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**An Ambition to Transition?
A Case Study of Norwegian Trade Unions**

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Abstract

This thesis explores trade unions in transition through the case of LO and its affiliated unions. The purpose is to shed light on a complex actor that operates in the junction between workers, employers and government. To investigate this, I have employed a case-study based on document analysis of trade union's official documents and media content analysis. These methods were coupled with the multi-level perspective, political defection- and intermediary theory.

The study finds through the theoretical approaches of the multi-level perspective, political defection and intermediaries that there is an ongoing coalition-driven policy change going on. LO maintains the position of the petroleum-affiliated unions because they traditionally subscribe to the unions with the highest issue ownership. Due to exogenous pressure such as climate change this issue ownership tradition has become challenged by coalitions wanting to accelerate or facilitate the transition.

Acknowledgements

This thesis has been written at the TIK Centre for Technology, Innovation and Culture at the University of Oslo during fall 2021. The thesis was inspired by the fascinating subject of innovation that can improve workers' rights and all the while support a transition to a sustainable future for the generations to come. The subjects I have encountered during my studies has all provided challenging thoughts and ideas that will stay with me.

In some ways, a writing a thesis have encapsulated the full student experience. It has been challenging, but with the support of family, friends and my supervisor, Allan Dahl Andersen, it has been a true joy despite periodic hardships. Through early mornings and late nights of both dance and hard work I have looked forward to getting to "Lesesalen" every day.

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The process of writing the thesis has been exciting from beginning to end, and I am sad to say that it has now come to an end. While I might not be at a university surrounded by excellent co-students and tutors, I will forever remain a student.

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List of abbreviations

Ap	Arbeiderpartiet
CCS	Carbon capture and storage
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
LO	Landsorganisasjonen i Norge
LoVeSe	Lofoten, Vesterålen & Senja
MDG	Miljøpartiet de Grønne
NCS	Norwegian Continental Shelf
NHO	Norsk Handelsorganisasjon
O&G	Oil and Gas
OED	The Norwegian Oil and Energy Department

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1. Introduction

The global community is quickly discovering the effects of climate change and scientists' previous estimations are grimmer than anticipated, and CO₂ emissions do not seem to decrease enough, but are in fact increasing (Conca, 2021). Fundamental changes in the energy sector are considered to be of utmost importance if we are to transition to a society that ensures a sustainable future for the generations to come. By changing the conditions for energy consumption, it is possible to make substantial changes in how we consume. However, the world of today is heavily reliant on fossil fuel both in terms of being the primary source of energy and how ingrained it is in the economic system. Actors within the petroleum industry might want to resist transitions away from the petroleum-based economy to maintain their regime of the energy industry, at least for the time being (Geels, 2014, p. 35; Mäkitie, Normann, Thune, Gonzalez, 2019, p. 270). Alternatively, industry actors might want to delay transitions to maximize their rent and at the same time search for new solutions by shifting focus on carbon capture and storage (CCS).

In the case of Norway, oil and gas industries have a prominent role both economically and in the cultural-historical context. The petroleum industry, excluding the supplier industry, is also responsible for 14% Norway's GDP, 14% of the national income and 42% of the total export, and is closely tied to the income in the Norwegian Pension Fund which currently sits at close to 12.000 billion NOK (Norsk Petroleum, 2021; Houeland, Jordhus-Lier & Angell, 2020, p. 3).¹ These numbers suggests that there could be a strong case of historical path dependency and lock-in in the Norwegian society which might be difficult to undo, and even more so without political backlash as established actors might work against emerging alternatives (Karlsen & Steen, 2018, p. 17).

Countries dependent on natural resource extraction can be one of the largest employers in the country, which is the case in Norway. The petroleum industry provides approximately 200'000 jobs, directly or indirectly (Erraia, Schjøtt-Pedersen & Fjose, 2020). Unsurprisingly, large changes in the structure of the industry are going to have consequences for the employees in the industry. Two of the largest unions in Norway, NHO (Næringslivets handelsorganisasjon, the Confederation of Norwegian Enterprises) and LO (Landsorganisasjonen I Norge, Norwegian Confederation of Trade Unions), have been criticized for reinforcing the existing

¹ Since 2017 stock rents have become the largest source of income in the pension fund, and increasingly so (Norges Bank Investment Management, 2021).

petroleum, despite growing interest in alternative energy sources (Andaur, 2021), and for some time there has been internal conflicts within LO on issues on continued extraction and searching (Mortensen, 2017). The LO congress of 2017 maintained the position established in the congress of 2013 where it states “working towards impact assessments of petroleum activity in unopened fields” with the including the areas outside of Lofoten, Vesterålen and Senja (FriFagbevegelse, 2017).

With the emergence of climate change on the international agenda unions are worried that their members are being put in jeopardy. In response to this the International Trade Union Confederation fought for the inclusion of “just transition”-principles in the Kyoto Conference of 1997, and later in the Paris agreements (Galgóczi, 2020, p. 369). The just transition movement aims to secure new and better jobs for disenfranchised workers that might be misplaced by consequence of transitions (Galgóczi, 2020, p. 369). Unions that follow the just transition concept might do so as a way to gain legitimacy in order to be better equipped to navigate between necessary transitions and maintain the trust of its members.

LO and other unions have made it clear that they consider their members as part of the solution and thus are considered to be a valuable resource for solving climate issues, but call for the state to take a more active role in the transition (Arendalsuka, 2021). Heikki Holmås, a politician (Sosialistisk Venstreparti) and Head of Wind Power in Multiconsult, has pointed out that the union movement needs to assume a leadership-role and points to how unions in Germany managed to negotiate new deals during the transition away from coal (Broen til Fremtiden, 2021, 1:44:40). Holmås also claims that the union movement must recognize how severe the transition is in order to achieve the 1.5-degree target, and that the unions be guiding society toward new, green missions/procurement (ibid).

Unions can participate in intermediary functions such as agenda setting, policy formulation, - implementation and – evaluation. If so, they can prove their importance in effective policy implementation, conveying new policies to recipients and stakeholders, and avoid overlapping (Kivimaa, 2020, editorial introduction). When unions do partake in policy development, they need to balance short-term interests of members and long-term goals. This could lead to the awkward decision of choosing between groups or coalition-groups of members. In relation to climate change urgency this issue becomes exacerbated as time passes without action (Thomas & Doerflinger, 2020, p. 395).

Because of the pressure and urgency climate change puts on the petroleum regimes new rulebooks might emerge and give rise to new assemblages and constellations of partnerships. If unions are able to exploit the reassembling and put themselves in a position of intermediary between different/new actors, unions might reinforce legitimacy and elevate their position/role by reinventing themselves (Normann, 2019, p. 104). As climate change pushes on, trade unions might be forced to consider their own identity and purpose if they are to persist. Upon entering a new sphere in politics unions might find themselves in a new role where they might work to bridge the gap between present and future, rather than solely focus on the redistributive aspect of unions (Thomas & Doerflinger, 2020, p. 396). Putting themselves in a position of contributing to a “guided” transition weaning Norway away from petroleum could help the transition not only through acceleration, but also making it smoother for workers to transition. It might add a possible the bonus of facilitating knowledge spillovers between emerging and incumbent regimes. And in return, unions might find renewed interest from the citizenry and other interest groups (Thomas & Doerflinger, 2020, p. 396).

1.1 Aims and objectives of the study

LO is the country’s largest trade union with about 930’000 members through 26 union affiliates. Combined LO represents workers from all industries in Norway and amounts to approximately half of the organized workforce of Norway. This includes unions such as Industri Energi and Fellesforbundet, two of the unions closest intertwined with the oil and gas industry. However, national ambitions of emission cuts and LOs claims of workers as “klimaløssere” command urgent change. LO plays a prominent role in collective bargaining and through their affiliation with the Norwegian labor party has connections to key positions within the policy making-framework. This has led to direct influence in the decision-making process in carbon taxation policies (Houeland, Jordhus-Lier & Angell, 2020, p.3). Using LO as a case lends itself to elaborate and provide nuance to the expectation of trade unions as an obstacle to, or a protagonist for, climate mitigation policies. This elicits questions of how LO previously has pursued the interests of its members and if this has changed as a reaction to the pressure from climate change urgency? How does LO approach the labor-environment dilemma? What does LO envision a sustainable future to be? And how does change in trade union policy affect the pace of transition to a sustainable future?

In order to investigate these questions, the study continues with the following research question:

Are trade unions reacting to the increasing urgency of climate action, and if they are why and how do they react?

To answer the research question, it is dissected in the following questions:

- *What are trade unions' preferences of a sustainable future? Are they changing?*
- *What effects are influencing trade unions' preference to transition?*
- *How are trade unions attempting to change the labor movement in relation to transitions?*

This thesis is going to look at how trade unions respond to the pressures created by climate change and how the union response affects the transition to a sustainable society. The has two different focuses. Firstly, if, how and why unions have changed their position on green solutions? Secondly, how does unions work to achieve their envisioned future?

The thesis tries to illuminate how trade unions act in transitions and shed light on unions as a complex actor. Transitions are intricate processes that need a joint effort from a broad range of actors to be successful. And as such, balanced, persistent and aligned policies are necessary in order to carry out successful energy transitions (Grubler, 2012, p. 14). The collective bargaining power of the trade unions makes inclusion necessary in shaping public policy and thus puts trade unions in a central role of policy development and a strong political actor. Exclusion of unions could lead to transition-opposition and climate skepticism (Johnstone & Hielscher, 2017, p. 460).

