The impact of the current situation on gas markets

and its implications for energy transition in the European Union and Spain

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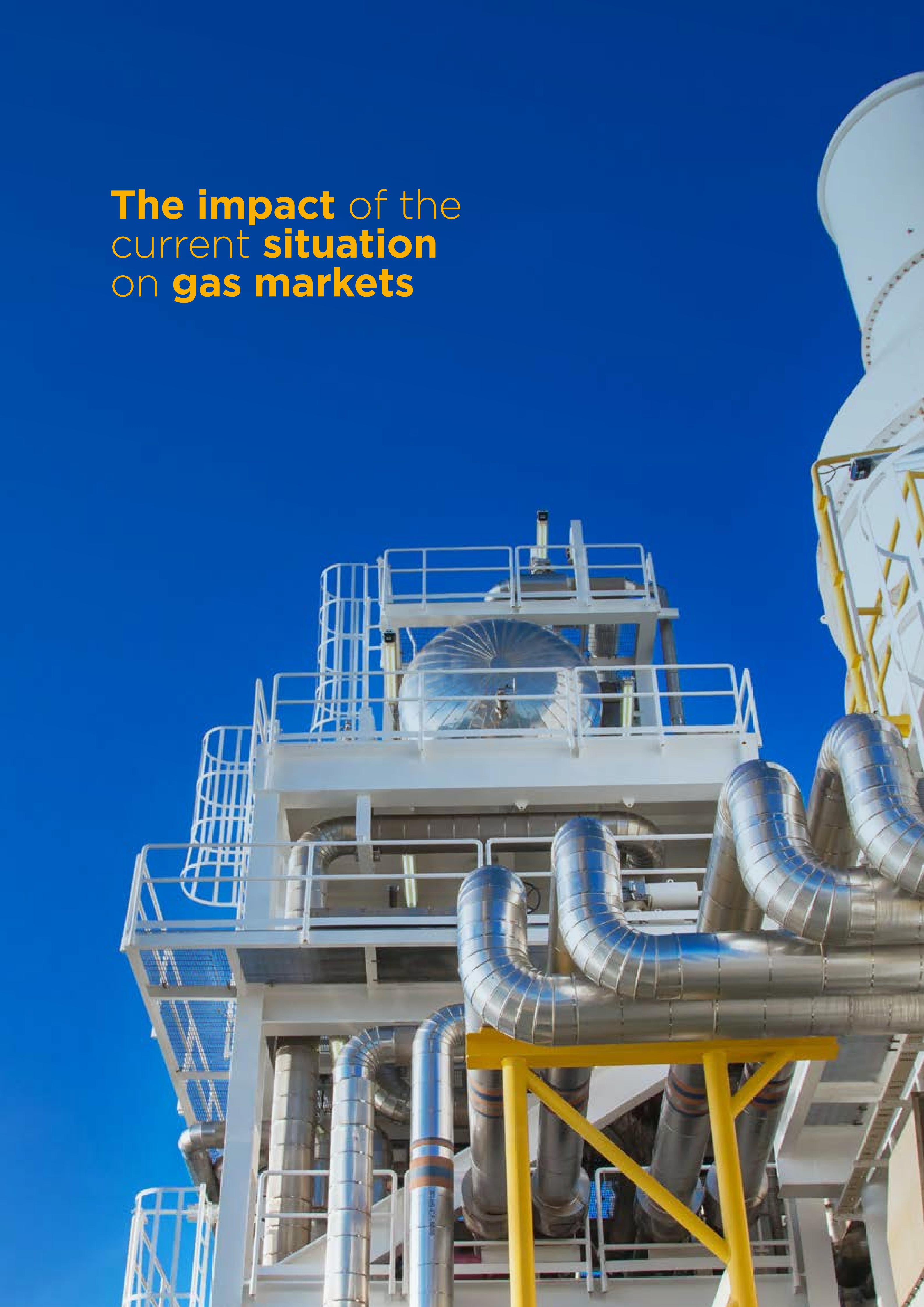

Executive summary

The natural gas (NG) market is one of the **principal energy markets** in the european union; it accounts for almost 25% of total primary energy consumption. As the EU does not have sufficient natural gas capacity to meet demand, the European Union (EU) is highly dependent on imports. Traditionally, it has been supplied via gas pipelines coming from Eastern European countries, such as Russia, across the North Sea or in North Africa. In recent years, it has also been importing liquefied natural gas (LNG) in LNG carrier vessels from the Persian Gulf, the USA and other markets. This latter trend has increased during the recent energy crisis that is a consequence of the war in Ukraine.

