting from the application of current tariffs.

Table 103. Average access bill resulting from introducing gas into the system by LNG facilities or international connections to the current tariffs and the resulting tariffs from the Circular. Year 2020.

	Tariffs from the proposed Circular (charges included)		Current tariffs		Variation rate	
Service	LNG entry	Pipeline entry	LNG entry	Pipeline entry	LNG entry	Pipeline entry
LNG ship unloading	0,08038	-	0,10534	-	-23,7%	
LNG storage	0,41792	-	0,60753	-	-31,2%	
Regasification	1,00080	-	0,88704	-	12,8%	
Transmission network entry	0,72331	0,92030	0,42649	0,42649	69,6%	115,8%
Total	**2,22241**	**0,92030**	**2,02641**	**0,42649**	**9,7%**	**115,8%**
Diference LNG-NG		**1,30211**		**1,59992**		**-18,6%**

Source: CNMC

2.7 International comparison

An analysis of the impact on competitiveness of the tariffs from the Circular with respect to the current tariffs is shown in next sections, of the resulting methodology proposed for the year 2020 with the corresponding tariffs associated with the various services provided by the LNG facilities in neighbor countries.

2.7.1 Alternatives for introducing gas into Spain's Virtual Interconnection Point through Portugal

Table 104 compares the invoicing, in average terms, that would result from introducing 1 TWh in the Spanish VBP from Portugal (Sines plant) or by Spain through LNG facilities to the current tariffs and the tariffs from the Circular, considering the following hypotheses:

- Nº of unloaded ships: 1
- Unloaded volume (TWh): 1
- Flat regasification for 30 days
- Individual services of annual duration are considered to be contracted, with the exception of the LNG storage service for which a daily contract is considered

It can be seen that introducing gas into Spain from the Sines plant, at current tariffs, means a saving for the shipper of 0.76 euros/MWh, while with the tariffs from the Circular this difference is reduced to 0.30 euros/MWh, i.e. 60% less.

Table 104. Invoicing of the access to the Spanish VBP from the SINES plant and from the Spanish plants

Current Tariffs										
	Entry via Portugal			Entry via Spain				Portugal vs Spain	
Service	Fixed term (€/kWh/día/mes)	Variable term (€/kWh)	Average billing (€/MWh)	€/Ship	Fixed term (€/kWh/día /mes)	Variable term (€/kWh)	Average billing (€/MWh)	€/MWh	%
Regasification			**0,5747**				**1,3425**	**- 0,7678**	**-57%**
LNG ship unloading		0,00004003	0,0400	33.978		0,000069	0,1030	- 0,0629	-61%
LNG Storage	0,0005820		0,2774			0,000032	0,4698	- 0,1924	-41%
Regasification	0,0041830	0,00011782	0,2573		0,019612	0,000116	0,7697	- 0,5125	-67%
Entrance - Portugal	**0,0002439**		**0,0081**					**0,0081**	
Exit - Portugal	**0,0000582**		**0,0019**					**0,0019**	
Entrance - España	**0,010848**	**-**	**0,3616**		**0,010848**	**-**	**0,3616**	**-**	**0%**
Total			**0,9464**				**1,7041**	**- 0,7577**	**-44%**

CNMC Tariffs									
	Entry via Portugal			Entry via Spain				Portugal vs Spain	
Service	Fixed term (€/kWh/día/mes)	Variable term (€/kWh)	Average billing (€/MWh)	€/Ship	Fixed term (€/kWh/día /mes)	Variable term (€/kWh)	Average billing (€/MWh)	€/MWh	%
Regasification			**0,5747**				**1,3351**	**- 0,7603**	**-57%**
LNG ship unloading		0,00004003	0,0400	55.645		0,000017	0,0731	- 0,0330	-45%
LNG Storage	0,0005820		0,2774		0,000485	0,000002	0,4394	- 0,1620	-37%
Regasification	0,0041830	0,00011782	0,2573		0,020885	0,000126	0,8226	- 0,5653	-69%
Entrance - Portugal	**0,0002439**		**0,0081**					**0,0081**	
Exit - Portugal	**0,0000582**		**0,0019**					**0,0019**	
Entrance - España	**0,0301440**	**0,000025**	**1,0294**		**0,016771**	**0,000025**	**0,5836**	**0,4458**	**76%**
Total			**1,6142**				**1,9187**	**- 0,3045**	**-16%**

Source: CNMC y ERSE

2.7.2 Alternatives for introducing gas into Spain's Virtual Interconnection Point through France

Similarly to the Portuguese case, Table 105 compares the average billing that would result from introducing 1 TWh in the Spanish PVB from France through the Montoir-de-Bretagne plant or from Spain through LNG plants to the current tariffs and the tariffs from the Circular, considering the same assumptions as for the Portuguese case. Additionally, it is indicated that the tariffs corresponding to the basic service (which includes unloading, LNG storage and regasification) of the Montoir-de-Bretagne plant have been taken as the lowest cost option.

It can be seen that introducing gas into Spain through the Montoir-de-Bretagne plant, at the current tariffs, means an extra cost for the shipper of 1.41 euros/MWh, while with the tariffs of the Circular this difference is reduced to 1.45 euros/MWh, which is 2.4% higher.

Table 105. Billing for access to the Spanish VBP from the Montoir-de-Bretagne plant and from the Spanish plants

Current Tariffs										
	Entry via France				Entry via Spain				France vs Spain	
Service	€/Ship	Fixed term (€/kWh/día/mes)	Variable term (€/kWh)	Average billing (€/MWh)	€/Ship	Fixed term (€/kWh/día/mes)	Variable term (€/kWh)	Average billing (€/MWh)	€/MWh	%
Regasification				**0,7860**				**1,3425**	**- 0,5565**	**-41%**
LNG ship unloading	90.000		0,000696	0,7860	33.978		0,000069	0,1030	0,6830	663%
LNG Storage							0,000032	0,4698	- 0,4698	-100%
Regasification						0,019612	0,000116	0,7697	- 0,7697	-100%
Entrance - France		**0,006805**		**0,2268**					**0,2268**	
Exit - France		**0,052246**		**1,7415**					**1,7415**	
Entrance - España		**0,010848**	-	**0,3616**		**0,010848**	-	**0,3616**	-	**0%**
Total				**3,1160**				**1,7041**	**1,4118**	**83%**

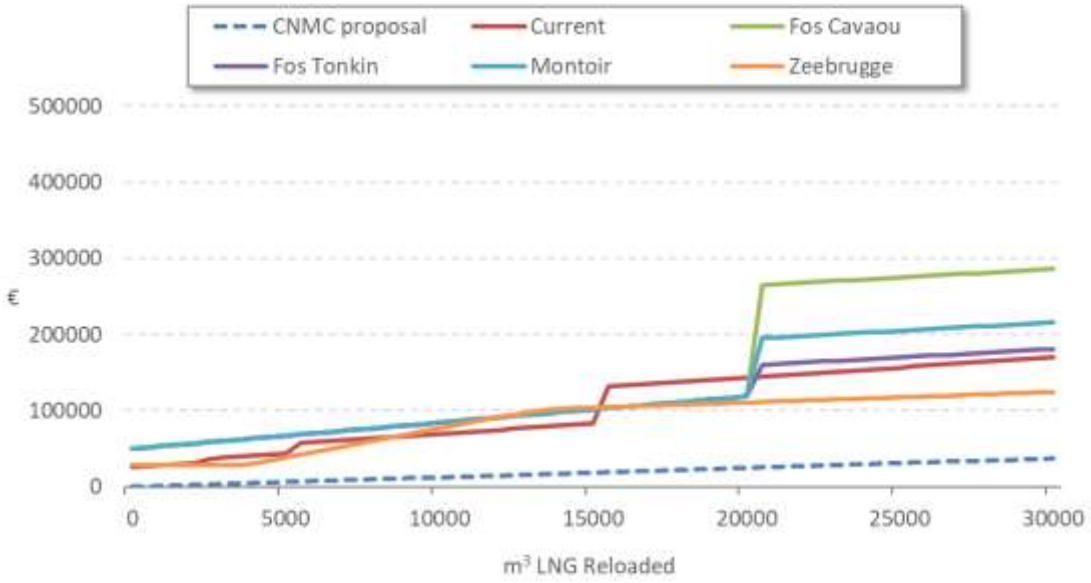
CNMC Tariffs										
	Entry via France				Entry via Spain				France vs Spain	
Service	€/Ship	Fixed term (€/kWh/día/mes)	Variable term (€/kWh)	Average billing (€/MWh)	€/Ship	Fixed term (€/kWh/día/mes)	Variable term (€/kWh)	Average billing (€/MWh)	€/MWh	%
Regasification				**0,7860**				**1,3351**	**- 0,5491**	**-41%**
LNG ship unloading	90.000	-	0,000696	0,7860	55.645		0,000017	0,0731	0,7129	976%
LNG Storage						0,000485	0,000002	0,4394	- 0,4394	-100%
Regasification						0,020885	0,000126	0,8226	- 0,8226	-100%
Entrance - France	-	**0,00681**	-	**0,2268**					**0,2268**	
Exit - France	-	**0,05225**	-	**1,7415**					**1,7415**	
Entrance - España		**0,017565**	**0,000025**	**0,6101**		**0,016771**	**0,000025**	**0,5836**	**0,0265**	**5%**
Total				**3,3645**				**1,9187**	**1,4458**	**75%**

Source: CNMC y CRE

2.7.3 Competitiveness of the LNG ship reloading service

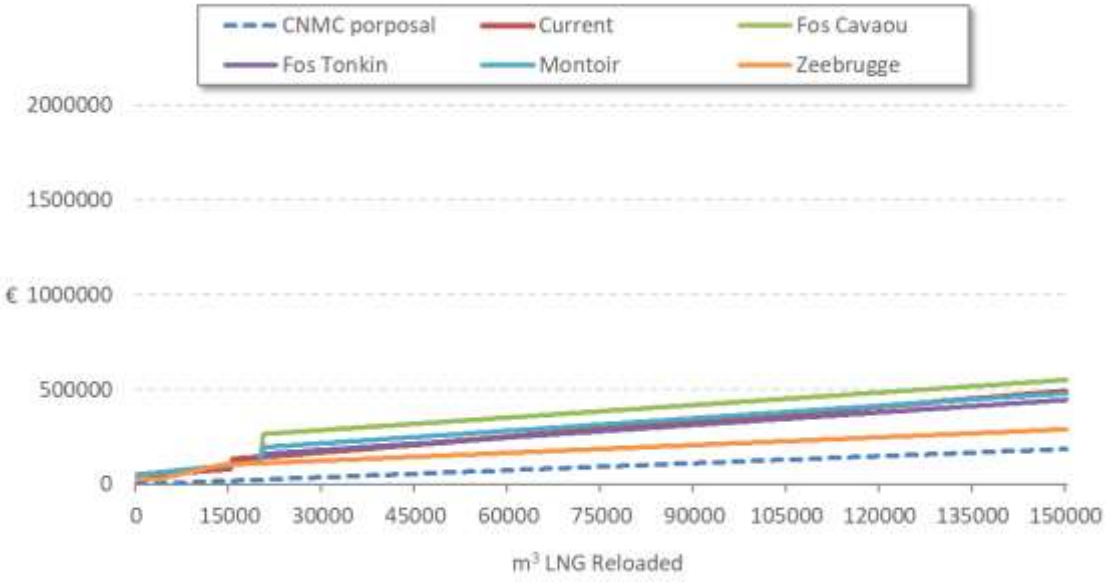
In addition, Graph 14 and Graph 15 compare the billing associated with the LNG ship reloading service at the current tariffs and those of the Circular in the Spanish case, with that of other European LNG terminals. In particular, the French terminals of Fos Cavaou, Fos Tonkin and Montoir, and the Belgian terminal of Zeebrugge are included in the comparison, which are nearby terminals, the most active in LNG loading operations and competitors of Spanish facilities in the provision of this service. Other terminals also quite active in this type of operations are Dutch, English or Dunkirk in France, although being exempt from third party access, information on their rates is not available and it has not been possible to include them in this analysis

Figure 14. Comparison of reloading costs up to 30,000 m3 LNG at different facilities



Source: CNMC

Figure 15. Comparison of reloading costs up to 150,000 m3 LNG at different facilities



Source: CNMC

It can be seen that the resulting tariffs from the methodology for the Spanish terminals are below both the current tariffs and the tariffs applied at the European facilities analyzed for all the volumes of cargo analyzed. For a 15,000 m^3 reloading, the savings in the Spanish facilities are over 80%.

In the case of higher reload volumes, typical of LNG re-export operations to other markets (usually due to price arbitrage/divergence between regions), the

differences are also considerable. As an example, for a 150,000 m^3 reloading, the cost at the Spanish LNG facilities is 69% lower than at Zeebrugge terminal.

3. Impact on energy-oriented policies

Order TEC/406/2019, of April 5th, which establishes energy policy guidelines to the CNMC sets out in its fifth paragraph the energy policy guidelines that the CNMC must follow in the methodology of electricity transmission and distribution tariffs.

It is considered that the resulting tariffs from the methodology of the Circular comply with the energy policy guidelines. This is due to the fact that the methodology establishes explicit rules for allocating the recognized compensation to the regasification, transmission and distribution activities in an objective, transparent, non-discriminatory manner and following criteria of efficiency in the use of the infrastructure. In this sense, differentiated tariffs are established for each of the services provided by the facility taking into account which of them are subject to international competition, in order to maximize the use of infrastructure, preserving in any case the sufficiency of incomes to recover the allowed revenues for each of the activities.

On the other hand, short-term multipliers have been defined in order to ensure the recovery of the recognized remuneration without it being a barrier to short-term contracting. Regarding this, it should be noted that the multipliers resulting from the methodology of the Circular are lower than the multipliers established in the current regulations. Consequently, the multipliers of the Circular do not penalize the formation of prices in the wholesale market, facilitating the electrification of the economy.

For these purposes, it is indicated that, as a result of billing the invoicing variables recorded in the financial year 2018 corresponding to combined cycles, the main users of contracts with a duration of less than one year, there is a reduction in the invoicing of exit tariffs from the transmission network and local networks, adjusted with the hypotheses set out in section VIII.1, with respect to the driving term of the current tariffs of between 17% and 55%, depending on the contract profile.

Finally, with regard to the applicable tariffs to the injection of biomethane and other gases of renewable origin, it is indicated that according to European regulations, the Regulator cannot discriminate either positively or negatively against certain uses, but tariffs for the use of the networks must be neutral.

In this context, it should be noted that Article 9 of Regulation (EU) 2017/460 provides that tariffs may only be set lower than those resulting from the methodology for (i) transmission tariffs for entry into and exit from storage

facilities, (ii) entry points from LNG facilities, and (iii) entry points from and exit points to infrastructure developed with the purpose of ending the isolation of Member States in respect of their gas transmission systems.

In this respect ACER indicated in the report on transmission tariffs in Germany that "*The Agency notes that the proposed tariff for entries from biogas and power-to-gas ('PtG') installations are set to zero. The Agency understands the rationale behind this choice, which is driven by policies on climate change. At the same time, the Agency remarks that this approach is not compliant with Article 6(3) of the NC TAR, which requires that the RPM be applied to all points of the network. For this reason, the Agency invites BNetzA to consider if the support to renewable gasses could be met in a different way than a discount on the entry tariff*"

Consequently, in order not to discriminate between the treatment given to biogas injections in the transmission and distribution networks, it has been decided to establish a 50% discount on the fixed term of the tariff for the use of the local networks that correspond to it.

4. Impact on competition

The proposed tariff methodology will have no impact on internal competition, insofar as consumers with the same characteristics will face the same tariffs for the use of the transmission and distribution networks.

Furthermore, as the proposed methodology generally results in a reduction in consumers' bills, it is estimated that it could have a beneficial impact on industries subject to international competition and, in particular, those most intensive in the use of natural gas, which will see their pre-tax cost reduced by approximately 0.5 to 0.8 euros/MWh.

5. Others impacts

The proposed Circular establishing the methodology for the calculation of tariffs for regasification, transmission and distribution of natural gas does not present impacts by gender. It should also be noted that it has no impact on children, adolescents or the family.

ANEXO I. FORECAST OF BILLING VARIABLES FOR THE REGULATORY PERIOD

ANNEX I. FORECAST OF BILLING VARIABLES FOR THE REGULATORY PERIOD

1. Forecast for 2019

CNMC´s forecast for 2019 has been updates considering the information available up to date:

In summary, the forecast update consists of:

- Update of closing values of year 2018 to real values.

- Forecasted demand of natural gas for electricity generation has been updated due to the sharp increase observed over 2019, driven by the increase in participation of combined cycles in the electricity mix due to the closure of the coal power plants and the current price situation. As a result, the estimated demand for electricity generation expected for 2019 is 119 TWh compared to 62 TWh in 2018.

- Forecasted demand for conventional industries has also been updated according to the latest available information. Industrial demand is estimated to close the year with an increase of 2.1% compared to the 2018 real value.

- For household consumption, based on the latest available information, it has been forecasted that the year will close with a variation of -8.2% vs. 2018.

- Contracted and invoiced capacities have been updated according to latest available information and the indicated updates of demand.

- Regarding entries, on the one hand there has been a sharp decrease of entries from Tarifa partially by entries form VIP Ibérico. Entries from LNG facilities have increased sharply because of low prices in LNG markets, supplying the decline of Tariff and increase of demand.

The new forecasted scenario for 2019 is described below.

Table I.1 shows the consumption, number of customers and contracted capacity forecasted by the CNMC for 2019. It is estimated that 2019 demand rise to 399.6 TWh, 15.2% higher than 2018 demand, mainly justified by the expected increase of demand of tariff group 1, and in particular, demand for electricity generation.

In the same way, an increase of 12.6% is forecasted for 2019 vs 2018 contracted capacity, as a result of an increase of 22.8% of the contracted capacity of group 1.

Table I.1. Forecasted demand, number of customers and contracted capacity for 2019

	2018 (A)			Forecast 2019 (B)			% (B) over (A)		
Tariff group	Volume (GWh)	Nº customers	Contracted capacity (MWh/day)	Volume (GWh)	Nº customers	Contracted capacity (MWh/day)	Volume (GWh)	Nº customers	Contracted capacity (MWh/day)
Group 1	***129.236***	***123***	***567.238***	***185.631***	***121***	***696.696***	***43,6%***	***-1,6%***	***22,8%***
Group 2	***126.479***	***3.751***	***483.865***	***128.092***	***3.758***	***492.182***	***1,3%***	***0,2%***	***1,7%***
16 bar < P ≤ 60 bar	34.421	151	121.370	35.832	150	123.241	4,1%	-0,3%	1,5%
4 bar < P ≤ 16 bar	92.058	3.600	362.495	92.260	3.607	368.941	0,2%	0,2%	1,8%
Group 3	***74.516***	***7.854.524***	***23.677***	***68.372***	***7.903.179***	***23.694***	***-8,2%***	***0,6%***	***0,1%***
3.1	12.848	4.777.158	-	10.850	4.607.521	-	-15,6%	-3,6%	
3.2	30.188	3.001.973	-	27.809	3.218.547	-	-7,9%	7,2%	
3.3	1.752	25.051	-	1.607	25.445	-	-8,3%	1,6%	
3.4	24.721	50.046	-	23.216	51.362	-	-6,1%	2,6%	
3.5	5.007	296	23.677	4.890	304	23.694	-2,3%	2,6%	0,1%
Interruptible group	***189***	***1***	***650***	***182***	***1***	***650***	***-3,8%***	***0,0%***	***0,0%***
Raw Material	***5.992***	***2***	***20.100***	***6.043***	***2***	***20.100***	***0,8%***	***0,0%***	***0,0%***
LNG to final customer	***10.503***	***-***	***-***	***11.343***	***-***	***-***	***8,0%***		
Total	***346.915***	***7.858.399***	***1.095.530***	***399.663***	***7.907.060***	***1.233.322***	***15,2%***	***0,6%***	***12,6%***

Source: Settlement database (SIFCO) and CNMC

Regarding the forecasted scenario, it should be noted that it is highly conditioned by the evolution of **demand for electricity generation**. In this regard, it is estimated that demand for electricity generation will increase in 2019 by 88.9% over 2018, while the contracted capacity of these consumers will increase by 38.5%. It should be noted that increases in contracted capacity are being observed well below increases in demand, as a result of a sharp increase of the load factor for tariff group 1 as a consequence of the steady growth of utilization of combined-cycle power plants.

Regarding **conventional demand**, if is foreseen an increase on demand for tariff group 1 and tariff group 2 over 2018 (3.7% and 1.3% respectively) and an increase in contracted capacity by these customers of 0.1% and 1.7% respectively.

Table I.2 shows demand for 2018 and forecasted demand for 2019 grouped by pressure level

Table I.2. Forecasted demand for electricity generation and conventional demand for 2019

	2018 (A)			Forecast 2019 (B)			% (B) over (A)		
Volume (GWh)	Electricity generation	Conventional	Total	Electricity generation	Conventional	Total	Electricity generation	Conventional	Total
P > 60 bar (1)	60.361	74.867	135.228	114.240	77.434	191.674	89,3%	3,4%	41,7%
16 bar < P ≤ *60 bar*	-	34.421	34.421	-	35.832	35.832		4,1%	4,1%
4 bar < P ≤ *16 bar*	137	92.110	92.247	69	92.373	92.443	-49,3%	0,3%	0,2%
P ≤ 4 bar	-	74.516	74.516	-	68.372	68.372		-8,2%	-8,2%
Total	***60.498***	***275.915***	***336.413***	***114.309***	***274.011***	***388.321***	***88,9%***	***-0,7%***	***15,4%***

Source: Settlement database (SIFCO) and CNMC

With regard to forecasted demand for customers supplied by networks of **pressure less or equal to 4 bar**, it has been updated considering the following hypothesis:

Given the different characteristics between customers connected to networks supplied from satellite LNG facilities and customers supplied from the transmission - distribution network, each group is analyzed independently.

Forecasted demand for customers connected at a pressure of less than or equal to 4 bar is the product of the forecast for the number of customers of each tariff group and the average size of such tariff group.

– ***Number of Customers:*** based on the number of customers obtained from the information provided by companies in the Settlement database for 2018, the forecasted increase in the number of customers is the consequence of the vegetative growth rate and the foreseen conversion to natural gas of LPG networks acquired by several natural gas distributors to REPSOL BUTANO, SA and CEPSA COMERCIAL PETRÓLEO, S.A.U. in 2015-2017. In this regard, although uncertainty is high, it has been considered that a total of 176,129 supply points from the acquired networks will be converted, and that 100,216 of these supply points have already been converted by the end of 2018. Consequently, it is forecasted that in the year 2019:

  - For customers connected to transmission and distribution networks, the increase in the number of customers considered is 36,030 customers, whereof 19,696 supply points are conversions to natural gas of the acquired LPG networks.

  - For customers connected networks supplied from satellite LNG facilities, the increase in the number of customers considered is 12,626, whereof 4,246 supply points are conversions to natural gas of the acquired LPG networks.

– ***Average sizes***: for tariff groups 3.1, 3.2, 3.3 and 3.4 they have been calculated considering for January to July registered values and for the rest of the period the mean of the average sizes recorded in the period 2016 - 2018. For tariff group 3.5, a decrease of demand of 2.3% has been considered, in line with the accumulated rates recorded as of July 2019.

  Taking into account the group's sensitivity of the demand to temperature, in order to facilitate the assessment of the forecasts for the different agents, it is worth noting that the State Meteorological Agency has described years 2012, 2013 and 2018 as warm, 2011, 2014, 2015 and 2017 as extremely warm and 2016 as very warm.

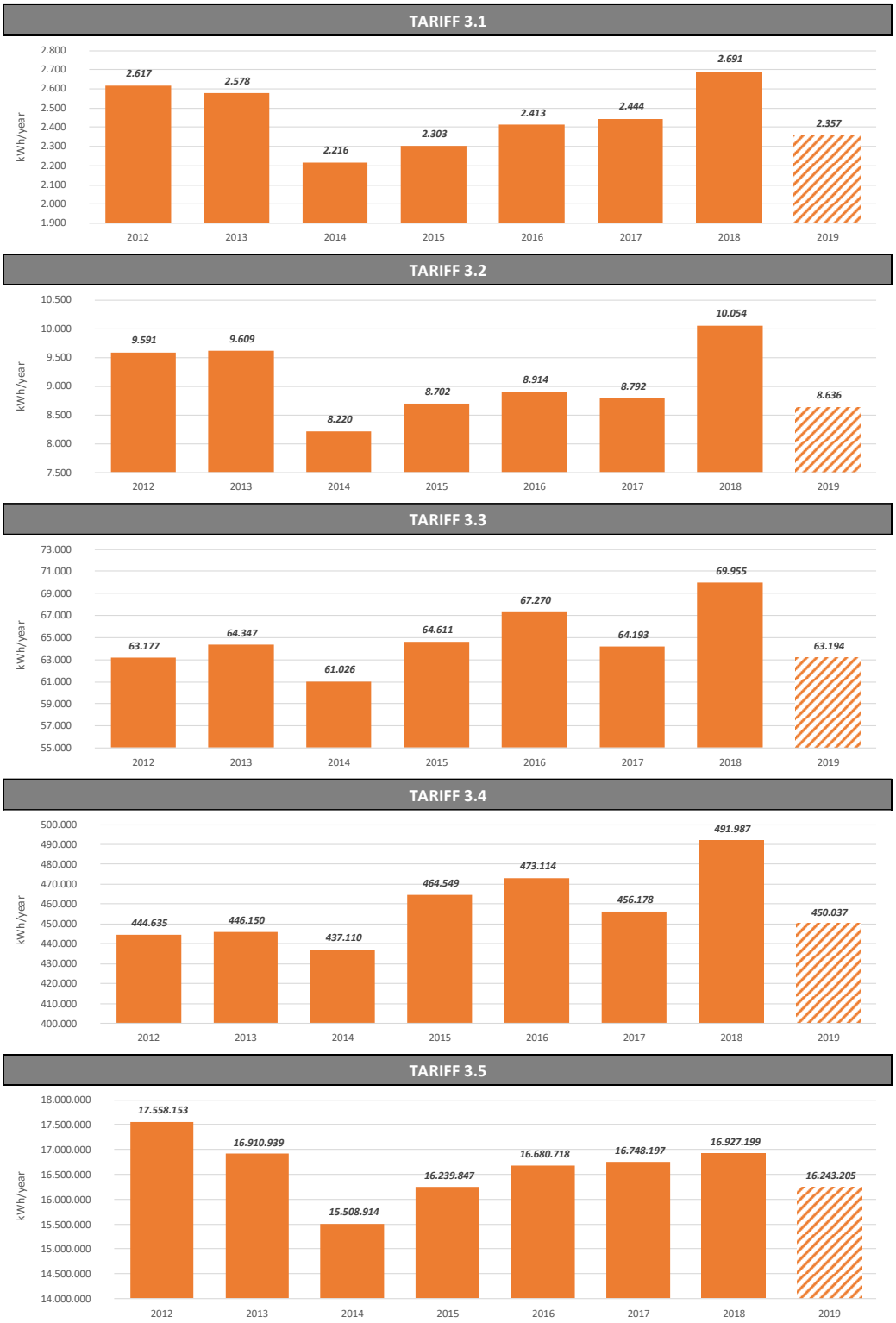
  Additionally, it shall be notes that winters (December-February) of years 2011 2012 and 2014-2015 were cold; 2010-2011, 2012-2013 and 2017-2018 were

normal (the latter very close to cold) and 2013-2014, 2015-2016 and 2018-2019 were warm. The winter 2016 2017 was categorized as very warm[37].

Illustration I.1 and Illustration I.2 show the evolution of the average sizes of tariff group 3 customers connected to the transmission - distribution networks and those connected to networks supplied from satellite LNG facilities respectively.

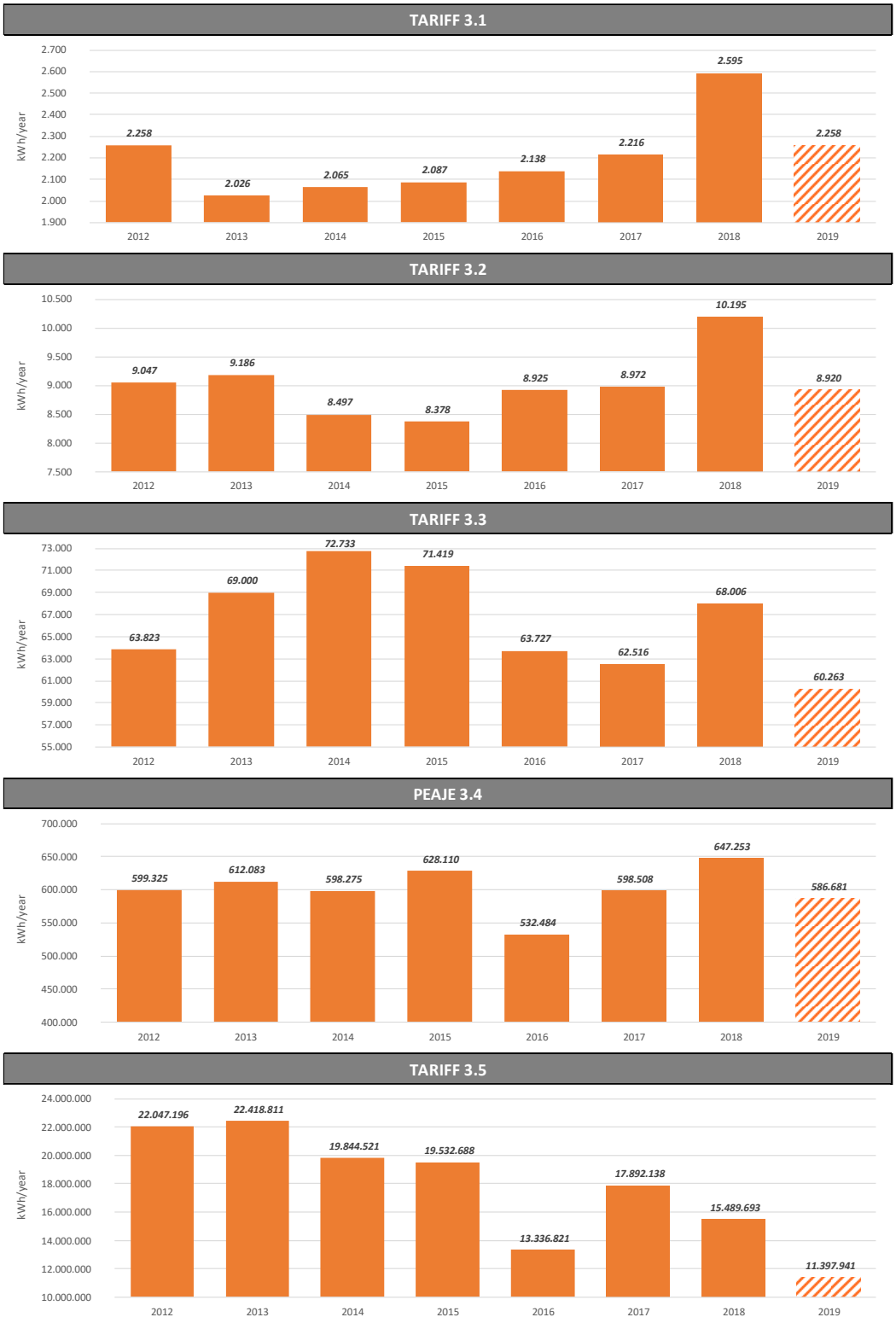
[37] Reports available at:
http://www.aemet.es/es/serviciosclimaticos/vigilancia_clima/resumenes?w=0&datos=0

Illustration I.1. Average sizes of customers supplied from transmission – distribution networks for each tariff group for 2012-2018 and CNMC's forecast 2019



Source: Settlement database (SIFCO) and CNMC

Illustration I.2. Average sizes of customers connected to networks supplied from satellite LNG facilities for each tariff group for 2012-2018 and CNMC's forecast 2019



Source: Settlement database (SIFCO) and CNMC

As a consequence of the above, Table I.3 show for 2018 and forecast 2019 the number of customers and demand for tariff group 3, according to the information available in the Settlement database for costumers supplied from networks of pressure less or equal to 4 bar.

According to these forecasts, the number of supplies will increase in 2019 (0.6%, 48,655 customers), while demand of these consumers will be reduced by 8.2% mainly justified by the high temperatures recorded from January to June 2019 compared with the same period of 2018.

Table I.3. CNMC´s forecasted conventional demand for customers supplied from networks of pressure less or equal to 4 bar.

		Año 2018		Forecast 2019		% (B) over (A)	
Tariff	Volume (MWh)	Volume (MWh)	Customers	Volume (MWh)	Customers	Volume (MWh)	Customers
I. Connected to satellite LNG facilities							
3.1	<5	245.973	94.803	229.744	101.768	-6,6%	7,3%
3.2	<50	449.797	44.121	442.482	49.605	-1,6%	12,4%
3.3	<100	24.737	364	26.008	432	5,1%	18,6%
3.4	100 < C ≤ 8.000	412.300	637	436.246	744	5,8%	16,7%
3.5	>8.000	107.137	7	113.030	10	5,5%	43,4%
TOTAL		**1.239.944**	**139.932**	**1.247.511**	**152.558**	**0,6%**	**9,0%**
II. Connected to transmission-distribution networks							
3.1	<5	12.602.238	4.682.355	10.619.911	4.505.753	-15,7%	-3,8%
3.2	<50	29.738.295	2.957.852	27.366.593	3.168.943	-8,0%	7,1%
3.3	<100	1.726.994	24.687	1.580.683	25.013	-8,5%	1,3%
3.4	100 < C ≤ 8.000	24.308.492	49.409	22.779.973	50.618	-6,3%	2,4%
3.5	>8.000	4.899.958	289	4.777.459	294	-2,5%	1,6%
TOTAL		**73.275.977**	**7.714.592**	**67.124.619**	**7.750.622**	**-8,4%**	**0,5%**
III. Total							
3.1	<5	12.848.211	4.777.158	10.849.655	4.607.521	-15,6%	-3,6%
3.2	<50	30.188.091	3.001.973	27.809.075	3.218.547	-7,9%	7,2%
3.3	<100	1.751.731	25.051	1.606.691	25.445	-8,3%	1,6%
3.4	100 < C ≤ 8.000	24.720.793	50.046	23.216.219	51.362	-6,1%	2,6%
3.5	>8.000	5.007.095	296	4.890.489	304	-2,3%	2,6%
TOTAL		**74.515.921**	**7.854.524**	**68.372.130**	**7.903.179**	**-8,2%**	**0,6%**

Source: CNMC

As mentioned above, the entry forecasts have been updated with the available information on contracts made in the months of January to October. During the considered period there has been a sharp decrease in entries from Tarifa, which are partially compensated by an increase in entries form VIP Ibérico.

In addition, as a result of the update of demand and the entries of natural gas, regasification, LNG storage and underground storage scenario has been revised. On the other hand, regarding LNG ship reloading and cooling down services, forecasts have been updated based on the available information from January November. In particular, it has been considered that the rate of LNG ship reloadings during this period is maintained for the rest of the year, and that no additional cooling down operations are carried out during the year.

A forecast of LNG storage contracted capacity has been made in order to adapt to the new scheme of Circular 8/2019, of December 12, of the National Commission of Markets and Competition, establishing the methodology applicable to the capacity allocation mechanism and access conditions to the natural gas system. Firstly, based on the daily profile of the LNG stocks of 2018, the optimal contracting scheme has been calculated, individualized by annual, quarterly, monthly and daily products. The load factor resulting from this exercise has been maintained for the forecast of 2019. The forecasted volume stored for 2019 on the other hand has been calculated considering the information available by November.