The study also attempts to contribute to the research field by helping understand the role of intermediaries' role in destabilization, and specifically our understanding of trade unions as a complex intermediary. In the Norwegian context trade unions are one third of the tripartite collaboration model and are as such are already very present in shaping society. While sustainability transitions and the role of trade unions are not new topics in themselves, trade unions have made fairly few appearances within the innovation and STS fields and seem to be somewhat elusive in the literature (Johnstone & Hielscher, 2017, p. 460). However, the topic of transition intermediaries has been featured increasingly in recent years (Kivimaa, Boon, Hyysalo & Klerkx, 2019a, p. 1062).

1.2 Structure of the thesis

Initially the thesis opens with presenting how unions are still relevant actors today and why they still can be influential in the transition to a sustainable future and present the structure of the thesis. This is followed by presenting some of the points of discussion within the transition literature and some of its characteristics. The thesis then moves on to the *Multi-Level-Perspective* (MLP) framework which serves as the baseline theoretical framework for the paper. The MLP framework is suitable for investigating changing behavior in actors responding to exogenous events or innovation. It is relevant to the thesis because of the importance trade unions carries in society, and their potential to participate in transitions which require fundamental changes in systems to address the challenges the global community is facing.

The MLP framework will then be expanded upon by using Kivimaa's theoretic approach (2019a) to "intermediaries". Intermediaries can speed up transitions by acting as catalysts. Intermediaries are recognized to be influential in transition processes by linking and connecting actors and activities that create momentum, collaboration and knowledge exchange which in turn might spur new configurations that disrupt undesired socio-technological configurations (Kivimaa et al., 2019a, p. 1062). However, within this context trade unions have become quite understudied in compared to other transition actors. The paper then moves on to explaining reasoning behind the research design, methods, data collection and ethical questions before presenting the empirical findings.

The empirical data is put into context through the case of Landsorganisasjonen i Norge (LO), affiliated unions and its structure. To track strategy changes in LO the past positions and activities of LO will be compared to newer sources, specifically through the yearly reports of LO and two action plans. The typology of intermediaries will be used to conceptualize trade unions activity and goals. The thesis uses the concept of political defection to discuss how LO-affiliated unions attempt to influence LO to shifting its stance on petroleum activity. Finally, a conclusion is presented.

To reiterate, I will look at how trade unions are reacting to the growing pressure to change due to climate change. To do this I employ the MLP-framework in order to understand how agency play a part in how trade unions react. Intermediary theory is used to understand how unions differentiate in their activities. Political defection is used to understand what instigates change in the unions. I have chosen to focus on LO and its affiliated unions because of their importance in the Norwegian labor movement. It is important to study this because of the essential position

unions have in policymaking and managing the discontent of its members. To study these phenomena, I have employed a document analysis of various trade unions' official documents to understand what they want to do, have done and what they expect the future to look like. I have also used a media content analysis to supplement the empirical foundation and track union participation in the public discourse. The aim of the study is to contribute to our understanding of trade unions' role in transitions.

The thesis concludes that there is an ongoing coalition-driven policy change going on. LO maintains the position of the petroleum-affiliated unions because they traditionally subscribe to the unions with the highest issue ownership. Due to exogenous pressure such as climate change this issue ownership tradition has become challenged by coalitions wanting to accelerate or facilitate the transition.

2. Literature review

In this section of the thesis, I will first present a brief overview of the academic field of sustainability transitions and then moves on to present one of the seminal theories called the multi-level perspective (MLP) and the concept of political defection. This is followed by suggesting how trade unions can serve as political actors. The chapter then moves on to outlining a typology of intermediaries and how various intermediaries operate. Afterward, a brief discussion on how trade unions may function as intermediaries. This is necessary due to the elusive nature of trade unions. Finally, a summary of chapter 2 is presented.

2.1 Sustainability transitions

Due to the rapid changes society experiences today there has also been an increased interest in the field of sustainability transitions. Grand-scale changes are necessary in order for society to evolve to a sustainable future. The field of sustainability transitions attempts to answer some of the questions when dealing with societal change. Grand challenges require complex solutions which in turn gives rise to new challenges and implications. Sustainability topics relate to societal, environmental and economic questions such as infrastructure, resource management and climate issues. Due to strong path-dependencies and lock-ins it is difficult to instigate change without changing socio-technical relations, business, lifestyles and organizational, institutional and political structures. Herein lies the crux of change in socio-technical systems. While socio-technical systems work incrementally due to the complexity, it suffers from being unable to cope with the requirements of rapid grand-scale changes. While there have been longstanding traditions grappling with the intricacies of transitions, recent developments within the field 4 main frameworks have emerged: Transition management, strategic niche management, multi-level perspective on socio-technical transitions (MLP) and technological innovation systems (Markard, Raven & Truffer, 2012, p. 955). This paper is only focusing on the MLP-framework.

Markard, Raven and Truffer (2012) considers sustainability transitions as “*long-term, multi-dimensional, and fundamental transformation processes through which established socio-technical systems shift to more sustainable modes of production and consumption*” (Markard et al, 2012, p. 957). Sustainability transitions also tends to have some sense of guided governance where a direction or goal is set with purpose and intent. Guidance also carries the expectation that a multitude of actors are involved and are encouraged to cooperate and

coordinate. Long-term goals set by political institutions often involve other political actors such as regulatory bodies (Markard et al, 2012, p. 957).

2.2 Multi-level perspective

In innovation theory the *Multi-Level Perspective*, referred to as MLP from here on, remains as one of the most prominent frameworks for understanding how fundamental changes in systems, and by extension what is working against a sustainability transition (Geels, 2019, p. 187). The MLP framework delineates 3 distinct analytical concepts; *niche-innovations*, *sociotechnical regimes* and *sociotechnical landscape* (Geels & Schot, 2007, p. 399). It is in the interactions between these three levels that transformative changes might rise, and transitions often considered to be the transformation between sociotechnical regimes (Geels & Schot, 2007, p. 187).

Niche-innovation are necessarily radically different from the incumbent regime, but emerge in smaller geographical areas or market niches, or by the help of targeted policy support (Geels et al., 2017, p. 1242). Niches often exist in sheltered environments such as incubators, and by developing in the outskirts of the reigning regime radical innovations “mature” without interference from a mainstream market selection (Geels, 2019, p. 189-190).

At the meso-level is the socio-technical regime system which self-sustains itself through lock-in mechanisms which is constantly improving through incremental developments (Geels, Sovacool, Schwanen & Sorrell, 2017, p. 1242). It is also implied that regimes consist of more than technological innovations, but also social (practices) and institutional dimensions (Kivimaa et al., 2019b, p. 113).

The landscape, or exogenous, level is the final driver of change in the MLP-framework. The macro-level could be understood as trends slowly evolving such as changing demographics, or shocks such as war that unsettle the existing regime. Once a regime is exposed to exogenous pressure it creates a “window of opportunity” for niche-innovations to disrupt the current system (Geels, 2019, p. 190).

Within the Multi-Level Perspective there is three reinforcing processes which differ but overlaps with the three analytical concepts mentioned above: increasing momentum of niche innovations, weakening of existing systems, and strengthening exogenous pressures. These reinforcing processes are the mechanisms that create the windows of opportunity when aligned (Geels et al., 2017, p. 1242). The momentum of transitions increases if multiple innovations

are able to connect with each other resulting in new combinations and configurations which further strengthen the momentum of sociotechnical transitions (Geels et al., 2017, p. 1242).

One concept that is often used by transition researchers is the notion of *destabilization* of regimes. Regime-destabilization is processes that interrupt reinforcement processes of regimes. Destabilization can be used as an active tool such as radical policy reforms or could be underlying processes that are less obvious. Policymakers using destabilization as a tool could replace incumbent actors, introduce new actors or remove important reinforcement structures such as policies. Typically, destabilization is most prevalent in the acceleration or embedment phase, or in advance of exogenous shocks or radical innovations (Kivimaa et al., 2019b, p. 115).