The model for contracting natural gas in the EU has evolved over the last few decades. It has shifted from a bilateral contract model to a more liberalised market model through the creation of different hubs. Apart from generating greater liquidity and an increased variety of products, this change has allowed natural gas markets to offer greater price transparency. This in turn has had a significant impact on the evolution of import contracts with producing countries, in which indexation binding gas prices to those of crude oil is being substituted for the use of reference prices that are derived at the hubs.

However, recently, the dynamics of the natural gas market has been greatly affected by two highly relevant events linked to supply and demand. These have resulted in a very significant rise in gas prices since the second quarter of 2021.

On the demand side, major growth accompanied the recovery from the economic paralysis caused by the COVID-19 pandemic.

Meanwhile, supply had been falling as a result of reduced investment in natural gas production, due to announcements of decarbonisation and the progressive substitution of natural gas for renewable gases. In addition, supply was affected by the increase in geopolitical tensions, with the Russian invasion of Ukraine being the most obvious example. This exacerbated the energy (gas and electricity) price crisis and the shortage of supply to the EU, as Russia is one of the most important exporters of NG to EU Member States.

These events have not only affected the price of natural gas through its supply model, but they have had a knock-on effect on electricity prices. This has resulted in a direct impact on consumers, especially industry and vulnerable households.

As a result of all this, the EU has introduced various measures, the most notable of which is REPowerEU, approved in spring 2022. This package of measures opens up different possibilities for countries to take emergency action in areas that directly affect supply and demand. Three fundamental options stand out: progressive substitution of the 155 bcm of natural gas imported from Russia and diversification of sources; the requirement to fill storage facilities; and accelerated deployment of renewable technologies, both electricity and gas (hydrogen and biogas).

Given the complexity of the situation, in addition to the REPowerEU initiative, other measures have been approved to alleviate the effects of volatility and high prices in the gas market; and as a consequence, also in the electricity market.

Although Spain has had a relatively diversified and secure energy supply model for several years, it is taking action in different areas to deal with this situation and protect private consumers and industry. Notable among the measures adopted and related to the gas market is Act-RD 10/2022, passed in May 2022, which established a price cap on gas used for electricity generation. This law aims to reduce the impact of rising gas prices on the electricity market.

«In a context of price volatility and uncertain security of supply, long-term contracts should play an important role as a stabilising element»

The electricity sector is one of the largest consumers of natural gas. Some of the electricity generating technologies that determine the daily price of electricity use natural gas as their fuel, as is the case of combined cycle power plants. In addition to being one of the most common technologies that determines the marginal price, combined cycles act as a supply security mechanism for the entire energy system and are essential to counterbalance the intermittent nature of renewable technologies.

«If the reduction in gas demand set by the European Commission for 2030 is too strict, this could make it difficult to renew long-term contracts, as it may deter investment in liquefaction plants»

There is no doubt that the current exceptional situation has revealed just how large Europe's energy dependence is and it has thrown up new challenges for the energy market in both the short and the long term.

However, we must not forget the climate and energy transition goals set for 2030 and 2050. Energy transition must not be seen as part of the problem, but rather as the solution to this situation of energy dependence and price crisis.

In such a scenario of energy transition and reduction of energy dependence, the gas sector plays a fundamental role. This is not only the transitory role of thermal "back up" that natural gas combined cycles play, but also through the progressive incorporation of new fuels and renewable gases, such as biogas or green hydrogen, which will make it possible to improve the competitiveness of the EU in the medium term, and of Spain in particular, given the relative abundance of renewable sources.

In turn, in a context of such exaggerated price volatility as we are currently experiencing and uncertain security of supply, long-term contracts should play an important role as a stabilising element.

If the reduction in gas demand set by the European Commission for 2030 is too strict, we can expect it to have a negative effect on the supply of LNG as it may deter investment in liquefaction plants, which would tend to push LNG prices up and this could make it difficult to renew long-term contracts. Such a situation could keep gas prices structurally high, thereby distorting the industrial competitiveness of the EU and slowing down the process of decarbonisation in other regions or economies that are less demanding when it comes to climate issues, as they could substitute other fuels (coal or oil) for NG, thus generating an increase in emissions.

«Lack of long-term contracts could keep gas prices structurally high, distorting the industrial competitiveness of the EU and slowing down the process of decarbonisation in other regions»

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