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More than just a petrol station: Norway's contribution to European Union's green strategic autonomy

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RECOMMENDATIONS:

- Sanctions on Russian oil & gas resulting from the invasion of Ukraine have made Norway EU's primary supplier, but locking-in a high carbon export pathway is a major risk for Norway.
- Norway's key role in Europe's energy transition and working towards a green strategic autonomy is matched with the importance of the European Union for the future phase out of Norwegian oil & gas production.
- In the longer term, EU's strategic goals, set by the Paris Agreement and the European Green Deal, are also Norway's goals, there is no conflict of interests.
- This makes the Green Partnership between Norway and the EU mutually beneficial and requires European policymakers' commitment in helping Norwegian partners raise climate policy ambitions while creating viable economic alternatives to petroleum extraction.
- Nordic states cooperation can help; the Nordics are among the most ambitious climate policy leaders, but Finland and Sweden's accession to NATO leaves Norway as the only half-member of the European family.

Europe's search for strategic autonomy in a turbulent world

The past five years have seen far-reaching changes in international politics and trade, all of which forced European policymakers to reconsider the role and place of the 'Old World' in global affairs. The continuous rise of China and its ambition to play a larger role, matching its economic weight, requires new approaches to international trade. The COVID-19 pandemic exposed Europe's import dependencies and the fragility of long and complex global value chains on which it relies. These vulnerabilities are visible in many strategically important sectors, from semiconductors (chips) through medicine to the production of items on which European Union's visions of future decarbonization rest: photovoltaic cells, wind turbines, nuclear fuel etc.

If this geoeconomic challenge was not enough, Russia's increasingly assertive posture in the last decade led to it wielding a full-scale war in Europe and challenging the continent's post-Cold War security architecture. The invasion of Ukraine in February 2022 caused massive suffering and loss of life within Ukraine, as well as a deep impact on the EU and NATO countries. If COVID-19 uncovered global supply vulnerabilities, economic sanctions and countersanctions laid bare the asymmetric energy relationship the EU maintained and the scale and depth of its dependence on Russia.

But apart from ever more forceful adversaries, European states also needed to deal with fickle allies. United States under Donald Trump was unpredictable and signaled waning support for a liberal world order the Americans themselves established. Although Joe Biden's administration has reversed many of Trump's policies and displays laudable firmness in the face of the war in Ukraine, assertiveness of its economic policy – epitomized by the Inflation Reduction Act (IRA) – does not deviate far from the predecessor's "America first" approach and constitutes a threat to Europe's industrial potential, economic wellbeing and the capacity to implement ambitious energy transition and climate policy as laid out in the European Green Deal. No matter if 2024 presidential elections bring back a more isolationist Republican president or a more internationalist Democrat, Europe needs to hedge its bets wisely and address all these vulnerabilities as much as possible.

A 'green' strategic autonomy?

Taken together, these circumstances make Europe's open strategic autonomy – or in the words of the European Commission "the capacity for Europe to act autonomously to safeguard its interests, uphold its values and way of life, and help shape the global future" – a political goal which is not merely desirable but inevitable. This concept, now synonymous with strategic sovereignty, this concept, originated in the domain of security and defense and used to be associated with France's uneasy relationship with the US and NATO, but has long ceased to be so narrowly defined. If anything, the war in Ukraine shows that the original idea of strategic autonomy which juxtaposed European defense with EU-led NATO is a myth, but the need for strengthening Europe's internal capacity to deal with shocks and stresses in an active, not merely reactive manner – is real.

The long-term challenge of climate change looms over any vision of a global future and a desired way of life, and for that reason, the goal should be redefined as achieving a 'green' strategic autonomy. But how can that be attained in practice? EU's long term vision rests on achieving the goals of the Paris Agreement, keeping global average temperature rises below 1.5-2°C, and on implementing the European Green Deal, which provides the most ambitious sustainable policy strategy yet seen. In this, Europeans want to lead global efforts, both as political champions of international climate governance and role models of ambitious climate action, as standard setters, technological innovators and industrial leaders. All that while retaining control (sovereignty) and without compromising core values on which the liberal democratic European project rests.