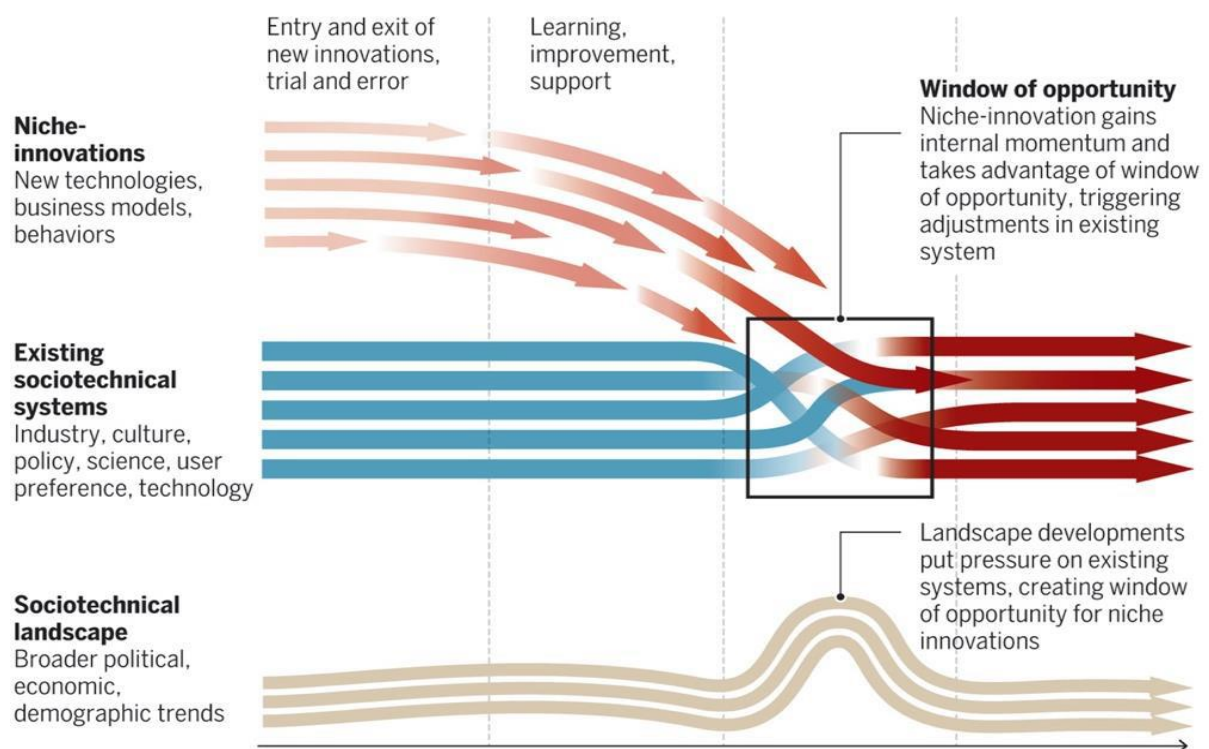


Figure 1. Illustration of the Multi-level Perspective. Adapted from Geels, Sovacool, Schwanen, & Sorell (2017, p. 1242)

2.3 Political defection and conditions for accelerated transitions

Acceleration of transition processes are difficult due to the tendency of policymakers and institutions to reinforce existing regimes resulting in lock-ins (Roberts & Geels, 2019, p. 222). Institutional conditions set the system up for continued investment in the current policy regime which are based on three elements: institutional arrangements, shared problems and policy targets, and the policy in of itself. Institutional arrangements can include policy networks such

as an arrangement that maintain regime-supporting preferences such as experts or bureaucrats, agencies or specific interest groups. A shared sense is what constitutes as issues or solution regarding problems or challenges of the regime such as participation forums or accessibility to deliberation arenas. Policies favoring incumbency might be established policy plans, targets or instruments. These are all effects that reinforce the incumbent regime and create path dependency and lock-ins (Roberts & Geels, 2019, p. 223).

To ease the effects of lock-ins Roberts and Geels (2019) outline three conditions that characterize reorientation. Firstly, changing allegiances requires an increased momentum in the drivers of niche-momentum. Secondly, the influence driving forces hold over policymakers must increase. Thirdly, destabilization has to be prevalent. The combination of these three conditions lay the foundation for loosening lock-ins and create opportunities of political defection (Roberts & Geels, 2019, p. 222). Political defection is represented by the fat arrow in figure 2 on the next page. The authors also suggest conditions at meso-level which can accelerate emerging niche-innovations. One of these are the mobilization of alliances and coalitions to work for technologies and put pressure for new policies. A second is to shift public opinion to influence policymakers which either legitimize niches or discredit regimes (ibid).

Roberts and Geels (2019) consider policy regimes “embedded in broader socio-technical regimes”. Meaning policy regimes are both socially shaped as well as having their own dynamics and materiality. This makes policy regimes open to influence from social groups and technological developments. In other words, policy regimes are susceptible to being influenced by firms and interest groups, mass publics, and technology and infrastructures (Roberts & Geels, 2019, p. 225).

Roberts and Geels propose two distinct ideal types of patterns for major policy change. The first, crisis-driven patterns that focus on how external landscape shock put substantial pressure on the regime that create major crises forcing policy change within the regime. The urgent need for change push policymakers toward alternative solutions existing outside of the regime. This can be considered as a leader-led pattern. A second pattern is identified by the struggle between two different sets of coalitions. Pressure is exerted from a challenging coalition associated with niches toward a regime-coalition. The niche-coalition put pressure on the policy regime through offering technological returns and growing support from experts and mass publics. In the meantime, the regime-coalition experience inefficient technology and firms, or disinterest from the mass public. This pattern could be considered a responsive pattern. When the

combination of the two patterns supersedes a threshold conditions for political defection emerge (Roberts & Geels, 2019, p. 225).

Increasing structuration
of activities in local practices

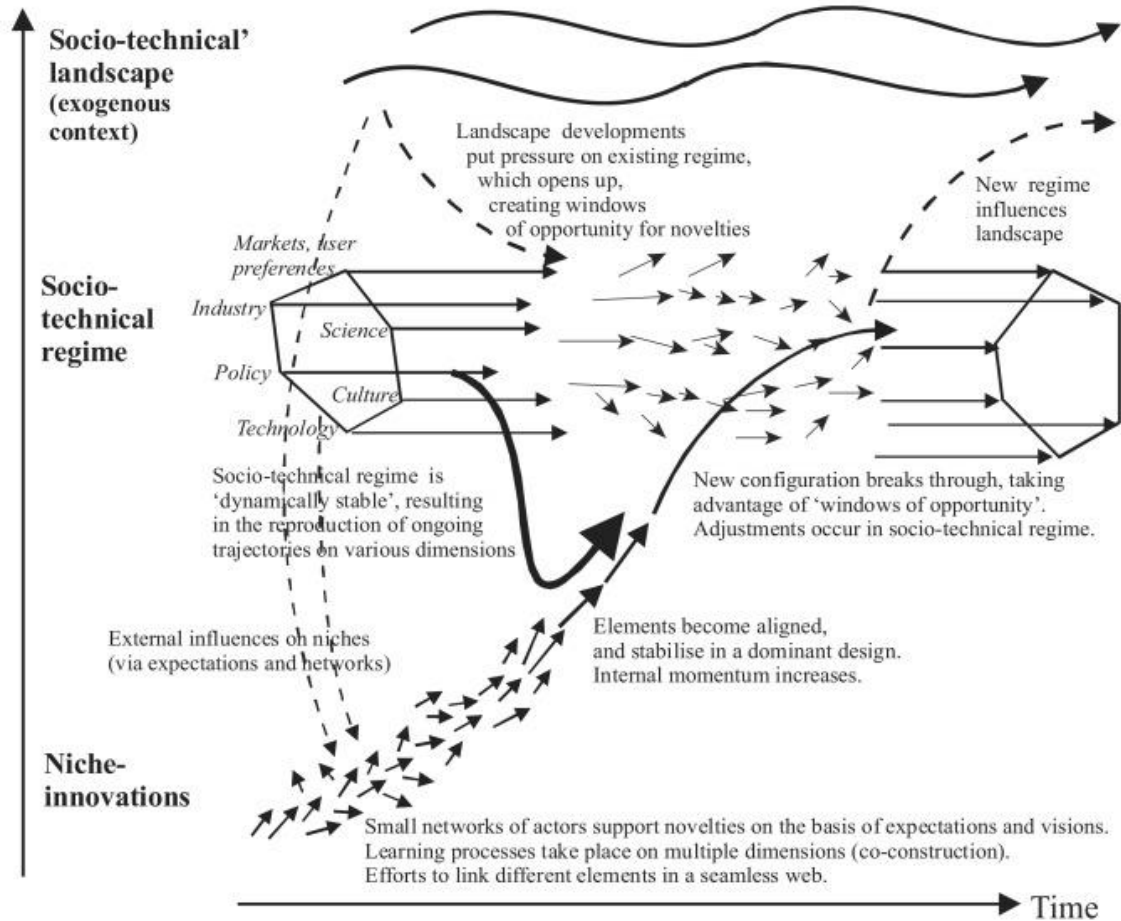


Figure 2. Conceptualization of political defection (represented by the fat arrow) in the multi-level perspective on transitions. Adapted from Roberts & Geels (2019, p. 223).

2.4 Trade unions as political actors

In the post-WWII era, the western world was characterized by heavy nation-building, industrialization and political cleavages appearing in tandem with union organization and the evolution of welfare states (Streeck & Hassel, 2003, p. 335). Traditionally, trade unions have been a primary outlet for centralization of the collective power of the workforce with the aim of improving and protecting worker rights. Both enabled by and due to heavy industrialization and modernization states were put under pressure to provide social support and welfare. Seeking political support and voters states started to negotiate with trade unions. The governments began to “exchange” social welfare as a means to secure voters and legitimacy, and as such states started to expand its political sphere to include social rights as part of it the governmental institution (Streeck & Hassel, 2003, p. 354). In the 1980s and 1990s trade unions engaged in campaigns outside of member’s economic interests and participated in peace and equality matters (Streeck & Hassel, 2003, p. 336; LO, Aug. 2021). With unions emerging as an actor in other arenas than labor and bargaining they started to become increasingly politicized leading to even more agency. Union members, intellectuals and the public began considering unions as leaders of social movements pertaining to outside in a broader economic scope (Streeck & Hassel, 2003, p. 336).

