

# Madrileña
## RED DE GAS

# 2017
ANNUAL REPORT

# CONTENTS


**KEY FIGURES** 2

**LETTER FROM THE CHAIRMAN** 5

**1. COMPANY** 9

**2. GROWTH** 13

**3. QUALITY** 23

**4. NETWORK** 31

**5. HUMAN CAPITAL** 37

**6. ENVIRONMENT** 45

**7. RESULTS** 55

# KEY FIGURES

## NETWORK LENGTH
(km)

**5,992**

The consolidation and expansion of the company during this year is reflected in the growth of its distribution network, which has been extended by more than 300 300 kilometres.

## USERS

**898,000**

We continue to grow. This year, Madrileña Red de Gas has 45,000 more users than last year, and has reached a total of 898.935 supply points.

## EMPLOYEES

**142**

An internal analysis of our workforce's knowledge base and the capacities of each position, together with the organizational review, have strengthened the team's efficiency in 2017.

Note: Employees in the partial retirement scheme have not been included in the final figure.

## INCOME
(€M)

**178.1**

Total revenues for this financial year, 2017, were € 178.1 million, 7.7 % more than the previous year. Of the total income, 83 % came from the remuneration for distribution activities.

## EBIT
(€M)

**105.4**

During this year, the company's main figures have increased, including the adjusted gross operating profit (EBIT), which has reached € 105.4 million, representing a growth of 2.2 % compared to the previous year.

## CASH FLOW

**107.5**

(€M)

The cash flow generated by ordinary operations during 2017 was € 107.5 million, maintaining a level similar to the previous year thus being maintained.

# LETTER FROM THE CHAIRMAN

The financial year recently ended has been full of events in terms of the development of Madrileña Red de Gas. The company has been in operation for seven years since its foundation in 2010, and has been established as a leading company in the natural gas distribution sector.

We have maintained the high levels of quality of service and safety that we had achieved in previous years and improved them. Similarly, we have continued to grow in size and we have very positive prospects for continuity in the medium term. Our customer service procedures are renewed and improved continuously.

First of all, I would like to refer to the work on investment and improvement of the network and, in particular, to the acquisition in May last year of 41,600 Repsol connection points, which are being transformed to natural gas at a higher rate than initially planned. Together with the continuous development activity in the network, this allows us to anticipate that we will have a total of more than 900,000 connection points in service in a period of three years, more than twice the network with which we started our journey in 2010.

We have developed other works to improve the network in relation to new issues, such as the segmentation of the network itself, and we have initiated a programme to extend telemetry. All this will help us improve management.

An ambitious fraud detection, correction and prevention programme has also been launched to tackle a problem which, although not reaching serious levels, has recently seen a clear growth not only in gas but also electricity distribution networks. This programme requires joint action by companies

and Administrations to address the problem of breach of contracts by some customers and those who actively promote this criminal activity.

Finally, good results are being achieved in the extension of the use of gas in those industrial sectors in which there was a clear unexploited potential, which, in addition to serving new customers, translates into a more efficient use of the network and contributes to the improvement of the company's results.

The use of gas as clean energy is one of the fields undergoing the greatest development in its application to motor vehicles, specifically cars and fleets of buses. Madrileña Red de Gas has been a pioneer in the promotion of these applications. We have signed an agreement with a car manufacturer to facilitate the use of vehicles powered by compressed natural gas. We have also installed our first gas supply station for vehicles and we have renewed our own fleet of vehicles, which now use compressed gas as fuel.

All this does not only mean a significant improvement in air quality in the cities, a problem that is receiving growing attention worldwide (a gas-powered vehicle reduces by 96 % emissions of nitrogen oxides, the most worrisome pollutant from the health point of view), but it represents a saving of 30 % for users in the cost of fuel and a field of growth of our activity. The use of gas in transport is undoubtedly a necessary and irreplaceable solution in the short and medium term in the transition to a cleaner and more efficient energy.

It is also a sign of our commitment to the Community of Madrid, to invest in a quality and safe gas network providing Madrid citizens access to natural gas in all its possible uses, as our company has constantly done.

The excellence of this work was recognized with the energy efficiency award from Madrid City Council, a recognition that gives us great satisfaction and encourages us to continue in this line of ongoing improvement.

In addition to the new investment, the company has continued with its internal improvement policy. In this sense, we have maintained the level of results of previous years, despite the impact that the regulatory reform of 2014 had on revenues from regulated activities. And this does not detract from quality of service indicators, as can be seen in the pages of this Annual Report.

Operational safety remains our first priority. In this field, we maintain the rates that reflect our performance at high levels. This is our explicit commitment to customers, suppliers and society in general.

**Within three years, MRG will have 900,000 connection points, more than twice the network it started with in 2010**

We are also working on improving our systems in order to simplify and facilitate interaction with our customers at all times when the relationship with the company becomes necessary: contracting, billing, claims, emergencies and incidents of all kinds.

Regarding the regulatory framework in which our activity is undertaken, what is most notable in the past year is stability,



**The investment in the use of natural gas in transport has led to MRG receiving the energy efficiency award from Madrid City Council**

which is the tendency since the implementation of the 2014 regulatory reform. This is perceived by investors, who continue to show high interest in the regulated energy sectors in Spain.

This stability in the medium and long term is essential for companies to develop their activity, designing business plans and investment decisions with medium and long-term expectations, maintaining the security of our shareholders' investments and the level of quality of service for customers. We hope that, for the benefit of all, that stability, recognized and appreciated by the financial and business community, will be maintained, through the required communication and consultation with different sectors. It is clear that regulation in sectors such as energy requires ongoing fine-tuning, which must be carried out on the basis of a permanent dialogue with the actors, since they are the ones who know in detail the complex reality that we must manage daily, improving and updating the regulations that govern sector operation. The constructive dialogue that has existed in the recent past must continue and contribute to the development of a vital sector for the Spanish and Madrilenian economy, for the benefit of all stakeholders: companies, consumers and regulatory authorities.

Finally, I would like to express the gratitude of Madrileña Red de Gas to shareholders, who in this new stage continue to support the company's development with a long-term vision. Also, to the management team and to all those who dedicate their professional activity to Madrileña Red de Gas, recognition for what has been achieved and the best outlook for what the future has to offer us.



Pedro Mielgo
Chairman

# 1 COMPANY



At Madrileña Red de Gas, we continue to demonstrate our commitment to consolidating natural gas as a major energy solution in all sectors and substituting other more expensive and polluting energies (liquefied petroleum gas, diesel fuel, etc.). Because of its clean and versatile energy, natural gas complies with environmentally friendly policies.

In this sense, at MRG, it is our obligation to make citizens aware of the importance of reducing emissions caused by road traffic by promoting the use of natural gas for vehicles (NGV) as a substitute for other fuels in public and private transport, which represents important economic and emission savings for consumers and, therefore, for the national economy.

As a distributor, one year on we continue to expand our network as a means through which to make the use of natural gas accessible to all the industrial fabric and the population as a whole. This has led us to successfully deal with the conversion of liquefied petroleum gas (LPG) plants acquired the previous year, an operation that has brought improvements for the user due to a greater use of energy. Similarly, we have intensified the meetings with the automotive sector, in order to encourage and give visibility to the use of NGV vehicles, which means the promotion of new product perspectives for the national automotive industry.

# 1. COMPANY

## 1.1 BOARD OF DIRECTORS

**Pedro Mielgo** Chairman

**Dennis van Alphen** Director

**Michael Andrew Bryan** Director

**Martijn Verwoest** Director

**Rong Yan** Director

**Jérôme Sousselier** Director

**Guillaume d'Engremont** Director

**John Richard Tomlinson** Director

**Ruwantha Vidanaarachchi** Director

**Intertrust** Secretary (non-Director)

## 1.2 EXECUTIVE COMMITTEE

**Pedro Mielgo** Chairman

**Alejandro Lafarga** Chief Executive Officer

**Rafael Fuentes** Legal Director

**Ignacio García de Alvear** Financial Director

**David Ortiz Carreras** Business Development Director

**Glen Lancastle** Systems and Operations Director

**María Sofía Vázquez Galatas** Human Resources Director

**Félix Blasco** Network Operations Director

## 1.3 PERSONAL DATA PROTECTION

In terms of data protection, the most relevant activities of MRG during this financial year have focused on defining criteria and resolving queries. Many of these have been related to the exercise of rights of access, rectification, cancellation and opposition, as well as the contents of the informative notes on data protection and contractual clauses.

We have also made the necessary adjustments to maintain the validity of the data protection management model by updating the safety document and several of the procedures. Similarly, and in order to promote the internal culture in terms of data protection, we have carried out training actions with staff on particular aspects of personal data protection. Finally, we have defined the roadmap for adapting the current personal data protection management model to the new requirements of the new Data Protection Regulation, which will enter into force in May 2018.

## 1.4 CORPORATE SOCIAL RESPONSIBILITY

For the second consecutive year, Madrileña Red de Gas has participated in the "GRESB Infrastructure" initiative. The results obtained have allowed us to have a vision both of company evolution with respect to the previous financial year and our degree of maturity in the matter in comparison with other companies in the sector.

In order to obtain a new certificate of business excellence, we have defined an ambitious work plan that allows us to apply for the "Excellent Madrid" seal granted at the end of the first half of 2018.

**At MRG, we want to make the use of natural gas accessible in all sectors, ensure an efficient management in terms of data protection and establish ourselves as a distributor of excellence**

# 2 GROWTH

## 2.1 LARGE CONSUMPTION

In Madrileña Red de Gas, the mass market has experienced exponential growth over the years, which has entailed ongoing evolution of the equipment and the tools that have favoured the efficient development of our commercial activity.

In MRG's scope of action, this has enabled a penetration in consumption (GWh) to be at present 55%, with a supply points consumption of tariffs regarded as large consumption (tariff 3.3 hereinafter) of 3.215 GWh, which represents 35% of the total gas transported in the company.

This constant growth of the large consumption mass market has required a potential implementation plan, which consists of preparing an in-depth study to identify potential customers in the scope of the company and of the creation of a more dynamic, agile and visual geo-positioning tool for existing and potential customers.

The identification of these customers has been undertaken by the twin method, based on the comparison and contrast of information with MRG customers in service and with all existing companies within the SABI database. For the classification, identification and extraction of the potential of active companies in our scope of action, we have counted on the collaboration of the consultancy firm, PricewaterhouseCoopers.

This study has enabled MRG to have reliable and complete information on a changing and difficult-to-access sector such as the industrial sector. This information guarantees effective commercial work, based on updated and classified economic criteria with real potential. The study was undertaken in three phases:

- Obtaining relevant external information, based on databases and aggregate information — Top-Down Analysis — which has allowed the understanding of consumption patterns by activity sector.

