

ÉNERGIE & CLIMAT

POLICY BRIEF  
OCTOBER 2021

#EUGREENDEAL  
#CLIMATECHANGE  
#ENERGYTRANSITION  
#FAIRTRANSITION  
#ENERGY

# THE EUROPEAN ENERGY PRICE SPIKE

## OVERCOMING THE FOSSIL FUEL CRISIS



■ PHUC-VINH NGUYEN

Research fellow,  
French and EU energy  
policy, Jacques Delors  
Institute

■ THOMAS  
PELLERIN-CARLIN

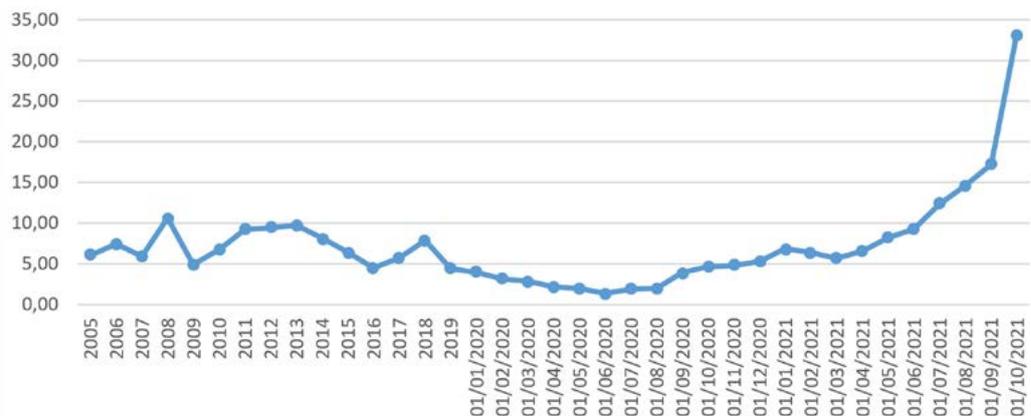
Director of the Jacques  
Delors Energy Centre,  
Senior Research Fellow,  
European Energy Policy

This autumn, in 2021, Europe is experiencing an energy price crisis, mainly caused by a surge in gas prices. As winter draws near, what we might call a “**gas crisis**”, in reference to the oil crises of 1973, 1979 and 2008, risks having a considerable impact – economically, politically and socially. This policy brief will present the current state

of play in Europe as well as reviewing the causes and determining crisis recovery strategies.

**Gas prices** on the European benchmark market **increased sixfold in a year** to reach historic levels (see graph 1)<sup>1</sup>.

FIGURE 1 ■ Dutch TTF natural gas prices (\$/MMBtu)



Source: Jacques Delors Institute based on data from BP Statistical Review of World Energy 2021 and Dutch TTF Natural Gas (USD/MMBtu) (ICIS Heren) Front Month Futures Quotes – CME Group.

1. Data "Dutch TTF Gas Futures", theice.com.

Acknowledgements: The authors would like to thank Lucas Guttenberg, Sébastien Maillard, Eulalia Rubio, Andreas Rüdinger, Karin Thalberg and Jean-Arnold Vinois for their comments.

This surge comes at a time of more widespread rises in fossil fuel prices. Coal prices quadrupled in the space of a year, and are now at \$240 per tonne, which is well above the levels seen in recent decades (\$50-125 per ton)<sup>2</sup>. In the meantime, oil prices doubled, returning to 2018 levels (\$80 per barrel) although they are still lagging levels seen in 2012-2014 of \$100 per barrel<sup>3</sup>.

Against a backdrop of rising fossil fuel prices, **electricity prices on the European Power Markets tripled** to record highs across Europe. As such, prices exceeded the symbolic level of €200 per MWh in some countries<sup>4</sup>, where prices had tended to average around €35-60 per MWh for the period.

These price hikes penalise an economic recovery throughout Europe which has been hard hit by an 18-month long Covid-19 pandemic. Not only do these surges increase production costs for many companies and businesses, but they also spark discussions

about the risk of inflation which, in turn, could influence decisions on monetary policy<sup>5</sup>.

Whilst the social impact of the energy price spike has already been felt, **with the onset of winter 2021-2022, the brunt of the crisis is yet to come**. As discussions rage on in Europe about implementing the European Green Deal and enter the difficult stage of legislative negotiations<sup>6</sup>, it marks a real political stress test for the European Union (EU) regarding its ability to reconcile urgent daily priorities and the climate emergency.