In modern times trade unions participate in both state and politics, and the labor market and collective bargaining. Naturally, unions have different strategies and patterns of activity due to historical and structural differences. These differences can be explained by looking at the two dimensions of political unity and the politicization of unions where the Scandinavian countries score high on both (Streeck & Hassel, 2003, p. 342). But most modern unions participate in both arenas (Streeck & Hassel, 2003, p. 335). However, the paper avoids discussing the different structures of trade unions as it falls outside of the scope of the thesis.

Due to the strength found in collective bargaining unions are able to exert their power in various means throughout the constitutional framework to influence, which often trace back to their ties with political parties. This can be done through serving as a recruitment pool for positions within political parties, providing funding for political campaigns, or subsidies to party organization. Threatening to shift their political allegiance is also a possible channel of influence, albeit a more extreme one that requires credibility (Streeck & Hassel, 2003, p. 336). Unions can also gather political support by participation in parastate institutions. Examples of this might be targeted funding or influencing public policy design (Streeck & Hassel, 2003, p. 337).

More specifically, trade unions have four ways of converting *industrial power* into *political power*. One way of conversion is *political exchange* which happens when unions have a strong collective bargaining power that greatly affects economic performance or political survival of the government (Streeck & Hassel, 2003, p. 344). Because governments subscribing to Keynesian strategies and promised that unemployment would not be the result of excessive wage demands they started depending on unions functioning as “managers of industrial discontent”. By waiving wage increases unions got improved social policies or improved union integration in return. This approach can be considered risky as it requires members to miss out on short-term benefits in favor of long-term which can spur member discontent, opposition or apathy (Streeck & Hassel, 2003, p. 345).

A second way of conversion is through creating alliances and aligning itself to a political party. This approach is often called *privileged links*. If unions are in a situation where they lack previously established connections to political parties, they can gain political power by trying to shift public discourse in favor of their preferred political party. But in an increasingly heterogeneous society unions can't assume that parties are going to follow through on the policies preferred by unions. Because of this unions might be forced to threaten their party-affiliation to take the union's interest in consideration, or else union-member votes could go to a competing party. Of course, in modern democracies trade unions are not able to force members to vote in accordance with union policy. This issue might be further exacerbated by declining member numbers (Streeck & Hassel, 2003, p. 347).

Thirdly, unions might seek to attain political power through serving as a *functional representation* in order gain influence on the implementation of public policy. By participating in bipartite or tripartite institutions unions have a more direct way of influencing the formation of public policy where they might be able to shift focus on issues that are important for their members and/or organizational aims. In some instances, unions might even be able to veto policies they strongly oppose. In policy networks outside of the national level functional representation is less formalized but includes trade unions as a means to get legitimacy or competence. That said, informal inclusion of unions has proved to be increasingly important for regional, sectoral and international policy-networks. New ways of governance have moved in the direction of collaboration where expertise and co-creation of policymaking play a larger role. As an alternative to competing interests, the collaborative governance-approach seeks to create a common vision and activity with the aim of improving the joint comparative

advantage. In this approach unions are an ally which can contribute with industrial expertise, training and skill development and more (Streeck & Hassel, 2003, p. 348).

Lastly, unions might function like more conventional groups of interests by lobbyist activities, especially if the links between union and political party is weakening or non-existent. Unions seeking to tilt political decisions look to be increasingly reliant on traditional lobbying-activities and are moving toward being juxtaposed with other interest groups (Streeck & Hassel, 2003, p. 348). This signifies a distinction between unions that has primarily relied on political exchange through collective bargaining and unions based on lobbyist activity. Unions based on collective bargaining might struggle to develop skills in presenting expert knowledge to policymakers as well as managing good PR-relations. Compared to firms and other interest groups, unions have in this instance a disadvantage (Streeck & Hassel, 2003, p. 348).

One study (Hyde & Vachon, 2018) found that labor unions are associated with lower greenhouse gas emissions, but this depends on institutional context. When unions are included in policy formation, they could be inclined to prefer sustainable alternatives, but this can be severely limited by strong employment protection laws. One suggestion might be to reevaluate current employment laws and terms and reinvent them with the aim of reassuring retraining and work replacement during necessary regulatory or technological change. This is part of what is known to be the just transition framework. However, this singular study does not take into account social processes that operate outside of national borders. They exemplify this by pointing out that Norway has a high degree of union density with low emission, but export offshore petroleum while using hydroelectric power for their own consumption (Hyde & Vachon, 2018, p. 11).

2.5 Transition intermediaries

In this sub-chapter I'm going to (1) introduce intermediaries on a general level, (2) delineate different types of intermediaries, and (3) attempt to connect the intermediary literature to the case of trade unions.

With the advent of systems of innovation combined and grand-scale transitions points of connections and nodes in innovation networks has been increasingly put under the microscope (Howells, 2006, p. 715). Due to the new research the role of intermediary has emerged as a relatively new actor within the sustainability transitions field.

Intermediaries are actors who perform a large variety of tasks within innovation systems. Intermediaries has been characterized as third parties, intermediary firms, bridgers, brokers, information intermediaries, and superstructure organizations (Howells, 2006, p. 715). Innovation intermediaries have been defined as, “an organization or body that acts [as] an agent or broker in any aspect of the innovation process between two or more parties” (Howells, 2006, p. 720). Intermediaries are increasingly considered to be important in innovation systems despite their veiled functions. Due to their obscure nature they tend to have to legitimize itself as it is challenged by an environment constantly looking reduce expenses (Van Lente, Boon & Klerkx, 2020, p. 485). The nature of intermediaries suggest that they might be prone to being short-lived, or at least having their lifespan heavily linked with the issues they are associated with. By extension suggesting that some intermediaries may lose their function and thus lose legitimacy. This is even more relevant for intermediaries operating within innovation and transition fields. If intermediaries fail to be considered legitimate, they could become considered as activists (Van Lente et al., 2020, p. 487). However, intermediaries can diversify their operations by positioning themselves in other related areas.

At its core intermediaries can be differentiated in two different groups: traditional intermediaries and systemic intermediaries. At its core it is the number of connections that make out the main difference between systemic and traditional intermediaries. Traditional intermediaries have been associated as “knowledge and technology brokers” operating between users and producers or firms and other related agencies (Van Lente et al., 2020, p. 486).).

Kivimaa et al. (2019) provides a review of the intermediary literature. Intermediaries in the context of transition studies stems from a varied background but is often associated with innovation intermediaries and systems of innovation, but that the term is fleeting and temporary. They define transition intermediaries as:

“Actors and platforms that positively influence sustainability transition processes by linking actors and activities, and their related skills and resources, or by connecting transition visions and demands of networks of actors with existing regimes in order to create momentum for socio-technical change, to create new collaboration within and across niche technologies, ideas and markets, and to disrupt dominant unsustainable socio-technical configurations”
(Kivimaa et al., 2019b, p. 111).

Kivimaa et al. (2019a) suggests classifying intermediaries in 5 groups: Systemic intermediaries which engage with all levels and promote an explicit transition agenda. Systemic intermediaries

also tend to lead on a system level. Regime-based transition intermediaries are bound through institutional arrangements or interests the incumbent regime but has a mandate or ambition to promote transition. Regime-based intermediaries tend to interact with different niches or the whole system. Niche intermediaries focus on experimentation and advancement of specific niches. To achieve their goals, they employ methods such as lobbying to change the regime in a direction preferable to the niche. Process intermediaries primarily work with facilitation of specific processes or projects instead of promoting larger niche-groups. That said, process intermediaries do not work with an explicit transition agenda, but rather in support of contexts or external priorities issued by other actors. User intermediaries serve as translators between emerging technology and users. The user intermediaries share user's preferences to inventors, developers and regime actors with the aim of qualifying the value of the technology offers that are available. The level of agency varies between these types of intermediaries. System, regime-based and niche intermediaries all maintain a strong agency for change in the system or niches. Process intermediaries carry less agency and operate more as a facilitator. User intermediaries may or may not have a strong agency (Kivimaa et al., 2019a, p. 1069-70).

More typical for the context of sustainability transitions is the systemic intermediaries. Systemic intermediaries are organizations that aims to influence innovation systems and networks rather than mediating one-on-one (Van Lente et al., 2020, p. 486; Parag & Janda, 2014, p. 105). Systemic intermediaries act in a way which leads to optimization and mitigation of system failures which in turn improve the overall innovation system. In the context of sustainability transitions effective systemic intermediaries support strong innovative activity that can contribute to a quicker and more efficient transition (Van Lente et al., 2020, p. 486). During destabilization processes the systemic intermediary attempt to decrease public legitimacy, commitments, deconstructing networks, markets and institutions, and implement new policy to practice (Kivimaa, 2019b, p. 115).

In the niche-regime interaction there is studies suggesting that intermediaries are a crucial part of the early phases of transitions. This is due to the discrepancy between niche-level and regime-level actors needs and direction of transitions. Intermediaries are important to connect and combine the two different perspectives and to position the actors in line with the common vision between intermediaries and their audience (Kivimaa et al., 2019b, p. 113).

