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A Petrostate's Outlook on Low-Carbon Transitions: The Discursive Frames of Petroleum Policy in Norway

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Abstract: Norway is a petroleum exporting country that, simultaneously, is at the forefront of implementing ambitious climate policy measures. Through a discourse analysis of official documents that address petroleum policy, this article examines how the Norwegian government justifies a place for Norwegian petroleum in a low-carbon future. Our findings show that the frames used to justify continued petroleum production between 2011 and 2018 remains predominantly stable, despite the growing opposition to this official discourse in relation to climate change and the societal dependence on petroleum revenues. This article highlights the tension that Norway, as a petroleum-producing country, face in an increasingly carbon-constrained world, and how this is handled in the official petroleum discourse. It shows how the official discourse portrays continued petroleum production and exploration as both valid and necessary and how this framing is discursively linked to a strong commitment to mitigate climate change.

Keywords: low-carbon transitions; petrostates; discourse analysis; Norway; state imperatives; energy policy goals



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1. Introduction

'The world needs to wind down fossil fuel production'. This is the clear message from the Production-Gap-Report [1] (p. 3). The report looks at the discrepancy between the planned fossil fuel production by different nations worldwide and what is seen as the needed reduction in order to achieve the temperature goal of the Paris Agreement (2015). What they find, however, is that 'governments continue to plan to produce coal, oil, and gas far in excess of the levels consistent with the Paris Agreement temperature limits' [1] (p. 3).

Although coal has been a primary target for greenhouse gas mitigation for a long time, attention toward other fossil fuels, such as oil, and gas, is clearly increasing. This is partly due to the special report published by the Intergovernmental Panel on Climate Change (IPCC) (2018) on the impacts of a 1.5 °C temperature increase. The carbon budget is tightening [2–4], and there is growing concern worldwide about climate-induced financial risks, such as stranded assets [5–7], as the need for keeping fossil fuels in the ground becomes increasingly evident. Calls to target not only the demand side of fossil fuels, but also the supply side of fossil fuels by adopting fossil fuel restrictions to mitigate climate change are being made [8–14]. However, as Piggot et al. [12] point out, more research is needed to understand the circumstances that influence the adoption of supply-side policies.

In this article we use Norway as a case to illustrate how a country that is heavily dependent on petroleum revenues adapts discursively to the increased tension between the supply of fossil fuels and the need to reduce greenhouse gas emissions, and how petroleum exploration and production is justified in a low-carbon transition. The country has expanded its oil and gas exploration through several licencing rounds into the Arctic, with no major changes in the framework conditions for the petroleum industry, except for a 'temporary tax relief package' for the petroleum industry due to COVID-19 [1] (p. 5).

The question is, if more fossil fuels are to be kept in the ground, and if the speed of the transition to a low-carbon world must accelerate, how does a petrostate discursively respond to the claim that petroleum production needs to be curtailed?

Using the analytical framework of Scrase and Ockwell [15,16], we aim to bring novel insight to the Norwegian case by illustrating how the discursive links between state imperatives and energy policy goals serve to strengthen the existing policy regime. The discourse on the future of petroleum is of strategic importance, not only for Norway, but also for other petroleum rich states, Europe, and the energy transition itself.

Norway exemplifies a country that is highly dependent on oil and gas revenues, with nearly all of the petroleum produced being exported. The country is ranked as the world's third largest exporter of natural gas [17]. Norway has also been described as 'the odd country' [18] (p. 186) because of its unique position concerning energy. Domestic electricity production is almost entirely based on renewable energy. In June 2021, the electricity production consisted of 93.4% hydro power, 5.4% wind power, and 1.2% thermal power [19]. Norway is also special when it comes to energy security. In 2020, Norway produced 2424 TWh of energy, but only consumed 212 TWh (final energy consumption), leaving 2212 TWh for exports [20]. In the same year, oil and gas constituted just over 40% of the combined value of the country's exports, see Figure 1 [17].

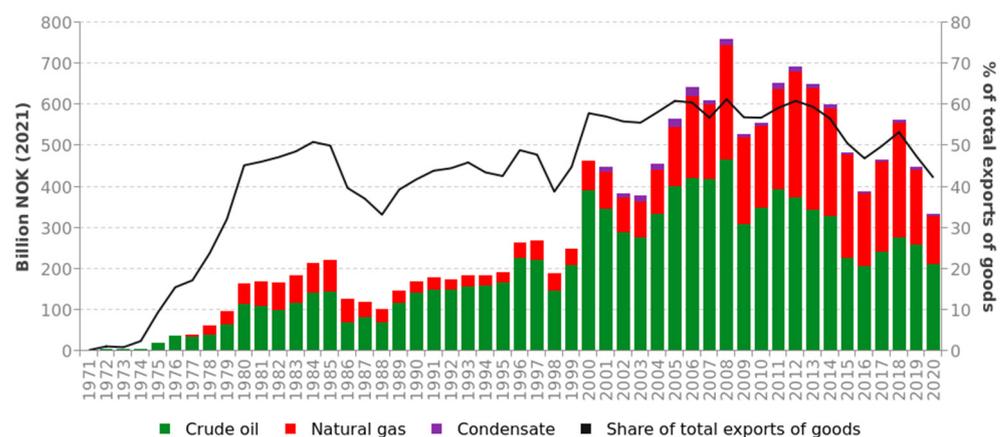


Figure 1. Export value of petroleum from 1971 to 2020, (preliminary numbers for 2020). Source: Table 08800, Statistics Norway, retrieved from [17].

