Is Energy Security the New 'Net Zero'?

By Vicky Pryce

As the economies in the West are facing the very real prospect of stagflation, we have seen a shift in thinking. As oil and gas prices are going through the roof following the Russian invasion of the Ukraine, energy security rather than net-zero has for the moment moved up on the agenda. Larry Summers the former US Treasury secretary in an interview for the BBC this week argued on the that any recessionary impact from those higher prices would be less hard than what we experienced due to Covid. He also thought that any worsening in this prognosis that might follow a decision at any point to cut Russia's ability to export oil and gas to the West would be worth it in the longer term as ' freedom has its price' and restoring world order was paramount.

But in the short term it would certainly hurt. And the impact would be both ways given that the oil and gas sectors at present provide for some 40% of Russia's tax revenues and some 60% of its exports. But while the US is practically self sufficient in energy, the EU's dependency on Russian gas, mainly through but not exclusively the current Nord Steam 1 pipeline , makes it very vulnerable to such a ban. In 2019, on average across Europe ,some 27% of all oil imports came from Russia and 47% of its coal. In addition Russia supplied some 41% of its natural gas needs, with Germany and Italy the most dependent of the large European countries. France on the other hand was much less reliant on Russia as some 70% of its electricity needs met by domestic nuclear power[i] . The UK is also much less dependent on Russia as it imports gas mainly from Norway.

But is the search for net zero partly to blame? Up to a point yes. We have certainly seen a 'dash for gas' to replace coal fired power stations while Germany also did a U-turn in 2011 , cancelling plans to expand nuclear power supply after the Fukushima Daiichi nuclear disaster[ii]. But as the economies started to bounce back from the temporary Covid slump, demand for energy increased sharply across the board. There was no way renewables alone, could meet that despite considerable investment and large subsidies over the last couple of decades. Just in the last few months, before the escalation of the Ukrainian conflict, the European Commission had suggested, and got agreement, on a new 'green' taxonomy which accepted, for a while at any rate, both gas and nuclear as 'clean' fuels too , to ease the pressure on governments, businesses and households .

Importantly, the taxonomy discussion and acceptance by the member states was at least an admission that the path to net zero required traditional fuels for longer than had been assumed. There was also concern that much of the cost of the transition would otherwise fall on poorer households increasing inequality and social tensions.

The Russian invasion in the Ukraine has complicated these calculations. It is fine to depend on gas for a bit longer but only if it is cheap and plentiful. And when it was cheap and plentiful Europe, and particularly the UK had reduced its storage capacity to what now looks like ridiculously low levels. It is finally recognised that this needs to be reversed. Additionally there are question marks over whether the attempted switch to alternative sources of energy was at the expense of energy security? Possibly. But in truth in 2020, just as the pandemic hit, renewables still only accounted for some 20% of Europe's energy needs. Nuclear power not much more than 10%. Yes, coal had fallen from more that 50% of all energy needs in the mid 1960s to just 15% by 2020. But oil at 35% and natural gas at 25% still dominated.

So this has left Europe very vulnerable. According to Eurostat, Europe in fact increased its reliance on imports for its energy needs from 56% in 2000 to 60% in 2019. The EU is currently stepping up attempts to rebuild gas reserves and the International Energy Agency (IEA) has come up

with a ten point plan for Europe to reduce dependency on Russia[iii]. Self-sufficiency seems now to be the name of the game. But ways of achieving vary. In the UK there now seem to be plans under formulation to increase North Sea production of oil and gas again[iv] and renewed calls to allow fracking in the UK which had been stopped by government before. But at the same time the EU is announcing a new strategy for achieving self-sufficiency by stepping up the move to clean power [v]. The plan just unveiled by the European Commission President, Ursula vin der Leyen, includes moving to more reliable suppliers' of oil and gas but it also looks for a massive new investment in renewables[vi].

Of course, high energy costs of the type we are seeing tend to encourage improvements in energy efficiency. This is exactly what happened after the oil price shocks of the 1970s. The energy consumed per unit of output dropped significantly and has continued to improve in most sectors as the table below shows[vii].

	Tonnes of oil equivalent					
	1990	2000	2010	2018	2019	2020p
Industrial energy consumption per million units of GVA	155.2	125.9	103.9	87.2	85.5	87.2
Domestic energy consumption per household	1.8	1.9	1.8	1.4	1.4	1.4
Service sector energy consumption per million units of GVA	25.9	22.3	16.6	15.1	14.7	15.3
Road passenger energy consumption per million passenger-kilometres*	42.7	41.9	39.2	34.8	33.8	33.2
Road freight energy consumption per million freight-kilometres*	86.6	79.8	91.4	96.0	94.0	89.5

* BEIS estimates for 2020.

The von der Leyen plan includes an element of this focussing particularly on buildings renovation and better integration into smart energy grids of AI . But it all takes time. And in the meantime if the decision 'to pay for the price of freedom' is taken, look for stagflation at best, recession at worst in the West with all the implications that this will have on the new geopolitical map that emerges.

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[i] https://www.world-nuclear.org/information-library/country-profiles/countries-a-f/france.aspx#:~:text=France%20derives%20about%2070%25%20of,generation%20to%2050%25%20by%202025.

[ii] https://www.euronews.com/2021/12/31/germany-begins-nuclear-phase-out-shuts-down-three-of-six-nuclear-power-plants

[iii] https://energycapitalpower.com/iea-announces-ten-point-plan-to-reduce-reliance-on-russian-gas/

[iv] https://www.ft.com/content/654b3cb4-f98c-49d5-bd80-0b87260b14f1

[v] https://www.reddit.com/r/europe/comments/t8w3ce/eu_to_step_up_push_for_clean_power_as_ukraine/

[vi] ” https://www.openaccessgovernment.org/eu-green-deal-stop-russian-oil-dependency/130982/