Category of intermediary	Context/ Level of Action	Emergence	Goal of intermediation	Normative pos. (position vis-a-vis niche)	Normative position (neutrality)
Systemic intermediary	Intermediating on system level between multiple actors & interests	Typically established to intermediate	Pursues given goals on a system level: ambitious to disrupt existing system	Outsider to specific niches, creating multiple, alternative niches	Typically regarded as a position of neutral, unbiased facilitator and broker, despite having an interest in stimulating transitions
Regime-based transition interm.	Intermediating on a system level between multiple actors within mandate given by dominant regime actors	Existing actor subsuming intermediary roles; or established by dominant actors to intermediate for transition	Pursues goals through typically more incremental solutions or political aims	Outsider to specific niches, creating multiple, alternative niches	Regarded as a player in the dominant system but pursuing or empowered for change
Niche interm.	Intermediating between local projects and/or higher level of aggregation	Often emerging to intermediate when a niche develops	Pursues goals and solutions from a perspective of a given niche	Insider to specific niche	Regarded as a player advancing a particular niche
Process interm.	Intermediating within experimental projects or specific processes contributing to transitions	Typically established/employed to intermediate day-to-day action in transition projects or processes	Implementing context-specific priorities, informed by broader transition trajectories	Typically outsider to specific niche	Regarded as neutral, unbiased “networker” that does not have specific “agenda” in the process
User interm.	Intermediating between technology (provided) and use, and/or niche technology and dominant configuration	Emerges from amidst users and consumers	Acts as a facilitator, representative, or broker of end-use or end users	Insider or outsider to specific niche	Leans towards user interests (in some cases even as activists)

Table 1. Overview of transition intermediary types. (Adapted from Kivimaa et al., 2019a, p. 1069).

To understand why a transition takes place (or not) it is necessary to understand how different phases of transitions happen. This process can take decades and is often considered to be a slow-moving, complex evolution. By borrowing structures from the MLP-model it is possible to look at how dynamics of intermediaries change during the transition by dividing the transition into different phases. This paper borrows the framework provided by Kivimaa et al. (Kivimaa et al., 2019b, p. 113). The phases are simplified into three categories: pre-development, acceleration and stabilization.

The pre-development and exploration phase is considered to be "...a dynamic equilibrium" suggesting that the pre-development phase goes through experimentation which is difficult to understand the outcome of. This phase is filled with dichotomy between wanting to push boundaries and hesitance to change existing configurations and assemblages. In this phase niches contribute to experimenting and exploration without aggravating the regime. The experimentation could be a way of articulating what opportunities are possible to pursue. (Kivimaa et al., 2019b, p. 113).

In the acceleration and embedding phase, solutions emerge and start gaining traction. At this point niches begin developing a support system to advance innovations further. This could be through nurturing or shielding processes due to the increased competition with the incumbent regime. As the niche commercializes socio-cultural, economic, ecological, and institutional changes become more evident. Additionally, collective learning and income get more typical and changes in institutional infrastructure get more visible. At this point niches engage a larger number of users and start competing with the incumbent regime (Kivimaa et al., 2019, p. 113; Kivimaa, Bergek, Matschoss & van Lente, 2020, p. 373).

The stabilization phase is reached once the equilibrium dynamic is stabilized. In other words, the original regime has subsided, and the emerging niche has become the new regime. This phase can be characterized by the "incumbent niche" overgoing mostly incremental change and economic change is focused on scaling. And thus, resetting the cycle leading to a new niche emerging which will at some point challenge the existing regime (Kivimaa et al., 2019b, p. 113)².

² However, this is a very narrow way of picturing it. Reality is much more complex as there is multiple competing niches and sociotechnical systems comprise of more than a singular regime. Different systems and regimes might develop at different rates which makes it difficult to point to an exact point of stabilization. Additionally, not all niches succeed in "overthrowing" the regime which can result in backlashes such as niche-lock-ins.

2.5.1 Trade unions as intermediaries

While trade unions are growing in attention it has yet to have a prominent role in intermediary theory. Because trade unions do not intuitively fit within Kivimaa et al.'s typology I will attempt to give a brief discussion as to how theory and unions are compatible. This will be further revisited in chapter 4 where union activity is viewed through an intermediary lens. Roberts and Geels (2019) also argue that the mobilization of alliances and actor coalitions can create pressure for policy change. Incidentally, this can be a by-product of the network facilitation/merging that intermediaries do.

While trade unions do not check all boxes for any of the types of intermediaries, they do share some motivations and functions. Trade unions could be understood as a “labor-intermediary” considering their efforts in wage and workers’ rights. They have historically been willing to make short term sacrifices to gain long-term. Unions have also been used as “managers of industrial discontent” explicitly intermediating between workers and capitalist forces. To some extent unions remind of regime-based intermediaries as they already are existing, and it is only recently they have entered the climate issue-discussion. They are also operating on in a way that includes the full range of actors from workers to the central government through the tripartite cooperation. However, this is only true for the unions that are already part of the existing regime. Unions with interests outside of the regime, or even oppose it openly, can be more difficult to categorize. Unions such as LO have a history of aiding firms in workplace-transitions likened to process intermediaries who focus on transitioning day-to-day projects. On the other hand, the systemic intermediary fits the broader vision of transition and in the case of non-regime intermediaries they aim to disrupt the existing system. While unions aren’t established to disrupt the existing system they are, historically speaking, established to retain control over reinforcing processes and serve as a break on capitalization of labor and possible injustice related to it.

2.7 Summary

The theoretical chapter has provided a brief overview of the sustainability transitions-field. It then gave a short introduction to the Multi-Level Perspective which is a framework for understanding socio-technical transitions and lends itself well to study agency and change in it. The MLP-framework suggests that transitions happen due to actors changing behavior from exogenous developments and/or innovations from the niche level. Further, the text explains

how certain conditions must be in place for political defection to occur. Namely, increased niche-momentum, influence over policymakers and/or increase destabilizing effects. To facilitate for these conditions to converge two patterns are suggested, one crisis-, or “leader-“, driven and one coalition driven. The text then gives a summary of different types of intermediaries and their typical roles in transitions. Lastly, the text provides a short overview of the just-transition ideas.

In this text I attempt to use these theoretical concepts in the following ways. The MLP-framework serves as a big picture framework for understanding both political defection and the role of intermediaries. Additionally, the MLP-framework provides conceptual tools for talking about different phenomena in transitions. Landscapes are tightly tied to the political context and refer to the longer, incremental shifts in for example public opinion and issue salience or exogenous shocks put on regimes. Regimes work, intentionally or not, to reinforce itself. In this case it is natural to consider the O&G sector as a regime attempting to resist transitions to alternative energy forms. While one sector might have multiple regimes and challenging niches I will, for analytical purposes, consider the sector a regime. In the Norwegian context, this makes Industri Energi and Fellesforbundet two possible incumbent actors. Opposing the regime are actors in niches which challenge the regime through radical innovation or new assemblages typically developed outside of the regime’s attention until maturity and a window of opportunity appear. In the energy context this could be new battery technology, solar- or wind power among others. Alternative energy sources might change other aspects of society. A well-used example is the transition from fossil fuel to electricity in transportation vehicles. Additionally, as Norway is mainly run by hydro-electricity oil and gas are mostly used as export goods relying on foreign demand. If Norway is unable to profitably export oil and gas it is necessary to find alternative sources for export-revenue. As such, trade unions attempting to diverge from the petroleum-based energy regime might look to renewable energy alternatives as a solution to fulfill growing energy demands. In this thesis these niches are represented by EL & IT forbundet and Fagforbundet. The two conflicting groups of unions each act as intermediaries for its respective group through creating a common vision, influencing policy or developing networks. This is done by converting their industrial power i.e., membership numbers, to political power. The two groups are competing for issue ownership to change LOs actions. This competition is highlighted through the political defection theory.

To reiterate, I will use the MLP-framework as a conceptual framework for investigating how trade unions are influenced by landscape pressures, and how this leads to a divergence between groups within LO, each seeking to influence the political system through LO, in opposite ways.

3. Methodology

This section is going to present the methods used to collect and analyze the data used in this paper. The thesis first presents the reasoning behind conducting a qualitative approach ahead of mixed- and quantitative methods. This is followed by why I decided to pursue a qualitative case study, and why LO was chosen as a case. It then presents a Norwegian context and the unions role in Norway. I will briefly outline a reflection on the research process discussing reliability, validity and potential ethical concerns. Afterwards, it will present the analytical strategy, then the two different data collection methods applied which are document analysis and media content analysis.

3.1 Qualitative approach

Scientific research in social sciences can be done through three sets of method approaches: qualitative, quantitative and mixed methods. These three approaches should be considered as a continuum with mixed methods in between qualitative and quantitative. Quantitative research focuses on observing social phenomena from “the outside”, without any interaction from the researcher. This approach is best suited to get insight into social “laws”. Quantitative research is then based on characteristics of phenomena that can be quantified and categorized. Qualitative research is suitable for research trying to develop the understanding of the reason behind social relationships and social structures or -activities. While qualitative methods do attempt to uncover regularities in society it is not the main priority of qualitative research (Johannessen, Tufte & Christoffersen, 2010, p. 362). The main perks of qualitative data are flexibility and openness. Both of which suits the research question as it attempts to understand a phenomenon that has not yet had much research and attempts to understand what roles and activity in trade unions influence energy transitions (Johannessen, et al., 2010, p. 364). As such it is natural to pursue a qualitative approach.