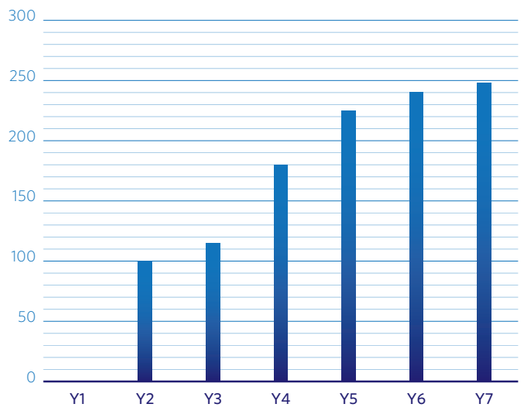
- Obtaining internal company information.

- Selection of clustering variables that have enabled, by internal and external information crossover, the identification of potential customers with behaviours analogous to those already existing. It has also enabled calculations of Customer Equity or theoretical value of the potential customer and conversion Payback to be performed.

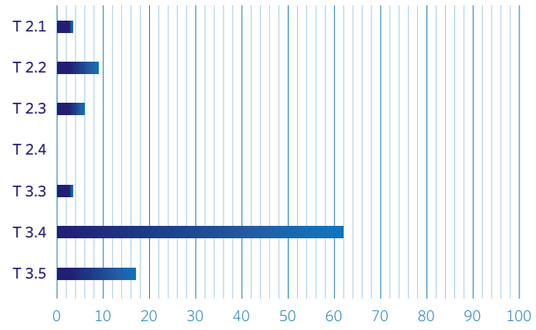
Among the first results obtained during this financial year, we can highlight the contracts with different companies and institutions of the Community of Madrid, some of which include: Martinrea International Inc., in Móstoles, the Iberdrola Campus in San Agustín de Guadalix, the National Microbiology Centre, in Majadahonda, and the Aliara Energía NGV service station in the municipality of Madrid. We have also carried out various actions with the Administration of the Community of Madrid in the institutional, health and educational environment.

On the other hand, the development of the customer geo-location tool, both for existing and potential customers, has enabled all the information to be available on a single platform

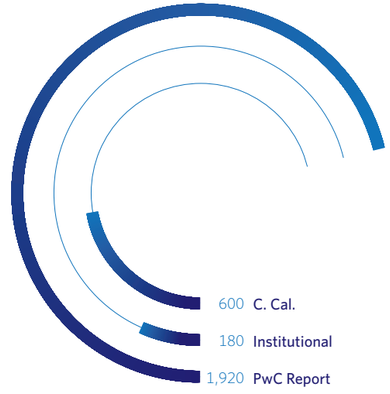
**Evolution of large consumption in recent years**
Commissioning (GWh)




**Consumption according to type of rate**
Total 3,215 GWh (%)




**Potential customers**
Total 2,707 GWh




through which we can visualize our distribution networks, monitor the commercial actions of our "extended company", update existing data and / or generate new potential customers directly through our website or the App version.

One of our challenges is to improve the perception that MRG customers have, and this new tool has made it possible for us to be more efficient in dealing with their demands and doubts, offering a solution to all their concerns, with products and services totally segmented in function of the profile of each customer, propose offers adapted to different needs and streamline contracting procedures.

**In constant growth and with a range of products and services segmented according to the specific profile of each customer, large consumption represents for Madrileña Red de Gas 35 % of the total gas transported by the company**

## 2.2 NEW CONSTRUCTION

In this financial year, Madrileña Red de Gas has experienced an 8% growth in new construction. We have gone from the 3,414 homes in service last year to the current 3,692 homes. Of these, an important part (55%) refers to fully detached homes.

According to data from the Ministry of Development, the granting of building permits in Spain attained 22% growth during the first nine months of 2016, compared to the same period of the previous year, and 32% in new building permits. The Community of Madrid leads this activity, with 27% of the total number of permits granted.

New build homes in Spain totalled 42,000 units. Of these, 6,000 were built in the Community of Madrid. Within the MRG distribution area, 3,692 had a natural gas supply.

The figures are slowly improving, but are still lower than the figures that were reached during the years preceding the crisis in the sector. Even so, we expect the expansionary trend to continue, as low interest rates, private deleveraging and better economic prospects are encouraging residential investment throughout the country. It is estimated that from 2018 the potential demand for housing will be between 170,000 and 180,000 homes per year.

Approximately one in every seven homes (about 25,000) will be built in the Community of Madrid, where the demand for new housing displays greater intensity than in the rest of the regions, and where the need for construction is also greater. It should be noted that the municipalities where MRG is present are those that register a higher demand (between 12,000 and 15,000 homes).

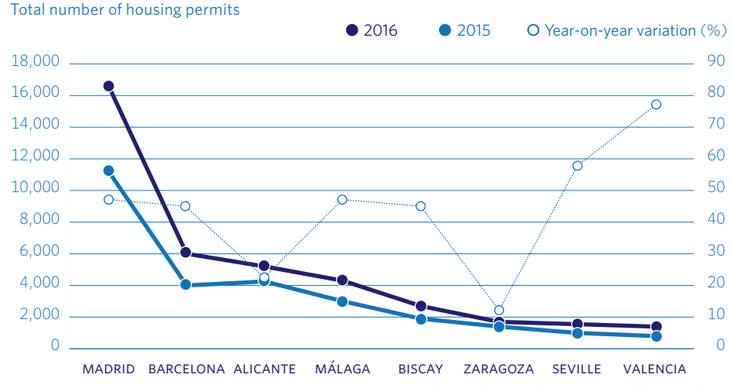
On the other hand, the sector has been reshaped after the crisis, and today the main promoters combine the experience of traditional residential developers with the financial and business vision of their new capitalist partners, often with foreign finance. This alliance is contributing to a greater professionalization of the sector.

The new regulation, resulting from the application of the latest European guidelines on the matter, affects the energy consumption of new building. The houses that are built from 2020 will have more restrictive limitations in terms of energy demand, which will be at 40 KWh / year m² (a value that currently ranges between 80 and 100 KWh / year m²). There will also be a restriction on primary energy to meet that energy demand.

**This financial year, MRG has experienced an 8 % growth in new construction: of the 3,414 new homes in service last year, we have gone to 3,692, of which 55 % represents single-family homes**

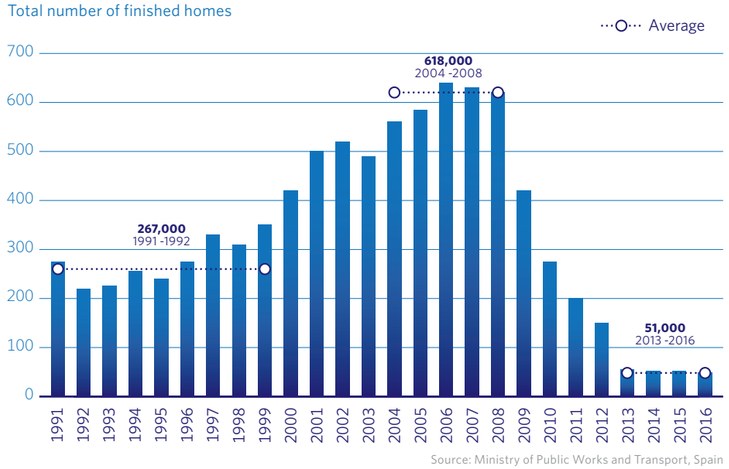
**Evolution of housing permits in the main cities of Spain**

Total number of housing permits




**Completed housing (private and state subsidised)**

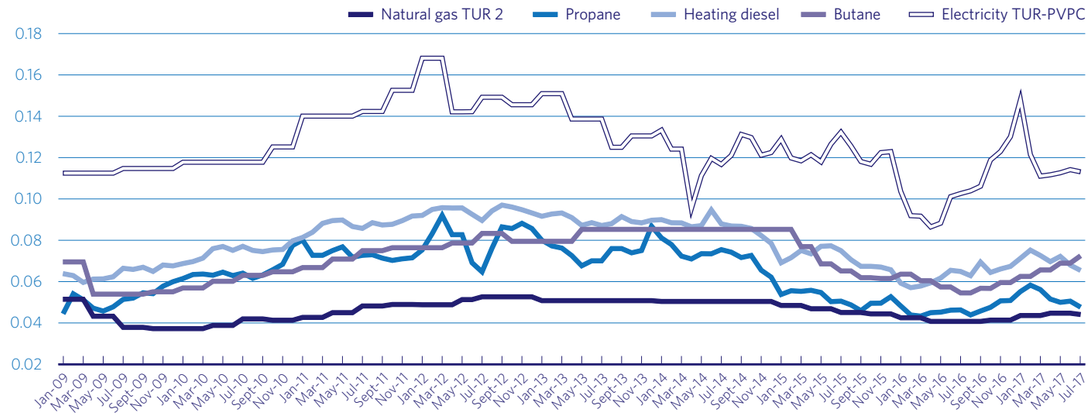
Total number of finished homes




Source: Ministry of Public Works and Transport, Spain

**Evolution of energy prices in Spain**

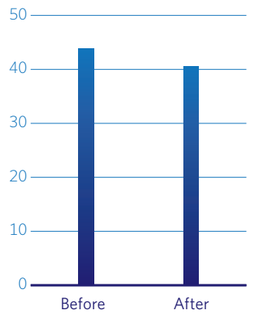
Average prices (€/kWh)



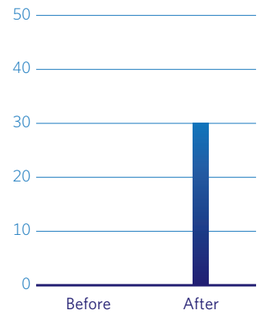

Liberalized diesel fuel C price. Average amounts according to European Commission Oil Bulletins, BOE (Spanish State Gazette) and CNMC

**Effects after LPG-Natural Gas switching**

MARGIN FOR COMPANIES (€M)



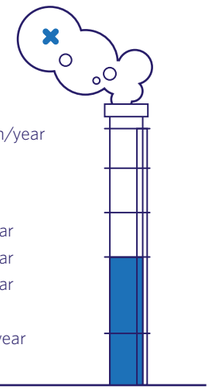

NET INCOME DISTRIBUTION FOR GAS SYSTEM (€M)




**$CO_2$ Emissions analysis**

| SUPPLY POINTS | | |
|---|---|---|
| Total | 42,534 | |
| Average consumption | 651 | kg |
| Average consumption | 9,016 | kWh/year |

| $CO_2$ EMISSIONS | | |
|---|---|---|
| LPG | 101,628 | t/year |
| Natural gas | 84,754 | t/year |
| Total savings | 16,874 | t/year |
| Percentage | 17 | % |
| Per household | 397 | kg/year |



## 2.3 LPG PROJECT

The ambitious project of transforming LPG plants to natural gas (about 42,000 supply points) began at the end of April 2016, and at the close of our financial year in June 2017, 76 plants had already been transformed, which means 1,986 new natural gas consumers.

Owing to the implementation of innovative IT tools for the geolocation of plants and supply points, we have reached a switching rate of 1,000 monthly supply points. In approximately three years, we will have completed the switching to natural gas for all our customers.

To undertake this process, MRG has worked with 14 installation companies, which undertake the technical adaptations required, and four new supply point companies with switching; all of them reputable.