What is needed is the decarbonization of the economy and a transition towards carbon neutral energy systems – in power generation, heating, as well as transportation. These in turn require energy security, including security of supply, understood in the broadest sense. Limited domestic supplies of strategic raw materials and energy resources make European policy makers look for alternatives in the Union's closest neighborhood.

On 23 February 2022, Norway's Prime Minister Jonas Gahr Støre and Frans Timmermans, Executive Vice-President of the European Commission, presented an outline for a "partnership" for "advancing green and resilient industrial value chains". The events of the following day limited the publicity of this initiative, but Russia's war in Ukraine has immediately strengthened EU-Norway collaboration, not least in the energy sector.

The following sections briefly discuss the contribution Norway can make to Europe's 'green' strategic autonomy in different sectors, highlighting the opportunities as well as challenges and risks.

Energy: oil, gas, electricity

Norway is, without doubt, a first-choice supplier of petroleum and methane for the European market. Geographically close, stable, and integrated into the Internal Energy Market, it was a natural first stop for EU policymakers seeking quick diversification away from Russia. This has in turn made Europe highly dependent on Norwegian exports and increased Oslo's political leverage.

However, the gas and oil price hike, which put European

consumers under extreme pressure but caused windfall profits for exporters, including Equinor, was very real and Norway's reluctance to discuss a gas price cap (which was in the end introduced at €180/MWh, after prices returned to pre-war levels) was not well received by EU institutions and some member states.

A broader problem with Norway's now primary role in supplying the European market is that this politically driven shift may lock-in the Norwegian economy on a carbon-intensive path which will expose the country to greater risks in the 2040s and 2050s, when decarbonization and eventual phase out of oil and gas production may be more drastic and painful. Likely, the last fossil methane molecule to be burned in Europe will originate from the Norwegian Continental Shelf, but the extension of the lifetime for oil and gas production may be a mixed blessing. Simultaneously, the Commission's REPowerEU strategy busts the idea of gas as a transition fuel – and casts it in the role of a political and environmental problem, of which Europe must rid itself sooner rather than later. Norway must strive to be more than the EU's petrol station, due to close in 20-40 years' time.

But Norway's potential contribution does not end at oil and gas. In fact, the more sustainable, long term, and unique input Norway can make is in the power sector. The country's zero-emission energy potential – in hydroelectric power, but also onshore and offshore wind and other technologies – is enormous. Green electricity can be exported, but it can also be used for hydrogen production in times of surplus, and that creates another value stream for Norway's energy exports. First steps in that direction were made in a January 2023 agreement between Norwegian and German companies on cooperation regarding hydrogen-ready gas plants, as well as an import pipeline that would initially bring "blue" hydrogen (produced from methane, with carbon capture) and eventually renewable "green" hydrogen from renewable-powered electrolysis.

Despite recent controversies related to record high electricity prices on the Norwegian domestic market (which have largely caught up with European prices, but that meant a large economic strain for Norwegian consumers used to lower prices and higher consumption levels), the experience of market and system integration across borders is positive. Norway is a pioneer of market-based approaches in power sector governance, having liberated its domestic market in the early 1990s. This was a steppingstone for the creation of the NordPool, a regional power market which first connected Norway with Sweden (1996), then Finland (1998) and eventually Denmark (until 2000). Norway and Sweden have also boasted a common renewable energy support system (green certificates), making this a multilevel cooperation.

However, infrastructure expansion is lagging behind ambitious visions. Even if Norway wanted to export more, which is now highly debatable, the roll out of new renewable capacity is slow, onshore wind effectively stopped, and new interconnectors are highly controversial. There is no political agreement whether power exports should take place at all, let alone be scaled up, and resource nationalism finds fertile ground in the Norwegian public debate. There are also domestic issues, such as the imbalance between pricing zones in the scarcely populated but energy-rich North, and the densely populated South, more responsive to European price signals.

Norway can and should still play the role of a green battery for the European market in transition, but needs to do this wisely, emphasizing the provision of much needed flexibility and backup power over selling larger volumes of electricity during long periods – at least until sufficient domestic overcapacity is achieved with new renewables. Additionally, Norway needs to be a leader in initiatives aimed at turning the North Sea into a multi-technology renewable power hub for Europe, where Norwegian offshore capacity and know-how will be vital.

