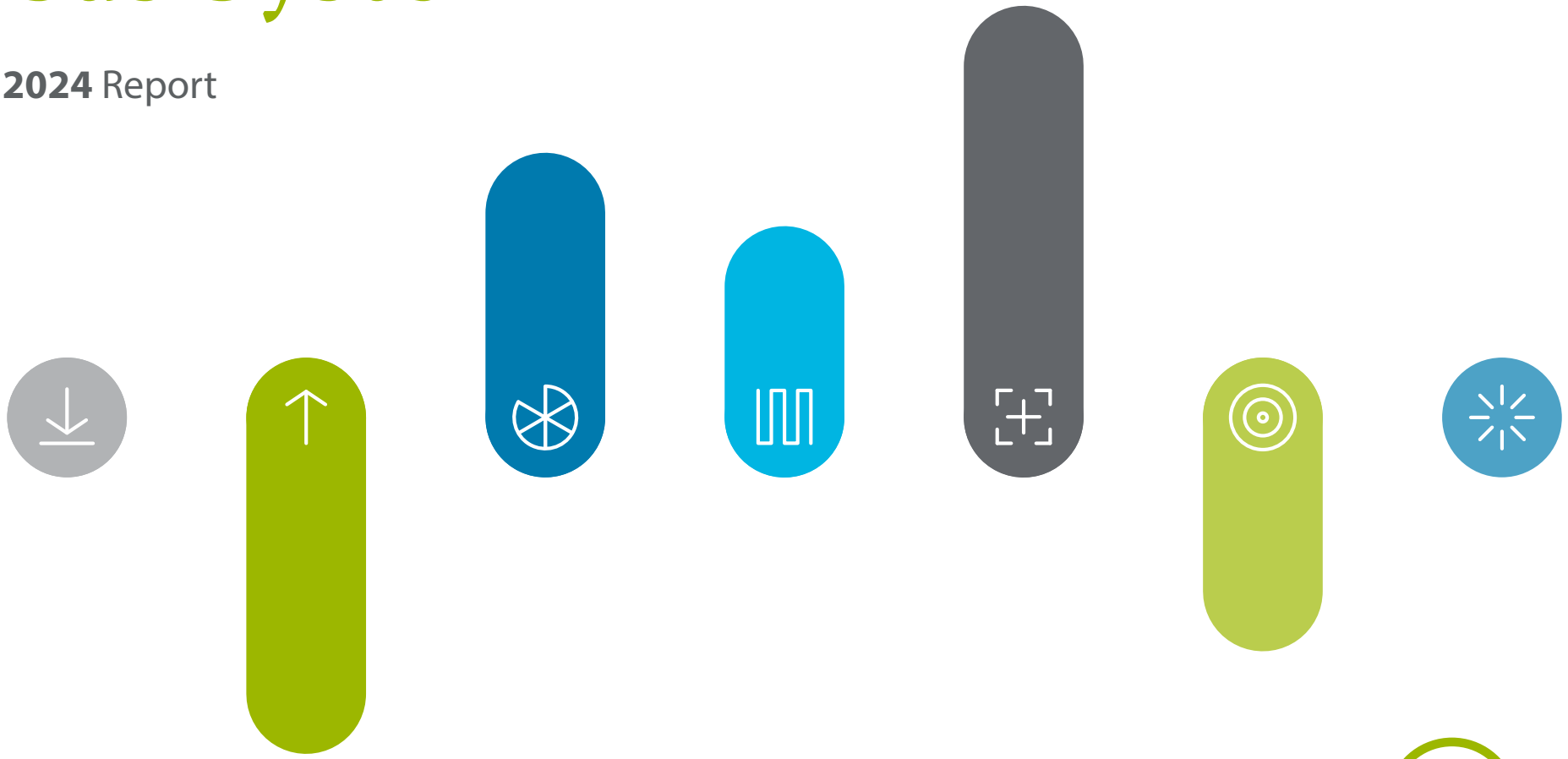
# The Spanish Gas System

**2024** Report



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Some published data are subject to change, as they are provisional data at the close of this report.
In the event of any discrepancy, the SL-ATR information prevails.

# With availability at 100%, the Spanish Gas Systemhas continued to contribute to Europe's security of supply

**Following the energy crisis caused by the Russian invasion of Ukraine, natural gas has consolidated its fundamental role in the security of energy supply** in Europe. In 2024, the European Commission continued to implement measures to reduce dependence on supplies from Russia, consolidating strategies adopted in previous years and including new initiatives to ensure security of supply. Member States have fulfilled their commitments to fill underground storage facilities in line with the targets set by the European Union (EU).

Geopolitical factors, coupled with the unavailability of some facilities, have created an energy landscape with rising prices throughout 2024. In addition to the Russian-Ukrainian conflict, gas prices have been affected by new tensions in the Middle East, as well as by the shutdowns at the Australian and American Freeport plants and the interruption of transit through the Suez Canal.

**In Spain, the Gas System has remained available every day of the year, guaranteeing supply to all consumers.** It has also demonstrated its resilience in the face of adverse weather conditions, such as the DANA (isolated depression at high levels) that affected part of our country.

**Spain also continued to contribute to the security of supply for the rest of Europe, sending a total of 34.5 TWh of natural gas**, both through interconnections and through the reloading of LNG vessels. In 2024, Spain consolidated its position as the second country in Europe in terms of the volume of LNG reloaded, surpassed only by Belgium. Loading operations complied with the EU's 14th package of sanctions against Russia for its invasion of Ukraine. Spain was the first country in the Union to establish the detailed rules and procedures for monitoring, controlling and authorising ship loading in the gas system to ensure compliance with this package.

**In 2024, the Spanish Gas System received supplies from 14 different origins**, representing a broad diversification of supply and positioning Spain as a strategic entry point for liquefied natural gas from Europe. The terminals also performed more LNG loading for bunkering in 2024 than in the previous year, contributing to the decarbonisation process of the maritime sector.

The high levels of LNG tank storage procurement and the high filling of underground storage facilities reflect the commitment of users to the Spanish Gas System. The capacity request and contracting platform has repeatedly been subject to competitive auctions with multiple rounds and participants. This has been demonstrated **by the annual auctions** that have allocated **LNG unloading and storage slots until 2039**.

In terms of **underground storage,** Spain reached **100% of its fill level in August** (the EU requires Member States to have a 90% fill level by 1 November).

In terms of natural gas demand, conventional gas for domestic, commercial and industrial consumption reached 237.1 TWh in 2024, mainly due to **higher industrial consumption, which increased by 4.2% to 176.8 TWh.**

In 2024, the national daily demand record of the last two years was also reached, at 1,671 GWh/day, driven by gas demand for electricity generation (11 December). **The periods of low wind and solar generation have been covered by more than 85% by combined cycles to guarantee the electricity supply (8-11 December).**

On the other hand, in accordance with the Resolution of the National Markets and Competition Commission (CNMC) of 20 September 2024, which determines the destination of natural gas stocks in the Gas System's shrinkage balance account, the stocks of this gas at 8 July 2024 (580,274 GWh) were used to cover the operating gas needs defrayed by the System. This led to a reduction in the natural gas procurement needs of the Technical Operator for this purpose for three months, from 3 October 2024 to 2 January of the following year.

Finally, the Guarantees of Origin System for renewable gases, which has been in operation since the beginning of 2023, **had certified the renewable gas produced at more than 34 Spanish facilities by the end of 2024.** The number of transactions in the GoO System in 2024 amounted to 944 GWh.

The development of this certification is key to increasing transparency and facilitating consumer participation in the implementation of a decarbonised energy system.

# Key figures

**364**
**Unloading slots** allocated until 2039

**94%**
**Average contracting** of LNG storage

**14**
**Countries that have supplied** natural gas to the System

**311.9 TWh**
**Demand** for natural gas

**+4.2%**
**Increase in consumption** of natural gas in the industrial sector

**1,671 GWh/day**
**National demand peak** (11/12/2024)

**221**
**Vessel unloading**

**+7.7%**
**Increased demand** of LNG tanker trucks

**+69%**
**Increase in net balance** for international connections

**100%**
**Fill level** of underground storage in August

**242 GWh**
**Shrinkage balance** for operating gas paid

**855 TWh**
**Transacted volume** in the MS-ATR

**179**
**Registered entities** with profile Holder of Guarantees of Origin

**496,602**
**Guarantees of Origin issued** (**265** hydrogen)

**34**
**Production facilities** for renewable gases with Guarantees of Origin

# 1 Demand



**Domestic gas demand reached 311.9 TWh.** Conventional demand, in particular, has registered 237.1 TWh, up 3.2% on 2023, mainly due to higher industrial consumption

# Key figures

In 2024, total domestic natural gas consumption amounted to 311.9 TWh, a decrease of 4.2% compared to the previous year. This figure is due to lower consumption in the electricity market, which has seen an increase in renewable generation (mainly solar and hydro) and a reduction in cross-border flow through international connections.

Conventional demand, for household, commercial and industrial consumption, increased by 3.2% compared to the previous year to 237.1 TWh, mainly due to higher industrial consumption (+4.2%).

International demand for natural gas decreased by 50% in 2024 to 37.7 TWh. This decrease is mainly due to a lower export flow in the Pyrenees VIP, where the connection became a pure import connection in 2024. Another reason was a lower level of shiploads, which in 2024 reached 13.6 TWh.

## Demand

*TWh*

| | 2023 | 2024 | 2024 vs. 2023 | |
|---|---|---|---|---|
| | Actual | Year end | TWh | % |
| **Conventional** | **229.8** | **237.1** | **7.3** | **+3.2** |
| DC/SMEs | **48.6** | 47.9 | -0.7 | -1.4 |
| Industrial | **169.7** | 176.8 | 7.1 | +4.2 |
| LNG trucks | **11.6** | 12.4 | 0.9 | +7.7 |
| **Electricity service** | **95.7** | **74.7** | **-21.0** | **-21.9** |
| **Total national demand** | **325.5** | **311.9** | **-13.7** | **-4.2** |

**311.9 TWh**

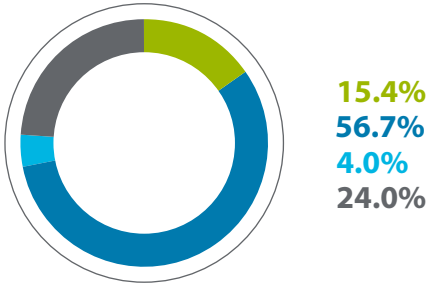
**National demand**
for natural gas in 2024

**+3.2%**

**Increase in conventional demand**
vs 2023, due to higher industrial consumption

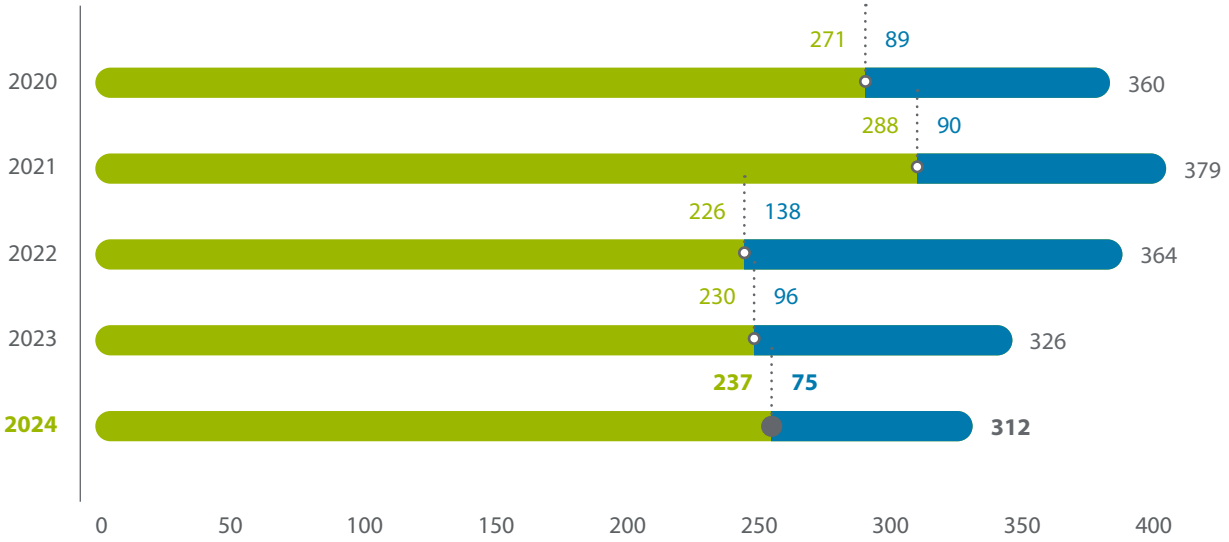
## Demand for natural gas

%




## Annual evolution of natural gas demand

TWh/year



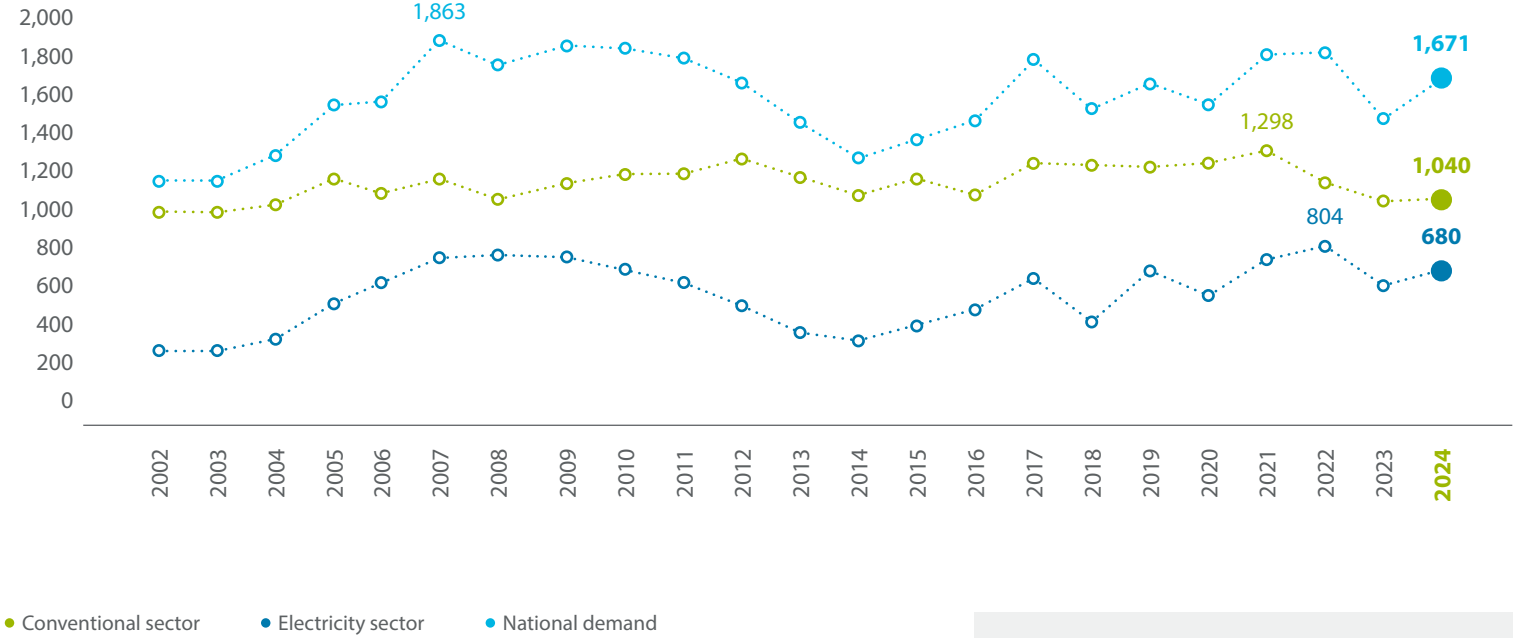

In 2024, the **autonomous communities with higher natural gas consumption** were Catalonia, Andalusia, Valencia and Murcia

The Autonomous Communities that reported the highest consumption of natural gas in 2024 were Catalonia, Andalusia, Valencia and Murcia. Between them they account for almost half of the total consumption of natural gas in Spain.

Daily peaks reached in 2024 were:

- **Total national demand:** 1,671 GWh/day (11 December). Daily record for the last two years, driven by demand for gas for power generation.
- **Conventional demand:** 1,040 GWh/day (11 January)
- **Electricity sector demand:** 680 GWh/day (11 December).

## Evolution of annual demand peaks




**1,671** GWh/day

**Maximum national demand**
(11/12/2024)

# Conventional demand for gas

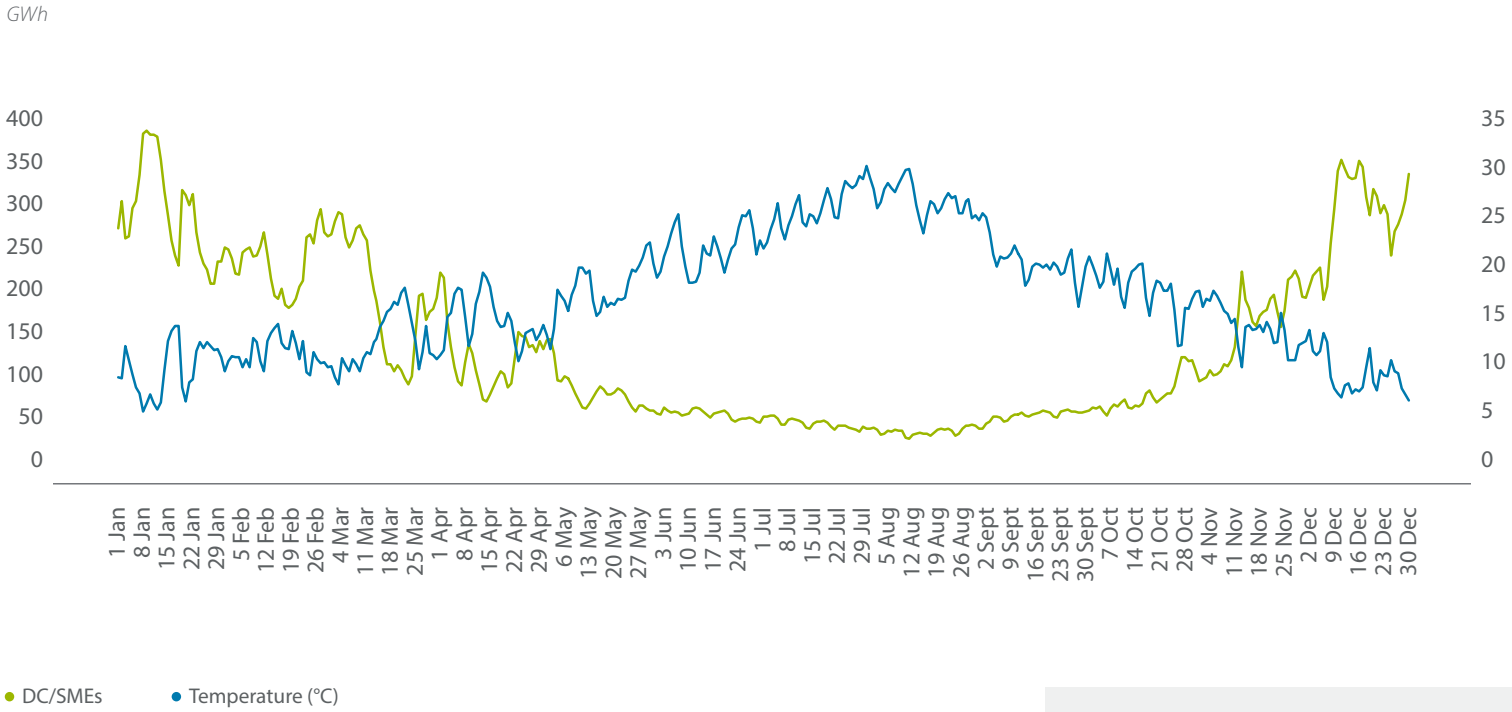
During 2024, the conventional sector recorded 237.1 TWh, 3.2% higher compared to the previous year.

This growth was mainly due to higher natural gas consumption by the industrial market, up by 7 TWh compared to 2023 (+4.2%).

## Domestic-commercial and SMEs

In 2024, demand for natural gas in the domestic-commercial and SME market fell by 0.7 TWh (-1.4%) compared to the previous year. This slight decrease is due to noticeably warmer temperatures in 2024 in the months with the greatest impact on natural gas demand.

### Domestic demand - Domestic-commercial and SME sector

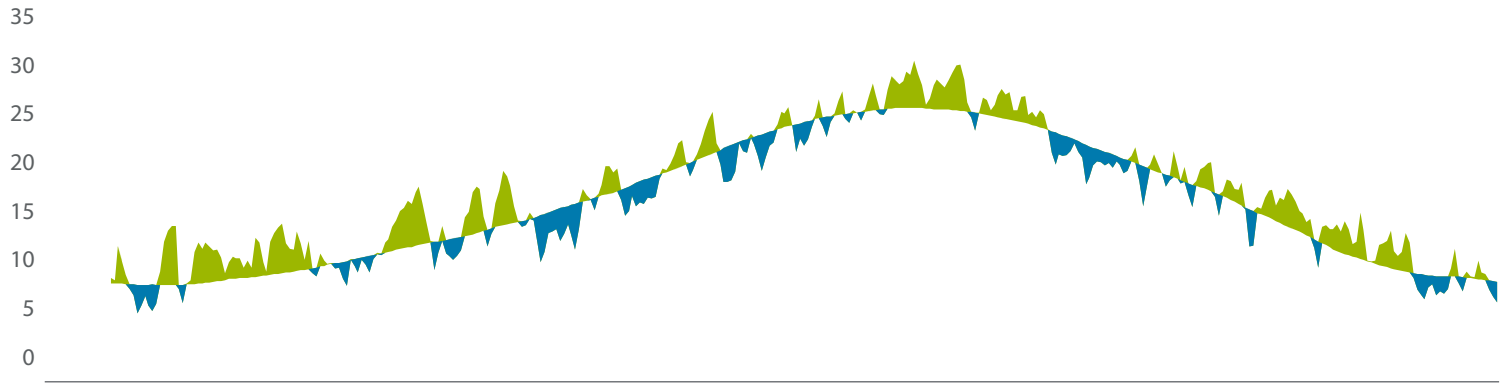



**237.1** TWh

**Conventional demand** for gas (**+3.2%** vs 2023)

# Reference temperature of the Gas System

ºC




| Cold/hot rating | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Σ ºC for excess | 58.49 | 57.28 | 43.23 | 41.21 | 21.02 | 18.75 | 39.90 | 59.01 | 5.81 | 32.45 | 59.79 | 25.71 |
| Σ ºC by default | -16.40 | -1.91 | -18.77 | -31.41 | -32.15 | -34.96 | -11.52 | -2.33 | -41.33 | -15.04 | -3.48 | -23.91 |
| **Variation** | **42.09** | **55.37** | **24.46** | **9.79** | **-11.13** | **-16.21** | **28.39** | **56.68** | **-35.52** | **17.41** | **56.31** | **1.80** |

# Industrial

Gas consumption in the industrial sector recorded 176.8 TWh in 2024, up 7.1 TWh compared to 2023 (+4.2%). This increase in gas demand for the industrial market has been mainly driven by consumption in the refining, construction, electricity and chemical/pharmaceutical sectors.