This process lasts approximately between 35 and 90 days per LPG plant, depending on the complexity of the reception facilities, the proximity of the plant to the natural gas distribution network and the application for licenses from the respective municipalities.

The commissioning has been carried out in four stages:

- Census of appliances and facilities
- Adaptation of the natural gas distribution network
- Adaptation of the facilities
- Switching of appliances and discharge of the supply point

From an economic point of view, this switching to natural gas brings considerable advantages. Since LPG is a petroleum product, it is subject to the existing refining and demand capacities (it becomes more expensive during the winter season and cheaper in the summer), and therefore the fluctuation in its price is higher than in natural gas.

Taking into account that LPG's average consumption is 650 kg / year (9,000 KWh / year), and that most of the consumption occurs in winter months, with the switch to natural gas the average customer obtains important economic advantages.

**Of the 516 LPG plants acquired in 2016 from Repsol, equivalent to 41,600 new supply points, 76 have already been switched to natural gas, which means 1,986 new consumers of clean energy**

Similarly, the switching of these LPG plants to natural gas also involves considerable advantages for the gas system, as it translates into revenues of more than € 30 million.

From the point of view of safety, all the LPG installations that are transformed comply with the current regulations, resulting in an increase in the safety of facilities.

Regarding the environmental advantages, it is well known that natural gas is one of the most environmentally friendly energies. Being its lightest molecule and containing only one carbon atom, it produces cleaner combustion than propane, which translates into 40% less $CO_2$ emissions. In concrete figures, the complete switching of the 516 LPG plants acquired will mean a saving of 16.8 tons / year of $CO_2$.

Among the natural gas marketers that have been interested in our project are Endesa, Cepsa and Iberdrola.

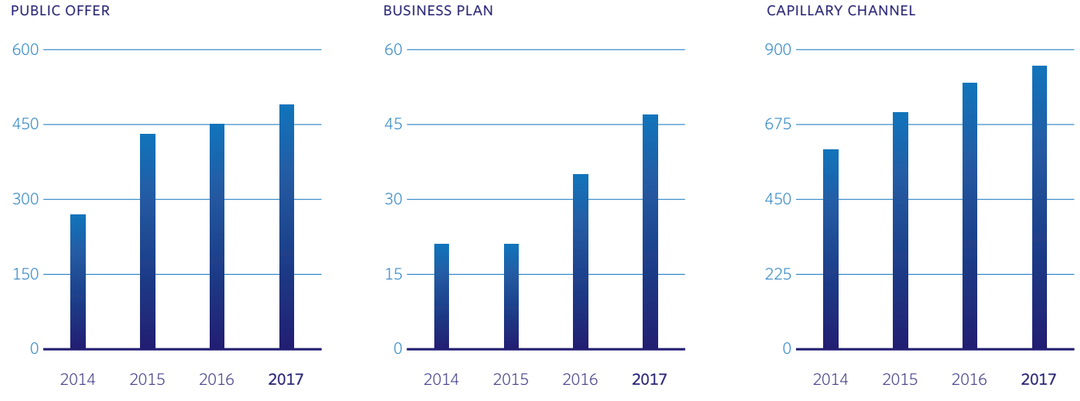
## 2.4 RESIDENTIAL MARKET AND NGV

The increase in pollution in the municipality of Madrid has led to the multiplication of restrictive measures for the access of vehicles to the city. In this context, NGV has a considerable competitive advantage, since hybrid vehicles that combine the use of natural gas with petrol are classified as ecological vehicles, which allows them to circulate freely.

A large part of the new construction, with predominance of the single-family housing, is carried out in Madrid's metropolitan ring, MRG's scope of action. In the medium term, the owners of these new homes will find it difficult to access the city centre with their conventional vehicles. Therefore, during this year, one of our challenges has been to disseminate among promoters and future buyers of new homes the advantages of the joint use of NGV and domestic natural gas, and to implement the pre-installation of NGV from the beginning of the project in single-family homes, as well as the design of effective and affordable solutions for their implementation in collective housing developments.

**Owing to its commitment to strengthen its commercial activity and the signing of agreements with different agents and partnership institutions, in this financial year MRG has grown in all the sectors of activity**

**Evolution of the channel**




## 2.5 COLLABORATIONS

In order to promote and implement the NGV in the network of dealers and workshops of the Community of Madrid, in this financial year MRG has signed an agreement with AMDA (Madrid Association of Automobile Distribution).

The collaboration with Agremia (Installations and Energy Sector Association) has also been maintained, with an increase in the market of vertical saturation of 3% with respect to 2016. In addition, additional measures have been developed that favour a greater level of involvement of the installation companies in the marketing of new natural gas supply points.

Similarly, we have extended the partnership agreement with the Energy Foundation of the Community of Madrid and various companies and associations in the sector for the development of the Boiler Room Renewal Plan.

On the other hand, we have maximized our commercial activity with reputable partners. Currently we have 164 agents, representing a growth of 9% over the previous year. In addition, a majority has subscribed to our commercial plan (with half-yearly validity) for the residential market and for the large consumption. The result: an increase of 30% compared to the previous year.



# 3 QUALITY

## 3.1 QUALITY POLICY

MRG's objectives in relation to quality policy have focused on several areas. On the one hand, the incorporation of the more than 500 LPG plants acquired from Repsol has required the company to adapt the systems and to check and control the relevant documentation.

Similarly, new actions have been undertaken to improve the satisfaction rate of our customers and we have improved the existing documentation and the preparation and revision of internal regulations.

The transition project of the quality management system to the requirements of the new revision of ISO 9001:2015 has also been started. The initial works have been based on the planning of the necessary changes that should be implemented during the next financial year for their correct adaptation. These focus on the new requirements regarding the context of the organization, leadership and focus on risks and processes.

Similarly, the first follow-up audit of the quality management system certification was carried out, in accordance with the UNE-EN ISO 9001:2008 standard with Tüv Rheinland. The internal audit of the system has also been carried out to verify compliance with the requirements established by the aforementioned standard.

On the other hand, we have continued with the development of the second phase of the internal regulation project through the adaptation of existing technical regulations or the creation of documents related to channels, claims, periodic inspection, home operations, emergency care, expansion and network operations.

## 3.2 UTILITY 4.0 PROJECT

Understanding how the gas sector operates can be complex for our customers, for whom it is not easy to differentiate between a distribution company, a trading company or an installer, nor to know what a facility revision or periodic inspection is, etc.

In order to explain to our customers what our activity is and what our obligations are as a distribution company, as well as what are the obligations that our customers have as users, MRG has wanted to take full advantage of new technologies and digital switching services and become an industry 4.0. In this way, and with the priority objective that "the customer should not suffer", users become customers.

This change of focus has generated a programme of more than 50 initiatives of organization, processes and information systems, and several lines of action have been identified with well-planned projects.

### FOCUS ON THE CUSTOMER

All the users connected to our natural gas distribution network are, in turn, customers of a supply company, with which they have the contractual relationship, since it is the marketing company that issues the invoices and proposes commercial offers to them.

Through a third party access contract, MRG provides services to different marketing companies to serve their customers. This implied that for the distribution company, the marketer's customer was another user who was managed with processes and communications similar to any user of another marketer.

**MRG is today a distribution company 4.0. Its commitment to new technologies facilitates a global vision of the habits and needs of natural gas users, who become customers**

Determined to move away from with this vision, MRG recognizes that not all customers connected to our distribution network are the same: each has its own habits, needs, schedules or preferences in communication channels. Therefore, the more we know and understand customers, the better we can serve them, offering them an improved and more efficient service.

The natural tendency of the customer is to interact with the marketing company. MRG has access to few "events" in the life of a customer to know them, know what his or her needs are and gather information about consumption habits, etc. This key information regarding the customer is provided by the marketing company and, if the data is not modified by its marketer or by the customer, it becomes outdated over time.

In this sense, we have analysed different cases in which the customer has interacted directly with MRG to resolve the request associated in each case. This analysis has allowed us to identify, in the different processes, the following areas of action:

- Description of «TODAY». Definition of the current situation of the needs of each customer and what service they receive from MRG.
- Customer needs. It establishes what are the current customer's demands.
- Customer's dream. It identifies what would be the best service that can be given to our customers.
- Obstacles. We study what stops us in order to give a service with 100% satisfaction.

Knowing our customers has allowed us to identify the characteristics of each one and be able to pay more attention to their needs, customs, what their information requirements are, when and how they need it, when they can assist us, and so on.

In order to serve our customer with a global vision, in any channel and through any interlocutor, it is essential to have information related to all processes, and that this information is centralized and available for MRG and for our extended company (contractors). In this way, many of the difficulties that now exist to communicate or find the customer at home are minimized. By having accurate information about the daily activity of the customer, we can know exactly what days and at what time it is most convenient for us to call on them at home.

### EXTENDED COMPANY

At MRG we have subcontracting models for field work. Therefore, a large part of our commitment to the customer is made through our extended company. The challenge for MRG this year has been to involve the extended company in the redesign and improvement of processes, listen to their field feedback, share objectives and design together a service that ensures that the commitment taken on by MRG is reflected in all areas of activity and through the potential interlocutors with the customer.

On the other hand, and taking into account that customers also make use of the official bodies that the Administration places at their disposal, such as the local consumer information offices, when processing a claim, the possibility of proposing working groups with the main official organizations, starting with those that deal with the most complaints regarding customer service, has been raised. In this way, we can resolve customer requests more effectively and provide added value, such as back-office, to these organizations.

**We have involved all those who make up the extended company in the redesign and improvement of processes and services in order to meet the commitments made with each customer**

## 3.3 SMART PROJECT

During this financial year, in relation to the use of telemetry meters whose use is mandatory for customers with consumptions over 5 GWh / year, MRG has taken a step beyond what current legislation requires. In order to extend the use of these meters to other customers, we have carried out an in-depth analysis of the possible solutions for both industrial and residential use. The result of this analysis has allowed the launch of the SMART 4K and SMART 1K projects, whose implementation is expected to be completed in the first half of 2018.