The expansion of oil and gas exploration into the northern regions (areas North of latitude 62) on the Norwegian Continental Shelf, has been debated in Norwegian politics since the 1970s [21]. In the early stage, the political debate was framed in terms of a 'tempo debate', aiming to ensure that a non-renewable resource was not extracted too fast. More recently, this debate has gradually transformed into considering keeping fossil fuels in the ground in response to climate concerns [21,22]. Some of the smaller political parties on the left and centre of the political spectrum, as well as environmental NGO's, have argued that Norwegian petroleum production needs to be curtailed [22].

However, the petroleum policy in Norway has been supported by the largest political parties across the left-right cleavage in Norwegian politics. Although there have been tensions on certain issues, the Labour Party, the Conservative Party, and the Progress Party make up the majority of support for the current petroleum policy in Parliament.

In the period 2011–2018, Norway had two different coalition governments. The Stoltenberg II Government (2005–2013) was a majority coalition government consisting of the Labour Party, Socialist Left Party, and the Centre Party. The current Solberg Government (2013–), began as a minority coalition government consisting of the Conservative Party and the Progress Party. The Liberal Party joined the Government in 2018. It is worth noting that the main features of the Norwegian petroleum policy have been stable in the period 2011–2018, despite the changes in government.

Contrary to many other petroleum rich states, Norway is also internationally recognised for being highly ambitious when it comes to environmental and climate change policies, and it is a country where climate science and the work of the IPCC is ‘treated as authoritative’ [23] (p. 191). According to the former Minister of Petroleum and Energy, there is no contradiction between the role of being ‘a leading environmental and climate nation’, with ‘facilitating profitable production of oil and gas in a long-term perspective’ [24] (p. 2341, our translation).

Hence, in this article, we *first* explore how the official discourse (retrieved from documents by the Ministry of Petroleum and Energy) has played out in Norway: why the official discursive framing of petroleum policy between 2011 and 2018 describes continued petroleum production and exploration as both valid and necessary and how this framing is reconciled with a strong commitment to climate change mitigation. *Second*, we look at the counter-discourse from the opposition in Parliament and the extent to which this has affected the official governmental discourse. *Last*, we draw some implications from the Norwegian case to other fossil fuel producing countries.

The issue of how to reconcile the Norwegian petroleum policy with Norwegian climate policy was addressed as early as in the 1990s (see, for instance, Bolstad [25]), with more recent studies also continuing to explore the topic such as Hovden and Lindseth [26], Engen et al. [27], Kristoffersen [28], Ryggvik and Kristoffersen [21], Lahn [22], and Bang and Lahn [13]. The research of Bang and Lahn [13] provides valuable insight on the Norwegian case, and how Norwegian policy advocacy coalitions influence the endorsement of supply-side policies. Another important contribution is Eckersley’s [23] comparative analysis of Norwegian and German climate discourses; the framing of the role as ‘climate leader’ and subsequent connection to the state imperatives on economic growth and security. Our focus, however, is not on national identities and roles but on how the core arguments concerning Norwegian petroleum policy goals are discursively linked or framed in relation to state imperatives. As such, the discourse analysis framework we use in this article enables us to address these aspects, in line with our intent to uncover how Norway balances its environmental and petrostate ambitions.

2. Analytical Framework: Discourse, State Imperatives and Energy Policy Goals

Discourse analysis is increasingly being used to study energy policy and to clarify state orientation [29]. Scrase and Ockwell [15,16] argue that, when it comes to energy policies and low-carbon transitions, there is a crucial point to be made in terms of how the policies are ‘framed’ or ‘discursively constructed’. The authors define the concept of framing as ‘the assumptions made, and the ways in which policy debates “construct”, emphasise and link particular issues’ [15] (p. 35). Understanding how discourses, in this context, are formed and developed is important in the sense that ‘discourses shape what can and cannot be thought, delimit the range of policy options and thereby serve as precursors to policy outcomes’ [30] (p. 178). The way discourse influences the very fabric of meaning-making and reasoning is presented in Dryzek’s definition of discourse:

A discourse is a shared way of apprehending the world. Embedded in language, it enables those who subscribe to it to interpret bits of information and put them together into coherent stories or accounts. Discourses construct meanings and relationships, helping define common sense and legitimate knowledge. [31] (p. 9)

Employing a ‘(critical) realist’ approach to discourse analysis, Scrase and Ockwell [15] (p. 39) argue that there are certain constraints that limit the effect of discourses. Building on the work of Dryzek et al. [32], Scrase and Ockwell [15] (p. 40) explain that a ‘more enduring set of constraints’ is what they call the ‘core imperatives’ of the state [16] (p. 2227). The constraints ‘consist of a number of imperatives or functions that governments of most contemporary nation states must fulfil’ [15] (p. 40). These core imperatives comprise five categories, in which ‘the first three involve maintaining domestic order, surviving internationally as an independent state and raising revenue’ [15] (p. 40), or in short, ‘domestic order, survival, and revenue imperatives’ [32] (p. 1). The last two core

imperatives ‘emerged with the rise of capitalist democracies: economic growth must be sustained and civil legitimacy maintained, so states are compelled to bear in mind the interests of citizens and investors’ [15] (p. 40). These five state imperatives make up the very essence of state activity, meaning that the state has to adhere to them [32] (p. 3).