Negative emissions: carbon capture & storage plus forestry

Norway has good reasons to consider itself a leader in carbon capture & storage (CCS) technology, and as such it can be vital for European decarbonization. Virtually all scenarios of net-zero by 2050 rest on a large share of negative emissions technologies, among which industrial-scale CCS could be prominent. Norway's transition strategy envisages turning the continental shelf into a 'hub' for captured carbon dioxide, and there are infrastructural and geological arguments for that, alongside experience and political will.

That said, CCS remains a largely hypothetical solution which is burdened with high environmental risks. Whether the plans for pumping CO2 from across north-western Europe to the Norwegian shelf can materialize, or even if Norway's own emissions can be captured and stored there on a scale, is still not certain. Meanwhile, many Norwegian policymakers and stakeholders are treating this solution as a silver bullet for domestic decarbonization, alongside equally uncertain green hydrogen. While such strong commitments are important to move new technologies and scale them up, there is also a risk of putting too many eggs in a basket that may prove to be the wrong one, or of delaying emissions reductions elsewhere because of trust in future capture technologies.

Another element of negative emissions which is seen as crucial in scenarios, e.g., of the IPCC, is bioenergy plus CCS (BECCS), boosting carbon capture plans for the forestry sector. Forests are natural carbon sinks, but expanding them, while at the same time increasing the use of renewable biomass for energy and wood for production processes in a modern bioeconomy, may well be contradictory goals. Norwegian companies, most notably the

biochemical champion Borregaard, have hi-tech know-how to develop industrial scale biorefineries, and there are also possible partnerships with Swedish and Finnish companies across forestry industries. However, we must bear in mind that forest growth rates in Scandinavia are low, and this limits the carbon sequestration capacity of local forests. Furthermore, the Norwegian pulp and paper industry is in decline, and if it finds new niches they will only partially compensate for this general trend.

Across the value chain: Critical raw materials & high value products

The core of the announced EU-Norway strategic partnership was raw materials – metals and minerals critical for new energy infrastructures. According to the Norwegian governmental agreement, Norway 'has the opportunity to develop the world's most sustainable mineral industry', and the country is boasting confirmed reserves of several critical raw materials. More problematic, however, is the difference between technical and political feasibility of expanding the extractive industry. The bone of contention in years to come will be licensing and local resistance to new mining projects.

Norway can use its competitive advantage in the production of important carbon neutral base products, including steel and aluminum. Steel exports can be an contribution to EU's industrial transition than blue hydrogen, not subject to the latter's market risks. Furthermore, Norway should strive to export products using its raw material endowment, not the raw materials themselves. For that to happen, an agreement with the EU regarding access to the European internal market for components such as batteries is necessary, while the supply chains for finished products in which these components are used can be quite complex. Granting Norwegian products full access, understanding the role Norway can play as a reliable source of raw materials and energy resources, is therefore a priority.

In 2021, a report by the Confederation of Norwegian Enterprise (NHO) identified six areas of possible advantage in future green technologies. These were: a global standing in all renewable technologies; the supply chain for offshore wind; the value chain for batteries; hydrogen; the maritime sector; and optimization of power systems and smart metering. While these are all sectors of high potential to transform the Norwegian economy contributing to European decarbonization, this will not happen without coordinated policy efforts. Long term investment, public-private partnerships, and co-financing, as well as strategic thinking & regulatory stability are needed, and here too the European environment is very important.

Further reading:

D.J. Lier, C. Houeland, H. Holmås, K. Szulecki, P.R. Østring, 2022, Petroleum Transition Pathways in Norway: How do Norwegian stakeholders envision pathways to net-zero & phase-out for the country's oil & gas sector? OGT Project Report.

K. Szulecki, A. Chitra, D.H. Claes, C. Houeland, D.J. Lier, 2021, Norwegian Oil & Gas Transition: Building bridges towards a carbon neutral future, OGT Project Report.

This Policy Brief has also been published as a Policy Brief within the GreenDeal-NET project

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