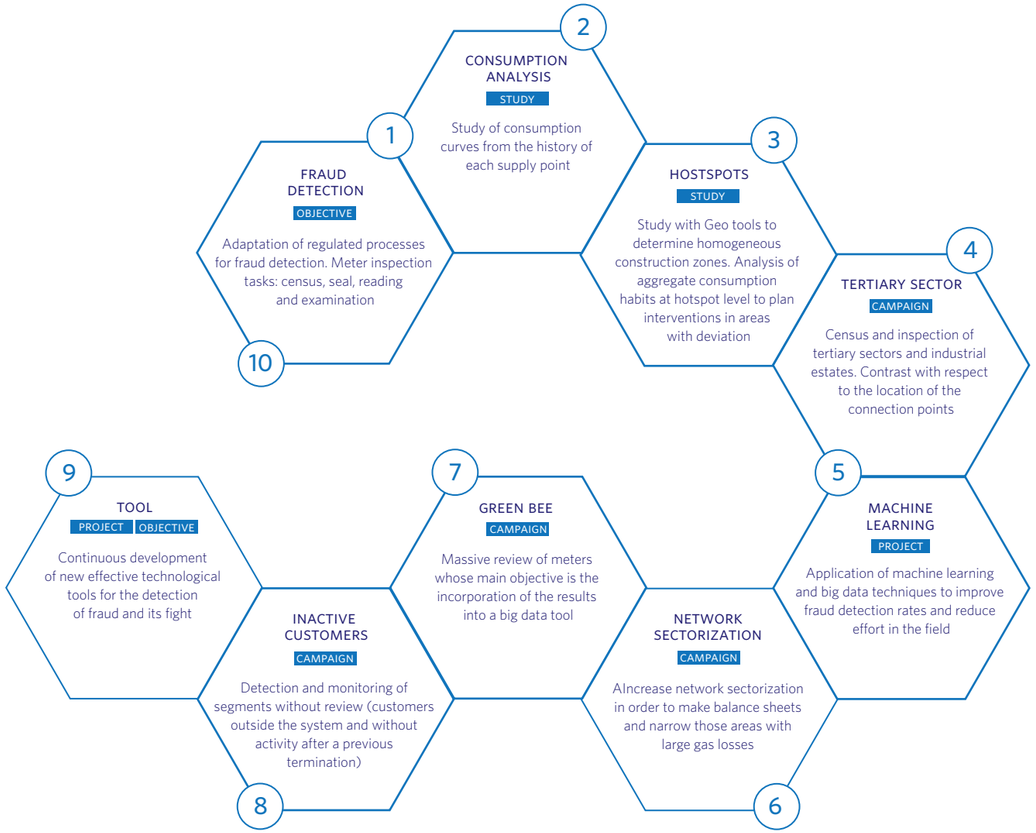
SMART 4K has been conceived with the aim of increasing the volume of telemetered gas in our network, from the current 20% to 70% at the end of the project. With this, we seek a greater control of daily consumption, in a way that allows us to eliminate the estimate of consumption in the distribution. We also hope to have a better control of fraud, along with the possibility of offering other services of added value to the customer.

We anticipate that this initiative will have a ROI of 60 months, without taking into account the positive effect it will have on the energy data in the gas balance.

For its part, SMART 1K has been designed with the aim of learning more about consumption patterns in our networks, the monitoring of network behaviour and pressure deviations, should they occur. The initial implementation of 1,000 telemetered household meters (Smartmeters) has been carried out throughout MRG's area of operation and has been directed at customers who are at a consumption threshold between 2,000 and 42,000 Kwh / year, with a range of pressures between 22 mbar and 100 mbar.

**The aim of the SMART 4K project is to increase the volume of telemetered gas in the MRG network, which will increase from the current 20% to 70% at the end of the project, scheduled for the first half of 2018**

**Development process of fraud detection**



### Inspections and detection of anomalies and fraud by municipalities

Data to July 2017

| MUNICIPALITY | TOTAL HOMES PER MUNICIPALITY | INSPECTED HOMES (%) | ANOMALIES AND FRAUD (%) |
|---|---|---|---|
| Ajalvir | 1,282 | 69% | 5.3% |
| Alcalá de Henares | 43.736 | 64% | 4.7% |
| Alcobendas | 28,335 | 44% | 3.1% |
| Alcorcón | 40,729 | 36% | 3.4% |
| Algete | 5,830 | 51% | 9% |
| Alpedrete | 4,242 | 59% | 6.3% |
| Boadilla del Monte | 13,009 | 70% | 5.7% |
| Brunete | 2,708 | 70% | 7.5% |
| Camarma de Esteruelas | 1,388 | 82% | 7.6% |
| Cobeña | 1,725 | 69% | 8.8% |
| Colmenar Viejo | 9,410 | 84% | 3.6% |
| Colmenarejo | 2,616 | 69% | 5.9% |
| Collado Villalba | 18,064 | 63% | 4.9% |
| Cubas de la Sagra | 925 | 15% | 8.7% |
| El Escorial | 2,843 | 24% | 3.5% |
| El Molar | 670 | 26% | 2.3% |
| Fuenlabrada | 49,834 | 62% | 5% |
| Fuente el Saz de Jarama | 698 | 71% | 5.3% |
| Galapagar | 8,045 | 75% | 6.3% |
| Griñón | 623 | 59% | 7.6% |
| Guadalix de la Sierra | 656 | 3% | 20% |
| Guadarrama | 6,165 | 60% | 2.7% |
| Hoyo de Manzanares | 2,128 | 58% | 5.5% |
| Humanes de Madrid | 5,537 | 76% | 7.3% |
| Las Rozas de Madrid | 22,753 | 69% | 3.8% |
| Leganés | 55,761 | 58% | 4.6% |
| Madrid | 269,240 | 30% | 4% |
| Majadahonda | 15,879 | 74% | 2.9% |
| Moraleja de Enmedio | 553 | 52% | 9.7% |
| Móstoles | 36,497 | 44% | 5.5% |
| Navalcarnero | 7,206 | 68% | 7.6% |
| Paracuellos de Jarama | 6,974 | 90% | 6.5% |
| Parla | 32,530 | 66% | 7% |
| Pedrezuela | 266 | 4% | 0% |
| Pozuelo de Alarcón | 22,944 | 54% | 4.6% |
| Quijorna | 845 | 2% | 7.1% |
| San Agustín del Guadalix | 3,439 | 73% | 6.1% |
| San Fernando de Henares | 12,460 | 58% | 5.4% |
| San Lorenzo de El Escorial | 2,710 | 11% | 3.7% |
| San Sebastián de los Reyes | 22,752 | 46% | 5.9% |
| Serranillos del Valle | 264 | 10% | 11.5% |
| Sevilla la Nueva | 2,414 | 73% | 7.5% |
| Talamanca de Jarama | 370 | 7% | 12% |
| Torrejón de Ardoz | 34,348 | 62% | 5.8% |
| Torrelaguna | 268 | 9% | 0% |
| Torrelodones | 5,264 | 77% | 3.7% |
| Tres Cantos | 14,802 | 29% | 2.7% |
| Valdemorillo | 2,332 | 36% | 13.5% |
| Valdemoro | 21,677 | 81% | 6% |
| Valdeolmos-Alalpardo | 982 | 75% | 6.9% |
| Valdetorres de Jarama | 194 | 2% | 0% |
| Vellón, El | 156 | 2% | 0% |
| Villanueva de la Cañada | 2,195 | 28% | 5% |
| Villanueva del Pardillo | 5,110 | 89% | 4.6% |
| Villaviciosa de Odón | 6,186 | 83% | 5.2% |
| Zarzalejo | 61 | 3% | 0% |

## 3.4 GREEN BEE PROJECT

Madrileña Red de Gas has committed in recent years to a comprehensive safety monitoring at its facilities and in the detection of fraud within its scope of action.

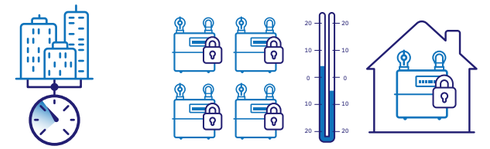
With the aim of reviewing 100% of our supply points and incorporating preventive and corrective measures against fraud in natural gas installations, in 2016 Green Bee was launched, an ambitious project whose completion is scheduled for 2018.

Green Bee has been a commitment by the company to collecting information that has helped the best implementation of big data and new technologies necessary for the detection of fraud. Among these is machine learning, which enables greater efficiency in detection.

Furthermore, together with Atos Smartgrid, our supplier specialized in services for utilities, we are developing, with a high level of success, MRG-owned algorithms for making proposals for inspection campaigns.

In addition to having substantially improved fraud management and associated detection processes, this initiative has resulted in the achievement of another important objective: the detection and correction of a large number of anomalies in measuring devices. This has had a direct impact on the reduction of network losses, the regulation of dangerous situations for customers, better service and an increase in the company's turnover.

### Green Bee in numbers

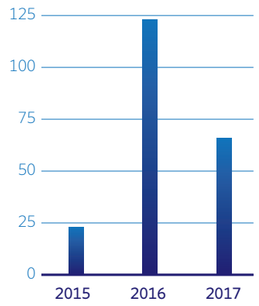


**88,451**
PROPERTY PRESSURE CENSUS READING

**322,766**
CHECKED AND SEALED IN BATTERY

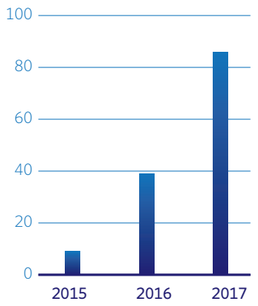
**398,476**
CHECKED AND SEALED IN HOME

**One off recovered consumption** (GWh)




Consumption recovered based on settlements. Total GWh recovered after the regularisation of consumption of fraud files. As a consequence of a change of criteria in the regularisation of consumption by the Government, there is a reduction in recovered consumption.

**Accumulated recovered consumption** (GWh)




Estimation of recurrent consumption. It is calculated considering an average annual recovery of 4.200 kWh (40% of the annual average of the average tariff 3.2) for change of meter with fraud or fault.

# 4 NETWORK

At MRG we work with a primary objective: that the natural gas circulating through our distribution network reaches our more than 890,000 customers 365 days a year without interruption and with optimal quality and safety conditions.

This is possible thanks to the staff that manage the 6,000 km of distribution network, with its auxiliary facilities, and that applies the highest standards of quality and safety included in our maintenance plan and in our risk prevention and personal safety policy.

In the current financial year, a total of 9.6 TWh was transported through our network, with a maximum contribution rate of 430,000 Nm³/h, with a normal behaviour of the network, which confirms the great capacity of the company to offer greater demands in the future, according to our network's analysis models.

For another year, we have attended the emergency requirements for safety posts, with exceptional parameters in service times, which are below half an hour in highest priority service. All this has been possible because MRG has consolidated a multidisciplinary emergency management team, favouring the completion of complementary activities of various kinds 24 hours a day, 365 days a year, such as out-of-hours deliveries, Dispatching alarm management, attention to urgent claims, etc.

Once again, the maintenance plan for the networks and auxiliary natural gas installations has been successfully completed, with the usual quality and safety parameters, as well as the maintenance plan for the liquefied natural gas (LNG) plants, ensuring at all times the supply to customers related to these plants.

**Network typology according to pressures and materials**
(length in metres)

| | High pressure A | Low pressure | Medium pressure A | Medium pressure B | LPG | TOTAL |
|---|---|---|---|---|---|---|
| Steel | 298,868 | 269 | 96 | 475,992 | 101,639 | 876,864 |
| Ductile Cast | 0 | 69,475 | 0 | 0 | 0 | 69,475 |
| Polyethylene | 116,250 | 242,180 | 194,440 | 4160,960 | 259,791 | 4,973,621 |
| Copper | 0 | 0 | 0 | 0 | 71,791 | 71,791 |
| | 415,118 | 311,924 | 194,536 | 4,636,952 | 433,221 | 5,991,751 |

We have also complied with the objective of ensuring the completion of all network operation activities without any impact on the safety of people and goods, and for another year we have not had any serious accidents.

