

Is the Global Energy Sector Really Turning Green?

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Abstract

One of the most important questions which has arisen after the pandemic is whether the world is or not turning its face to green energy?

International summits, public policymakers, environmental organizations, all have argued that there is no time to lose when it comes to decarbonization and green energy. But how did the world's most powerful economic countries really react? Have they already started turning green or are they just issuing decarbonization policies without being focused on implementing them? Will the war in Ukraine represent a game changer for the short, mid and long term decarbonization politics?

This article will list a number of examples where some of the main actors in decarbonization of the planet are rather doing the opposite instead of doing what they are promoting through their international agenda.

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1. Introduction

2021 was a year in which the global energy markets started to recover their huge losses registered during the lockdowns generated by the pandemic which continued its long run throughout the whole world until the spring of 2022.

Global economic recovery as well as global energy markets recovery implied a lot of energy has been used to generate sufficient amount of goods and services destined to fill in the needs of the economies which suffered during the lockdowns as well as of the people and their desire to return to their normal lives and way of living.

In terms of Europe's gas market, the prolonged 2020-2021 winter season determined the underground storages to reach a quite low level at the end of the winter season, the market players seeking to quickly refill their storage positions to benefit of the flexibility generated by the underground storages in the next cold season.

Throughout 2021 and until 2021-2022 winter season, energy markets were confronted with Russia and Gazprom's unwillingness to provide the required volumes in order to support the demand. Lower volumes from Russia were properly

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signaled and explained through the Quarterly Gas Review reports of the Oxford Institute for Energy Studies and had become the day-to-day reality starting with 2022 summer. [1] (Quarterly Gas Review: Short- and Medium-Term Outlook for Gas Markets, 2021).

Russia's war in Ukraine, accompanied by Gazprom's non-compliance with the contractual clauses (imposed payment mechanism in rubles, gas cut-offs to Poland and Bulgaria, gas deliveries reduction to Germany and Austria, power cut-offs to Finland, etc.) has led Europe to face, probably, its worse energy crisis in the last 100 years.

Of course, in such circumstances, it became almost impossible for the EU Member States to comply with their own legislation (i.e. Green Deal and Fit for 55) and 2050 targets in terms of decarbonization.

2. Post-pandemic recovery

Although Russia's war in Ukraine is now triggering a real earthquake in the energy markets (and not only) and in the post-lockdowns period each country has issued ambitious decarbonization plans, those plans were not accompanied by complementary actions which, of course, conducted to environmental organizations criticism, new rhetoric at political level and a wave of discontent through a large part of the population.

But why were these countries not following their publicly declared agenda? Was it greed? Was it geopolitics? Is it impossible? My view is that there is a part of each and I will further argue this statement:

a. Greed – as we all know, the end of the lockdowns brought a sharp increase in terms of demand which had to be covered by strong industrial production. After the economies were (partially) closed, all expected the recession to be on the doorstep and no one expected their economy to be forced to cope with such an increase in terms of consumption. Of course, no country desired to be left behind and the industrial production was resumed at its full capacity. This meant a lot of energy had to be consumed in order for such demand to be fulfilled. Everyone, except the public speakers, forgot about renewables and switching to green energy when they had to take immediate action confronted with such a boom in terms of consumption.

b. Geopolitics – ever since the beginning, geopolitics had an enormous influence in energy flows. In this way, economic dependencies were generated in terms of demand and supply relation. Strong diplomatic relations between countries have created strong energy chains through the decades. Would Russia have maintained its influence in Europe if Germany, Russia's biggest energy client, would have switched to renewables?

c. Impossibility – of course there is no such thing as impossible when there are enough will and resources involved. In terms of will, we will see below some examples defining the will to switch to renewables. In terms of resources, the increasing costs of raw materials and workforce, likewise the supply-chain

bottlenecks have brought, for example, a sharp increase in photovoltaic projects costs.

The war in Ukraine brought the situation closer to the impossible side and has made the transition to renewables steeper in terms of costs.

The cost of the transition will have to be born, unfortunately, by the final consumers, being the ones “chosen” to pay for years of harmful inaction from the policy makers.

Of course, an increase in the resources allocated would have helped to cope with this high cost of the transition, but we will see below where the resources were distributed.

3. Decarbonization plans implementation

As mentioned before, multiple ambitious decarbonization plans were issued in the last two years, most of them being currently left behind due to the extreme geopolitical context.

But there were so-called opportunity windows, just before the pandemic, the countries missed to take advantage of and which are currently triggering a harsh transition period with enormous cost both for the consumers and for the environment.

Germany

Although a strong advocate of the switch to renewables policies, Germany fails, for the moment, to implement such measures. On 30 May 2020 Germany put into operation the 1,100 MW Datteln 4 power plant which is located in North Rhine-Westphalia region, despite their publicly declared agenda of closing all their coal-fired power plants by 2038.

Germany’s opposite to cleaner energy direction was also on the table in 2021 when, in the first six months, coal was the main contributor to the country’s energy mix.

Of course that strong demand had to be coped with strong input in terms of supply which furthermore had to be met by a strong energy input. Nevertheless, this remains an unwanted example for Germany’s public policymakers and for the global economy if the interest for green energy still remains valid.

The consequences of Germany’s inaction towards renewables and energy diversification are deepened by the war conducted by Russia in Ukraine. The country is now facing the obligation to fire up the coal power plants in order to save gas for the upcoming winter season. As we know, Germany’s industry has no chance of surviving without Russian gas supplies which, after what we have seen in Poland, Bulgaria and Finland, might be halted in the next period.

Austria

Strong consequences are also heading for Austria due to the lack of energy diversification policies in the past decade and the Russian invasion of Ukraine which

has also led to the prospect of having the Russian gas supplies halted in the upcoming period.

Seen as a defining event for the switch to the renewables path, the closure of the 230 MW coal-fired power plant Mellach in 2020 is now having the opposite effect, Austrian government being prepared to re-open Mellach in order to avoid critical situation which may be induced by an eventual gas cut-off by the Russian side.

China

As highlighted in the Nature journal in 2020, China has made significant investment in its renewables, targeting a proportion of 20% of renewables and non-fossil fuels in its total energy mix by 2030. Nevertheless, having had the fastest exit from the lockdown as a result of the severe sanitary measures imposed, China was confronted with an extreme demand which had to be somehow covered. As such, China pushed all its coal-fired power plant to the limits and, as a consequence, China's share of global coal generation rose from 50% in 2019 to 53% in H1-2021.

Even with an ambitious plan for renewables already in place, China stated, at the beginning of 2022, that it will run its coal-fired power plants up to their full capacity in order to ensure energy security. Of course, the economy needs support and this support comes with a price which, in this case, has "to be paid" by the renewables plan.

4. Conclusions

Although we have seen examples of countries not complying with their own "green energy" policies in the last two years, one should also remember that this period since 2020 was unusual for the global markets, starting with the sanitary crisis, deepened by an energy crisis and culminating with a war at the EU's eastern border. Within such a global context, coal power output increased in 2021 to an all-time high according to the International Energy Agency.

Having defined the context and looking to the continuously increasing energy consumption, we have to welcome EC's decision to include natural gas and nuclear energy into EU's taxonomy and hope that through such measures a smoother switch to green energy could be achieved.

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