In the same way, for the purpose of the transmission methodology, the injection and withdraws equivalent contracted capacities that would have been needed have been estimated considering the daily injections and extractions in underground storages (hereinafter AASS) for 2018. The following hypotheses have been made for this purpose:

- Storage capacity for 2019 has been estimated considering the information of the first 11 months of the year, and for the rest of the year 2018 values have been assumed.
- Forecasted injections and withdrawals for 2019 are calculated considering the relationship with storage capacity from GTS forecasts
- Based on the daily injection and withdrawal profiles equivalent contracted capacities that would have been needed for 2018 have been calculated, considering the optimal contracting scheme, resulting the optimal capacities daily products, for both injections and withdrawals. To calculate forecasted injection and withdrawal capacities for 2019, 2018 load factor has been considered.[38.]

[38] There is a difference between injection and withdrawn values shown in justified by the difference source (for daily injection and withdrawal profiles GIE data has been considered, Table I.4 and Table I.5; while Table I.6 shows data from the Settlement database)

Forecasts of invoiced capacities have been updated, especially relevant for proposed methodology, since forecasted invoiced capacity has been considered as the best forecast for contracted capacity, as it is estimated that as a consequence of the elimination of the current penalty/discount scheme, agents will adjust their contracted capabilities to those actually used, except for bidirectional connections with Portugal and France where current contracted capabilities will be maintained.

Contracted and invoiced capacities for tariff group 3 have been estimated based on available information of load curves of such customers for 2016-2018.

Table I.4 shows entry volumes and capacities, Table I.5 exit volumes capacities and Table I.6 regasification, LNG storage and underground storage forecasted scenario for 2019.

Table I.4. Forecast for entry volumes, contracted and invoiced capacities for 2019

Entry point	Year 2018				Forecast year 2019				% 2019 over 2018		
	Volume (GWh)	Contracted capacity (MWh/day)	Invoiced capacity (MWh/day)	Load factor (%)	Volume (GWh)	Contracted capacity (MWh/day)	Invoiced capacity (MWh/day)	Load factor (%)	Volume	Contracted capacity	Load factor
TOTAL	**338.998**	**1.132.902**	**1.074.549**	**82,0%**	**400.335**	**1.299.204**	**1.218.095**	**84,4%**	**18,1%**	**14,7%**	**3,0%**
International connection point	**194.703**	**643.413**	**613.298**	**82,9%**	**164.580**	**592.676**	**545.202**	**76,1%**	**-15,5%**	**-7,9%**	**-8,2%**
Tarifa GME	75.114	242.534	230.753	84,9%	37.838	159.197	141.301	65,1%	-49,6%	-34,4%	-23,3%
MEDGAZ	79.293	238.200	231.367	91,2%	69.701	237.889	221.009	80,3%	-12,1%	-0,1%	-12,0%
VIP Pirineos	40.190	162.462	150.963	67,8%	55.121	188.879	176.778	80,0%	37,2%	16,3%	18,0%
VIP Ibérico	106	217	216	133,5%	1.920	6.711	6.114	78,4%	1714,6%	2991,3%	-41,3%
LNG facility	**137.015**	**463.543**	**435.354**	**81,0%**	**229.638**	**687.753**	**654.000**	**91,5%**	**67,6%**	**48,4%**	**13,0%**
Barcelona	50.848	166.077	156.872	83,9%	60.960	187.904	180.789	88,9%	19,9%	13,1%	6,0%
Cartagena	6.665	21.098	19.869	86,6%	16.816	51.241	48.733	89,9%	152,3%	142,9%	3,9%
Huelva	39.924	148.418	137.971	73,7%	57.394	168.945	162.413	93,1%	43,8%	13,8%	26,3%
Bilbao	27.728	87.993	84.379	86,3%	61.034	178.794	175.727	93,5%	120,1%	103,2%	8,3%
Sagunto	537	1.697	1.595	86,7%	22.423	66.930	54.318	91,8%	4075,5%	3842,9%	5,9%
Mugardos	11.313	38.259	34.668	81,0%	11.011	33.939	32.021	88,9%	-2,7%	-11,3%	9,7%
Storage facilities	**6.215**	**22.699**	**22.699**	**75,0%**	**4.425**	**12.683**	**12.683**	**95,6%**	**-28,8%**	**-44,1%**	**27,4%**
AS Serrablo	2.614	9.506	9.506	75,3%	1.861	5.311	5.311	96,0%	-28,8%	-44,1%	27,4%
AS Gaviota	2.033	7.651	7.651	72,8%	1.448	4.275	4.275	92,8%	-28,8%	-44,1%	27,4%
AS Marismas	871	3.071	3.071	77,7%	620	1.716	1.716	99,0%	-28,8%	-44,1%	27,4%
AS Yela	697	2.471	2.471	77,3%	496	1.381	1.381	98,5%	-28,8%	-44,1%	27,4%
Other	**1.064**	**3.247**	**3.198**	**89,8%**	**1.692**	**6.092**	**6.208**	**76,1%**	**58,9%**	**87,6%**	**-15,3%**
Marismas	56	186	186	82,0%	1	3	3	82,0%	-98,5%	-98,5%	0,0%
Poseidon	30	217	186	38,3%	45	319	284	38,3%	46,8%	47,0%	-0,2%
Viura	881	2.588	2.557	93,2%	1.547	5.505	5.646	77,0%	75,6%	112,7%	-17,5%
Madrid	98	256	269	104,3%	100	264	276	103,3%	2,1%	3,1%	-1,0%

Source: Settlement database (SIFCO) and CNMC

Table I.5. Forecast for exit volumes, contracted and invoiced capacities for 2019

Exit point	Year 2018				Forecast year 2019				% 2019 over 2018		
	Volume (GWh)	Contracted capacity (MWh/day)	Invoiced capacity (MWh/day)	Load factor (%)	Volume (GWh)	Contracted capacity (MWh/day)	Invoiced capacity (MWh/day)	Load factor (%)	Volumen	Capacidad contratada	Factor de carga
TOTAL EXITS	346.832	1.703.199	1.657.163	55,8%	403.712	1.838.195	1.811.435	60,2%	16,4%	7,9%	7,9%
International connection point	3.478	136.563	117.448	7,0%	3.548	139.321	119.819	7,0%	2,0%	2,0%	0,0%
CI Biriatou	437	126.900	108.175	0,9%	446	129.462	110.359	0,9%	2,0%	2,0%	0,0%
CI Larrau											
CI Badajoz	3.040	9.663	9.273	86,2%	3.102	9.858	9.460	86,2%	2,0%	2,0%	0,0%
CI Tuy											
Storage facilities	6.942	28.084	28.084	67,7%	11.843	40.317	40.317	80,5%	70,6%	43,6%	18,8%
AS Serrablo	1.857	7.515	7.515	67,7%	3.168	10.789	10.789	80,5%	70,6%	43,6%	18,8%
AS Gaviota	4.024	16.283	16.283	67,7%	6.865	23.376	23.376	80,5%	70,6%	43,6%	18,8%
AS Marismas	531	2.107	2.107	69,0%	905	3.025	3.025	82,0%	70,6%	43,6%	18,8%
AS Yela	531	2.178	2.178	66,7%	905	3.127	3.127	79,3%	70,6%	43,6%	18,8%
National exit	336.413	1.538.552	1.511.632	59,9%	388.321	1.658.557	1.651.298	64,1%	15,4%	7,8%	7,1%
P > 60 bar	135.228	587.338	555.335	63,1%	191.674	716.796	714.577	73,3%	41,7%	22,0%	16,1%
16 bar < P ≤ 60 bar	34.421	121.370	120.874	77,7%	35.832	123.241	121.325	79,7%	4,1%	1,5%	2,5%
4 bar < P ≤ 16 bar	92.247	363.145	368.611	69,6%	92.443	369.591	366.958	68,5%	0,2%	1,8%	-1,5%
P ≤ 4 bar	74.516	466.698	466.812	43,7%	68.372	448.929	448.438	41,7%	-8,2%	-3,8%	-4,6%

Source: Settlement database (SIFCO) and CNMC

Table I.6. Forecasted scenario for regasification, LNG storage and underground storage for 2019

	Year 2018			Forecast Year 2019			% Forecast 2019 over 2018		
	Contracted capacity (MWh/day)/month	Invoiced capacity (MWh/day)/month	Regasification GWh	Contracted capacity (MWh/day)/month	Invoiced capacity (MWh/day)/month	Regasification GWh	Contracted capacity (MWh/day)/month	Regasification GWh	
Regasification	473.234	444.269	138.216	706.662	673.625	234.560	49,3%	69,7%	
Barcelona	165.998	156.805	50.848	189.854	183.402	60.960	14,4%	19,9%	
Huelva	148.450	138.002	39.912	173.131	166.163	57.394	16,6%	43,8%	
Cartagena	21.104	19.872	6.665	51.254	48.745	16.816	142,9%	152,3%	
Sagunto	1.703	1.599	2	66.962	54.327	22.423	3831,9%	1401827,4%	
Mugardos	38.260	34.669	11.313	33.947	32.029	11.011	-11,3%	-2,7%	
Bilbao	97.720	93.323	29.476	191.514	188.959	65.955	96,0%	123,8%	
	Nº of ships	Unloads GWh		Nº of ships	Unloads GWh		Nº of ships	Unloads GWh	
LNG ship unloading	187	164.496		266	248.930		42,5%	51,3%	
Barcelona	74	61.114		72	65.230		-3,1%	6,7%	
Huelva	49	45.071		64	60.542		30,9%	34,3%	
Cartagena	15	11.072		22	19.809		46,7%	78,9%	
Sagunto	4	2.418		22	23.707		462,3%	880,3%	
Mugardos	15	12.943		17	12.413		30,0%	-4,1%	
Bilbao	32	31.878		69	67.229		116,7%	110,9%	
	Nº of ships	Reloads GWh		Nº of ships	Reloads GWh		Nº of ships	Reloads GWh	
LNG ship reloading	5	4.908		14	501		180,0%	-89,8%	
	Nº of ships	GWh		Nº of ships	GWh		Nº of ships	GWh	
Cooling down service	5	83		3	27		-40,0%	-67,4%	
	Contracted capacity (MWh/day)/month	Invoiced capacity (MWh/day)/month	Truck loads GWh	Contracted capacity (MWh/day)/month	Invoiced capacity (MWh/day)/month	Truck loads GWh	Contracted capacity (MWh/day)/month	Truck loads GWh	
LNG truck loading	34.663	36.341	11.728	46.434	45.403	13.829	34,0%	17,9%	
	nº days of regasification capacity	Average storaged volume (MWh/day)	Forecasted contracted capacity (MWh/day)/month	nº days of regasification capacity	Average storaged volume (MWh/day)	Forecasted contracted capacity (MWh/day)/month	nº days of regasification capacity	Average storaged volume (MWh/day)	
LNG storage	17,06	8.049.237	8.680.230	17,92	12.661.995	13.617.283	5,1%	57,3%	
	Contracted capacidad GWh	Injections GWh	Withdrawals GWh	Contracted capacidad GWh	Injections GWh	Withdrawals GWh	Contracted capacidad GWh	Injections GWh	Withdrawals GWh
LNG storage	22.065	6.194	5.777	25.252	11.843	4.425	14,44%	91,2%	-23,4%

Source: Settlement database (SIFCO) and CNMC

Finally, invoiced capacities have been calculated taking into account the corresponding multipliers for the short-term standard capacity products, in order to consider its impact on incomes and tariff calculation.

For estimating entries for each type of product, a forecast of the volumes, contracted and invoiced capacities has been made for each entry point, considering available information of contracted capacities by November and estimating the rest of the period considering the needs of natural gas to meet the forecasted demand for 2019. For exits through international connections, regasification and tank loading, the same procedure has been carried out.

As previously indicated, for the entries and exits from underground storage, in order to consider the effect of the proposed multipliers for short-term products, the hypothetically optimal contracting scheme of 2018 has been considered for 2019, meaning that contracted capacity will be of daily products.

The following considerations have been made for forecasting national demand by type of contract:

- Natural gas demand for peninsular power generation has been disaggregated by type of contract (annual, quarterly, monthly, daily and within-day) and by months considering available real values for January - July in the settlement database. To estimate remaining months, the annual relationship between the short-term and long- term products corresponds to values in July. Finally, the demand of short-term contracts is distributed by type of short-term contract (quarterly, monthly, daily and within-day) and month maintaining the structure of the contracts by 2018 tariff.

- In the case of the forecast of gas demand for extrapeninsular electricity generation, it has been considered that all the demand is supplied by long-term contracts.

- The volume and capacity of conventional demand has been distributed by type of contract (annual, quarterly, monthly, daily and within-day) and by month considering the following hypotheses:
  - For the months of January to July, the actual data available in the Settlement database is taken.
  - The relationship between short and long term per year corresponds to the mean of the moving average observed during the last months.
  - The expected short-term demand for the months of August to December is distributed by month and type of contract, maintaining the same contracting structure as that of 2018 in those months.
  - Capacities are estimated considering the same load factor as in those contracts in 2018 and applying the same utilization factors as in 2018.

Table I.7 shows the capacities of entry into the system, in Table I.8 the capacities per outlet and in Table I.9 the capacities of the LNG regasification and storage scenario foreseen for 2019 taking into account the multiplier of each product.

Table I.7. Entry equivalent invoiced capacity with multipliers

Entry point	Forecast Invoiced Capacity 2019 (MWh/day)/month	Forecast Invoiced Capacity (MWh/day)					Forecast invoiced capacity per entry point taking into account the impact of current multipliers (MWh/day)	Forecast invoiced capacity per entry point taking into account the impact of the multipliers proposed by CNMC (MWh/day)
		Annual	Quarterly	Monthly	Daily	Intraday		
CI Tarifa	141.301	124.912	12.177	2.174	2.038	-	158.238	145.693
CI Medgaz	221.009	216.334	2.923	1.753	-	-	224.648	222.166
CI Biriatou (*)	186.266	149.298	11.388	10.393	13.898	1.290	231.683	205.371
CI Larrau (*)								
CI Badajoz (*)	6.711	1.504	-	3.472	1.283	453	15.575	10.473
CI Tuy (*)								
PR Barcelona	180.789	152.786	3.188	21.510	3.213	92	194.876	190.355
PR Cartagena	48.733	18.875	4.001	25.802	54	-	58.655	57.603
PR Huelva	162.413	135.626	5.419	19.255	2.066	48	174.384	170.904
PR Bilbao	175.727	137.762	7.529	30.286	139	11	184.284	186.824
PR Sagunto	54.318	2.125	1.925	49.506	748	14	69.554	70.556
PR Mugardos	32.021	18.165	3.254	9.291	1.312	-	38.567	36.332
Yac.Poseidón	284	-	-	281	2	-	424	372
Yac.Viura	5.646	5.405	-	154	80	6	5.962	5.766
Yac. Marismas	3	-	-	3	-	-	4	4
PB Madrid	276	175	-	89	12	-	342	310
AS Serrablo	5.311	-	-	-	5.311	-	N/A	8.339
AS Gaviota	4.275	-	-	-	4.275	-	N/A	6.712
AS Marismas	1.716	-	-	-	1.716	-	N/A	2.694
AS Yela	1.381	-	-	-	1.381	-	N/A	2.168
TOTAL	**1.228.179**	**962.967**	**51.802**	**173.968**	**37.529**	**1.914**	**1.357.195**	**1.322.643**

Source: Settlement database (SIFCO) and CNMC

Table I.8. Exit equivalent invoiced capacity with multipliers

Exit point	Forecast Invoiced Capacity 2019 (MWh/day)/month	Forecast Invoiced Capacity (MWh/day)					Forecast invoiced capacity per exit point taking into account the impact of current multipliers (MWh/day)	Forecast invoiced capacity per exit point taking into account the impact of the multipliers proposed by CNMC (MWh/day)
		Annual	Quarterly	Monthly	Daily	Intraday		
International Connection (*)	**136.563**	**124.124**	**55**	**11.755**	**496**	**133**	**143.141**	**140.958**
CI Biriatou	126.900	115.478	-	10.950	358	114	132.981	130.897
CI Larrau								
CI Badajoz	9.663	8.646	55	805	138	19	10.160	10.061
CI Tuy								
Underground storage	**40.317**	**-**	**-**	**-**	**40.317**	**-**	**N/A**	**63.701**
AS Serrablo	10.789				10.789		N/A	17.047
AS Gaviota	23.376				23.376		N/A	36.935
AS Marismas	3.025				3.025		N/A	4.779
AS Yela	3.127				3.127		N/A	4.941
National Exit	**1.651.298**	**1.436.850**	**3.557**	**135.222**	**72.206**	**3.464**	**1.831.221**	**1.735.304**
P > 60 bar	714.577	514.083	2.500	123.774	70.789	3.432	886.698	794.385
16 bar < P ≤ 60 bar	121.325	120.766	67	486	4	3	121.540	121.453
4 bar < P ≤ 16 bar	366.958	353.829	963	10.746	1.392	28	374.372	370.923
P ≤ 4 bar	440.240	439.982	27	211	21	-	440.409	440.343
P ≤ 4 bar Plantas Satélite	8.198	8.191	1	6	1	-	8.203	8.201
Total	**1.828.179**	**1.560.974**	**3.612**	**146.977**	**113.019**	**3.596**	**1.974.362**	**1.939.962**

(*) Contracted capacity

Source: Settlement database (SIFCO) and CNMC

Table I.9. LNG regasification and storage scenario associated with the forecast demand for 2019 with equivalent invoiced capacities with multipliers

	Year 2019 forecast							
	Forecast Invoiced Capacity (MWh/day)	Forecast Invoiced Capacity (MWh/day)					Invoiced capacity with current multipliers (MWh/day)	Invoiced capacity with CNMC multipliers (MWh/day)
		Annual	Quarterly	Monthly	Daily	Intraday		
Regasification	**673.625**	**480.039**	**23.289**	**161.776**	**8.308**	**213**	**743.337**	**752.472**
Barcelona	183.402	153.358	3.190	23.548	3.214	92	198.521	197.179
Huelva	166.163	135.635	5.420	22.993	2.067	48	179.832	178.775
Cartagena	48.745	18.882	4.003	25.806	55	0	58.670	59.923
Sagunto	54.327	2.132	1.925	49.510	743	17	69.573	75.355
Mugardos	32.029	18.170	3.255	9.292	1.312	0	38.576	37.708
Bilbao	188.959	151.863	5.496	30.628	918	55	198.165	203.532
Truck loading	**45.403**	**37.422**	**3.407**	**4.398**	**175**	**1**	**48.581**	**46.765**
Barcelona	14.712	13.368	921	398	24	-	15.275	14.903
Huelva	9.319	7.174	248	1.883	13	-	9.607	9.731
Cartagena	8.778	7.759	601	313	104	1	9.678	8.985
Sagunto	4.472	2.409	1.170	866	26	0	5.260	4.784
Mugardos	4.081	3.689	35	353	4	0	4.280	4.159
Bilbao	4.041	3.022	431	584	3	1	4.481	4.204
LNG storage	**13.617.283**	**9.778.950**	**2.645.354**	**331.474**	**861.505**	**-**	**N/A**	**15.287.437**

Source: Settlement database (SIFCO) and CNMC

2. Scenario foreseen for the period 2020-2026 with the current structure

Final consumer demand

The demand scenario for the period 2020-2026 developed by the CNMC is summarized in Table I.10.

Table I.10. Final consumer demand. 2019 - 2026

GWh	2019	2020	2021	2022	2023	2024	2025	2026
Total Demand	**399.663**	**388.113**	**385.864**	**384.575**	**380.537**	**370.314**	**352.379**	**319.064**
Electric generation demand	**114.309**	**99.691**	**95.205**	**92.150**	**86.911**	**76.120**	**58.266**	**25.749**
Convventional demand	***285.354***	***288.421***	***290.659***	***292.425***	***293.626***	***294.194***	***294.113***	***293.315***
Industrial deamnd	***205.639***	***208.697***	***211.398***	***213.673***	***215.490***	***216.826***	***217.664***	***217.993***
P > 60 bar	77.434	77.577	77.720	77.863	78.007	78.151	78.295	78.440
16 < P ≤ 60 bar	35.832	35.975	36.155	36.336	36.518	36.700	36.884	37.068
4 < P ≤ 16 bar	92.373	95.144	97.523	99.473	100.965	101.975	102.485	102.485
Domestic	***68.372***	***68.042***	***67.461***	***66.834***	***66.099***	***65.210***	***64.170***	***62.921***
LNG direct to final customer	***11.343***	***11.683***	***11.800***	***11.918***	***12.037***	***12.157***	***12.279***	***12.402***

Growth rate over ths previous year (%)	2019	2020	2021	2022	2023	2024	2025	2026
Total Demand	**14,6%**	**-2,9%**	**-0,6%**	**-0,3%**	**-1,0%**	**-2,7%**	**-4,8%**	**-9,5%**
Electric generation demand	**83,7%**	**-12,8%**	**-4,5%**	**-3,2%**	**-5,7%**	**-12,4%**	**-23,5%**	**-55,8%**
Convventional demand	***-0,4%***	***1,1%***	***0,8%***	***0,6%***	***0,4%***	***0,2%***	***0,0%***	***-0,3%***
Industrial deamnd	***2,1%***	***1,5%***	***1,3%***	***1,1%***	***0,9%***	***0,6%***	***0,4%***	***0,2%***
P > 60 bar	3,4%	0,2%	0,2%	0,2%	0,2%	0,2%	0,2%	0,2%
16 < P ≤ 60 bar	4,1%	0,4%	0,5%	0,5%	0,5%	0,5%	0,5%	0,5%
4 < P ≤ 16 bar	0,3%	3,0%	2,5%	2,0%	1,5%	1,0%	0,5%	0,0%
Domestic	***-8,2%***	***-0,5%***	***-0,9%***	***-0,9%***	***-1,1%***	***-1,3%***	***-1,6%***	***-1,9%***
LNG direct to final customer	***8,0%***	***3,0%***	***1,0%***	***1,0%***	***1,0%***	***1,0%***	***1,0%***	***1,0%***

Source: CNMC

The forecasts for the period 2020-2026 have been made considering the following assumptions:

- Demand for electric generation: a distinction has been made between the combined cycles located on the Peninsula, the Balearic Islands and the Canary Islands.

  In terms of the demand for natural gas in the cycles located on the Peninsula for the financial year 2020, it has been reduced with respect to that of 2019 by - 17.1%) due fundamentally to the expected increase in electricity production from renewable energy sources in that financial year. Annual reductions of 5%, 3.5% 6.2% 13.6% 26.1% and 57.2% are expected over the period 2021-2026. These are mainly due to forecasts of

electricity demand and the expected increase in electricity production from renewable energy sources in line with forecasts made in the electricity sector (see Annex I of the Report accompanying the Proposed Circular establishing the methodology for calculating transmission and distribution electricity tariffs).

Regarding the demand for natural gas from the cycles located in the Balearic Islands, a strong increase is expected in 2020 (124.5%) as a result of the foreseeable closure of the Alcudia plant's coal groups. For the rest of the period 2021-2025 the forecast growth rates are more moderate (+1.4% in 2021 and values between -0.3% and +0.1% for 2022-2025). Finally, for the year 2026 a decrease of 46.9% is foreseen due to the fact that a new reinforcement of the peninsular link is expected to come into operation.

Concerning the demand for natural gas from the combined cycles located in the Canary Islands, it has not been considered that the regasification plants in the archipelago will come into operation during the period studied.

- Conventional industrial demand: A decreasing rate of change has been estimated for the period 2020-2026 as a result of decreasing forecasts of GDP growth rates for 2020 and a forecast of energy efficiency improvements in industry. Thus, starting from a growth rate of 2.1% in 2019, the annual growth rate is expected to decrease over the period, starting at 1.5% for 2020, and decreasing progressively to a value of 0.2% in 2026.

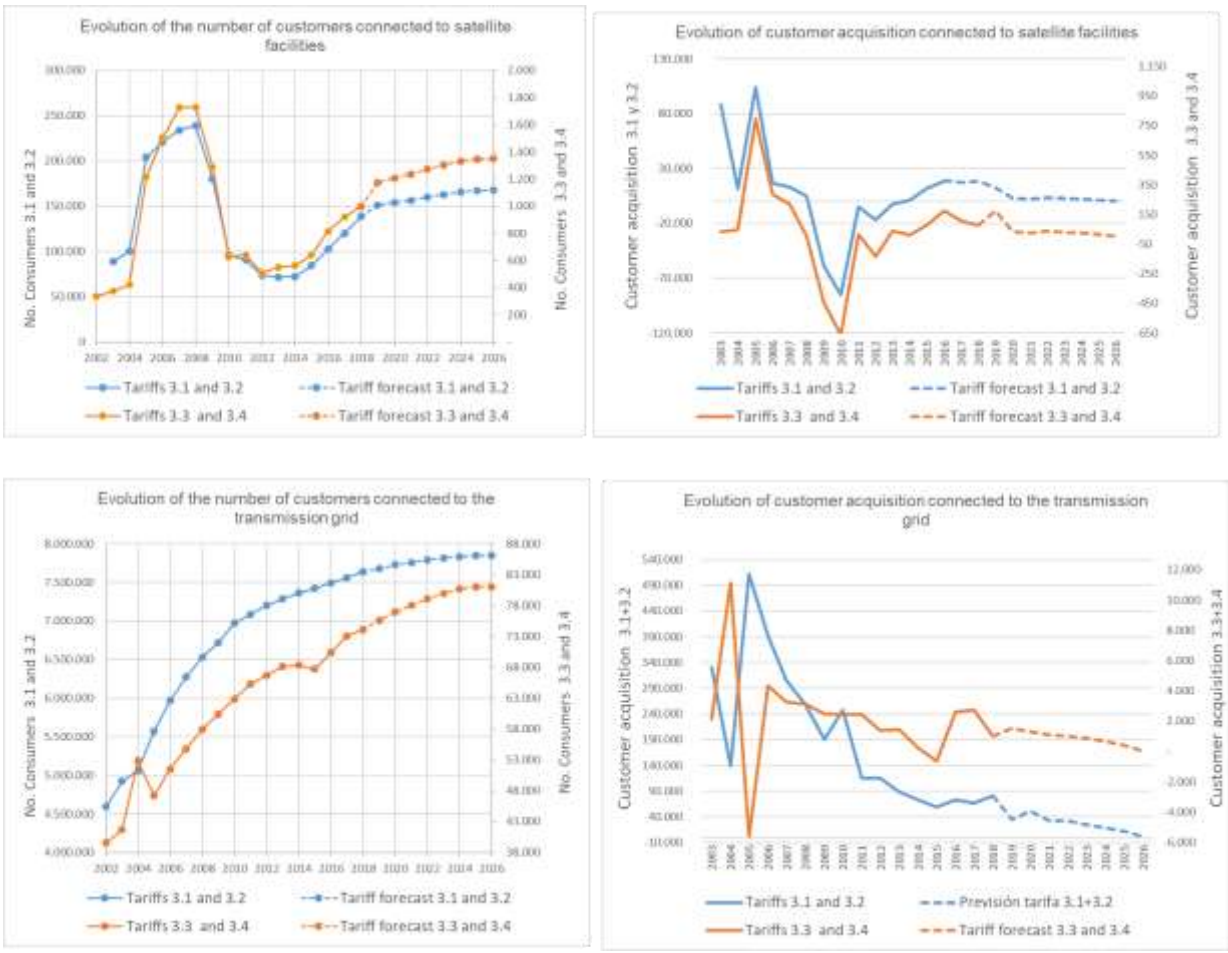
- Group 3 demand: The demand of group 3 results from the product of the number of consumers foreseen for each year, by the average consumption estimated for that year, differentiated between consumers connected to satellite LGN facilities and those connected to the transmission-distribution network.

  The expected increase in the number of consumers is a result of the natural growth rate and the planned transition to natural gas from the LPG networks acquired from REPSOL BUTANO, S.A. and CEPSA COMERCIAL PETRÓLEO, S.A.U. in 2015-2017 by several natural gas distributors. Although a high degree of uncertainty exists, it has been estimated that a total of 176,129 supply points will be converted, of which 70% are estimated to be converted by 2019, around 15% will be converted in 2020 and the remainder gradually until 2026. It has been considered that 65.7% of these supply points will be connected to the transmission and distribution network, while the remaining 34.3% will be supplied from satellite LNG facilities.

With regard to the natural growth rate, it has been considered to be a decreasing rate of 0.4% for 2020-2022 and it will be progressively reduced to 0% in 2026, which is typical of a mature market.

Figure I. 3 shows the evolution of the number and acquisition of consumers in groups 3.1 and 3.2 and 3.3 and 3.4, supplied from the transmission-distribution network and from satellite LNG facilities, indicating the forecast for the period 2019-2026.

Figure I. 3. Evolution of the number and capture of customers of tariffs 3.1 and 3.2 and 3.3 and 3.4 supplied from the transmission - distribution network and from satellite facilities



Source: Settlement database (SIFCO) and CNMC

As a result, the final number of Group 3 consumers grows by 0.7% in 2020, 0.4% in 2021, 0.5% in 2022, 0.4% in 2023, 0.3% in 2024, 0.2% in 2025 and 0% in 2026.

The average sizes of group 3 consumers connected to satellite LNG facilities and those connected to the transmission/distribution grid are estimated to experience an annual reduction of around 2% as a result of energy efficiency measures in buildings.

Table I.11 indicates the number of total consumers supplied at pressures below 4 bar, the resulting average sizes and the expected demand for the period 2019-2026.

Table I.11. Group 3 Demand forecasting 2019-2026

	2019	2020	2021	2022	2023	2024	2025	2026	2020	2021	2022	2023	2024	2025	2026
Number of customers	7.903.179	7.959.000	7.994.559	8.031.075	8.059.920	8.081.758	8.095.240	8.097.000	0,7%	0,4%	0,5%	0,4%	0,3%	0,2%	0,0%
3.1	4.607.521	4.640.311	4.660.846	4.682.178	4.698.892	4.711.626	4.719.483	4.720.584	0,7%	0,4%	0,5%	0,4%	0,3%	0,2%	0,0%
3.2	3.218.547	3.240.227	3.254.117	3.268.227	3.279.415	3.287.839	3.293.047	3.293.690	0,7%	0,4%	0,4%	0,3%	0,3%	0,2%	0,0%
3.3	25.445	25.722	25.930	26.133	26.303	26.427	26.504	26.509	1,1%	0,8%	0,8%	0,7%	0,5%	0,3%	0,0%
3.4	51.362	52.431	53.353	54.222	54.990	55.544	55.883	55.893	2,1%	1,8%	1,6%	1,4%	1,0%	0,6%	0,0%
3.5	304	309	313	316	320	322	323	323	1,6%	1,3%	1,2%	1,0%	0,7%	0,4%	0,0%
Average size (MWh/year)	8,65	8,55	8,44	8,32	8,20	8,07	7,93	7,77	-1,2%	-1,3%	-1,4%	-1,5%	-1,6%	-1,8%	-2,0%
3.1	2,35	2,31	2,27	2,22	2,18	2,13	2,09	2,04	-1,9%	-1,9%	-2,0%	-2,0%	-2,1%	-2,1%	-2,1%
3.2	8,64	8,48	8,31	8,15	7,98	7,82	7,66	7,49	-1,9%	-1,9%	-2,0%	-2,0%	-2,1%	-2,1%	-2,1%
3.3	63,14	61,98	60,78	59,58	58,38	57,17	55,97	54,78	-1,8%	-1,9%	-2,0%	-2,0%	-2,1%	-2,1%	-2,1%
3.4	452,02	444,29	435,71	427,13	418,55	409,96	401,36	392,78	-1,7%	-1,9%	-2,0%	-2,0%	-2,1%	-2,1%	-2,1%
3.5	16.085,17	16.083,80	16.082,72	16.080,51	16.078,77	16.077,16	16.076,30	16.075,99	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Consumption (MWh)	68.372.130	68.041.697	67.461.005	66.834.108	66.098.836	65.210.301	64.169.935	62.920.668	-0,5%	-0,9%	-0,9%	-1,1%	-1,3%	-1,6%	-1,9%
3.1	10.849.655	10.719.884	10.558.953	10.397.546	10.224.088	10.040.703	9.846.280	9.637.788	-1,2%	-1,5%	-1,5%	-1,7%	-1,8%	-1,9%	-2,1%
3.2	27.809.075	27.466.655	27.050.966	26.631.824	26.184.300	25.711.551	25.211.861	24.677.166	-1,2%	-1,5%	-1,5%	-1,7%	-1,8%	-1,9%	-2,1%
3.3	1.606.691	1.594.195	1.576.028	1.556.916	1.535.439	1.510.953	1.483.501	1.452.044	-0,8%	-1,1%	-1,2%	-1,4%	-1,6%	-1,8%	-2,1%
3.4	23.216.219	23.294.585	23.246.507	23.160.054	23.015.864	22.770.699	22.429.175	21.953.500	0,3%	-0,2%	-0,4%	-0,6%	-1,1%	-1,5%	-2,1%
3.5	4.890.489	4.966.378	5.028.550	5.087.769	5.139.145	5.176.396	5.199.118	5.200.169	1,6%	1,3%	1,2%	1,0%	0,7%	0,4%	0,0%

Source: Settlement database (SIFCO) and CNMC

- LNG direct to final customer: demand in 2020 is estimated to grow by 3%, slightly higher than the growth estimated for industrial demand, maintaining for the rest of the period growth estimates of 1%.

As a result of the above assumptions, it is estimated that demand will decline over the period 2020-2026, with a rate of -2.9% in 2020, rates not exceeding -1% between 2021 and 2023, and increasing reductions the rest of the period; -2.7% in 2024, -4.8% in 2025 and finally -9.5% in 2026.

Regarding the forecast of the capacity to be contracted by the agents, it is taken into account that as a consequence of the elimination of the current penalty/discount scheme. The agents will adjust their contracted capacities to those actually used, with the exception of the bi-directional connections with Portugal and France where the contracted capacities are estimated to be maintained. Therefore, the forecast for the period 2020-2026 is based on the estimate of the capacities invoiced in 2019.

The impact of the multipliers of the short-term contracts proposed in the methodology has also been included in the forecast. The resulting estimate, to avoid confusion, will henceforth be referred to as **equivalent contracted capacity.**

The equivalent contracted capacities by tariff and type of consumer (electricity generation, satellite LNG facility connection and others) have been estimated by maintaining the load factors implicit in the CNMC's forecast scenario for 2019, average use and considering that the distribution implicit in short- and long-term products remains constant as that contemplated for 2019.

Concerning **exports**, for the equivalent contracted capacities in the international connections with Portugal and France planned for 2020 have been considered the variations over 2019 estimated by the companies. Moreover, the average of the last three years closed has been considered for the period 2021-2026.

The estimate of **capacity contracting in the AA.SS** is based on the assumption that this will vary according to the variations in demand in the previous year as they determine the quantities to be stored to meet the minimum security stock requirements. The maximum available storage capacity will not be reached in the forecast horizon. The quantities injected and withdrawn have been estimated by applying the same proportion to the storage capacity implicit in the LWG forecast for 2020-2024 and maintained for 2025 and 2026.

The quantities injected and withdrawn have been estimated by applying the same proportion to the storage capacity implicit in the TSO forecast for 2020-2024 and maintained for 2025 and 2026. In conclusion, Table I.12 summarizes the underground storage capacity and volumes injected and withdrawn in the AA.SS during 2020-2026. The forecast of equivalent capacity entering and exiting the system from underground storage has been made by maintaining the load factor resulting from the 2019 forecast for the entire period.