On the other hand, in this financial year, MRG has continued to carry out actions aimed at improving the information in the network. These actions have allowed us to increase the level of sectorization in areas associated with regulation and metering stations (RMSs) at the highest level that guarantee supply conditions allow. This information, collected in the information system of the distribution control centre, allows decision-making in waste reduction actions to be improved (see the graph on page 34).

In addition, we have carried out studies that allow more detailed sectorization of the emission areas and those that are still in the process of sectorization; among these are Leganés, Colmenar Viejo, Fuencarral and Alpedrete.

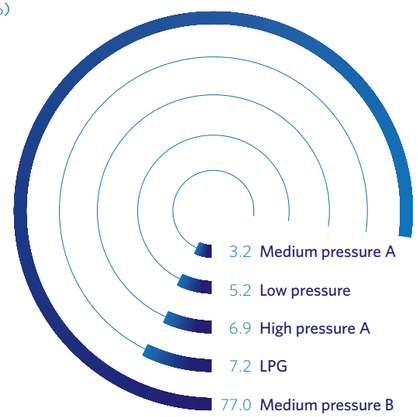
Similarly, we continued with the updating of the communications systems, replacing all PSTN communications with 3G modem, as well as the old Datalloger teleinformation systems with modern remote communication units. All of the alarm and operation signals of the LNG plants in the SCADA system have also been added.

The management of the new LPG project, which supplies 42,000 customers, has been successfully incorporated into normal MRG operations. This operation has made it possible

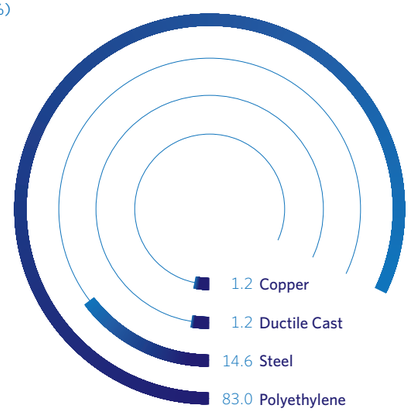
**The MRG distribution network reaches 6,000 km and serves more than 890,000 customers. A total of 9.6 TWh of natural gas has been transported this year**



**Network pressures**
Total (%)




**Network materials**
Total (%)




**The management of the new LPG project, which supplies 42,000 customers and has 390 km of associated networks, has been successfully incorporated into the operation of Madrileña Red de Gas**

for the 516 LPG plants, with their 390 km of associated networks, to be satisfactorily included in our maintenance plans.

In concrete figures, during this year, 2,250 preventive and regulatory inspections have been carried out in these plants, 48 tank recalls, 381 gas tightness tests and 2,800 gas refills in tanks, which has successfully guaranteed the quality of the gas supply to our LPG customers.

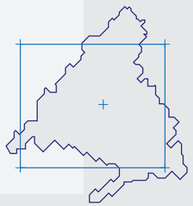
In order to comply with the internal quality requirements of MRG on the constant supervision of LPG plants, which includes the project called "Improvement Plan for Safety Conditions in LPG plants", we have installed 107 video surveillance cameras in 49 LPG plants. These devices have also been complemented with a programme of extraordinary visits to the facilities. In addition, we have incorporated all the information and documentation of the LPG project into our mapping system.

**The information, collected in the information system of the distribution control centre, allows decision-making in waste reduction actions to be improved**

**Sectorization by zones for tracking losses / Gas lost or accumulated by the RMS** (%)

Scale %

- >10 <65
- ≥4 <10
- ≥3 <4
- ≥2 <3
- ≥1 <2
- >0 <1
- ≥-10 ≤0
- ≥-25 ≤-10



Community of Madrid

▪▪▪ Metropolitan area

(*) MRG municipalities in which there have not yet been antifraud campaigns and no data are available.

Torrelaguna
Miraflores de la Sierra*
Guadalix de la Sierra
El Vellón
Talamanca de Jarama
Soto del Real*
Pedrezuela
El Molar
Los Molinos*
Valdetorres de Jarama*
Guadarrama
San Agustín de Guadalix
Colmenar Viejo
Alpedrete
Collado Villalba
Fuente el Saz de Jarama
Valdeolmos
San Lorenzo del Escorial
Hoyo de Manzanares
Tres Cantos
Algete
El Escorial*
Galapagar
Torrelodones
Cobeña
Camarma de Esteruelas
Zarzalejo
S. S. de los Reyes
Fuencarral-El Pardo
Colmenarejo
Alcobendas
Ajalvir
Las Rozas
Paracuellos del Jarama
Valdemorillo
Alcalá de Henares
Villanueva del Pardillo
Majadahonda
Torrejón
Villanueva de la Cañada
Moncloa-Aravaca
Pozuelo de Alarcón
San Fernando de Henares
Quijorna
Boadilla del Monte
MADRID
Brunete
Latina
Carabanchel
Usera
Sevilla la Nueva
Villaviciosa de Odón
Alcorcón
Leganés
Móstoles
Navalcarnero
Fuenlabrada
Moraleja de Enmedio
Humanes
Parla
Serranillos Valle
Griñón
Cubas
Valdemoro

# 5 HUMAN CAPITAL




At MRG we know that the needs of our customers vary from day to day. Therefore, faithful to our commitment and responsibility, we want to strengthen excellence in service. With the intention of eradicating problems encountered by customers, we have carried out an internal analysis of our team, studying what are the capacities of each position and what is the stock of knowledge that the company possesses. For this purpose, we have consulted the business excellence expert Beatriz Muñoz-Seca, from the IESE business school.

This study has given us a real picture of the occupation rate of each job. Similarly, processes have been clarified, consumption reduced and activities questioned, in order to know what processes we can industrialise, reducing execution times, and what other activities of greater added value we can incorporate, which includes the extended company.

With the information obtained and based on the needs detected, a comprehensive and individualized training plan has been drawn up, which will provide the MRG team with the necessary tools to tackle future changes efficiently and also the setbacks that the company faces on a daily basis.
That is why it is essential to identify the company's knowledge, because it will be this that helps us solve current and future problems, as well as knowing what makes us different from other distributors.

This new training plan will be executed at a general level and with individual planning that will provide each of the employees with specific training for the full development of the skills and abilities necessary to achieve our objectives of excellence.

## 5.1 COMMITMENT TO THE TEAM

Work taking up a good part of our day to day is nothing new. Therefore, in order to strengthen our responsibility with the social environment and being aware that the motivation and commitment of our employees are the company's driving force, MRG invests in conciliation practices that facilitate the ability to combine the professional and the personal life.

Throughout this financial year, we have favoured flexibility in staff entry and exit time, the continuous work day during the summer months and on Fridays throughout the year, as well as the reduction of working hours for childcare.

The health and well-being of our employees are some of MRG's other concerns. All our workers enjoy private medical insurance, as well as a physiotherapy service in our offices. In addition, we make loans with optimal conditions that facilitate an improvement to the family economy available to all of them.

On the other hand, and with the aim of promoting dialogue between workers and general management, during this year we have launched the following initiatives:

- Breakfasts with general management, aimed at supporting, advising and exchanging one-on-one reflections with department heads. Once the assessment analysis of the meeting has been carried out and after establishing a personalized action plan, they are provided with the necessary means so that they can reach the goals they have set themselves.
- Active listening through talks with employees, aimed at encouraging dialogue about their concerns. These talks have allowed employees from different areas to get first-hand knowledge of the management's points of view. In addition, this initiative encourages interpersonal approach and offers the possibility of sharing opinions and knowledge with other colleagues on topics of interest.
- I Ideas Competition, created to value the talent of Madrileña Red de Gas employees. The award, endowed with 3,000 euros, has been awarded to one of our emergency coordinators for the development of several tools that allow streamlining processes and routine tasks, significantly reducing work times, and not only in his unit, but also in other related units. This first ideas competition has encouraged the entrepreneurial spirit in our employees, thus fulfilling one of its main objectives. In addition, it has brought improvements in organization that contribute to company progress.

Finally, at MRG we have been betting on NGV for years, because we are convinced of the enormous advantages it has for sustainable mobility. Therefore, thinking that our employees can be a benchmark for sustainable mobility in Madrid, we have increased by 200% the subsidy for the purchase of NGV vehicles, in addition to enabling their financing at 0% interest, so that any employee may acquire one under unbeatable conditions

**Configuration of the MRG staff**

| | 142* EMPLOYEES | | 11 NEW ADDITIONS | |
|---|---|---|---|---|
| 80% | PERCENTAGE | 20% | 36% | 64% |
| 46 years | AVERAGE AGE | 42 years | 29 years | 33 years |
| 67% | UNIVERSITY GRADUATES | 23% | 100% | 86% |
| 76% | EXECUTIVE POSITION | 24% | 0% | 9% |
| 98% | TECHNICAL POSITION | 2% | 18% | 0% |
| 61% | MANAGEMENT POSITION | 39% | 18% | 55% |
| 20 years | AVERAGE SENIORITY | 12 years | | |

* Employees in a partial retirement scheme have not been considered.

**In order to strengthen its responsibility with the social environment, MRG has favoured the flexibility of schedules and the reduction of working hours for the reconciliation of family and work life**

## 5.2 INTEGRATED MANAGEMENT SYSTEM

This financial year, the adaptations of the management systems necessary for the integration of new LPG business stand out in a very significant way. This has meant:

- The publication of internal regulations on prevention, updating and adapting the existing regulations, and in a very specific way regarding the prevention of serious accidents due to dangerous substances - SEVESO III.

- The study and analysis of different legal requirements related to the dismantling of LPG plants, waste management and accreditation of personnel of contractor companies.

- The monitoring of quality, environmental and prevention aspects in the development of natural gas switching projects.

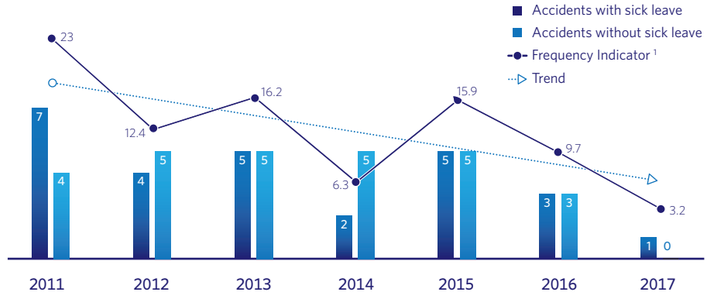
- The definition of a plan to improve safety conditions in the plants, which implies the installation of video surveillance cameras, presence sensors, signage, periodic surveillance rounds, remote management systems, user recommendations, etc.

On the other hand, follow-up audits of the certifications have been carried out, as well as the audit of the quality management system, risk prevention and environment, according to ISO 9001:2008, OHSAS 18001:2007 and ISO 14001 standards: 2004, respectively; the maintenance of the supervision project of the contractors for their own activity, including in the field of LPG, and the execution of the second phase of the MRG internal regulations development project.