**176.8** TWh

**Industry gas consumption**
(**4.2%** vs 2023)

The evolution of industrial demand, as depicted in the graph on the next page on the evolution of the Large Industrial Gas Consumers Index (IGIG[1]), has been upward, intensifying in the second half of the year. During this period it recorded a 4.2% growth compared to the same period of the previous year.

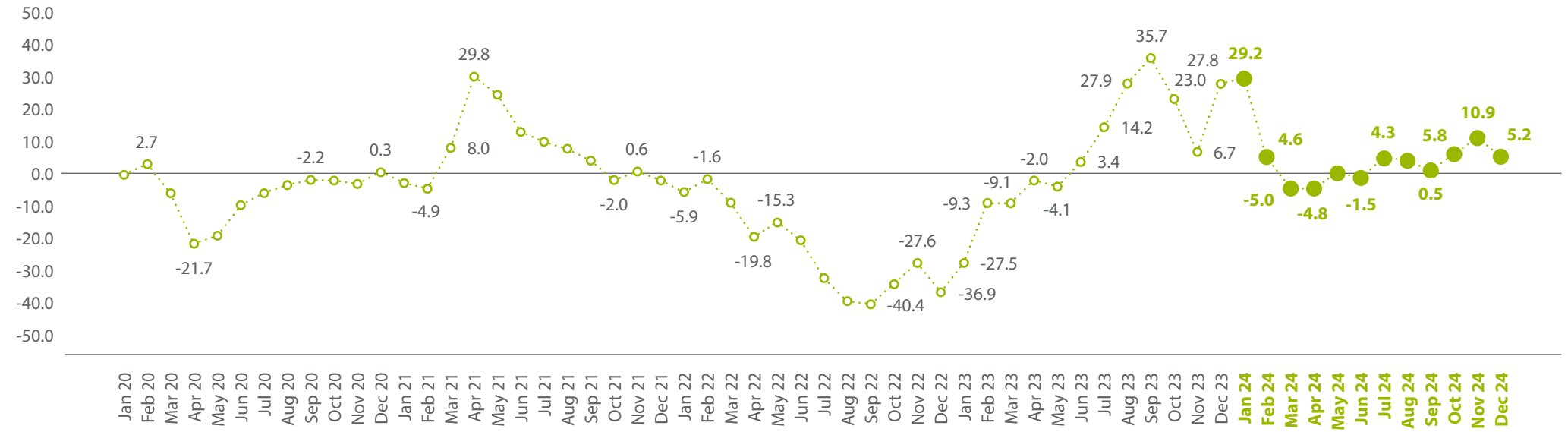
## Annual consumption of natural gas by industrial sector

*TWh/year*

| | 2024 | 2024 vs. 2023 |
|---|---|---|
| | | % |
| Refining | 36.3 | 13.11 |
| Chemistry/Pharmaceuticals | 23.5 | 1.80 |
| Electricity | 21.3 | 2.98 |
| Construction | 19.8 | 5.12 |
| Agri-food | 18.8 | -0.83 |
| Other industry | 15.0 | -2.38 |
| Metallurgy | 12.3 | 1.09 |
| Paper | 12.0 | 1.43 |
| Services | 11.8 | 2.05 |
| Textile | 1.6 | -7.43 |

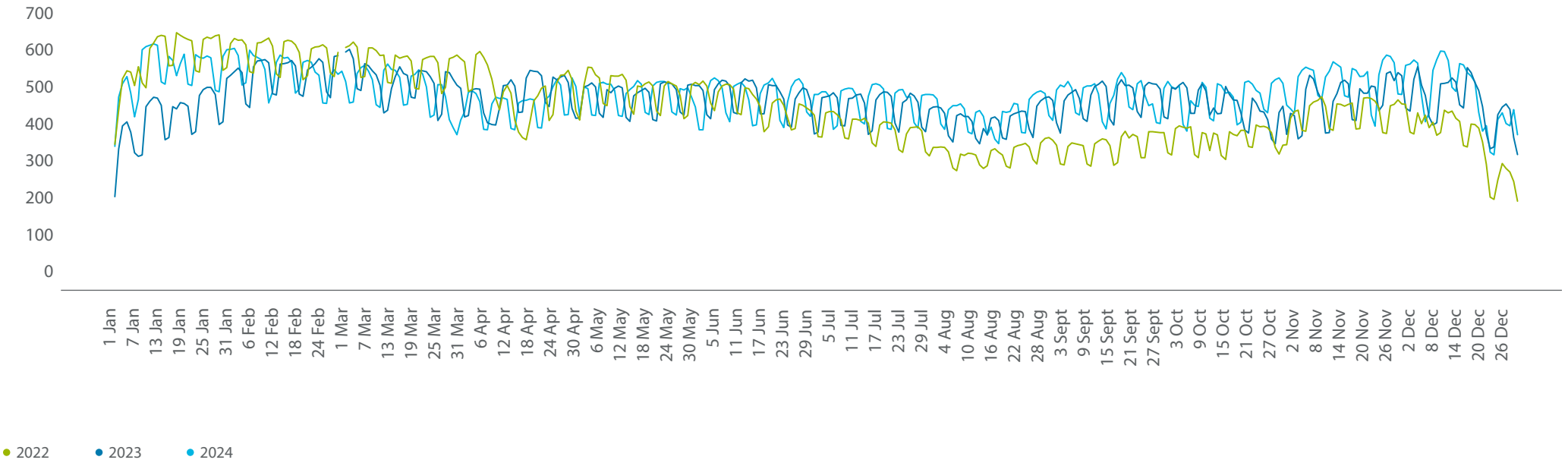
[1] The Large Industrial Gas Consumers Index (IGIG), which began to be published by the Technical Manager of the System in 2015, shows the evolution of gas consumption of the main gas-consuming industries for the ten most intensive industrial sectors in the use of this fuel.

## Large Gas Consumers Evolution



## Daily industrial demand

GWh



## Tankers

Consumption of gas supplied by LNG tankers increased to 12.4 TWh (41,500 tankers loaded) in 2024, an increase of +0.8 TWh compared to 2023. Huelva was the busiest loading terminal, followed by Barcelona and Sagunto.

### → Murgados

0.9 TWh/year
3.1 thousand loads
**24%** $F_{ut}$

### → Huelva

2.6 TWh/year
8.7 thousand loads
**41%** $F_{ut}$

### → Cartagena

2.2 TWh/year
7.4 thousand loads
**35%** $F_{ut}$

### → Barcelona

2.5 TWh/year
8.2 thousand loads
**39%** $F_{ut}$

### → Sagunto

2.2 TWh/year
7.5 thousand loads
**58%** $F_{ut}$

### → Bilbao

1.3 TWh/year
4.3 thousand loads
**70%** $F_{ut}$

### → El Musel

0.7 TWh/year
2.2 thousand loads
**20%** $F_{ut}$

## Mobility

The demand for natural gas in the transport sector continues the trend of previous years, with increased consumption. In 2024, this sector consumed 2.7 TWh/year more than the previous year, reaching 8.2 TWh/year, a growth of 49%.

This increase was mainly due to growth in maritime transport, up 2 TWh compared to the previous year.

### Land transportation

The annual consumption of gas vehicles in Spain has registered an increase of 15% compared to 2023, up to 4.1 TWh (1.2 TWh tankers + 2.9 TWh pipeline).

### Maritime transport

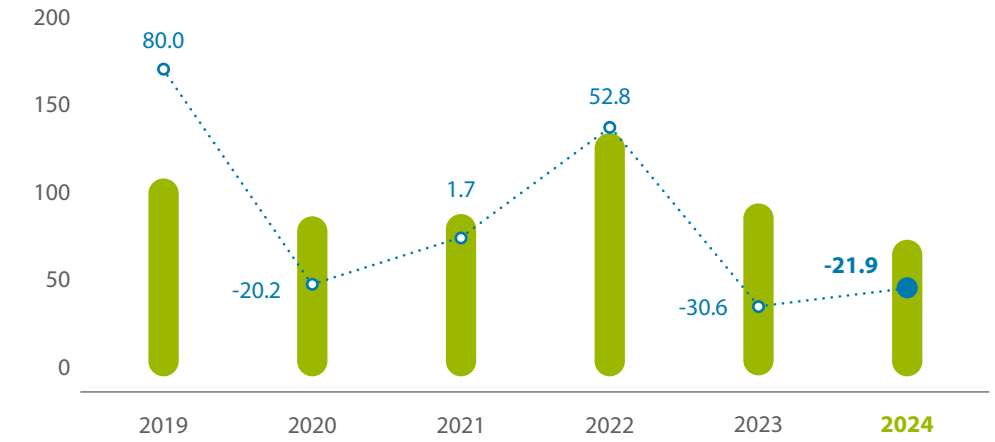
Over the course of 2024, 3.9 TWh have been supplied for maritime transport.

**Demand for natural gas for mobility has continued the upward trend** of recent years **and has grown by 49%** compared to 2023

# Gas demand for the electricity sector

In 2024, gas deliveries to the electricity sector reached 74.7 TWh. This figure was 21.9% lower than in 2023 due to the concurrence of the following factors: an increase in renewable generation (mainly solar and hydro), coupled with lower electricity exports due to international connections.

## Gas deliveries for electricity generation




● % change vs. previous year

The periods of low wind and solar generation have been covered by more than 85% by combined cycles to guarantee the electricity supply (8-11 December).

The demand for electricity in Spain, according to Redeia year-end data, increased by 1.6% in 2024 compared to the previous year.

Natural gas has contributed 11% of the electricity system's demand coverage.

The most significant variations with respect to the previous year were as follows:

- Increase in hydro generation (+15.1 TWh).
- Increase in solar generation. In 2024, 8.0 TWh more energy than the previous year and an increase in installed capacity of 7.3 GW were recorded, exceeding the installed wind power capacity for the first time.
- Increase in other renewables (+5.3 TWh).
- Decline in exports to neighbouring countries (-4.0 TWh).
- Increase in electricity demand (+3.6 TWh).

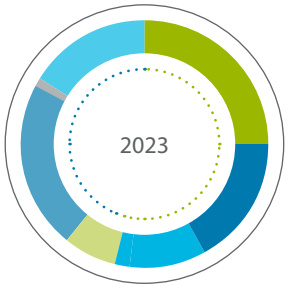
**Natural gas covered 11% of the demand for electrical energy** in Spain in 2024

## Balance of annual electricity

*TWh (e)*

| | 2023 | 2024 | 2024 vs. 2023 | |
|---|---|---|---|---|
| | | | TWh | % |
| **Electricity demand** | **228.4** | **232.0** | **3.6** | **+1.6** |
| Wind | 61.0 | **60.0** | -1.0 | -1.6 |
| Installed capacity [GW] | 30.1 | **31.7** | 1.6 | +5.3 |
| % utilisation of total installed | 23 | **22** | - | - |
| Solar | 41.2 | **49.2** | 8.0 | +19.4 |
| Installed capacity [GW] | 26.4 | **33.7** | 7.3 | +27.6 |
| % utilisation of total installed | 18 | **17** | - | - |
| Hydraulic | 25.3 | **40.4** | 15.1 | +60.0 |
| Other renewables | 4.3 | **9.6** | 5.3 | +123.1 |
| CHP (cogeneration) | 18.3 | **18.5** | 0.2 | +0.9 |
| Nuclear | 53.9 | **52.2** | -1.8 | -3.3 |
| Coal | 3.8 | **2.9** | -0.9 | -23.2 |
| Natural gas | 39.0 | **27.6** | -11.4 | -29.1 |
| International balances | -14.0 export | **-10.0** export | 4.0 | +28.4 |
| France | -1.6 | **2.8** | 4.4 | - |
| Portugal | -10.2 | **-10.2** | 0.0 | - |
| Morocco | -1.9 | **-2.6** | -0.7 | - |

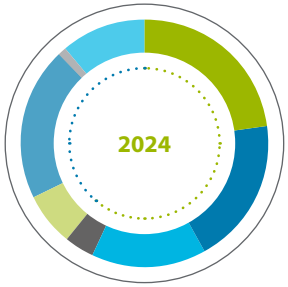
Corrected for labour and temperature effects **+1.4%**




Renewable 53%
Non-renewable 47%

**25%** **7%**
**17%** **22%**
**10%** **1%**
**2%** **16%**

Wind · Hydraulic · CHP (cogeneration) · Coal
Solar · Other renewables · Nuclear · Natural gas




Renewable 61%
Non-renewable 39%

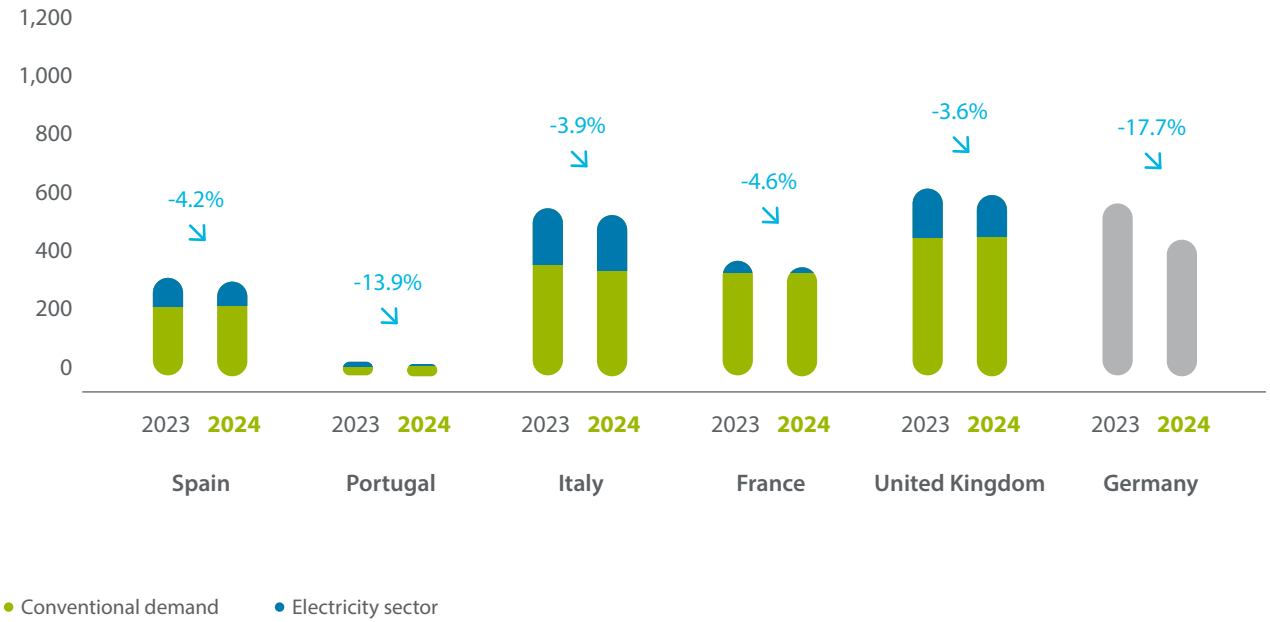
**23%** **7%**
**19%** **20%**
**15%** **1%**
**4%** **11%**

Source: Redeia.

# European comparison of natural gas demand

Total demand for natural gas has experienced a similar overall decline in virtually all countries. Portugal and Germany have posted the largest declines.

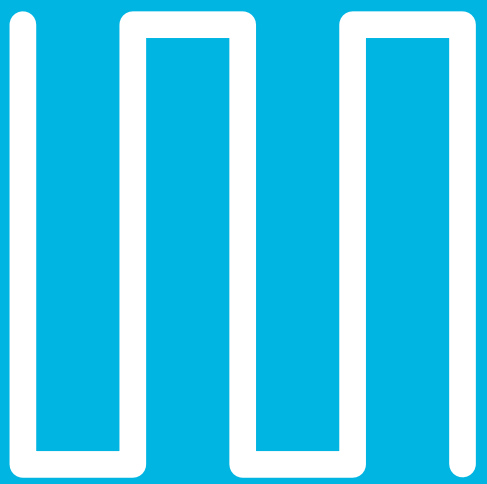
## Total natural gas demand by country




Source: TSO websites (REN, Natran, Teréga, National Grid, Snam).

Note: The same detail of comparable conventional and electricity demand is not available for Germany.
Some data are subject to change as they are provisional.

# 2 Physical operation



# The Spanish Gas System remained **available every day of the year** in 2024 and has always guaranteed supply to all consumers

# Continuity, quality and security of supply

In 2024, the Technical Manager of the System continued to guarantee the continuity, quality and security of supply, under the principles of objectivity, transparency and non-discrimination; seeking the correct operation of the System with criteria of effectiveness, efficiency, better customer service and the correct coordination between access points, storage, transmission and distribution.

At European level, Russia's invasion of Ukraine has remained a key factor in EU energy policy. In 2024, the European Commission (EC) continued to implement measures to reduce dependence on supplies from Russia, consolidating strategies adopted in previous years and exploring new initiatives to ensure security of supply in a context of stressed energy markets. With the expiry of the Ukraine-Russia gas transit agreement on 31 December 2024, the EC worked proactively with the most affected Member States to prepare for the cutoff of Russian gas imports via Ukraine. These measures, coupled with collaborative efforts, mean that the European Union (EU) has been able to address this situation with the utmost confidence.

Among the measures adopted in 2024 are the following:

- Council Regulation (EU) 2024/1745 of 24 June 2024, introducing restrictions on refuelling of Russian LNG at terminals located in the EU. Through this regulation, refuelling services on the territory of the EU are prohibited for transhipment operations of Russian LNG, with the exception of transhipments for Member States. The ban includes ship-to-ship, ship-to-shore, reloading operations and related ancillary services.

- Council Regulation (EU) 2024/2642 of 12 October 2024, extending restrictions on maritime transport of Russian LNG by increasing the number of LNG vessels prohibited from operating in EU ports.

- Council Recommendation (EU) 2024/2476 of 25 March 2024, calling on EU Member States to continue to implement voluntary measures until 31 March 2025, to maintain a collective 15% reduction in gas demand, compared to the average demand recorded between April 2017 and March 2022.

- Commission Implementing Regulation (EU) 2024/2995 of 29 November 2024 establishing the filling trajectory with intermediate targets for 2025 for each Member State with underground storage facilities on its territory and directly interconnected to its market area.

- Regulation (EU) 2024/1789 of the European Parliament and of the Council of 13 June 2024, strengthening solidarity mechanisms in the internal market for natural gas. This regulation extends automatic solidarity arrangements between Member States in emergency situations and ensures priority supply to protected customers. It also establishes clearer rules on compensation between states to ensure an equitable distribution of the costs involved in activating these mechanisms, promoting a more effective and coordinated response to supply crises.

In terms of crisis levels, as defined in European Regulation (EU) 1938/2017, eight countries remain at the "Early Warning" level, particularly: Italy, Latvia, Austria, Croatia, Estonia, the Netherlands, Finland and Slovenia; Germany is at "Warning" level.

At national level, and in this environment of high volatility in international energy markets, the Spanish Gas System has enjoyed a high level of supply diversification. Spain has received natural gas from 14 different origins thanks to the regasification terminals, which position our country as a strategic entry point for LNG within Europe.

In addition, Spain has contributed to the security of supply of the rest of Europe by sending natural gas, both through interconnections and by reloading LNG carriers to other countries.

In this respect, it is worth highlighting the incorporation of the El Musel terminal as a reinforcement of European security of supply. This enables an additional contribution to the entries to the Gas System, if the Competent Authority for security of supply deems it necessary, in the event of an Exceptional Operation Situation (EOS) or declaration of one of the crisis levels defined in EU Regulation 1938/2017. The commissioning of this regasification plant is measure 72 of the More Energy Security Plan (Plan +SE), approved in October 2022, which includes a series of measures aimed at providing greater security in terms of energy prices for households and the Spanish economy as a whole, as well as contributing to increasing the European Union's security of supply.

In 2024, Spain consolidated its key role in Europe's security of supply with a total of 34.5 TWh of natural gas delivered to the rest of the continent, ensuring a stable flow of energy. In addition, regasification terminals more than doubled the number of LNG loads for bunkering compared to the previous year. This not only strengthens Spain's position as an energy hub, but also actively contributes to the decarbonisation of maritime transport through a more sustainable and efficient model.

With regard to the level of underground storage capacity, Spain reached 100% of its capacity in August. The target set by Regulation (EU) 2022/1032 was to reach 90% full by 1/11/2024.

On the other hand, in 2024, a total of 221 LNG unloadings were carried out at the Spanish regasification terminals as a whole.

**Spain consolidates its key role in Europe's security of supply** in 2024, with the contribution of 34.5 TWh to the continent

## Operating Notes

Nine Operating Notes were published throughout 2024, in the following order:

- Operation Note No. 1/2024 - 05.01.2024 (start): Exceptional operation situation level 0 - cold snap.
- Operation Note No. 2/2024 - 25.01.2024: Order TED/72/2023: Minimum level of operational buffer stocks of users.
- Operation Note No. 3/2024 - 16.02.2024 (start): Unavailability of the Sagunto Terminal due to an incident in its transmission network. Exceptional operating situation -level 0-.
- Operation Note No. 4/2024 - 03.06.2024 (start): Temporary reduction in LNG storage capacity at TVB due to the unavailability of an LNG tank at the Sagunto terminal.
- Operation Note No 5/2024 - 01.07.2024 (start): Scheduled maintenance on the León-Oviedo gas pipeline (20").
- Operation Note No. 6/2024 - 26.08.2024: Decommissioning of the TK-1400 at the Barcelona Terminal.
- Operation Note No. 7/2024 – 09.23. 2024 (start: Scheduled maintenance on the León-Oviedo gas pipeline (20"). Caudal river bypass.
- Operation Note No 8/2024 - 04.11.2024 (start): Effects of the DANA (isolated depression at high levels). Inspection work on the Valencia-Alicante gas pipeline (24") and the Valencia-Alicante splitting (20") at Alfarb.
- Operation Note No 9 / 2024 - 29.11.2024 (end). Scheduled work on the León-Oviedo gas pipeline (20"). Insertion Position O06A Villadangos del Páramo.

The Spanish Gas System has remained available every day of the year and has always guaranteed supply to all consumers.