These core state imperatives act as constraints in the sense that, if a reframing of energy policy is to be successful, it needs to ‘be constructed so as to speak to core imperatives if they are to be effective within the evolving context of incumbent institutions, and be able to alter the way that policy discussions frame energy problems’ [16] (p. 2226). Hence, the introduction of new content, or ideas, in energy policy require discursive connections or links to the core imperatives. The core imperatives, together with physical conditions and institutional factors, act as restraining forces on discourses, implying that:

in all policy spheres, including energy, it is always in the interests of state actors to first and foremost ensure that initiatives deliver against these core imperatives. Other concerns, such as environmental issues, constitute secondary considerations and may only become salient when cast in the light of these imperatives. [15] (p. 40), see also [16] (p. 2228)

Thus, if the discourse on low-carbon transition is to have any meaningful impact on policy measures, it must address how the interests represented by the core imperatives will be impacted during the process [15] (p. 40). As Scrase and Ockwell [15] (pp. 40–41) state, ‘actors who discursively construct or “frame” their proposed policy solutions in a way that claims to contribute to achieving these core imperatives are more likely to be successful in influencing energy policy’. As such, the state imperatives represent both a challenge and an opportunity for those who aim to change existing petroleum policy.

According to Scrase and Ockwell [15] (p. 43), countries in general, tend to make their energy policy on the basis of four goals; access, security, efficiency, and environment. The goals on access and security revolve around ensuring that society and its population has energy to maintain a certain standard of living, and reliable energy supply. The goals on efficiency and environment entail making sure that energy is produced and consumed in a resource efficient and environmentally sound way [15] (p. 43).

These goals can be linked to the core state imperatives in various ways, and in the following, we explore how the official petroleum discourse links together state imperatives and energy policy goals ‘so as to speak directly to core government priorities’, to use a phrase from Scrase and Ockwell [16] (p. 2231). The core state imperatives we focus on are the ones that we found to be most clearly addressed in the Norwegian petroleum policy documents: ensuring economic growth, generating state revenues, upholding civil legitimacy, and surviving internationally. In our context, the survival imperative is interpreted as the ability to compete internationally in supplying the world with petroleum in an increasingly carbon-constrained world. The only state imperative we do not analyse is that of domestic order, since we did not find it to be directly addressed in the official petroleum discourse.

3. Materials and Methods

In this article, discourse analysis is used to answer how the Norwegian petroleum policy is framed and how state imperatives and energy policy goals are discursively linked in the official petroleum discourse. White papers and propositions are the responsibility of the sectoral ministry (in our case the Ministry of Petroleum and Energy). Before a white paper or proposition is presented to Parliament (the Storting), the content has been coordinated amongst the various ministries and approved by the government as a collective body (the Council of State). As such, the white papers and propositions represents the government’s official orientations on current and future policies or proposals in a particular policy area.

The data were collected in 2019 by searching the archive on the official webpage (www.stortinget.no, accessed on 19 June 2019) of the Parliament. We searched for documents published by 27 March 2019 on the topics ‘Energy’ and ‘Oil and gas’ in the parliamentary sessions from 2010–2011 to 2018–2019 which generated 76 search results. In the

review process, we narrowed the thematic scope of the study, limiting the analysis to white papers and propositions that address the general outlines of the Norwegian petroleum policy (information on the status of petroleum activities on the Norwegian Continental Shelf), the opening of south-eastern Barents Sea for petroleum activity, and the 23rd and 24th licensing rounds of petroleum exploration that followed, see Table 1. These documents form the core of the official Norwegian petroleum discourse during this period. They also contain the justifications for opening new areas for oil and gas exploration in the Arctic.

Table 1. Governmental and parliamentary documents chosen for analysis.

Author	Year	Type of Publication
Ministry of Petroleum and Energy	2011	Meld. St. 28 (2010–2011) (Report to the Storting/white paper)
	2013	Meld. St. 36 (2012–2013) (Report to the Storting/white paper)
	2013	Meld. St. 41 (2012–2013) (Report to the Storting/white paper) ¹
	2015	Prop. 114 S (2014–2015) (Proposition to the Storting)
	2018	Prop. 80 S (2017–2018) (Proposition to the Storting)
Hansson, R.	2014	Dokument 8:39 S (2013–2014) (Private Member’s Motion)
Lysbakken, A., Hansen, S.E., and Holmås, H.E.	2016	Dokument 8:49 S (2015–2016) (Private Member’s Motion)
Bastholm, U.A.	2017	Dokument 8:27 S (2017–2018) (Private Member’s Motion)
Standing Committee on Energy and the Environment	2014	Innst. 206 S (2013–2014) (Recommendation to the Storting)
	2016	Innst. 274 S (2015–2016) (Recommendation to the Storting)
	2018	Innst. 130 S (2017–2018) (Recommendation to the Storting)
Norwegian Parliament (the Storting)	2014	S.tid. 2013–2014, 5. Juni (Official Report)
	2016	S.tid. 2015–2016, 23. mai (Official Report)
	2018	S.tid. 2017–2018, 27. februar (Official Report)

¹ With corrections to Meld. St. 36 (2012–2013).

The qualitative data analysis software NVivo was used to code text from the white papers and propositions on petroleum policy into eight categories or frames; the four state imperatives as well as the four energy policy goals, resulting in 301 references. Since the statements on policy measures in relation to the categories/frames and the justification of such measures were intrinsically linked in the documents, we chose to code both. In order to highlight how the governmental discourse on the continuation of petroleum production is being challenged, and how the counter-discourse is addressed in the official policy documents, we included three private member’s motions raised by elected members of parliament, the subsequent recommendations from the Standing Committee and the debate in the Norwegian Parliament.

These documents were included in our analysis and reviewed manually (not coded in NVivo). The documents were retrieved from the same online archive as the white papers and propositions and selected on the basis that they concern the 23rd and 24th licensing rounds or the implications of the Paris Agreement on Norwegian petroleum policy. Except for the 2011 white paper, the official documents are all in Norwegian. As such, quotes from these documents have been translated by the authors of this article.