The project to adapt the quality and environment system to the new versions of ISO 9001:2015 and ISO 14001:2015 standards has also started.

**In the financial year 2017, the accident rate continues its downward trend. The information and prevention of occupational risks policy carried out by the company has contributed to this**

**Evolution of workplace accidents in MRG, 2011 -2017**




1 The Frequency Indicator is defined as the numberof accidents with leave during the working day for every million hours worked.

## 5.3 SECURITY AND RISK PREVENTION

In terms of prevention, we can highlight the first audit of the second cycle of monitoring the certification of the occupational risk prevention system in accordance with the OHSAS 18001:2007 standard, as well as the internal audit of the prevention system and the regulatory occupational risk prevention audit.

The objective of these audits is to determine if our risk prevention management system complies with the provisions planned for such management, including the requirements of the standard; if it continues to be implemented correctly and is effective enough to comply with the policy and objectives of MRG. Similarly, they enable deviations and opportunities for improvement within the organization to be detected, with respect to everything related to the prevention of occupational risks, and in order to assess the need to make improvements and / or establish the respective actions considered appropriate.

On the other hand, the policy and the safety management manual for the prevention of serious accidents involving dangerous substances, SEVESO III, has completed the basic structure of safety management criteria and risk prevention, defining the MRG model for serious accidents management.

In relation to the management of the assets affected by the SEVESO III directive on the prevention of serious accidents, Madrileña has made progress in the regulatory notifications to the competent authority, in the drafting and publication of the internal emergency plans and in the

**The occupational risk prevention policy of MRG has included the specific training of personnel in safety and prevention of occupational risks**

verifications by the agency of authorized management of internal emergency plans. The implementation of the plans has begun with the training of the personnel and the respective simulations.

The actions of the external prevention service include the updating of occupational risk assessments in work places, facilities and workstations, occupational risk assessments of activities, especially the new processes associated with LPG, external preventive resource reports, specific technical reports on safety, ergonomics, simulations, etc., and safety notes on safety conditions in LPG plants.

Madrileña Red de Gas continues to cooperate with the competent administration maintaining its adherence to the "Bonus" system established by R.D. 404/2010, with the consequent reduction of contributions through professional contingencies due to MRG's contribution to the reduction and prevention of occupational accidents.

Similarly, in accordance with the established calendar and with the objective of assessing the adequacy of the action procedures defined in the Emergency / Self-Protection Plan, during this financial year several emergency drills have been carried out. Based on the information obtained, new preventive and corrective measures to be applied have been specified.

In relation to the Carriage of Dangerous Goods by Road (ADR), ADR advisors have been appointed for routine discharges and emptying processes in LPG plants; and the mandatory annual report has been sent to the Ministry of Transport.

The occupational risk prevention policy of Madrileña Red de Gas includes the training of personnel in safety and prevention of occupational risks. In this sense, the main training activities carried out this year have focused on:

- Third-party violence
- Self-protection plans
- Safety in gas work.
- First aid.
- Stress management (psychosocial risks).
- Leadership and conflict management (psychosocial risks).
- Prevention in offices, confined spaces and field work.
- Basic level of prevention aimed at preventive resources.

Similarly, the first courses on online risk prevention in offices have been conducted, an alternative that meant a significant improvement in participation results compared to other financial years.

As a relevant informative activity in this period, a video on the importance of the design of facilities in relation to the prevention of occupational hazards has been prepared and shared among MRG workers.

Regarding the exchange of prevention documentation, the documentary check on 119 contractor and subcontractor companies and 941 workers is being monitored; the volume subject to supervision is greater than 7,931 documents.

Similarly, it has been necessary to carry out more than 50 documentary exchange activities with new contracts; new supervisory requirements have been defined and a specific campaign has been carried out to supervise security documentary conditions for self-employed workers.

MRG has continued to establish periodic medical examination campaigns, focused on different groups; as well as preventive vaccination campaigns against influenza and prevention of specific pathologies (prevention of colon cancer, prostate, etc.).

The progressive reduction of the number of accidents at work is a priority objective for MRG, which is why we are committed to training and information on occupational risk prevention for our workers in order to raise awareness. To this is added ongoing research on occupational accidents in order for additional preventive measures to be adopted where appropriate. This has allowed a downward trend to be maintained in the results of occupational accidents.

Finally, we have maintained our participation on the sectoral committee and we have continued to attend the different business forums, such as the SEDIGAS safety conference. The functions of consultation and participation of workers have continued to be developed through the periodic meetings of the health and safety committee.

**Regarding the exchange of documentation on prevention, the documentary check of 119 contractor and subcontractor companies and more than 900 workers of those companies are being monitored**

# 6 ENVIRONMENT

## 6.1 LEGAL FRAMEWORK. ROYAL DECREE 1434

Although the legal framework for the distribution and marketing of piped natural gas is subject to specific updates, a complete update of the regulation of the "supply" of piped natural gas, which is included in Item III of RD 1434/2002 of December 27, which regulates the activities of transportation, distribution, marketing, supply and authorization procedures for natural gas installations, is due. In this Item III, key aspects for distributors and marketers of piped natural gas, and for users and consumers, require regulatory updating due to their obsolescence. These aspects include suspension and termination of supply for technical reasons, for non-payment, for termination of the supply contract and for breach of obligations by users and consumers; fraud, the inspection of measuring equipment and gas reception facilities, and the liquidation of defrauded consumption; verification, checking, inspection and reading of the measurement and control equipment, and the liquidation of the consumption with anomalies; the promotion and financing of facilities for the consumption of piped natural gas; essential supplies and injection of biomethane into the natural gas distribution network.

The MINETAD has requested from SEDIGAS, which represents carriers, distributors and marketers, a proposal for regulatory updating for the first quarter of 2018 in which working groups for each activity participate and a steering group composed of representatives from each area.

## 6.2 NGV DEVELOPMENT

The current transport model is not sustainable in the medium term. Virtually one hundred percent of the energy consumed is obtained from oil, with limited global reserves, concentrated in geopolitically complex areas and at volatile prices.

In addition to being a great opportunity for the consumer, a greater development of NGV for mobility entails the promotion of new product perspectives for the industry of the automotive sector in Spain.

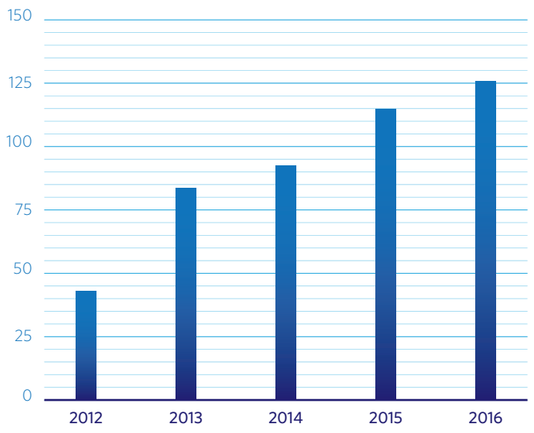
The diversification of energy sources in transportation is a pressing need. Natural gas is distinguished by greater price stability, independent of the price of crude oil, and a scope of application in all segments, short, medium and long overland haul, maritime and rail.

For this reason, for Madrileña Red de Gas, the expansion of NGV continues to be a strategic objective.

Throughout this financial year, we have expanded the infrastructure for the supply to the bus company Grupo Ruíz (the private company with the largest number of vehicles powered by NGV in the Community of Madrid), to which we have provided sufficient capacity for an annual increase of new vehicles.

Except in the Avenida de América transport hub, buses powered by natural gas continue to have restricted access to other hubs in Madrid, and although there has been progress in this situation, the horizon that is being considered for authorization is still far away. The Madrid Regional Transport Consortium has tendered and awarded the completion of a project with technical and regulatory requirements for access authorization, as well as the completion of the basic studies of each hub. This must be followed by the relevant regulatory amendment and the final completion of the construction projects of the necessary adjustments.

**Evolution of NGV consumption**
(GWh/year)




**For MRG, the expansion of NGV continues to be a strategic objective. Its development for mobility entails the promotion of new product perspectives for the automotive sector industry in Spain**

On the other hand, this year we have connected to our distribution network the new Aliara Energía public supply station, on Avenida de los Poblados. Its location is of special importance for light professional transport, as well as for the individual user, as it is located in an essential communication route in the south of Madrid.

The latest measures adopted in the Air Quality Plan of the City of Madrid and Climate Change will help to boost the use of NGV. EMT will increase its number of buses as well as the capacity of its refuelling station in the Carabanchel depots.

The municipality of San Lorenzo de El Escorial is a clear example of the great potential that this sector represents for MRG. The passenger transport company of this municipality already has a NGV service station for the loading of its buses, which represents 11% of the natural gas consumption of the municipality, being especially relevant in the summer months as it is a seasonally adjusted consumption.

MRG is another example of vehicles that can be operated with NGV. More than 96% of the mileage that our fleet performs is fuelled by NGV in the public stations that exist in the Community of Madrid. In addition, the use of NGV in day to day life has helped to improve air quality in Madrid, with 1 MT less $NO_x$ and emissions of 13.5 MT of $CO_2$.

This has earned us the Muévete Verde Award for Energy Efficiency from Madrid City Council.

**More than 96% of the mileage performed by the MRG fleet is fuelled by NGV in the public stations that exist in the Community of Madrid**

In our sector, we have been working for years on the displacement of other energies that are more polluting than natural gas, and it transpires that the transport sector, which uses half of the energy consumed in Madrid, has not taken the technological leap that they have given other sectors such as the industrial, the commercial or the domestic.

At MRG, as a partner of Agremia, we are encouraging fleets of our associates, which mostly comprise vans or industrial vehicles, to also incorporate NGV vehicles.

Within the framework of the collaboration agreement signed with the Volkswagen Group, which is increasing the number of models powered by NGV, especially the SEAT brand, we continue to play an active part in NGV promotional sessions, conducting training sessions at the group's main dealers.

## 6.3 MADRID AIR QUALITY AND CLIMATE CHANGE PLAN

Ensuring the protection of the health of citizens against the effects of air pollutants, contributing to the fight against climate change and reducing greenhouse gas emissions are the main objectives of Plan A for Air Quality and Climate Change, approved by Madrid City Council, based on the principles of sustainability.

The plan aims to comply with European and national legislation on air quality by achieving air quality levels consistent with the guideline value of the World Health Organization.

The objective is ambitious. It is to reduce, by 2030, 40% of the total emissions of greenhouse gases (GHG) of the municipality of Madrid with respect to 1990, and adopt a commitment to reduce 50% of emissions caused by urban mobility in 2030, with respect to 2012. To which is added the development of an adaptation strategy in the face of the effects of climate change.

For this, Plan A promotes the development of 30 measures, organized into four lines of action:

- Sustainable mobility.
- Urban regeneration.
- Adaptation to climate change.
- Citizen awareness and communication.

For MRG, the first two lines of action are key to achieving the objective of reducing emissions of air pollutants, the main problem in Madrid city centre. The plan includes actions on road network and public space aimed at reducing the intensity of private traffic and the promotion of public transport, as well as active modes of mobility.