This topic carries significant political importance, as demonstrated by the European Parliament's decision to address that issue during the 6 October plenary session. The European Council will follow suit on 21 and 22 October. For its part, the European Commission will present a "toolbox"<sup>7</sup> combining measures that Member States can use to address the situation immediately, in line with European law and the political ethos of the European Green Deal.

## 1 ■ The role of gas in energy pricing

Electricity prices in Europe are based on a marginal price model. Wholesale prices largely depend on the **production costs of the latest power plant called upon to meet demand on the European grid**. In this case in point, we are referring to gas power plants. As a result, **the setting of electricity prices is indirectly caused by gas prices regardless**

**of the fact that gas only contributes to 20% of European electricity**<sup>8</sup>.

**The 2021 increase in gas prices is the result of a "perfect storm", i.e., the accumulation of disparate events, none of which in itself presents a major problem, but which together, create a systemic risk. In other**

2. "Coal, 2021 Data, 2022 Forecast, 2008-2020 Historical, Price, Quote, Chart", tradingeconomics.com.

3. "Brent Crude Oil Price", Investing.com.

4. "Latest European Power Markets data", Energylive.cloud.

5. "Warum sehe ich BILD.de nicht?", bild.de.

6. DEFARD C. 2021. "Putting the cart before the horse? Perspectives on a potential ETS on residential buildings", policy paper 268, Institut Jacques Delors, July.

7. European Commission. 2021. "Remarks by Commissioner Simson following the Informal Energy and Transport Council meeting", 22 septembre.

8. European Union. 2021. *EU energy in figures*.

**words**, small streams have converged into a powerful torrent. Without pretending to be exhaustive, we can distinguish the factors which have impacted gas supply and demand respectively.

In 2021, a multitude of events disrupted the EU's gas supply. **The Yamal-Europe Russian gas pipeline fire outbreak in early August 2021**, the **cut in Dutch gas production**, and maintenance by **Russian** and **Norwegian producers** – which was postponed because of the pandemic – affected timely production and exports to the EU. Moreover, winter 2020-2021 was a particularly cold one in Russia, which restricted their export capabilities. The economic rebound in Asia means that liquefied natural gas (LNG), including the so-called “*freedom gas*” promised by the United States, is headed for Asian rather than European markets. Last but not least, Russia, the European Union's main gas supplier which produces approximately a third of the gas used in the EU<sup>9</sup>, **is very much in a dominant position**. Russia and its state-owned energy company, Gazprom, have the resources to considerably increase their gas exports to the EU. As reported by the International Energy Agency (IEA), Gazprom “is fulfilling its long-term contracts with European counterparts”<sup>10</sup> – but “its exports to Europe are down from their 2019 level”<sup>11</sup>. **This opportunistic behaviour is not the root cause of this crisis. It is, however, causing it to deepen**. There are economic reasons behind this move since Gazprom is a large beneficiary of high gas selling prices. The Russian company is also suspected of manipulating market prices as clarified recently in *a letter that was co-signed by 42 MEPs from Europe's main political parties*.

Several factors are at play with respect to European demand for gas. First, both China and the EU had to brave a cold and protracted winter 2020-2021. This was compounded by COVID-19-related lockdowns and curfews which increased demand for residential gas heating in Europe. As a result, **EU gas consumption was up 7.6% year-on-year in the first quarter of 2021**<sup>12</sup>. In addition, the rise in *European carbon market* Emissions Trading Scheme (ETS) prices resulted in a 3.4% increase in electricity generation from gas,<sup>13</sup> to the detriment of coal. Lastly, several European countries experienced a sweltering summer. This led to a surge in gas demand in order to generate electricity to power air conditioners used by the general public and data centres. Parallel to this, electric wind power was down on forecasts. All of this ignited further demand from gas power plants since European Member States are yet to produce the required solar power capabilities to meet increased electricity consumption during the summer period.

Together, these factors provide us with greater insight into the gas price surge and the reason why **current pan-European gas storage is lower than usual**. To date, European gas storage is at 75% capacity versus an average of 90% for the same period in previous years<sup>14</sup>. As things stand, the situation is not critical. That said, the scenario could unravel if the crisis persists with a harsh and icy winter 2021-2022 across Europe.

9. European Union. “From where do we import energy?”.

10. “Statement on recent developments in natural gas and electricity markets”, [iea.org](#).

11. “Statement on recent developments in natural gas and electricity markets”, [iea.org](#).

12. European Commission. 2021. “Quarterly market reports confirm globalised nature of gas market in 1st quarter of 2021”, 8 July.

13. *Ibid.*

14. 10-year average based on data extracted from *AGSI+ (gje.eu)*.

