Title: Current Energy Security Situation in Europe

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Cillian O'Donoghue, Policy Director, Eurelectric

Hello, my name is Cillian O'DONOGHUE. I am Director of Policy at Eurelectric, the European electricity industry association. Despite being an Irish national, I have been Brussels based working on EU energy policy for over 10 years, so my background and expertise is very much on EU Climate & Energy policy, not Irish energy security policy. Over the next 5 minutes, I am going to speak on four things; 1) the cause of the current energy price crises, 2) the impacts thus far and 3) what we have done at EU level to try to address the crisis and 4). I will not go through each item individually.

1. The Causes

This crisis is essentially a gas shortage crisis. The "root cause" is that there is simply not enough gas in the system. This is having major contagion impacts on electricity prices given that gas is the price setting technology for electricity in the vast majority of hours. It's somewhat an oversimplification but the electricity price in Europe is often the gas price, multiplied by 2, with the CO2 price added on top. This means that high gas prices translate to high electricity prices.

We are seeing exceptionally high gas prices at present. At the Dutch Title Transfer Facility - the main reference hub for gas prices in Europe - prices in recent years have averaged between 15-20euros per megawatt hour. In August, these prices went to over 300. That is 15 times higher than average. At present, the price of gas at the TTF is 150. That is 10 times higher than the average.

Other factors such as the dry summer which meant that hydro reservoirs were at low levels and the shut down of several nuclear reactors in France have contributed, but the high gas price is the main cause.

Usually, Europe imports 40% of its gas from Russia. This is roughly between 155 to 175 bcm of gas. Given the infrastructure limitations – something I will elaborate upon in more detail – we cannot replace this Russian gas in the short term. There is too much demand and not enough supply, that is the problem.

2. The Consequences

The main impact we have seen is in major price increases. Overall, it is more an energy price crises than an energy crises. Wholesale electricity prices have increased +532% since January 2021. Retail prices have increased +84% since January 2021. I am now going to look at how households and energy intensive industry have been affected.

For households, the increase has been 84%. The reason for limited increase is that for retail around 80% of electricity is purchased in forward markets, that is 1-3 years before the electricity is actually

generated. The remain 20% is exposed to spot market pricing, so the increase we've seen in retail prices for consumers only reflects the last 20%. Looking ahead, many of these forward contracts are ending, so a higher volume is going to have to be purchased at these higher electricity prices.

With regards energy intensive industry, the impacts have been dramatic. Industries such as fertilisers, steel and non-ferrous metals have seen major curtailments and closures. For example, aluminium and zinc, have reduced their production by 50% in Europe since the crisis began. For a primary aluiminium smelter to restart production, it costs 200-400 million so it is likely they will not open again, and we will be increasing reliant on importing our raw materials from regions that have a much higher carbon footprint.

3. Measures adopted at EU level

At EU level, the reaction to the Russian invasion was the the REPowerEU strategy. More recently, we have seen some emergency electricity markets interventions. I will describe the main elements of each now.

i. REPowerEU

The strategy published in June was the reaction to the Russian invasion and is based on three main pillars;

i. **Reduce demand**: We have agreed to reduce our gas demand by 15%. For electricity Member States have a 10% overall target and a 5% target in peak hours. The 5% peak reduction is challenging but doable. For households we need to come with schemes that incentivise these reductions. For industrials, voluntary demand shifts are the best outcome – we need demand reduction, not destruction here.

ii. **Increase renewables:** We should have a huge buildout of renewables. It is estimated that 732 GW of wind or solar will be needed by 2030 according to the Commission's plan. At present, we are seeing to main obstacles to achieving this; 1) permit planning – we see that it can take 7-10 years to get permitting approval, while only 2 years to build and 2) measures to address the supply chain issues.

iii. **Diversification:** We are building more LNG terminals which can bring LNG to the European market from alternative suppliers such as the US, Qatar, Algeria, etc. In particular, we have seen a large increase in LNG imports from the US since the crises began. However, in the very short term, building the LNG infrastructure needed to replace Russian gas will be a major challenge.

ii. Emergency Measures

A series of emergency measures have been adopted, of most significance we would flag;

- **Protecting the most vulnerable**: The European Commission has published a series of toolbox which aim to provide targeted support to the most vulnerable consumers.
- **A cap on inframarginal rents:** Market revenues shall be capped to a maximum of 180 EUR/MWh. Cap targets all the market revenues of producers (and intermediaries) regardless of the market timeframe. However, the measure offers lots of flexibility for the Member States who can maintain and introduce further measures. We are concerned that this patchwork could undermine the internal energy market.

- **Measures on crude petroleum, coal, natural gas and refinery sectors:** In these measures surplus profits shall be subjected to this contribution with an applicable rate of rate of at least 33%.

4. Further measures expected at EU level

Looking ahead, there will now be discussions on gas price caps and reforming the EU electricity market. Gas price caps are subject to the current discussion, but no final decision has been made here yet. Elsewhere, at EU level discussions on reform the electricity market design is now beginning. We do see the need for some reforms but an evolution, rather than a revolution is needed here. Electricity markets in Europe essentially work well. It is the gas market, not the electricity market, where the problem lies.

In conclusion, say the short-term outlook is not great. There is no easy solution. I need to be honest and to say that we expect this crisis to last longer than just this winter and possible a couple of years. We expect prices to remain higher than we have seen in previous years. This is represented by forward prices for electricity which remain high.

We are much more optimistic for the medium-term. Indeed, the REPower EU plan, with faster electrification through the huge buildout of renewables will be a step in the right direction, leading to achieve faster decarbonization through clean electrification while minimising Europe's energy dependence.

Thanks for your time.