4. Results and Discussion

In the following, we apply the analytical framework of Scrase and Ockwell [15,16], to explore and analyse the main justifications for continued petroleum production and exploration in Norway. We do this by identifying the discursive links between state imperatives and energy policy goals in the official petroleum discourse. We start with how petroleum is framed as vital for ensuring the state imperative of economic growth domestically and how this is linked to the state imperatives of generating state revenue and ensuring civil legitimacy by creating jobs and upholding the Norwegian welfare state. We then take a look at how this domestic framing intersects with the international framing on economic growth, where both framings portray Norwegian oil and gas as pro-environment.

Thereafter, we look at the international framing where Norwegian petroleum is said to contribute to economic growth abroad by providing energy access and global energy security. Finally, we turn to the counter-discourse that challenges the official discourse on petroleum. The main results from our analysis on how the official petroleum discourse links state imperatives and energy policy goals are summarised in Figure 2.

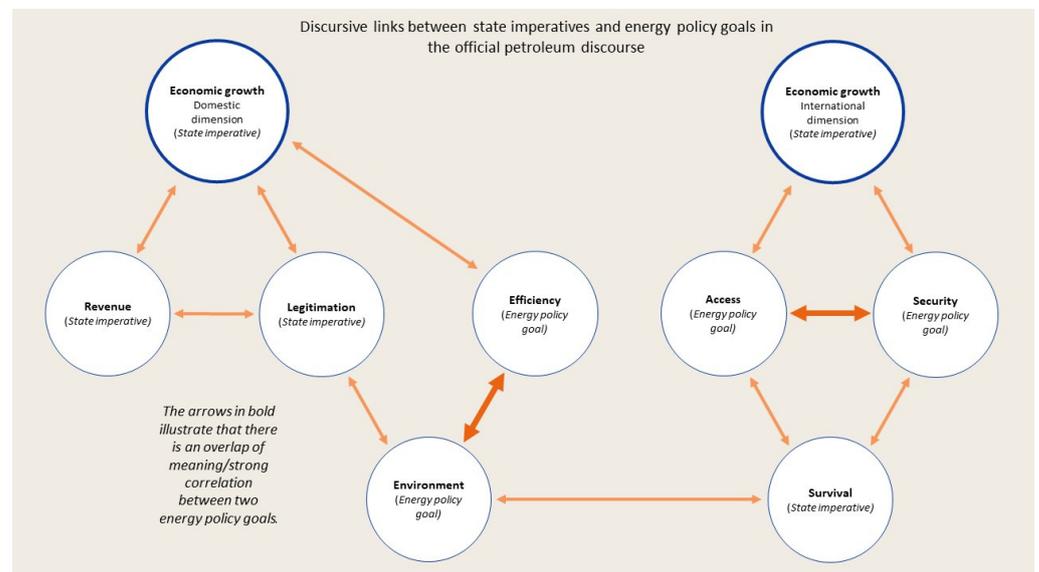


Figure 2. Discursive links in the official petroleum discourse between state imperatives and energy policy goals. The figure illustrates how the state imperative of economic growth is the most dominant, with two dimensions. In the domestic dimension, efficient petroleum production is linked to the state imperative of revenue, the legitimation imperative (through creating welfare and jobs) and the energy policy goal on environment. In the international dimension, global demand for clean energy access and security is linked to Norwegian petroleum production, maintaining a space for Norwegian petroleum in an increasingly carbon-constrained world (securing the state imperative of survival).

In the following, we exemplify and show empirically how these framings are used in the official petroleum discourse, and how the discursive links between the state imperatives and the energy policy goals appear in the official documents as shown in Figure 2.

4.1. Securing the Economic Growth Imperative: The Domestic Dimension of the Official Petroleum Discourse

The overarching goal of the petroleum policy in Norway is articulated as follows: ‘to facilitate profitable production of oil and gas in a long-term perspective’ [33] (p. 6). Hence, the aim is to ensure the ‘highest possible value creation through good resource management . . . ’ [34] (p. 35, our translation). Norwegian oil covers approximately 2% of the global demand, and it generates ‘large amounts of revenue and results in tens of thousands of jobs in Norway’ [34] (p. 13, our translation). This positions the overall goal for Norwegian petroleum policy in accordance with the imperative of ensuring economic growth. The importance of the petroleum industry for the Norwegian economy is clear. For instance, in the 2015 proposition it is stated that:

The petroleum activity is a cornerstone of the Norwegian economy and will continue to be so in the foreseeable future. It is Norway’s largest industry measured in value creation, state revenues, investments, and export value, and thereby contributes to financing the welfare state. [35] (p. 9, our translation)

Maintaining economic growth through petroleum activities also makes it possible to fulfil the core imperatives of ensuring revenue and civil legitimacy, creating discursive links

between petroleum as a resource and the imperatives. Ensuring state revenues from oil and gas activities is framed as synonymous with securing the welfare state in Norwegian petroleum policy because it is a fundamental underlying principle that the petroleum resources are the property of the people:

There has been broad agreement that the extraordinary revenues from oil and gas production shall benefit the owner of the resources—the Norwegian people. The petroleum tax system and the State's Direct Financial Interest (SDFI) ensure that a large part of the value creation from the petroleum activities accrues to the state. [34] (p. 22, our translation)

The management of petroleum resources has been based on the principle that it should benefit the Norwegian society and population since the beginning of exploration and production on the Norwegian Continental Shelf [33] (p. 5). This principle forms the logic of what has become recognised as 'the Ten Oil Commandments', first outlined in White Paper No. 76 (1970–1971), *Exploration for and exploitation of subsea natural resources on the Norwegian Continental Shelf*, etc. [33] (p. 5). In 1990, the Government Pension Fund Global was established, and its financial assets were invested in the international market 'to avoid overheating the Norwegian economy and to shield it from the effects of oil price fluctuations' [36]. The market value of this fund is currently more than NOK 12,200 billion [37].