Table I.12. Underground storage capacity and volumes injected and withdrawn from the AA.SS. 2020 – 2026

Underground Storages		2020	2021	2022	2023	2024	2025	2026
Storage capacity	(GWh/mes)	28.317	27.638	27.503	27.425	27.191	26.605	25.579
Injection	(GWh)	8.707	10.936	11.405	11.669	13.132	13.132	13.132
Withdrawal	(GWh)	8.972	9.332	10.921	11.039	11.542	11.542	11.542
Growth rate over the previous year (%)		**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
Storage capacity		12,1%	-2,4%	-0,5%	-0,3%	-0,9%	-2,2%	-3,9%
Injection		-26,5%	25,6%	4,3%	2,3%	12,5%	0,0%	0,0%
Withdrawal		*102,7%*	*4,0%*	*17,0%*	*1,1%*	*4,6%*	*0,0%*	*0,0%*

Source: CNMC

The regasification needs are determined separately for the Peninsula-Balearic System, and for the Canary Islands System, with the following hypotheses:

- The forecast demand for gas to be introduced into the system over the forecast horizon is the result of adding to the forecast demand for each of the years increased by the corresponding shortfalls, the balance of injection and extraction forecast for each year, excluding the demand from customers connected to a satellite LNG facility.
- Once the volume of gas to be introduced into the system has been determined, the equivalent flow forecast is determined by applying for each entry point the load factor (73%) and the utilization (93%) of the contracted capacity forecast for 2019. Considering that the annual and short-term product contracting scheme forecast for 2019 is maintained by applying the proposed multipliers.
- The volume forecast for 2019 for each entry point has been considered as the best forecast for NG entry for the period 2020-2026. Although uncertainty is high in terms of the possible evolution of LNG prices with the consequent impact on natural gas entries.

  In addition, the injection of biogas into distribution has been considered as a new entry point for natural gas. The estimate of this volume has been made based on the information provided by the companies (see Table I.13).

Table I.13. Forecast of biogas injection into the distribution network 2020 – 2026

		2020	2021	2022	2023	2024	2025	2026
Biogas injection into distribution network	(GWh)	12	55	209	363	518	672	854

Source: Companies

Therefore, the expected entry of natural gas for the period 2020-2026 increases from 166,284 GWh in 2020 to 167,126 GWh in 2026. The overall regasification needs are obtained by difference and considering, in order to determine the volume of LNG, the needs of LNG to the final customer (including exports of tanks and bunkering).

- Once the overall regasification needs have been determined, the forecast of the equivalent regasification capacity is determined, maintaining the load factor foreseen for 2019 (79.5%) and the utilization of the contracted capacity foreseen for that year (98.1%). Such forecast has been distributed by regasification plant considering that the Virtual Balance Tank scheme is implemented in 2020, which means that LNG storage, regasification and virtual liquefaction become non-localized services. Thus, it is expected that progressively the percentages of distribution per plant converge until reaching the distribution which corresponds to the

percentages of regasification capacity of each plant over the national total in the year 2023.

Truck loading is determined by the demand from customers connected to a satellite LNG facility, both directly and through a distribution network, and from LNG unloads supplied through tanks. This loading in tanks includes tanks for bunkering, tanks for other countries once consumers supplied by propane air in the Canary Islands are excluded.

The equivalent capacity of loading in tanks is estimated by maintaining the loading factor foreseen for 2019 (79.5%) and the utilization of the contracted capacity foreseen for that year (98.1%). Also, taking in consideration that the scheme of contracting annual and short-term products foreseen for 2019 is maintained by applying the proposed multipliers.

Regarding the number of tanks, it is estimated that the average sizes of the tanks declared for 2018 for each regasification plant are maintained.

The volume of **LNG storage** has been forecast considering that the number of days of contracted regasification capacity (without the effect of multipliers) in 2019 is maintained. In the forecast of equivalent capacity, the load factor of the 2019 forecast has been kept for the whole period. Furthermore, as a result of the supply of new products and services in the regasification plants, an increase in the use of these facilities is expected under the assumptions explained below.

The following concepts have been taken into account:

- The Balance Sheet Circular establishes a penalty for positive imbalance equivalent to 2 times the daily LNG storage tariff. In order to avoid this penalty, it is expected that the agents will contract daily storage capacity. In order to determine the volume associated with this use, the annual average of positive imbalances in plants over the last three years (2016, 2017, 2018) has been taken into account.
- Bunkering forecasts are estimated in accordance with the interest expressed by the system's agents in quarterly and monthly capacity contracting.
- The annual contract for the new unloading, LNG storage and loading service starting in 2021. Estimating that up to 2025, 20% of the storage capacity of a standard 600,000 m3 LNG plant would be used for this service, increasing it to 50% in 2026.
- The use of LNG storage for price arbitrage between accounts and/or for seasonal storage. In order to calculate this value, the average incremental value of LNG storage in the summer months of 2018 and 2019 has been taken into account.

With respect to the **LNG ship reloading service, t**he assumption made is that over the period the number of LNG loads will gradually increase due to the

development of LNG bunkering, reaching 80 vessels by 2026 with an average size of 5,279 m3 of LNG. In addition, it has been considered that as a result of the new products and services in the regasification plants there will be between 3 additional unloading in 2020 and 2021 and 5 in 2022 - 2026 to large vessels.

Regarding the number of loads of **Cooling down** on the 2020-2026 period, estimates for 2019 have been maintained.

The volume of **LNG Unloading** in each subsystem has been estimated taking into account the forecast of the regasification activity and the forecast of the transfer of NLG to tanker. The number of tankers has been calculated maintaining the average size of tankers per regasification plant planned for 2019.

When these forecasts were made, the entry into operation of the Musel plant was not considered, nor were the regasification plants of the Canary Islands considered to enter into operation.

In relation to the new **virtual liquefaction** service, it has been considered a zero contracted capacity. Taking into account the characteristics of the product offered as well as the fact that there is no historical data available to estimate the demand for this service by the agents.

The equivalent contracted capacities and system entry volumes are shown in Table I.14. The equivalent contracted capacities and exit volumes is shown in Table I.15. And the LNG regasification and storage scenario foreseen for the period 2020-2026 is displayed in Table I.16. In order to show the impact of the change in the proposed multipliers, the equivalent capacity with current multipliers is also indicated for the year 2020.

Table I.14. Equivalent contracted capacity and volume per entry point

Entry point	2020			2021		2022		2023		2024		2025		2026	
	Equivalent Capacity Current Multipliers (MWh/day)	Equivalent capacity (MWh/day)	Volume (GWh)	Equivalent capacity (MWh/day)	Volume (GWh)	Equivalent capacity (MWh/day)	Volume (GWh)	Equivalent capacity (MWh/day)	Volume (GWh)	Equivalent capacity (MWh/day)	Volume (GWh)	Equivalent capacity (MWh/day)	Volume (GWh)	Equivalent capacity (MWh/day)	Volume (GWh)
CI Tarifa	158.238	145.693	37.838	145.693	37.838	145.693	37.838	145.693	37.838	145.693	37.838	145.693	37.838	145.693	37.838
CI Medgaz	224.648	222.166	69.701	222.166	69.701	222.166	69.701	222.166	69.701	222.166	69.701	222.166	69.701	222.166	69.701
CI Biriatou	231.683	205.371	55.121	205.371	55.121	205.371	55.121	205.371	55.121	205.371	55.121	205.371	55.121	205.371	55.121
CI Larrau															
CI Badajoz	15.575	10.473	1.920	10.473	1.920	10.473	1.920	10.473	1.920	10.473	1.920	10.473	1.920	10.473	1.920
CI Tuy															
PR Barcelona	185.210	180.913	57.937	191.162	61.219	191.692	61.388	190.845	61.117	182.429	58.422	166.371	53.279	136.729	43.787
PR Cartagena	77.745	76.351	22.289	102.821	30.017	124.657	36.391	144.937	42.312	138.545	40.446	126.350	36.886	103.839	30.314
PR Huelva	157.807	154.658	51.938	155.456	52.206	148.137	49.748	139.992	47.013	133.819	44.940	122.040	40.984	100.297	33.682
PR Bilbao	145.898	147.909	48.320	125.898	41.130	96.674	31.582	67.661	22.104	64.677	21.129	58.984	19.270	48.475	15.836
PR Sagunto	72.916	73.966	23.507	85.238	27.089	92.367	29.355	98.621	31.342	94.272	29.960	85.974	27.323	70.656	22.455
PR Mugardos	38.301	36.082	10.936	39.717	12.037	41.376	12.540	42.689	12.938	40.807	12.367	37.215	11.279	30.584	9.269
Yac.Poseidón	424	372	45	372	45	372	45	372	45	372	45	372	45	372	45
Yac.Viura	5.962	5.766	1.547	5.766	1.547	5.766	1.547	5.766	1.547	5.766	1.547	5.766	1.547	5.766	1.547
Yac. Marismas	4	4	1	4	1	4	1	4	1	4	1	4	1	4	1
PB Madrid	342	310	100	310	100	310	100	310	100	310	100	310	100	310	100
AS Serrablo	15.886	16.906	3.773	17.586	3.925	20.579	4.593	20.802	4.643	21.749	4.854	21.749	4.854	21.749	4.854
AS Gaviota	12.787	13.608	2.935	14.155	3.053	16.564	3.572	16.743	3.611	17.506	3.775	17.506	3.775	17.506	3.775
AS Marismas	4.130	5.462	1.006	5.681	1.047	6.649	1.225	6.720	1.238	7.026	1.294	7.026	1.294	7.026	1.294
AS Yela	5.132	4.396	1.258	4.572	1.308	5.351	1.531	5.408	1.548	5.655	1.618	5.655	1.618	5.655	1.618
TOTAL	**1.352.689**	**1.300.407**	**390.170**	**1.332.443**	**399.302**	**1.334.200**	**398.197**	**1.324.575**	**394.137**	**1.296.641**	**385.078**	**1.239.025**	**366.834**	**1.132.672**	**333.157**

Source: CNMC

Table I.15. Equivalent contracted capacity and volume per exit point

Exit Point	2020			2021		2022		2023		2024		2025		2026	
	Equivalent Capacity Current Multipliers (MWh/day)	Equivalent capacity (MWh/day)	Volume (GWh)	Equivalent capacity (MWh/day)	Volume (GWh)	Equivalent capacity (MWh/day)	Volume (GWh)	Equivalent capacity (MWh/day)	Volume (GWh)	Equivalent capacity (MWh/day)	Volume (GWh)	Equivalent capacity (MWh/day)	Volume (GWh)	Equivalent capacity (MWh/day)	Volume (GWh)
Conexión Internacional	**143.042**	**140.958**	**3.548**	**154.923**	**12.861**	**147.929**	**12.861**	**142.302**	**12.861**	**145.361**	**12.861**	**147.938**	**12.861**	**148.639**	**12.861**
CI Biriatou	132.981	130.897	446	127.713	4.141	128.830	4.141	129.151	4.141	129.584	4.141	129.148	4.141	128.819	4.141
CI Larrau															
CI Badajoz	10.061	10.061	3.102	27.210	8.720	19.099	8.720	13.151	8.720	15.777	8.720	18.790	8.720	19.820	8.720
CI Tuy															
Planta de regasificación	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PR Barcelona															
PR Cartagena															
PR Huelva															
PR Bilbao															
PR Sagunto															
PR Mugardos															
Almacenamiento Subterráneo	**89.222**	**46.834**	**8.707**	**58.818**	**10.936**	**61.345**	**11.405**	**62.765**	**11.669**	**70.633**	**13.132**	**70.633**	**13.132**	**70.633**	**13.132**
AS Serrablo	23.876	12.533	2.329	15.740	2.925	16.416	3.051	16.796	3.122	18.902	3.513	18.902	3.513	18.902	3.513
AS Gaviota	51.732	27.155	5.047	34.103	6.338	35.568	6.611	36.392	6.764	40.954	7.612	40.954	7.612	40.954	7.612
AS Marismas	6.694	3.514	666	4.413	836	4.603	872	4.709	892	5.299	1.004	5.299	1.004	5.299	1.004
AS Yela	6.920	3.632	666	4.562	836	4.758	872	4.868	892	5.478	1.004	5.478	1.004	5.478	1.004
Salida nacional	**1.816.350**	**1.743.624**	**376.430**	**1.731.735**	**374.064**	**1.722.252**	**372.657**	**1.700.831**	**368.500**	**1.652.415**	**358.157**	**1.570.365**	**340.100**	**1.366.947**	**306.662**
P > 60 bar	864.509	794.801	177.211	777.255	172.870	764.055	169.961	741.405	164.869	694.681	154.229	617.307	136.529	421.954	104.175
16 bar < P ≤ 60 bar	121.967	121.881	35.975	122.433	36.155	122.987	36.336	123.596	36.518	124.208	36.700	124.823	36.884	125.441	37.068
4 bar < P ≤ 16 bar	383.854	380.992	95.202	390.191	97.578	397.742	99.526	403.450	101.015	407.211	102.018	408.954	102.517	408.632	102.499
P ≤ 4 bar	437.625	437.558	66.743	433.469	66.161	429.018	65.523	423.915	64.784	417.865	63.897	410.915	62.869	402.699	61.641
P ≤ 4 bar Plantas Satélite	8.394	8.392	1.299	8.388	1.300	8.450	1.311	8.465	1.315	8.450	1.313	8.366	1.301	8.221	1.279
TOTAL SALIDAS	**2.048.614**	**1.931.416**	**388.685**	**1.945.476**	**397.861**	**1.931.526**	**396.923**	**1.905.898**	**393.031**	**1.868.409**	**384.150**	**1.788.936**	**366.093**	**1.586.219**	**332.656**

Source: CNMC

Table I.16. Forecast of the regasification activity. 2020 - 2026

		2020		2021	2022	2023	2024	2025	2026
Regasification		Current multiplier	CNMC multiplier						
Volume	GWh	219.009		227.576	224.748	220.338	210.298	191.261	156.302
Equivalent contracted capacity	MWh/day	697.867	706.760	738.741	733.805	723.583	690.675	628.257	513.601
Barcelona		188.675	187.399	198.014	198.563	197.686	188.968	172.335	141.631
Cartagena		77.766	79.427	106.964	129.678	150.775	144.126	131.440	108.022
Huelva		162.737	161.780	162.615	154.959	146.439	139.982	127.660	104.915
Bilbao		157.444	161.708	138.890	109.012	79.048	74.563	66.376	51.828
Sagunto		72.935	78.997	91.036	98.650	105.329	100.684	91.822	75.462
Mugardos		38.310	37.449	41.221	42.942	44.306	42.352	38.624	31.743
Trunk loading		Current multiplier	CNMC multiplier						
Volume	GWh	14.178		14.296	14.426	14.549	14.668	14.778	14.879
Equivalent contracted capacity	MWh/day	49.807	47.945	48.343	48.781	49.197	49.601	49.973	50.316
LNG Storage									
Storage volume	GWh/year	4.372.506		4.585.723	4.571.047	4.522.224	4.318.226	3.930.860	3.218.678
No. Days contracted capacity	No. Days	17,92		17,92	17,92	17,92	17,92	17,92	17,92
Equivalent contracted capacity		14.463.390		15.168.669	15.120.123	14.958.626	14.283.840	13.002.512	10.646.752
LNG ship unloading									
Unloaded volume	***GWh/year***	***236.625***		***246.458***	***245.311***	***241.361***	***231.777***	***213.185***	***178.662***
Barcelona		*62.006*		*64.582*	*64.282*	*63.247*	*60.735*	*55.864*	*46.817*
Cartagena		*18.830*		*19.612*	*19.521*	*19.207*	*18.444*	*16.964*	*14.217*
Huelva		*57.549*		*59.941*	*59.662*	*58.701*	*56.370*	*51.849*	*43.452*
Bilbao (con BBE)		*63.906*		*66.561*	*66.251*	*65.185*	*62.596*	*57.575*	*48.252*
Sagunto		*22.535*		*23.472*	*23.362*	*22.986*	*22.073*	*20.303*	*17.015*
Mugardos		*11.799*		*12.290*	*12.232*	*12.035*	*11.558*	*10.631*	*8.909*
Canarias		*0*		*0*	*0*	*0*	*0*	*0*	*0*
No. Ships		***253***		***264***	***262***	***258***	***248***	***228***	***191***
Barcelona		*68*		*71*	*71*	*70*	*67*	*61*	*51*
Cartagena		*21*		*22*	*22*	*21*	*20*	*19*	*16*
Huelva		*61*		*63*	*63*	*62*	*60*	*55*	*46*
Bilbao (con BBE)		*66*		*68*	*68*	*67*	*64*	*59*	*50*
Sagunto		*21*		*22*	*22*	*22*	*21*	*19*	*16*
Mugardos		*16*		*17*	*17*	*16*	*16*	*14*	*12*
Canarias		*0*		*0*	*0*	*0*	*0*	*0*	*0*
LNG Transhipment									
Volume transferred	GWh	3.387		4.534	6.086	6.423	6.761	7.098	7.436
No. Vessels		26		36	47	56	66	75	85
Cooling down									
Volume	GWh	27.000		27.000	27.000	27.000	27.000	27.000	27.000
No. Vessels		3		3	3	3	3	3	3

Source: CNMC

3. Scenario foreseen for the period 2020-2026 with the structure proposed by the CNMC

A new distribution tariff structure has been proposed, after analysing the profiling of natural gas consumers for 2018 (see Appendix III of the Report), and their segmentation. This new distribution tariff structure differentiates consumers by annual consumption levels instead of considering the pressure of the network from which they are supplied.

Therefore, the demand forecast made for the period 2020-2026 with the current structure to date has been converted to the new proposed structure.

This conversion has been carried out considering the characterization performed for the year 2018. In such a way that, for each tariff group of the current structure, the volumes consumed, supply points, contracted and invoiced capacities have been allocated to the new proposed tariff groups. Distinguishing between demand for electricity generation, conventional and satellite LNG facilities. The contracted and invoiced capacities of Group 3 were estimated based on the information available on the load curves of these consumers for 2016-2018.

Consequently, the resulting distribution for 2018 for each current tariff group and type of consumption (electricity generation, conventional transmission-distribution and satellite LNG facilities) has been maintained over the entire period.

The conversion of domestic demand by tariff group from the current structure to the new structure proposed for 2020 and 2021 is shown in Table I.17.

Table I.17. Conversion of the National Demand Forecast for 2020 and 2021 to the proposed structure

			2020			2021		
			Volume	Customers	Equivalent Capacity	Volume	Customers	Equivalent Capacity
			MWh	No.	Qd (kWh/day)	MWh	No.	Qd (kWh/day)
P>60 bar			**177.210.715**	**124**	**794.800.522**	**172.870.453**	**124**	**777.255.151**
RL.1	C ≤ 5.000	kWh	0	1	584	0	1	555
RL.2	5.000 < C ≤ 15.000		11	1	44	11	1	44
RL.3	15.000 < C ≤ 50.000		204	6	1.379	204	6	1.382
RL.4	50.000 < C ≤ 300.000		878	8	15.864	866	8	15.286
RL.5	300.000 < C ≤ 1.500.000		1.180	1	54.699	1.183	1	54.809
RL.6	1.500.000 < C ≤ 5.000.000		6.559	2	82.131	6.572	2	82.295
RL.7	5.000.000 < C ≤ 15.000.000		38.725	3	248.602	37.338	3	241.500
RL.8	15.000.000 < C ≤ 50.000.000		125.431	4	660.950	123.754	4	657.152
RL.9	50.000.000 < C ≤ 150.000.000		625.608	8	3.008.839	620.694	8	2.992.178
RL.10	150.000.000 < C ≤ 500.000.000		7.138.301	21	31.278.765	7.016.032	21	30.860.911
RL.11	C > 500.000.000		169.273.817	70	759.448.663	165.063.797	70	742.349.039
P<60 bar			**197.919.715**	**7.807.254**	**940.431.048**	**199.893.740**	**7.840.651**	**946.092.089**
16-60 Bar			**35.975.207**	**152**	**121.881.107**	**36.155.083**	**153**	**122.432.626**
RL.1	C ≤ 5.000	kWh	2	1	2	2	1	2
RL.2	5.000 < C ≤ 15.000		0	0	0	0	0	0
RL.3	15.000 < C ≤ 50.000		799	1	3.397	803	1	3.414
RL.4	50.000 < C ≤ 300.000		10.242	2	4.390	10.293	2	4.412
RL.5	300.000 < C ≤ 1.500.000		18.761	10	74.265	18.854	10	73.495
RL.6	1.500.000 < C ≤ 5.000.000		63.239	18	251.446	63.555	19	249.081
RL.7	5.000.000 < C ≤ 15.000.000		227.821	31	1.520.273	228.960	31	1.502.663
RL.8	15.000.000 < C ≤ 50.000.000		722.156	29	3.666.982	725.767	29	3.659.006
RL.9	50.000.000 < C ≤ 150.000.000		1.732.949	17	6.980.264	1.741.614	17	7.013.772
RL.10	150.000.000 < C ≤ 500.000.000		8.222.609	26	28.631.922	8.263.722	26	28.775.082
RL.11	C > 500.000.000		24.976.628	18	80.748.166	25.101.511	18	81.151.699
4-16 Bar			**95.201.901**	**3.644**	**380.992.247**	**97.577.633**	**3.680**	**390.190.879**
RL.1	C ≤ 5.000	kWh	6	53	56.796	6	53	57.432
RL.2	5.000 < C ≤ 15.000		275	23	14.659	282	23	14.794
RL.3	15.000 < C ≤ 50.000		2.387	57	74.478	2.446	58	75.043
RL.4	50.000 < C ≤ 300.000		53.946	291	447.463	55.295	294	451.320
RL.5	300.000 < C ≤ 1.500.000		599.502	750	2.991.901	614.489	758	3.018.535
RL.6	1.500.000 < C ≤ 5.000.000		2.394.661	751	11.015.506	2.454.404	759	11.135.302
RL.7	5.000.000 < C ≤ 15.000.000		6.384.865	712	36.692.363	6.543.997	719	37.583.248
RL.8	15.000.000 < C ≤ 50.000.000		14.714.284	574	69.812.695	15.082.159	580	71.553.850
RL.9	50.000.000 < C ≤ 150.000.000		23.091.397	295	92.315.285	23.665.992	298	94.545.180
RL.10	150.000.000 < C ≤ 500.000.000		35.945.930	124	127.655.017	36.843.493	125	130.841.990
RL.11	C > 500.000.000		12.014.647	13	39.916.084	12.315.069	13	40.914.185
<4 Bar			**66.742.608**	**7.803.458**	**437.557.694**	**66.161.024**	**7.836.817**	**433.468.583**
RL.1	C ≤ 5.000	kWh	10.490.044	4.536.540	66.800.914	10.330.304	4.555.576	65.783.685
RL.2	5.000 < C ≤ 15.000		20.459.080	2.860.874	144.768.573	20.146.480	2.872.729	142.556.610
RL.3	15.000 < C ≤ 50.000		6.565.114	328.804	46.454.783	6.464.803	330.167	45.744.986
RL.4	50.000 < C ≤ 300.000		5.904.305	53.045	37.257.362	5.876.575	53.731	37.088.252
RL.5	300.000 < C ≤ 1.500.000		11.772.230	21.196	76.015.247	11.746.058	21.566	75.846.588
RL.6	1.500.000 < C ≤ 5.000.000		5.307.614	2.463	34.423.391	5.296.139	2.506	34.351.315
RL.7	5.000.000 < C ≤ 15.000.000		3.234.487	424	18.438.433	3.253.750	431	18.532.628
RL.8	15.000.000 < C ≤ 50.000.000		2.474.490	103	11.485.883	2.505.059	104	11.627.776
RL.9	50.000.000 < C ≤ 150.000.000		535.244	8	1.913.109	541.857	8	1.936.743
RL.10	150.000.000 < C ≤ 500.000.000		0	0	0	0	0	0
RL.11	C > 500.000.000		0	0	0	0	0	0
TOTAL TRANSMISSION-DISTRIBUTION			**375.130.430**	**7.807.377**	**1.735.231.570**	**372.764.193**	**7.840.775**	**1.723.347.240**
SATELLITE FACILITY <4 Bar			**1.299.090**	**155.616**	**8.392.385**	**1.299.981**	**157.817**	**8.387.794**
RL.1	C ≤ 5.000	kWh	229.841	103.776	1.579.549	228.650	105.275	1.571.366
RL.2	5.000 < C ≤ 15.000		334.972	45.340	2.598.962	332.869	45.944	2.582.647
RL.3	15.000 < C ≤ 50.000		107.489	5.211	833.981	106.814	5.280	828.745
RL.4	50.000 < C ≤ 300.000		118.905	898	657.955	119.329	916	660.309
RL.5	300.000 < C ≤ 1.500.000		249.812	339	1.383.994	251.205	347	1.391.710
RL.6	1.500.000 < C ≤ 5.000.000		118.205	41	646.424	118.948	42	650.375
RL.7	5.000.000 < C ≤ 15.000.000		101.901	10	510.319	103.464	10	517.920
RL.8	15.000.000 < C ≤ 50.000.000		37.964	2	181.200	38.702	2	184.720
RL.9	50.000.000 < C ≤ 150.000.000		0	0	0	0	0	0
RL.10	150.000.000 < C ≤ 500.000.000		0	0	0	0	0	0
RL.11	C > 500.000.000		0	0	0	0	0	0
LNG DIRECT TO FINAL CUSTOMER			**11.683.076**			**11.799.907**		
TOTAL SYSTEM			**388.112.596**	**7.962.993**	**1.743.623.955**	**385.864.081**	**7.998.592**	**1.731.735.034**

Source: CNMC

Once the forecast for the period 2020 - 2026 has been obtained in the proposed structure it has been adapted. To obtain the equivalent of the demand from October to December, the demand of the first calendar year has been multiplied by 3/12. And in order to obtain the demand from January to September, the demand of the second calendar year has been multiplied by 9/12.

Finally, Table I.18 shows the entries, Table I.19 the exit points and in Table I.20 the LNG regasification and storage scenario of the forecast for the period October 2020 to September 2026 according to the proposed structure.

Table I.18. 2020-2026 forecast of entries with proposed structure and year of gas

Entry point	Oct 20 - Sep 21		Oct 21 - Sep 22		Oct 22 - Sep 23		Oct 23 - Sep 24		Oct 24 - Sep 25		Oct 25 - Sep 26	
	Volume (MWh)	Equivalent capacity (MWh/day)	Volume (MWh)	Equivalent capacity (MWh/day)	Volume (MWh)	Equivalent capacity (MWh/day)	Volume (MWh)	Equivalent capacity (MWh/day)	Volume (MWh)	Equivalent capacity (MWh/day)	Volume (MWh)	Equivalent capacity (MWh/day)
CI Tarifa	37.838.452	145.693	37.838.452	145.693	37.838.452	145.693	37.838.452	145.693	37.838.452	145.693	37.838.452	145.693
CI Medgaz	69.700.918	222.166	69.700.918	222.166	69.700.918	222.166	69.700.918	222.166	69.700.918	222.166	69.700.918	222.166
CI Biriatou	55.120.751	205.371	55.120.751	205.371	55.120.751	205.371	55.120.751	205.371	55.120.751	205.371	55.120.751	205.371
CI Larrau												
CI Badajoz	1.919.644	10.473	1.919.644	10.473	1.919.644	10.473	1.919.644	10.473	1.919.644	10.473	1.919.644	10.473
CI Tuy												
PR Barcelona	60.398.084	188.600	61.345.820	191.559	61.184.837	191.057	59.095.700	184.533	54.565.052	170.385	46.160.013	144.140
PR Cartagena	28.085.099	96.204	34.797.801	119.198	40.831.700	139.867	40.912.407	140.143	37.775.805	129.399	31.956.932	109.467
PR Huelva	52.139.183	155.256	50.362.848	149.967	47.696.931	142.029	45.458.230	135.362	41.973.117	124.985	35.507.702	105.732
PR Bilbao	42.927.413	131.401	33.969.246	103.980	24.473.765	74.914	21.373.159	65.423	19.734.558	60.407	16.694.705	51.102
PR Sagunto	26.193.478	82.420	28.788.165	90.585	30.845.185	97.057	30.305.487	95.359	27.982.078	88.048	23.671.801	74.486
PR Mugardos	11.761.907	38.809	12.414.233	40.961	12.838.474	42.361	12.510.105	41.277	11.551.002	38.113	9.771.720	32.242
Yac.Poseidón	44.551	372	44.551	372	44.551	372	44.551	372	44.551	372	44.551	372
Yac.Viura	1.546.559	5.766	1.546.559	5.766	1.546.559	5.766	1.546.559	5.766	1.546.559	5.766	1.546.559	5.766
Yac. Marismas	848	4	848	4	848	4	848	4	848	4	848	4
PB Madrid	99.709	310	99.709	310	99.709	310	99.709	310	99.709	310	99.709	310
AS Serrablo	3.886.882	17.416	4.425.870	19.831	4.630.164	20.746	4.801.092	21.512	4.853.927	21.749	4.853.927	21.749
AS Gaviota	3.023.130	14.018	3.442.343	15.962	3.601.239	16.699	3.734.183	17.315	3.775.277	17.506	3.775.277	17.506
AS Marismas	1.036.502	4.528	1.180.232	5.156	1.234.710	5.394	1.280.291	5.593	1.294.381	5.655	1.294.381	5.655
AS Yela	1.295.627	5.627	1.475.290	6.407	1.543.388	6.702	1.600.364	6.950	1.617.976	7.026	1.617.976	7.026
TOTAL	**397.018.736**	**1.324.434**	**398.473.279**	**1.333.761**	**395.151.824**	**1.326.981**	**387.342.449**	**1.303.624**	**371.394.603**	**1.253.429**	**341.575.865**	**1.159.260**

Source: CNMC

Table I.19. 2020-2026 forecast of exit points based on proposed structure and year of gas

