

## GASNATURALLY FEEDBACK TO EU ENERGY EFFICIENCY DIRECTIVE EVALUATION AND REVIEW

21 September 2020

**GasNaturally supports energy efficiency as a key contributor to achieving the European Green Deal ambitions. We agree that increasing energy efficiency is an important element of developing a sustainable and competitive EU energy mix as well as a crucial enabler of empowering consumers on and off the grid. We welcome the Commission's emphasis on investing in energy efficiency as part of the COVID-19 Recovery Plan. In this context, GasNaturally would like to share a set of considerations aimed at strengthening the Commission's initiative to review the EU Energy Efficiency Directive (EED).**

*Policy recommendations:*

- *Prioritise EED implementation measures;*
- *Focus on cost-effectiveness by ensuring a level playing field, as well as greater competition between projects and technologies that deliver energy savings, CO<sub>2</sub> emission reductions, improvement of air quality and other environmental benefits;*
- *Further explore potential benefits of gaseous solutions to reduce hard to abate emissions in heating (e.g. rural, vulnerable customers);*
- *The European Primary Energy Factor (PEF), approved just two years ago, should not be further reduced. Moreover, a thorough impact assessment of the impact of the current 2.1 PEF should be conducted.*

### **(1) The need to prioritise EED implementation measures**

From the recent assessment of the final NECPs it is apparent that the EU is not on track to reach the energy efficiency ambition. We believe that these gaps must be addressed and, in this context, the Commission and Member States should consider the benefits of gas to fill in this gap.

- The Commission and Member States should consider the benefits of natural gas to reach the EED goals.
- The Commission should focus on improving the implementation of the EED.

### **(2) The role of gas in unlocking energy savings**

The use of gas in the heating sector is essential to unlock the full potential of energy savings. An overview of scenarios for technology and market development for gas appliances in residential, commercial and industrial sectors is provided by GasNaturally.<sup>1</sup> Indeed, the required technologies and much of the infrastructure is already in place to switch to gas in heating and cooling, for example:

- **Modern gas boilers** on and off the grid are very efficient for space heating and hot water production. Replacing inefficient and carbon-intensive heating technologies with **condensing gas boilers** is one solution that can immediately reduce CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub> and PM emissions, improve air quality and increase efficiency at a significantly lower cost than alternatives.

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<sup>1</sup> Gas Appliances Brochure (2020): Robust technologies for a carbon neutral future, [link](#)

Analyses by the IEA, which take into account both CO<sub>2</sub> and methane emissions, show that coal-to-gas switching in heating reduces emissions by 33%.<sup>2</sup>

- The next generation of gas appliances is even more efficient by using the energy from air, ground or water in gas heat pumps. Blending of natural gas with **biomethane** or LPG with **bioLPG** makes gas-fired condensing boilers the most cost-efficient and sustainable heating technology for private households.
- The efficiency can be further increased by pairing with **renewables**. At present, this is commonly done by using condensing gas boilers on and off the grid in combination with **solar thermal panels**, mainly for hot water production.
- In commercial as well as residential settings, **gas-based combined heating and power (CHP)** with efficiency up to 95% and **combined cooling, heating and power (CCHP) systems** are used to increase energy efficiency. These integrated systems can recover energy that is otherwise lost as heat. For example, heat that is released from natural gas-powered electricity generators can be harnessed to run space or water heaters, or commercial boilers.
- In off grid areas, **LPG condensing boilers** offer a long-term, cost-effective pathway to decarbonisation through the **gradual introduction of bioLPG**, which reduces carbon footprint by up to 80% compared to conventional LPG.

### (3) Focus on cost-effectiveness

With heating accounting for a third of EU GHG emissions and half of final energy demand, Member States face different challenges when it comes to meeting 2030 targets<sup>3</sup>. Looking into whether EU co-funded energy efficiency investments in buildings have cost-effectively helped the EU toward its 2020 energy saving target, however, the European Court of Auditors has recently concluded that operational programmes and project selection have not been driven by a cost-effectiveness rationale.<sup>4</sup> It is therefore important to offer a **wide range of realistic, affordable and energy-efficient heating alternatives**.

Gas heating on and off the grid scores well in terms of **affordability**. On average the EU consumers pay over 3 times more for electricity than for gas<sup>5</sup>. It is noteworthy that affordability is considered as the most important factor when choosing a new heating system by European citizens<sup>6</sup>.