Another concern has been to secure stability and predictability for the oil and gas companies and the regulatory framework within which the industry operates [34] (p. 38), [35] (p. 42). This concern is justified in the following manner:

There has over time been broad political consensus regarding the main features of the petroleum policy, which has contributed to stability and predictability. The Norwegian framework has proven to be robust over time, including adjustments when the circumstances have made it appropriate. The system has given the companies stability and predictability, which is a strength for the Norwegian Shelf's competitiveness compared to other petroleum provinces. [35] (p. 42, our translation)

Stability is important for the continuation of petroleum activities on the Norwegian Continental Shelf. It is clear that the industry is here to stay, and that it has a bright future. According to the Ministry of Petroleum and Energy [34] (p. 23, our translation), 'the prospects for the Norwegian Shelf are positive with a competitive resource base, high investment rate and sound interest from oil companies for continued exploration, development and operation'.

4.2. Petroleum as Pro-Environment in the Official Petroleum Discourse: Efficient and Clean

Dryzek et al. [32] (p. 173) argue that the fact that Norwegian petroleum activities are closely linked to the civil legitimacy imperative through the benefits petroleum has to offer, in terms of the welfare state, indicates that 'legitimation actually points in an anti-environmental direction'. However, in the official discourse on petroleum, oil and gas is framed not only as pro-development but also pro-environment. Importantly, the domestic and international framings intersect on the issue of the environment. Hence, the pro-environment frame is closely linked to civil legitimacy and fundamentally to the core state imperative of survival. As stated earlier, survival is here understood as the ability to compete internationally in supplying the world with petroleum in an increasingly carbon-constrained world. Hence, survival hinges on international developments and the scenarios of desirable and feasible futures. The discursive link between Norwegian petroleum production and the environment is created through the aspiration of the Norwegian government 'to combine Norway's role as a major energy producer with the ambition of being a world leader in environmental and climate policy' [33] (p. 7). The key arguments presented in this intersection are that 'the Norwegian Shelf is regarded as one of the world's cleanest petroleum provinces' [33] (p. 25) and that 'the activity on the Norwegian Shelf is facing the strongest climate policy instruments in the world' [35] (p. 44, our translation).

The petroleum industry on the Norwegian Shelf was subjected to a CO₂ tax in 1991, which resulted in the industry becoming 'more aware of energy-efficient operations' [33]

(p. 123). In 2008, the emissions from the petroleum industry were incorporated into the EU's Emission Trading System (ETS) [33,34]. Climate policy measures are used as a justification for Norway to continue with its petroleum production and exploration, making a clear connection to the survival imperative. As stated in the 2015 and 2018 propositions:

The activity on the Norwegian Shelf is facing the strongest climate policy instruments in the world Some have argued that instead of setting such framework conditions, one should rather shut down parts of the production on the Norwegian Shelf as a climate measure. Such an approach will only cause oil and gas to be recovered elsewhere. It is not beneficial for the climate, and it will be harmful to Norway'. [35] (p. 44, our translation)

Because Norwegian emissions per unit produced are significantly lower than the average for those of other countries, the global emissions from the production stage will increase if Norwegian petroleum production is replaced by production from these countries. [34] (p. 29, our translation)

The ruling principle for evaluating the implementation of emission-reducing measures on the Norwegian Continental Shelf has been that of 'cost-efficiency' [33] (p. 115). Policy instruments based on the principle of cost-efficiency are viewed as 'important to ensure a sensible balance between resource utilisation, value creation and consideration for the environment' [33] (p. 25). This is one of the reasons why Dryzek et al. [32] (p. 171) categorises Norwegian environmental policy efforts as 'weak ecological modernization'. Such a variant of ecological modernisation 'is tied only to the economic imperative in terms of "pollution prevention pays"' [32] (p. 165).

Norway was the first country in the world to set a CO₂ stabilisation target in 1989 [38]. The target was declared unachievable by the Brundtland Government and officially abandoned in 1995. This was due to an unforeseen growth in production from oil and gas fields in the North Sea, with a subsequent increase in the projected growth in emissions from the petroleum sector [26,39]. These events were accompanied by a reframing of Norwegian climate policy from the domestic stabilisation target and emission reductions within the country's own territory ('national action'), to international agreements and the use of the flexible mechanisms in the Kyoto Protocol ('thinking globally') [26] (p. 67). Norway was one of the foremost proponents of the use of flexible mechanisms in the Kyoto negotiations [39]. With the flexible mechanisms in place, Norway could reduce emissions cost effectively outside its borders, and thus 'maintain both an expansive petroleum industry and international credibility in environmental matters' [26] (p. 67). Greenhouse gas emissions from oil and gas extraction in Norway increased by 62.7 % between 1990 and 2020, see Table 2.

Table 2. Greenhouse gas emissions in Norway ¹.

	Million Tonnes CO ₂ Equivalents		Change in Per Cent	
	2020	1990–2020	2019–2020	
Emissions	49.3	−3.9	−3.4	
Oil and gas extraction	13.3	62.7	−4.4	
Manufacturing industries and mining	11.4	−42.2	−1.6	
Energy supply	1.6	288	−1.9	
Heating in other industries and households	0.6	−79.7	−18.8	
Road traffic	8.4	13.1	−3.9	
Aviation, navigation, motor equip. etc.	7.3	38	−4.5	
Agriculture	4.4	−6.6	−0.2	
Other	2.2	−17.1	−3.2	

¹ Preliminary numbers, 30 June 2021. Source: Tables 08940 and 08941, Statistics Norway [40].

