

## OLIVIER APPERT

Chairman of France Brevets, Scientific Advisor of the Centre for Energy and Climate of Ifri, Former President of the French Energy Council

Thank you for being here for this session on energy and environment.

During the different sessions of this WPC, the huge importance of energy and environment has been highlighted several times.

In fact, in times of multiple crises, this workshop today will discuss the opportunities and challenges to achieve the goals of energy security, sustainability, affordability, acceptability and resilience, from the perspective of different geographic stakeholders which map out credible and realistic pathways through this most demanding period.

Around the table, there is a wonderful panel to cover all the dimensions of the energy and environment challenges. I will give the floor to the different panelists for 10 minutes. After each presentation, I suggest we have a short Q&A session, focusing on the specific content of the presentation. At the end, we will have time for a general debate between the panelists and the audience.

It is my privilege to start by presenting my views on the present situation of the energy sector. Clearly, after the Covid crisis in 2020, the energy sector has faced, in 2021, an unprecedented crisis with the consequences of the Ukrainian conflict for the last 18 months.

The growth of energy prices had a major impact on inflation worldwide. Most of the countries in the world have been faced with an economic shock, similar to that we experienced during the oil shocks of 1973 and 1979.

The oil price increased rapidly at the beginning of the year from USD 80 to USD 120 per barrel, due to the uncertainties linked to the Ukrainian conflict. This growth was mitigated by the possible impact of the crisis on the world economy. For the last month, the price went back to the pre-crisis level, therefore, the impact of oil on inflation is rather limited.

The gas and electricity markets, more specifically in Europe, have been faced with their first crisis in 2021, due to the market design followed by the consequences of the Ukrainian crisis in 2022. The prices of gas increased from EUR 9 per megawatt hour in 2020 to EUR 47 per megawatt hour in 2021. Then the uncertainty of the availability of Russian gas pushed the price up to EUR 125 per megawatt hour in 2022, which peaked at EUR 240 in August. In the US, the gas market was more volatile than during the previous years, but the gas price rarely exceeded USD 20 per megawatt hour. Today, the price in the US is five times lower than in Europe.

The price of electricity followed the price of gas – EUR 113 per megawatt hour in 2021, EUR 297 in 2022 compared to the average price in 2020 of EUR 35 per megawatt hour. The impact on the energy spending in Europe is huge – EUR 1,200 billion in 2022 compared to 580 in 2021 and only 310 in 2020, which represents 8% of the European GDP in 2022 compared to 4% in 2021 and only 2.2% in 2020.

Rapidly, after the Russian invasion, the European countries and the EU Commission took measures. An embargo on Russian coal was decided on April 8 and, later, on Russian oil on June 6 and these measures have also been taken in most of the developed countries in the world. An ambitious energy plan has been agreed upon called REPowerEU, in order to cope with the dependence of EU countries on Russian supplies. Most of the countries took measures in order to reduce the impact of the price increase on the final consumer or to promote energy sobriety. A decision was taken at EU level to set up a cap on the price of Russian oil and gas, and I remind you that, in June 2022, the US government launched a massive plan of USD 400 billion in order to sustain the US economy, the Inflation Reduction Act.

As a result of these measures taken in Europe and in many other countries, the OECD imports of Russian oil dropped by 50% to 2.5 million barrels per day. However, this drop has been largely compensated by Russian oil exports to non-OECD countries, especially China and India. In one year, Indian imports of Russian oil have increased by a factor of 10. Russian exports to the EU by pipeline dropped from 10 billion cubic meters (bcm) in March 2022 to 1.5 bcm in December and, at the same time, Russian LNG exports increased significantly. At the end of 2022, the share of Russia in the EU gas imports is only 10%.

Immediately after the first embargo measures, the price of Russian oil dropped by 30% in order to find consumers. In fact, Russia was obliged to reduce the price in order to increase its export towards non-OECD countries.