3.2 Qualitative case study

Using a case-study based approach is best used when (a) focusing on “how” and “why” questions; (b) it is difficult or unethical to manipulate the behavior of the objects of study; (c) you suspect that context is tied to the phenomena you want to study; and (d) boundaries are not explicit between phenomenon and context (Baxter & Jack, 2008, p. 545).

The research question presented in this thesis; *Are trade unions reacting to the increasing urgency of climate action, and if they are why and how do they react?* Suggests that a case-study is a suitable approach as it focuses on *how* unions are difficult to change or manipulate, and the question considers how unions and sociotechnical transitions interact. Specifically, the question asks what roles trade unions are filling as intermediaries in the ongoing energy transition (Yin, 2018, p. 94). Furthermore, case studies follow a loose framework for collecting and analyzing data. It is not unusual for researchers to move between steps interchangeably, despite most following preparation, data collection, analysis and discussion.

3.2.1 Case selection

Upon deciding what case, or unit of analysis, to use it is to look at how “a phenomenon operates within a bounded context” (Baxter & Jack, 2008, p. 545). In the case of this thesis the goal is to look at how trade unions, as an actor functioning on multiple levels, might influence the pace of energy transitions. The study limits itself to the energy transition, but suspects that there might be lessons learned that can contribute to union intermediation in for example, digitalization or automatization. Norwegian closeness with petroleum could possibly give a stronger contrast in how unions balance labor-environment issues compared to other transition-fields. The study is also limiting itself to the time around and between 2010 and 2020 as the interest in climate-friendly solutions have vastly increased since 2010.

The decision fell on Landsorganisasjonen I Norge (LO) as they represent several unions of both radical and conservative nature, and most petroleum workers are associated directly or indirectly through LO. Additionally, both accessibility (as a study object) and socio-cultural (oil-dependence) reasons make Norwegian unions a feasible case. Looking at the LO-affiliated unions further substantiate our understanding of how LO develops its policies and preferences.

Relying on a single case study is not always optimal as multiple-case studies are often considered to be more robust. However, Robert Yin (2018) provides five criteria for using single case studies: *critical, unusual, common, revelatory* or *longitudinal* cases. In other words, the case is either critical in relation to the theory, it is something that is unusual or lacks comparable counterparts, focus on every-day occurrences, new access to observation, or provide time-based samples of the case. Conversely, the case of LO fits three of these. First of all, trade unions, and especially umbrella-organizations, are in a unique position compared to other interest groups and function as intermediaries between workers through representation

and the state and industry. It can be argued that a multi-case study that considered two smaller unions of differing opinions might give more validity as the two “camps” of opinion are clearly separated. However, that opens up questions of variability in member numbers and how strong their relative power within the labor-movement is. Future studies doing more thorough examinations of this could prove to be a valuable study, nonetheless. Additionally, trade unions tend to follow policy that is suggested by LO which is established during their congress every fourth year, and changes in internal policies are generally reserved for the unions with the strongest issue ownership (Houeland et al, 2020, p. 3).

Secondly, trade unions have received little attention in transition studies with a few exceptions. Johnstone and Hielscher (2017) considers the role of unions in the destabilization of the UK coal industry but recognizes that both trade unions and destabilization are elusive in sustainability literature. Normann (2019) explores two deliberate destabilizations of established industries, one focused on the closing of Dutch coal mines in which unions play a larger role. Houeland, Jordhus-Lier and Angell (2020) discusses how conflicts between environment and petroleum policies play out in the internal processes of LO, and how they engage with climate change mitigation policies. Even though these three studies touch upon trade unions, and less so in the Norwegian context, they do not provide an exhaustive understanding of trade unions as transition- or intermediary actors.

Thirdly, studying LO over time fulfills the longitudinal requirement by sampling documents in the period between 2009 and 2020. The thesis attempts at giving a description of what and why potential changes in LOs position regarding climate change might have happened.

3.2.2 A Norwegian context

As briefly mentioned earlier, the oil and gas sector are tightly intertwined with Norwegian society. O&G comprise of 14% of the Norwegian GDP and employs 200'000 workers. Norwegian oil & gas has had a strong presence in modern Norwegian history and culture, but despite its centrality there has been contention between the economic forces associated with O&G and conservationist/environmentalist interests. Norway has had a long tradition with preservation of nature and environment going back to the middle ages and the more recent example of establishment of the Norwegian Society for the Conservation of Nature. The strong tradition has participated in Norway's ambition to act as a leader on climate issues. The two conflicting interests has put Norwegian leaders in a difficult position where they are expected

to unite two diverging interests. To navigate the difficult terrain policymakers has focused on including climate ambition in international agreements, and in domestic discussions treated the two issues as independent of each other (Normann & Tellmann, 2021, p. 425). This is also the approach trade unions have maintained.

Petroleum activity outside of Lofoten, Vesterålen og Senja (LoVeSe) has been in contention since the 1990's after researchers suggested large reservoirs of O&G (Søbye, 2017). The LoVeSe issue highlights some of the characteristics and issues of the debate. LoVeSe is one of the main tourist destinations, central to the fishing industry and environmentalists have been concerned of the consequences associated with potential petroleum-related accidents. The petroleum industry on the other hand argues that the industry can maintain a satisfactory level of security and that the income generated will go to the coming generations and more recently funds could be allocated to green investments.

3.2.3 Trade unions in Norway

About 50% of the Norwegian workforce is part of a trade union which is a high union density compared to countries outside of Scandinavia. Of the 1.9 million unionized laborers half of them are part of the Norwegian Federation of Trade Unions (Landsorganisasjonen Norge, hereafter LO) (SSB, 2021). LO is an umbrella organization for trade unions and has members from a majority of industries and professions in Norway, including the oil and gas-, and the supply industry. With its collective power LO is considered to be the most powerful of the unions. Part of the reason for the strength of LO, outside of the high degree of membership, is the political ties they have with the Norwegian Labor Party (Arbeiderpartiet, Ap). There are formal agreements between the two bodies, and both enjoy mutual positions at each other's boards.

LOs policy has usually been decided on the position that the trade union closest to the issue holds. In the case of O&G this is Industri Energi and Fellesforbundet. These issues are discussed and open for other unions to comment on in the prelude to and during the LO-congress which happens every 4th year. For this thesis, I will use LOs policy preference as a representative for the broader labor movement as they represent half of the organized workforce. The size and network of LO makes them the biggest actor in the labor movement, and a shift in LOs policy preference will have a big impact on how the labor movement operates.

3.3 Data quality and ethical concerns

All research is based on the four cornerstones of quality: reliability, construct validity, internal and external validity. I will attempt to connect the methodological choice made in this study to these concepts and make necessary reflections on the success of the scientific execution.

Construct validity is about identifying the appropriate means to conduct the research in relation to the concepts that are being investigated. To produce high quality construct validity, the researcher has to (a) define what changes are in specific concepts, and (b) identify the appropriate measures required to study those concepts. Preferably identification also involves citing other published academic work that make similar matches between concept and research tool (Yin, 2018, p. 44).

Internal validity focuses on establishing a causal relationship that is not contested by spurious conditions or phenomena. To avoid spurious conclusions, the researcher has to use tactics such as pattern matching, explanation building, consider other explanations or use logic models (Yin, 2018, p. 45). While the study draws from a series of documents ideally, I would be able to conduct interviews and represent a broader set of actors. Interviews would allow me to get a more thorough understanding of how the different unions relate to each other and interact outside of LO. It might also have provided insight to which issues their members are occupied with in terms of climate change.

External validity is the measurement of how generalizable the findings are to other studies or policy. Achieving a satisfactory degree of external validity is done by asking open ended questions such as how and why rather than what (Yin, 2018, p. 46). Because this case study focuses on a few and specialized actors it might struggle with generalization, even more so considering LO is an umbrella-organization for trade unions.

Reliability is the quality of operating the study in a way that ensures that data collection can be repeated and still conclude with the same results. Yin (2018) points out that case studies rarely are easily repeatable. To avoid accusations of poor documentation he proposes researchers to develop a case study database. I attempt to follow this advice by using the digital tool NVivo 12 Pro which aids me in storing, categorizing and analyzing the collected data. It also provides a feature that logs changes which I will keep for a period after submission.

The ethical considerations are based on the National Committee for Research Ethics in the Social Sciences and the Humanities (2016) guidelines for ethical research in social sciences, humaniora, law and theology. The data collected for this thesis have all been publicly available on websites. All official documents have been provided links to in the appendixes (NESH, 2016, p. 16). The data there is not much of personal details, but rather of institutional details. The private interests of the data procured should be thoroughly documented, and as there is no agreement between me and the organizations used as data. It is important to ensure quality and careful use of methods as the informants have not expressed nor had any opportunity to decline any indication of participation in my study (NESH, 2016, p. 23; *ibid*, p. 13). Quality is maintained by thorough referencing, avoiding plagiarizing and scientific honesty (NESH, 2016, p. 27-29). As some of the data is collected through a third party with confidentiality it is difficult to provide an open and shared data foundation, but through proper referencing I hope to contribute by being responsible by referencing and protecting the information due to ethical concerns (NESH, 2016, p. 29).