			Oct 20 - Sep 21			Oct 21 - Sep 22			Oct 22 - Sep 23			Oct 23 - Sep 24			Oct 24 - Sep 25			Oct 25 - Sep 26		
			Volume	Customers	Equivalent Capacity	Volume	Customers	Equivalent Capacity	Volume	Customers	Equivalent Capacity	Volume	Customers	Equivalent Capacity	Volume	Customers	Equivalent Capacity	Volume	Customers	Equivalent Capacity
			MWh	No.	Qd (kWh/day)	MWh	No.	Qd (kWh/day)	MWh	No.	Qd (kWh/day)	MWh	No.	Qd (kWh/day)	MWh	No.	Qd (kWh/day)	MWh	No.	Qd (kWh/day)
P>60 bar			**173.955.518**	**124**	**781.641.494**	**170.688.108**	**125**	**767.355.263**	**166.141.786**	**126**	**747.067.782**	**156.888.700**	**127**	**706.362.118**	**140.954.248**	**128**	**636.650.596**	**112.263.536**	**128**	**470.792.542**
RL.1	C ≤ 5.000		0	1	562	0	1	541	0	1	511	0	1	451	0	1	349	0	1	183
RL.2	5.000 < C ≤ 15.000		11	1	44	11	1	44	11	1	44	11	1	45	11	1	45	11	1	45
RL.3	15.000 < C ≤ 50.000		204	6	1.381	205	6	1.384	205	6	1.387	206	6	1.389	206	6	1.392	206	6	1.395
RL.4	50.000 < C ≤ 300.000		869	8	15.431	861	8	15.002	849	8	14.414	824	8	13.223	780	8	11.178	709	8	7.854
RL.5	300.000 < C ≤ 1.500.000		1.182	1	54.781	1.185	1	54.891	1.187	1	55.001	1.189	1	55.111	1.192	1	55.221	1.194	1	55.331
RL.6	1.500.000 < C ≤ 5.000.000	kWh	6.569	2	82.254	6.582	2	82.418	6.595	2	82.583	6.608	2	82.749	6.622	2	82.914	6.635	2	83.080
RL.7	5.000.000 < C ≤ 15.000.000		37.685	3	243.276	36.624	3	237.506	35.158	3	229.372	32.210	3	213.154	27.158	3	185.449	17.781	3	120.894
RL.8	15.000.000 < C ≤ 50.000.000		124.173	4	658.101	122.866	4	654.635	120.981	4	649.179	117.080	4	637.658	110.315	4	617.509	95.419	4	550.132
RL.9	50.000.000 < C ≤ 150.000.000		621.923	8	2.996.343	618.279	9	2.983.248	612.852	9	2.962.818	601.073	9	2.917.813	580.274	9	2.837.888	537.016	9	2.631.567
RL.10	150.000.000 < C ≤ 500.000.000		7.046.599	21	30.965.375	6.954.197	21	30.622.173	6.823.508	21	30.122.896	6.554.020	22	29.102.045	6.087.474	22	27.340.100	5.192.691	22	22.869.144
RL.11	C > 500.000.000		166.116.302	70	746.623.945	162.947.298	70	732.703.421	158.540.440	71	712.949.577	149.575.479	71	673.338.482	134.140.217	72	605.518.552	106.411.874	72	444.472.919
P<60 bar			**199.400.234**	**7.832.302**	**944.676.829**	**201.012.299**	**7.865.237**	**948.833.094**	**202.083.853**	**7.892.856**	**950.657.478**	**202.540.442**	**7.913.737**	**949.703.079**	**202.355.392**	**7.927.568**	**945.839.711**	**201.473.139**	**7.931.579**	**938.751.655**
16-60 Bar			**36.110.114**	**153**	**122.294.747**	**36.290.664**	**155**	**122.848.117**	**36.472.118**	**156**	**123.443.420**	**36.654.478**	**158**	**124.054.757**	**36.837.751**	**159**	**124.669.121**	**37.021.939**	**161**	**125.286.528**
RL.1	C ≤ 5.000		2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2
RL.2	5.000 < C ≤ 15.000		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RL.3	15.000 < C ≤ 50.000		802	1	3.409	806	1	3.426	810	1	3.444	814	1	3.461	818	1	3.478	822	2	3.496
RL.4	50.000 < C ≤ 300.000		10.281	2	4.406	10.332	2	4.429	10.384	2	4.451	10.436	2	4.473	10.488	2	4.495	10.540	2	4.518
RL.5	300.000 < C ≤ 1.500.000		18.831	10	73.688	18.925	10	72.910	19.020	10	72.123	19.115	10	71.326	19.210	10	70.520	19.306	11	69.704
RL.6	1.500.000 < C ≤ 5.000.000	kWh	63.476	19	249.672	63.794	19	247.285	64.113	19	244.867	64.433	19	242.419	64.755	19	239.940	65.079	19	237.431
RL.7	5.000.000 < C ≤ 15.000.000		228.676	31	1.507.066	229.819	31	1.489.296	230.968	32	1.489.672	232.123	32	1.496.135	233.284	32	1.502.626	234.450	33	1.509.144
RL.8	15.000.000 < C ≤ 50.000.000		724.864	29	3.661.000	728.489	30	3.652.896	732.131	30	3.664.501	735.792	30	3.682.758	739.471	30	3.701.107	743.168	31	3.719.547
RL.9	50.000.000 < C ≤ 150.000.000		1.739.448	17	7.005.395	1.748.145	17	7.039.023	1.756.886	17	7.073.868	1.765.670	17	7.109.237	1.774.499	18	7.144.783	1.783.371	18	7.180.507
RL.10	150.000.000 < C ≤ 500.000.000		8.253.443	26	28.739.292	8.294.711	26	28.882.988	8.336.184	26	29.027.403	8.377.865	26	29.172.540	8.419.754	27	29.318.403	8.461.853	27	29.464.995
RL.11	C > 500.000.000		25.070.291	18	81.050.816	25.195.642	18	81.455.862	25.321.620	18	81.863.089	25.448.228	18	82.272.405	25.575.470	19	82.683.767	25.703.347	19	83.097.186
4-16 Bar			**96.983.700**	**3.671**	**387.891.221**	**99.039.053**	**3.708**	**395.853.981**	**100.642.817**	**3.745**	**402.023.180**	**101.767.202**	**3.782**	**406.270.899**	**102.391.947**	**3.820**	**408.518.310**	**102.503.070**	**3.858**	**408.712.392**
RL.1	C ≤ 5.000		6	53	57.273	6	53	57.694	6	54	57.823	6	55	57.657	6	55	57.195	6	56	56.443
RL.2	5.000 < C ≤ 15.000		280	23	14.760	286	24	14.839	291	24	14.841	294	24	14.767	296	24	14.616	297	25	14.392
RL.3	15.000 < C ≤ 50.000		2.432	57	74.902	2.483	58	75.177	2.523	59	75.062	2.552	59	74.554	2.568	60	73.660	2.571	60	72.391
RL.4	50.000 < C ≤ 300.000		54.958	294	450.356	56.124	297	452.483	57.035	299	452.275	57.676	302	449.718	58.036	305	444.839	58.108	309	437.698
RL.5	300.000 < C ≤ 1.500.000		610.742	756	3.011.876	623.707	763	3.026.968	633.830	771	3.026.465	640.952	779	3.010.279	644.952	787	2.978.561	645.755	794	2.931.703
RL.6	1.500.000 < C ≤ 5.000.000	kWh	2.439.468	757	11.105.353	2.491.155	765	11.185.064	2.531.482	772	11.208.629	2.559.741	780	11.174.502	2.575.419	788	11.082.676	2.578.156	796	10.933.941
RL.7	5.000.000 < C ≤ 15.000.000		6.504.214	717	37.360.527	6.641.903	724	38.134.749	6.749.281	731	38.737.169	6.824.386	739	39.154.279	6.865.801	746	39.378.121	6.872.493	753	39.403.121
RL.8	15.000.000 < C ≤ 50.000.000		14.990.190	579	71.118.562	15.308.403	585	72.623.961	15.556.893	590	73.798.440	15.731.700	596	74.623.262	15.829.881	602	75.084.535	15.849.596	608	75.173.590
RL.9	50.000.000 < C ≤ 150.000.000		23.522.343	298	93.987.706	24.019.663	301	95.953.106	24.406.942	304	97.495.748	24.676.104	307	98.566.686	24.821.471	310	99.142.230	24.838.372	313	99.203.286
RL.10	150.000.000 < C ≤ 500.000.000		36.619.102	125	130.045.247	37.395.494	126	132.801.938	38.001.776	127	134.954.565	38.428.280	129	136.468.805	38.667.828	130	137.319.172	38.715.928	131	137.489.717
RL.11	C > 500.000.000		12.239.964	13	40.664.659	12.499.828	13	41.528.003	12.702.755	13	42.202.163	12.845.510	13	42.676.391	12.925.688	14	42.942.705	12.941.788	14	42.996.110
<4 Bar			**66.306.420**	**7.828.477**	**434.490.861**	**65.682.582**	**7.861.375**	**430.130.996**	**64.968.919**	**7.888.955**	**425.190.878**	**64.118.762**	**7.909.797**	**419.377.423**	**63.125.693**	**7.923.589**	**412.652.280**	**61.948.130**	**7.927.559**	**404.752.735**
RL.1	C ≤ 5.000		10.370.239	4.550.817	66.037.992	10.208.544	4.569.653	65.008.317	10.038.168	4.585.362	63.923.354	9.858.130	4.597.227	62.776.867	9.668.807	4.605.099	61.571.252	9.467.681	4.607.401	60.290.478
RL.2	5.000 < C ≤ 15.000		20.224.630	2.869.765	143.109.601	19.907.822	2.881.432	140.867.866	19.574.871	2.891.235	138.511.904	19.223.296	2.898.642	136.024.156	18.853.670	2.903.536	133.408.681	18.461.142	2.904.933	130.631.153
RL.3	15.000 < C ≤ 50.000		6.489.881	329.826	45.922.436	6.388.220	331.167	45.203.085	6.281.380	332.294	44.447.081	6.168.563	333.145	43.648.787	6.049.954	333.708	42.809.508	5.923.995	333.868	41.918.227
RL.4	50.000 < C ≤ 300.000		5.883.508	53.559	37.130.530	5.849.010	54.213	36.918.199	5.802.782	54.796	36.631.217	5.737.196	55.239	36.220.773	5.651.061	55.526	35.679.218	5.538.565	55.595	34.969.432
RL.5	300.000 < C ≤ 1.500.000		11.752.601	21.474	75.888.753	11.710.401	21.825	75.616.622	11.641.662	22.141	75.173.139	11.527.832	22.382	74.438.530	11.365.832	22.538	73.392.910	11.141.935	22.574	71.947.645
RL.6	1.500.000 < C ≤ 5.000.000	kWh	5.299.007	2.496	34.369.334	5.280.324	2.536	34.250.630	5.249.695	2.573	34.054.604	5.198.766	2.601	33.727.135	5.126.148	2.619	33.259.203	5.025.653	2.623	32.610.691
RL.7	5.000.000 < C ≤ 15.000.000		3.248.934	429	18.509.079	3.265.210	435	18.585.405	3.275.875	441	18.628.759	3.276.572	445	18.613.857	3.266.356	448	18.535.375	3.241.588	448	18.372.489
RL.8	15.000.000 < C ≤ 50.000.000		2.497.416	104	11.592.302	2.526.547	105	11.727.517	2.552.392	106	11.847.484	2.572.059	107	11.938.774	2.584.768	107	11.997.764	2.587.813	108	12.011.897
RL.9	50.000.000 < C ≤ 150.000.000		540.204	8	1.930.834	546.505	8	1.953.356	552.095	8	1.973.338	556.349	8	1.988.543	559.098	8	1.998.369	559.757	8	2.000.723
RL.10	150.000.000 < C ≤ 500.000.000		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RL.11	C > 500.000.000		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL TRANSMISSION-DISTRIBUTION			**373.355.752**	**7.832.426**	**1.726.318.322**	**371.700.407**	**7.865.367**	**1.716.188.355**	**368.225.639**	**7.892.982**	**1.697.725.280**	**359.429.142**	**7.913.864**	**1.656.065.197**	**343.309.640**	**7.927.696**	**1.592.490.307**	**316.736.675**	**7.931.707**	**1.409.544.198**

			Oct 20 - Sep 21			Oct 21 - Sep 22			Oct 22 - Sep 23			Oct 23 - Sep 24			Oct 24 - Sep 25			Oct 25 - Sep 26		
			Volume	Customers	Equivalent Capacity	Volume	Customers	Equivalent Capacity	Volume	Customers	Equivalent Capacity	Volume	Customers	Equivalent Capacity	Volume	Customers	Equivalent Capacity	Volume	Customers	Equivalent Capacity
			MWh	No.	Qd (kWh/day)	MWh	No.	Qd (kWh/day)	MWh	No.	Qd (kWh/day)	MWh	No.	Qd (kWh/day)	MWh	No.	Qd (kWh/day)	MWh	No.	Qd (kWh/day)
SATELLITE FACILITY <4 Bar			**1.299.758**	**157.266**	**8.388.942**	**1.308.250**	**160.647**	**8.434.684**	**1.313.735**	**163.830**	**8.461.448**	**1.313.673**	**166.579**	**8.453.635**	**1.304.333**	**168.358**	**8.387.167**	**1.284.855**	**169.078**	**8.257.196**
RL.1	C ≤ 5.000		228.948	104.900	1.573.412	229.354	107.197	1.576.203	229.285	109.357	1.575.733	228.420	111.220	1.569.784	226.079	112.425	1.553.701	222.230	112.913	1.527.248
RL.2	5.000 < C ≤ 15.000		333.395	45.793	2.586.726	333.538	46.733	2.587.838	333.056	47.620	2.584.095	331.503	48.388	2.572.051	327.930	48.886	2.544.327	322.284	49.089	2.500.521
RL.3	15.000 < C ≤ 50.000		106.983	5.263	830.054	107.029	5.371	830.411	106.874	5.473	829.210	106.376	5.561	825.345	105.229	5.619	816.449	103.418	5.642	802.392
RL.4	50.000 < C ≤ 300.000		119.223	912	659.720	120.236	936	665.329	120.912	959	669.073	120.954	978	669.311	120.028	990	664.189	118.010	995	653.020
RL.5	300.000 < C ≤ 1.500.000		250.857	345	1.389.781	253.424	356	1.404.004	255.234	366	1.414.034	255.605	374	1.416.087	253.823	379	1.406.216	249.584	381	1.382.731
RL.6	1.500.000 < C ≤ 5.000.000	kWh	118.762	42	649.388	120.064	43	656.391	121.016	44	661.472	121.299	45	662.877	120.575	46	658.757	118.697	46	648.322
RL.7	5.000.000 < C ≤ 15.000.000		103.073	10	516.020	105.152	10	526.201	107.028	10	535.340	108.455	10	542.201	109.134	11	545.289	108.933	11	543.942
RL.8	15.000.000 < C ≤ 50.000.000		38.518	2	183.840	39.453	2	188.307	40.330	2	192.491	41.061	2	195.981	41.534	2	198.238	41.698	2	199.022
RL.9	50.000.000 < C ≤ 150.000.000		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RL.10	150.000.000 < C ≤ 500.000.000		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RL.11	C > 500.000.000		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LNG DIRECT TO FINAL CUSTOMER			**11.770.699**			**11.888.406**			**12.007.290**			**12.127.363**			**12.248.637**			**12.371.123**		
INTERNATIONAL CONNECTIONS			**10.532.781**		**151.431.768**	**12.861.112**		**149.677.230**	**12.861.112**		**143.708.617**	**12.861.112**		**144.596.531**	**12.861.112**		**147.293.540**	**12.861.112**		**148.463.968**
VIP Pirineos			3.217.308		128.508.933	4.141.084		128.550.549	4.141.084		129.070.660	4.141.084		129.475.764	4.141.084		129.256.707	4.141.084		128.901.477
VIP Ibérico			7.315.473		22.922.836	8.720.028		21.126.681	8.720.028		14.637.957	8.720.028		15.120.767	8.720.028		18.036.832	8.720.028		19.562.491
UNDERGROUND STORAGE			**10.378.535**		**55.822.030**	**11.287.930**		**60.713.312**	**11.603.385**		**62.410.016**	**12.766.536**		**68.666.147**	**13.132.254**		**70.633.199**	**13.132.254**		**70.633.199**
Serrablo			2.776.423		14.938.235	3.019.701		16.247.164	3.104.090		16.701.210	3.415.252		18.375.379	3.513.087		18.901.771	3.513.087		18.901.771
Gaviota			6.015.584		32.366.176	6.542.686		35.202.188	6.725.529		36.185.954	7.399.712		39.813.322	7.611.689		40.953.838	7.611.689		40.953.838
Yela			793.264		4.188.151	862.772		4.555.128	886.883		4.682.427	975.786		5.151.804	1.003.739		5.299.386	1.003.739		5.299.386
Marismas			793.264		4.329.472	862.772		4.708.832	886.883		4.840.426	975.786		5.325.642	1.003.739		5.478.203	1.003.739		5.478.203
TOTAL SYSTEM			**407.337.526**	**7.989.692**	**1.941.961.066**	**409.046.105**	**8.026.010**	**1.935.013.584**	**406.011.161**	**8.056.812**	**1.912.305.341**	**398.497.826**	**8.080.443**	**1.877.781.511**	**382.855.976**	**8.096.054**	**1.808.804.212**	**353.386.019**	**8.100.785**	**1.636.898.561**

Source: CNMC

Table I.20. Forecast 2020-2026 regasification and LNG storage with proposed structure and gas year

		Oct 20 - Sep 21	Oct 21 - Sep 22	Oct 22 - Sep 23	Oct 23 - Sep 24	Oct 24 - Sep 25	Oct 25 - Sep 26
LNG ship unloading							
Ships	nº	261	263	259	250	233	200
Volume	(MWh)	243.999.691	245.597.825	242.348.494	234.172.732	217.833.063	187.293.083
Regasification							
Equivalent capacity	(MWh/day)	730.746	735.039	726.139	698.902	643.862	542.265
Volume	(MWh)	225.434.193	225.455.181	221.440.432	212.807.601	196.019.778	165.041.979
Truck loading							
Equivalent capacity	(MWh/day)	48.243	48.671	49.093	49.500	49.880	50.230
Number	nº	51.205	51.659	52.107	52.539	52.942	53.313
Volume	(MWh)	14.266.609	14.393.149	14.517.892	14.638.322	14.750.654	14.854.070
LNG ship reloading							
Numero Barcos	nº	34	44	54	63	73	82
Volume	(MWh)	4.247.491	5.697.938	6.338.938	6.676.394	7.013.850	7.351.307
LNG transshipment							
Numero Barcos	nº	0	0	0	0	0	0
Volume	(MWh)	0	0	0	0	0	0
Cooling down							
Numero Barcos	nº	3	3	3	3	3	3
Volume	(MWh)	27.000	27.000	27.000	27.000	27.000	27.000
LNG Storage							
Equivalent capacity	(MWh/day)	14.992.350	15.132.259	14.999.000	14.452.537	13.322.844	11.235.692
Volúmen	(MWh)	4.532.418.912	4.574.715.792	4.534.429.462	4.369.225.078	4.027.701.531	3.396.723.275
Virtual liquefaction							
Equivalent capacity	(MWh/day)	0	0	0	0	0	0
Volume	(MWh)	0	0	0	0	0	0

Source: CNMC

ANNEX II. CAPACITY WEIGHTED DISTANCE METHODOLOGY

ANNEX II. CAPACITY WEIGHTED DISTANCE METHODOLOGY

According to article 26(1)(a)(vi) of Commission Regulation (EU) 2017/460[39] of 16 March 2017 establishing a network code on harmonised transmission tariff structures, where the proposed reference price methodology is other than the capacity weighted distance reference price methodology detailed in Article 8, a comparison against the latter shall be included.

This Annex specifies the parameters and the procedure followed for calculating the capacity-based transmission tariffs according to the capacity weighted distance reference price methodology.

An Excel file named "Modelo Transporte.xls" is published alongside the present document with the following information: (i) forecasted capacities at each entry and exit point for 2020, (ii) distance between each entry and exit point, (iii) the capacity-based transmission tariffs for entry and exit points calculated according to the capacity weighted distance reference price methodology.

1. Parameters for the capacity weighted distance methodology

The capacity weighted distance methodology establishes the capacity-based transmission tariffs for an entry point shall be derived from the distance between such entry point and each exit point weighting the mentioned distances by the forecasted contracted capacity at each exit point. Correspondingly, the capacity-based transmission tariffs for an exit point shall be derived from the distance between such exit point and each entry point weighting the mentioned distances by the forecasted contracted capacity at each entry point. In this way, capacity-based transmission tariffs will be higher the higher the distance between each entry point and each exit point.

The capacity weighted distance methodology requires then to determine previously (i) entry points to transmission network, (ii) exit points to transmission network (iii) minimum distance between each entry point and each exit point of the transmission network and (iv) the forecasted contracted capacity for each entry and exit point.

Nevertheless, it shall be noted that, according to the network code on harmonised transmission tariff, entry and exit points can be physical or be combined in clusters, consequently, previously, it is required to define the transmission network model considered.

[39] Available at : http://eur-lex.europa.eu/legal-content/ES/TXT/PDF/?uri=CELEX:32017R0460&from=EN

1.1. Transmission network model

The transmission network model used to determine the capacity-based transmission tariffs, may differ from the actual physical transmission network, meaning that a simplified transmission network may be used.

Using a simplified transmission network makes it easier to apply the CWD methodology, as the number of distances to calculate is reduced, but if it is simplified excessively, it may not reproduce appropriately the real transmission network and therefore, not reflect the costs related to such network.

In addition, the simplification of transmission network requires making decisions about: (i) the procedure to calculate the distance between entry and exit points considered, and (ii) the allocation of the injections and withdraws from the physical points to the virtual points considered, which allows a certain degree of freedom in its application.

Considering the above and the evolution of current computing techniques, it has been decided to contemplate the physical network. In particular, the existing transmission network[40] at the time of preparation of this report has been considered with the following simplifications.

- The following repeated pipelines have been simplified:
  - Montesa-Tivissa
  - Tivissa-Arbós
  - Arbós-Castellvi de Rosanes
  - Castellvi de Rosanes-Planta de regasificación de Barcelona
  - Tivissa-Mediana de Zaragoza
  - Planta de regasificación de Huelva-Palomares del Río
  - Getafe-Algete
  - Algete-Sanchinarro
  - Santurce-Vergara
- Barcelona LNG facility has two connection points with the transmission network (45 bar and 72 bar), however a single-entry point to the transmission network has been considered.

1.2. Entry points to the transmission network

According to the considered network model and the infrastructure in operation, the following entry points have been considered:

[40] Defined as "*Orden IET/2434/2012, de 7 de noviembre, por la que se determinan las instalaciones de la red básica de gas natural pertenecientes a la red troncal de gas natural*".

1) International interconnection points with third countries by pipeline (Tarifa, Almería, Badajoz, Tuy, Biriatou and Larrau),
2) Entry points from LNG facilities [41]: Barcelona, Huelva, Cartagena, Bilbao, Sagunto y Mugardos.
3) Entry points from production facilities: Marismas, Poseidón, Viura and Planta de biogás de Madrid
4) Entry points from underground storage facilities: Serrablo, Gaviota, Yela and Marismas

1.3. Exit point from the transmission network

On the other hand, the considered exit points are:

1) Bidirectional international interconnection points of Badajoz, Tuy, Biriatou and Larrau
2) Exit points to underground storage facilities: Serrablo, Gaviota, Yela y Marismas
3) Each exit point to the transmission network to the regional network (local influence transmission network, secondary transmission network and distribution network).
4) Exit points to each LNG facility (not physical counterflow)

1.4. Minimum distance between each entry point and each exit point

Once the transmission network model and the entry and exit points have been defined, the calculation of the minimum distance between each entry point and each exit point of the transmission network has been carried out using the Dijkstra[42] algorithm.

For this purpose, the information required for its calculation has been requested the Technical Manager of the Gas System, GTS. In particular, the GTS has provided the distance of each connection point of the transmission network to all connection points adjacent to it. It must be emphasized that according to the information provided by the GTS, the only non-bidirectional pipeline in the transmission network is the pipeline between the compression stations of Córdoba and Almendralejo.

1.5. Forecasted contracted capacity at each entry point distance

The forecasted contracted capacity at each entry point corresponds to the invoiced capacity by entry point included in Annex I of the Consultation Document

[41] Provided that is the case Musel LNG facility is put in operation it will be considered as another entry and exit point.

[42] The Dijkstra algorithm is an iterative algorithm that provides the shortest path from a particular initial node to all other nodes in the graph, when all distances are positive.

It has been considered as best forecast for the contracted capacity the invoiced capacity forecasted for the year 2020, because it has been deemed that as a result of the elimination of the current penalty / discount scheme the agents will adjust their contracted capacities to those actually used, with the except for the bidirectional interconnection points with Portugal and France for which the contracted capacities have been considered.

The forecasted non-yearly standard capacity by entry point has been affected by the equivalent multipliers, in order to consider its corresponding impact on revenues in the tariff calculation.

In the case of virtual interconnection points with France and Portugal, the forecasted contracted capacity has been disaggregated according to the technical capacities of each physical points that make up the aforementioned virtual interconnection, in accordance with the information provided by the GTS (see Table II.1).

Table II. 1 Forecasted contracted capacity for entry points at virtual interconnections

	VIP Ibérico (GWh/d)			VIP Pirineos (GWh/d)		
	Badajoz	Tuy	Total	Larrau	Irún/Biriatou	Total
Forecasted contracted capacity VIP (A)	0	0	10			205
Technical contracted capacity (1)	55	25	80	165	60	225
% of total (B)	69%	31%	100%	73%	27%	100%
Physical forecasted contracted capacity (A) * (B)	7	3	10	151	55	205

Source: GTS and CNMC
(1) Technical capacity at Irún/Biriatou includes coordinated and not coordinated capacity

In the case of entries from underground storage (hereinafter, AA.SS.), the contracted capacity by entry point has been estimated with the following hypotheses:

- Storage capacity for 2019 has been forecasted with the information of the first 11 months of the year
- Capacity for 2020 will fluctuate with respect to 2019 depending on the variations in demand from the previous year to the extent that they determine the quantities to be stored to meet the minimum security stock requirements. Withdrawals volume is calculated by applying the same relationship with the storage capacity implicit in the GTS forecasts.
- Capacity is contracted by a single agent.
- Contracted entry capacity corresponds to the one that would minimize the transmission tariff invoice considering proposed multipliers, and calculated

assuming that the daily withdrawal from storage facilities profile forecasted 2020 is equal to the real profile of 2018.

– Forecasted contracted capacity is distributed by AA.SS. based on the withdrawals forecasted for the year 2018 provided by the GTS.

It is noted that with the previous hypotheses, contracting daily capacity minimizes the entry to the transmission network invoice.

Table II.2 shows forecasted contracted capacity for each entry point

Table II. 2. Forecasted contracted capacity at each entry point for 2020

Entry point	Forecasted contracted capacity CNMC 2020 whitout multipliers	Forecasted contracted capacity (MWh/day)					Forecasted contracted capacity taking into account the multipliers proposed by CNMC (MWh/day)
		Year	Quarter	Month	Day	Within Day	
CI Tarifa	141.301	124.912	12.177	2.174	2.038	-	145.693
CI Medgaz	221.009	216.334	2.923	1.753	-	-	222.166
CI Biriatou	186.266	149.298	11.388	10.393	13.898	1.290	205.371
CI Larrau							
CI Badajoz	6.711	1.504	-	3.472	1.283	453	10.473
CI Tuy							
PR Barcelona	171.821	145.208	3.029	20.443	3.054	87	180.913
PR Cartagena	64.594	25.019	5.303	34.200	72	-	76.351
PR Huelva	146.974	122.733	4.904	17.424	1.870	43	154.658
PR Bilbao	139.123	109.066	5.960	23.977	110	9	147.909
PR Sagunto	56.944	2.228	2.018	51.899	784	15	73.966
PR Mugardos	31.801	18.040	3.232	9.227	1.303	-	36.082
Yac.Poseidón	284	-	-	281	2	-	372
Yac.Viura	5.646	5.405	-	154	80	6	5.766
Yac. Marismas	3	-	-	3	-	-	4
PB Madrid	276	175	-	89	12	-	310
AS Serrablo	10.768	-	-	-	10.768	-	16.906
AS Gaviota	8.667	-	-	-	8.667	-	13.608
AS Marismas	3.479	-	-	-	3.479	-	5.462
AS Yela	2.800	-	-	-	2.800	-	4.396
TOTAL	**1.198.467**	**919.922**	**50.934**	**175.489**	**50.220**	**1.903**	**1.300.407**

Source: GTS and CNMC

1.6. Forecasted contracted capacity at each exit point

Likewise, contracted capacity forecasted for each exit point from the transmission network has been estimated based on the invoiced capacity forecasted for each exit point for 2020, with the following hypotheses.

In the case of virtual interconnection points with France and Portugal, the contracted capacities have been disaggregated according to the technical capacities of each physical points that make up the aforementioned virtual interconnection, in accordance with the information provided by the GTS (Table II.3).

Table II. 3. Forecasted contracted capacity for exit points at virtual interconnections

	VIP Ibérico (GWh/d)			VIP Pirineos (GWh/d)		
	Badajoz	Tuy	Total	Larrau	Irún/Biriatou	Total
Capacidad contratada prevista VIP (A)			10			131
Capacidad contratada técnica (1)	134	10	144	165	60	225
% sobre total (B)	93%	7%	100%	73%	27%	100%
Capacidad contratada prevista punto físico (A) * (B)	9	1	10	96	35	131

Source: GTS and CNMC

In the case of **exit points to storage facilities**, in the same way as for forecasted contracted capacity by entry point, contracted capacity, has been estimated as to minimize the transmission tariff invoice, assuming that the daily injection profile of year 2018 is maintained and capacity is contracted by a single agent.

It is noted that with the previous hypotheses, contracting daily capacity minimizes the exit to the transmission network invoice to storage facilities.

Referring to **exit to the LNG facilities** (virtual liquefaction), a contracted exit capacity of zero has been considered, attending both the characteristics of the offered product and that there is no historical data series that allows assessing the demand of the service by agents.

In the case of **exit to national customers**, as suppliers do not contract capacity at the exit connection points of the transmission network with the regional network, exit forecasted contracted capacity, excluding customers supplied from satellite LNG facilities[43] has been disaggregated for each exit point with the available information at CNMC.

Particularly, the following information is available:

- Individualized information on the location of the consumption points and invoicing variables of customers supplied by networks of pressure higher than 4 bar and customers supplied by networks of design pressure lower than 4 bar with remote metering installed (annual consumption greater than 5 GWh) in the Settlements Database of the gas sector (SIFCO).
- Demand disaggregated by municipality and tariff group, in SIFCO.
- Daily demand for each exit point for 2017, provided by the GTS.

[43] According to article 92 of Act 34/1998, customers supplied from satellite LNG facilities should only defray the costs of the design pressure network that is used for their supply.

- List of CUPS (consumption points) with remote metering installed related to each exit point for year 2017, provided by the GTS.
- List of municipalities supplied by each exit point of the transmission network, published by the GTS[44].
- Daily individualized load curves for natural gas power plants, thermal power plants, interruptible customers, customers to whom applies the raw material tariff and aggregated load curves by tariff group of customers with remote metering installed other than the aforementioned, provided by transmission system operator and distributor system operators, for year 2018.

Considering the above information, the forecasted contracted capacity at each exit point of the transmission network has been estimated as the sum of the capacity of all the CUPS related to this exit point and the capacity of the rest of the customers supplied from that exit point.

The **contracted capacity of the CUPS related to an exit point** of the transmission network is the invoiced capacity of customers with remote metering installed for the last available year (2018), considering the duration of the standard capacity contracts formalized by the customers, according to the individualized information available in SIFCO.

Forecasted contracted capacity for the rest of the customers supplied from that exit point is estimated using the contracted capacity of the customers connected at a pressure of less than 4 bar and from tariff groups 3.1 to 3.4[45], proceeding as follows:

1º The load factor of each tariff group has been estimated, as the ratio between the maximum volume demanded in one day and the annual consumption recorded, according to the estimated load curves for the referred tariff groups for 2016-2018 (see Table II. 3).

Table II. 4. Load factors considered for tariff groups 3.1 to 3.4

[44] Available at: http://www.enagas.es/enagas/es/Gestion_Tecnica_Sistema/CalidadGas/OtraInformacionCalidadNueva

[45] This implies avoiding customers with remote metering installed in the forecast, whose contracted capacity represents 0.5% of the contracted capacity by customers connected to design pressure networks higher than 4 bar and those included in the tariff group 3.5.

Tariff group	Load factor (%)
3.1	43,023%
3.2	38,719%
3.3	46,369%
3.4	42,442%

Source: CNMC

2º Contracted capacity has been estimated by tariff group and municipality applying the respective load factor to the customers demand of each tariff group in each municipality supplied from the transmission network, according to the information available in SIFCO.

3º Contracted capacity has been allocated to exit points considering the relationship municipality-exit point published by the GTS on its website.

It is noted that when a municipality is supplied by more than one exit point from the transmission network simultaneously, the demand of the mentioned municipalities has been distributed by exit point based on the measured demand on the day of maximum demand of 2017 (05/12/2017), according to the information provided by the GTS.

Finally, once available the contracted capacity corresponding to 2018 disaggregated by the exit point of the transmission network, pressure level (pressure> 60 bar, between 4-16 bar, between 16-60 bar and < 4 bar) and type of customer (intended for electricity generation or conventional use), contracted capacity for 2020 of national customers connected to the transmission-distribution network disaggregated by pressure level and customer type is distributed by exit point proportionally to the measured capacity of 2018.

Table II. 5 shows forecasted contracted capacities for each exit point, with the exception of the national exits where, for illustrating purposes, exit points have been aggregated by pressure of the network to which customers are connected.

Table II. 5. Forecasted contracted capacity at each exit point for 2020

	Forecasted contracted capacity at each exit point in the CNMC 2018 report (MWh/day)	Forecasted contracted capacity (MWh/day)					Forecasted contracted capacity for each exit point taking into account the multipliers proposed by CNMC (MWh/day)
		Year	Quarter	Month	Day	Within Day	
International interconnection points	**134.480**	**122.230**	**54**	**11.576**	**489**	**131**	**140.958**
CI Biriatou CI Larrau	124.911	113.668	-	10.778	353	112	130.897
CI Badajoz CI Tuy	9.569	8.562	54	797	137	19	10.061
LNG facilities	**-**	**-**	**-**	**-**	**-**	**-**	**-**
PR Barcelona							-
PR Cartagena							-
PR Huelva							-
PR Bilbao							-
PR Sagunto							-
PR Mugardos							-
Underground storage facilities	**29.642**	**-**	**-**	**-**	**29.642**	**-**	**46.834**
AS Serrablo	7.932				7.932		12.533
AS Gaviota	17.187				17.187		27.155
AS Marismas	2.224				2.224		3.514
AS Yela	2.299				2.299		3.632
Exit to national customers	**1.651.080**	**1.436.177**	**3.584**	**135.573**	**72.280**	**3.466**	**1.735.232**
P > 60 bar	714.951	514.351	2.501	123.838	70.826	3.434	794.801
16 bar < P ≤ 60 bar	121.753	121.191	67	487	4	3	121.881
4 bar < P ≤ 16 bar	376.920	363.435	989	11.038	1.429	29	380.992
P ≤ 4 bar (1)	437.456	437.199	27	209	21	-	437.558
TOTAL	**1.815.202**	**1.558.407**	**3.638**	**147.148**	**102.411**	**3.597**	**1.923.023**

Source: GTS and CNMC
Notes:
(1) Excluding the capacity of customers supplied from LNG satellite facilities

The aforementioned file contains contracted capacities for each exit point of the transmission network and its breakdown by pressure level.

2. Allowed revenues for transmission services to be recovered through capacity-based transmission tariffs.

Capacity weighted distance methodology is limited to determine entry and exit capacity-based transmission tariffs of the transmission network. Meaning, the allowed revenues for transmission services to be recovered through capacity-based transmission tariffs corresponds to the allowed revenues for investment and operating costs.

In accordance with Article (8)(1)(e) of Regulation (EU) 2017/460, 50% of the referred allowed revenues shall be recovered through capacity-based transmission tariffs at entry points and 50% through capacity-based transmission tariffs at exit points (see Table II. 6).

Table II. 6. Allowed revenues for transmission services to be recovered through capacity-based transmission tariffs

Allowed revenues for transmission services to be recovered from capacity-based transmission tariffs (€)	2020 forecast	% of the total
Investment costs	435.183.402 (A)	75,8%
Operational costs	139.052.576 (B)	24,2%
Total	**574.235.978**	**100,0%**

Entry	Exit
Revenues from capacity charge [(A) + (B)] * 50%	Revenues from [(A) + (B)] * 50%
217.591.701	217.591.701
69.526.288	69.526.288
287.117.989	**287.117.989**

Source: CNMC

3. Calculation of the reference price of the capacity-based transmission tariffs

3.1. Reference price at an entry point to the transmission network

As stablished in Article 8(2) of Regulation (EU) 2017/460, reference prices shall be derived in the following sequential steps:

1. Weighted average distance calculation from each entry point to each exit point

$$AD_{En} = \frac{\sum_{all\ Ex} CAP_{Ex} \times D_{En,Ex}}{\sum_{all\ Ex} CAP_{Ex}}$$

Where:

– AD_{En} is the weighted average distance for an entry point or a cluster of entry points;

– CAP_{Ex} is the forecasted contracted capacity at an exit point; as calculations set out in section 1.6 of present annex;

– $D_{En,Ex}$ is the distance between an entry point and an exit point, as calculations set out in section 1.4 of present annex

2. Weight of cost for each entry point calculation:

$$W_{c,En} = \frac{CAP_{En} \times AD_{En}}{\sum_{all\ En} CAP_{En} \times AD_{En}}$$

Where:

– $W_{c,En}$ is the weight of cost for a given entry point;

- AD_{En} is the weighted average distance for an entry point;

- CAP_{En} is the forecasted contracted capacity at an entry point calculated as calculations set out in section 1.5 of present annex.

3. Part of revenue to be recovered from capacity-based transmission tariffs at each entry point calculation

$$R_{En} = W_{c,En} \times R_{\Sigma En}$$

Where:

- $W_{c,En}$ is the weight of cost for a given entry point

- $R_{\Sigma En}$ is the part of the transmission services revenue to be recovered from capacity-based transmission tariffs at all entry points described in section 2 of present annex;

- R_{En} is the part of the transmission services revenue to be recovered from capacity-based transmission tariffs at an entry point or a cluster of entry points.

4. Capacity-based transmission tariff at each physical entry point

$$T_{En} = \frac{R_{En}}{CAP_{En}}$$

Where:

- T_{En} is the reference price at a physical entry point;

- CAP_{En} is the forecasted contracted capacity at an entry point as established in section 2 of present annex;

- R_{En} is the part of the transmission services revenue to be recovered fromcapacity-based transmission tariffs at an entry point or a cluster of entry points

Table II. 7 shows the transmission tariffs at each physical entry point calculated according to the procedure described above.

Table II. 7. Capacity-based transmission tariffs resulting from applying capacity weighted distance methodology at each physical entry point

Entry point	Forecasted contracted capacity (CAP_{En})	Weighted distance (AD_{En})	Weight of cost ($W_{C,En}$)	Allowed revenues to be recovered (R_{En})	Entry capacity-based transmission tariff
	Qd (MWh/day)	km	%	€	€/(MWh/day)and year
CI Tarifa	145.693	891	0,138	39.684.150	272,4
CI Almería	222.166	803	0,190	54.557.869	245,6
CI Biriatou	54.766	665	0,039	11.127.061	203,2
CI Larrau	150.605	609	0,098	28.048.215	186,2
CI Badajoz	7.200	1.031	0,008	2.268.817	315,1
CI Tuy	3.273	1.159	0,004	1.159.489	N/A
PR Barcelona	180.913	611	0,118	33.807.280	186,9
PR Cartagena	76.351	689	0,056	16.087.287	210,7
PR Huelva	154.658	877	0,144	41.475.338	268,2
PR Bilbao	147.909	601	0,095	27.161.997	183,6
PR Sagunto	73.966	530	0,042	11.982.182	162,0
PR Mugardos	36.082	1.014	0,039	11.182.352	309,9
YAC Marismas	4	839	0,000	952	256,5
YAC Poseidón	372	865	0,000	98.340	264,3
YAC Viura	5.766	476	0,003	838.208	145,4
BI Madrid	310	505	0,000	47.970	154,5
AASS Serrablo	16.906	608	0,011	3.140.190	185,7
AASS Gaviota	13.608	593	0,009	2.468.276	181,4
AASS Yela	5.462	512	0,003	854.752	156,5
AASS Marismas	4.396	839	0,004	1.127.264	256,5
TOTAL	**1.300.407**	**722**	**1,000**	**287.117.989**	**220,8**

Source: CNMC
Note: CI: International interconnection, PR: LGN facility, Yac.: Production facility, PB: Biogas production facility and AS: Underground Storage facility

It is observed that, in general, capacity-based transmission tariffs at entry points from the Southern Spain are higher than those applicable to the entries through the East or North of Spain and that the entry points located in the central area of The Peninsula have the lowest capacity prices (see Figure II. 1).