## 2 ■ Providing immediate assistance to the most affected Europeans

While the price spike is a shock for the entire continent, there is a contrasting impact between countries. This is reflected in the **variety of solutions and messages communicated by Member States**. European countries can choose between three types of short-term measures: lowering energy prices (e.g., lowering Value-Added Tax (VAT) or other taxes, or price freezing regulations), subsidising energy consumption, and increasing social welfare. Strictly speaking, the latter policy is more focused on society than energy.

The Polish government has pinned the blame on the European carbon market ETS, singling out its contribution to higher electricity bills for households<sup>15</sup>. Above all, this is political posturing since **the rise in ETS carbon prices only equates to 20% of electricity price hikes**<sup>16</sup>. Conversely, the Greek government considers ETS and the related revenue as a way out of this crisis. Nationwide, throughout Greece, the additional revenue from the ETS market price increase should lead to the creation of a **special fund to support the energy transition with an endowment of €150 million**. At the European level, Greece<sup>17</sup> advocates for the introduction of a **temporary hedging mechanism** financed either through an advance payment of expected future ETS revenue or through one-off additional auctions of carbon allowances. Nonetheless, such a solution **raises questions about selected price scenarios on which expected revenue depends**. It could also cause speculation to spiral out of control. And it is speculation which undermines European carbon price

forecasts – a warning sign that has alerted the Polish<sup>18</sup> and Spanish<sup>19</sup> governments – .

On the flip side, the carbon market is not the only answer. For instance, EU Member States can also **use fiscal leverage in an effort to reduce end-customer bills**. This scenario applies to Spain and Italy whose governments have decided to temporarily **cut VAT** on electricity (21% to 10%) and gas (now 5%). **At the same time, both governments have lowered various special taxes** which affect production, transportation and energy consumption. In Spain, the government is accusing electricity companies of capitalising on the gas price spike by producing low-cost electricity for an astronomical market price. As such, between now and March 2022, the government will take up **to 90% of companies' profits that are deemed "excessive"**. It is estimated that this scheme would accrue between €2.6 and €3 billion, thereby reducing household bills which have skyrocketed by 35% since August 2020<sup>20</sup>. Though it protects households, this mechanism **runs the risk of depressing investment in renewable power**<sup>21</sup>.

Lastly, European countries may also use **direct subsidies**. This is the case for France thanks to energy voucher and a planned additional €100 for the 5.8 million eligible households based on official tax authority data. This brings us to our next question: how far are governments willing to go to contain the increase in energy bills for households? In this respect, France is an excellent study case. In no way does the additional €100 offset the energy price surge. This is why it is

15. MARTEWICZ M. 2021. "Poland Wants to Detail EU Role in Surging Electricity Prices", *Bloomberg*, 10 September.

16. Commission européenne. 2021. "European Parliament Plenary Debate on Fit for 55 after presentation of IPCC Report", 14 September • BROWN S. 2021. "Soaring fossil gas costs drive 86% of UK electricity price increases", *ember-climate.org*, 21 September.

17. HALL S. 2021. "Greece wants ETS revenues used to mitigate high energy price", *montelnews.com*, 4 October.

18. KOŚC W. 2021. "Poland's carbon price conundrum", *Politico*, 9 September.

19. HELLER F. 2021. "Spain's energy prices continue to hit record highs despite government intervention", *euractive.com*, 17 September.

20. NOCED M.A. 2021. "Electricity: Spain announces new measures to bring down soaring energy bills", *El País*, 14 September.

21. Press releases. 2021. "Spanish measures on electricity undermine EU Green Deal", *windeurope.org*, 27 September.

supported by a “price shield” which involves a temporary freeze on regulated selling prices of gas for three million French consumers<sup>22</sup>. The period that follows would apply a catch-up smoothing mechanism. This would result in a smaller decline in regulated selling prices of gas which, in turn, would differ from the substantial decrease expected in April 2022. By implementing this strategy, there is a legal risk of annulment of price freezes by the Council of State of France. Moreover, it is based on a mild winter scenario, which depends on the often-unsettled weather elements. The French government will cover

part of the price hike for the 5.8 million energy voucher households. In the current climate, though, all other households will pay the price spike in full on their gas bills. With this in mind, there is not one uniform protection policy for all seven million residential gas consumers. **The French government differs from its Italian and Spanish counterparts in the sense that it prioritises a minimum spend strategy<sup>23</sup>**. This is to avoid the **risk of societal impact which could give rise to political movements like that of the Yellow Vests**.

### 3 ■ How can Member States and the EU act?

Europe’s energy price crisis is a result of our dependence on fossil fuels and particularly gas. There is an urgent need to take action. To this end, policy decision makers must develop a strategy structured into two timeframes: the immediate term (winter 2021-2022) and the medium term (2022-2030).