Both discourses ('national action' and 'thinking globally') acknowledge climate change and the need for emission reduction; however, they differ in their choice of the best strategy

to reduce these emissions [26] (p. 66). The argument that Norwegian gas can replace coal, the most polluting fossil fuel in Europe, was used by prominent actors in the petroleum industry and later by Norwegian politicians [26] (pp. 66, 68). This line of reasoning is still dominant in the justification of Norwegian petroleum policy, where it is noted that ‘Norwegian export of gas makes it easier for actors in Europe to make the decisions to phase out coal in the power supply’ [34] (p. 16, our translation).

A quality of natural gas that is frequently emphasised in the documents is its ability to balance and provide backup for intermittent renewables and thus ease the transition away from coal. This makes it likely that there will be a need for Norwegian gas exports to Europe in the future. As stated in the 2015 proposition:

The planned shutdown of nuclear power plants in Europe, the phasing out of old coal power plants combined with an increased need for flexible power production to balance a high share of sun and wind power, indicates that the gas demand will grow in the European power sector in the long run. Gas from the Norwegian Shelf currently covers a considerable amount of Europe’s needs. Gas from the Norwegian Shelf can also do this in the decades to come. [35] (p. 22, our translation)

Therefore, Norwegian gas is presented as a bridge towards a low-carbon future. However, the question of how long it can do so is contested and depends on future developments in Europe. Possible futures vary in different scenarios, thereby making expectations about the future crucial for oil and gas.

4.3. Securing the Economic Growth Imperative: The International Dimension of the Official Petroleum Discourse

Economic growth has an important international dimension in the documents, linked to energy security, access, and survival. This ‘external dimension’, the demand for oil and gas internationally [41] (p. 130), is of primary concern in Norwegian petroleum policy. Securing access to petroleum resources is framed not just as something that ensures economic growth for Norwegians, but also something that supports economic growth internationally. By supplying the world with its petroleum resources, Norway contributes to economic growth both domestically, by aiding its own prosperity, and internationally by helping other countries. In the 2011 white paper, the following point is made:

Reliable access to energy is a key factor in the development of the world economy, and is closely connected to national prosperity and development . . . 1.5 billion people are without access to electricity. Improved access to modern forms of energy is needed in order to lift these people out of poverty. [33] (p. 7)

The link between energy access and economic growth is also highlighted in the 2018 proposition where it is argued that ‘without increased access to energy, [the] global welfare increase and positive social development would not have taken place’ [34] (p. 13, our translation). Gas in particular is framed as ‘an affordable and efficient way to meet the energy needs’, and in this way, it helps to pave the way for ‘the development of wealth in different countries’ [34] (p. 16, our translation). Furthermore, Norwegian gas is highlighted as ‘important for the energy supply, energy security and energy transition in Europe’ [34] (p. 18, our translation).

Petroleum and the Carbon Budget: The Quest for Securing the Survival Imperative

For the petroleum sector to survive in a carbon-constrained world, there must be room for petroleum. Therefore, the size of the carbon budget in possible energy futures is of key importance. According to the Ministry of Petroleum and Energy, ‘the most authoritative estimates for the world’s future energy development come from the International Energy Agency (IEA)’ [34] (p. 19, our translation). The World Energy Outlook (WEO) from IEA is frequently used to justify Norwegian petroleum policy. Norway is not alone. The WEO by the IEA, according to Van de Graaf [42] (p. 235), ‘is widely regarded as an authoritative source of energy data and policy scenarios’. Energy scenarios, however, are not ‘predictions’ but ‘possible futures’ [43] (p. 207). Despite this, they enter the political realm in which they

influence politics and inform policy decisions. As argued by the Executive Director of the International Energy Agency (IEA), ‘I can answer this confidently: the reason that we look into the future is to trigger key policy changes in the present’ [44] (p. 3).

The WEO operates with three different scenarios: the ‘New Policies Scenario’, the ‘Current Policies Scenario’ and the ‘Sustainable Development Scenario’ [45] (p. 29). The New Policies Scenario is described as ‘a measured assessment of where today’s policy frameworks and ambitions, together with the continued evolution of known technologies, might take the energy sector in the coming decades’ [45] (p. 29). The Current Policies Scenario is founded ‘solely on existing laws and regulations’ [45] (p. 29) and can essentially ‘be read as a projection of “business-as-usual”’ [46] (p. 65). The Sustainable Development Scenario is based on the goals of the Paris Agreement and the Sustainable Development Goals (SDGs) on key components related to energy [45] (p. 29).

The 2013 white paper argued for a role for Norway in securing stability and predictability to meet the growing demand for oil and gas, making a clear discursive connection to the survival imperative:

An increasing need for more and cleaner energy, for oil and gas, and an emphasis on energy security, means that the outlook for Norway’s oil and gas exports are good. Norway has always been, and is, a stable and predictable supplier of oil and gas. Under all conceivable scenarios for future energy use, this will be a competitive advantage for Norway as an energy supplier. [47] (p. 7, our translation)

The argument that new capacity is needed in energy scenarios based on the 2-degree target, is also used in this white paper [47]. Although energy scenarios depicting a below 2-degree trajectory ‘show a significant decrease in the use of fossil energy up until 2050’, it is also asserted that ‘in these scenarios there will still be a need for new capacity to compensate for falling production from fields in operation’ [47] (p. 8, our translation).