It also includes actions related to the mobile fleet of key sectors with high impact on air quality and the promotion of sustainable employment mobility and shared mobility. In this field, the use of NGV is vital for the achievement of its objectives, which are the following:

- Renewal of the EMT fleet (700 buses will use NGV).
- Renovation of taxis with environmental criteria (ZERO or ECO), incentives for the elimination of diesel vehicles.
- Merchandise distribution: reservation in loading and unloading areas, preferential conditions for low emission vehicles and renewal of the mobile fleet.
- Fleets of municipal services: ZERO and ECO utilization.
- Promotion of alternative energy charging stations.

**Madrid City Council's Plan A for Air Quality and Climate Change seeks to reduce 50% of emissions caused by urban mobility in 2030, compared to 2012**

In terms of urban regeneration, the focus is on the promotion of the use of renewable energies. Amongst others, it is worth mentioning:

- The promotion of the replacement of polluting heating fuels: prohibition of the use of coal, regulation of the use of biomass with studies of suitability in urban environments.
- Promotion of the renovation of air conditioning systems, prioritizing the connection to supply networks generated from renewable energies. Collaboration in hot and cold network projects.

In relation to the need for adaptation required by climate change, the actions undertaken are integrated into the development of a municipal strategy that advances risk analysis, thus broadening awareness of threats and carrying out an updated monitoring of their development.

Finally, and in relation to actions on environmental awareness, Plan A aims to implement actions in collaboration with other Administrations, as well as information campaigns and citizen awareness on energy efficiency and air quality and a plan that promotes sustainable consumption.

The time frame foreseen for its implementation contemplates two well-defined horizons: 2020 for all those structural and technological measures that imply a significant reduction of emissions, and 2030 for urban regeneration, the start-up of the energy transition and the renewal of the vehicle fleet.

**Promoting sustainable mobility and urban regeneration are two of the key points of Plan A in which the policies promoted by MRG for the use of NGV play a fundamental role**

**Energy consumption: facilities and vehicles** [1]

| | 2013 | 2014 | 2015 | 2016 | 2017 [2] |
|---|---|---|---|---|---|
| Electricity in offices (kwh) | 367,402 | 334,472 | 363,000 | 301,897 | 161,094 |
| Electricity in network and LNG plants (kwh) [3] | – | – | 95,987 | 53,024 | 66,160 |
| Natural gas in offices (kwh) | 5,805 | 14,429 | 18,397 | 17,320 | 10,586 |
| NGV (kg) | – | 5,619 | 18,730 | 37,843 | 6,732 |
| Petrol (l) | 51,272 | 34,093 | 9,253 | 2,855 | 1,229 |
| Diesel (l) | 23,142 | 18,944 | 11,855 | 1,417 | 0 |

1 Fleet vehicles consume NGV fuels, petrol and diesel fuel. The statistics do not include the consumption of the vehicles of the sales personnel nor those of the private vehicles of employees placed in a timely manner at the disposal of the company.

2 Data of the first half year.

3 The electricity consumption data of the LNG and RMS plants of 2016 is incomplete, due to the fact that invoices for some plants and stations are not available.

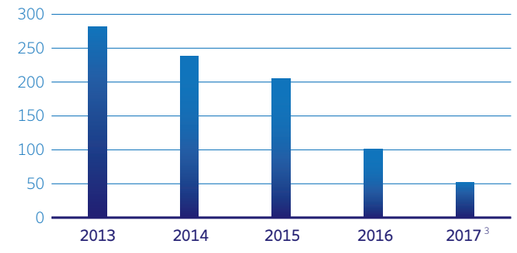
**MRG has implemented an active system of environmental management and a continuous improvement of its environmental standards for sustainable growth that respects the environment**

## 6.4 ENVIRONMENT

The protection of the environment is essential for a solid business development with a future projection. Caring for our environment is a task for everyone, especially companies that, like MRG, can directly influence the substitution of fossil fuels for other clean varieties that reduce emissions of pollutants and greenhouse gases.

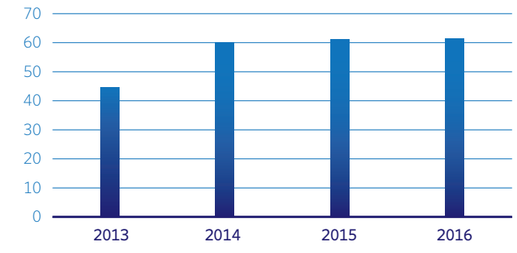
For MRG, caring for and respecting the environment is not only a commitment, but a fundamental part of its business strategy. Aware of our responsibility to the environment, we want to continue reducing our ecological footprint. Therefore, we ensure that all the resources used are used in the most efficient way possible, taking a step forward in the implementation of an active environmental management system and in the improvement of our environmental standards, which will allow us to grow sustainably respecting the environment and collaborating with the advancement of society towards a better world.

**Atmospheric emissions of facilities** [1] **and vehicles** [2] (thousands/kg $CO_2$)




1 Include direct and indirect emissions of the building.
2 Fleet vehicles consume NGV fuels, petrol and diesel fuel. The statistics do not include the consumption of the vehicles of the sales personnel nor those of the private vehicles of employees placed in a timely manner at the disposal of the company.
3 Data of the first half year.

**Fugitive emissions of methane in the distribution network** [1] (thousands/tonnes $CO_2$)




1 The estimated fugitive emissions depends on the materials of the network, its length and conversion factors.

**MRG's policy on environmental management is framed within its philosophy of capitalising on the synergies associated with the integrated prevention, environmental and quality management system**

The monitoring audit of the second cycle of the certification of the environmental management system, in accordance with the ISO 14001:2004 standard, as well as the internal audit of the environmental system, were the most significant milestones of this financial year.

The purpose of these audits has been to determine if the environmental management system has been properly implemented and has complied with the plans established for such management, including the requirements of ISO 14001.

In addition, they have provided management with sufficient information to control, plan and review activities that may have an impact on the environment. In the same way, they have allowed us to evaluate the adequacy of the environmental policy for the company itself.

The basic structure of environmental management criteria is framed within the philosophy of capitalising upon the synergies associated with the integrated management system for prevention, environment and the quality of

MRG, completing this structure with the review of specific environmental procedures that are considered necessary, as for example, those for the assessment of environmental aspects.

The environmental management system of our company establishes specific annual environmental objectives that, during this financial year, have resulted in the achievement of a reduction in electricity consumption in offices exceeding 2% of the target set. The distribution of MRG environmental information to 100% of the LPG maintainers and the reduction, owing to the high number of supply point captures, of 5% of LNG vented in the LNG plants.

Similarly, during this period, we continued with the monitoring of the environmental indicators chart associated with the environmental management processes that allow us to monitor performance. These indicators show a satisfactory result in terms of resource consumption. It is observed that there is no longer diesel consumption and significantly decreasing gasoline consumption, mainly due to the use of NGV, which leads to a reduction in respective $CO_2$ emissions from vehicles.

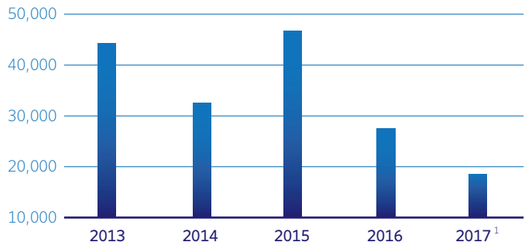
The natural gas safety cards without odorant, odorized natural gas and LNG have been defined and registered in the National Institute of Toxicology.

On the other hand, the operation of the LNG plants and the dismantling of the LPG plants have required specific actions from the environment area such as the preparation of reports on the soil situation in the LNG plants, the analysis of waste from the dismantling of LPG plants, noise measurements in LNG and LPG plants, the analysis of requirements for fire prevention in clearings according to Decree 58/2009, of June 4, of the Community of Madrid Forest Fire Emergency Civil Protection Plan, the analysis of the application of the Environmental Responsibility Act, the analysis of regulations applicable to phytosanitary treatments in LNG and LPG facilities, etc.

In addition, the project to adapt the system to the requirements of the new ISO 14001:2015 standard has been started, preparing the planning of the expected future changes.

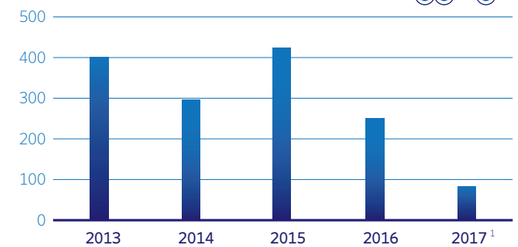
**The environmental management system of MRG establishes specific environmental objectives of an annual nature, including the reduction of electricity consumption in our offices which, in this financial year, has exceeded 2 % of the target set**

**Management of construction and demolition waste** (tonnes)



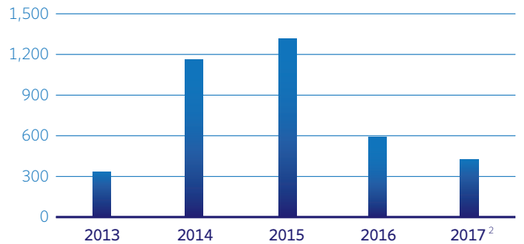

1 Data of the first half year.

**Costs of hazardous waste sent to authorised landfills** (thousands/€)



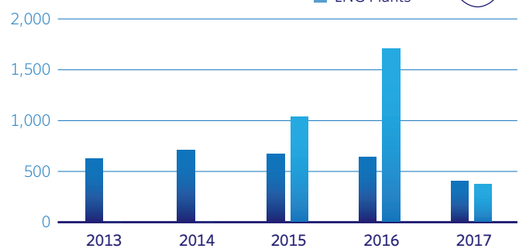

1 Data of the first half year.

**Hazardous waste management**[1] (kg)




1 Categories of hazardous waste managed: contaminated plastic and metal containers, contaminated rags, aerosols, filters, batteries, computer and electronic equipment, button and alkaline batteries.
2 Data of the first half 2017.

**Water consumption** ($m^3$)




Note: We have begun to monitor data on water consumption by the LNG plants since their launch in 2015.

# 7 RESULTS

## 7.1 RESULTS SUMMARY

The national demand for natural gas in 2016 grew by 2.1% with respect to 2015, mainly due to the increase in industrial, commercial and domestic consumption, and continued its growth during the first part of 2017, in which it grew 6.5% with respect to the same date of the previous year, boosted by industrial consumption.

In this context, MRG has continued to increase penetration in its area of influence, surpassing the 855,000 supply points. To these points must be added the 39,000 LPG supply points, pending switching to natural gas and reaching an approximate figure of 900,000 supply points in total. Regarding the latter, the company's strategy is to transform it into natural gas, as this is an efficient and sustainable energy source, and thus continue to expand its current gas distribution network in the 59 municipalities in which it has a license to operate.

For MRG, it is important to continue developing a sustainable business model, focused on the growth of the regulated distribution business, the increase in operational efficiency, the financial strength to take advantage of the growth opportunities in its market, the sustainable remuneration to shareholders and a firm social commitment that pursues the creation of value for all our stakeholders.