In the short term, the European Union has little room for manoeuvre since Member States have opted out of bestowing the EU with large-scale and direct powers to intervene on social issues. European countries have also decided against an EU-sized budget which would provide a swift financial footing to take action in such circumstances. In other words, the onus is on EU Member States to draw on their current extensive resources to provide a concrete solution to the human and social emergency. Each of the above ways of working has its advantages and disadvantages. For instance, the proposed VAT cut is an immediate and effective solution. And yet, it is beneficial to all

revenue categories including the wealthiest. Against this background, the European Commission must make the first move with governments and national parliaments, outlining all possible options. In this spirit, all democracies – whether national or regional – can make the right choices for their country.

In the medium term, **the best solution to fossil fuel price crises is to withdraw from fossil fuels**. This is where the EU can take decisive action. Below is a list of five actions the European Union could take in an endeavour to reduce and better manage our dependence on fossil gas:

- On 14 December 2021, the European Commission is expected to review the Directive on the Energy Performance of Buildings (EPBD) which includes obligations to **renovate buildings** for specific property owners.<sup>24</sup> Considering the wide-scale use of gas to heat buildings, the measure would accelerate major

<sup>22</sup>. Note also that the customer market offer is indexed to regulated selling prices. This accounts for approximately two million indirectly affected people. *The French Energy Regulatory Commission (CRE) reported a further increase in the cost of imported natural gas. This, in turn, drove up regulated selling prices of natural gas in October.*

<sup>23</sup>. The French government’s energy voucher extension plan will be financed by VAT gains generated through increased energy prices.

<sup>24</sup>. DEFARD C. 2021. “Putting the cart before the horse? Perspectives on a potential ETS on residential buildings”, *Policy paper 268*, Jacques Delors Institute, July.

- renovation works which will significantly reduce European gas imports.
- Consistent with the [recommendations put forward by the International Energy Agency \(IEA\)](#), the Commission should propose **a ban on the sale of fossil fuel boilers**, including gas, for residential heating purposes. This ban should also become effective in 2025.
  - **Develop renewable sources of heating.** This includes systems ranging from solar water heaters and heat pumps to locally sourced renewable biomass and heat networks. European countries should revise their national recovery and resilience plans, as well as their national energy and climate plans, with priority given to the development of these types of renewables.
  - Fossil gas is also a key ingredient in industrial processes such as hydrogen production, as used in [ammonia and fertiliser manufacturing processes](#). Both the Commission and Member States must prioritise **the development of green hydrogen**, produced through water electrolysis, near European industrial clusters. This would create the conditions for European industry to rapidly shift away from its dependence on “grey” hydrogen, which is expensive and harmful.
  - The European Parliament and Council **must increase the budget allocated to the proposed “Social Climate Fund”<sup>25</sup>** to ensure that the EU has a future fund to provide tangible and structural support to lift every European family out of fuel poverty.<sup>26</sup>
  - The European Commission should carefully study the Spanish proposal to **create a Centralised European Gas Purchasing Group** in a drive to better coordinate Europeans. The Jacques Delors Institute first made the proposal in 2010<sup>27</sup> and 2015<sup>28</sup>, which has since been backed by Poland. This recommendation should receive full and undivided attention as it offers a potentially practical and better approach to managing the interdependence between the European Union and its gas suppliers, with Russia chief among them.



Managing Editor: Sébastien Maillard ■ The document may be reproduced in part or in full on the dual condition that its meaning is not distorted and that the source is mentioned ■ The views expressed are those of the author(s) and do not necessarily reflect those of the publisher ■ The Jacques Delors Institute cannot be held responsible for the use which any third party may make of the document ■ Translation from French: Wordclass ■ © Jacques Delors Institute



L'Europe pour les citoyens



<sup>25</sup>. DEFARD C. 2021. “A Social Climate Fund for a fair energy transition”, *Policy brief*, Institut Jacques Delors, 5 October.

<sup>26</sup>. MAGDALINSKI E., DELAIR M. & PELLERIN-CARLIN T. 2021. “How to lift 30 million europeans out of energy poverty?”, *Infographics*, Institut Jacques Delors, January.

<sup>27</sup>. ANDOURA S., HANCHER L. & VAN DER WOUDE M. 2015. *Vers une Communauté européenne de l'énergie : un projet politique*, Report n°76, Institut Jacques Delors, p. 123

<sup>28</sup>. DELORS J., ANDOURA S. & VINOIS J.-A. 2015. *De la Communauté européenne de l'énergie à l'Union de l'énergie*, Report n°107, Institut Jacques Delors, p. 158.