

The war in Ukraine and Europe's energy dilemmas

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I am basing this on presentations at the FLAME conference in Amsterdam in May, that I attended.

It is fair to say that, irrespective of how the war progresses, measures being taken by Europe to wean itself from Russian energy are increasing Europe's energy dilemmas and challenges.

Increasing reliance on renewables is still challenged by long-term intermittency, for which there are no answers yet – requiring natural gas back-up.

Decoupling of European energy from Russian oil, gas and coal is one-way and permanent, at least over the foreseeable future. But in discussing Europe's dilemmas we must remember that the energy crisis predated the Ukraine war. Recovery from Covid 19 and quantitative easing led to the global commodity boom, increasing energy demand and high prices we are experiencing now. The Ukraine war exacerbated that, but also brought home the enduring importance of fossil fuels, global energy security and energy affordability.

The reality is that since 1970 about 80% of global energy comes from fossil fuels. What has been achieved during the last ten years is to merely replace some coal by natural gas. The world has not yet had any serious transition to renewables to make a difference. There is no evidence that much has been done to squeeze out oil, gas and coal. China is building many more coal-fired power plants than the US and EU are closing and in India coal provides 75% of its electricity.

In the light of the current energy crisis and high prices – especially high gas prices – the irony is that the big winner, even in Europe, is coal. It should have been a boon for low carbon energy and renewables, but it is not. This is the reality

the world is confronting. Energy transition has not really started yet, but it needs to.

The world has been mostly addressing reduction of energy production emissions, but has failed so far to address the erosion of natural carbon sequestration. Suffice to say that the Amazon rainforest became a net emitter last year. The net result of these mechanisms is that the carbon concentration in the atmosphere – that causes global warming - has been going up steadily by 2 parts per million (ppm) every year since 1990 and it is still the same today.

With the world coming out of the pandemic, economic recovery set in motion a commodity price boom and oil and gas and energy prices increased sharply. That was the logical consequence of what happened during the pandemic and before. Quantitative easing (QE), printing money, running serious negative interest rates over a long time meant that too much money ended up chasing too few goods, driving prices and inflation up.

What the Ukraine war brought home is that fossil fuels are still existential to global energy systems and that global energy security and geopolitics matter.

The world needs to pursue development of renewables going forward. But low energy density and intermittent renewables need back-up. That means that with the increase in the adoption of renewables, gas is becoming even more important than it was before, including LNG. The sources of LNG are quite limited, with diversification of supplies becoming incredibly important. Falling back into coal is not a choice in a world that aims to arrest global warming.

As the world pushes for more renewables, the requirement for gas as back-up increases. But intermittency of renewables makes gas intermittent, making the operation of gas-power facilities that much more expensive than otherwise would have

been. As long as intermittency remains an issue, the world needs a transition strategy for gas, not just for renewables.

High prices should incentivize more investment in new gas and LNG resources, but it is not. For this to happen the US and the EU must stop scape-goading gas and give clearer signals that gas will be needed well into the future – not just until 2030. Not doing so will lead to another crisis in a few years down the line, as oil and gas supply shortages become more acute.

Gas is a necessary part of the solution. But the gas industry must also get serious about addressing methane emissions and about adopting CCS at large scale.

The world needs to get serious about energy security and energy transition, but simultaneously, not just the net-zero part, including also natural carbon sequestration.

If this is not recognized and addressed, the world will carry on adding 2 ppm to the global carbon concentration in the atmosphere, all the way to 3degC+.

As soon as there is a crisis, people are reminded of the reliance on fossil fuels and that energy security and consumer affordability matter. If consumers cannot pay the high prices, it becomes a political imperative. Politicians scramble to bring energy prices down by cutting taxes. The world and governments will need to think about how people pay for energy. It is a basic living requirement that all people are entitled to and it has to be affordable.

The following is about the EU and what should be done later

The world will need secure and affordable supplies of oil and gas for a long time to come. The 80% reliance of global energy on fossil fuels and the need for 100 million b/d oil will not go away that quickly. Bringing fossil fuel dependence down to 20% by 2050 is a huge undertaking – requiring a massive and costly industrial, economic and societal upheaval - and will take time.

But the world, and Europe, need to get out of coal – not just stop the increase, but get it out of the energy system as quickly as possible, and fast, and replace it with renewables supported by natural gas during transition.

It also needs to reduce energy demand. If not, we are not serious about climate change. It requires changes in personal lifestyles, but that is something no one is prepared to talk about seriously.

What is needed is a global climate deal and China and Russia will need to be part of it. It is not just western democracies that need to deal with climate change, but also all future emitters.

Limiting global warming requires becoming serious about carbon consumption, not just production, and about the carbon price. The world will have to make pollutants pay. And the polluters are not just the oil and gas companies or the airlines or heavy industry. That's an illusion. The polluters are those who buy their products – its us. These companies do not make carbon intensive products for the fun of it. They make them because consumers want to use them – fuels, plastics and all other products made from fossil fuels.

If the world carries-on on this unsustainable path, then the growth of carbon concentration in the atmosphere will carry on growing at 2 ppm per year, with the inevitable consequences, until environmental unsustainability hits home.

The trouble is that the consequences have not yet registered with people fully to do something about it. It is time to recognize we are not really making any progress. There is a huge gap between what the public is being told and reality.

Since the crisis, the European Commission has gone into an over-drive issuing new policies and regulations on everything related to climate change and energy, left, right and centre. This can lead us in the wrong direction longer term. As Professor Dieter Helm warned in his latest paper, on looking at

how to avoid the next energy crisis, “times of crisis should not drive long-term policy decisions.”

We saw a good example on 8 June, when Ursula von der Leyen admitted that EU’s electricity market “does not work anymore” and needs to be adapted to the “new realities of dominant renewables”. I am not sure about that, but it took her a long time to come to that realization. In the meanwhile, Europeans have been and are still paying the price.

There will be other crises along the way. Brussels must address the issues, and not allow itself to be driven by activists and ideology. We need a serious transition to clean energy, but doing it in the middle of a crisis is a challenge. Plans to address Europe’s energy dilemmas must reflect reality: the pain of high prices and inflation on Europeans today, before they take to the streets.

There is a huge gap between what the public is being told and reality. Getting to net-zero will be costly.

The rejection by MEPs of parts of EU’s climate bill on 7 June is an indication and a warning of the challenges the EC will be facing if it pursues an agenda seen to be at odds with people’s concerns. As is rejection by the ENVI and ECON committees of the European Parliament mid-June of including natural gas and nuclear in EU’s Taxonomy.

The war in Ukraine appears to be becoming protracted. Europe must have answers to its energy dilemmas sooner than later. A long-period in crisis mode and high prices will be destructive.

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