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EXECUTIVE SUMMARY OF THE EVALUATION

Accompanying the

Proposal for a Directive of the European Parliament and of the Council on common rules for the internal markets in renewable and natural gases and in hydrogen (recast)

Proposal for a Regulation of the European Parliament and of the Council on the internal markets for renewable and natural gases and for hydrogen (recast)

{COM(2021) 803 final} - {COM(2021) 804 final} - {SEC(2021) 431 final} -
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1. EXECUTIVE SUMMARY

1.1. Background and purpose of the evaluation

This Evaluation supports the concomitant Impact Assessment aimed at improving the EU regulatory framework governing the internal gas market (Impact assessment for the Hydrogen and Decarbonised gas markets package). The Evaluation analyses to what extent the existing legislation was successful in achieving its goals[1]. In contrast, the purpose of the Impact Assessment is to identify and weigh options for a future reform of the regulatory framework.

This Evaluation will focus on developments in gas markets which have been subject to several legislative reforms in the past 20 years. The latest reform of the regulatory framework – which is the object of this evaluation – dates back to 2009. It forms part of what is commonly referred to as the 'Third Energy Package'. It followed on a first and second set of landmark energy legislation, adopted in 1996 ('First Energy Package') and 2003 ('Second Energy Package') respectively. The Third Energy Package also contained the regulatory framework for electricity markets and the establishment of the Agency for the cooperation of Energy Regulators (ACER). These parts of the Third Energy Package already underwent recasts adopted in 2019[2].

The Third Energy Package pursued the general objective of completing the internal energy market and moving towards a competitive, secure and sustainable Energy Union. It covers in particular five main areas[3]:

- unbundling energy suppliers from network operators;
- strengthening the independence of regulators;
- establishing the Agency for the Cooperation of Energy Regulators (ACER);
- enhancing cross-border cooperation between transmission system operators and the creation of European Networks for Transmission System Operators;
- open, fair retail markets and consumer protection.

The functioning, role, and structure of ACER was most recently addressed in the recast of the ACER Regulation[4], and will not be part of this report except where specifically relevant to the evaluation of other areas.

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1 See in detail the Commission's 'Better Regulation Guidelines': https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en

2 In the following, the Third Energy Package is referred to for principles and concepts applicable to both gas and electricity markets at the time, whereas aspects specific to the gas market are described under the heading of the Third Gas Package. For the evaluation of the Third Energy Package as regards the electricity market, ACER, and overarching aspects see the accompanying report to the Market Design Initiative (SWD/2016/0412 final - 2016/0379 (COD)) https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=SWD:2016:412:FIN

3 The intervention logic of the Third Package is set out in the accompanying impact assessment at the time https://ec.europa.eu/smart-regulation/impact/ia_carried_out/docs/ia_2007/sec_2007_1179_en.pdf.

4 Regulation (EU) 2019/942 of the European Parliament and of the Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators: http://data.europa.eu/eli/reg/2019/942/oj

1.2. Key findings

Tangible progress

Overall, the evaluation's findings support the view that the Third Gas Package has positively contributed to competition and performance of the internal gas markets, delivering tangible market benefits that have translated into added net social welfare.

Since the entry into force of the Third Gas Package in 2011, the evaluation shows that the initiative to further increase competition and to remove obstacles to cross-border competition in gas markets has **generally been effective**, and that active enforcement of the legislation has led to **positive results for gas markets and consumers**.

The reinforced unbundling rules had a positive effect on competition and helped to limit problems of market foreclosure. Markets are in general less concentrated and more integrated than in 2009. The new rules aiming at removing barriers to cross-border trade and to enhance cooperation between transmission system operators (TSOs) and regulators contributed to **increased liquidity** of gas markets and an **increase in traded volumes, also across borders**, resulting in more competitive wholesale markets and contributing to robust and fair wholesale price formation.

As regards retail markets, the set of new consumer rights introduced by the Third Gas Package have clearly **improved the position of consumer in energy markets**. The new rules enabled consumers to make better use of emerging competition between different suppliers in many countries, and switching between different suppliers increased. Also, consumers have access to a single point of contact for queries and to alternative (supplier-consumer) dispute settlement services.

Remaining obstacles

However, in other fields the success of the rules of the Third Package in developing the internal gas market further to the benefit of customers **remains limited**.