# Natural gas and LNG supplies

In 2024, natural gas supplies reached 340,470 GWh.

For the sixth consecutive year, supplies in the form of liquefied natural gas (LNG) exceeded those of natural gas. The entry of LNG accounted for 60% of the gas supply for the Spanish Gas System. In 2024, LNG came from 14 different origins.

**340,470 GWh**

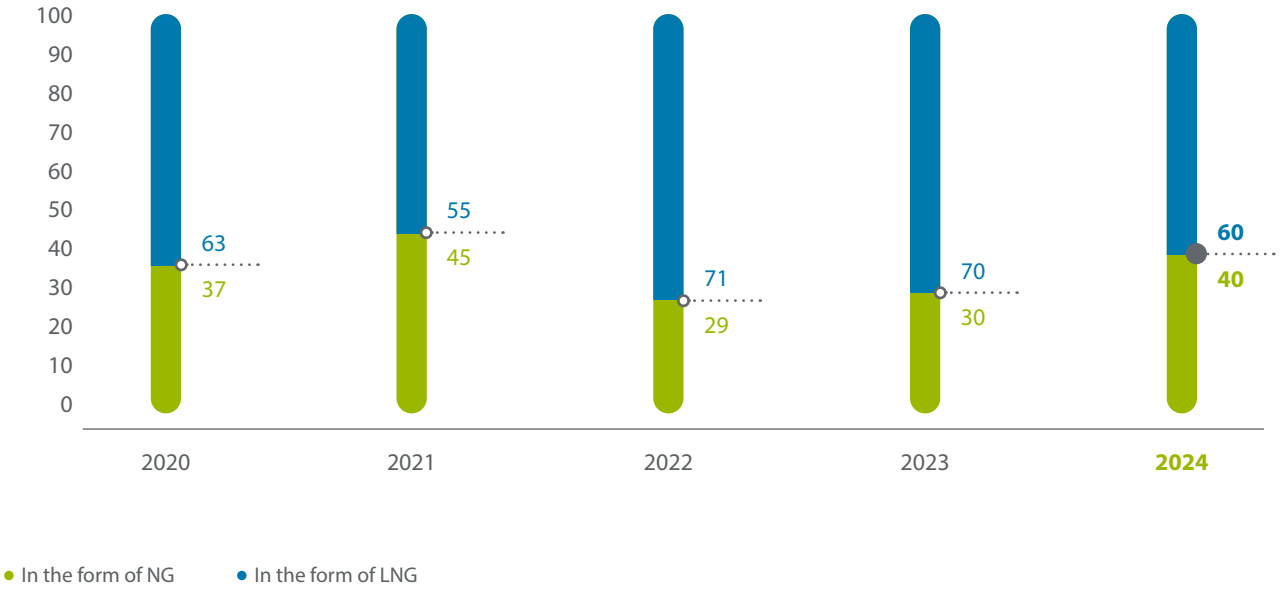
**Procurement**
of natural gas in 2024

## Inputs to the Spanish Gas System

Inputs in the form of natural gas accounted for 134,808 GWh.

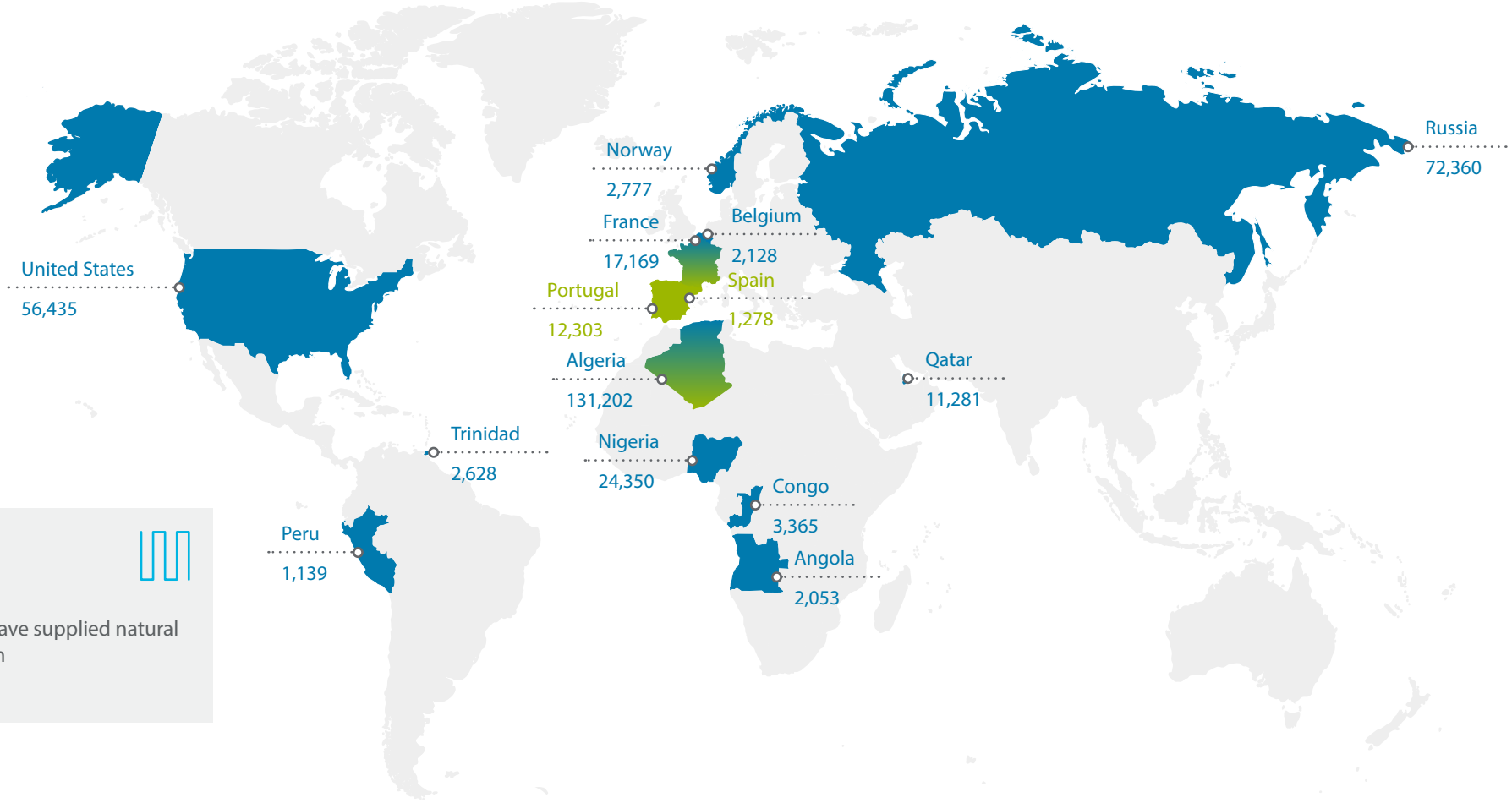
LNG supply, meanwhile, reached 205,662 GWh.

### Supplies evolution



## Origin of supplies

*GWh*



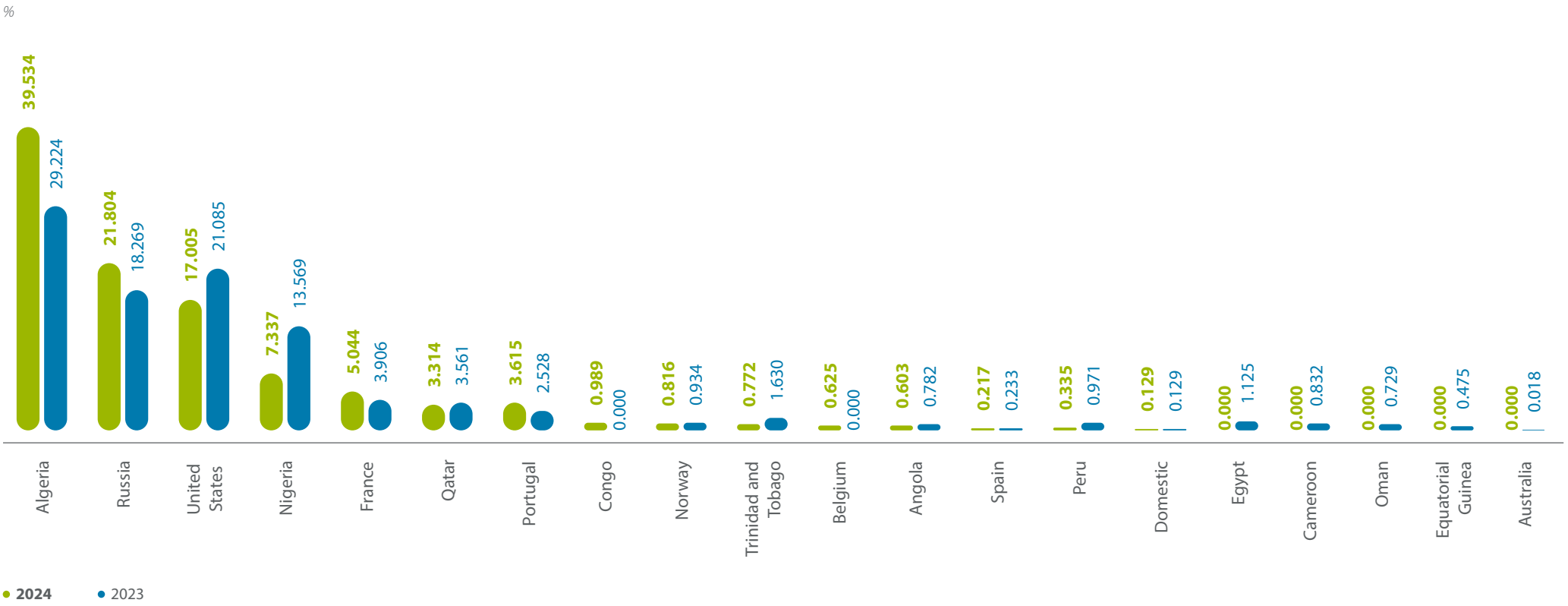

**14**

**Countries** that have supplied natural gas to the System

- NG supplies
- LNG supplies
- NG and LNG supplies

In the supply portfolio, Algeria has become the main supplier to the Spanish Gas System, accounting for 39.5% of supplies in 2024.

## Percentage of diversification of supplies



## Number of LNG vessel unloadings

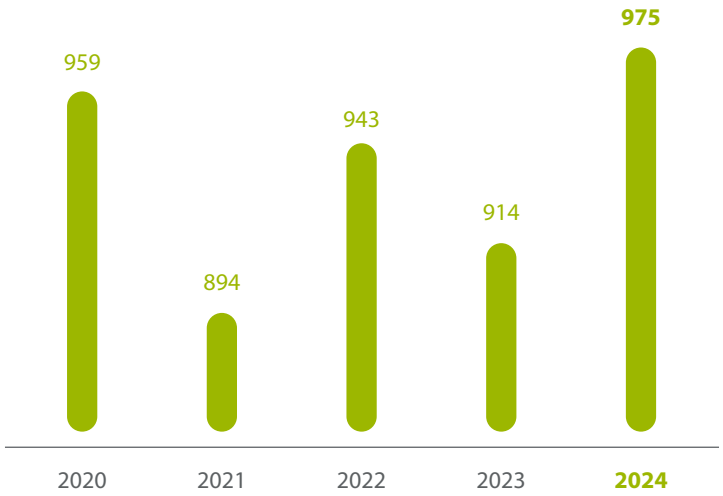
| | 2023 | 2024 |
|---|---|---|
| Barcelona Terminal | 49 | 34 |
| Huelva Terminal | 49 | 38 |
| Cartagena Terminal | 51 | 35 |
| Bilbao Terminal | 63 | 49 |
| Sagunto Terminal | 56 | 32 |
| Mugardos Terminal | 29 | 23 |
| El Musel terminal | 2 | * |
| **Total** | **299** | **211** |

**211**

**Vessels unloaded**
in the System

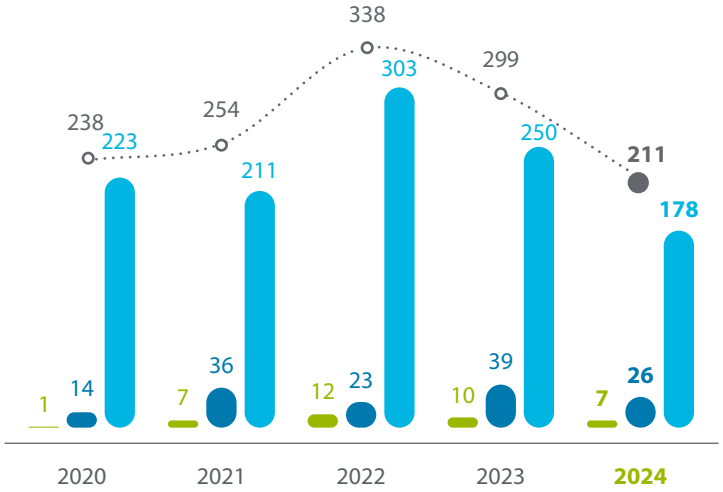
## Evolution of average volume: Unloaded LNG

*∑ GWh total vessels / Total*




In 2024, fewer ships were unloaded than in 2023, with a decrease in LNG bunkering volume of 72.3 TWh. As for the average volume unloaded per vessel in 2024, the figure reached 975 GWh, an increase of 7% versus 2023.

## Evolution of the number of vessels unloaded




* Vessels unloaded at this terminal in 2024 are subject to the provisions of the Resolution of 2 February 2023.

# Unloading by origins and regasification terminals

In 2024, each regasification terminal received gas from at least three different countries. The terminal with the highest number of downloads was Bilbao, followed by Huelva and Cartagena.

# Natural gas connections

The net balance from international connections amounted to 112 TWh, up 69% on the previous year.

## Unloading by origins and regasification terminals

*Number of unloadings*

| | Angola | Algeria | Belgium | Congo | Spain | United States of America | France | Nigeria | Norway | Peru | Qatar | Russia | Trinidad and Tobago | Total | Average size unloaded (GWh) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barcelona | 1 | 16 | – | – | – | 2 | – | 2 | – | – | 12 | 1 | – | **34** | 818 |
| Huelva | – | – | – | 3 | 1 | 12 | – | 13 | – | 1 | – | 7 | 1 | **38** | 947 |
| Cartagena | – | 10 | 1 | 1 | – | 9 | 1 | 4 | – | 1 | – | 7 | 1 | **35** | 748 |
| Bilbao | – | 1 | – | – | – | 8 | – | – | 3 | – | – | 37 | – | **49** | 1,024 |
| Sagunto | 1 | – | 1 | – | – | 6 | – | – | – | – | – | 15 | – | **23** | 1,165 |
| Mugardos | – | 10 | – | – | – | 10 | – | 7 | – | – | 1 | 2 | 2 | **32** | 741 |
| **Total** | **2** | **37** | **2** | **4** | **1** | **47** | **1** | **26** | **3** | **2** | **13** | **69** | **4** | **211** | **975** |
| Average size unloaded (GWh) | 973 | 524 | 447 | 352 | 110 | 535 | 132 | 607 | 447 | 36 | 581 | 670 | 435 | 975 | – |

# Regasification terminals

Spain continues to lead Europe in terms of the number of LNG infrastructures and LNG vaporisation and storage capacity.

The facilities maintain their characteristics and technical capabilities. The Spanish Gas System has a total of 27 storage tanks, with nine berths and a capacity for methane tankers of up to 270,000 m³.

**Spain is the European country with the most** LNG terminals, vaporisation capacity and LNG storage in Europe

## Single Tank Model

In 2024, each regasification terminal received gas from at least three different countries. The terminal with the highest number of downloads was Bilbao, followed by Huelva and Cartagena.

### Technical characteristics of the regasification terminals

| | | LNG storage | | Truck loading capacity | Berths | |
|---|---|---|---|---|---|---|
| Regasification terminal | Maximum vaporisation capacity (Nm³/h) | No. of tanks | m³ LNG | GWh/day | No. of berths | m³ LNG |
| Barcelona | 1,950,000 | 6 | 760,000* | 17 | 2 | 266,000 |
| Huelva | 1,350,000 | 5 | 619,500 | 17 | 1 | 175,000 |
| Cartagena | 1,350,000 | 5 | 587,000 | 17 | 2 | 266,000 |
| Bilbao | 800,000 | 3 | 450,000 | 5 | 1 | 270,000 |
| Sagunto | 1,000,000 | 4 | 600,000** | 11 | 1 | 266,000 |
| Mugardos | 412,800 | 2 | 300,000 | 11 | 1 | 266,000 |
| El Musel | 800,000 | 2 | 130,000 | 9 | 1 | 266,000 |
| **Total** | **7,662,800** | **27** | **3,446,500** | **87** | **9** | **Up to 270,000** |

* Includes total tanks without taking into account the removal of the TK-1400 tank, as this was carried out in November 2024, as published in Operational Note No. 6/2024.
** Includes total tanks without taking into account the temporary reduction indicated in Operational Note No. 4/2024.

# Production at regasification terminals

In 2024, inflows from regasification terminals to the System totalled 196,263 GWh. Tanker loading increased by 7.7%, while regasification decreased by 25.8%.

Average daily emissions at the regasification terminals reached 502 GWh/day.

In terms of stocks in tanks, the annual average was 56%, occasionally reaching 75%.

**12,439** GWh

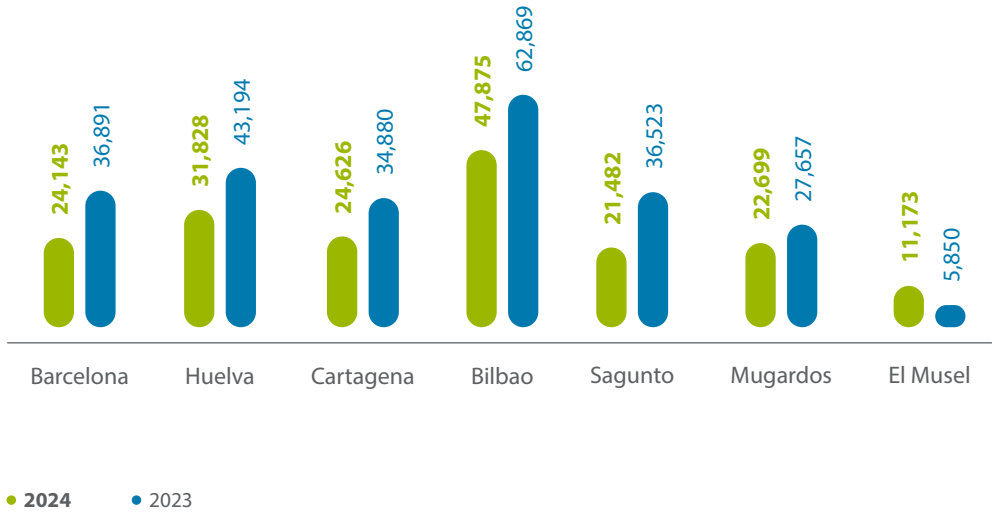
**Loaded by tankers**
(**7.7%** vs 2023)