- Focus on **cost-effectiveness** by ensuring greater competition between projects and technologies that deliver energy savings, CO<sub>2</sub> emission reductions, improvement of air quality and other environmental benefits. For instance, for any national measure aiming at raising energy efficiency, the Commission should enforce the obligation to carry out a mandatory Cost-Benefit Analysis.

### (4) Primary Energy Factor (PEF) and the role of energy labelling in heating energy efficiency

The Energy Sector Integration Strategy foresees a **review of the Primary Energy Factor (PEF)** as part of the review of the Energy Efficiency Directive. The PEF is used to compare the efficiency of electricity

<sup>2</sup> IEA (2019) The Role of Gas in Today's Energy Transitions, [link](#)

<sup>3</sup> In Poland, half of the housing stock is still heated with coal, while the renovation rate still needs to be improved to reach the desired 2.5% of floor area p.a. In their NECPs, Bulgaria, Greece, Slovakia and Spain highlight that their heating sectors will rely on natural gas or natural gas-based CHP to reach 2030 targets.

<sup>4</sup> ECA (2020). Special Report 11/2020: Energy efficiency in buildings: greater focus on cost-effectiveness still needed, [link](#)

<sup>5</sup> <https://ec.europa.eu/eurostat/documents/2995521/9802432/8-21052019-AP-EN.pdf/7f42181d-d795-4ce1-9dde-ba93fe247166>

<sup>6</sup> [https://eurogas.org/website/wp-content/uploads/2019/12/Eurogas\\_Energy-Report\\_ComRes.pdf](https://eurogas.org/website/wp-content/uploads/2019/12/Eurogas_Energy-Report_ComRes.pdf)

use with that of other energy employed, such as natural gas or LPG, in a fair manner. The PEF must adequately reflect this energy mix to create the right incentives for customers and avoid perverse effects, such as an increase in demand for electricity in regions where generation is particularly carbon-intensive. The PEF must not be a political tool to encourage a change of national policy, but a reliable criterion that provides information of the current energy mix of the power generation in order to reach decarbonization objectives.

- GasNaturally advises **against further reduction of the European Primary Energy Factor (PEF)** approved just two years ago.

Moreover, an important element of meeting the EU 2030 energy efficiency target is enabling consumers to compare the performance of *all* local space heaters and make informed purchasing decisions. In this context, PEF is critical for consumers to be able to compare the performance of electric heating appliances and other appliances running on primary energies across Europe. However, the impact of the 2.1 PEF set in the EED has not been assessed.

- The Commission should conduct a **thorough assessment of the impact of the current 2.1 PEF** or any new proposed PEF introduction in Ecodesign and energy labelling.

#### (5) Improving knowledge of hybrid heating solutions

In rural areas, there is a greater role for **LPG** as a gaseous fuel for gas-powered heating combined with solar thermal systems, for fuel cells and hybrid systems. For example, hybrid solutions when combined with an LPG boiler would be the most efficient in remote areas characterised by severe climatic conditions. With LPG as the second energy source, warm water can be produced efficiently even with low temperatures outside. The hybridisation of heating systems can lead to a drop in the share of diesel and solid fuels, an increase in the share of renewables, and an improvement in the overall energy efficiency of Europe's residential energy sector. By the same token, hybrid systems have a negligible impact on air quality compared to conventional fuels and biomass.

**As non-condensing boilers still represent over 50% of all heating appliances installed in the EU, replacing them with condensing natural gas and LPG boilers should represent a priority on the path to meeting the EU 2030 energy efficiency target.** In this context, incentives for the purchase of new boilers are needed.

- Also with a view of contributing to the Renovation Wave initiative, the Commission should encourage Member States to offer rural homeowners incentives (e.g. subsidies, scrappage schemes, interest-free loans, tax deductions) to invest in the replacement of their inefficient heating systems with cleaner alternatives.
- Policymakers should encourage installers often owning small and medium-size enterprises to share information and continue learning about new sustainable heating solutions.

*GasNaturally is a partnership of eight associations (Eurogas, Natural & bio Gas Vehicle Association (NGVA Europe), European Gas Research Group (GERG), International Gas Union (IGU), International Association of Oil and Gas Producers (IOGP), Gas Infrastructure Europe (GIE), Liquid Gas Europe (LGE) and Marcogaz) that together represent the whole European gas value chain. Our members are involved in gas exploration and production, transmission, distribution, wholesale and retail operations, as well as gas in transport.*