Figure II. 1. Capacity-based transmission tariffs resulting from applying capacity weighted distance methodology at entry points

Source: CNMC

3.1.1. Adjustments to capacity-based transmission tariffs at entry points resulting from applying CWD

Once capacity-based transmission tariffs for each physical entry point are available, it is necessary to determine the price for virtual interconnection points, in accordance with Article 22(b) of Regulation (EU) 460/2017. In particular, the price of each virtual interconnection point will be calculated by applying the following formula:

$$P_{st,VIP} = \frac{\sum_i^n \left(P_{st,i} \times CAP_i\right)}{\sum_i^n CAP_i}$$

Where:

- $P_{st,\,VIP}$ is the reserve price for a given unbundled standard capacity product at the virtual interconnection point
- i is an interconnection point contributing to the virtual interconnection point;

- n is the number of interconnection points contributing to the virtual interconnection point;
- $P_{st,\,i}$ is the reserve price for a given unbundled standard capacity product at interconnection point i;
- CAP_i is technical capacity or forecasted contracted capacity, as relevant, at interconnection point.

Additionally, considering that the AA.SS. and the LNG facilities are managed jointly by the GTS without the suppliers having the capacity to decide on the use of a specific facility, it has been decided to apply the same reference prices to all entry points to the transmission network from AA.SS. and LNG facilities, in accordance with Article 12 of Circular 8/2019, of December 12, of the National Commission of Markets and Competition, which establishes the methodology and conditions of access and capacity allocation in the natural gas system. The procedure used for levelling prices is the one used for virtual interconnection points with France and Portugal.

Table II. 8 shows capacity-based transmission tariffs resulting from considering entry points from Virtual interconnections, LNG plants and AA.SS.

Table II. 8. Capacity-based transmission tariffs resulting from applying capacity weighted distance methodology for each cluster of entry points to the transmission network

Entry point	Forecasted contracted capacity	Entry capacity-based transmission tariff		Total revenues
	Qd (MWh/day)	€/(MWh/day) and year	Variation over average tariff (%)	thousand €
VIP_FR	**205.371**	**190,75**	**-13,6%**	**39.175.275**
VIP_PT	**10.473**	**327,35**	**48,3%**	**3.428.306**
CI Tarifa	145.693	272,38	23,4%	39.684.150
CI Medgaz	222.166	245,57	11,2%	54.557.869
LNG Facility	**669.880**	**211,53**	**-4,2%**	**141.696.436**
AA.SS	**40.372**	**188,01**	**-14,8%**	**7.590.481**
Yac.Poseidón	372	264,26	19,7%	98.340
Yac. Marismas	4	256,45	16,2%	952
Yac.Viura	5.766	145,36	-34,2%	838.208
PB Madrid	310	154,49	-30,0%	47.970
TOTAL	**1.300.407**	**220,79**	**0,0%**	**287.117.989**

Source: CNMC

Bearing in mind that, in accordance with Article 12(3) and Article 12(4) of the "Circular", a 100% discount is established for capacity-based transmission tariffs entry points from and exit points to storage facilities and a discount of 13,9% to the entry tariff to transmission network from LNG facilities (See section 4.5.1 of the Consultation document), it is necessary to adjust capacity-based transmission tariffs applicable to the rest of the entry points, in order to ensure recovery of the allowed revenues (see Table II. 9)

Table II. 9. Capacity-based transmission tariffs resulting from applying capacity weighted distance methodology for each of entry point to the transmission network after the provided adjustments in Articles 6 and 9 of Regulation (EU) 460/2017

		Before adjustments		After adjustments	
Entry point	Forecasted contracted capacity	Entry capacity-based transmission tariff	Total revenues	Entry capacity-based transmission tariff	Total revenues
	Qd (MWh/day)	€/(MWh/day) and year	thousand €	€/(MWh/day) and year	thousand €
VIP_FR	205.371	190,75	39.175.275	210,79	43.289.276
VIP_PT	10.473	327,35	3.428.306	361,73	3.788.331
CI Tarifa	145.693	272,38	39.684.150	300,99	43.851.590
CI Medgaz	222.166	245,57	54.557.869	271,36	60.287.277
Plantas GNL	669.880	182,12	122.000.631	201,25	134.812.556
Yac.Poseidón	372	264,26	98.340	292,01	108.667
Yac. Marismas	4	256,45	952	283,38	1.052
Yac.Viura	5.766	145,36	838.208	160,63	926.233
BI Madrid	310	154,49	47.970	170,72	53.007
TOTAL REVENUES (A)	**1.260.036**	**206,21**	**259.831.703**	**227,86**	**287.117.989**
ALLOWED REVENUES TO BE RECOVERED			**287.117.989**		
Adjustment factor (B)/(A)			**1,1050**		

Source: CNMC

3.2. Reference price at an exit point to the transmission network

Analogously, as stablished in Article 8(2) of Regulation (EU) 2017/460, reference prices shall be derived in the following sequential steps:

1. Weighted average distance calculation from each exit point to each entry point

$$AD_{Ex} = \frac{\sum_{all\ Ex} CAP_{En} \times D_{En,Ex}}{\sum_{all\ En} CAP_{En}}$$

Where:

- AD_{Ex} is the weighted average distance for an exit point or a cluster of exit points;

- CAP_{En} is the forecasted contracted capacity at an entry point; as calculations set out in section 1.5 of present annex;

- $D_{En,Ex}$ is the distance between an entry point and an exit point, as calculations set out in section 1.4 of present annex

2. Part of revenue to be recovered from capacity-based transmission tariffs at each exit point calculation

$$W_{c,Ex} = \frac{CAP_{Ex} \times AD_{Ex}}{\sum_{all\ Ex} CAP_{Ex} \times AD_{Ex}}$$

Where:

- $W_{c,Ex}$ is the weight of cost for a given exit point

- AD_{Ex} is the weighted average distance for an exit point

- CAP_{Ex} is the forecasted contracted capacity at an entry point calculated as calculations set out in section 1.6 of present annex

3. Part of revenue to be recovered from capacity-based transmission tariffs at each exit point calculation

$$R_{Ex} = W_{c,Ex} \times R_{\Sigma Ex}$$

Where:

- $W_{c,Ex}$ is the weight of cost for a given exit point

- $R\Sigma Ex$ is the part of the transmission services revenue to be recovered from capacity-based transmission tariffs at all exit points described in point 2 of present annex;

- R_{Ex} is the part of the transmission services revenue to be recovered from capacity-based transmission tariffs at an exit point or a cluster of exit points.

4. Capacity-based transmission tariff at each physical exit point

$$T_{Ex} = \frac{R_{Ex}}{CAP_{Ex}}$$

Where:

- T_{Ex} is the reference price at a physical exit point;
- CAP_{Ex} is the forecasted contracted capacity at an exit point as stablished in section 1.6 of present annex
- R_{Ex} is the part of the transmission services revenue to be recovered from capacity-based transmission tariffs at an exit point or a cluster of exit points

Table II.10 shows the transmission tariffs per physical exit point calculated according to the procedure described above. It is noted that, for illustrating purposes of the results, national exit points are shown aggregated. However, the result per physical exit point is available in the Excel file published alongside the Consultation Document.

Additionally, Figure II.2 shows the prices that result for national exit points grouped by province. The capacity weighted distance methodology does not allow determining capacity-based tariffs for exit points of the transmission network where exit capacity is zero, such as LNG plants. In order to avoid null prices at any exit point, it has been decided to set the price that would correspond at that exit point in the event that the contracted capacity was 1 MWh / day.

It is observed that capacity-based tariffs at exit points located in the central area of The Peninsula are the lowest, while the highest prices are for the Northwest area.

Table II. 10. Capacity-based transmission tariffs resulting from applying capacity weighted distance methodology for each physical exit point.

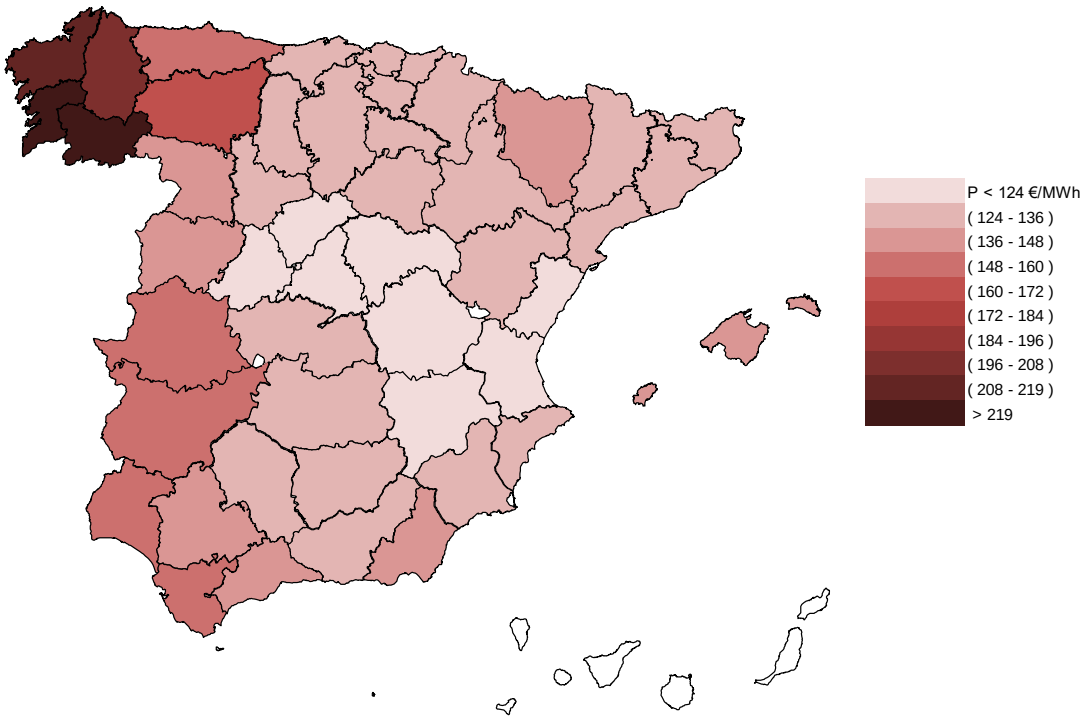
Exit point	Forecasted contracted capacity (CAPEn)	Weighted distance (ADEn)	Weight of cost (WC,En)	Allowed revenues to be recovered (REn)	Exit capacity-based transmission tariff
	Qd (MWh/day)	km	%	€	€/(MWh/day)and year
CI Biriatou	34.906	796	0,020	5.735.435	164,31
CI Larrau	95.991	782	0,054	15.497.185	161,44
CI Badajoz	9.362	869	0,006	1.678.629	179,30
CI Tuy	699	1.301	0,001	187.559	268,45
PR Barcelona	0	842	-	0	188,71
PR Cartagena	0	748	-	0	159,81
PR Huelva	0	975	-	0	211,39
PR Bilbao	0	792	-	0	174,29
PR Sagunto	0	647	-	0	144,82
PR Mugardos	0	1.182	-	0	265,77
AS Serrablo	12.533	754	0,007	1.951.031	155,67
AS Gaviota	27.155	704	0,014	3.943.904	145,24
AS Marismas	3.514	602	0,002	436.296	124,17
AS Yela	3.632	830	0,002	622.191	171,29
Salida nacional (1)	1.735.232	718	0,895	257.065.760	148,14
TOTAL	**1.923.023**	**723**	**1,000**	**287.117.989**	**149,31**

Source: CNMC

Note: CI: International interconnection, PR: LGN facility, Yac.: Production facility, PB: Biogas production facility and AS: Underground Storage facility

(1) For illustrating purposes of the results, national exit points are shown aggregated. Results by physical exit point are available in the Excel file published alongside the Consultation Document.

Figure II. 2 Exit capacity-based transmission tariffs resulting from applying capacity weighted distance methodology



Source: CNMC
Nota:
(1) For illustrating purposes of the results, national exit points are shown aggregated by province. Results by physical exit point are available in the Excel file published alongside the Consultation Document.

3.2.1. Adjustments to exit capacity-based transmission tariffs resulting from applying CWD

Once the exit capacity-based transmission tariffs for each physical exit point considered in the network model are available, capacity charge for virtual interconnection points of France and Portugal are calculated according to Article 22(b) of Regulation (EU) 460/2017.

Additionally, in accordance with the entry capacity-based transmission tariffs, exit tariffs to AA.SS. and LNG facilities have been levelled.

Finally, bearing in mind that neither suppliers nor customers can select the exit point of the transmission network from which they are supplied, a single exit point to customers connected to local networks has been considered.

The methodology used to level the prices of exits to the AA.SS. and of exits to national customers corresponds to the one established in Article 22(b) of Regulation (EU) 2017/460.
Table II. 11 shows resulting exit tariffs for each cluster of exit points considered.

Table II. 11. Capacity-based transmission tariffs resulting from applying capacity weighted distance methodology for each cluster of exit points.

Exit point	Forecasted contracted capacity	Exit capacity-based transmission tariff		Total revenues
	Qd (MWh/day)	€/(MWh/day) and year	Variation over average tariff (%)	thousand €
National	1.735.232	148,14	-0,78%	257.065.760
VIP Pirineos	130.897	162,21	8,64%	21.232.620
VIP Ibérico	10.061	185,49	24,23%	1.866.188
Underground Storages	46.834	148,47	-0,56%	6.953.421
LNG Facility	-	178,38	19,48%	-
TOTAL	**1.923.023**	**149,31**		**287.117.989**

Source: CNMC

Similarly, to the entry tariffs to the transmission network, a 100% discount has been applied to exits to the AA.SS., so it is necessary to adjust prices of the remaining exit tariffs, in order to ensure the recovery of the transmission network allowed revenues.

Table II. 12 shows the transmission tariffs for each exit point of the transmission network resulting from the adjustment provided in Article 9 of Regulation 2017/460. It is observed that the exit capacity tariff to national customers is lower than the average cost, while the exit tariffs for the virtual interconnection points towards France, Portugal and LNG plants, are above the average.

Table II. 12. Capacity-based transmission tariffs resulting from applying capacity weighted distance methodology for each exit point of the transmission network after the provided adjustments in Articles 6(4) and 9 of Regulation (EU) 2017/460

		Before adjustments		After adjustments	
Exit point	Forecasted contracted capacity	Exit capacity-based transmission tariff	Total revenues	Exit capacity-based transmission tariff	Total revenues
	Qd (MWh/day)	€/(MWh/day) and year	thousand €	€/(MWh/day) and year	thousand €
National	1.735.232	148,14	257.065.760	151,82	263.445.890
VIP Pirineos	130.897	162,21	21.232.620	166,23	21.759.594
VIP Ibérico	10.061	185,49	1.866.188	190,09	1.912.505
LNG Facility	-	178,38	-	182,81	-
TOTAL REVENUES	**1.876.189**	**149,33**	**280.164.568**	**153,03**	**287.117.989**
ALLOWED REVENUES TO BE RECOVERED			**287.117.989**		
Adjustment factor			**1,0248**		

Source: CNMC

ANNEX III. CHARACTERIZATION OF THE NATURAL GAS DEMAND

ANNEX III. CHARACTERIZATION OF THE NATURAL GAS DEMAND

From a regulatory point of view, the main objective of a cost allocation methodology is that each segment of customers pays through their invoice an estimate as close as possible to the costs that their supply causes to the whole system. In any case, this implies analyzing the factors that are correlated with each of the identified costs, and, correspondingly, determining an adequate segmentation of customers[46] in order to define a coherent price structure.

1. Purpose

The purpose of this annex is to carry out a characterization of natural gas customers, with the aim of segmenting them in order to define the structure of distribution tariffs. For this, based on the available information, the CNMC has analyzed the customers distribution of customers and their consumption by design pressure at the network connection point, location, associated activity, average size, contracted capacity and utilization of this contracted capacity.

2. Information used

In the characterization of the demand, the information available in the Gas Sector Billing and Consumption Information System (SIFCO) provided by the different agents has been taken into account, in order to carry out the settlements of the regulated activities in the natural gas sector. With regard to national demand, in the SIFCO database, the transport and distribution companies provide monthly aggregate information on the number of supplies, consumption, capacity and billing differentiated by pressure level and access tariffs.

Moreover, transmission and distribution companies provide monthly aggregate information on the number of supplies and consumption disaggregated by municipality and access tariff.

Finally, transmission and distribution companies provide monthly individualized information on the billing variables of all those supply points connected to design pressure networks greater than 4 bar and those connected to design pressure networks less than 4 bar. With the obligation to have telemetry equipment[47].

This information has been checked and complemented with other available sources of information by the CNMC, such as the information of the Electricity

[46] For the purposes of the characterization of the demand customer, consumer and supply point are equivalent.

[47] All customers with consumptions exceeding 5,000,000 kWh / year must have telemetry equipment with the capacity to measure, at least, daily flows.

Sector Information and Control System (SINCRO), of Circular 5/2008, of December 22, of the National Commission of Energy, the information for the Spanish retail market of natural gas, the information provided by the transmission and distribution companies for the purpose of providing the mandatory reports on the proposals for orders establishing the tariffs and charges and information published by the Transmission System Operator about xxx.

In the characterization performed, the analyzed variables were not only the number of customers and their consumption, but also the average size, load factor, invoiced capacity, as well as the type of contracting performed.

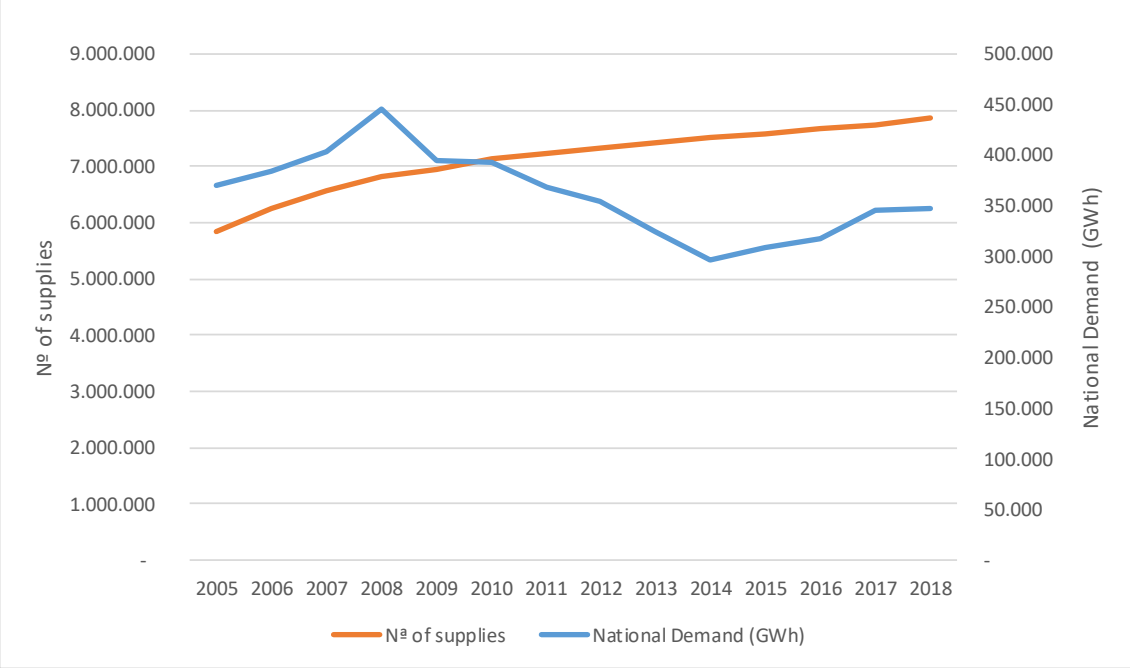
It is remarkable that the average number of customers declared in SIFCO, with individualized information, is around 4,574 supply points for 2018.

Aggregated data have been used for those customers without individualized information,

3. Demand characterization

Figure III. 1 shows the evolution of the number of supplies and consumption for the national demand of natural gas. It is observed that, while the number of natural gas supplies has not stopped growing during the whole period of analysis, although the increases are more relevant in the first years, their consumption increased rapidly until 2008, to fall later until 2014 and increase slightly since 2014.

Figure III. 1 Number of supplies and national demand for natural gas evolution



Source: CNMC (Database information SIFCO)

In the following sections, national demand will be characterized according to various parameters that could be used in segmentation: pressure level, demanded capacity and consumption.

It is indicated that the analysis focuses on the year 2018, the year in which the national demand for natural gas reached 346 TWh with approximately 7.8 million supply points.

The analysis focuses on year 2018. This year the national gas demand reached 346 TWh and approximately 7.8 million supply points.

3.1. Design pressure analysis.

The design pressure customers are connected to is one of the most commonly used parameters in customer segmentation, as it is a relevant cost driver.

Each of the connected consumer groups is analyzed at the design pressure levels implicit in the current tariffs, that is, greater than 60 bar, between 16 bar and 60 bar, between 4 bar and 16 bar and less than or equal to 4 bar.

In 2018, 7,811,305 supply points were connected to the transmission or distribution networks and 763[48] LNG satellite facilities were supplied by tanker trucks.

The national demand for natural gas reached 346 TWh, of which 97% was destined for the supply of customers connected in the transmission and distribution networks and 3% for the supply of LNG satellite facilities. In terms of supply points, the largest group, with 99.94% of the total supply points, was the one connected to design pressure networks of less than 4 bar. While in terms of consumption, the most representative group is the one connected to design pressure networks greater than 60 bar, whose consumption accounts for almost 39% of the consumption recorded in the year, followed by the group of consumers connected to design pressure networks between 4 bar and 16 bar, whose consumption represents approximately 27% of the total consumption. In line with this, the higher the design pressure that consumers are connected to, the larger the average size is, starting from 1,097 GWh / client for networks larger than 60 bar to 10 MWh / client for consumers connected to networks whose design pressure It is less than 4 bar.

Table III. 1 National *Demand for Natural Gas (GWh). 2018 year*

Design presuure	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (MWh)
P (1) > 60 bar	123	0,002%	134.924	38,9%	1.096.941
16 bar < P ≤ 60 bar	153	0,002%	34.841	10,1%	227.717
4 bar < P ≤ 16 bar	3.677	0,047%	91.678	26,5%	24.933
P ≤ 4 bar	7.807.352	99,940%	74.495	21,5%	10
TOTAL	***7.811.305***	***99,990%***	***335.937***	***97,0%***	***43***
LNG satellite facilities	763	0,010%	10.498	3,0%	13.758
Total	***7.812.068***	***100,000%***	***346.434***	***100,0%***	***44***

Source: CNMC (Database information SIFCO)

As already indicated above, for characterization purposes, individualized an aggregate information by supply point is provided. Specially, at SIFCO database there is individualized information for 4,754 supply points, whose consumption represents approximately 80% of the national demand for natural gas, although in terms of number of supplies it barely represents 0, 1% of the total (Table III. 2)

[48] The number of satellite LNG facilities corresponds to 2017 year.

Table III. 2 ***Aggregate and individualized information of the national demand for natural gas. 2018 year***

	Aggregated information		Individualized information		Individualizated vs aggregated	
Design pressure	Nº of supplies	Consumption (GWh)	Nº of supplies	Consumption (GWh)	Nº of supplies	Consumption (GWh)
P (1) > 60 bar	123	134.924	123	134.924	100,0%	100,0%
16 bar < P ≤ 60 bar	153	34.841	153	34.841	100,0%	100,0%
4 bar < P ≤ 16 bar	3.677	91.678	3.677	91.678	100,0%	100,0%
P ≤ 4 bar	7.807.352	74.495	621	6.260	0,0%	8,4%
3.1	4.748.216	12.902	-	-	0,0%	0,0%
3.2	2.982.119	30.135	-	-	0,0%	0,0%
3.3	27.386	1.779	-	-	0,0%	0,0%
3.4	49.320	24.698	309	1.278	0,6%	5,2%
3.5	312	4.981	312	4.981	100,0%	100,0%
Total	**7.811.305**	**335.937**	**4.574**	**267.702**	**0,1%**	**79,7%**

Source: CNMC (Database information SIFCO)

It should be noted that, 60 of 4,574 supplies that booked contracted capacity did not have any consumption throughout the year 2018.

In the following sections, consumers are characterized in each of the design pressure level they are connected to. It is indicated that the analysis of consumers connected to pressure networks of design greater than 4 bar and consumers connected to pressure networks of design less than 4 bar and 3.5 tariff has been carried out taking into account the available individualized information by CNMC. The characterization of the rest of consumers connected to pressure networks with a design of less than 4 bar was carried out according to the aggregate information.

3.1.1. Design pressure greater than 60 bar

In 2018, 123 supplies were connected to design pressure networks greater than 60 bar, whose consumption reached 135 TWh, 38.9% of the national demand for natural gas.

3.1.1.1. Tariff analysis

According to the current tariff structure, consumers connected to pressure networks with a design greater than 60 bar are distributed in three tariff groups, depending on their level of consumption. It is indicated that, in order not to distort the characterization, the supply points have been classified by tariff group taking

into account the total consumption of each supply point, that is, regardless of the tariff[49] to which they have been billed, if applicable, short term contracts
Table III. 3 shows the distribution of the number of supplies and their consumption according to the structure of current access tariffs. It is observed that 1.3 tariff is the one that concentrates the largest volume of consumption 112 TWh (83% of total consumption for this pressure level). According to the tariff definition, these consumers are those with the largest average size, 2,669 GWh, compared to 1,097 GWh, which is the average size of consumers connected to networks greater than 60 bar. On the contrary, consumers on the 1.1 tariff barely represent 1.1% of the total consumption of this pressure level, although they concentrate 35% of the supply points. It is observed that, consumers on the 1.1 tariff have the highest load factors.

Table III. 3 Distribution of the number of supplies and their consumption of consumers connected to networks greater than 60 bar. 2018 year

Tariff	Consumption segment (GWh)	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
1.1	C ≤ 200 GWh	43	35%	1.487	1,1%	35	73%
1.2	200 GWh < C ≤ 1.000 GWh	38	31%	21.332	15,8%	561	57%
1.3	C > 1.000 GWh	42	34%	112.105	83,1%	2.669	69%
Total		***123***	***100%***	***134.924***	***100,0%***	***1.097***	***67%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

3.1.1.2. Analysis by region.

In the analysis of the distribution of clients connected to pressure networks greater than 60 bar by region, it is observed that Andalucía with 23% of the total is the area with the highest number of supply points, followed by Aragon with 11% and Comunidad Valenciana and Castilla la Mancha with 9%.

Regarding the distribution of consumption, Andalucía also concentrates the largest volume with 28% (37,253 GWh). Murcia, with 16% and Cataluña, with 12%, hold the second and third place respectively in consumption. It should be noted that, in Andalucía, the provinces with the highest consumption are Cádiz and Huelva, which account for 82% of the total consumption of the region. In the region of Cataluña, only two provinces have any consumption at this level of pressure, Barcelona (87%) and Tarragona (13%).

[49] Short-term contracts are billed at the corresponding tariff to the volume involved in the contract. Consequently, a unique customer with various types of contract may be billed at different tariffs. For the purpose of characterization, costumers have been classified in each tariff according to the total annual consumption.

The analysis of the average size by region shows that Murcia is the largest one with 2,339 GWh / client, followed by Cataluña (1,763 GWh / client) and Baleares (1,514 GWh / client). While consumers in País Vasco and Aragon have the highest load factors (87.5% and 87.1%, respectively). See Table III. 4

Table III. 4 Distribution of the number of supplies and their consumption of consumers connected to networks greater than 60 bar. by region. 2018 year

Region	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Andalucía	28	22,8%	37.253	28%	1.330	75,3%
Aragón	13	10,6%	5.053	4%	389	87,1%
Asturias	2	1,6%	1.298	1%	649	33,0%
Baleares	3	2,4%	4.542	3%	1.514	22,1%
Cantabria	4	3,3%	3.750	3%	937	73,3%
Castilla La Mancha	11	8,9%	10.894	8%	990	74,2%
Castilla y León	10	8,1%	3.984	3%	398	84,5%
Cataluña	9	7,3%	15.868	12%	1.763	69,1%
Extremadura	1	0,8%	0	0%	0	41,9%
Galicia	4	3,3%	5.386	4%	1.346	81,3%
La Rioja	3	2,4%	2.262	2%	754	44,6%
Madrid	7	5,7%	1.689	1%	241	62,4%
Murcia	9	7,3%	21.055	16%	2.339	69,7%
Navarra	3	2,4%	1.422	1%	474	31,6%
País Vasco	5	4,1%	7.455	6%	1.491	87,5%
Comunidad Valenciana	11	8,9%	13.013	10%	1.183	74,9%
TOTAL	***123***	***100,0%***	***134.924***	***100%***	***1.097***	***66,7%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

3.1.1.3. Analysis by activity

Table III. 5 shows the distribution of the number of supplies connected to pressure networks with a design greater than 60 bar and their consumption classified by activity according to the 2009 CNAE classification. There are two main activities: manufacturing industry and electricity supply, and they represent together 78% of the supply points and 95% of the total consumption. It should be noted that the activity dedicated to the supply of electricity concentrates 52% of consumption and 41% of supply points, while the manufacturing industry concentrates 43% of total consumption and 37% of supply points. The largest average size of consumers corresponds to that of the electric power supply activity with 1,400 GWh / customer, however, this group has a lower load factor (57%) than the rest of the activities, with the exception of the supply dedicated to other professional, scientific and technical activities (51%) and the one dedicated to Agriculture, livestock and fishing (54%).

Table III. 5 Distribution of the number of supplies and their consumption of consumers connected to networks greater than 60 bar. by activity. 2018 year

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Agriculture, Livestock and fishing	1	0,8%	326	0,2%	326	53,5%
Extractive industries	2	1,6%	894	0,7%	447	85,1%
Manufacturing industry	46	37,4%	57.898	42,9%	1.259	84,8%
Electricity, gas, steam and air conditioning supply	50	40,7%	69.993	51,9%	1.400	56,9%
Water supply and sanitation activities	1	0,8%	1.176	0,9%	1.176	88,7%
Building	4	3,3%	4.252	3,2%	1.063	58,2%
Transport and storage	18	14,6%	176	0,1%	10	77,6%
Professional, scientific and technical activities	1	0,8%	208	0,2%	208	50,7%
TOTAL	***123***	***100,0%***	***134.924***	***100,0%***	***1.097***	***66,7%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

If we take a look to the electricity supply activity, Table III. 6 shows the distribution of supplies by type of generation: 72% of the supply points (36 customers) correspond to combined cycle gas turbines, whose consumption reaches 83% of the total consumption for this sector, 22% of the supply points and 17% of the total consumption are cogeneration facilities with an average size of 1,054 GWh. Despite the fact that the combined cycles are the largest average size clients (1,604 GWh), they have the lowest load factor (53%) in this group

Table III. 6 Distribution of the number of supplies and their consumption of electricity supply consumers connected to networks greater than 60 bar. by type of generation. 2018 year

Actividad	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Combined Cycle gas Turbines	36	72%	57.758	83%	1.604	53%
Thermal power plants	1	2%	41	0%	41	90%
Cogeneration plants	11	22%	11.599	17%	1.054	87%
Waste treatment plants	2	4%	596	1%	298	92%
TOTAL	***50***	***100%***	***69.993***	***100%***	***1.400***	***57%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

The main activities carried out in the manufacturing industry are shown in greater detail in the table below, similar to the analysis performed with the electricity supply. The activities with the highest volume of consumption are those dedicated to Coke and Oil Refining and the Chemical Industry, with 48% and 29% of the total consumption in the sector, respectively. It is remarkable, the greater load factor in the manufacturing industry than in the electricity supply activity.

Table III. 7 Distribution of the number of supplies and their consumption of the manufacturing industry consumers connected to networks greater than 60 bar. by type of activity. 2018 year

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Food industry	4	9%	1.427	2%	357	83%
Wood and cork industry	1	2%	503	1%	503	88%
Paper industry	6	13%	4.642	8%	774	78%
Coke and oil refining industry	8	17%	27.759	48%	3.470	84%
Chemical industry	17	37%	16.556	29%	974	88%
Manufacture of pharmaceutical products	1	2%	53	0%	53	58%
Manufacture of other non-metallic mineral products	5	11%	1.661	3%	332	86%
Metallurgy; manufacture of iron, steel and ferro-alloy products	3	7%	4.676	8%	1.559	86%
Manufacture of metal products, except machinery and equipment	1	2%	621	1%	621	89%
TOTAL	***46***	***100%***	***57.898***	***100%***	***1.259***	***85%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

Finally, the group of consumers dedicated to the Transport and Storage activities includes compression stations and natural gas transport centers, with the exception of a single supply point whose activity is passenger transportation (see Table I.8).

Table III. 8 Distribution of the number of supplies and their consumption of consumers connected to networks greater than 60 bar. for the transport and storage activities. 2018 year

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Land and pipeline transport	17	94%	5	3%	0	55%
Storage and transport attached activities	1	6%	171	97%	171	78%
TOTAL	***18***	***100%***	***176***	***100%***	***10***	***78%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

There are many supply points that use cogeneration in the development of their activity, even if its main activity is not the supply of electricity. In particular, according to the available information at CNMC, 36 supply points used cogeneration in their production processes in 2018, representing 29.3% of the supplies connected in design pressure networks greater than 60 bar and 30,3% of the total consumption at that pressure level.

It is worth noting the high degree of penetration of cogeneration in the extractive industry and in the manufacturing industry, in particular in wood and cork activities, other non-metallic mineral products manufacturing, the food and paper industry.

Table III. 9 *Distribution of the number of supplies and their consumption of consumers connected to networks greater than 60 bar. for those activities that use cogeneration in their production processes. 2018 year*

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Agriculture, Livestock and fishing	1	100,0%	326	100,0%	326	53,5%
Extractive industries	2	100,0%	894	100,0%	447	85,1%
Manufacturing industry	20	43,5%	26.548	45,9%	1.327	84,2%
Electricity, gas, steam and air conditioning supply	11	22,0%	11.599	16,6%	1.054	86,7%
Building	2	50,0%	1.503	35,3%	751	89,7%
TOTAL	***36***	***29,3%***	***40.870***	***30,3%***	***1.135***	***84,7%***

Source: CNMC (Database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

Table III. 10. Distribution of the number of supplies and their consumption of consumers connected to networks greater than 60 bar. for the manufacturing industry that use cogeneration in their production processes. 2018 year

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Food industry	2	50%	913	64%	456	81%
Wood and cork industry	1	100%	503	100%	503	88%
Paper industry	3	50%	1.677	36%	559	66%
Coke and oil refining industry	3	38%	14.991	54%	4.997	86%
Chemical industry	6	35%	6.628	40%	1.105	87%
Manufacture of other non-metallic mineral products	4	80%	1.659	100%	415	87%
Metallurgy; manufacture of iron, steel and ferro-alloy products	1	33%	176	4%	176	67%
TOTAL	***20***	***43%***	***26.548***	***46%***	***1.327***	***84%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

3.1.1.4. Contract duration analysis

Table I.11 shows the distribution of customers connected to pressure networks greater than 60 bar and their consumption according to the duration of the contract. It is observed that, 67% of the supply points, whose consumption represents 48% of the total, they only have long-term contracts, 24% of the customers, whose consumption represents 48% of the total consumption, have long-term contracts and contracts of less than one-year duration and 9% of the customers, with consumption close to 4%, only have short-term contracts. It should be noted that the group of consumers with the highest load factors only has short-term contracts. The largest average size group is the one that combines annual and short-term contracting.