The New Policies Scenario is presented as IEA’s central scenario. With reference to WEO 2014, it is argued in the 2015 proposition, that energy consumption towards 2040 will increase by just under 40% in the New Policy Scenario and by 17% in the 2-degree target scenario [35] (p. 16). Furthermore, to meet the demand in the New Policies Scenario (up to 2035), annual investments in petroleum projects of 500–600 billion USD are needed, ‘corresponding to almost 30 times what is now to be invested in the first stage of construction of the Sverdrup field’ [35] (p. 21, our translation). This, it is argued, ‘provides great business opportunities for the Norwegian-based supply industry both at home and abroad in the decades ahead’ [35] (p. 21, our translation), however, in a scenario that features developments which are said to be ‘... not sufficient to reach the 2-degree target’ [35] (p. 16, our translation).

In the 2018 proposition, all three IEA scenarios in WEO 2017 are referred to in terms of petroleum demand. In relation to the New Policies Scenario, it is stated that ‘IEA in its main scenario estimates that the world’s energy consumption will increase by 27% in the period 2016–2040’, and ‘oil consumption is estimated to increase by over 11 million barrels per day, or approximately 12% towards 2040’ [34] (p. 19, our translation). This is an increase from 94.6 to 104.9 million barrels per day [34] (p. 21, see Table 2.14). In the Sustainable Development Scenario, the demand is estimated to be 73 million barrels per day. However, this has little or no consequence for Norwegian petroleum policy due to the following:

The oil production from existing investments in fields is by the IEA estimated to be approximately 50 million barrels per day in 2030 and 33 million barrels per day in 2040. After 2025, there will thus also be a need for a series of new oil developments globally in order to meet the oil demand. An oil consumption in 2040 as estimated in the ‘Sustainable Development Scenario, 73 million barrels per day, requires that new oil production equivalent to today’s total production from the three largest oil producers (Russia, Saudi Arabia and the USA) must be brought to the market in 2030 and 2040 to cover the demand. [34] (p. 20, our translation)

Hence, no policy change for production or exploration is needed. On the contrary, as the Chief Economist of IEA stated while visiting Norway in 2012, (the same year that the

WEO concluded that two-thirds of the remaining fossil fuel needed to stay in the ground), every drop of Norwegian oil is needed [48].

4.4. Challenging the Official Discourse from State Imperatives: The Counter-Discourse

There are, however, members of the Norwegian Parliament in this period that challenge the official governmental discourse and the legitimacy of being a petroleum-dependent state. The Socialist Left Party (SV), the Green Party (MDG), and the Red Party are all in favour of turning down new projects on oil exploration [49] (p. 32). Furthermore, in 2018, seven out of nine youth parties in Norway expressed that they were in favour of phasing out the oil and gas industry in the foreseeable future [49] (p. 34). However, according to the data, the majority of elected members in the Norwegian Parliament are in favour of a continuation of the Norwegian petroleum adventure. Decisions to reject the Private Member's Motions to cease the 23rd and 24th licensing rounds illustrate this conclusion [50] (p. 3236), [51] (p. 2997), [24] (p. 2392).

The first time that the Norwegian Parliament dealt with a proposal aimed at reducing petroleum activities by ceasing oil exploration was 5 June 2014 [51] (p. 2966). A member of Parliament, representing the MDG, raised the issue in a Private Member's Motion proposing to halt the awarding of new blocks in the 23rd licensing round [52]. Awarding new areas for exploration in the 23rd licensing round was deemed incompatible with Norway's obligation to the 2-degree target and Norwegian climate policy [52] (p. 3).

In the Private Member's Motion, it was argued that continued investment in the oil and gas industry was being questioned by several financial actors, domestically and abroad, making a discursive connection to the state imperative of economic growth by highlighting the future uncertainty of oil and gas [52] (p. 1). A link to the civil legitimacy imperative was made by using (among others) the argument that, because the IEA had shown that the world's proven fossil fuel reserves exceed what can be burned within the 2-degree target, and due to the time delay between petroleum discovery and subsequent production stage, 'the assumption that any new discoveries in the 23rd licensing round could actually be recovered is irresponsible to the oil and gas industry, taxpayers and future generations' [52] (p. 1, our translation).

Furthermore, it was argued that 'Norway is now in an exceptionally good position to start the transition to the sustainable welfare society . . . ' [52] (p. 1, our translation), and that such a transition was inevitable. However, in the recommendation by the Standing Committee, a majority of the committee members asserted that 'it is an overarching goal for the Norwegian petroleum policy that it is to be united with Norway's role as a leader in environmental and climate policy' [53] (p. 2, our translation). The core argument and justification were again the IEA scenarios:

The IEA has documented that within the 2-degree target there is also a need to build new capacity equivalent to 40 million barrels of oil in daily production until 2035. The need for new gas capacity is even greater. [53] (p. 2, our translation)

On 3 February 2016, a Private Member's Motion was raised by three members of Parliament from the Socialist Left Party on how to follow-up on the Paris Agreement concerning Norwegian petroleum policy [54]. One of the proposals in the Motion was that the 23rd licensing round should be halted until it was assessed how much of the Norwegian petroleum resources could be produced given the strengthened goal, the 1.5-degree target, in the Paris Agreement [54] (pp. 1–2). However, this proposal was not recommended by the majority of the Standing Committee and the majority of the Norwegian Parliament voted against it [55] (p. 5), [50] (p. 3236).