**502** GWh/day

**Average daily** production of the regasification terminals

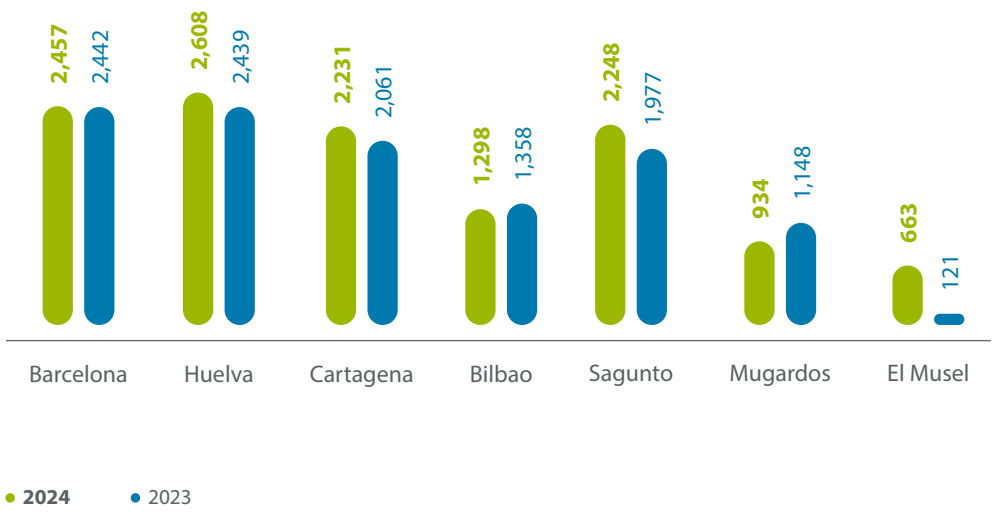
## Regasification evolution

*GWh*



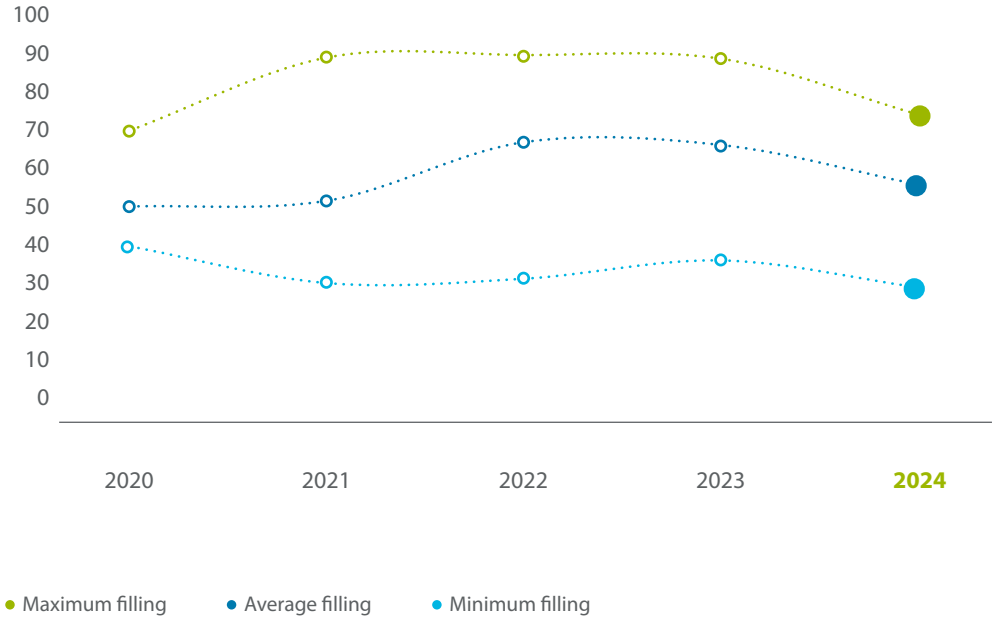
## Tanker trucks loading evolution

*GWh*

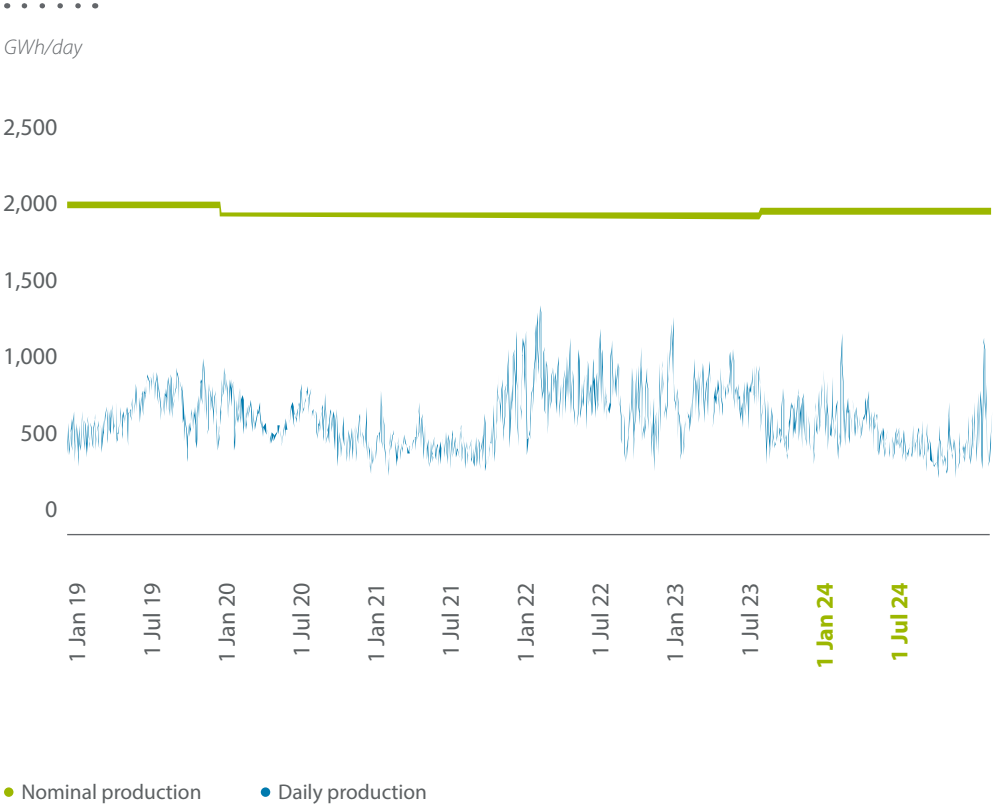



## Evolution of total stocks in tanks

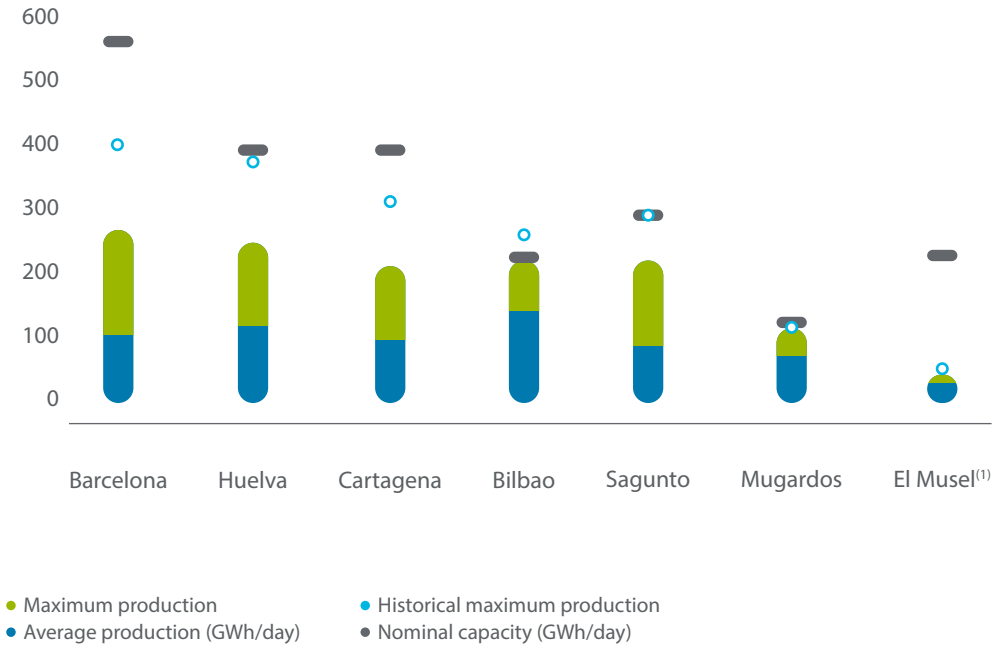
*%*



## Nominal and daily production evolution




## Productions and capacities by regasification terminals




[1]Issuance subject to the stipulations of order TED/578/2023.

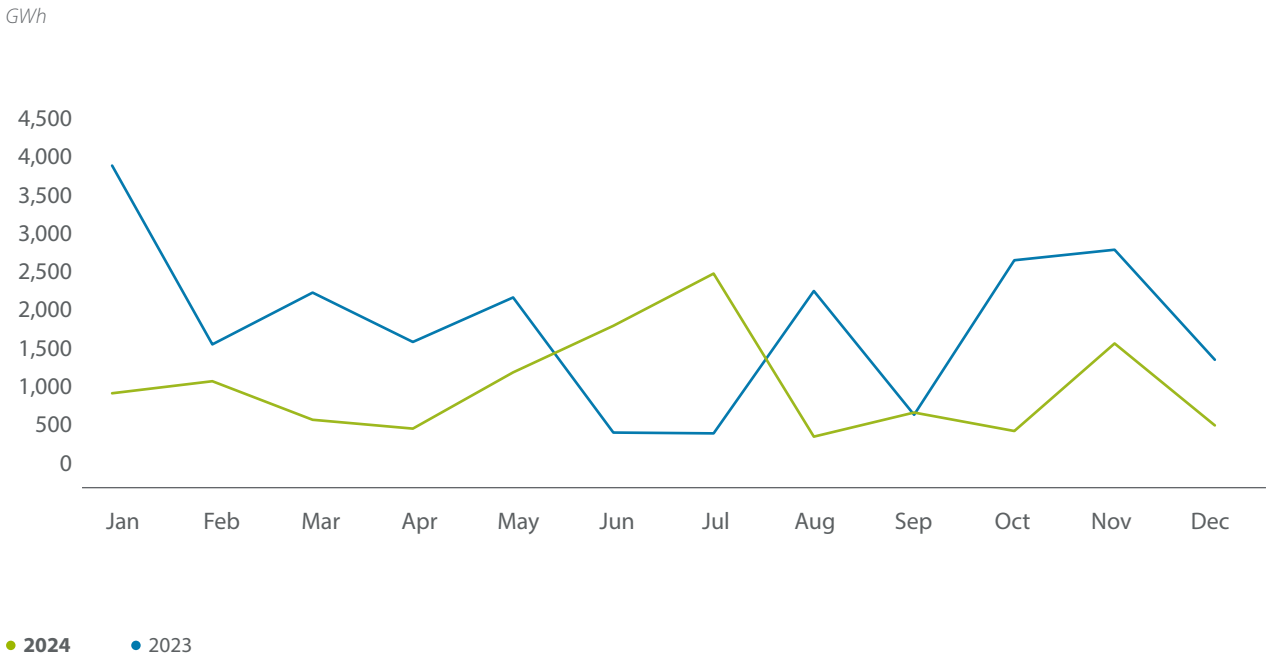
# Vessel loading at regasification terminals

In 2024, outflows from regasification terminals in the form of shiploads totalled 12,309 GWh, which contributed to Europe's security of supply.

**12,309** GWh

**Outputs** from regasification terminals in the form of vessel loading

## Evolution of vessel loading



# Tanker trucks loading at regasification terminals

In 2024, the volume of tanks managed was 12,439 GWh, 7.7% more than in 2023. Excluding the increase at the El Musel terminal, in service since 2023, the most significant increase is seen at the Huelva terminal.

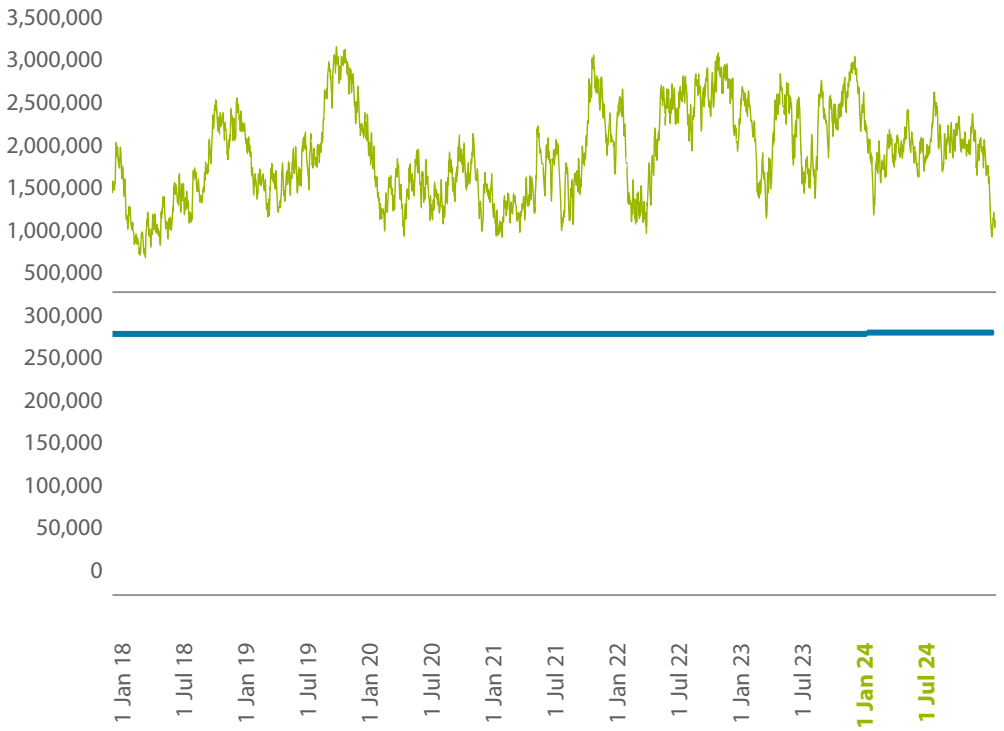
## Tanker trucks loading at regasification terminals

| | 2023 | | | | 2024 |
|---|---|---|---|---|---|
| **Terminal** | **Total GWh** | **Total GWh** | **o/2023** | **Max. daily GWh/day** | **o/2023** |
| Barcelona | 2,442 | **2,457** | **+0.6%** | **12** | **-18.8%** |
| Huelva | 2,439 | **2,608** | **+6.9%** | **14** | **+22.1%** |
| Cartagena | 2,061 | **2,231** | **+8.3%** | **14** | **+13.2%** |
| Bilbao | 1,358 | **1,298** | **-4.4%** | **6** | **+3.9%** |
| Sagunto | 1,977 | **2,248** | **+13.7%** | **10** | **+4.4%** |
| Mugardos | 1,148 | **934** | **-18.7%** | **6** | **-13.5%** |
| El Musel | 121 | **663** | **+450.0%** | **4** | **+43.3%** |
| **Total** | **11,546** | **12,439** | **7.73%** | **54** | **8.0%** |

# Stocks at terminals

## Evolution of stocks at terminals

*$m^3$ LNG*



# International connections

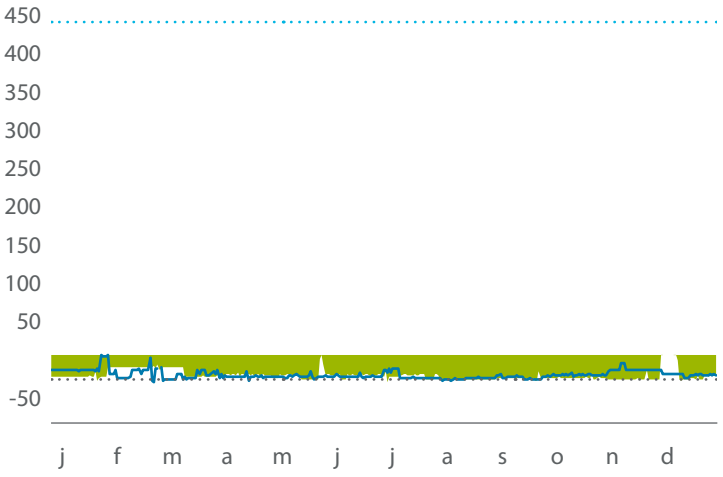
The net balance from international connections was 111,803 GWh in 2024, 69% higher than the previous year.

## International connections with North Africa

In 2024, the net balance through international connections in North Africa reached 96,188 GWh, 13% higher than in 2023.

### Inputs via Tarifa

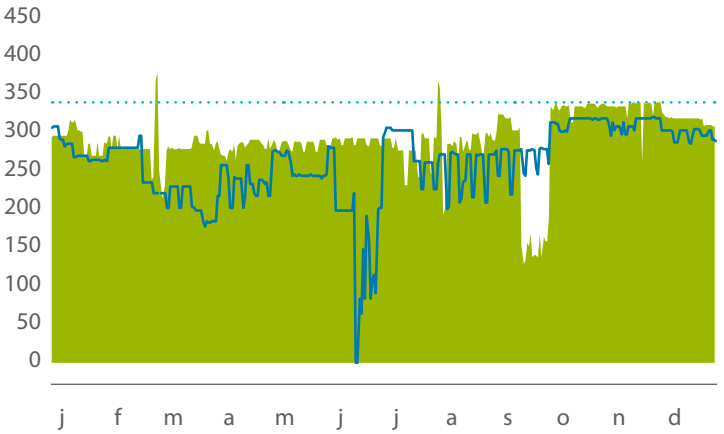
*GWh/day*




**2024** 2023 Nominal import Nominal export

### Inputs via Almería

*GWh/day*



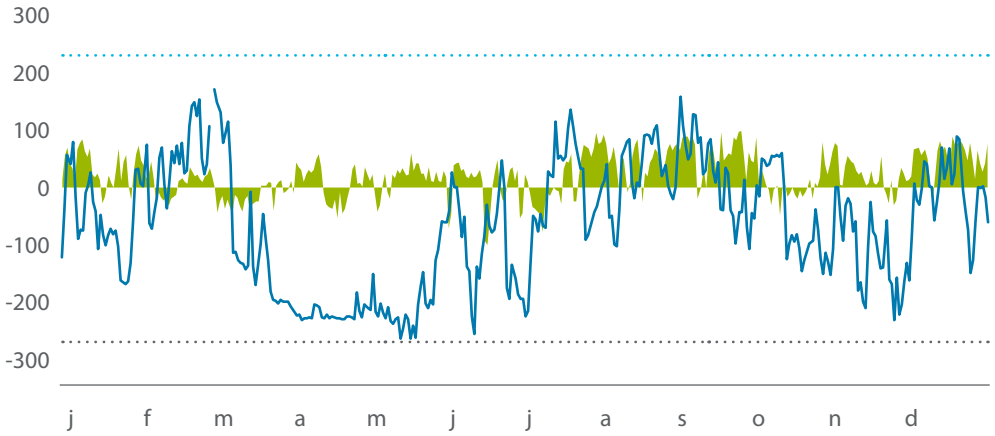

**2024** 2023 Nominal

# International connections with France

In 2024, the net balance through international connections with France reached 7,367 GWh in the import direction. In 2023, the net balance was in an export direction, mainly due to prolonged strike episodes in France and the need to fill its underground storage facilities.

## Physical movements - IC France

*GWh/day*
*Balance = Imports - Exports*



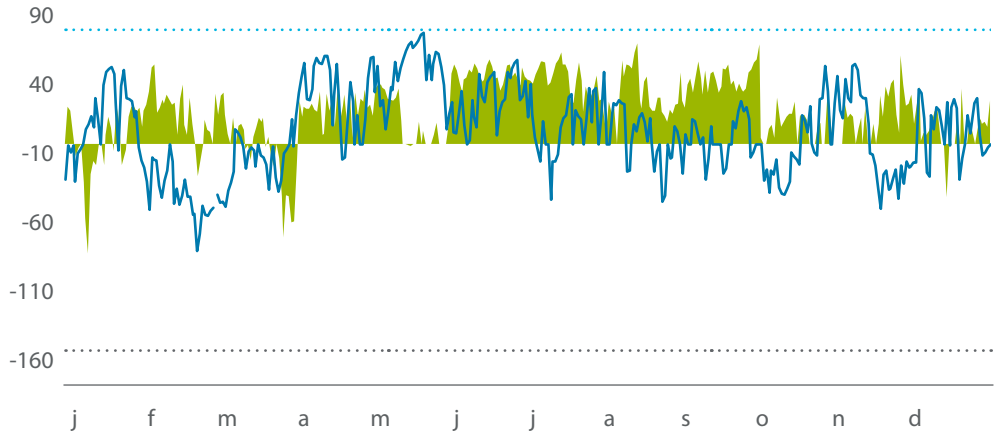

**2024** 2023 Nominal import Nominal export

# International connections with Portugal

In 2024, the net balance through international connections with Portugal reached 8,248 GWh, 130% higher than the previous year.

## Physical movements - IC Portugal

*GWh/day*
*Balance = Imports - Exports*




**2024** 2023 Nominal import Nominal export

# Underground storage facilities

Physical gas injected during 2024 amounted to 9,200 GWh. Physical extraction, on the other hand, was 10,609 GWh.

Order TED/72/2023 of 26 January defined the methodology for calculating users' minimum operating buffer stocks in order to reach 90% of underground storage on 1 November each year. Spain reached 100% full capacity in August 2024.

**100%**

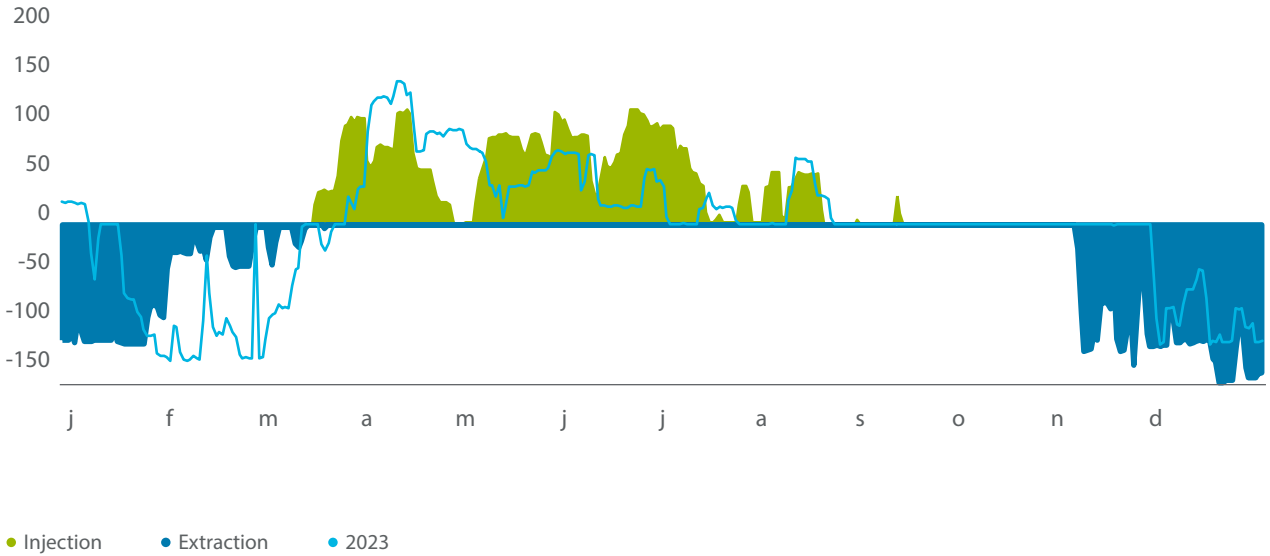
**Fill level** of storage in August (level required by EU: **90%** as at 1 November)

**9,200 GWh**

**Gas injected** into storage

## Extraction / injection vs. 2023

*GWh/day*




**10,609 GWh**

**Gas extracted** into storage

## Injection/Extraction in storage facilities

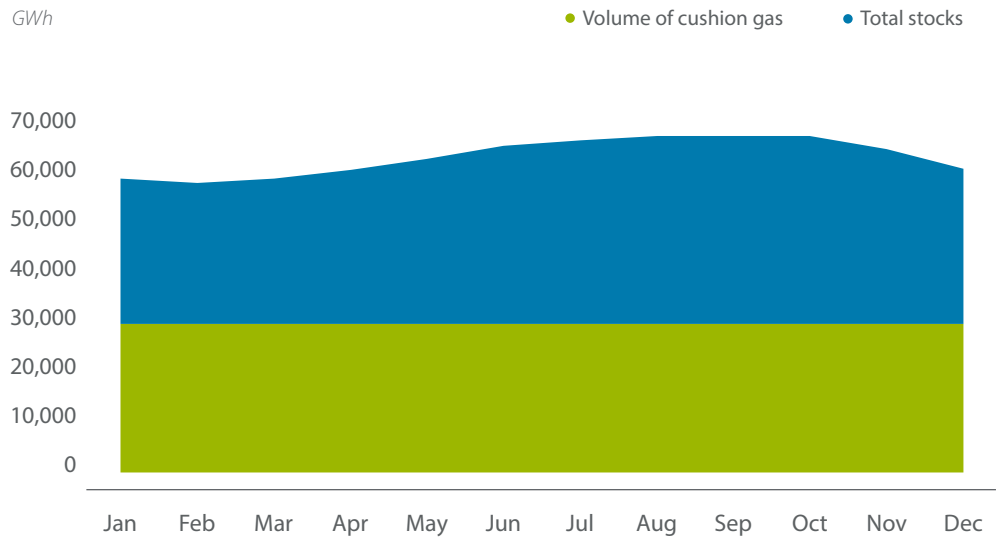
*GWh*

| | 2023 | 2024 | o/ 2023 |
|---|---|---|---|
| Injection | 7,070 | **9,200** | 30% |
| Extraction | 8,669 | **10,609** | 22% |