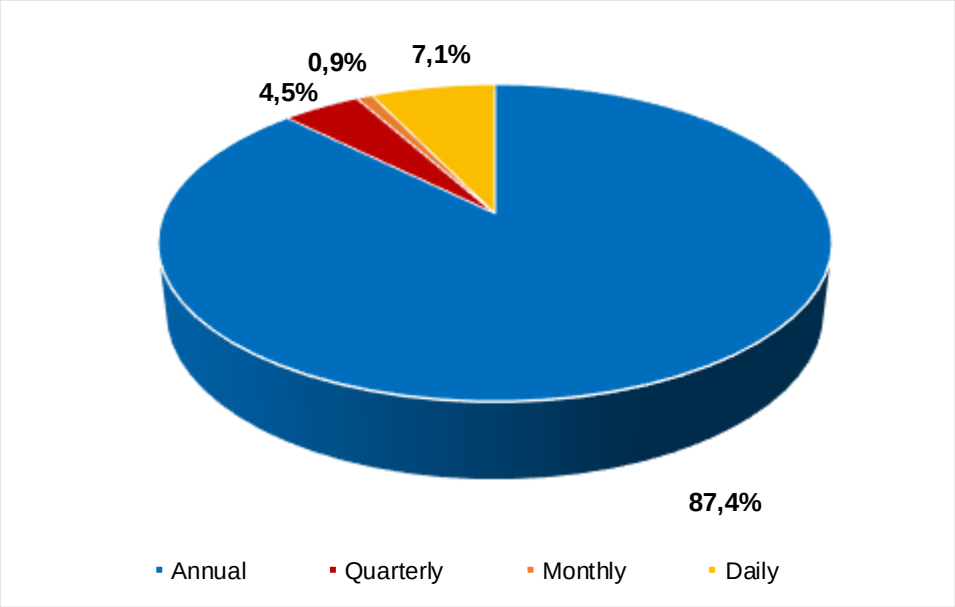
Table III. 11 Distribution of the number of supplies and their consumption of consumers connected to networks greater than 60 bar. by type of contract. 2018 year

Type of contract	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Annual contracts	82	67%	64.838	48,1%	791	66%
Annual and short-term contracts	30	24%	65.160	48,3%	2.172	68%
Short-term contracts	11	9%	4.926	3,7%	448	69%
TOTAL	***123***	***100%***	***134.924***	***100,0%***	***1.097***	***67%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

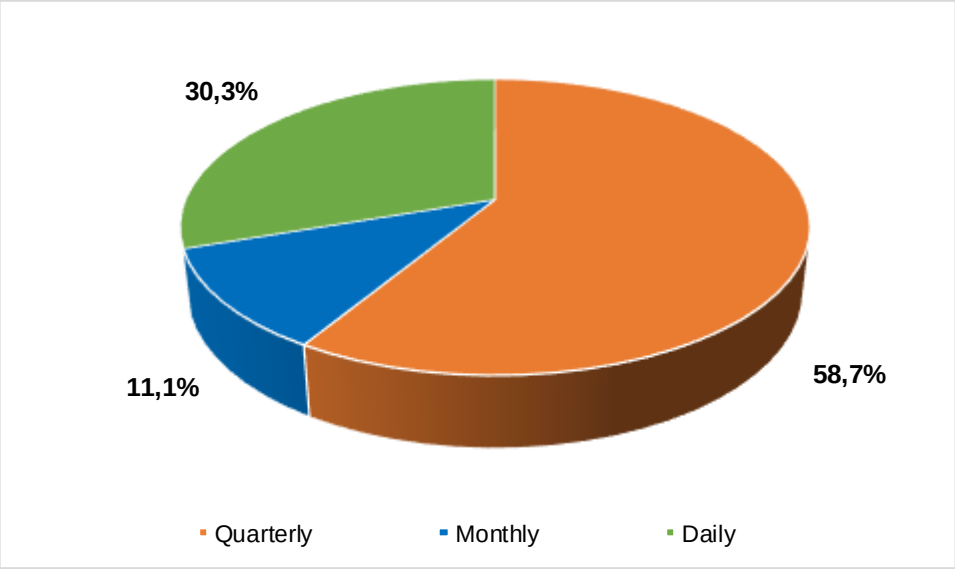
Consumers that have annual and short-term contracts mainly concentrate consumption on annual (87.4%), daily (7.1%) and quarterly (4.5%) contracts, while consumers who only have short term contracts, they concentrate their consumption on quarterly (58.7%), daily (30.3%) and monthly (11.1%) contracts. There are not within day contracts.

Figure III. 2 Distribution of the volume of consumers connected to networks greater than 60 bar. for consumers that have annual and short-term contracts. 2018 year



Source: CNMC (Individualized database information SIFCO)

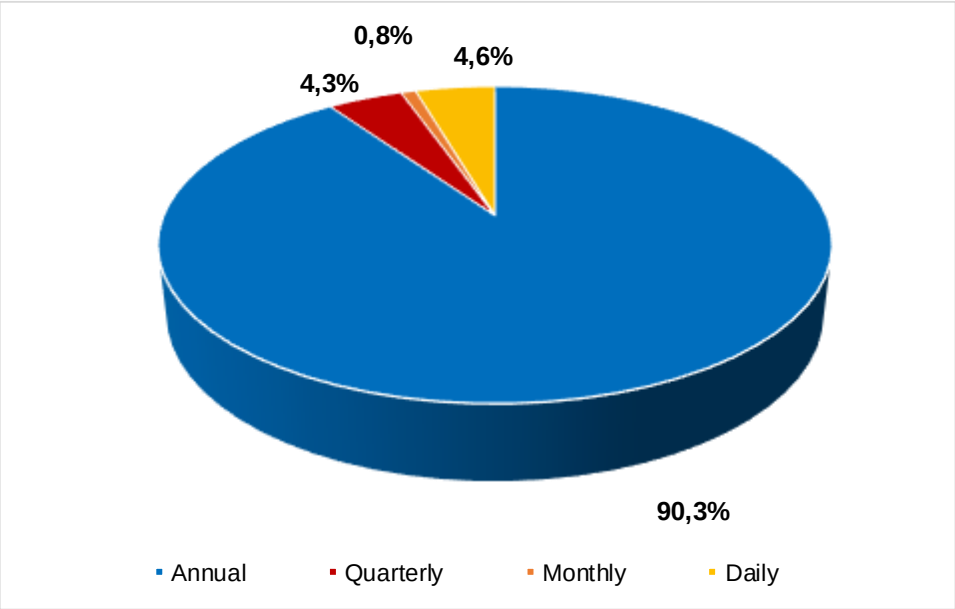
Figure III. 3 Distribution of the volume of consumers connected to networks greater than 60 bar. for consumers that only have short-term contracts. 2018 year



Source: CNMC (Individualized database information SIFCO)

Consequently, annual duration contracts represent 90.3% of total consumption, followed by daily contracts (4.6%), quarterly contracts (4.3%) and monthly contracts (0.8%).

Figure III. 4 *Distribution of the volume of consumers connected to networks greater than 60 bar. by type of contract. 2018 year*



Source: CNMC (Individualized database information SIFCO)

3.1.1.5. Analysis by activity and type of contract

If we analyze the type of contracts by activity, Electricity Supply is almost exclusively the only group that has short-term contracts (see Table I.12). The manufacturing industry short-term contracts represents 0.8% of the total consumption.

Table III. 12 . Distribution of the volume of consumers connected to networks greater than 60 bar. by type of contract and activity 2018 year

Activity	Annual	Quarterly	Monthly	Daily
Agriculture, Livestock and fishing	100,0%			
Extractive industries	100,0%			
Manufacturing industry	99,3%	0,2%	0,0%	0,6%
Electricity, gas, steam and air conditioning supply	81,9%	8,2%	1,6%	8,3%
Water supply and sanitation activities	100,0%			
Building	100,0%			
Transport and storage	100,0%			
Professional, scientific and technical activities	100,0%			
TOTAL	***90,3%***	***4,3%***	***0,8%***	***4,6%***

Source: CNMC (Individualized database information SIFCO)

The electricity supply industry consumes 18.1 % of its energy through short-term contracts, highlighting daily contracts with 8.3 % of energy. It should be noted that the total customers of this industry (50), 18 only have the long term contracts, 22 have short-term and annual contracts, and the remaining 10 have only short-term contracts.

Except for the electricity supply, short term contracting is residual, accounting for 99.3 % of consumption over annual contracts.

3.1.1.6. Analysis by region and activity

Table III. 13 shows the distribution of customers connected to pressure networks greater than 60 bar and their consumption by region and activity. It is noted that the most widespread activities of the national territory are those for electricity supply, manufacturing and transport and storage.

In the electricity supply activity, Andalucía is the region with the highest volume of consumption (16.3 % of the total for this pressure group) and with the highest number of points of supply (13.0 % of the total), followed by Cataluña whose consumption and supplies account for 11.6 % and 4.9 % of the total, respectively. It should be noted that the region of Asturias, the Balearic Islands and Cataluña account for almost all of the consumption at this pressure level.

The manufacturing sector is the second largest in terms of both customers and consumption. The regions of Murcia and Andalucía have the greatest

consumption (11 % and 10.6 % respectively) and more supply points (4.9 % and 8.9 % respectively).

Finally, as stated above, the group of consumers who carry out their activity in the transport and storage sector correspond to the compression stations and natural gas transport centers, hence its high presence on the national territory and its lack of representativeness in terms of consumption

Table III. 13 Distribution of the number of supplies and their consumption of consumers connected to networks greater than 60 bar. by region and activity. 2018 year

CC.AA	Agriculture, Livestock and fishing		Extractive industries		Manufacturing industry		Electricity, gas, steam and air conditioning supply		Water supply and sanitation activities		Building		Transport and storage		Professional, scientific and technical activities		TOTAL	
	Nº of supplies (%)	Consumption (%)	Nº of supplies (%)	Consumption (%)	Nº of supplies (%)	Consumption (%)	Nº of supplies (%)	Consumption (%)	Nº of supplies (%)	Consumption (%)	Nº of supplies (%)	Consumption (%)	Nº of supplies (%)	Consumption (%)	Nº of supplies (%)	Consumption (%)	Nº of supplies (%)	Consumption (%)
Andalucía					8,9%	10,6%	13,0%	16,3%			0,8%	0,7%					22,8%	27,6%
Aragón			0,8%	0,2%	4,9%	3,0%	4,1%	0,6%					0,8%	0,0%			10,6%	3,7%
Asturias							1,6%	1,0%									1,6%	1,0%
Baleares							2,4%	3,4%									2,4%	3,4%
Cantabria					2,4%	1,6%	0,8%	1,2%									3,3%	2,8%
Castilla La Mancha					4,1%	5,4%	1,6%	2,3%			0,8%	0,4%	2,4%	0,0%			8,9%	8,1%
Castilla y León			0,8%	0,5%	3,3%	1,4%	1,6%	1,0%					2,4%	0,0%			8,1%	3,0%
Cataluña							4,9%	11,6%					2,4%	0,1%			7,3%	11,8%
Extremadura													0,8%	0,0%			0,8%	0,0%
Galicia					0,8%	2,6%	2,4%	1,4%									3,3%	4,0%
La Rioja											0,8%	1,7%	1,6%	0,0%			2,4%	1,7%
Madrid	0,8%	0,2%			2,4%	0,6%					0,8%	0,4%	1,6%	0,0%			5,7%	1,3%
Murcia					4,9%	11,0%	2,4%	4,6%									7,3%	15,6%
Navarra							1,6%	1,1%					0,8%	0,0%			2,4%	1,1%
País Vasco					1,6%	3,7%	1,6%	0,9%	0,8%	0,9%							4,1%	5,5%
Comunidad Valenciana					4,1%	3,0%	2,4%	6,5%					1,6%	0,0%	0,8%	0,2%	8,1%	9,5%
TOTAL	***0,8%***	***0,2%***	***1,6%***	***0,7%***	***37,4%***	***42,9%***	***40,7%***	***51,9%***	***0,8%***	***0,9%***	***3,3%***	***3,2%***	***14,6%***	***0,1%***	***0,8%***	***0,2%***	***100,0%***	***100,0%***

Source: CNMC (Individualized database information SIFCO)

Due to the particular relevance of manufacturing, a more comprehensive analysis is required. Table III. 14 shows the customer distribution and consumption by region and type of activity in the manufacturing sector.

It should be noted that, 47.9 % of the consumption of the manufacturing sector corresponds to coke and oil refining industry. This consumption is located at only 8 customers with a very high average consumption (3.470 GWh). The distribution by region is Murcia with 17.2 % of the consumption, Andalucía with 10.2 % and Castilla-La Mancha with 9.1 % are the regions that have the highest volume of consumption.

The chemical industry is the second most important manufacturing activity, with 28.6 % of consumption and 37 % of customers. Andalucía and Murcia are the regions with the highest volume of consume (with 11.5% and 6.4% of the consumption respectively). The average customer size for this activity (974 GWh/year) is lower than for coke and refining petroleum sector.

The third most representative activity corresponds to the metallurgical industry, which accounts for 8.1 % of consumption and 6.5 % of the supply points. In this sector, the average size is around 1.559 GWh/year.

It is remarkable that in general all activities in the manufacturing sector have high load factors (85 % for industry as a whole). At the chemical industry, this load factor often reaches greater values than 90 % (as is the case in Castilla y Leon, Andalucía, Murcia and Castilla-La Mancha).

Table III. 14 Distribution of the number of supplies and their consumption of consumers connected to networks greater than 60 bar for the manufacturing industry. by region and activity. 2018 year

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Food industry	4	8,7%	1.427	2,5%	357	83%
Castilla y León	1	2,2%	318	0,5%	318	68%
Murcia	2	4,3%	515	0,9%	257	87%
Comunidad Valenciana	1	2,2%	595	1,0%	595	89%
Wood and cork industry	1	2,2%	503	0,9%	503	88%
Castilla y León	1	2,2%	503	0,9%	503	88%
Paper industry	6	13,0%	4.642	8,0%	774	78%
Andalucía	1	2,2%	651	1,1%	651	90%
Aragón	4	8,7%	3.613	6,2%	903	86%
Madrid	1	2,2%	378	0,7%	378	37%
Coke and oil refining industry	8	17,4%	27.759	47,9%	3.470	84%
Andalucía	2	4,3%	5.878	10,2%	2.939	85%
Castilla La Mancha	3	6,5%	5.257	9,1%	1.752	82%
Murcia	1	2,2%	9.958	17,2%	9.958	87%
País Vasco	1	2,2%	5.029	8,7%	5.029	83%
Comunidad Valenciana	1	2,2%	1.636	2,8%	1.636	76%
Chemical industry	17	37,0%	16.556	28,6%	974	88%
Andalucía	6	13,0%	6.663	11,5%	1.110	91%
Aragón	1	2,2%	7	0,0%	7	64%
Cantabria	3	6,5%	2.146	3,7%	715	72%
Castilla La Mancha	1	2,2%	2.024	3,5%	2.024	91%
Castilla y León	1	2,2%	1.078	1,9%	1.078	94%
Madrid	2	4,3%	380	0,7%	190	84%
Murcia	2	4,3%	3.717	6,4%	1.858	91%
Comunidad Valenciana	1	2,2%	541	0,9%	541	83%
Manufacture of pharmaceutical products	1	2,2%	53	0,1%	53	58%
Castilla y León	1	2,2%	53	0,1%	53	58%
Manufacture of other non-metallic mineral products	5	10,9%	1.661	2,9%	332	86%
Aragón	1	2,2%	368	0,6%	368	94%
Castilla La Mancha	1	2,2%	24	0,0%	24	76%
País Vasco	1	2,2%	1	0,0%	1	7%
Comunidad Valenciana	2	4,3%	1.268	2,2%	634	85%
Metallurgy; manufacture of iron, steel and ferro-alloy products	3	6,5%	4.676	8,1%	1.559	86%
Andalucía	2	4,3%	1.137	2,0%	568	77%
Galicia	1	2,2%	3.540	6,1%	3.540	89%
Manufacture of metal products, except machinery and equipment	1	2,2%	621	1,1%	621	89%
Murcia	1	2,2%	621	1,1%	621	89%
TOTAL	***46***	***100,0%***	***57.898***	***100,0%***	***1.259***	***85%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

3.1.2. Design pressure between 16 and 60 bar

In 2018, 153 supplies were connected to design pressure networks between 16 and 60 bar, whose consumption reached 34.8 TWh, 10.1% of the national demand for natural gas.

3.1.2.1. Tariff analysis

Table III. 15 shows the distribution of the number of supplies and their consumption of those consumers connected to design pressure networks between 16 and 60 bar according to the structure of current access tariffs[50]. It is

[50] See note (4)

noted that consumers from tariffs 2.5 and 2.6 account for 95.4 % of the total consumption and 34 % of the total supply points. These consumers have an average size above the average pressure level and have high load factors (82 % and 74 % respectively). On the contrary, consumers from tariffs 2.1 to 2.3 with 53.6 % of the total supply points only represent 2 % of the total consumption. These consumers have lower load factors (between 34 % and 59 %).

Table III. 15 Distribution of the number of supplies and their consumption of consumers connected to networks between 16 and 60 bar. 2018 year

Tariff	Consumption segment (GWh)	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
2.1	C ≤ 500	6	3,9%	1	0,0%	0	34%
2.2	500 < C ≤ 5.000	29	19,0%	76	0,2%	3	59%
2.3	5.000 < C ≤ 30.000	47	30,7%	591	1,7%	13	46%
2.4	30.000< C ≤ 100.000	19	12,4%	918	2,6%	48	60%
2.5	100.000 < C ≤ 500.000	34	22,2%	9.180	26,3%	270	74%
2.6	C > 500.000	18	11,8%	24.075	69,1%	1.337	82%
TOTAL		***153***	***100%***	***34.841***	***100%***	***228***	***78%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

3.1.2.2. Analysis by region.

The analysis of the distribution of customers connected to design pressure networks between 16 bar and 60 bar per region shows that Cataluña is the region with the highest volume of consumption and the highest number of supply points (58.8 % and 56.2 % of the total). In terms of consumption, Galicia, with 14.4 %, and Aragon, with 10.6 % hold the second and third place respectively. The analysis of the number of supplies shows that Comunidad Valenciana is the second largest region by number of supply points. Castilla y León is the region with the highest average customer size (1.024 GWh), while the Madrid and La Rioja have the lowest average sizes (6 GWh/year). Castilla y León and Galicia have the highest load factors (with 92 % and 82 % respectively) while La Rioja and the Balearic Islands have significantly lower values (44 % and 45 % respectively) (see Table III. 16).

Table III. 16 Distribution of the number of supplies and their consumption of consumers connected to networks between 16 and 60 bar by region. 2018 year

Region	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Andalucía	8	5,2%	2.151	6,2%	269	81%
Aragón	7	4,6%	3.685	10,6%	526	81%
Baleares	1	0,7%	11	0,0%	11	45%
Castilla y León	2	1,3%	2.048	5,9%	1.024	92%
Cataluña	86	56,2%	20.479	58,8%	238	77%
Galicia	5	3,3%	5.024	14,4%	1.005	82%
La Rioja	1	0,7%	6	0,0%	6	44%
Madrid	1	0,7%	6	0,0%	6	72%
Comunidad Valenciana	42	27,5%	1.432	4,1%	34	63%
TOTAL	***153***	***100,0%***	***34.841***	***100,0%***	***228***	***78%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

3.1.2.3. Analysis by activity

Table III. 17 shows the distribution of the number of supplies connected to pressure networks between 16 bar and 60 bar and their consumption classified by activity. The most relevant sector is the manufacturing industry which accounts for 81.5 % of consumption and 73.2 % of supply points. The electricity, gas, steam and air conditioning supply sector, with 12.8 % of the total consumption and 7.8 % of the supply points, holds the second most relevant activity.

In terms of the average size of consumers, the electricity, gas, steam and air conditioning supply sector is the largest one (372 GWh/year), followed by Agriculture, livestock and fishing (309 GWh/year) and Manufacturing industry (254 GWh/year). On the contrary, smaller consumers operate in the Hotel sector (0,2 GWh/year), Activities, professional, scientific and technical (2,1 GWh/year) and Other services (3,3 GWh/year).

In terms of load factor, the electricity, gas, steam and air conditioning supply and extractive industries sectors have the highest load factors (82 % and 80 % respectively). On the contrary, the hotel sector with only one consumer has the lowest load factor (31 %).

Table III. 17 Distribution of the number of supplies and their consumption of the consumers connected to networks between 16 and 60 bar by activity. 2018 year

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Agriculture, Livestock and fishing	2	1,3%	617	1,8%	309	77%
Extractive industries	3	2,0%	335	1,0%	112	80%
Manufacturing industry	112	73,2%	28.396	81,5%	254	78%
Electricity, gas, steam and air conditioning supply	12	7,8%	4.459	12,8%	372	82%
Water supply and sanitation activities	4	2,6%	489	1,4%	122	57%
Trade	10	6,5%	495	1,4%	50	72%
Transport and storage	2	1,3%	25	0,1%	12	40%
Hotels	1	0,7%	0	0,0%	0	31%
Professional, scientific and technical activities	1	0,7%	2	0,0%	2	44%
Public Administration	1	0,7%	3	0,0%	3	73%
Sanitary Activities	2	1,3%	9	0,0%	5	48%
Other services	3	2,0%	10	0,0%	3	56%
TOTAL	***153***	***100%***	***34.841***	***100%***	***228***	***78%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

For the most relevant activities in terms of consumption in the manufacturing sector, the chemical industry (34.7 %), the coke and oil refining industry (26.9 %) and the paper industry (17.5 %) have the largest consumption of the manufacturing industry. In terms of supply points, the chemical industry with 20.5 % of the supply points, followed by the food industry with 19.6 % of supply points, although the latter only accounts for 4 % of consumption. The largest customers (1.530 GWh) are at the Coke and oil refining industry, while the Furniture manufacturing sector has the largest load factor (88 %) (see Table III. 18).

Table III. 18 Distribution of the number of supplies and their consumption of the manufacturing industry consumers connected to networks between 16 and 60 bar by activity. 2018 year

Actividad	Nº clientes	Clientes (%)	Consumo (GWh)	Consumo (%)	Tamaño medio cliente (GWh)	Factor carga (1)
Food industry	22	19,6%	1.138	4,0%	52	68%
Textile industry	6	5,4%	37	0,1%	6	52%
Wood and cork industry	1	0,9%	535	1,9%	535	80%
Paper industry	12	10,7%	4.958	17,5%	413	88%
Graphic arts and reproduction of recorded media	1	0,9%	141	0,5%	141	73%
Coke and oil refining industry	5	4,5%	7.651	26,9%	1.530	77%
Chemical industry	23	20,5%	9.849	34,7%	428	79%
Manufacture of pharmaceutical products	4	3,6%	58	0,2%	15	75%
Manufacture of rubber and plastic products	7	6,3%	48	0,2%	7	48%
Manufacture of other non-metallic mineral products	9	8,0%	1.497	5,3%	166	83%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	5,4%	1.378	4,9%	230	73%
Manufacture of metal products, except machinery and equipment	5	4,5%	38	0,1%	8	52%
Manufacture of computer, electronic and optical products	1	0,9%	13	0,0%	13	77%
Electrical equipment and equipment manufacturing	1	0,9%	6	0,0%	6	32%
Manufacture of machinery and equipment n.c.o.p.	5	4,5%	1.045	3,7%	209	64%
Manufacture of motor vehicles, trailers and semi-trailers	1	0,9%	1	0,0%	1	67%
Furniture manufacturing	2	1,8%	4	0,0%	2	88%
Repair and installation of machinery and equipment	1	0,9%	0	0,0%	0	5%
TOTAL	***112***	***100,0%***	***28.396***	***100,0%***	***254***	***78%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

With regard to the electricity, gas, steam and air conditioning supply sector, it should be noted that all the supply points are in the electricity generation. Nine co-generators and three waste treatment facilities are connected to the design pressure network between 16 and 60 bar. Waste treatment plants have the largest average (414 GWh/year) and co-generators have the higher load factor (84.8 %). See Table III. 19

Table III. 19 Distribution of the number of supplies and their consumption of electricity supply activity consumers connected to networks between 16 and 60 bar by type of generation. 2018 year

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Cogeneration plants	9	75%	3.218	72%	358	84,8%
Waste treatment plants	3	25%	1.241	28%	414	81,8%
TOTAL	***12***	***100%***	***4.459***	***100%***	***372***	***81,8%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

Finally, according to the available information available in CNMC, 47 points of supply (30.7%) and 63.0% of the consumption connected in design pressure networks between 16 and 60 bar used cogeneration in their production processes.

Table III. 20 Distribution of the number of supplies and their consumption of consumers connected to networks between 16 and 60 bar that use cogeneration in their production processes by activity. 2018 year

Activity	Nº of supplies	Nº of supplies of total activity (%)	Consumption (GWh)	Consumption of total activity (%)	Average customer size (GWh)	Load factor (1)
Agriculture, Livestock and fishing	2	100,0%	617	100,0%	309	76,9%
Manufacturing industry	30	26,8%	17.069	60,1%	569	82,3%
Electricity, gas, steam and air conditioning supply	11	91,7%	3.853	86,4%	350	81,0%
Water supply and sanitation activities	1	25,0%	9	1,8%	9	43,3%
Trade	2	20,0%	418	84,4%	209	87,5%
Other services	1	33,3%	0	0,0%	0	27,5%
TOTAL	***47***	***30,7%***	***21.966***	***63,0%***	***467***	***82,0%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

According to the available information in CNMC, 30 points of supply of industrial consumers, which represented 27% of the supplies connected to design pressure networks between 16 and 60 bar and 60 % of the total consumption for that level of pressure. It is worth highlighting that the chemical industry with 57 % of supply points and nearly 81 % of the consumption using cogeneration in their processes and the paper industry with 42 % of the points of supply and 70 % of total consumption using cogeneration in their processes.

Table III. 21 Distribution of the number of supplies and their consumption of consumers connected to networks between 16 and 60 bar that use cogeneration in their production processes in the manufacturing sector. 2018 year

Activity	Nº of supplies	Nº of supplies of total activity (%)	Consumption (GWh)	Consumption of total activity (%)	Average customer size (GWh)	Load factor (1)
Food industry	1	5%	348	31%	348	72%
Wood and cork industry	1	100%	535	100%	535	80%
Paper industry	5	42%	3.455	70%	691	87%
Graphic arts and reproduction of recorded media	1	100%	141	100%	141	73%
Coke and oil refining industry	2	40%	2.658	35%	1.329	84%
Chemical industry	13	57%	7.954	81%	612	83%
Manufacture of rubber and plastic products	1	14%	26	55%	26	47%
Manufacture of other non-metallic mineral products	3	33%	907	61%	302	90%
Manufacture of computer, electronic and optical products	1	100%	13	100%	13	77%
Manufacture of machinery and equipment n.c.o.p.	2	40%	1.033	99%	516	64%
TOTAL	***30***	***27%***	***17.069***	***60%***	***569***	***82%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

3.1.2.4. Contract duration analysis

Based on the duration of customers' contracts connected to pressure networks between 16 and 60 bar, 92% of consumers, whose consumption accounts for almost 98% of the consumption of this pressure level, use only annual contracts, 5 % of the supply points, whose consumption accounts for 2% of the total consumption at this pressure level, have annual contracts and short term, while 3% of the supply points, whose consumption represents 0.2% of the total consumption at this pressure level, only have short term contracts (see Table III. 22).

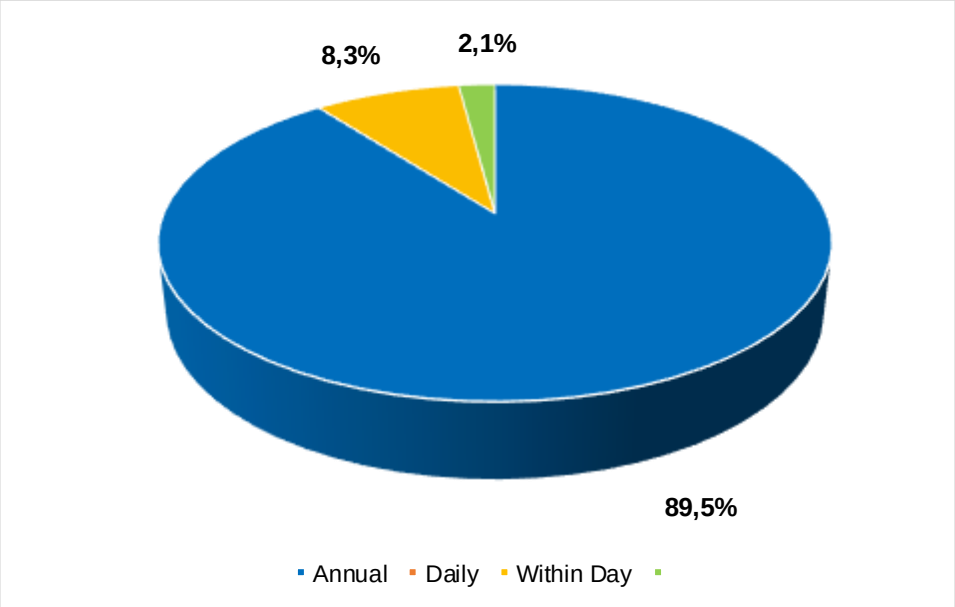
Table III. 22 Distribution of the number of supplies and their consumption of consumers connected to networks between 16 and 60 bar by type of contract. 2018 year

Type of contract	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Annual contracts	141	92%	33.963	97,5%	241	78,6%
Annual and short-term contracts	7	5%	802	2,3%	115	67,2%
Short-term contracts	5	3%	75	0,2%	15	43,0%
TOTAL	***153***	***100%***	***34.841***	***100,0%***	***228***	***78,2%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

Consumers that have annual and short-term contracts concentrate consumption mainly on annual contracts (89.5%) followed by daily (8.3%) and within day contracts (2.1%). Only daily and quarterly contracts have been used by consumers who only book in the short term.

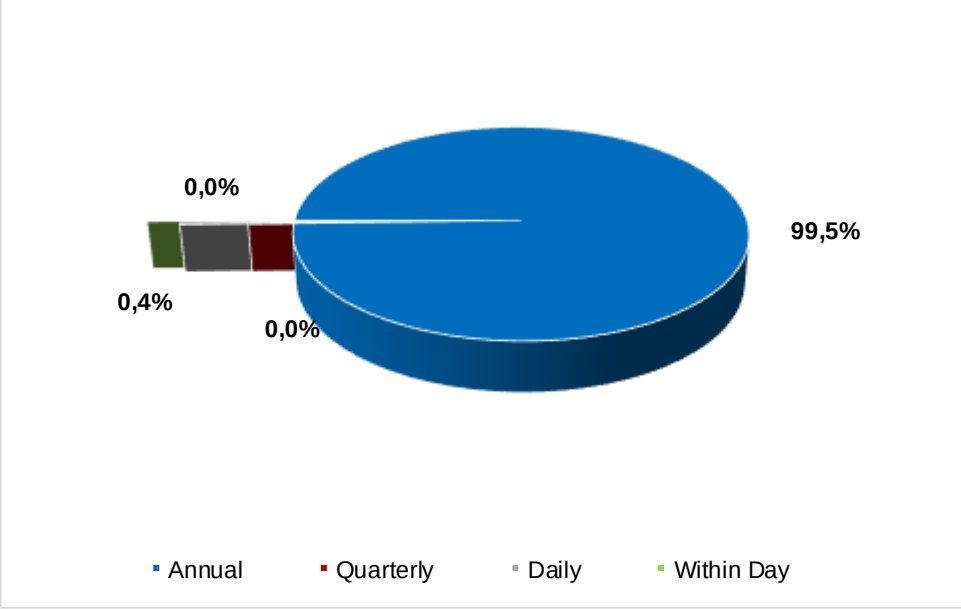
Figure III. 5 Distribution of the volume of consumers connected to networks between 16 and 60 bar for consumers that have annual and short-term contracts. 2018 year



Source: CNMC (Individualized database information SIFCO)

As a result, annual contracts account for 99.5 % of the total consumption, followed by daily contracts (0.4 %). Quarterly and within day contracts barely account for 0.1 % of total consumption.

Figure III. 6 *Distribution of the volume of consumers connected to networks between 16 and 60 bar by type of contract. 2018 year*



Source: CNMC (Individualized database information SIFCO)

3.1.2.5. Analysis by activity and type of contract

In the analysis of the duration of contracts by activity, it is noted that short-term contracting is concentrated on trade, extractive industries and manufacturing industries (see Table III. 23).

Table III. 23 Distribution of the volume of consumers connected to networks between 16 and 60 bar. by type of contract and activity 2018 year

Activity	Annual	Quarterly	Daily	Intradaily
Agriculture, Livestock and fishing	100,0%			
Extractive industries	97,7%		0,6%	1,7%
Manufacturing industry	99,5%	0,0%	0,4%	0,0%
Supply of electricity, gas, steam and air conditioning	100,0%			
Water supply and sanitation activities	99,7%	0,1%	0,2%	
Commerce	97,4%	0,0%	2,6%	
Transport and storage	100,0%			
Hotels	100,0%			
Professional, scientific and technical activities	100,0%			
Public administration	100,0%			
Sanitary Activities	100,0%			
Other services	100,0%		0,0%	
TOTAL	***99,5%***	***0,0%***	***0,4%***	***0,0%***

Source: CNMC (Individualized database information SIFCO)

3.1.1.6. Analysis by region and activity

Table III. 24 shows the distribution of customers connected to design pressure networks between 16 bar and 60 bar and their consumption by region and activity. It is observed that the most widespread sector in the national territory corresponds to the manufacturing industry

The regions of Cataluña and Comunidad Valenciana are represented in almost all of the analyzed sectors, while the Balearic Islands, Castilla y Leon and La Rioja are represented in only one sector (trade, manufacturing and other services, respectively).

Within the manufacturing industry, Cataluña is the region with the higher consumption (49.7% of the total) and the higher number of supply points (41.2%). Galicia accounts for 13.2 % of the total consumption for this pressure group and only 2.6% of supply points, in terms of consumption.

In the electricity supply sector, Cataluña with 7.1 % and Andalucía with 4.3 % are the most representative regions in terms of consumption.

In the rest of the activities, although they concentrate almost 19% of the supply points, they barely represent 5.7% of the total consumption of this pressure group, the most relevant sector is Agriculture, fishing and livestock, with 1.3% of the supply points and 1.8% of total consumption, which is mainly located in

Andalucía, followed by Trade, developed in the Balearic Islands, Cataluña and Comunidad Valenciana, with 6.5% of supply points and 1.4 % of consumption and water supply and sanitation activities, in Cataluña and Galicia, with 2.6% of supply points and 1.4% of consumption.

Table III. 24 Distribution of the number of supplies and their consumption of consumers connected to networks between 16 and 60 bar by region and activity. 2018 year

Region	Manufacturing Industry		Supply of electricity, gas, steam and air conditioning		Rest	
	Nº of supplies (%)	Consumption (%)	Nº of supplies (%)	Consumption (%)	Nº of supplies (%)	Consumption (%)
Andalucía	1,3%	0,1%	2,6%	4,3%	1,3%	1,8%
Aragón	3,3%	8,9%	0,7%	1,1%	0,7%	0,6%
Baleares					0,7%	0,0%
Castilla y León	1,3%	5,9%				
Cataluña	41,2%	49,7%	3,9%	7,1%	11,1%	2,0%
Galicia	2,6%	13,2%			0,7%	1,2%
La Rioja					0,7%	0,0%
Madrid	0,7%	0,0%				
Comunidad Valenciana	22,9%	3,7%	0,7%	0,3%	3,9%	0,1%
TOTAL	***73,2%***	***81,5%***	***7,8%***	***12,8%***	***19,0%***	***5,7%***

Source: CNMC (Individualized database information SIFCO)

Focusing on the manufacturing sector (see Table III. 25), the most relevant activity is the chemical industry with 34.7% of consumption and 20.5% of the supply points. This activity takes place mainly in Cataluña, followed by Galicia and Castilla y León. In this respect, it should be noted that Tarragona province has 52% of the supply points and 72% of the total consumption of the chemical industry.