3.4 Data collection

This thesis follows a document-based process analysis of how trade unions are changing and how change in union preferences might affect transition pace.

3.4.1 Documents

Document analysis is often used with other research methods to triangulate data, and it is expected to draw from more than one source of evidence as a way to outline similarities and dissimilarities by comparing the sources. Typically, documents are used in coordination with interviews, observations or physical artefacts, but have also been used as a singular method (Bowen, 2009, p. 28-29). Triangulation of data helps prevent source bias and aid the researcher in avoiding pitfalls such as inadequate foundation for findings. Document analysis is suitable for case studies as it gives a stable and broad insight into how a phenomenon, organization or event act as documents are social facts (Bowen, 2009, p. 27; 29).

Bowen (2009) outlines 5 functions of documentary material: as a context provider, introducing new questions, supplementary research data, basis for tracking change, and validating data. Using documents in a trade union-context provides at least three functions. Collecting annual

reports and congressional protocols can provide context by putting the reflections and actions of the case in a wider context. In the case of the thesis this is how climate change urgency puts pressure on unions to change and how unions respond to it. Documents may provide the researcher with new questions to pursue in other research methods such as interviews. Journals, newspaper articles and memos (and more) can be valuable sources of information to supplement other data sources. Documents are suitable for tracking long term change and development. Different drafts of documents or series of reports that have even small changes in different documents may turn out to be major changes in an organization, for example. The research question of this thesis is focused on a longitude-approach. Documents can be used to quality-check evidence from other sources. If evidence is pointing in the same direction it gives further credibility to the findings.

Bowen (2009) warns against using documents without being critical and caution. Researchers have to be aware of the possible inaccuracies of the document format. Neither should researchers just “pick” specific sentences and formulations from documents, but instead try to understand the meaning of the document and what contributions it brings to the issues of the study. That includes considering the level of depth it brings to each specific topic. The lack of or the incompleteness of documents does have value and could explain a facet of the object of study, or the people related to it. It might suggest that topics have been given little attention. In response the researcher should investigate other documents to provide additional evidence which broaden legitimacy (Bowen, 2009, p 33).

LO and the affiliated trade unions provides transparent access to their annual reports and congressional protocols to a varying degree. LO is the most transparent while Industri Energi does not provide any readily available public access. An overview of this is provided in appendix 2 and appendix 3, hyperlinks included.

When developing the media content collection, I decided to exclude local and regional newspapers, radio sources and all other Scandinavian news outlets. I also limited the search to only include the period of January 1st, 2009 to December 31st, 2020. I used the search strings provided in Table 2 to retrieve the news articles. “Klima”, “petroleum/olje” and “omstilling” was included to filter the search to include the topics the thesis is attempting to answer, namely changing preferences in unions in relation to transition to a sustainable future. When I experimented with alternative search strings I either found unreasonably large amounts of hits (10’000-100’000s total) that were too vague or open-ended. Or too narrow resulting in too few

hits (10 total) which would have weak validity and/or generalizability. The selection was made through a purposive method based on the most relevant media (Macnamara, 2005, p. 13).

3.5 Media content and document analysis

3.5.1 Media content analysis

Media content analysis (MCA) is considered to be susceptible to interpretations and almost impossible to study completely objectively, but is non-intrusive despite its broad reach in time and scope (Macnamara, 2005, p. 2; p.6). Media content can be a vast array of objects such as medium, message, source or context. The objective of content analysis is to make sense out of these phenomena and attempt to gain some sense of meaning from them, and an important step is to single out key features relevant to the study (Macnamara, 2005, p. 4). Media content analysis can be considered as a sub-category of content analysis, and its shortest definition might be:

“Who says what, through which channel, by whom, with what effect” (Macnamara, 2005, p. 2).

It is more typically divided in two overlapping approaches: qualitative and quantitative analysis. A quantitative approach tends to focus on collection data such as issues, number of mentions, or key words put in context among others. Quantitative studies should also strongly consider the outlet of the media (Macnamara, 2005, p. 4). The quantitative approach has been criticized for assuming that size or frequency is directly transferrable to impact. This is why many researchers combine the qualitative and quantitative approaches. Qualitative approaches are more inclined to provide insight to perceptions of media credibility, context and audience characteristics. Meaning qualitative analysis focus on the relationship between the text and its audience. This reminding us of the issue of media content being open to interpretation, and as a method on the interpretations of the researcher. The quantitative approach provides a structure in accordance with the scientific method (briefly discussed in chapter 3.4) and findings, while the qualitative approach helps us understand underlying meaning in the text and its interpretation by its audience.

Media Content Analysis can be condensed into three central uses; descriptive; hypothesis testing (inferential) and facilitating inference. It also has some degree of predictive power (Macnamara, 2005, p. 3). Using MCA in a descriptive role can give understanding of characteristics of discourse and public opinion. The inferential role and predictive role can

facilitate inferences to the connection between the studied issue and society. Additionally, it might provide a foundation for inferring how mass media representation affect the audience. Due to the subjective nature of MCA the methodology dictates the degree of reliability (Macnamara, 2005, p. 4).

This study employs a combination of qualitative and quantitative content analysis. To achieve a greater degree of objectivity the study established a code book (appendix 1) in an a priori (deductive) fashion. But before finalizing the code book exploratory work was done through reading random sample documents from the retrieved documents, and emerging topics was included in the code book. This should help mitigate bias from the researcher's side. While creating both positive and negative nodes of the same concept is important, this has not been fruitful in every instance, such as when tracing activities of unions (Macnamara, 2005, p. 9). Codes like this has been left out of the presented code book for better organization. Regarding "intercoder reliability" I rely on the discussions with my supervisor as the primary control mechanism.

3.5.2 Data analysis

Document analyses include three steps: skimming, reading and interpretation. Content analysis is processing the data into different categories that are tied to the questions of the research question. Despite accusations of content analysis obscuring the interpretive processes, content analysis does not only consist of information via interviews and other means of conversation. Content analysis provides a quick, but meaningful overview of relevant text. Content analysis does however require the researcher to be able to separate relevant information from irrelevant information (Bowen, 2009, p. 32).

The next step is a more thorough reading of the extracted information with the goal of noticing emerging patterns and themes which suggest categories to be used in the analysis. Categories and themes added inductively are highlighted in the codebook. In thematic analysis it is possible to use predefined codes, and it is especially true when used in combination with other research methods. During this phase it is important for the researcher to behave as neutral and careful in the data selection and analysis treatment (Bowen, 2009, p. 32).

I have used NVivo as a digital tool for categorizing and analyzing the collected data. To methodically categorize the data a code book was developed. The codebook is presented in Appendix 1. When creating the code book, I depended on the combination of inductive and

deductive approaches. Firstly, I considered the most central concepts of the theoretical framework and the research question which were then reconceptualized to suitable codes (or variables). Secondly, after the exploratory phase some recurring themes were included in the code book as their own codes. As a novice researcher I had no formal training with coding to this extent and relied on some self-practice before delving into the collected data. In a thesis-situation it is unreasonable to expect my supervisor to overview the coding and I had no project partner. As an alternative I revisited the code book with my supervisor afterwards to get additional feedback. Most data collected has been written in Norwegian, so the thesis is prone to incorrect interpretation during translations. Any quotations presented in this paper has been translated by me.

During the analysis of the annual reports and action plans I have primarily focused on the sub-chapters of “næringspolitikk”, “næringspolitiske virkemidler”, “regional utvikling”, “bistand ved omstilling”, and the chapters “Miljø og bærekraftig utvikling” and “forskning og utvikling”. This was done to decrease the workload as there are multiple subjects which fall outside of this study. The chosen chapters each represent different aspects of influencing policy and intermediary roles. The industrial policy (næringspolitikk) chapters give an insight to what themes and activities LO has been preoccupied with on a broader scale. The environmental chapter (Miljø og bærekraftig utvikling) provides information on what issues and solutions LO focus on. The R&D chapter (Forskning og utvikling) demonstrate one way for unions to have direct influence through funding (and conducting) research as well as further highlighting their emphasis. It was not possible to procure the action plans of Fellesforbundet, so I have looked at the periodical report of what Fellesforbundet have done each period between the congresses. It was not possible to gather any official documents of Industri Energi and when I contacted them, I never got any replies.

The media analysis has been included in the coding process and has been used to triangulate data sources and provide additional sources. This was in part due to the lacking data for some of the unions and time periods. However, the media analysis did not provide as much content as I hoped for during the 2009-2013 period, and due to formal restrictions, I was not able to retrieve more data for this period. This leads to the second reason for the media analysis, upon scouring the official document I noticed there was little attention paid to domestic climate issues in advance of the 2013 congress, or that the related discussions were held internally. The media analysis corroborates my suspicion.

After using a structured search on the Retriever-platform the search words provided few news articles in the period between 2009-2013. The search resulted in extraction of two *relevant* hits in 2009, zero in 2010, two in 2011 and one in 2012. The updated plan in context with the rapidly growing climate concerns might be the explanation to why the search got 10 hits in 2013. Unfortunately, some of the news articles have been removed from the webpages, including both from 2009. The search yielded 19 relevant hits on news search in 2014, 11 in 2015, 10 in 2016, 9 in 2017. 9 hits on news articles in 2019; 7 hits in 2020. The 2021-search marked the end date. The '21-congress was postponed due to Covid until 2021, and unfortunately, the thesis is due before the 2021-congress is held.