**58,820** GWh

**Final stocks**
in underground storage

## Stocks in underground storages




## Full management of underground storage facilities

| | | Jan | Feb | Mar | Apr | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Working capacity | *GWh* | 34,179 | 34,179 | 34,179 | 34,179 | 34,179 | 34,179 | 34,179 | 34,179 | 34,179 | 34,179 | 34,179 | 34,179 |
| Volume of cushion gas | *GWh* | 28,793 | 28,793 | 28,793 | 28,793 | 28,793 | 28,793 | 28,793 | 28,793 | 28,793 | 28,793 | 28,793 | 28,793 |
| **Initial stocks** | ***GWh*** | **60,230** | **56,895** | **56,141** | **56,833** | **58,718** | **60,763** | **63,229** | **64,410** | **65,140** | **65,182** | **65,183** | **62,681** |
| Injection (net) | *GWh/month* | 0 | 0 | 849 | 1,885 | 2,046 | 2,466 | 1,181 | 731 | 42 | 1 | 0 | 0 |
| Average daily injection | *GWh/day* | 0 | 0 | 27 | 63 | 66 | 82 | 38 | 24 | 1 | 0 | 0 | 0 |
| Extraction (gross) | *GWh/month* | 3,334 | 755 | 157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,502 | 3,860 |
| Average daily extraction | *GWh/day* | 108 | 26 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 83 | 125 |
| **End stocks** | ***GWh*** | **56,895** | **56,141** | **56,833** | **58,718** | **60,763** | **63,229** | **64,410** | **65,140** | **65,182** | **65,183** | **62,681** | **58,820** |

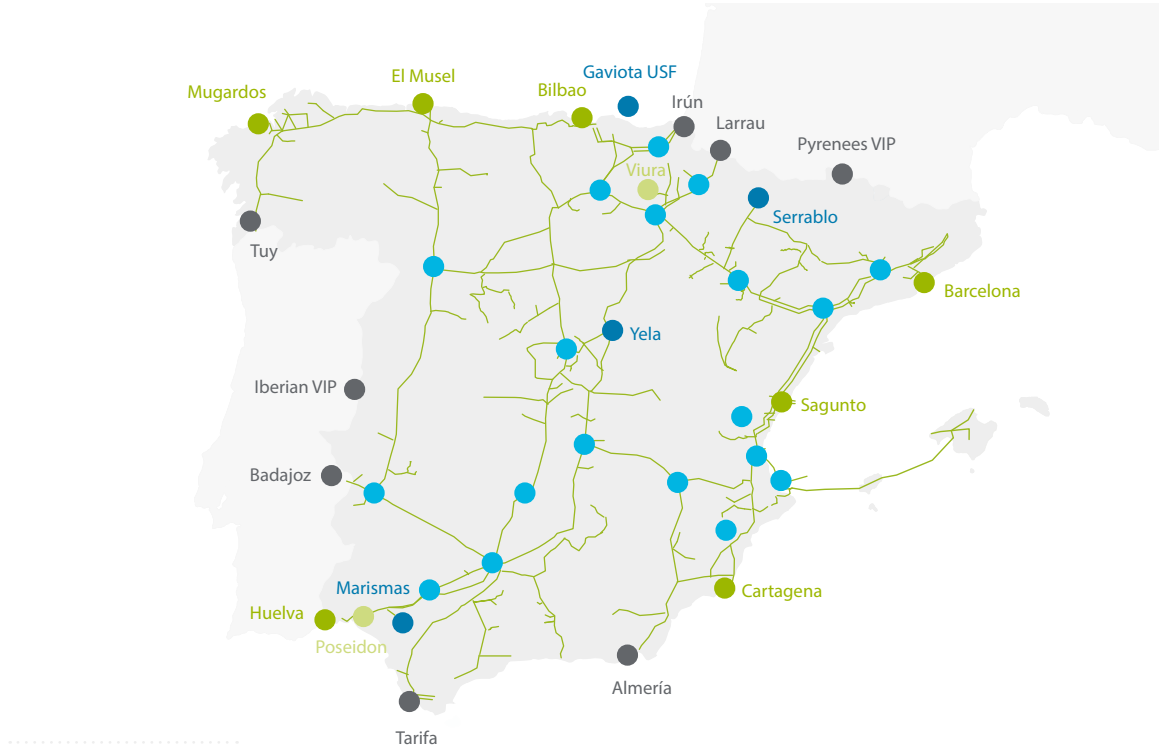
# Gas transmission

The Gas System has 11,369 km of primary transport pipelines at the end of 2024, and a total of 13,361 km, including secondary pipelines.

**11,369 km**

**Primary transmission pipelines** (**13,361 km**, including secondary ones)

## Transmission infrastructure

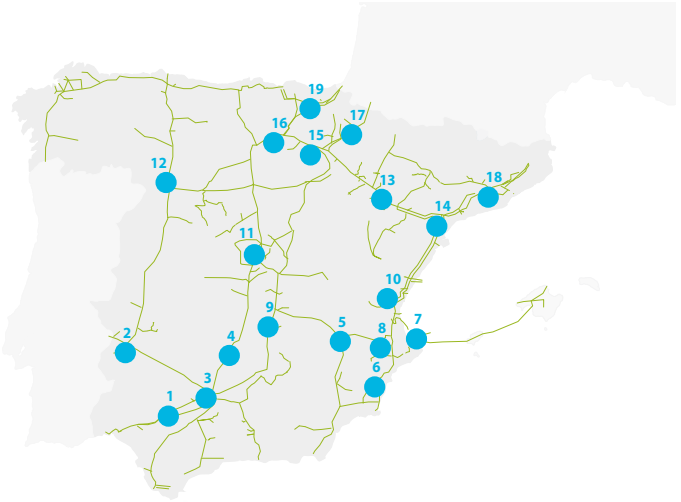



LNG terminals · Underground storage facilities · Compressor stations · International connections · Gas fields

# Compressor stations

The gas pipeline network has nineteen compressor stations, as well as transport centres, regulation and measurement stations and connection points to the network. They allow the correct primary distribution of gas throughout national territory and provide security of supply of natural gas even in situations of peak demand.

## Compressor stations




1. Seville CS
2. Almendralejo CS
3. Córdoba CS
4. Almodóvar CS
5. Chinchilla CS
6. Crevillente CS
7. Denia CS
8. Montesa CS
9. Alcázar CS
10. Paterna CS
11. Algete CS
12. Coreses CS
13. Zaragoza CS
14. Tivissa CS
15. Villar de Arnedo CS
16. Haro CS
17. Navarra CS
18. Bañeras CS
19. Euskadour CS

# Average emission gas quality

| | Barcelona | Huelva | Cartagena | Bilbao | Sagunto | Mugardos | El Musel | Aznalcázar Gas Field | Viura Gas Field | Valdemingómez | La Galera | Portugal Connection | France Connection | Tarifa | Almería |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Molar fractions %** | | | | | | | | | | | | | | | |
| Nitrogen ($N_2$) | 0.310 | 0.093 | 0.315 | 0.193 | 0.318 | 0.135 | 0.181 | 1.361 | 0.678 | 0.857 | 1.077 | 0.119 | 0.461 | 1.149 | 1.646 |
| Carbon dioxide ($CO_2$) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.251 | 0.269 | 1.443 | 0.857 | 0.010 | 0.244 | 1.046 | 1.553 |
| **Gas quality** | | | | | | | | | | | | | | | |
| H.C.V. [KWh/$m^3$(n)] | 11.763 | 11.802 | 11.643 | 11.581 | 11.743 | 11.540 | 11.324 | 11.330 | 11.629 | 10.872 | 10.877 | 11.667 | 11.642 | 11.684 | 11.667 |
| H.C.V. [MJ/$m^3$(n)] | 42.348 | 42.487 | 41.916 | 41.691 | 42.275 | 41.546 | 40.765 | 40.789 | 41.863 | 39.141 | 39.157 | 41.999 | 41.913 | 42.063 | 42.001 |
| Relative density | 0.597 | 0.597 | 0.590 | 0.585 | 0.597 | 0.582 | 0.570 | 0.587 | 0.598 | 0.574 | 0.568 | 0.590 | 0.596 | 0.619 | 0.631 |

# 3 Commercial operation



High levels of LNG storage contracting and of LNG storage and the filling of underground storage facilities **have made it possible to face 2024 with a more than solid guarantee of supply** to cover domestic demand and contribute to Europe's security of supply

# Procurement and commercial use

## Main commercial figures

In 2024, new users joined the Gas System Facilities Access Framework Contract and the Balancing Portfolio Framework Contract.

**At 31 December 2024:**

**307** **Users adhered** to the Framework Agreement for access to the Spanish Gas System Facilities

**286** **Users adhered** to the Balancing Portfolio Framework Contract. All had Balancing Portfolio in PVB

**239** TVB Balancing Portfolio | **240** Balancing Portfolio in AVB

**232** **Authorised companies** in the Framework Contract for Access to the Spanish Gas System Facilities and in the three Balancing Portfolios (PVB, TVB and AVB)

**26** **Balancing Portfolio Groupings** in place

**25** PVB | **10** AVB | **11** TVB

**50** Subjects are part of the groupings

**+1,600** **Active users** in the SL-ATR Logistics System.

## Procurement capacity

The high levels of LNG tank storage procurement and the high filling of underground storage facilities reflect the commitment of users to the Spanish Gas System. This has made it possible to face the year with a more than solid guarantee of supply to cover not only domestic demand, but also to reinforce the security of European supply through exports via international connections and ship reloads from Spanish terminals. In fact, in 2024 Spain consolidated its position as the second country in Europe in terms of the volume of LNG recharged, behind only Belgium.

The capacity request and contracting platform managed by Enagás GTS has been repeatedly subject to competitive auctions with multiple rounds and participants. This has been made clear in the annual auctions, where slots of LNG offloading and storage capacity have been allocated until 2039. The process went smoothly and successfully without any contingency.

The most noteworthy aspects of 2024 in the field of capacity procurement are the following:

- More than 150,000 capacity allocation processes.
- More than 60 shippers have participated in the allocation processes.
- Great interest in the services of loading and unloading slots, LNG storage and underground storage, with contracting ratios close to 100%.

In the annual auctions, more than **360 LNG unloading and capacity slots have been allocated until 2039**

**+150,000**

**Capacity allocation processes**

**+60**

**Shippers** that have participated in allocation processes

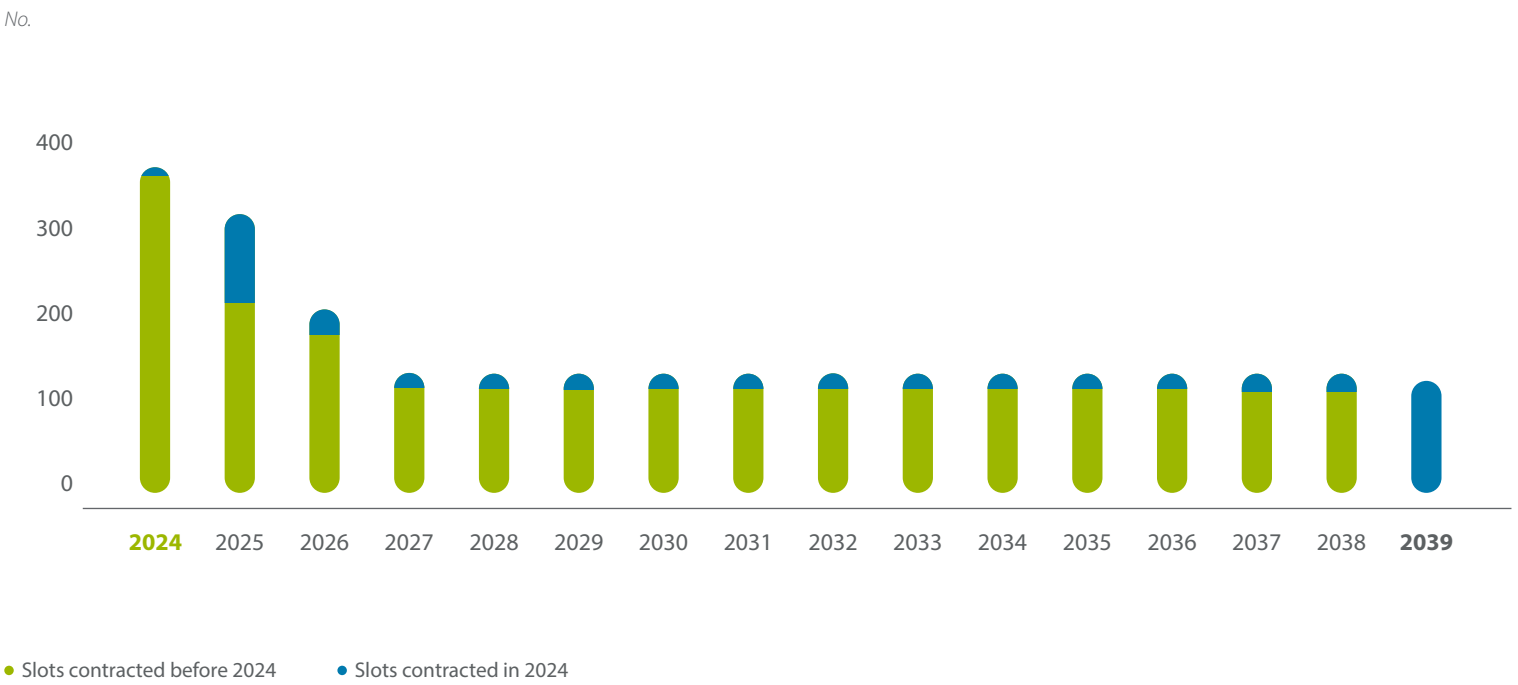
## Services associated with slots

- Over the course of 2024, more than 360 unloading slots and over 500 loading slots of all existing size categories (small scale, medium scale and large scale), have been allocated until 2039.
- At the annual auction of offloading slots, 250 slots have been offered for the next 15 years. The allocation ratio was approximately 97% of supply, in line with previous years.
- The ratio of applications received to applications offered was approximately 250%.

**+360**

**Unloading slots** allocated until 2039

### Unloading slots



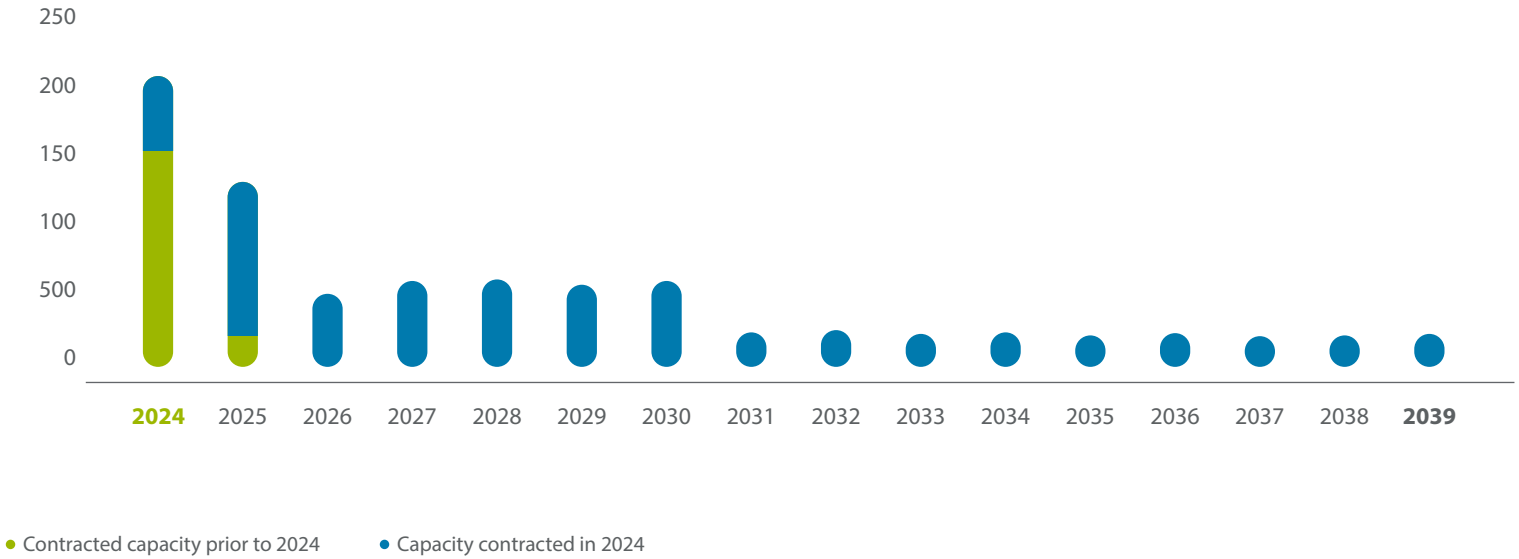
- For the first time, a monthly auction of loadings with an ascending clock mechanism has been carried out automatically in the SL-ATR system.

**+500**

**Loading slots** allocated until 2039

## Loading slots

*No.*



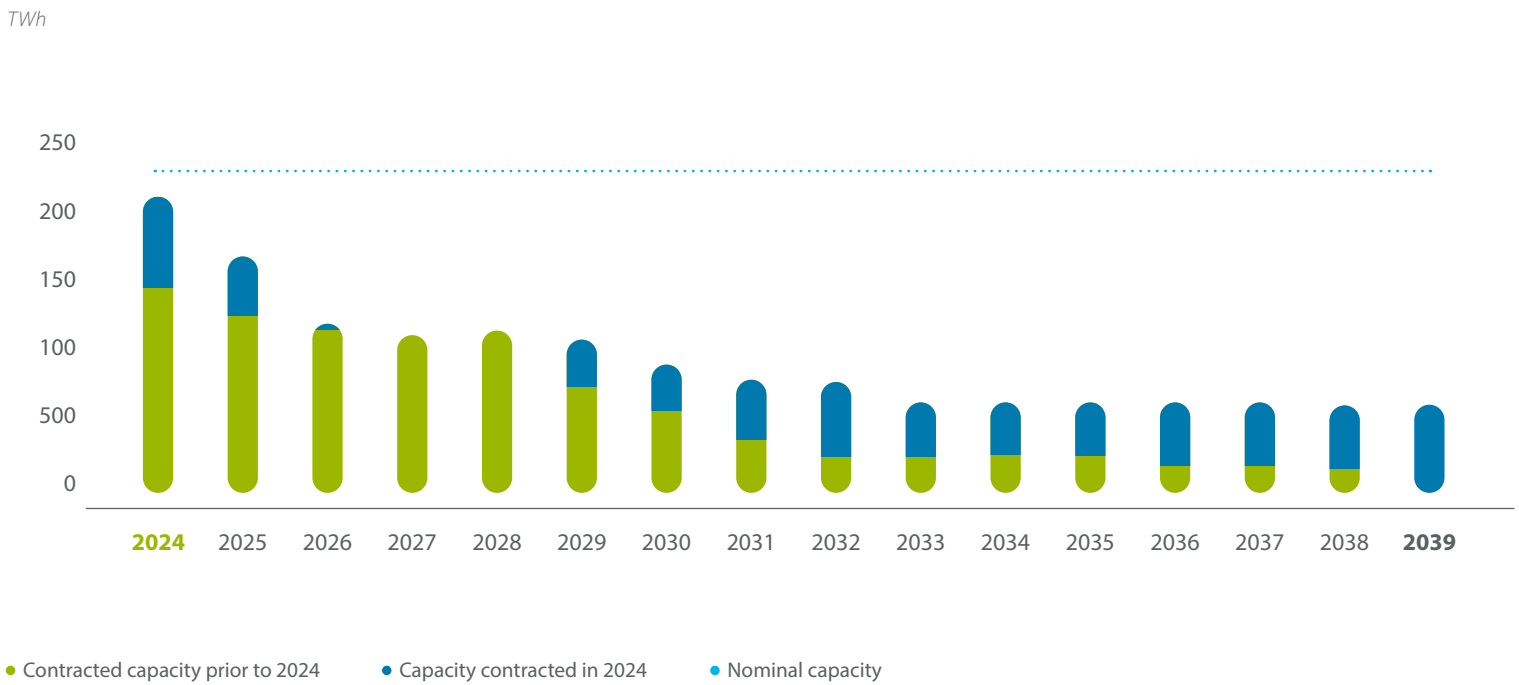
## LNG storage service

- The contracting of the LNG storage service during 2024 reached an average of 94%. On some days, this reached 100%.
- In the 2024 annual auction, capacity was offered for the following 15 years (until 2039), except for gas years 2027 and 2028, in which there was no available capacity. It has been allocated in all years in which capacity has been offered.
- In general terms, the requested capacity has been higher than the capacity offered for the first years. In the case of 2026, the requested capacity was even higher, at 600%.

**94%**

**Average contracting**
of the LNG storage service

### Contracting of LNG storage capacity



## Underground storage service

- Since August 2024, no capacity has been offered in the quarterly and monthly allocations as it has been fully contracted. Of the 35,926 GWh, only 100 GWh were reserved in the daily horizon products.
- As in the case of slots and LNG storage services, premiums have also been recorded in the long-term allocation auctions.

For more details on the **capacities contracted** in the System, please refer to **Annex 1** of this chapter in the downloadable information by clicking **here.**

For further details on **auctions that do not involve slots,** please refer to **Annex 2** of this chapter in the downloadable information by clicking **here.**

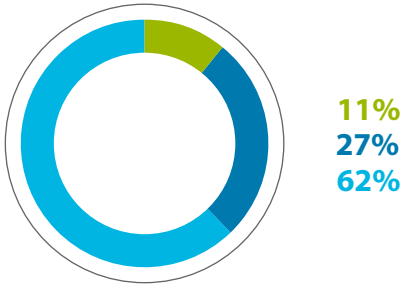
For more details on the **slot allocation procedures,** see **Annex 3** of this chapter in the downloadable information by clicking **here.**

## Organised secondary capacity market

During 2024, 92 users were authorised to trade on the organised secondary capacity market, of which 24 were active users. The majority of bids were for sale (794), representing 78% of the total number of bids submitted. 281 transactions were matched, 31 associated with unloading slots, 75 for LNG storage and 175 for tanker trucks loading. The volumes traded in these transactions relative to contracted capacity are 10%, 0.1% and 0.3%, respectively.

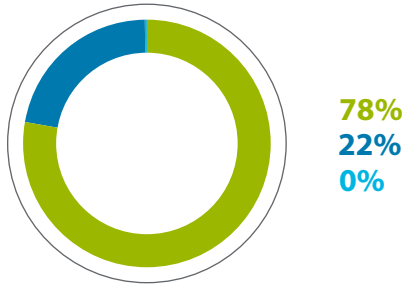
### Matched transactions in the secondary market

*No.*




### Matched capacity in the secondary market

*%*



## Continuous improvement in contracting processes

### Improvements in management of congestion and anti-hoarding

In 2024, new services (regasification, virtual liquefaction, PVB entry and PVB exit) were incorporated into the daily capacity use/loss mechanism. In addition, the algorithm for calculating the capacity offered by application of the oversale and capacity repurchase mechanism, as well as the mechanism for the use or lose capacity for products with a longer-than-daily term, has been automated and refined.