The second activity in terms of consumption corresponds to the coke and oil refining industry with 26.9 % of the total consumption of the manufacturing sector. This activity takes place in Cataluña with 19.3 % of consumption and in Galicia with 7.6 % of consumption, and more specifically in the provinces of Tarragona and Coruña.

The third activity in terms of consumption corresponds to the Paper industry, which concentrates 10.7% of the supply points and 17.5% of manufacturing industry consumption. This activity is mainly located in Aragon, Cataluña and Castilla y León (with 7.7%, 6.0% and 3.7%, respectively).

In terms of number of supplies, the Food industry is the second most important activity of the manufacturing industry with 19.6%, located primarily in Comunidad Valenciana with 11.6% of supplies, followed by Cataluña with the 6.3%

Table III. 25 Distribution of the number of supplies and their consumption of consumers connected to networks between 16 and 60 bar for the manufacturing industry by region and activity. 2018 year

Activity	Nº of supplies	Nº of supplies of total activity (%)	Consumption (GWh)	Consumption of total activity (%)	Average customer size (GWh)	Load factor (1)
Andalucía	**2**	**1,8%**	**36**	**0,1%**	**18**	**42,9%**
Food industry	1	0,9%	31	0,1%	31	42,8%
Manufacture of pharmaceutical products	1	0,9%	5	0,0%	5	43,1%
Aragón	**5**	**4,5%**	**3.096**	**10,9%**	**619**	**80,3%**
Food industry	1	0,9%	456	1,6%	456	89,0%
Paper industry	2	1,8%	2.176	7,7%	1.088	86,2%
Electrical equipment and equipment manufacturing	1	0,9%	6	0,0%	6	31,6%
Manufacture of machinery and equipment n.c.o.p.	1	0,9%	458	1,6%	458	57,2%
Castilla y León	**2**	**1,8%**	**2.048**	**7,2%**	**1.024**	**91,9%**
Paper industry	1	0,9%	1.062	3,7%	1.062	92,3%
Chemical industry	1	0,9%	987	3,5%	987	91,5%
Cataluña	**63**	**56,3%**	**17.304**	**60,9%**	**275**	**76,7%**
Food industry	7	6,3%	406	1,4%	58	71,3%
Textile industry	3	2,7%	17	0,1%	6	67,6%
Paper industry	8	7,1%	1.714	6,0%	214	88,6%
Graphic arts and reproduction of recorded media	1	0,9%	141	0,5%	141	72,5%
Coke and oil refining industry	4	3,6%	5.484	19,3%	1.371	75,4%
Chemical industry	19	17,0%	7.735	27,2%	407	77,1%
Manufacture of pharmaceutical products	3	2,7%	53	0,2%	18	80,7%
Manufacture of rubber and plastic products	5	4,5%	39	0,1%	8	44,0%
Manufacture of other non-metallic mineral products	3	2,7%	275	1,0%	92	87,8%
Metallurgy; manufacture of iron, steel and ferro-alloy products	3	2,7%	828	2,9%	276	70,6%
Manufacture of metal products, except machinery and equipment	3	2,7%	34	0,1%	11	49,5%
Manufacture of machinery and equipment n.c.o.p.	2	1,8%	577	2,0%	288	71,1%
Manufacture of motor vehicles, trailers and semi-trailers	1	0,9%	1	0,0%	1	67,4%
Repair and installation of machinery and equipment	1	0,9%	0	0,0%	0	4,6%
Galicia	**4**	**3,6%**	**4.607**	**16,2%**	**1.152**	**84,0%**
Wood and cork industry	1	0,9%	535	1,9%	535	79,7%
Coke and oil refining industry	1	0,9%	2.167	7,6%	2.167	82,2%
Chemical industry	1	0,9%	1.096	3,9%	1.096	84,2%
Manufacture of other non-metallic mineral products	1	0,9%	809	2,8%	809	92,2%
Madrid	**1**	**0,9%**	**6**	**0,0%**	**6**	**71,8%**
Manufacture of machinery and equipment n.c.o.p.	1	0,9%	6	0,0%	6	71,8%
Comunidad Valenciana	**35**	**31,3%**	**1.300**	**4,6%**	**37**	**63,7%**
Food industry	13	11,6%	245	0,9%	19	47,1%
Textile industry	3	2,7%	20	0,1%	7	43,3%
Paper industry	1	0,9%	7	0,0%	7	12,3%
Chemical industry	2	1,8%	32	0,1%	16	54,8%
Manufacture of rubber and plastic products	2	1,8%	8	0,0%	4	79,3%
Manufacture of other non-metallic mineral products	5	4,5%	413	1,5%	83	68,2%
Metallurgy; manufacture of iron, steel and ferro-alloy products	3	2,7%	550	1,9%	183	76,8%
Manufacture of metal products, except machinery and equipment	2	1,8%	4	0,0%	2	92,6%
Manufacture of computer, electronic and optical products	1	0,9%	13	0,0%	13	77,4%
Manufacture of machinery and equipment n.c.o.p.	1	0,9%	4	0,0%	4	77,0%
Furniture manufacturing	2	1,8%	4	0,0%	2	87,5%
TOTAL	***112***	***100,0%***	***28.396***	***100,0%***	***254***	***78,3%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

3.1.3. Design pressure between 4 and 16 bar

3.1.3.1. Tariff analysis

Table III. 26 shows the distribution of the number of supplies and their consumption of those consumers connected to the design pressure networks

between 4 and 16 bar, which account for 0.05 % and 26.5 % of the total number of supplies and total consumption of the system, respectively.

It is noted that, according to the existing tariff structure[51], the largest group has an average size between 0,5 and 5 GWh/year, although the largest volume of consumption (48 %) corresponds to 2.5 tariff consumers, which, in terms of supply numbers, represents only 5.8 % of those connected in design networks between 4 bar and 16 bar. It is also observed that the larger the average customer size, the higher the load factor of the billed capacity (86%).

Table III. 26 Distribution of the number of supplies and their consumption of consumers connected to networks between 4 and 16 bar. 2018 year

Tariff	Consumption segment (GWh)	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
2.1	C ≤ 500	695	18,9%	134	0%	0	33%
2.2	500 < C ≤ 5.000	1.359	37,0%	2.905	3%	2	57%
2.3	5.000 < C ≤ 30.000	1.038	28,2%	13.618	15%	13	51%
2.4	30.000< C ≤ 100.000	357	9,7%	19.150	21%	54	65%
2.5	100.000 < C ≤ 500.000	215	5,8%	44.192	48%	206	76%
2.6	C > 500.000	13	0,4%	11.679	13%	898	83%
TOTAL		***3.677***	***100,0%***	***91.678***	***100%***	***25***	***68%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

3.1.3.2. Analysis by region

The analysis of the distribution of customers connected to design pressure networks between 4 bar and 16 bar per region shows that, in terms of consumption, Comunidad Valenciana is the largest consumer, with 22 % of the total consumption for this pressure group, followed by Cataluña with 16 % and the País Vasco with 13 %.

In terms of the number of supplies, Cataluña is the region that has the largest number, 861 (23.5 %), followed by Valencia (16.2 %) and País Vasco (15.1 %).

Asturias, Extremadura and the Balearic Islands are the communities whose customers have the highest average size, while the consumers in Navarra, Comunidad Valenciana and the País Vasco are the ones with the highest load factors and those of the Balearic Islands and Madrid the lowest (see Table III. 27).

[51] See Note 3

Table III. 27 Distribution of the number of supplies and their consumption of consumers connected to networks between 4 and 16 bar by region. 2018 year

Region	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Andalucía	149	4,1%	4.962	5%	33,3	71%
Aragón	211	5,7%	4.036	4%	19,1	63%
Asturias	77	2,1%	5.272	6%	68,5	66%
Baleares	1	0,0%	56	0%	56,0	59%
Cantabria	60	1,6%	1.869	2%	31,2	70%
Castilla La Mancha	168	4,6%	4.485	5%	26,7	69%
Castilla y León	282	7,7%	7.583	8%	26,9	67%
Cataluña	861	23,4%	14.765	16%	17,1	68%
Extremadura	33	0,9%	1.861	2%	56,4	70%
Galicia	140	3,8%	3.350	4%	23,9	64%
La Rioja	48	1,3%	619	1%	12,9	65%
Madrid	250	6,8%	3.999	4%	16,0	59%
Murcia	76	2,1%	1.473	2%	19,4	60%
Navarra	172	4,7%	5.330	6%	31,0	73%
País Vasco	555	15,1%	12.166	13%	21,9	71%
Comunidad Valenciana	594	16,2%	19.851	22%	33,4	71%
TOTAL	***3.677***	***100,0%***	***91.678***	***100%***	***24,9***	***68%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

3.1.3.3. Analysis by activity

Table III. 28 shows the distribution of the number of supplies and the consumption of connected customers in design pressure networks between 4 bar and 16 bars per activity sector. It is indicated that SIFCO database does not have information about the activity of 241 points of supply that accounts for 6.6% of the total supplies and 1% of the total consumption of this level pressure.

Manufacturing industry is the most representative sector, with 68.6% of the supply points and 73.2% of consumption, followed by far, in terms of supply points by the trade sector (with 5.4% of the supply points) and, in terms of consumption, by the electricity, gas, steam and air supply (with 13.2% of consumption).

In terms of average size, the supply of energy sector has the largest consumers (107 GWh/year), followed by the extractive industry (51,4 GWh/year) and the building sector (44 GWh/year). Smaller consumers operate at information and communications and hotels sectors.

In terms of load factor, supply of energy, construction and agriculture sectors are those with the highest load factors (79 %, 79 % and 71 % respectively).

Table III. 28 Distribution of the number of supplies and their consumption of the consumers connected to networks between 4 and 16 bar by activity. 2018 year

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Agriculture, Livestock and fishing	42	1,1%	1.093	1,2%	26,0	71%
Extractive industries	19	0,5%	976	1,1%	51,4	55%
Manufacturing industry	2.524	68,6%	67.128	73,2%	26,6	68%
Supply of electricity, gas, steam and air conditioning	113	3,1%	12.092	13,2%	107,0	79%
Water supply and sanitation activities	44	1,2%	931	1,0%	21,1	62%
Building	47	1,3%	2.088	2,3%	44,4	79%
Trade	197	5,4%	1.730	1,9%	8,8	61%
Transport and storage	108	2,9%	1.859	2,0%	17,2	61%
Hotels	35	1,0%	51	0,1%	1,4	58%
Information and communications	10	0,3%	11	0,0%	1,1	58%
Financial activities	12	0,3%	456	0,5%	38,0	70%
Real estate activities	13	0,4%	50	0,1%	3,8	48%
Professional, scientific and technical activities	16	0,4%	46	0,1%	2,9	27%
Administrative activities	25	0,7%	203	0,2%	8,1	58%
Public administration	23	0,6%	106	0,1%	4,6	46%
Education	10	0,3%	21	0,0%	2,1	46%
Sanitary Activities	37	1,0%	451	0,5%	12,2	63%
Artistic activities	10	0,3%	31	0,0%	3,1	50%
Other services	51	1,4%	501	0,5%	9,8	66%
Household activities	97	2,6%	908	1,0%	9,4	53%
Activities of organizations	3	0,1%	43	0,0%	14,3	43%
Undetermined	241	6,6%	903	1,0%	3,7	50%
TOTAL	***3.677***	***100,0%***	***91.678***	***100,0%***	***24,9***	***68%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

Due to its relevance, Table III. 29 shows the distribution of the number of supplies and the consumption of connected customers in design pressure networks between 4 bar and 16 bar from manufacturing sector. In terms of supply numbers, the Food industry concentrates 20.2% of the supply points followed by the Manufacture of other non-metallic mineral products with 15.8% and manufacture of metal products with 11.2%. In terms of consumption, the manufacturing industry of other non-metallic mineral products (32.8%) is the most relevant, followed by the Food Industry (17.4%), Metallurgy (14.2%) and Chemical Industry (8.2%). The manufacture of other non-metallic mineral products is the activity whose customers have the highest average size (55 GWh), excepting the tobacco industry that is not taken into consideration because it only has one single customer.

In terms of load factor, tobacco industry consumers, the manufacture of rubber and plastic products and the manufacture of other non-metallic mineral products are those with the highest load factors.

Table III. 29 Distribution of the number of supplies and their consumption of the manufacturing industry consumers connected to networks between 4 and 16 bar by activity. 2018 year

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Food industry	509	20,2%	11.675	17,4%	22,9	65%
Beverage manufacturing	44	1,7%	1.196	1,8%	27,2	69%
Tobacco industry	1	0,0%	126	0,2%	125,5	82%
Textile industry	138	5,5%	1.489	2,2%	10,8	56%
Clothing making	17	0,7%	76	0,1%	4,4	48%
Leather and footwear industry	19	0,8%	163	0,2%	8,6	56%
Wood and cork industry	25	1,0%	831	1,2%	33,2	70%
Paper industry	127	5,0%	5.922	8,8%	46,6	75%
Graphic arts and reproduction of recorded media	21	0,8%	56	0,1%	2,7	69%
Coke and oil refining industry	13	0,5%	371	0,6%	28,5	66%
Chemical industry	206	8,2%	5.487	8,2%	26,6	70%
Manufacture of pharmaceutical products	56	2,2%	1.000	1,5%	17,9	70%
Manufacture of rubber and plastic products	102	4,0%	2.408	3,6%	23,6	76%
Manufacture of other non-metallic mineral products	398	15,8%	21.997	32,8%	55,3	76%
Metallurgy; manufacture of iron, steel and ferro-alloy products	231	9,2%	9.514	14,2%	41,2	64%
Manufacture of metal products, except machinery and equipment	282	11,2%	1.963	2,9%	7,0	58%
Manufacture of computer, electronic and optical products	26	1,0%	86	0,1%	3,3	45%
Electrical equipment and equipment manufacturing	36	1,4%	277	0,4%	7,7	59%
Manufacture of machinery and equipment n.c.o.p.	165	6,5%	1.724	2,6%	10,4	42%
Manufacture of motor vehicles, trailers and semi-trailers	48	1,9%	378	0,6%	7,9	51%
Manufacture of other transport equipment	14	0,6%	45	0,1%	3,2	28%
Furniture manufacturing	18	0,7%	39	0,1%	2,2	67%
Other manufacturing industries	23	0,9%	305	0,5%	13,2	72%
Repair and installation of machinery and equipment	5	0,2%	3	0,0%	0,7	29%
TOTAL	***2.524***	***100,0%***	***67.128***	***100,0%***	***26,6***	***68%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

With regard to the electricity, gas, steam and air conditioning supply sector, it should be noted that 81.4% of the supply points and 97.5% of the consumption is at the electricity generation sector. In particular, there are three thermal power plants connected to the design pressure network between 4 and 16 bar, 7 waste treatment plants, 46 cogeneration plants, as well as 1 biomass plant. In addition, the production, transmission and distribution of electricity has 35 points of supply, production and distribution of gaseous fuels has 17 and steam and air conditioning supply have another 5 points of supply. Cogeneration plants have the highest number of supply points (41%) and the highest consumption (53%). The only supply point in the biomass plants sector has the largest average size (322 GWh) and the largest load factor (87%) (see Table III. 30).

Table III. 30 Distribution of the number of supplies and their consumption of electricity supply activity consumers connected to networks between 4 and 16 bar by type of generation. 2018 year

Actividad	Nº clientes	Clientes (%)	Consumo (GWh)	Consumo (%)	Tamaño medio cliente (GWh)	Factor carga (1)
Central Térmica	3	2,7%	137	1,1%	45,7	22%
Tratamiento de residuos	7	6,2%	1.507	12,5%	215,4	86%
Cogeneración	46	40,7%	6.428	53,2%	139,7	81%
Biomasa	1	0,9%	322	2,7%	322,4	87%
Producción, transporte y distribución de energía eléctrica	35	31,0%	3.396	28,1%	97,0	82%
Producción de gas; distribución por tubería de combustibles gaseosos	17	15,0%	29	0,2%	1,7	81%
Suministro de vapor y aire acondicionado	4	3,5%	271	2,2%	67,9	75%
TOTAL	***113***	***100,0%***	***12.092***	***100,0%***	***107,0***	***79%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

Finally, it is stated that, according to the available information available in CNMC, 568 points of supply used cogeneration in their production processes in 2018 which account for 15.4% of supplies connected in the design pressure networks of between 4 and 16 bars and 40.8 % of the consumption of that level of pressure.

Table III. 31 Distribution of the number of supplies and their consumption of consumers connected to networks between 4 and 16 bar that use cogeneration in their production processes by activity. 2018 year

Sector de actividad	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Agriculture, Livestock and fishing	12	28,6%	954	87,2%	79	74%
Extractive industries	6	31,6%	810	82,9%	135	57%
Manufacturing industry	299	11,8%	23.915	35,6%	80	74%
Supply of electricity, gas, steam and air conditioning	72	63,7%	8.558	70,8%	119	82%
Water supply and sanitation activities	12	27,3%	333	35,8%	28	77%
Building	8	17,0%	301	14,4%	38	86%
Trade	24	12,2%	572	33,1%	24	69%
Transport and storage	46	42,6%	798	43,0%	17	72%
Hotels	4	11,4%	23	45,2%	6	64%
Financial activities	2	16,7%	106	23,2%	53	77%
Real estate activities	2	15,4%	26	52,4%	13	53%
Professional, scientific and technical activities	5	31,3%	17	36,7%	3	67%
Public administration	2	8,7%	26	24,8%	13	42%
Education	2	20,0%	8	38,5%	4	41%
Sanitary Activities	8	21,6%	244	54,0%	30	69%
Artistic activities	1	10,0%	3	9,7%	3	77%
Other services	6	11,8%	71	14,2%	12	60%
Household activities	17	17,5%	448	49,4%	26	51%
Activities of organizations	1	33,3%	25	57,1%	25	38%
Undetermined	39	16,2%	168	18,6%	4	48%
TOTAL	***568***	***15,4%***	***37.406***	***40,8%***	***66***	***74%***

Source: CNMC (Individualized database information SIFCO and SINCRO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

The analysis of industrial customers, according to the available information for 2017 in CNMC, it shows that 299 points of supply used cogeneration in their production processes, which represented 12% of the supplies connected in design pressure networks of between 4 and 16 bar and 36% of the consumption

for that level of pressure. In terms of consumption, it is remarkable that 44% of consumption and 23% of supply points of the Manufacture of other non-metallic mineral products, use cogeneration in their production processes. The highest use of cogeneration is at the wood industry with 84%.

Table III. 32 Distribution of the number of supplies and their consumption of consumers connected to networks between 4 and 16 bar that use cogeneration in their production processes in the manufacturing sector. 2018 year

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Food industry	66	13%	5.817	50%	88	73%
Beverage manufacturing	4	9%	471	39%	118	93%
Textile industry	17	12%	637	43%	37	62%
Clothing making	1	6%	13	17%	13	36%
Leather and footwear industry	4	21%	91	56%	23	55%
Wood and cork industry	10	40%	700	84%	70	77%
Paper industry	33	26%	3.510	59%	106	78%
Chemical industry	15	7%	464	8%	31	53%
Manufacture of pharmaceutical products	3	5%	351	35%	117	78%
Manufacture of rubber and plastic products	13	13%	1.424	59%	110	89%
Manufacture of other non-metallic mineral products	91	23%	9.691	44%	106	75%
Metallurgy; manufacture of iron, steel and ferro-alloy products	11	5%	161	2%	15	56%
Manufacture of metal products, except machinery and equipment	13	5%	161	8%	12	68%
Electrical equipment and equipment manufacturing	1	3%	16	6%	16	43%
Manufacture of machinery and equipment n.c.o.p.	12	7%	200	12%	17	44%
Manufacture of motor vehicles, trailers and semi-trailers	3	6%	15	4%	5	25%
Other manufacturing industries	2	9%	193	63%	97	81%
TOTAL	***299***	***12%***	***23.915***	***36%***	***80***	***74%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

3.1.3.4. Contract duration analysis

On the basis of the duration of the contracts, it is noted that 94% of consumers connected to design pressure networks between 4 bar and 16 bar, whose consumption accounts for 89.9% of registered consumption, use only annual contracts, 3% of the supply points (that account for 7.8% of the consumption) use both annual contracts and contracts with a duration of less than a year and 3 % (with 2.4% of the total consumption) only use contracts with a duration of less than a year (see Table III. 33)

It is remarkable that users who are supplied through long-term and short-term contracts have the largest average size. Users that only use long term contracts has the largest load factor.

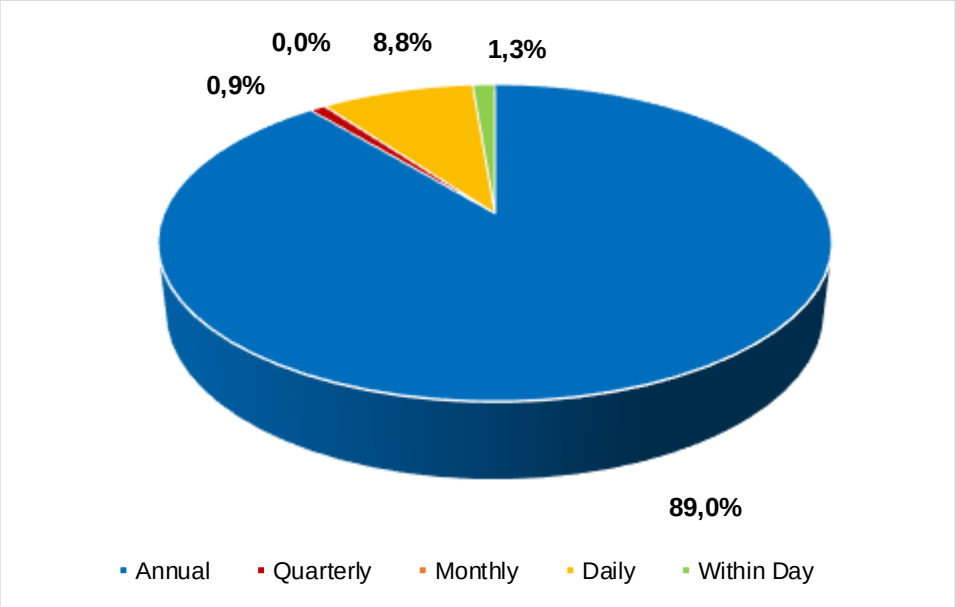
Table III. 33 Distribution of the number of supplies and their consumption of consumers connected to networks between 4 and 16 bar by type of contract. 2018 year

Type of contract	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Annual contracts	3.469	94%	82.387	89,9%	24	68,9%
Annual and short-term contracts	115	3%	7.135	7,8%	62	66,5%
Short-term contracts	93	3%	2.155	2,4%	23	58,9%
TOTAL	***3.677***	***100%***	***91.678***	***100,0%***	***25***	***68,4%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

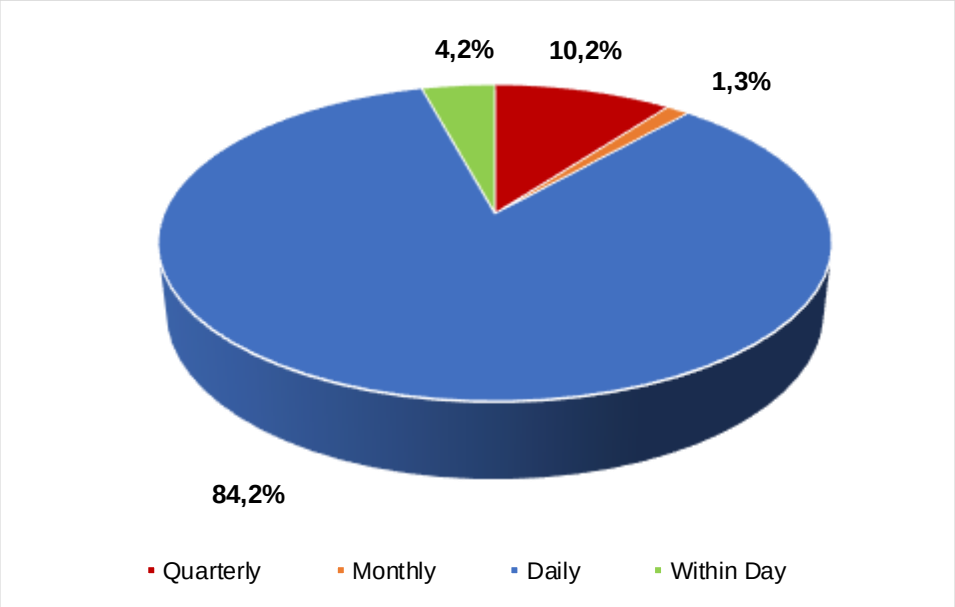
Consumers combining annual contracts with short-term contracts concentrate consumption mainly on annual (89%) and daily contracts (8.8%), while consumers that only have short-term contracts concentrate their consumption on daily (84.2%) and quarterly contracts (10.2%) (see Figure III. 7 and Figure III. 8).

Figure III. 7 Distribution of the volume of consumers connected to networks between 4 and 16 bar for consumers that have annual and short-term contracts. 2018 year



Source: CNMC (Individualized database information SIFCO)

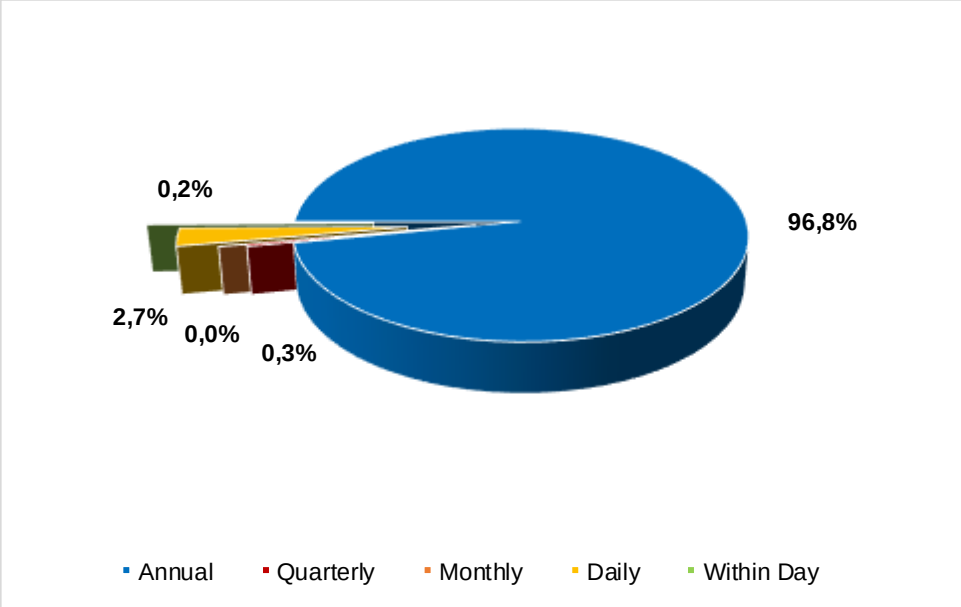
Figure III. 8 Distribution of the volume of consumers connected to networks between 4 and 16 bar for consumers that only have short-term contracts. 2018 year



Source: CNMC (Individualized database information SIFCO)

As a result, annual contracts represent 96.8% of the total consumption, followed by daily contracts (2.7%), while the sum of quarterly, monthly and within day contracts hardly exceed 0.5% of the total consumption at this pressure level (see Figure III. 9).

Figure III. 9*. Distribution of the volume of consumers connected to networks between 4 and 16 bar by type of contract. 2018 year*



Source: CNMC (Individualized database information SIFCO)

3.1.3.5. Analysis by activity and type of contract

The analysis by activity and type of contract shows that the Agriculture, livestock and fishing sector has the highest incidence of short-term contracting (13.4%). However, consumption in this sector is rather residual, accounting for only 5% of total short-term consumption for this pressure group. The manufacturing industry reaches 84.2%, in absolute values, of the total short-term consumption in this pressure group.

Table III. 34 Distribution of the volume of consumers connected to networks between 4 and 16 bar by type of contract and activity 2018 year

Activity	Annual	Quarterly	Monthly	Daily	Intra-Day
Agriculture, Livestock and fishing	86,6%	0,5%		11,8%	1,1%
Extractive industries	99,9%	0,1%			
Manufacturing industry	96,3%	0,3%	0,0%	3,2%	0,2%
Supply of electricity, gas, steam and air conditioning	98,2%	0,8%	0,2%	0,6%	0,1%
Water supply and sanitation activities	96,5%	0,3%		1,9%	1,2%
Building	100,0%			0,0%	
Trade	98,9%	0,1%		1,0%	0,1%
Transport and storage	99,6%				0,4%
Hotels	100,0%				
Information and communications	100,0%				
Financial activities	100,0%				
Real estate activities	100,0%				
Professional, scientific and technical activities	100,0%				
Administrative activities	100,0%				
Public administration	100,0%				
Education	100,0%				
Sanitary Activities	100,0%			0,0%	
Artistic activities	100,0%				
Other services	99,9%	0,1%			
Household activities	98,9%	0,0%	0,0%	0,6%	0,5%
Activities of organizations	100,0%				
Undetermined	96,3%	0,0%		2,3%	1,4%
TOTAL	***96,8%***	***0,3%***	***0,0%***	***2,7%***	***0,2%***

Source: CNMC (Individualized database information SIFCO)

3.1.3.6. Analysis by region and activity

Table III. 35 shows the distribution of customers connected to design pressure networks between 4 bar and 16 bars and their consumption by region and activity. It is noted that the most widespread sector in the national territory corresponds to the manufacturing industry.

Within the manufacturing industry, Comunidad Valenciana is the most consuming community (19.6% of the total) and Cataluña has the highest number of supply points (16.3%). Cataluña, with 10.7% and the País Vasco with 10.3% of the total consumption for this pressure level are the second and third largest consumers.

In the electricity supply sector, Cataluña with 3.6% and the País Vasco with 2.0% are the most representative communities in terms of consumption.

Talking about the rest of activities, the Building sector, accounting for 1.3% of the supply points and 2.3% of consumption, is the most relevant sector and it is mainly located in Navarra, Castilla y Leon and Madrid followed by the Transport and storage sector, with 2.9 % of the points of supply and 2 % of consumption and located in Madrid, Murcia and Cataluña and by the Trade sector, with 5.4 % of the points of supply and 1.9 % of consumption and located in Comunidad Valenciana, Cataluña and País Vasco.

Table III. 35 Distribution of the number of supplies and their consumption of consumers connected to networks between 4 and 16 bar by region and activity. 2018 year

Region	Manufacturing industry		Supply of electricity, gas, steam and air conditioning		Rest	
	Nº of supplies (%)	Consumption (%)	Nº of supplies (%)	Consumption (%)	Nº of supplies (%)	Consumption (%)
Andalucía	2,7%	2,8%	0,3%	1,7%	1,0%	0,9%
Aragón	3,4%	2,2%	0,2%	1,5%	2,1%	0,7%
Asturias	1,6%	5,1%	0,1%	0,3%	0,4%	0,4%
Baleares	0,0%	0,1%				
Cantabria	1,1%	1,8%	0,1%	0,0%	0,5%	0,2%
Castilla La Mancha	3,2%	3,7%	0,3%	0,4%	1,1%	0,8%
Castilla y León	5,2%	5,2%	0,3%	1,6%	2,1%	1,5%
Cataluña	16,3%	10,7%	0,6%	3,6%	6,5%	1,7%
Extremadura	0,6%	1,9%			0,3%	0,2%
Galicia	2,4%	3,0%	0,1%	0,1%	1,3%	0,6%
La Rioja	0,9%	0,4%	0,1%	0,2%	0,3%	0,1%
Madrid	3,6%	1,7%	0,1%	0,3%	3,1%	2,3%
Murcia	1,0%	0,8%	0,0%	0,2%	1,1%	0,6%
Navarra	3,9%	4,1%	0,2%	0,7%	0,6%	1,1%
País Vasco	10,2%	10,3%	0,4%	2,0%	4,5%	1,0%
Comunidad Valenciana	12,5%	19,6%	0,4%	0,5%	3,3%	1,6%
TOTAL	***68,6%***	***73,2%***	***3,1%***	***13,2%***	***28,3%***	***13,6%***

Source: CNMC (Individualized database information SIFCO)

Deepening in the manufacturing industry sector (see Table III. 36), the most relevant activity is the Manufacture of other non-metallic mineral products with 32.8% of the consumption and 15.8% of the supply points. This activity is mainly located in Valencia, followed by far from Cataluña and Castilla la Mancha. In this respect, it is remarkable that the province of Castellon accounts for 43 % of the points of supply and 60% of the total consumption of this activity.

The second activity in terms of consumption corresponds to the food industry with 17.4% of manufacturing industry consumption and 20.2% of the supply points. This activity is carried out in Cataluña, Castilla y Leon, País Vasco and Extremadura (29%, 14%, 7% and 7% respectively on consumption).Barcelona and Lérida account for 73% of Cataluña's consumption for this activity, and 21% of total consumption in the food sector at national level.

The third activity in terms of consumption corresponds to the Metallurgy, which accounts for 9.2% of the supply points and 14.2% of the consumption of the Manufacturing Industry. This activity is mainly located in País Vasco, Asturias and Cantabria (with 33.0%, 26.3% and 7.3% of the total consumption of the metallurgy sector, respectively).

Table III. 36 Distribution of the number of supplies and their consumption of consumers connected to networks between 4 and 16 bar for the manufacturing industry by region and activity. 2018 year

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Andalucía	101	4%	2.541	4%	25	66%
Food industry	24	1%	630	1%	26	59%
Manufacture of other non-metallic mineral products	32	1%	821	1%	26	77%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	0%	365	1%	61	64%
Rest	39	2%	724	1%	19	62%
Aragón	144	6%	2.017	3%	14	61%
Food industry	24	1%	208	0%	9	56%
Manufacture of other non-metallic mineral products	32	1%	272	0%	9	64%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	0%	235	0%	39	64%
Rest	82	3%	1.302	2%	16	61%
Asturias	87	3%	4.643	7%	53	70%
Food industry	24	1%	445	1%	19	84%
Manufacture of other non-metallic mineral products	32	1%	949	1%	30	85%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	0%	2.502	4%	417	63%
Rest	25	1%	748	1%	30	74%
Baleares	32	1%	56	0%	2	59%
Manufacture of other non-metallic mineral products	32	1%	56	0%	2	59%
Cantabria	80	3%	1.646	2%	21	71%
Food industry	24	1%	327	0%	14	76%
Manufacture of other non-metallic mineral products	32	1%	220	0%	7	70%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	0%	690	1%	115	72%
Rest	18	1%	409	1%	23	66%
Castilla La Mancha	112	4%	3.395	5%	30	72%
Food industry	24	1%	635	1%	26	60%
Manufacture of other non-metallic mineral products	32	1%	1.485	2%	46	80%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	0%	155	0%	26	68%
Rest	50	2%	1.121	2%	22	72%
Castilla y León	156	6%	4.759	7%	31	63%
Food industry	24	1%	1.675	2%	70	63%
Manufacture of other non-metallic mineral products	32	1%	835	1%	26	85%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	0%	363	1%	60	63%
Rest	94	4%	1.887	3%	20	57%
Cataluña	475	19%	9.836	15%	21	65%
Food industry	24	1%	3.378	5%	141	68%
Manufacture of other non-metallic mineral products	32	1%	1.493	2%	47	80%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	0%	524	1%	87	68%
Rest	413	16%	4.441	7%	11	60%
Extremadura	64	3%	1.707	3%	27	70%
Food industry	24	1%	782	1%	33	65%
Manufacture of other non-metallic mineral products	32	1%	417	1%	13	96%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	0%	455	1%	76	63%
Rest	2	0%	53	0%	27	58%
Galicia	109	4%	2.716	4%	25	65%
Food industry	24	1%	622	1%	26	70%
Manufacture of other non-metallic mineral products	32	1%	157	0%	5	62%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	0%	434	1%	72	63%
Rest	47	2%	1.503	2%	32	64%
La Rioja	76	3%	340	1%	4	58%
Food industry	24	1%	163	0%	7	52%
Manufacture of other non-metallic mineral products	32	1%	65	0%	2	79%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	0%	7	0%	1	64%
Rest	14	1%	105	0%	7	58%
Madrid	135	5%	1.583	2%	12	56%
Food industry	24	1%	328	0%	14	57%
Manufacture of other non-metallic mineral products	32	1%	265	0%	8	60%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	0%	200	0%	33	52%
Rest	73	3%	790	1%	11	56%
Murcia	75	3%	765	1%	10	54%
Food industry	24	1%	534	1%	22	54%
Manufacture of other non-metallic mineral products	32	1%	6	0%	0	54%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	0%	46	0%	8	83%
Rest	13	1%	179	0%	14	50%
Navarra	148	6%	3.759	6%	25	68%
Food industry	24	1%	452	1%	19	55%
Manufacture of other non-metallic mineral products	32	1%	421	1%	13	67%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	0%	247	0%	41	61%
Rest	86	3%	2.639	4%	31	73%
País Vasco	305	12%	9.401	14%	31	71%
Food industry	24	1%	864	1%	36	80%
Manufacture of other non-metallic mineral products	32	1%	793	1%	25	87%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	0%	3.141	5%	524	63%
Rest	243	10%	4.603	7%	19	73%
Comunidad Valenciana	249	10%	17.964	27%	72	72%
Food industry	24	1%	633	1%	26	59%
Manufacture of other non-metallic mineral products	32	1%	13.741	20%	429	75%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	0%	151	0%	25	73%
Rest	187	7%	3.439	5%	18	66%
Total	***2.524***	***100%***	***67.128***	***100%***	***27***	***68%***

Source: CNMC (Individualized database information SIFCO)

(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

3.1.4. Design pressure of less than or equal to 4 bar

Consumers connected to pressure networks of less than or equal to 4 bar are the largest group within the gas system with 7.807.360 supply points.