The regulatory measures applicable to natural gas distribution activity have not undergone any change and the sustainability and control fund on the system's tariff deficit is maintained. Regulation is a key element in the sustainability of our activities, so that necessary investments are attracted in order to guarantee and expand the distribution of natural gas in an efficient and sustainable manner.

| **Profit and Losses** [1] (€ million) | 2016 | 2017 |
|---|---|---|
| Remuneration | 137.3 | 135.7 |
| Other revenues | 28.0 | 42.4 |
| EBITDA [2] | 134.2 | 138.1 |
| EBIT | 103.1 | 105.4 |
| Net profit | 49.3 | 48.9 |

1 In accordance with the International Financial Reporting Standards (IFRS).
2 Excluding non-recurrent expenses.

**MRG's business model focuses on the growth of the regulated distribution business, the increase in operational efficiency, financial strength, sustainable remuneration for shareholders and a strong social commitment that pursues the creation of value for all its stakeholders**

In this environment of stability and sustainable growth, our consortium of shareholders remains intact, through Gingko Tree Investment Ltd, PGGM, EDF Invest and Lancashire County Pension Fund, and shares the same vision: the importance and advantages that natural gas represents as a sustainable and efficient energy source, the profile of the company's business and its commitment to the long-term stability of the current regulatory framework. MRG proposes to its shareholders an industrial project for the creation of long-term value, and it is the trust of our shareholders that allows us to have the necessary resources to carry out this sustainable growth.

## 7.2 OPERATIONAL RESULTS

Compared to the previous year, all the main magnitudes have increased, due to the good performance of the operating efficiencies introduced and the partial entry of the LPG supply points.

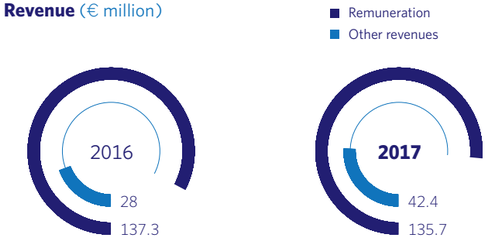
The gross operating profit (EBITDA) reached € 138.1 million (+3%), and the adjusted gross operating profit (EBIT) for amortization and non-recurring expenses reached € 105.4 million (+2.2%).

At the ebitda level, the increase is explained by the partial entry into operation of the LPG supply points, the increase in the volume of periodic inspection operations and the reduction of operating expenses, owing to the continuous improvement in automation and the processes. All this has allowed to increase the EBITDA by 3% compared to the previous year, despite the impact of lower remuneration and higher expenses as a result of the execution of home operations aimed at combatting fraud.

Similarly, operating results at the ebit level have been increased by 2.2% with respect to the previous year (€ 105.4 million), very similar to the increase in EBITDA, since amortizations and non-recurring expenses are practically constant.

**In this financial year, EBITDA has increased by 3% and EBIT by 2.2%. Total revenues have grown 7.7%**

**Revenue** (€ million)




## 7.3 REVENUE

Total revenues have reached € 178.1 million, representing a growth of 7.7% compared to those obtained during the previous financial year. Of the total revenue, excluding income from LPG sales (€ 14.3 M), 83% comes from recognized remuneration for distribution activity, fixed on the orders of the Ministry of Industry, Tourism and Commerce No. 2446/2013, published in Spanish State Gazette No. 312 of December 30, 2013; Order No. 2355/2014, published in Spanish State Gazette No. 303 of December 16, 2014 and Order No. 2445/2014, published in Spanish State Gazette No. 312 of December 26, 2014.

The remaining 17% refers to other services related to the distribution of natural gas, mostly regulated (13.5%). These include income from meter rental, periodic inspections, provision of other services to users and income from other non-regulated services (3.5%).

The entry into partial operation of the network assets connected to the LPG plants acquired from Repsol contributed a turnover of € 14.3 million during the financial year.

## 7.4 FINANCIAL POSITION AND BALANCE

MRG considers financial strength as a strategic pillar that allows it to maintain strong levels of solvency and liquidity ratios consistent with an investment grade rating, balancing the increase in debt with the generation of additional cash derived from new investments. The structure of the debt responds to the profile of regulated business.

In this context, and on April 11, the company completed an operation to issue two bonds under the EMTN programme. The issue was made by Madrileña Red de Gas Finance BV, which lent the funds to MRG through an intercompany loan structure. The issues were € 300 million each, for terms of eight and 12 years, and it received the investment grade credit rating from the international rating agencies, Standard & Poor's and Fitch. The programme is guaranteed by Madrileña Red de Gas and deposited in the Luxembourg Stock Exchange. The funds obtained will be earmarked primarily for the amortization of € 500 million in bonds, due September 2018, while the rest will be used for different corporate purposes.

Through this new financing, MRG has managed to reduce the cost, increase the term and eliminate the risk of interest rate variations; in particular: reduce the average cost of financing from 3.1% to 2.7%, increasing the average life of the debt from 6.2 years to 8.9 years and closing 100% of its debt at a fixed interest rate.

At the same time, the company has secured a contingent credit line (Revolving Credit Facility) with a group of four banks for a total of € 200 million, for a term of five years, in terms significantly more advantageous than the lines previously in force for € 175 million. This line allows us to increase our liquidity position with absolute flexibility to dispose of the aforementioned funds.

In conclusion, and comparing with our counterparts in the distribution sector, MRG is the only company that has the following advantages: debt financed in the long term (average life of the debt = 8.9 years), without risk of interest rate (100% fixed rate), at the most competitive price (2.7%) and with a liquidity line for € 200 million at five years with absolute flexibility to dispose of these funds.

**In this financial year, an operation to issue two bonds was completed by Madrileña Red de Gas Finance BV. The issues, of € 300 million each, received the investment grade credit rating from the international rating agencies, Standard & Poor's and Fitch**

| **Balance**[1] (€ million) | **2016** | **2017** |
|---|---|---|
| Gas distribution licences | 713.4 | 740.3 |
| Net tangible fixed assets | 355.7 | 380.8 |
| **Total Network Fixed Assets** | **1,069.1** | **1,121.0** |
| | | |
| Goodwill | 57.4 | 57.4 |
| Deferred tax asset | 27.3 | 26.3 |
| Other non-current assets | 29.9 | 53.6 |
| | | |
| Current assets | 47.2 | 35.6 |
| Cash | 111.4 | 598.6 |
| | | |
| **Total Assets** | **1,342.3** | **1,892.5** |
| | | |
| Equity | 369.3 | 323.3 |
| Subordinated Shareholders Loan | – | – |
| | | |
| Long term debt | 846.7 | 1,442.2 |
| Deferred tax liability | 25.7 | 35.4 |
| Other non-current liabilities | 20.1 | 24.1 |
| | | |
| Current liabilities | 80.6 | 67.4 |
| | | |
| **Total Liabilities & Shareholders equity** | **1,342.3** | **1,892.5** |

1 In accordance with the International Financial Reporting Standards (IFRS).

| **Free cash flow**[1] (€ million) | **2016** | **2017** |
|---|---|---|
| EBITDA[2] | 134.2 | 138.1 |
| Income tax paid | (12.0) | (8.8) |
| Working capital[3] | 1.4 | (6.7) |
| Capex | (15.7) | (15.1) |
| Free cash flow[2 3] | 107.8 | 107.5 |

1 In accordance with the International Financial Reporting Standards (IFRS).
2 Excluding non-recurrent expenses.
3 Deficit 2014 and 2015 are excluded.

## 7.5 OPERATIONS CASH FLOW

The cash flow generated by ordinary operations during the year was € 107.5 million, maintaining a level similar to the previous year.

The improvement in the operating margin as a consequence of the operational efficiency in the processes, the increase in other regulated revenues and the temporary reduction of the investment as a result of the agreement reached with Repsol for the purchase of the 41,600 LPG supply points, which will be transformed to natural gas in the coming years, have been the main factors that have contributed to the maintenance of cash flow generated in the year.

Also noteworthy, in the non-recurring or extraordinary items of the year, is the acquisition from Repsol of the LPG plants for € 61.5 million and the € 19 million corresponding to the distribution of the definitive system deficit for 2014 and 2015.

**The cash flow generated by ordinary operations was € 107.5 million, maintaining a level similar to the previous year**

The details of the annual accounts and the auditors' reports are available online at www.madrilena.es, *Investor relations* section.

## 7.6 INVESTMENTS

With the objective of expanding the distribution of natural gas to the greatest number of consumers, MRG has continued with the investment plan in its area of influence. During the current year, the payments made to finance the investment in fixed assets reached a figure of € 78.9 million.

In view of its essential characteristics, investments or investment commitments in 2017 can be grouped into four main areas:

### ACQUISITION

At the end of 2016, MRG acquired 516 LPG plants and their network assets from Repsol, with 41,054 supply points connected, for approximately € 61.5 million.

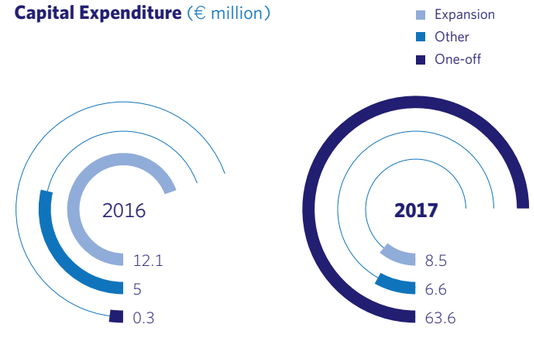
### EXPANSION

The company's strategy is focused on the expansion of its distribution network in the 59 municipalities in which it has a license to operate. MRG has invested a total of € 15.2 million in this area.

### CONVERSION TO NATURAL GAS OF LPG POINTS

Regarding the acquired supply points, the company's strategy is to transform these points into natural gas, as this is an efficient and sustainable energy source, and thus be able to continue expanding our current gas distribution network. During this year, MRG has already converted 1,900 LPG supply points to natural gas.

**Capital Expenditure** (€ million)




### OTHER PROJECTS

In this financial year, we have intensified our efforts assigned to the efficiency in the telematic control of all the automatic systems of the distribution network and in the development of an information system aimed at combating fraud.

Through these investments, MRG will continue to improve operational efficiency thanks to advances in automation and digitalization in all processes. In the coming years, the efficient operation of the assets in operation, together with the investment plan described, will lead to a sustainable growth of the cash and the results of the company.

The data reflected in this report correspond to the annual financial year, between July 1, 2016 and June 30, 2017.

Published by
Madrileña Red de Gas

Edited by
Nuria Martínez Deaño

English translation
Lema Traductores

Design
Francisco Dorado

Photography
J.A. López

Production
Global Media Comunicaciones

© Madrileña Red de Gas, S.A.U., 2017

Madrileña
RED DE GAS

Calle Virgilio, 2-B
28223-Pozuelo de Alarcón
Madrid, Spain
T (+34) 902 330 150

www.madrilena.es