The application of these mechanisms has allowed additional capacity to emerge in congested services, such as LNG storage, tanker loading at the Bilbao Terminal, entry via the Almería International Connection and virtual liquefaction.

### Strengthening the contracting platform

Enagás GTS implemented 16 lines of improvement with a focus on regulatory needs and/or user requests. In addition, a multidisciplinary team has been set up, comprising systems and business technical profiles, to follow up and monitor the capacity auctions.

# Use of facilities by agents

## Regasification terminals

The volume of LNG offloaded amounted to 205,662 GWh in 2024, down 26% on the previous year. Meanwhile, ship reloading operations totalled 13,661 GWh, 38% less than in 2023.

During 2024, users made use of regasification terminals 26% less than in the previous year.

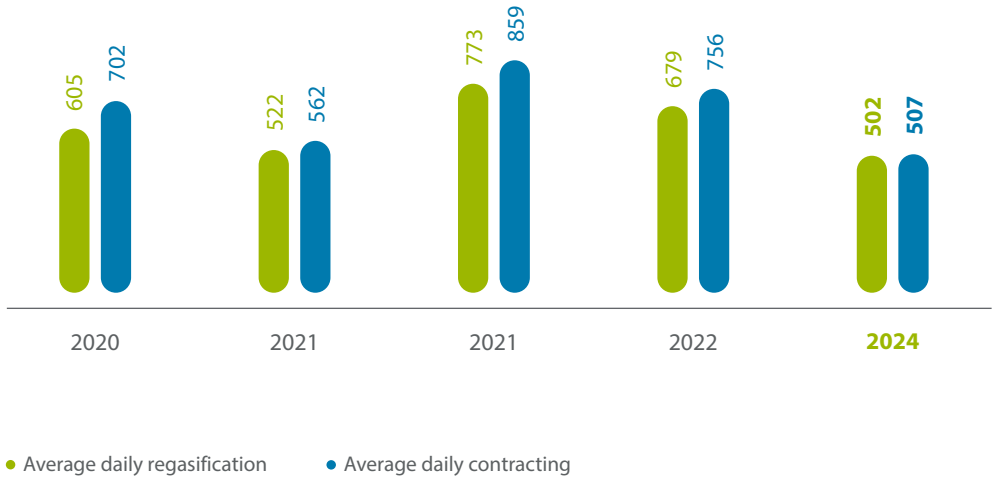
### Use of regasification terminals

*GWh*

| | 2023 | 2024 |
|---|---|---|
| Regasification | 250,095 | 185,762 |

### Evolution of average regasification and contracting in the terminals

*GWh*



# Underground storage facilities

Users made greater use of underground storage in 2024 than in 2023. Extraction increased by 23% and injection by 6%.

## Use of underground storage

*GWh*

| | 2023 | 2024 |
|---|---|---|
| Extraction | 8,904 | **10,948** |
| Injection | 8,078 | **8,548** |

**+23%**

**Increased extraction**
in underground storage
vs 2023

**+6%**

**Increased injection**
in underground storage
vs 2023

# International connections

During 2024, users made the following usage for international connections:

- Tarifa International Connection. Exports reached 9,703 GWh, 2% up on the previous year.
- Almería International Connection. Imports have registered 105,891 GWh, 12% more than in 2023.
- VIP Pirineos International Connection. Imports amounted to 16,076 GWh, 11% higher than the previous year, while exports, which broke records the previous year, amounted to 8,709 GWh, 77% down on 2023.
- Iberian VIP International Connection. Imports amounted to 12,303 GWh, 22% higher than the previous year, while exports amounted to 4,056 GWh, 37% lower than in the previous year.

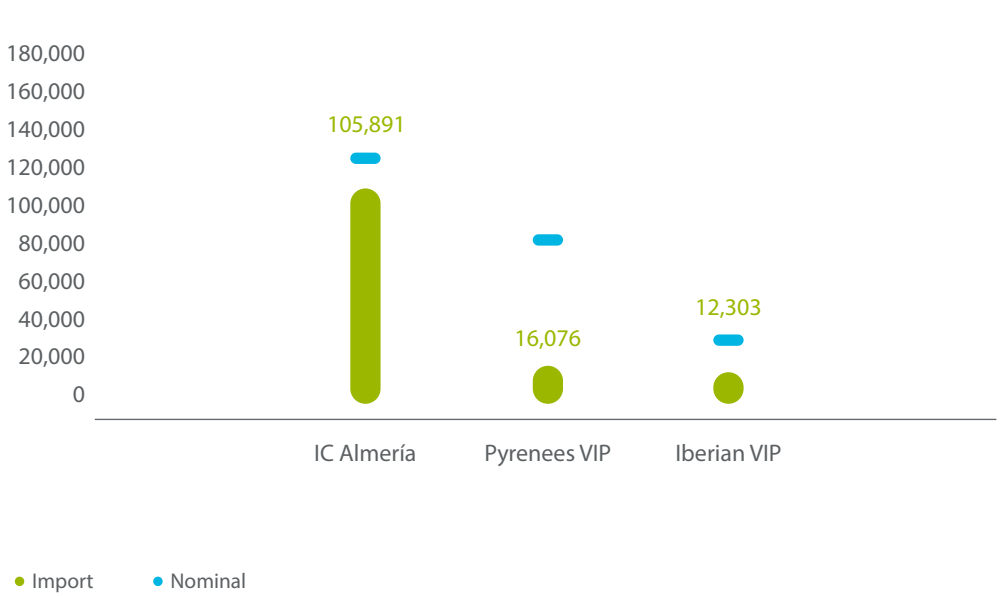
## Use of international connections

*GWh*

| | 2023 | | | 2024 | | |
|---|---|---|---|---|---|---|
| | **Balance** | **Import** | **Export** | **Balance** | **Import** | **Export** |
| IC Tarifa | -9,441 | 30 | 9,471 | **-9,703** | **0** | **9,703** |
| IC Almería | 94,842 | 94,842 | 0 | **105,891** | **105,891** | **0** |
| Pyrenees VIP | -22,926 | 14,453 | 37,379 | **7,367** | **16,076** | **8,709** |
| Iberian VIP | 3,582 | 10,058 | 6,476 | **8,248** | **12,303** | **4,056** |

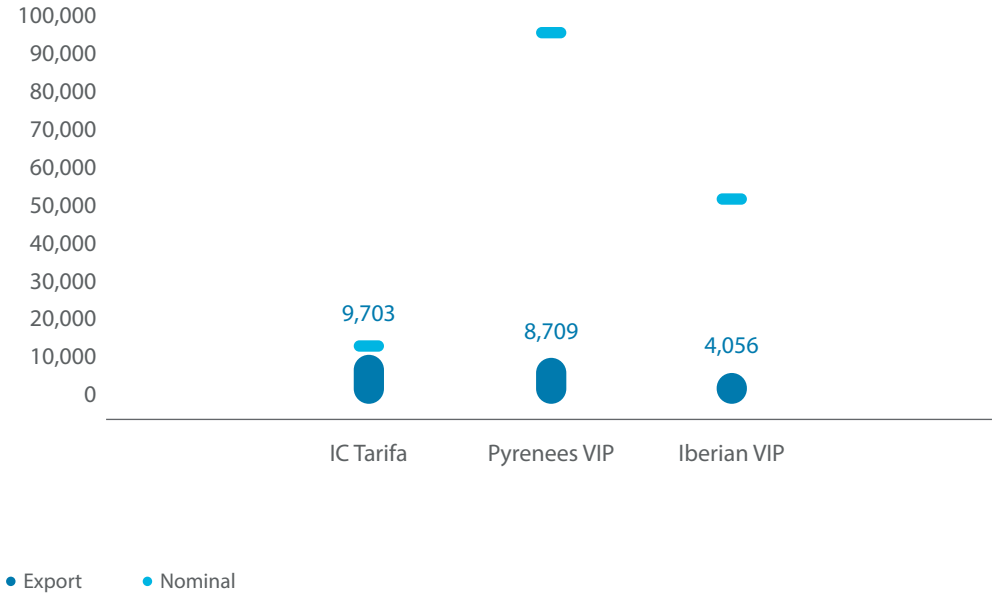
## Import / Nominal

*GWh/year*



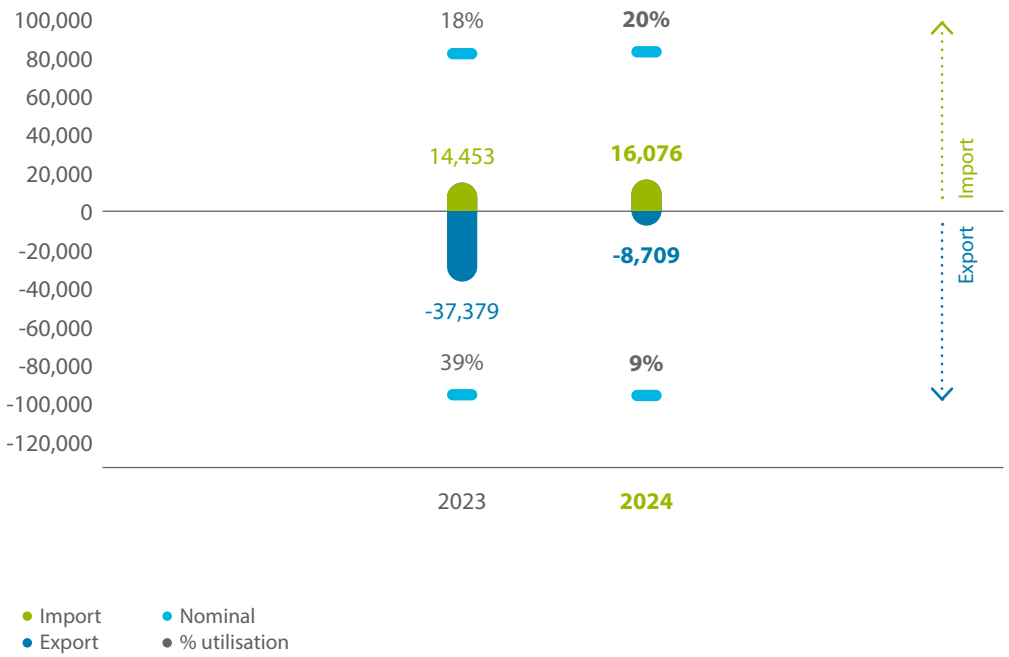

## Export / Nominal

*GWh/year*



## VIP Pirineos movements

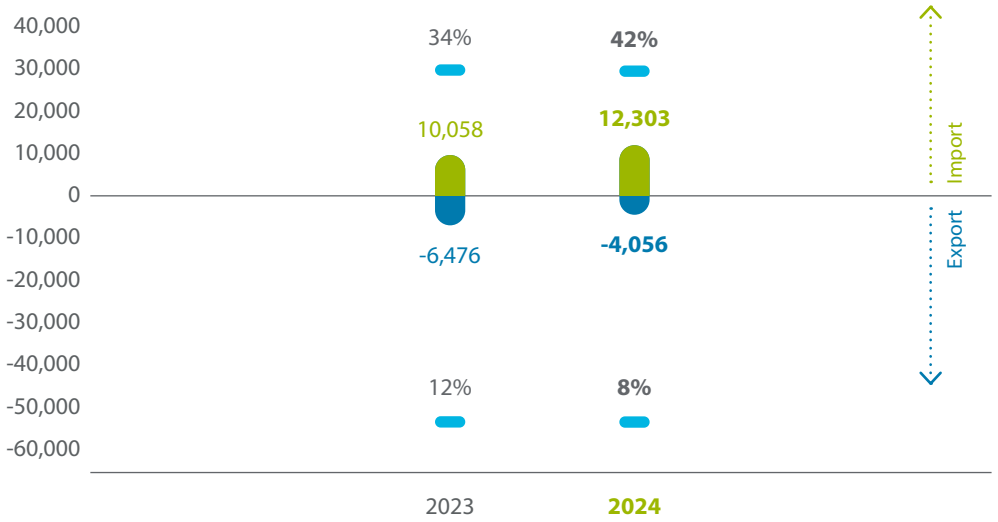
*GWh/year*




Import
Export
Nominal
% utilisation

## Iberian VIP movements

*GWh/year*




Import
Export
Nominal
% utilisation

# Guarantees

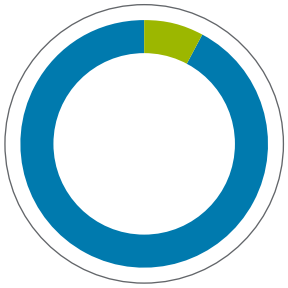
**The Spanish Gas System establishes a system of guarantees for users to meet their obligations to pay service contract toll and royalty invoices and imbalance surcharges in accordance with the provisions of the CNMC (National Commission on Markets and Competition), ensuring that the System is reliable and economically secure.**

The calculation and management of guarantees in contracting, for all products that can be contracted in the Spanish Gas System, and imbalance activities are carried out by the TSO and are notified to the affected user and to the Guarantees Manager.

The average guarantees retained in 2024 total €498.8 M for imbalance and contracting activities.

## Average guarantees retained

%



- Average imbalances
- Average contracting

| | |
|---|---|
| 8% | €37.9 M |
| 92% | €460.9 M |

## Guarantees for capacity contracting

CNMC Circular 8/2019, which establishes the methodology and conditions for access and capacity allocation in the natural gas system, imposes a system of guarantees to cover possible non-payment of tolls and fees for capacity contracts.

The availability of guarantees is a prerequisite for requesting capacity, submitting a bid for an auction and concluding capacity contracts.

## Most relevant indicators of guarantees for capacity contracting

| €575.9 M | €460.9 M | €370.8 M |
|---|---|---|
| **Maximum** guarantees | **Average** guarantees | **Minimum** guarantees |

## Average guarantees for capacity contracting for services

%

- LNG storage
- USF
- Contracting of vessels
- Distribution
- Others

| | |
|---|---|
| 8% | €37.3 M |
| 10% | €47.2 M |
| 14% | €65.4 M |
| 48% | €221.2 M |
| 20% | €89.6 M |

## Guarantees for imbalances

CNMC Circular 2/2020 establishing the natural gas balancing rules imposes a guarantee scheme to cover the risk of non-payment of imbalance surcharges.

Users with a balance sheet portfolio must have collateral to cover their level of risk, which takes into account both the user's operational situation and its net debit or credit position with respect to imbalance surcharges.

### Most relevant indicators of guarantees for imbalances

**€65.7 M**
**Maximum** guarantees

**€37.9 M**
**Average** guarantees

**€27.9 M**
**Minimum** guarantees

## Enforcement of guarantees

The aforementioned CNMC Circulars 8/2019 and 2/2020 establish the enforcement of previously withheld guarantees in the event of non-compliance with payment obligations both for tolls and fees for contracted access services and for imbalance surcharges. The System Technical Operator is responsible for requesting the Guarantees Manager to enforce guarantees in accordance with the regulations in force in order to recover the amounts owed in the imbalance and contracting activities.

Globally, most of the enforcements accumulated in September. In March the volume of collateral enforced (€M) was higher but the number of enforcements was lower, with a negligible ratio of amounts enforced compared to the volume of collateral posted.

### Most relevant indicators on defaults and guarantee enforcement

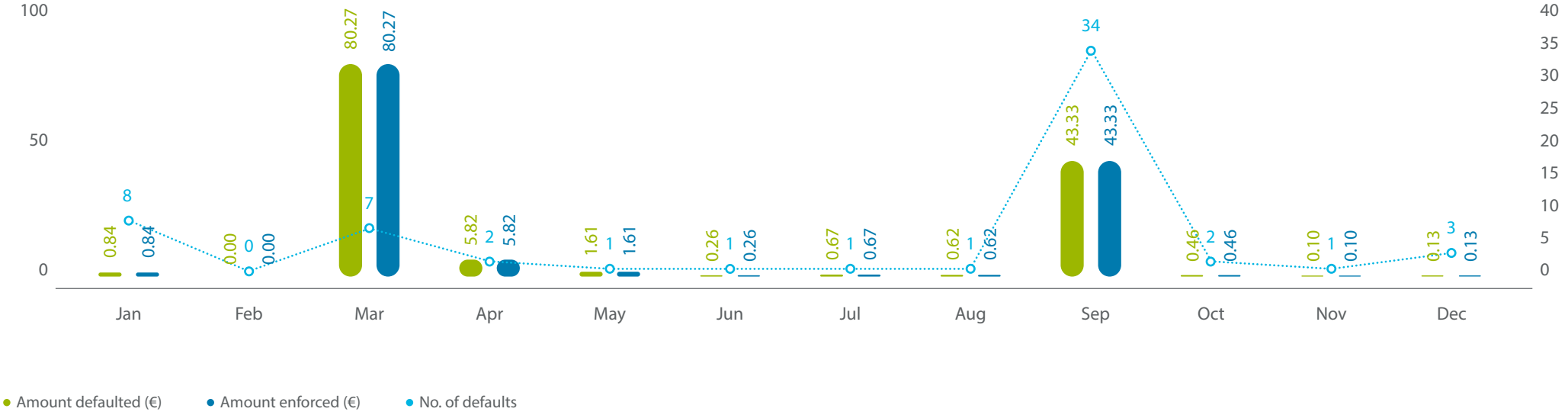
**63**
No. of **defaults**

**€0.1 M**
Amount **defaulted**

**€0.1 M**
Guarantees **enforced**

The Spanish Gas System **establishes** a system of guarantees **for users** to meet their **obligations** to pay service contract toll invoices and imbalance surcharges

## Defaults and enforcement of guarantees




In 2024, it was necessary to carry out 44 enforcements associated with contracting, affecting four users. The amounts enforced barely total 113,000 euros and the ratio between the amounts enforced and the guarantees provided in this activity is 0.025%.

In relation to the daily assessment of the risk index, there have been 62 non-compliances, 90% of which have been settled in less than 24 hours. There has been no disqualification associated with this process.

Finally, with regard to the imbalance activity, it was necessary to carry out 19 enforcements that affected eight users, without having led to any disqualification. The amounts enforced barely total 21,000 euros and the ratio between the amounts enforced and the guarantees provided in this activity is 0.055%.

# Guarantees retained for capacity contracting and imbalances

Procurement capacity: **€460.9 M**

Imbalances: **€37.9 M**

## Average guarantees

*%*

| | |
|---|---|
| 8% | €37.3 M |
| 10% | €47.2 M |
| 14% | €65.4 M |
| 48% | €221.2 M |
| 20% | €89.6 M |

LNG storage · Slots · Others
USF · Distribution

## Level of Risk

*Daily frequency*

**62** **Non-compliances**

**56** Deliveries **recovered < 24h (90%)**

| | |
|---|---|
| No. of enforcements | 44 |
| No. of users affected | 4 |
| Amount enforced | €113,361 |
| Average enforcement rate | **0.025%** |

| | |
|---|---|
| No. of enforcements | 19 |
| No. of users affected | 8 |
| Amount enforced | €20,749 |
| Average enforcement rate | **0.055%** |

# Gas markets

Prices in the main European hubsrecorded average increases of around 60%.

## The role of the TSO in the Organised Market

As established in the Balancing Circular 2/2020, the TSO is responsible for maintaining the transmission network of the Gas System within the normal operating limits by means of the so-called balancing actions in PVB, and is also responsible for management of imbalances in TVB and AVB.

The TSO is **responsible for maintaining the transmission network of the Gas System within the normal operating limits** by means of the balancing actions in PVB

In addition, according to the Resolution of 12 July 2023 of the Secretary of State for Energy, which develops the procedure for the purchase of operating gas and gas intended for minimum filling level, the TSO is responsible for making these purchases in the Organised Market.

Likewise, Order TED/72/2023, of 26 January, which develops the procedures necessary for compliance with the obligation to maintain minimum buffer stocks of natural gas, authorised the TSO to purchase natural gas destined for minimum buffer stocks on the Organised Gas Market in the event of non-compliance by users.

## Regulatory filing

- In 2024, the TSO managed 3.1% of the volume traded on MIBGAS.
- 7% decrease in trading volume on Market Platforms in 2024 compared to 2023.
- 98% efficiency in taking balancing actions for stock maintenance of the transmission network.

**98%**

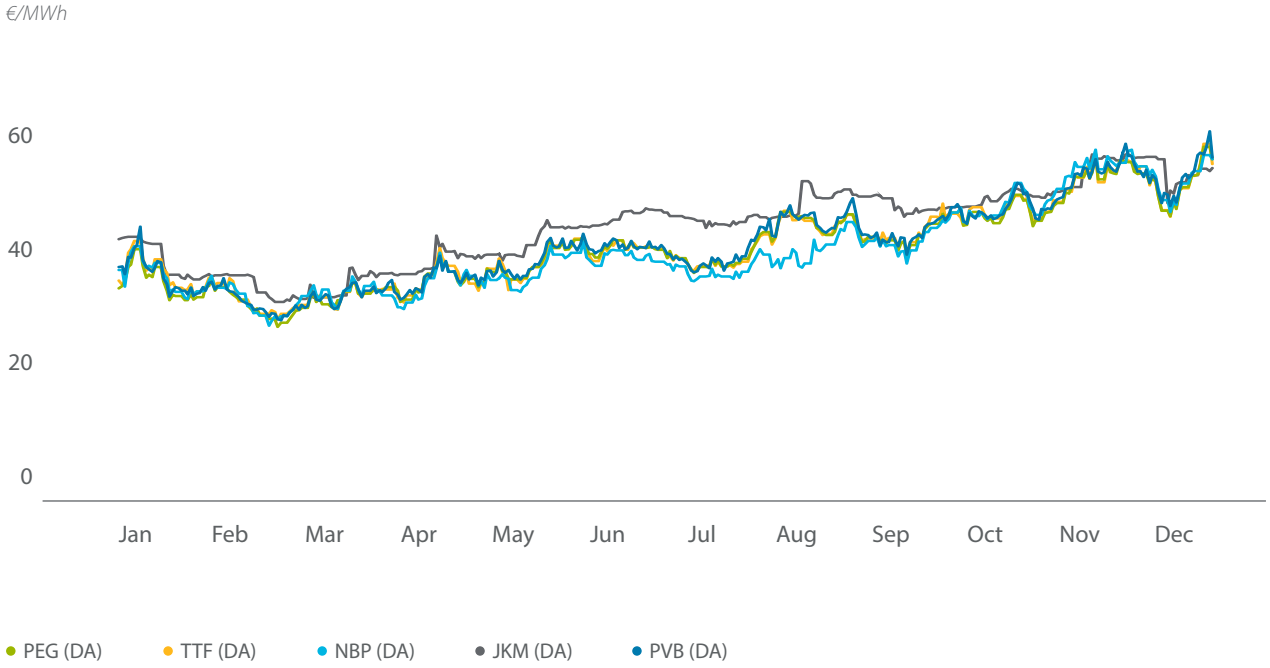
**efficiency in taking balancing actions** for the maintenance of the transmission network stock

# Evolution of prices in the main European hubs and JKM

Gas prices in the European hubs, after reaching historic highs in 2022 and declines in 2023, followed an upward trend in 2024, reaching the highest prices in the previous fourteen months in December.