According to the available information for characterization, customers from 3.5 tariff which available individualized information have been separately characterized from the rest of consumers connected to this level pressure.

3.1.4.1. Tariff analysis

99% of the supply points connected to design pressure networks of less than or equal to 4 bar are under 3.1 and 3.2 tariff and account for 57.8% of the total consumption for this pressure group. Consumers under 3.4 tariff account for 33.2% of the total consumption but only 0.6% of the supply points while consumers under 3.5 tariff have the largest average size (15,965.7 MWh)

Focusing on 3.4 tariff consumers, there are 309 supply points (0.6%) whose consumption accounts for 5.2% (1.278 GWh) of the total consumption for this tariff with individualized information at SIFCO database

Table III. 37 Distribution of the number of supplies of consumers connected to networks of less than or equal to 4 bar and their consumption by tariff. 2018 year

Tariff	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (MWh)
3.1	4.748.216	60,8%	12.902	17,3%	2,7
3.2	2.982.119	38,2%	30.135	40,5%	10,1
3.3	27.386	0,4%	1.779	2,4%	65,0
3.4	49.320	0,6%	24.698	33,2%	500,8
3.5	312	0,0%	4.981	6,7%	15.965,7
TOTAL	***7.807.352***	***100,0%***	***74.495***	***100%***	***9,5***

Source: CNMC (Individualized database information SIFCO and aggregated information))

3.1.4.2. Analysis by region

In order to analyze the supply points and consumption distribution of consumers connected to design pressure networks of less than or equal to 4 bar by region, we will first analyze 3.1 to 3.4 tariffs with only aggregated information available. The analysis for consumers in the 3.5 tariff will be based on individualized database information SIFCO.

In terms of consumption, Madrid is the largest consumer with 28 % of the total for this pressure group, followed by Cataluña with 23% and Castilla y Leon with 9 %.

The analysis of the number of supplies shows that Cataluña is the region with the highest number, 2,2 million (28%), followed by Madrid, 1,8 million (23%) and Valencia, 0,7 million (9%).

Apart from Canarias, whose average consumption is much higher than in the rest of the regions, Navarre, Aragon and Castilla y Leon are the communities whose customers have the highest average consumption (see Table III. 38).

Table III. 38 Distribution of the number of supplies and their consumption of consumers connected to networks of less than or equal to 4 bar (3.1 to 3.4 tariffs) by region. 2018 year

Region	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (MWh)
Andalucía	460.307	5,9%	2.419	3%	5,3
Aragón	212.192	2,7%	3.011	4%	14,2
Asturias	219.510	2,8%	2.009	3%	9,2
Baleares	98.797	1,3%	843	1%	8,5
Canarias	56	0,0%	42	0%	751,8
Cantabria	178.963	2,3%	1.059	2%	5,9
Castilla La Mancha	265.841	3,4%	2.832	4%	10,7
Castilla y León	481.056	6,2%	6.579	9%	13,7
Cataluña	2.208.841	28,3%	16.028	23%	7,3
Extremadura	79.581	1,0%	569	1%	7,1
Galicia	278.790	3,6%	2.177	3%	7,8
La Rioja	87.091	1,1%	1.044	2%	12,0
Madrid	1.770.601	22,7%	19.786	28%	11,2
Murcia	98.570	1,3%	528	1%	5,4
Navarra	146.139	1,9%	2.358	3%	16,1
País Vasco	544.023	7,0%	5.161	7%	9,5
Comunidad Valenciana	676.685	8,7%	3.072	4%	4,5
TOTAL	***7.807.040***	***100,0%***	***69.513***	***100%***	***8,9***

Source: CNMC aggregated information

For customers in the 3.5 tariff, in terms of consumption, Madrid is the largest consumer region with 22% of the total consumption for this tariff (1.5% of the total consumption for this pressure level), followed by Cataluña with 20% and Castilla y Leon with 15% (see Table III. 39). In terms of the number of supplies, Madrid has the largest number of supply points, 68 (21%), followed by Cataluña, 64 (20%) and Castilla y Leon, 36 (11%).

Baleares, Castilla y Leon and Murcia have the largest average customers and Extremadura, Castilla la Mancha and Cantabria the lowest.

Customers from Baleares, Extremadura and Cantabria have the largest load factor (78%, 66% and 66% respectively).

Table III. 39 Distribution of the number of supplies and their consumption of consumers connected to networks of less than or equal to 4 bar (3.5 tariff) by region. 2018 year

Region	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Andalucía	19	6%	272	5%	14	54%
Aragón	10	3%	190	4%	19	52%
Asturias	14	4%	206	4%	15	58%
Baleares	5	2%	125	3%	25	78%
Cantabria	4	1%	46	1%	11	66%
Castilla La Mancha	20	6%	279	6%	14	63%
Castilla y León	36	12%	739	15%	21	60%
Cataluña	64	21%	992	20%	15	62%
Extremadura	4	1%	41	1%	10	66%
Galicia	12	4%	165	3%	14	57%
La Rioja	6	2%	89	2%	15	54%
Madrid	68	22%	1.091	22%	16	51%
Murcia	2	1%	39	1%	19	55%
Navarra	15	5%	183	4%	12	52%
País Vasco	19	6%	322	6%	17	63%
Comunidad Valenciana	14	4%	203	4%	15	57%
TOTAL	***312***	***100,0%***	***4.981***	***100%***	***16***	***58%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

3.1.4.3. Analysis by activity

The distribution of the number of supplies connected to design pressure networks of less than or equal to 4 bar and its consumption by activity according to the CNAE 2009 classification is shown in Table III. 40 for those customers with individualized information (tariff 3.5). It is remarkable that two activities stand out clearly: manufacturing industries and health activities, covering 59.6% of the supply points and 58.4% of the total consumption. The manufacturing industry accounts for 44.3% of the total consumption and 46.2% of the supply points and the health sector accounts for 14.1% of the consumption and 13.5% of the supply points. Agriculture, livestock and fisheries has the highest average size customers with 40 GWh/customer. Water supply and sanitation and financial activities have the largest load factor customers (92% and 77% respectively).

Table III. 40 Distribution of the number of supplies and their consumption of consumers connected to networks of less than or equal to 4 bar (3.5 tariff) by activity. 2018 year

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Agriculture, Livestock and fishing	2	0,6%	79	1,6%	40	67%
Manufacturing industry	144	46,2%	2.209	44,3%	15	60%
Supply of electricity, gas, steam and air conditioning	10	3,2%	264	5,3%	26	62%
Water supply and sanitation activities	2	0,6%	62	1,3%	31	92%
Building	6	1,9%	108	2,2%	18	48%
Trade	17	5,4%	352	7,1%	21	60%
Transport and storage	4	1,3%	53	1,1%	13	33%
Hotels	4	1,3%	69	1,4%	17	71%
Financial activities	2	0,6%	42	0,8%	21	77%
Real estate activities	1	0,3%	12	0,2%	12	45%
Professional, scientific and technical activities	3	1,0%	96	1,9%	32	60%
Administrative activities	11	3,5%	115	2,3%	10	55%
Public administration	4	1,3%	55	1,1%	14	52%
Education	6	1,9%	97	1,9%	16	31%
Sanitary Activities	42	13,5%	702	14,1%	17	61%
Artistic activities	5	1,6%	56	1,1%	11	44%
Other services	15	4,8%	170	3,4%	11	60%
Household activities	9	2,9%	119	2,4%	13	43%
Activities of organizations	3	1,0%	66	1,3%	22	67%
Undetermined	22	7,1%	255	5,1%	12	53%
TOTAL	***312***	***100%***	***4.981***	***100%***	***16***	***58%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

Due to its relevance, Table III. 41 shows the distribution of the number of supplies and consumption of connected customers in design pressure networks of less than or equal to 4 bar (3.5 Tariff) of the manufacturing industry. In terms of the number of supplies, the food industry concentrates 35.4% of the supply points followed by the textile and the metallurgical industry, both with 9.7% of the supply points. In terms of consumption, the food industry (43.4%) is the most relevant, followed by Metallurgy (9.8%) and the Manufacture of fabricated metal products (7.5%). The chemical industry and the food industry have the highest average sizes (19,6 and 18,8 GWh respectively).

The wood and cork industry have the highest load factor (99.2%) followed by the Graphic arts activity (85.6 %).

Table III. 41. Distribution of the number of supplies and their consumption of consumers connected to networks of less than or equal to 4 bar (3.5 tariff) of the manufacturing industry. 2018 year

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Food industry	51	35,4%	959	43,4%	18,8	62,8%
Beverage manufacturing	3	2,1%	39	1,8%	12,9	49,9%
Textile industry	14	9,7%	162	7,3%	11,5	57,2%
Clothing making	1	0,7%	11	0,5%	10,6	63,3%
Leather and footwear industry	1	0,7%	14	0,6%	14,2	63,7%
Wood and cork industry	1	0,7%	11	0,5%	10,9	99,2%
Paper industry	6	4,2%	87	3,9%	14,5	62,6%
Graphic arts and reproduction of recorded media	1	0,7%	14	0,6%	14,3	85,6%
Coke and oil refining industry	2	1,4%	37	1,7%	18,6	59,6%
Chemical industry	7	4,9%	137	6,2%	19,6	65,4%
Manufacture of pharmaceutical products	4	2,8%	41	1,9%	10,3	71,0%
Manufacture of rubber and plastic products	6	4,2%	90	4,1%	15,0	53,6%
Manufacture of other non-metallic mineral products	7	4,9%	57	2,6%	8,2	73,1%
Metallurgy; manufacture of iron, steel and ferro-alloy products	14	9,7%	217	9,8%	15,5	70,7%
Manufacture of metal products, except machinery and equipment	13	9,0%	165	7,5%	12,7	53,9%
Manufacture of computer, electronic and optical products	1	0,7%	9	0,4%	9,3	53,1%
Manufacture of machinery and equipment n.c.o.p.	6	4,2%	104	4,7%	17,3	43,0%
Manufacture of motor vehicles, trailers and semi-trailers	2	1,4%	23	1,0%	11,3	47,2%
Manufacture of other transport equipment	3	2,1%	24	1,1%	8,0	39,6%
Furniture manufacturing	1	0,7%	9	0,4%	9,0	41,1%
TOTAL	***144***	***100,0%***	***2.209***	***100,0%***	***15,3***	***60,2%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

The analysis of customers connected to networks of less than or equal to 4 bar under the 3.4 tariff for which individualized information is available in SIFCO database (309 points of supply and 1.278 GWh of consumption), the manufacturing industry is the largest consumer with 32.3% of the consumption and 23.3% of the supply points followed by the health with 14.7% of the consumption and 10.7% of the supply points. The highest average size of consumers corresponds to that of the public administration with 8,5 GWh/customer.

Finally, according to the available information in CNMC, 48 points of supply, which represented 15.4% of the connected supplies in design pressure networks of less than or equal to 4 bar and 17.3% of the consumption of that level of pressure in 2018 used cogeneration in their production processes.

Table III. 42 Distribution of the number of supplies and their consumption of consumers connected to networks of less than or equal to 4 bar (3.5 tariff) for those activities that use cogeneration in their production processes. 2018 year

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Manufacturing industry	12	8,3%	204	9,2%	17	65%
Supply of electricity, gas, steam and air conditioning	7	70,0%	198	74,9%	28	59%
Water supply and sanitation activities	1	50,0%	32	50,7%	32	85%
Building	1	16,7%	12	11,5%	12	56%
Trade	2	11,8%	70	20,0%	35	75%
Transport and storage	2	50,0%	21	39,8%	10	30%
Hotels	2	50,0%	20	29,2%	10	70%
Professional, scientific and technical activities	1	33,3%	10	10,9%	10	87%
Administrative activities	3	27,3%	39	34,1%	13	54%
Education	1	16,7%	18	18,2%	18	42%
Sanitary Activities	6	14,3%	123	17,5%	20	80%
Artistic activities	1	20,0%	19	33,3%	19	84%
Other services	1	6,7%	9	5,6%	9	58%
Household activities	3	33,3%	36	30,3%	12	36%
Undetermined	5	22,7%	48	18,8%	10	67%
TOTAL	***48***	***15,4%***	***859***	***17,3%***	***18***	***62%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

According to the available information in CNMC about industrial consumers 12 points of supply, which represented 8% of customers connected to networks of less than or equal to 4 bar, used cogeneration in their production processes. It is remarkable, by its level of consumption, the manufacture of other non-metallic mineral products, where 61 % of consumption and 29 % of supply points use cogeneration. The wood industry and the graphic arts sector, both of them use 100 % cogeneration, however their consumption is not significant.

Table III. 43 Distribution of the number of supplies and their consumption of consumers connected to networks of less than or equal to 4 bar (3.5 tariff) for the manufacturing industry that use cogeneration in their production processes. 2018 year

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Food industry	4	8%	90	9%	22	60%
Textile industry	1	7%	25	15%	25	62%
Wood and cork industry	1	100%	11	100%	11	99%
Paper industry	1	17%	8	9%	8	57%
Graphic arts and reproduction of recorded media	1	100%	14	100%	14	86%
Manufacture of other non-metallic mineral products	2	29%	35	61%	17	83%
Metallurgy; manufacture of iron, steel and ferro-alloy products	1	7%	10	5%	10	47%
Manufacture of metal products, except machinery and equipment	1	8%	11	7%	11	63%
TOTAL	***12***	***8%***	***204***	***9%***	***17***	***65%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

3.1.4.4. Contract duration analysis

According to the duration of the contracts, 96% of consumers connected to networks of less than or equal to 4 bar and who have individualized information

(3.5 Tariff) that account for 97.5% of the total consumption use only annual contracts, 2% of the supply points which account for 1.7% of the consumption use both annual contracts and contracts with a duration of less than a year and the rest 2% with a consumption of 0.8% of the total consumption only use short-term contracts (see Table III. 44).

It is remarkable that customers who use long term and short-term contracts have the largest average size. Customers that only use long-term contracts have the largest load factor (57.9%).

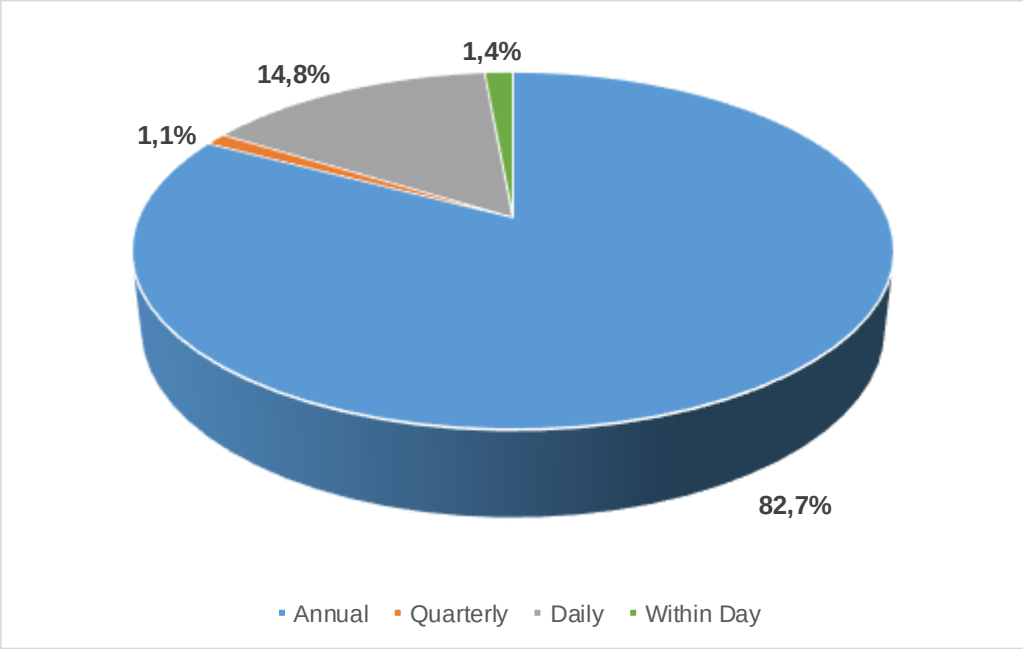
Table III. 44 Distribution of the number of supplies and their consumption of consumers connected to networks of less than or equal to 4 bar (3.5 tariff) by type of contract. 2018 year

Type of contract	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Annual contracts	301	96%	4.856	97,5%	16	57,9%
Annual and short term contracts	5	2%	86	1,7%	17	48,9%
Short term contracts	6	2%	39	0,8%	7	46,8%
TOTAL	***312***	***100%***	***4.981***	***100,0%***	***16***	***57,6%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

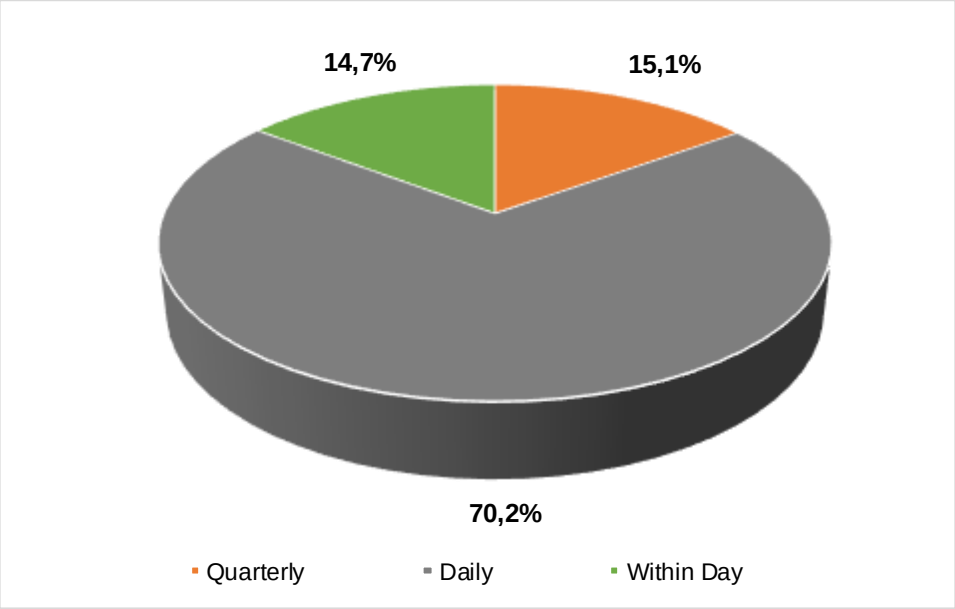
Consumers that have annual and short-term contracts concentrate their consumption mainly on annual contracts (82.7%), daily contracts (14.8 %), within day contracts (1.4%) and quarterly contracts (1.1%), while consumers who only have short-term contracts concentrate their consumption on daily contracts (70.2%), quarterly contracts (15.1%) and within day contracts (14.7%) (see Figure III. 10 and Figure III. 11).

Figure III. 10 Distribution of the volume of consumers connected to networks of less than or equal to 4 bar (3.5 Tariff) for consumers that have annual and short-term contracts. 2018 year



Source: CNMC (Individualized database information SIFCO)

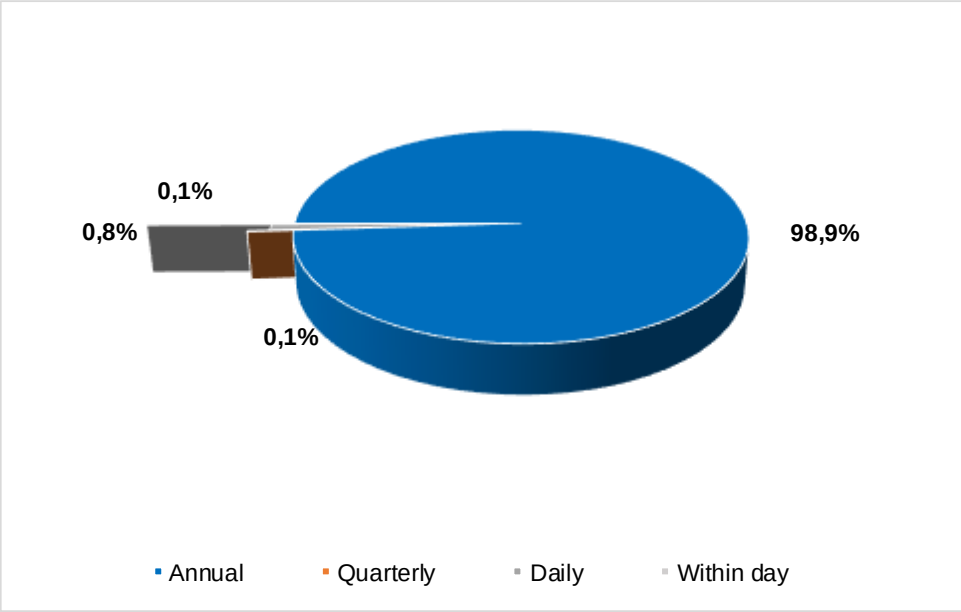
Figure III. 11 Distribution of the volume of consumers connected to networks of less than or equal to 4 bar (3.5 Tariff) for consumers that only have short-term contracts. 2018 year



Source: CNMC (Individualized database information SIFCO)

As a result, annual contracts account for 98.9% of total consumption, followed by daily contracts (1.4%), while quarterly and within day contracts barely exceed 0.2% of the total consumption at this pressure level (see *Figure III. 12*).

***Figure III. 12* Distribution of the volume of consumers connected to networks of less than or equal to 4 bar (3.5 Tariff) by type of contract. 2018 year**



Source: CNMC (Individualized database information SIFCO)

3.1.4.5. Analysis by activity and type of contract

A group of supply points are “Undetermined” due to the lack of available information at SIFCO database. This “Undetermined” group has the highest incidence of short-term contracting, 11.6% of its total consumption which represents 55% of total short-term consumption at this level pressure (see Table III. 45). The manufacturing industry occupies the second place in absolute value in terms of short-term contracting, reaching 37.6% of total short-term consumption at this level pressure. A deep analysis of the manufacturing industry shows there are only 5 customers who have short-term contracts. The Manufacture of bricks, tiles and products of cooked earth for construction accounts for almost 40% of the short-term consumption of the manufacturing industry and concentrates 2 out of 5 customers who have short-term contracts. The fruit and vegetable processing and conservation sector accounts for 29% of the short-term consumption of the manufacturing industry.

Table III. 45 Distribution of the volume of consumers connected to networks of less than or equal to 4 bar (3.5 Tariff) by type of contract and activity. 2018 year

Activity	Annual	Qarterly	Daily	Intraday
Agriculture, Livestock and fishing	98,2%		1,8%	
Manufacturing industry	99,1%	0,3%	0,6%	
Supply of electricity, gas, steam and air conditioning	100,0%			
Water supply and sanitation activities	100,0%			
Building	100,0%			
Trade	100,0%			
Transport and storage	100,0%			
Hotels	100,0%			
Financial activities	100,0%			
Real estate activities	100,0%			
Professional, scientific and technical activities	100,0%			
Administrative activities	100,0%			
Public administration	100,0%			
Education	100,0%			
Sanitary Activities	100,0%			
Artistic activities	100,0%			
Other services	100,0%			
Household activities	97,7%	0,4%	0,9%	1,0%
Activities of organizations	100,0%			
undetermined	88,4%	0,0%	9,3%	2,3%
TOTAL	***98,9%***	***0,1%***	***0,8%***	***0,1%***

Source: CNMC (Individualized database information SIFCO)

3.1.4.6. Analysis by region and activity

Table III. 46 shows the distribution of customers connected to design pressure networks of of less than or equal to 4 bar (3.5 tariff) and their consumption by region and activity. It is remarkable that the most widespread sector in the national territory is the manufacturing industry.

The analysis of the manufacturing industry shows that Cataluña is the region that accounts por the highest consumption (14.8% of the total) and with the highest number of supply points (13.5%) followed by Castilla y León with 7.4% of total consumption for this pressure level.

The analysis of the Health activities sector shows that Madrid with 3.4% and Baleares with 2.1% are the regions with the highest consumption.

The analysis of the rest of activities, that concentrates 40.4% of supply points and 41.6% of the total consumption of this pressure level, shows that the most relevant sector is the Trade one, with 5.4% of supply points and 7.1% of consumption, mainly located in Castilla y León, País Vasco and Madrid, followed by the electricity, gas, steam and air conditioning supply sector, with 3.2% of the points of supply and 5.3% of the consumption and located in Madrid, Andalucía and Castilla y León and Other services sector, with 4.8% of the supply points and

3.4% of the consumption developed in Madrid, País Vasco and Comunidad Valenciana.

Table III. 46 Distribution of the volume of consumers connected to networks of less than or equal to 4 bar (3.5 Tariff) by region and activity. 2018 year

Region	Manufacturing industry		Sanitary Activities		Rest	
	Nº of supplies (%)	Consumption (%)	Nº of supplies (%)	Consumption (%)	Nº of supplies (%)	Consumption (%)
Andalucía	1,9%	1,4%	0,6%	0,8%	3,5%	3,2%
Aragón	1,3%	1,5%	0,3%	0,8%	1,6%	1,5%
Asturias	2,6%	2,6%	1,0%	0,7%	1,0%	0,9%
Baleares			1,0%	2,1%	0,6%	0,4%
Cantabria	0,6%	0,5%	0,3%	0,1%	0,3%	0,3%
Castilla La Mancha	1,6%	0,8%	1,6%	1,2%	3,2%	3,6%
Castilla y León	6,1%	7,4%	1,9%	1,9%	3,5%	5,5%
Cataluña	13,5%	14,8%	1,0%	0,8%	6,1%	4,2%
Extremadura	0,6%	0,4%	0,6%	0,4%		
Galicia	1,0%	1,0%	0,3%	0,3%	2,6%	2,0%
La Rioja	1,6%	1,4%	0,3%	0,4%		
Madrid	7,1%	5,0%	2,9%	3,4%	11,9%	13,5%
Murcia	0,3%	0,4%			0,3%	0,4%
Navarra	2,9%	2,2%	0,6%	0,4%	1,3%	1,1%
País Vasco	3,2%	3,4%	0,3%	0,2%	2,6%	2,9%
Comunidad Valenciana	1,9%	1,7%	0,6%	0,4%	1,9%	2,0%
TOTAL	***46,2%***	***44,3%***	***13,5%***	***14,1%***	***40,4%***	***41,6%***

Source: CNMC (Individualized database information SIFCO)

A deep analysis into the Manufacturing industry sector (see *Table III. 47*), the most relevant activity corresponds to the Food Industry with 43.4% of consumption and 35.4% of the supply points. This activity is mainly located in Cataluña, followed by Castilla y León and Navarra (with 18%, 10% and 3% respectively on consumption). Gerona, Barcelona, and Tarragona are the provinces with the highest consumption within the Food Industry, concentrating 40.6% of the total consumption of the Food Industry for this pressure level and tariff group.

The second activity in terms of consumption corresponds to the Metallurgy sector with 9.8% of the total consumption in the manufacturing sector and 9.7% of the supply points. This activity is mainly located in Asturias and País Vasco (with 5% and 3% respectively of the total consumption of the Metallurgy Sector).

LaThe third activity in terms of consumption corresponds to the Manufacture of metal products, except machinery and equipment, which concentrates 9% of the supply points and 7.5% of the consumption of the Manufacturing Industry. This activity is mainly located in Madrid, La Rioja and Castilla y León (with 2.0%, 1% and 1% of consumption respectively over the total consumption of the manufacturing industry).

Table III. 47 Distribution of the number of supplies and their consumption of consumers connected to networks of less than or equal to 4 bar (3.5 Tariff) for the manufacturing industry by region and activity. 2018 year

Activity	Nº of supplies	Nº of supplies (%)	Consumption (GWh)	Consumption (%)	Average customer size (GWh)	Load factor (1)
Andalucía	6	4%	72	3%	12	45%
Food industry	4	3%	42	2%	10	48%
Beverage manufacturing	1	1%	12	1%	12	48%
Manufacture of machinery and equipment n.c.o.p.	1	1%	18	1%	18	38%
Aragón	4	3%	74	3%	18	61%
Food industry	1	1%	7	0%	7	34%
Beverage manufacturing	1	1%	18	1%	18	82%
Chemical industry	1	1%	39	2%	39	71%
Manufacture of other non-metallic mineral products	1	1%	10	0%	10	44%
Asturias	8	6%	127	6%	16	54%
Food industry	1	1%	15	1%	15	71%
Metallurgy; manufacture of iron, steel and ferro-alloy products	6	4%	107	5%	18	66%
Manufacture of metal products, except machinery and equipment	1	1%	5	0%	5	9%
Cantabria	2	1%	24	1%	12	69%
Food industry	2	1%	24	1%	12	69%
Castilla La Mancha	5	3%	39	2%	8	60%
Manufacture of other non-metallic mineral products	3	2%	10	0%	3	90%
Manufacture of machinery and equipment n.c.o.p.	2	1%	30	1%	15	54%
Castilla y León	19	13%	367	17%	19	58%
Food industry	9	6%	222	10%	25	65%
Paper industry	1	1%	11	0%	11	55%
Chemical industry	1	1%	7	0%	7	54%
Manufacture of pharmaceutical products	1	1%	14	1%	14	78%
Manufacture of rubber and plastic products	2	1%	37	2%	18	55%
Manufacture of metal products, except machinery and equipment	2	1%	25	1%	13	65%
Manufacture of machinery and equipment n.c.o.p.	1	1%	36	2%	36	36%
Manufacture of motor vehicles, trailers and semi-trailers	1	1%	14	1%	14	38%
Manufacture of other transport equipment	1	1%	-	0%	-	0%
Cataluña	42	29%	739	33%	18	63%
Food industry	16	11%	399	18%	25	65%
Textile industry	12	8%	143	6%	12	56%
Clothing making	1	1%	11	0%	11	63%
Leather and footwear industry	1	1%	14	1%	14	64%
Paper industry	1	1%	32	1%	32	103%
Chemical industry	3	2%	60	3%	20	61%
Manufacture of pharmaceutical products	2	1%	18	1%	9	56%
Manufacture of rubber and plastic products	2	1%	22	1%	11	61%
Metallurgy; manufacture of iron, steel and ferro-alloy products	2	1%	17	1%	9	70%
Manufacture of metal products, except machinery and equipment	2	1%	22	1%	11	54%
Extremadura	2	1%	19	1%	9	97%
Manufacture of other non-metallic mineral products	2	1%	19	1%	9	97%
Galicia	3	2%	50	2%	17	59%
Food industry	2	1%	42	2%	21	60%
Paper industry	1	1%	8	0%	8	57%
La Rioja	5	3%	68	3%	14	53%
Food industry	1	1%	13	1%	13	58%
Beverage manufacturing	1	1%	9	0%	9	29%
Manufacture of rubber and plastic products	1	1%	17	1%	17	56%
Manufacture of metal products, except machinery and equipment	2	1%	28	1%	14	66%
Madrid	22	15%	249	11%	11	59%
Food industry	6	4%	45	2%	8	69%
Textile industry	1	1%	8	0%	8	131%
Paper industry	3	2%	36	2%	12	49%
Coke and oil refining industry	2	1%	37	2%	19	60%
Chemical industry	2	1%	30	1%	15	74%
Manufacture of pharmaceutical products	1	1%	9	0%	9	117%
Metallurgy; manufacture of iron, steel and ferro-alloy products	2	1%	17	1%	9	53%
Manufacture of metal products, except machinery and equipment	2	1%	33	2%	17	65%
Manufacture of other transport equipment	2	1%	24	1%	12	40%
Furniture manufacturing	1	1%	9	0%	9	41%
Murcia	1	1%	21	1%	21	48%
Manufacture of metal products, except machinery and equipment	1	1%	21	1%	21	48%
Navarra	9	6%	109	5%	12	53%
Food industry	6	4%	72	3%	12	54%
Manufacture of rubber and plastic products	1	1%	14	1%	14	42%
Manufacture of metal products, except machinery and equipment	1	1%	13	1%	13	62%
Manufacture of computer, electronic and optical products	1	1%	9	0%	9	53%
País Vasco	10	7%	169	8%	17	83%
Food industry	1	1%	49	2%	49	71%
Wood and cork industry	1	1%	11	0%	11	99%
Metallurgy; manufacture of iron, steel and ferro-alloy products	4	3%	75	3%	19	85%
Manufacture of metal products, except machinery and equipment	2	1%	17	1%	9	110%
Manufacture of machinery and equipment n.c.o.p.	1	1%	8	0%	8	85%
Manufacture of motor vehicles, trailers and semi-trailers	1	1%	9	0%	9	80%
Comunidad Valenciana	6	4%	84	4%	14	60%
Food industry	2	1%	29	1%	14	58%
Textile industry	1	1%	10	0%	10	51%
Graphic arts and reproduction of recorded media	1	1%	14	1%	14	86%
Manufacture of other non-metallic mineral products	1	1%	19	1%	19	72%
Manufacture of machinery and equipment n.c.o.p.	1	1%	11	1%	11	41%
Total	***144***	***100%***	***2.209***	***100%***	***15***	***60%***

Source: CNMC (Individualized database information SIFCO)
(1) The load factor has been obtained as the ratio between the average consumption and the annual average billed capacity.

ANNEX IV. CAPACITY BALANC FOR THE DAY OF MAXIMUM DEMAND 2017


Troncal
1.344.429
No Troncal
Pérdidas
-3.319
Troncal
96.313
Consumos
469.778
W3 2
209.626
60 ³ P > 16
Consumos
118.256
Pérdidas
-10.819
W3 1
665.431
Troncal
0
W2 1
188.452
16 ³ P > 4
Consumos
312.896
Pérdidas
2.387
Troncal
0
W3 0
2.914
W2 0
10.050
W1 0
538.599
4 ³ P
Consumos
543.020
Pérdidas
8.542

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