We should not forget the major event which happened just a year ago – the sabotage of the gas pipes Nord Stream 1 and 2. These pipes were playing a major role in the gas supply of Germany. On September 26, 2022, several explosions destroyed the gas pipe off the Danish coast. It is the first time that such a vital infrastructure was attacked in a peace zone. Who is responsible of such sabotage? There is no clear evidence. However, the clear winner of this sabotage is the US. If such an infrastructure may be attacked during peacetime, what are the implications on all the vital infrastructures we rely on, both energy and telecommunications?

Some key figures. Russian revenues from energy dropped significantly. The share of Russia on the EU gas supply was reduced from 40% to 10%. EU investment in renewable energy and heat pumps increased by 40%. The electric vehicle market increased by 15% and the EU CO<sub>2</sub> emissions were reduced by 2.5%.

In a nutshell, European countries are the guessed losers of this major energy crisis we are facing. This will have a significant impact on our economies and, clearly, the US are the winners. As far as Russia is concerned, the impact on its economy is rather limited on the short-term. However, on the longer term, Russia will have difficulties to compensate its European outlets.



For the last few weeks, the dramatic conflict between Israel and the Hamas has been bringing a new dimension to the world energy crisis. However, for the time being, we have not seen evidence of what could happen due to this new crisis.

This is the scene I wanted to describe. Before I leave the floor to the different panelists, are there any questions or any comments? Yes, please?

**Arash Duero, Managing Director of UAE-based Big Picture Strategy LLC.**

I have a brief question regarding Indian exports to Europe. Do we have numbers regarding how much Indian exports to Europe have increased? It would be interesting to see how much of the void left by Russia that India and China actually filled.

**Jean Abiteboul, President of GIIGNL (International Group of Liquefied Natural Gas Importers), Non Executive Board member of Tellurian, Inc. (AMEX: TELL), Founder and Chairman of JA Energy Consulting**

Are you talking about gas? Your question is about gas?

**Arash Duero**

Yes.

**Jean Abiteboul**

I will come to that.

**Arash Duero**

Okay, great. Thank you.

**Olivier Appert**

As far as oil is concerned, nobody knows exactly where the oil is going. However, clearly, the imports of Russian oil to India has been increased by a factor of 10.

**Arash Duero**

What about India to Europe?

**Olivier Appert**

That is another story. Yes, please?

**Ana Birchall, Special Envoy for Strategic and International Affairs Nuclearelectrica**

Thank you so much. Ana Birchall from Romania. Thank you so much for a great presentation, but you did not mention nuclear energy. We know that France has such a great tradition and Romania has such a great tradition, and we are actually working very closely together at the EU level. We all know that the energy from nuclear is one of the cleanest, most affordable and more reliable sources of energy. Perhaps, in your presentation, you might want to consider



that part as well. Maybe later on, during the debate, I could intervene in a more elaborate way?

Thank you.

**Olivier Appert**

Please do not think that, in my presentation, I underestimate the role of nuclear, but I was focusing on an energy world in deep crisis. Unfortunately, if I could raise the flag of a problem with nuclear, it is the availability of nuclear in France which has been reduced dramatically linked to maintenance issues due to Covid and also due to technical problems. Fortunately, we are out of this situation. However, in August 2022, for the first time in 30 years, France was a net importer of electricity.

Clearly, now, I think there is a growing consensus, in France and in Europe, to develop nuclear energy and to base the energy transition on nuclear. There is also, within European countries, some countries strongly opposed to nuclear energy.

**Jean de Kervasdoué; Professor Emeritus of Economy and Health Management at the Conservatoire national des arts et métiers (Cnam), Founder of the Pasteur/Cnam School of Public Health**

Olivier, it was not a bad technique, it was new norms. The reason why nuclear power plants were closed in France was mainly for normative reasons rather than bad technology, as simple as that.

**Olivier Appert**

Okay. If there are no more questions, you may afterwards ask a question.