Geopolitical factors, coupled with the unavailability of some facilities, have shaped an energy landscape with rising prices throughout 2024. Events during the year that had an impact included the escalation of the Russian-Ukrainian conflict and the final cessation of Russian gas transit through Ukraine after some speculation about a possible continuation, renewed tensions in the Middle East and uncertainties on the gas supply side with disruptions at the Australian and US Freeport facilities and the interruption of transit through the Suez Canal.

## Evolution of prices in the main European hubs and JKM



# Balancing actions in PVB

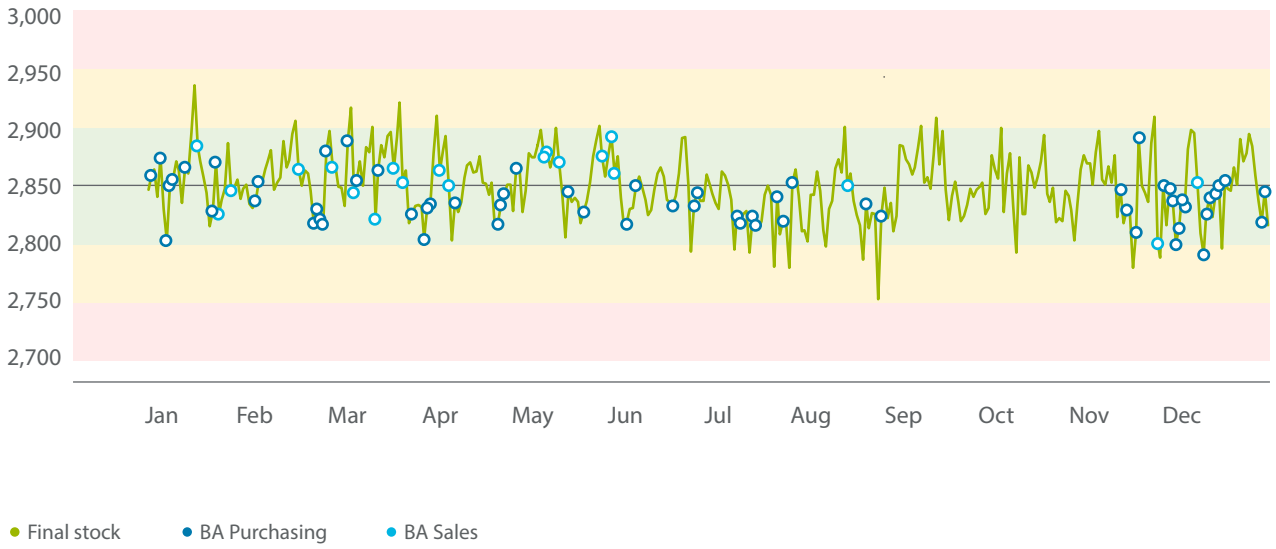
Action by means of balancing actions is an operation that the TSO must carry out in the Organised Market when it estimates that the expected gas stock in the transmission network at the end of the day is going to move away from the band of optimal values for operational functioning -green band-, with the aim of returning the stock to that band.

- **Sell-balance actions:** when the stock is expected to end up in the upper warning band -upper red band.
- **Buy balance actions:** when the stock is expected to end up in the lower warning band -lower red band.

The revenues and economic costs derived from these balancing actions, together with the costs and revenues from user imbalance settlements, are subsequently settled by the TSO.

The graph on the right illustrates the time distribution of balancing actions throughout the year and the evolution of the System's status, indicating the days on which the TSO went to the Organised Market.

## Balancing actions and evolution of the state of the System



During 2024, 94 of the 96 balancing actions (BA) performed by the GTS ended the gas day meeting the target of stock located in the indifference band. On 31 May, the volume of available gas (VAG) ended less than 1 GWh above the indifference band and on 10 December the VAG ended less than 5 GWh below the indifference band.

In 2024, the GTS carried out approximately one balancing action every four days.

## Management of imbalances in TVB and AVB

According to current regulations, the TSO manages imbalances in TVB/AVB, and must go to the market to buy/sell the net balance of users' imbalances within a maximum of five days of their occurrence.

- The default imbalances are practically daily, generally of a few kWh and respond to tanker loads not supplied by the users.
- Excess imbalances are sporadic, of more significant quantities and motivated by the lack of available storage, both in tanks and in underground facilities.

**94**

**Balancing actions performed** by the GTS were one every four days on average over the year

### Balancing actions (purchase)

| Balancing actions | 70 |
|---|---|
| Quantity (GWh) | 2,402 |
| Cost (€M) | 92.03 |

### Imbalance management (purchase)

| Managing imbalances | 145 |
|---|---|
| Quantity (GWh) | 33 |
| Cost (€M) | 1.12 |

### Balancing actions (sell)

| Balancing actions | 26 |
|---|---|
| Quantity (GWh) | 1,178 |
| Revenue (€M) | 36.77 |

### Imbalance management (sell)

| Managing imbalances | 11 |
|---|---|
| Quantity (GWh) | 65 |
| Revenue (€M) | 2.28 |

## Operating gas

In accordance with the Resolution of 12 July 2023 of the Secretary of State for Energy, which develops the procedure for the purchase of operating gas and gas intended for minimum filling level, the TSO has extended both the products and the type of session in which it makes purchases of paid operating gas. During 2024, the TSO purchased 734 GWh of operating gas, at a cost of €23.27 M.

In accordance with the CNMC Resolution of 20 September 2024, establishing the destination of the natural gas stocks in the Gas System's shrinkage balancing account, the stocks of this gas at 8 July 2024 (580.274 GWh) were used to cover the operating gas needs paid for by the System. This meant a reduction of GTS's contracting needs of 242 GWh of natural gas for this purpose for three months, from 3 October 2024 to 2 January of the following year.

During 2024, the TSO has not been required to turn to the market for the purchase of gas for the minimum filling level of the facilities.

## The presence of the TSO in the Organised Market

In 2024, the TSO traded 3,580 GWh in balancing actions, 734 GWh for the purchase of operating gas and 98 GWh in the management of imbalances in TVB/AVB, which resulted in a total of 4,857 GWh/year and represents 3.1% of the volume traded on the Organised Market.

## Maintenance of minimum buffer stocks of natural gas

The steps taken by the TSO, in coordination with CORES and the users, have led to the latter complying with the maintenance of the minimum buffer stocks established in current legislation, avoiding the need for the TSO to resort to the Market for the subsidiary acquisition of these stocks.

During 2024, **the TSO has not been required to turn to the market for the purchase of gas** for the minimum filling level of the facilities

**3.1%**

**Gas volume traded** by the GTS on the Organised Market

# Volumes traded on platforms

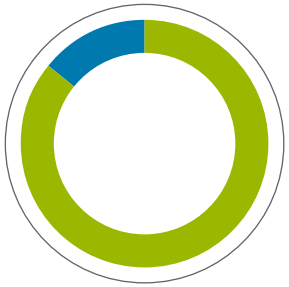
In 2024, 288,238 bilateral OTC transactions were recorded on the MS-ATR platform belonging to the TSO, representing a recorded volume of 854,838 GWh. Compared to the previous year, the volume of transactions decreased by 8%.

The volume registered in PVB was 359,612 GWh in 2024, 109% of the System's total demand and 6% up on the previous year.

In the case of TVB, the record of transactions totalled 493,159 GWh, representing 190% of the total demand of the System and 17% less than in 2023.

## Trading volume

%

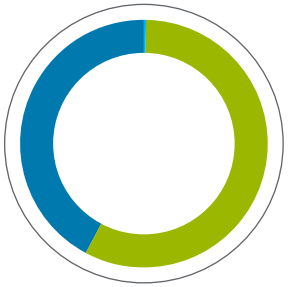


86.0%
14.0%

- MS-ATR (OTC)
- Platforms

## Bilateral transactions

%



57.7%
42.1%
0.2%

- Virtual Balancing Tank
- Virtual Balancing Point
- Virtual Balancing Storage

**288,238**

**Bilateral OTC transactions** registered on the MS-ATR platform

**854,838 GWh**

**Total volume** of transactions recorded on the MS-ATR platform

# 4 Renewable gases



Enagás GTS plays a crucial role in the transition **towards a more sustainable gas system** and is working actively to facilitate the integration of renewable gases into existing infrastructure

# Regulatory milestones

Renewable gases play a key role in the energy transition, offering a sustainable and low-carbon alternative to diversify the Spanish Gas System, contributing to the decarbonisation of the energy sector and security of supply in a context of growing demand for clean energy.

At national and European level, progress was made during 2024 in the regulation of the introduction of renewable gases into the Spanish Gas System. In this context, the following regulatory milestones were relevant:

- In April, the National Markets and Competition Commission (CNMC) published its resolution establishing the procedure for managing connections between biomethane production facilities and the transport or distribution network. This procedure responds to the twelfth final provision of Royal Decree-Law 14/2022 on the amendment of RD 1434/2002, which regulates activities of transport, distribution, marketing, supply and authorisation of natural gas facilities.

- In June, the public information procedure was opened on the proposal for the Circular amending CNMC Circular 8/2019 of 12 December, which establishes the methodology and conditions for access to and allocation of capacity in the natural gas system.

- In July, the Official Journal of the European Union (OJEU) published:

  - Directive (EU) 2024/1788 of the European Parliament and of the Council of 13 June 2024 on common rules for the internal markets for renewable gas, natural gas and hydrogen, amending Directive (EU) 2023/1791 and repealing Directive 2009/73/EC

  - Regulation (EU) 2024/1789 of the European Parliament and of the Council of 13 June 2024 on the internal markets for renewable gas, natural gas and hydrogen and amending Regulations (EU) No. 1227/2011, (EU) 2017/1938, (EU) 2019/942, (EU) 2022/869 and Decision (EU) 2017/684 and repealing Regulation (EC) No. 715/2009.

- In July, Order TED/728/2024 was also published, which develops the mechanism for the promotion of biofuels and other renewable fuels for transport purposes.

- In September, the Ministry for Ecological Transition and the Demographic Challenge (MITERD) launched a prior public consultation on the transposition of Directive (EU) 2024/1788 of the European Parliament and of the Council on common rules for internal markets in natural gas and renewable gases and hydrogen and the updating of sectoral regulations relating to liquid and gaseous hydrocarbons.

Enagás GTS plays a crucial role in the transition to a more sustainable gas system and is actively working to facilitate the integration of renewable gases into the existing infrastructure. Enagás GTS also manages the Guarantees of Origin System (GoO) for renewable gases, a key tool for certifying the origin and environmental characteristics of the gases produced.

Over the course of 2024, **progress was made in the regulation for the introduction of renewable gases** into the Spanish Gas System, both at national and European level

# Integration of renewable gases

In 2024, Enagás GTS supported the development of the regulatory framework for access to renewable gases, both hydrogen and biomethane, in the Spanish Gas System through various actions.

Enagás GTS has actively participated in the forums and meetings organised by the CNMC and has clarified all the issues raised by the Autonomous Communities, developers and grid operators regarding the integration of renewable gas production plants into the Gas System.

As part of this communication and regulatory support work, Enagás GTS has responded to the national public consultations on renewable gases related to the revision of Circular 8/2019 launched by the CNMC in June 2024 and the gas and hydrogen package launched by MITERD in September 2024.

In addition, and in accordance with current legislation, Enagás GTS:

- Has responded to the requests for binding reports from the Autonomous Communities that have requested it for direct connection lines for renewable gas production plants, in accordance with article 78.5 of the Hydrocarbons Law.
- Registered as biomethane injection points in the SL-ATR logistics system all the requests received by grid operators, in accordance with article 9 of the procedure for managing the connection of biomethane production plants to the transport or distribution network established by the CNMC.
- Responded to the analyses of the compositional compatibility of the gas flow resulting from the injection of biomethane with the facilities of the System.

## Regulations

**CNMC Resolution defining the procedure for managing the connection of biomethane production plants to the transport or distribution network.**

On 19 April 2024, the CNMC approved Resolution RDC/DE/004/22, published in the Official State Journal (BOE) on 30 April 2024, establishing the procedure for managing the connection of biomethane production plants to the transport and distribution networks.

This resolution aims to facilitate and regulate the integration of biomethane into the Gas System, promoting the production of renewable gases and helping to decarbonise the energy sector. The procedure details the steps to be followed by biomethane producers and grid operators to process connection requests, including deadlines, technical requirements and transparency obligations.

Among the main provisions, it is established that transport and distribution system operators must have web platforms for the management of connection requests, where applicants can consult their processing status. It also establishes a time priority criterion for the processing of applications, based on the date and time of submission.

The resolution entered into force on 1 May 2024, the day after its publication in the Official State Gazette (BOE).

Enagás GTS **has supported the development of the regulatory framework** on access to renewable gases through various actions

**Public information process on the proposal of the Circular amending CNMV Circular 8/2019 of 12 December, establishing the methodology and conditions for access and capacity allocation in the natural gas system.**

On 21 June 2024, the CNMC launched a public information procedure on the proposed Circular amending Circular 8/2019.

The main objectives of this proposed amendment are twofold:

- On the one hand, to review the mechanisms for access to gas infrastructure and the anti-hoarding measures established, taking into account the market situation and demand, as well as the level of capacity utilisation. In particular, new capacity reserve values are established for the different contracting horizons and new ranges for the surcharges established in the congestion management and anti-hoarding mechanisms, in such a way that these ensure the effectiveness of the objectives pursued.

- On the other hand, to update and adapt connection and access conditions and capacity allocation in the gas sector to the new needs arising from its decarbonisation and the promotion of renewable and low-carbon gases. The concept of conditional connection capacity appears as the maximum authorised capacity or flow rate provided for in Article 12 bis of Royal Decree 1434/2002 of 27 December 2002, the use of which is subject to the conditions previously established in the corresponding contract.

The public consultation closed on 19 July and at the end of the year under review (2024) the final version of the proposed amendment to the circular was awaiting publication.

# Guarantees of Origin

The Guarantees of Origin (GoO) System for Renewable Gases, managed by Enagás GTS, came into operation in early 2023 and by the end of 2024 had certified the renewable gas produced at more than 34 Spanish facilities.

The aim of this system is to energize the renewable gas market by providing value to producers, who can demonstrate the renewable nature of their business, and by providing confidence to consumers, who can verify the origin of the gas they consume.

The development of renewable gas certification is key to increasing transparency and making it easier for consumers to engage in the deployment of a decarbonised energy system.

## Remember

**A GoO certifies the renewable character of 1 MWh of gas, which is assigned a unique identification number.** The GoO and its attributes remain unchanged throughout its life cycle, which can be up to 18 months, and in all operations that can take place on the platform: issuance, transfer, import/export and redemption.

The gases covered by this certification are biogas, biomethane and renewable hydrogen. In addition, the system will cover any type of marketing logistics: injection into the gas system, injection into isolated pipelines, off-grid logistics and even self-consumption of renewable gases.

## Regulations

**Order TED/728/2024, which develops the mechanism for the promotion of biofuels and other renewable fuels for transport**

In July 2024, Order TED/728/2024 was published, developing the mechanism for promoting biofuels and other renewable fuels for transport. The order includes the procedures for calculating annual consumption targets or sales of biofuels and other renewable fuels for transport, as well as for accrediting compliance with these targets through renewable fuel certificates.

In addition, it includes other aspects applicable to the GoO system:

- The entity responsible for the system of guarantees of origin of gas from renewable sources will act as the subject of verification, providing information that allows comparison of the information provided by those subjects that are obliged to comply.
- Inclusion in the Guarantee of Origin of information relating to the sustainability and greenhouse gas emission reduction criteria of those production facilities that have such information.
- Implementation of the requirements of Delegated Regulation (EU) 2023/1184 to certify that the electricity used to produce renewable fuels of non-biological origin (RFNBOs) is renewable.

These amendments apply from 1 January 2025.

The order also states that reporting parties must submit redeemed Guarantees of Origin for use in transport in order to apply for renewable fuel certificates attesting to compliance with the quota obligations for biofuels and other renewable fuels for transport purposes.

**Accreditation scheme Order TED 1026/2022 - ENAC**

The auditing companies for the inspection and verification activity in the GoO System must be accredited under the reference standard UNE-EN ISO/IEC 17020:2012 for the inspection activity in the field of natural gas and derivatives (ITC-ICG 03), in the absence of a specific accreditation scheme.

During 2024, work was carried out in collaboration with the National Accreditation Entity (ENAC) to develop an accreditation scheme adapted to the Order TED 1026/2022, approving the procedure for management of the System of Guarantees of Origin of gas from renewable sources. At the end of the year under review (2024), the scheme is awaiting approval by ENAC.

Once approved, audits of the GoO System will have to be carried out by companies accredited under this scheme, although a transitional period of one year will be allowed for accreditation.

## IT developments

Following the implementation of the basic functionalities in 2023, the GoO System incorporated new processes during 2024, allowing it to expand its scope and make it easier for users to operate in it.

The main functionalities enabled in 2024 are:

- Import and export of GoO through the AIB platform.
- Activity certification.
- Incorporation of sustainability and emissions reduction information into the GoO.

## Import and export of GoO through the AIB platform

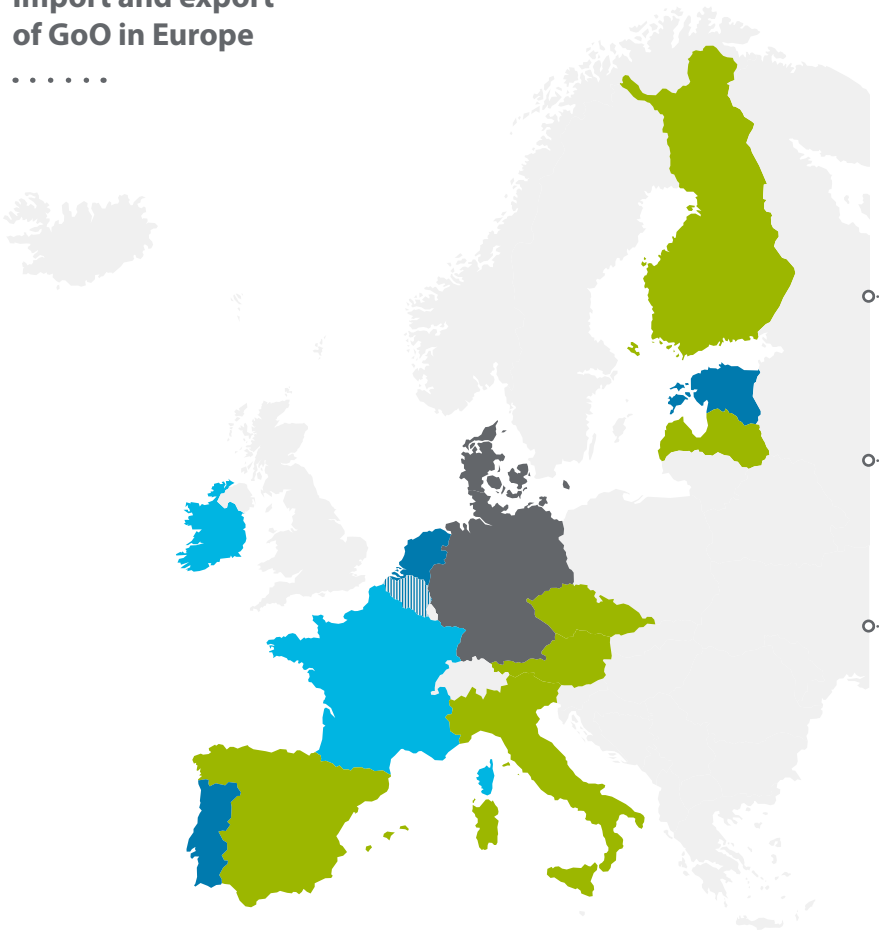
The Association of Issuing Bodies (AIB) brings together the organisations responsible for operating the GoO Systems in different European countries and has a platform that facilitates GoO exchanges between these countries.

In 2023, Enagás GTS formalised all the administrative procedures required to join this association and in March 2024 completed the connection to its exchange platform. This means it is now possible to import and export Guarantees of Origin with countries and regions connected to the AIB system. By the end of 2024 it was possible to exchange GoOs with Austria, Italy, the Czech Republic, Latvia, Finland and the Brussels Region.

Since this number of countries is relatively small and in order to add liquidity to the Spanish GoO market, a process called ex domain cancellation has been enabled to import and export Guarantees of Origin from records in other countries. The ex domain cancellation is a redemption of guarantees of origin associated with consumption in a country other than the one in which the redemption is made.

The procedure of ex domain cancellation is detailed in document A10 of the list of additional public information available at the **GoO website**.

### Import and export of GoO in Europe



**6**
Countries connected to the AIB hub: **Spain, Italy, Austria, Czech Republic, Finland and Latvia.**

**3**
Countries in the process of connectingto the AIB hub: **Portugal, the Netherlands and Estonia.**

**2**
Countries with defined arrangements to perform ex domain cancellation: **Ireland and France.**

**2**
Countries with agreements in process to carry out ex domain cancellation: **Germany and Denmark.**

- Connected to the AIB hub
- Shortly connecting to the AIB hub
- Agreement exdomain cancellation
- EDC under discussion

## Certification of activity

In compliance with the GoO System Management Procedure approved by Order TED/1026/2022, the System must issue two types of activity certificates linked to the redemption of Guarantees of Origin:

- **Redemption Information Statements.** These identify the GoOs redeemed in a calendar year for a given holder and are specific to a point of consumption or for bunkering/vehicular gas operations.
- **Supply Mix Certificates.** These are issued to supplying holders and include the share of their supplies, measured as a percentage of the energy supplied to domestic demand during a calendar year, whose renewable origin has been attributed through redemption of a GoO.

### Remember

**Redemption is the process by which guarantees of origin are associated with physical consumption of energy**. For example, an agent who consumes 100 MWh in a month and who wants to claim that 100% of their consumption is renewable would have to redeem 100 Guarantees of Origin.

The generation of these certificates has been available since April 2024, when the Redemption Information Statements and Supply Mix Certificates for 2023 were issued.