A new proposal to bring petroleum exploration to a halt was raised concerning the 24th licensing round, on 10 October 2017, by a member of Parliament representing the MDG [56]. Referring to WEO 2016, it was argued that in the 450 Scenario, oil demand is reduced by 30% in 2040. (The 450 Scenario was later replaced by the Sustainable Development Scenario in the WEO [46] (p. 66)). Because of the long time span between discovery and production, these fields would start producing when fossil fuels would be on their way out of the energy mix [56] (p. 1). The proposal was rejected by the majority

in the Committee [57] (p. 5). Those who supported it, the SV and the MDG, argued that the oil policy ‘is rational only in a very pessimistic scenario where the world fails in its fight against climate change and releases irreversible and dangerous climate change’ [57] (p. 3, our translation). However, in the parliamentary debate, it was argued by the Minister of Petroleum and Energy that there is room for a considerable amount of oil and gas in the decades to come, simultaneously, as it is possible to meet the goals of the Paris Agreement. Furthermore, companies operating on the Norwegian Continental Shelf have been given the responsibility by the Government to highlight any climate-related risks when submitting plans for development and operation. Thus, the job for Norway, as a petroleum producing country, is ensure a production ‘with the lowest possible cost and with the lowest possible CO₂ emissions’ [24] (p. 2341, our translation).

5. Conclusions

As we have seen, the official discourse on petroleum policy between 2011 and 2018, frames the continuation of oil and gas production and exploration as both valid and necessary. The main goal of petroleum policy is ‘to facilitate profitable production of oil and gas in a long-term perspective’ [33] (p. 6), which makes economic concerns, and thus economic growth, the most dominant framing. Profitable production secures the state imperatives of revenue and legitimation, while the environmental issues in the policy documents are framed through resource efficiency (and thus, the imperative of economic growth) and the legitimation imperative (‘waste less, pollute less’).

Energy security plays an important role, but in an ‘externalised’ sense through the survival imperative. All IEA scenarios in this period provide room for oil and gas, even when the goal of the Paris Agreement is taken into account. However, oil and gas production must be as clean as possible to be competitive in a carbon-constrained world. Clean oil and gas production is therefore described as an integral component for a competitive Norwegian petroleum sector and one important justification for its continuation. Hence, Norway is positioning itself to compete internationally for a place in the carbon-constrained future. In doing so, it attempts to strengthen the connection between the energy policy goal of the environment (clean production) and the state imperative of survival (fossil fuel exports).

The counter-discourse challenges both the legitimation imperative by questioning the cleanliness of Norwegian petroleum, and petroleum as a source of economic growth, by questioning the viability of petroleum to sustain the welfare state in a carbon-constrained world, with expectations of reduced demand and stranded assets. This has put increased pressure on the government to justify its pursuit for more petroleum production and exploration. The counter-discourse, however, has not yet succeeded in creating a clear restructuring of the *official* petroleum policy discourse in relation to these environmental and economic issues, and in this respect, the core framing of petroleum production has remained predominantly stable.

The official petroleum discourse has thus rejected the claim by the counter-discourse that petroleum exploration and production on the Norwegian Continental Shelf need to be curtailed through supply-side policy. As stated by the Minister of Petroleum and Energy:

The petroleum policy that has been pursued so far has given us good results and there is no reason why we should not be able to extract great value from this industry also in the time ahead The Government will thus continue with an oil and gas policy along the familiar lines, with an active licensing policy and with long-term and stable framework conditions. [24] (p. 2341, our translation)

The official discourse ‘solves’ the challenges from the counter-discourse by drawing on both the domestic and international dimensions of economic growth. It provides jobs and economic growth domestically, and internationally, Norway provides the world access to cleaner petroleum and energy security also in a carbon-constrained world. By framing climate change as a global problem that is best addressed through global cost-efficient solutions and Norway as a ‘cleaner’ energy supplier, the official discourse responds to and dismisses the counter-discourse on petroleum policy.

The two dimensions of economic growth significantly improve the number of ways that energy policy goals and state imperatives can connect. If the counter-discourse is to increase the likelihood of influencing the official petroleum discourse to a larger extent, it would be necessary to put pressure on the discursive links in both dimensions of the state imperative of economic growth. This is also partly what has been happening in the counter-discourse through an increased focus on climate-induced financial risks, in terms of transitional risks. As such, there is clearly a counter-discourse confronting the ‘discursive hegemony’ of the current way the petroleum policy is framed. While it is not necessarily so that a discursive shift will have a specific material impact on the petroleum policy, it is hard to envision any material changes being made possible without a change in the framings used in the petroleum discourse.

If we are to extend what we have learned from the Norwegian case and consider the possible implications for other fossil fuel producing countries, the case of Norway illustrates why some countries choose to compete for a place in a carbon-constrained world. Moreover, Norway illustrates two possible (and likely) responses from other fossil fuel producers to the quest to wind down fossil fuel production. First, fossil fuel producing countries can (and most likely will) argue that there is still (some) ‘space’ for fossil fuels in a carbon-constrained world. Second, cleaner production of fossil fuels may increasingly play a more prominent role in the justification of domestic fossil fuel production in an attempt to create a stronger link between the energy policy goal of environment and the survival imperative. If this is the case, then this increased discursive connection may serve as a barrier against a reframing of climate policy, from a focus on reducing the demand for fossil fuels, to reducing the supply of fossil fuels.

If one regards the incentives that exist in the current international framework of climate change mitigation, that is, putting a price on carbon, it is important to realise that the price on carbon *should reflect* what is needed in order to make the least carbon efficient resources, and thus the least profitable, stay in the ground. If not, both justifications that the fossil fuel producing countries are most likely to use may indeed slow down what needs to speed up: the winding down of fossil fuel extraction.

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