On *wholesale markets*, the situation has improved since 2009. As stated in the recent 2020 report on the State of the Energy Union[5], gas wholesale markets have become well developed in recent years. Traded volumes on natural gas hubs rose to an all-time high in 2019. This trend continued into 2020, with the COVID-19 crisis negatively impacting the trading activity and demand for gas. The Dutch Title Transfer Facility (TTF) is developing into a benchmark also for internationally traded liquefied natural gas (LNG). Connectivity and access to different sources of gas continue to improve as well. Price correlation between the TTF and other hubs in North Western Europe is high[6]. On the other hand, there are still differences in market development, liquidity as well as competition intensity among Member States. Price convergence between TTF and North Eastern markets (Poland, Baltics and Finland) or South West (Spain, Italy) shows price differences between EUR 1-3/MWh or above during the year.

[5] COM(2020) 950 final, available at: https://ec.europa.eu/energy/sites/ener/files/progress_on_internal_energy_market.pdf

[6] Below EUR 1/MWh for 90% of trading days in 2019 (ACER MMR 2020, Gas Wholesale Markets Volume, p. 43).

Tariff pancaking effects[7] could be a cause, but cannot explain the differences completely. For several South Eastern Member States, the ACER report does not even contain price differences as the data is missing as a result of missing markets or price indications. This is due to the fact that the implementation of the Network Codes is still on-going or being transposed, is not yet showing the results in practice.

As regards *retail markets*, competition performance could be improved. Gas retail prices remain largely determined by wholesale gas prices, which make up most of the energy component and filter into the retail price after several months[8]. In some countries, household gas prices seem to be quite low as compared with wholesale prices and disconnected from the evolution of wholesale prices.

Overall, retail gas prices including taxes and levies increased in 2019 compared to 2018. However, since they follow the evolution of wholesale prices with a slight time lag, they are likely to drop again in the near future. Gas prices for household consumers ranged from EUR 33/MWh in Hungary to EUR 116/MWh in Sweden. The average price for the EU was EUR 68/MWh. Consumers in Luxembourg spent the least on taxes and levies. In Denmark, the share of generation and supply costs was the lowest, while the taxation share was the highest[9].

A number of Member States still practice some form of blanket price regulation for gas – a practice that may cause severe market distortions.

With regard to **consumer protection**, in comparison to the electricity sector, the gas market framework lags behind. Persisting high levels of energy poverty across numerous Member States, as well as the low pace at which appropriate measures of tackling consumer vulnerability and energy poverty are being developed, hamper the further deepening of the internal energy market.

As well, consumer engagement is under-developed. Switching related fees such as contract termination charges continue to constitute a significant financial barrier to consumer engagement. The duration for technical switching supplier is available in nine Member States and range from one to 15 days (often much longer than for switching electricity provider). In addition, poor consumer satisfaction with energy bills, and poor awareness of information conveyed in bills[10] suggests that there may still be scope to improve the comparability and clarity of billing information.

New developments and the decarbonisation of the energy sector are not addressed by the existing rules

While the principles of the Third Gas Package achieved its main purposes (e.g. more supplier competition), new developments in gas markets and, in particular, the ambition of the European Union to achieve a climate neutral economy by 2050 make adaptations necessary.

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7 Namely the accumulation of tariffs to be paid by traders when shipping gas across several borders as result of the current entry/exit tariffs system.

8 2020 Energy Prices and Costs Report.

9 2020 State of the Energy Union Report.

10 European Commission (2016), 'Second Consumer Market Study on the functioning of retail electricity markets for consumers in the EU'.

In December 2019, the Commission presented the European Green Deal as the new European Growth Strategy setting out a clear agenda to make Europe the **first climate neutral continent in the world by 2050**. This objective, and the objective of a 55% reduction in GHG emissions by 2030 compared to 1990 (as legally demanded by the European Climate Law[11]), requires a substantial transformation of Europe's economy to a green and competitive economy with fundamental changes in many areas, including the energy sector.

Energy markets will need to adapt to enable the technology trajectories highlighted in the Commission's 2018 long-term strategy 'A Clean Planet for All' and ensure that they can be realised in a non-disruptive and cost-effective manner. To achieve the decarbonisation goals it will be necessary to **gradually replace natural gas** by decarbonised energy carriers including electricity, renewable heat and decarbonised gases.

The existing gas market rules are **not fully suited for the decarbonisation** of the energy sector. The current regulatory framework for gas focuses on fossil-based natural gas and does not fully anticipate the emergence of alternative methane gases, such as bio-methane, or other gaseous fuels, notably hydrogen. Also, most renewable gas is currently produced decentrally and fed into local distribution grids. The market design of the Third Energy Package is however based on the flow from large-scale production via the transmission system down to the distribution grids and final consumers.