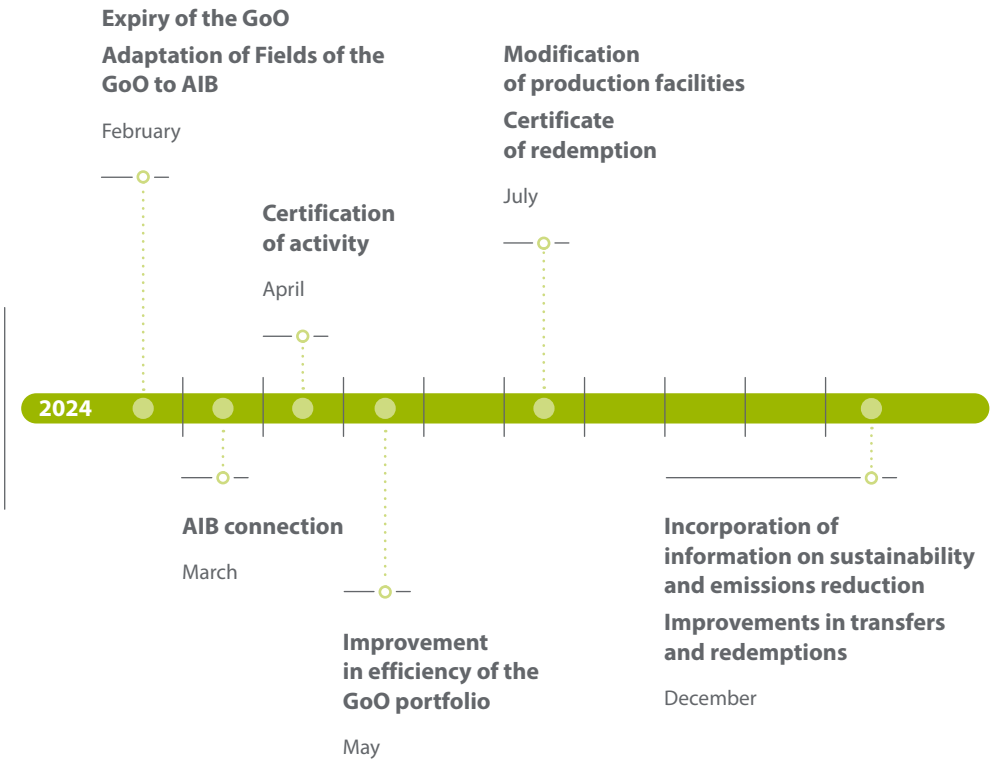
In addition, in July 2024 certificates similar to the Redemption Information Statements were made available to users, but associated with each redemption process carried out in the System. These certificates are generated on the day of redemption and are available for users to download.

## Incorporation of sustainability and emission reduction information in the GoO

In compliance with TED/728/2024, which develops the mechanism for the promotion of biofuels and other renewable fuels for transport purposes, in December 2024 the incorporation of sustainability and emission reduction information in the GoO was enabled. This information is incorporated in the Guarantees of Origin issued for gas produced from 1 January 2025.

In addition to these functionalities, other improvements in the operation of the GoO System were enabled in 2024, such as the possibility of modifying production facilities and improving efficiency in different queries of the IT platform.

## IT developments of the GoO System




# Current status of the GoO system

50 new entities were registered as holders in the GoO System during 2024, amounting to **a total of 179 registered holders:** 45 producers, 29 suppliers, 17 consumers and 95 intermediaries.

The number of production facilities in the final registration is 34, which means 21 new facilities registered in 2024. In addition, 19 facilities are provisionally registered, i.e. they are not yet operational and cannot access the issuance of the GoO.

For more details on all the production facilities registered in the System, consult the **"Production Device & Account holders" section of the GoO website.**

## Facilities registered in the GoO System

| Type of facility | No. |
|---|---|
| Biomethane for injection into the Gas System | 6 |
| Off-grid biomethane | 1 |
| Renewable hydrogen for grid injection outside the Gas System | 1 |
| Off-grid renewable hydrogen | 2 |
| Biogas for self-consumption | 24 |

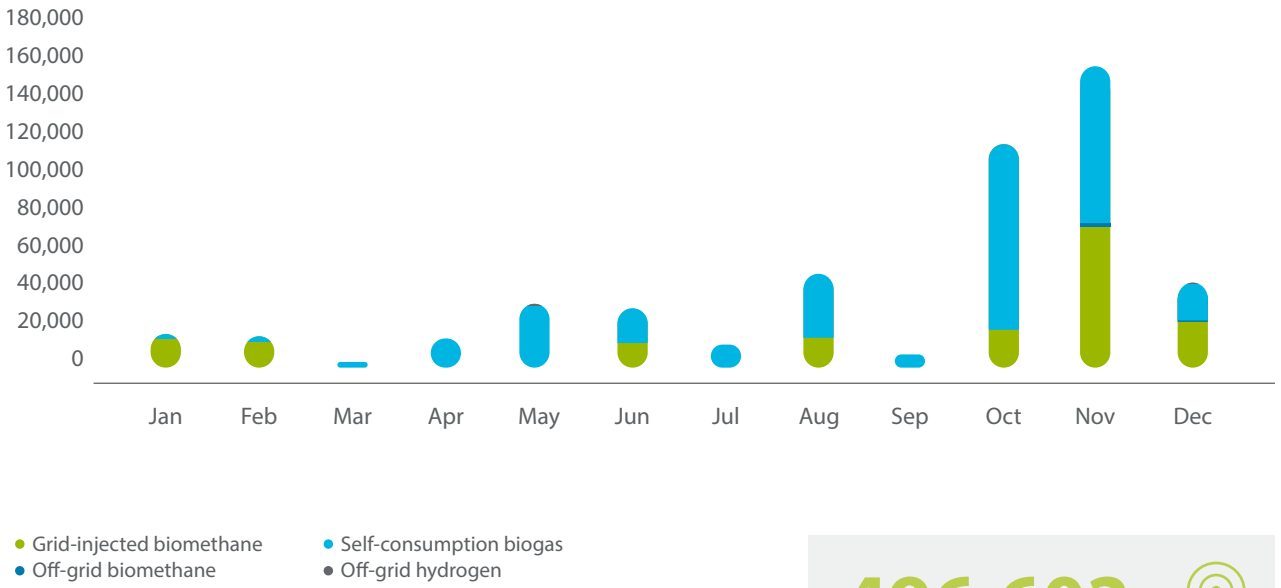
In 2024, the first production facility for off-grid biomethane was registered in the GoO System. It was Sologas, a facility located in A Coruña that produces off-grid biomethane and liquefies it to distribute it to its customers via tanker trucks.

In terms of renewable hydrogen production, in 2024, two new facilities completed their registration. Firstly, the Power to Green Hydrogen Mallorca project, which produces off-grid hydrogen and transfers it in tube trailers [1] to be injected into the natural gas grid. And secondly, the Puertollano I Green Hydrogen Plant, managed by Iberdrola, which produces hydrogen and injects it into a private grid to supply it directly to its customer.

In addition, four new biomethane production facilities for injection into the of the GoO System, four new biomethane production facilities for injection into the Gas System and fourteen biogas production facilities for self-consumption.

With regard to the issuance of Guarantees of Origin, in 2024 the GoO System issued a total of 496,602 Guarantees of Origin, giving a cumulative total of 591,750 since it was put into operation. The largest proportion of Guarantees of Origin issued has been for biogas for self-consumption (64%), followed by biomethane for injection into the Gas System (35%) and off-grid biomethane (1%). In 2024, the first 265 off-grid hydrogen Guarantees of Origin were also issued.

## Number of GoO issued by gas type and commercialisation logistics




**496,602**

**Guarantees of Origin issued**
(**591,750** since their implementation in 2023)

[1] The hydrogen tube trailers are transport vehicles designed to transport high-pressure compressed hydrogen in a series of tubes mounted on a trailer.

Regarding redemption, 21,809 Guarantees of Origin were redeemed in 2024 for a point of consumption, 1,516 for bunkering operations and 319,146 were automatically redeemed as they were for biogas for self-consumption. In addition, 8,614 Guarantees of Origin were redeemed through the process of ex domain cancellation from France.

Finally, the number of Guarantees of Origin transferred in the GoO System in 2024 amounted to 89,080, of which 75,994 took place between entities belonging to the Spanish GoO registry and 13,086 were exported through the AIB platform to the Austrian registry and imported from France via ex domain cancellation.

**351,085**

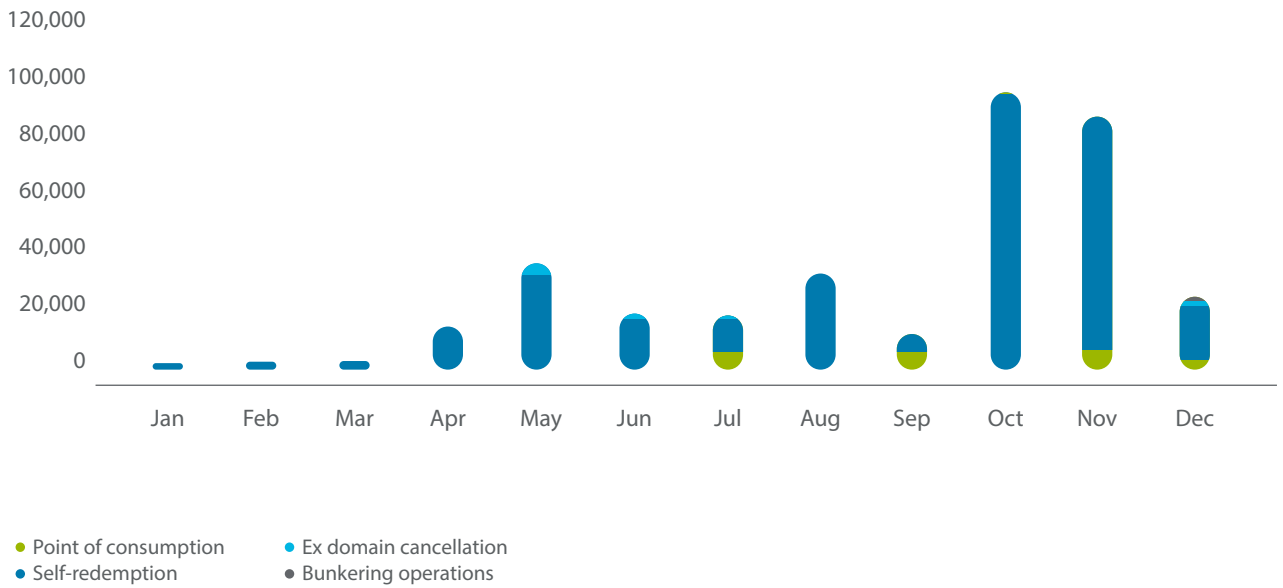
**Guarantees of Origin redeemed**

**89,080**

**Guarantees of Origin transferred**

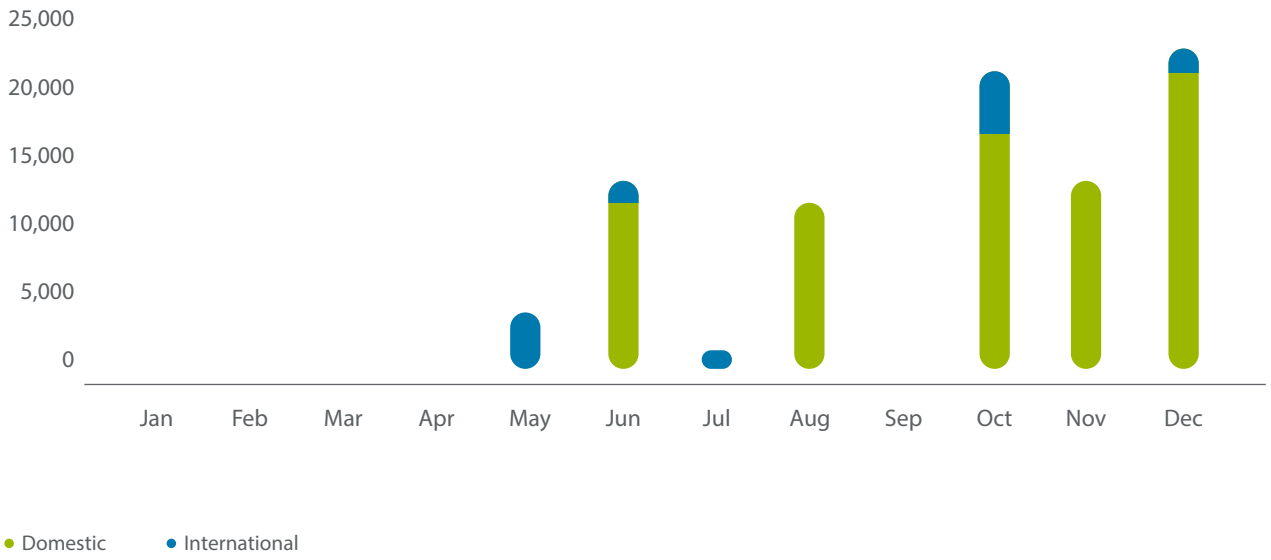
## Number of Guarantees of Origin redeemed by type of redemption

*MWh*



## Number of Guarantees of Origin transferred

*MWh*




In 2024, the number of transactions carried out in the GoO Systems totalled 944 GWh, which represents a total of 1,055 GWh transacted in the System since the start of its operation.

**1,055 GWh**

**Total transactions made** in the GoO System since the beginning of its operation in 2023

## Committee of the Subjects

The objective of the Committee of the Subjects of the Guarantees of Origin System is to report on the functioning and management of the System, as well as channelling proposals for improvement. This body is made up of 227 members, including MITERD, the CNMC, Enagás GTS, the holders of the GoO System, transmission companies and distributors of the Gas System, operators of isolated pipelines, trading platform operators and sectoral associations.

Regular meetings of the committee take place every two months, although extraordinary meetings are also held to discuss specific issues in detail. In 2024, the body held six ordinary and four extraordinary meetings with an average of more than 100 attendees.

Among the topics regularly dealt with by the committee are the monitoring of the functioning of the GoO system, the IT developments implemented, the follow-up of legislative developments applicable at both national and European level, as well as the follow-up of the GoO markets.

**227**

**Members of the Committee**
of the Subjects of the GoO System
at 31 December 2024

In addition, in 2024, a series of documents were submitted for consultation and approval, detailing the functioning of various casuistries and processes carried out in the GoO System. Approved procedures include those related to the inclusion of sustainability and emissions (A8), RFNBO requirements verification process (A9), ex domain cancellation (A10), off-grid production injection into the Gas System (A11) and information on financial support for renewable gas production facilities (A12).

You can access the documents approved by the Committee of the Subjects on the **GoO System website.**

The committee has also approved the development of a certificate to be awarded to production facilities certifying that they form part of the register of facilities in the GoO System.

**The objective of the Committee of the Subjects of the Guarantee of Origin System is to** report on the functioning and management of the System, as well as channelling proposals for improvement

# 5 Transparency and services to the sector



In 2024 Enagás GTS boosted the **development of new initiatives** and consolidated the existing ones, focusing its efforts on **providing the best possible service to** all the System's **stakeholders,** based on the principles of transparency, objectivity, independence and neutrality

As Technical System Operator (TSO), Enagás GTS performs its functions in accordance with the principles of transparency, objectivity, independence and neutrality. Security of supply and proper coordination between access points to the system are the main pillars of its performance.

In 2024, Enagás GTS promoted the development of new initiatives, consolidated existing ones and focused its efforts on providing the best possible service to all System participants.

# Overview

Throughout 2024, Enagás GTS continued to work on promoting the sustainability of the Gas System, integrating renewable gases and reducing the footprint of the gas system.

## Integration of hydrogen and other gases

Enagás GTS has contributed to the development of the regulatory framework for the access of renewable gases to the Spanish Gas System. To this end, it has actively participated in the forums and meetings organised by the National Markets and Competition Commission (CNMC) and in the national public consultations on renewable gases.

It also responded to the requests for binding reports from the Autonomous Communities that have requested it for direct connection lines for renewable gas production plants, in accordance with article 78.5 of the Hydrocarbons Law.

## Minimising carbon footprint

As part of its commitment to reducing its carbon footprint, Enagás GTS convened three meetings of the operational efficiency community, which consists of all Gas System operators. The aim of these meetings was to present topics of interest to the sector, such as operational efficiency measures and the impact of international geopolitical effects on flows, developments in renewable gases and innovation projects.

# Customer centric shippers plan

In 2024, Enagás GTS promoted a customer centric shippers plan with the main objective of establishing a closer relationship with the agents of the Gas System. Enagás GTS held regular meetings with the users of the sector in order to learn directly about their needs, expectations and opportunities for improving the services offered.

In total, more than 30 meetings were held with different agents of the Gas System.

In order to provide a better service, Enagás GTS has implemented digital solutions that facilitate advanced information analysis: tools for a more accurate and agile use of commercial data, which improve the TSO's responsiveness and enable more effective anticipation of the sector's needs and more appropriate market monitoring.

**30**

**Personalised meetings**
with the various players in the Gas System

# Control Centres Conference

The Technical System Operator has brought together professionals from the control centres of the main energy companies for this benchmark event in the sector. The eleventh edition of this meeting took place in 2024, this time focusing on "Geostrategy and control centre exercises: preparedness and response".

The conference was also attended by Exolum, Redeia, Trinity Energy Storage, the natural gas distribution companies Nedgia, Redexis, Gas de Extremadura, Madrileña Red de Gas and Nortegás, and the operators of the adjacent international connections, Medgaz, REN, Teréga and, for the first time, OMCo (Onhym), the Moroccan operator. Participation was also extended to sectors outside the energy sector, as in the case of Canal de Isabel II, which took part in this event to share its experience in exceptional situations.

# Workshops

In the exercise of its functions under the principle of transparency and to promote coordination between agents, in 2024 Enagás GTS organised informative events with the sector, including:

- An informational workshop on the published regulations relating to Council Decision (CFSP) 2024/1744 on unloading operations of liquefied natural gas originating in or exported from Russia.
- Four workshops on the contracting process, detailing the plan to strengthen the contracting platform, the launch of new developments and other aspects of interest to users.
- A meeting on the analysis and use of the flexibility ofslots, jointly analysing the different milestones involved in the management of a ship's loading/unloading slots.
- Two sessions for new agents of the Gas System to provide them with all the information they need to operate: authorisation, access to the systems, contracting, management of their balancing, etc.

# NGTS Working Group

The main objective of this group is to propose and review the technical standards and operating procedures of the Spanish Gas System to ensure its proper functioning and adaptation to the needs of the sector. Eleven meetings were held in 2024.

The work of this subgroup focused on analysing and adapting the Technical Regulations of the Ministry for Ecological Transition and the Demographic Challenge (MITERD). In 2024, various working subgroups were set up with the participation of representatives from the various agents of the Gas System, such as transmission companies, distributors and shippers, who expressed their needs, including those relating to the integration of renewable gases.

# Gas System Monitoring Committee

This meeting is held every two months and brings together around 200 players from the sector. In 2024 Enagás GTS wanted to find out how the System's stakeholders who take part in these meetings rated them. At the beginning of the year Enagás GTS made available a form to gauge their opinion, which was very positive. The process also made it possible to gather suggestions for improvement, focusing on strengthening the communication of information and the dissemination of issues relevant to the gas sector.

As part of this forum, round tables were held in which the sector discussed, among other things, decarbonisation of the transport sector.

# Publications

In 2024, Enagás GTS, in line with its commitment to transparency, published information of interest to the sector, both through its section on the Enagás website and on the website of the Logistics System for Third Party Access to the Network (SL-ATR).

Its publications include:

- The Gas System Admissible Ranges 2025-2040 report:

  Document of interest to the energy sector as set out in '09 detail protocol' on the "Calculation of admissible ranges for the values of the basic control variables within the normal operating ranges of the system", with quarterly details for the gas year 2024/2025 and with annual details for the following years until 2040.

  It shows all the technical capacities of the facilities that make up the Gas System and is updated annually. In addition, hydraulic simulations are used to study the maximum and minimum transport capacities in different demand scenarios, operating situations and time horizons, thus showing the limitations or congestion of the System in these stress situations.

  Date of publication: 12.06.2024.

You can consult this document in the TSO publications section of the **Enagás website.**

- The monthly gas statistics bulletin.
- The Annual Report on the Spanish Gas System.
- Operating Notes and timely communications.
- Daily operations of the System: stocks in plants, underground storage and inputs and outputs of the transport network.

# Studies

- RMS/MS saturation degree analysis. 2023/2024 campaign:

  Document that follows the instructions of the DP14 Detailed Protocol "Criteria for defining the degree of saturation of the Regulation and Metering Stations and Metering Stations and the Procedure for making proposals for action". This protocol stipulates that each transmission system operator must carry out an annual study on the current state of saturation of its RMS/MS and indicate the degree of saturation, taking into account the growth forecasts of these networks by the interconnected operators (transmission system operator or distributor).

  With all the data received from the transmission companies, Enagás GTS prepares a final report containing both the technical proposals and their economic estimate, as well as an evaluation of their suitability, which must be sent to the Secretary of State for Energy of MITERD.

  This report details the specific monitoring to be carried out on certain positions, with the aim of guaranteeing the security of supply of the System at all times.

  Date of shipment: 23.9.2024.

# Committee of Subjects of the GoO System

The Committee of Subjects of the GoO System is a body whose purpose is to report on the functioning and management of this system, as well as to channel proposals for improvement.

In 2024, six ordinary meetings were held to deal with recurring issues such as monitoring the functioning of the GoO system and IT developments implemented, and four extraordinary meetings were held to discuss in depth specific issues related to legislative developments. On average, more than 100 participants attended each of these meetings.

**10**

**Meetings** of the Committee of Subjects in 2024

**100**

**Average number of attendees** to meetings of the Committee of Subjects

# Service desk

The service desk serves the sector 24 hours a day, 365 days a year.

It is in charge of ongoing support and handling of all complaints, incidents and queries on daily and intraday authorisation, contracting, guarantees, nomination, renomination, operation, provision of information, balancing actions, market platform notifications, allocations and balancing and forecast demand.

In 2024, users made use of the Inquiries and Incidents Portal 3,200 times. Enagás GTS has responded to all of them using the same channel.

The service desk provides its activity to all users of the Spanish Gas System **24 hours a day, 365 days a year**

You can access the Service Desk on the Enagás website by clicking **here.**

# Downloads

In this section you can download in editable format (Excel) part of the graphical content of Enagás GTS published in this report, along with the referenced annexes.

## 1 Demand

## 2 Physical operation

## 3 Commercial operation

- **Annex 1.** Contracted capacity
- **Annex 2.** Number of slots auctions
- **Annex 3.** Allocation of slots

## 4 Renewable gases

**Issue**
Enagás Communication, Public Affairs
& Investor Relations General Management

**Technical coordination**
Enagás Technical System General Management

**Design and layout**
Addicta Diseño Corporativo

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