Lastly, gas market rules are not necessarily compatible with the framework applying to electricity, energy efficiency and renewable energy sources including heating and cooling. The increasing penetration of intermittent energy sources, on the contrary, requires the whole energy system, both markets and infrastructure, to be **better integrated**. The progressive integration and emergence of new energy markets means that infrastructure becomes more interconnected. A more holistic and inclusive approach to infrastructure network planning may therefore be required of system operators, as opposed to the largely silo-based current practices.

On the technological side, the ability to produce increasing quantities of renewable and low-carbon gases, including hydrogen, has increased considerably. They are, however, not price competitive towards hydrogen produced from fossil fuels at the moment, and therefore require support. Abolishing regulatory barriers will enable renewable and low carbon sources of gases to compete in the EU gas market, bringing down costs of production, increasing cost efficiency and leading to less support measures and state aid. It will also enable supply of those gases to Member States that otherwise would not satisfy their demand.

To better identify the shortcomings of the Third Energy Package with respect to the integration of renewable and low carbon gases, the current provisions should be assessed against the pathways likely to be taken towards a climate-neutral economy. Principally, **two pathways are expected to emerge in parallel,** as one does not exclude the other. They are expected to develop at different pace in the EU in terms of scope, speed and location.

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[11] Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law'), OJ L 243, 9.7.2021, p. 1–17.

(i) A methane-based infrastructure in which natural gas will progressively (but not fully) be replaced by other sources of methane (i.e. bio-methane, synthetic methane and to some degree renewable or low carbon hydrogen) using the currently existing infrastructure;

(ii) A parallel hydrogen-based infrastructure in a parallel dedicated network that will progressively complement methane-based gases.

For the **first pathway**, the existing gas rules, focusing on natural gas mainly imported from outside the EU, do not address the specific characteristics of decentralized renewable and low-carbon gases production within the EU. The vast majority of today's bio-methane plants in the EU are connected at the distribution level. However, the current regulatory framework does not anticipate decentralised gas injections, meaning that the tradability and access of bio-methane to markets and the gas grid is not on a level playing field with fossil natural gas. This affects the business case of bio-methane producers and ultimately the costs for achieving the EU's climate objectives.

Accommodating higher shares of renewable and low-carbon gases in the system poses also new challenges that were not originally foresaw by the Third Gas Package. The growing volumes of biomethane, hydrogen but also LNG affect gas quality and thereby the design of gas infrastructure and end-user appliances. Differences in gas quality entail the risk of cross-border trade restriction and market fragmentation. However, the current regulatory framework was not designed with these upcoming challenges for gas quality management in mind.

The **second pathway** was not anticipated by the Third Gas Package. The current gas market rules do not contemplate the large development and deployment of renewable or low carbon hydrogen in the European gas market. Whilst the Gas Directive and Gas Regulation apply to all gases that can safely be injected into the natural gas network, they neither apply to newly built hydrogen networks nor to natural gas networks that might be retrofitted to accommodate pure hydrogen transport.

Renewable and low-carbon hydrogen is perceived as a promising energy carrier and feedstock to support the EU's decarbonisation efforts with demand projected to take off in transport and industry and sizeable investment needed to take place already before 2030. A re-examination of the current gas market regulatory framework is therefore needed and it has already been announced in the European Commission's communication on a hydrogen strategy for a climate neutral Europe[12]. Given the different potential in EU Member States for the production of renewable and low carbon hydrogen, a suitable market framework could facilitate hydrogen to play its role as an energy carrier and as an enabler of energy system integration in the EU.

As far as **security of supply** is concerned, the relevant provisions in the Third Package represented a step in the right direction; but they were soon superseded by the *lex specialis* contained in the 2010 Security of supply Regulation, which laid down a comprehensive

[12] COM(2020) 301 final.

governance to improve the Union resilience to gas supply disruption, and in the most recent rules, adopted in 2017, which strengthened the role of regional cooperation, solidarity and transparency in times of crisis. This evolution was not fully reflected in the additional acts adopted under the Third Package (the so-called Network Codes and Guidelines).

Overall, the Third Package partially fulfilled its original mission and created a stable market-based approach on which further legislation should be built. However, retail level competition could be significantly improved, and consumer protection strengthened further in order to ensure that the full benefits of the internal market can be passed through to all EU consumers. Moreover, the existing rules are not fully adapted to deal with the decarbonisation of the gas sector. The scope and speed of the EU's climate objectives had not been fully foreseen by the Third Package, creating a clear rationale to update market rules so that they may be able to fully contribute to reaching a climate neutral economy by 2050.