Trade union:	Search strings:	Total # of hits:
Landsorganisasjo -nen Norge (LO)	"LO" and klima and (petroleum* OR olje*) AND (omstilling or Omstill*)	1001
EL & IT Forbundet	("EL og IT" OR "EL & IT") and klima and (petroleum* OR olje*) AND (omstilling or Omstill*)	105
Fagforbundet	"Fagforbundet" and klima and (petroleum* OR olje*) AND (omstilling or Omstill*)	228
Fellesforbundet	"Fellesforbundet" and klima and (petroleum* OR olje*) AND (omstilling or Omstill*)	246
Industri Energi	"Industri Energi" and klima and (petroleum* OR olje*) AND (omstilling or Omstill*)	186

Table 2. Table of search strings used in Atekst Retriever. Note that the number of hits is the total of the period 2009-2021.

4. Empirical findings and analysis

This chapter intend to outline the empirical findings with the aim of explaining how trade unions change and how it influences the pacing of sustainability transitions. The chapter focuses on how policy preferences has developed, and which activities LO and the affiliated trade unions has acted as a political actor.

The chapter is structured in 3 periods with 3 themes each. The first period is 2009 – 2013 which is the first congressional period surveyed in the thesis. To maintain clarity, it is divided into “political context”, “Vision for the future”, and “Political cooperation or realignment”. The “political context” theme presents and analyze the broader context for change and how it might impact union interaction between niche and regime level. “Vision for the future” presents what the future are going to look like and how it might influence how they interact with other unions. “Political cooperation or realignment” attempts to understand how unions relate to each other and how they work towards the envisioned future. This sub-chapter also offers an analysis to how LO and affiliated unions respond to opportunities for political defection. These chapters allow for investigating how the political context shapes its surroundings, understanding how changes in union preferences develop over time, how unions work toward attaining their goals, and how unions could participate in transitions via political defection. The subsequent time periods follow the same structure.

Three distinct events have been prominent in the documents surveyed, the financial crisis of 2008-09, the oil crisis of 2014-2016 and the COVID-19 outbreak in 2020. All of them have had an impact on the socio-technical landscape along with growing concerns on the effects of climate change. The change in the Norwegian government in 2014 also changes the landscape somewhat as LO are not affiliated with the new government.

The analysis begins in 2009 after the LO-congress and climate change was beginning to get a prominent place in the field of politics as is signified by the United Nations Climate Change Conference in Copenhagen (UNCCC). The series has been categorized in three major parts divided by each congress respectively in 2009, 2013 and 2017. A fourth congress was scheduled for 2021 but was postponed to 2022 due to COVID-19. The two most recent LO congresses also provide a program of action for the corresponding four-year period. It has not been possible to retrieve the plan of action for the 2009-2013 period.

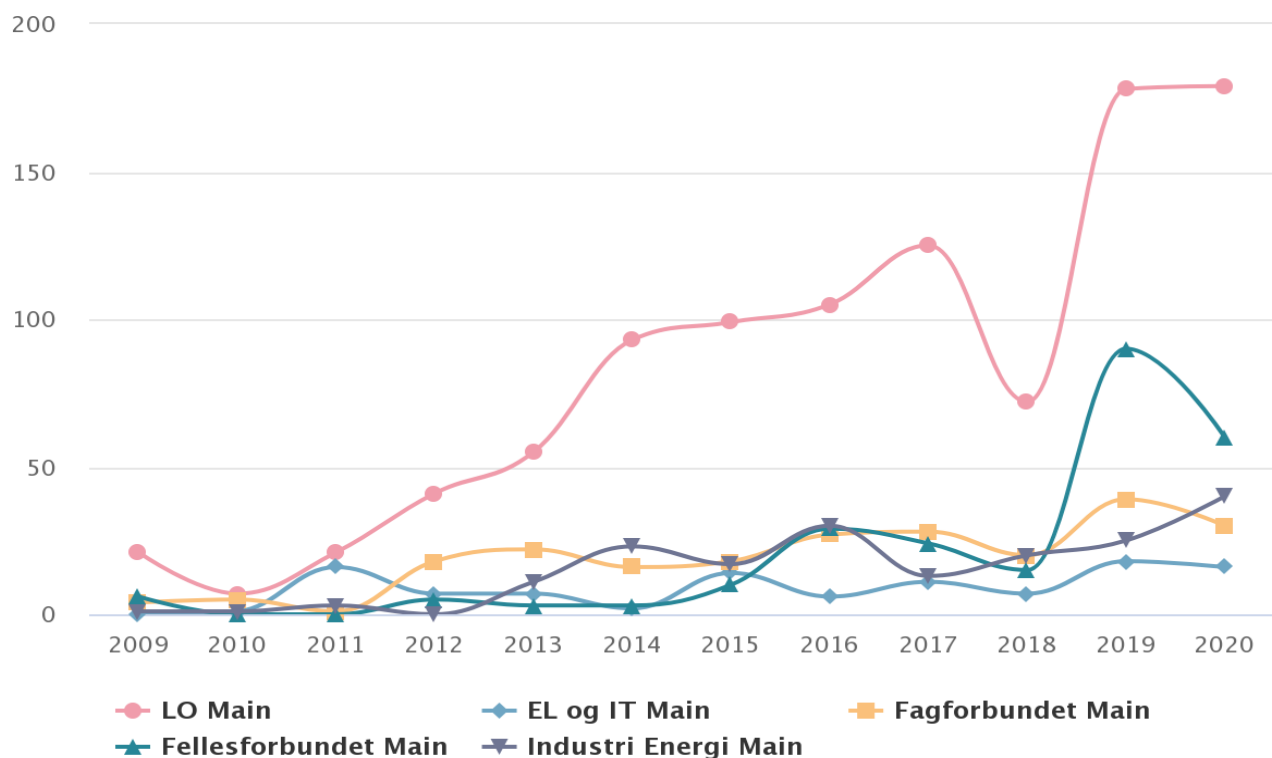


Figure 3. Annual overview of news hits in the period 1. Jan. 2009 to 31. Dec. 2020. This figure show how there has been an increase in news hits with based on transitions and climate. LO has had a strong rise since 2009. The bump in 2014 was a response to the oil price crisis. The dip in 2018 I suspect is because of a political campaign took much attention. That might also be the reason why it sharply rises again with Fellesforbundet. The sudden interest in 2019 was as a response to the proposals of merging the labor and environmentalist movements. The other unions have a slow growing interest. EL & IT is the only union that has been stable. The spike in EL & IT (pink) in 2011 is a duplication of the same article due to a data error on the webpage. Search performed on Atekst – Retriever.

4.1 2009 – 2013

4.1.1 Political Context

The early period of 2009-2013 was marred by the financial crisis as investments halted in the O&G industry. Gas lines, the shipbuilding and the supply industry had to compete with actors outside of Norway for the few projects not abandoned. Naturally, this had a severe impact on the labor force resulting in intervention by the labor movement.

In the beginning of 2010, the O&G sector was affected by the financial crisis due to lower oil prices which in turn led to postponement of projects. With about 250'000 employees touched by the crisis LO made sure to engage with central O&G companies as well as in the media with the aim of stimulating activity within the industry. An example of this is the work LO performed in getting approval of a concession application to build and maintain a gas powerplant. This was approved under the prerequisite of the integration of CO₂-cleansing

facilities on the power plant. The project was intended as a step in the electrification of potential new O&G fields in the Norwegian sea. Due to frustrations with delays and insecurities for the shipbuilders and suppliers, LO worked with government institutions and operators to maintain activity on the Norwegian continental shelf (NCS). Another example is that LO monitored the development of the Goliat-oilfield to ensure the creation of maximum jobs and supplier activity. However, LO has advocated for an increased investment in demonstration/test-facilities for windmill technology as an alternative that strengthen the Norwegian supply industry.

In 2012 and 2013 much of the activity from offshore companies was sent abroad, and in 2014, during the oil price drop, the industry experienced heavy downsizing. Fellesforbundet expressed concerns over lost jobs for short-term benefits to government and the industry arenas. This led to people questioning the offshore industry ability to compete with external actors. As Statoil (now Equinor) accounts for 70% of the petroleum production on NCS their activities will consequently shape the industry. These are important observations as it puts the Norwegian employment market in the offshore industry under severe pressure.

4.1.2 Vision for the future

EL & IT forbundet maintain a clear position early on:

“Comprehensive climate change is the largest threat to humankind of today. The less fortunate has to bear more of the burden. In order to change this development energy systems, have to move away from fossil fuel towards renewable resources. Because of its wealth and level of production Norway has a special responsibility to lead the charge. This transition has to start now.”

It is clear that EL & IT consider the labor movement to function as a driver for climate-friendly industry-policy and fight for a carbon-neutral society. The grandiose challenge assumes strong political governance. El & IT wants to contribute to a policy that shifts the power-balance and constrain the market liberalism to gain new momentum. A strong public sector is important as a welfare producer and counterbalance to the market economy. The union expect that public institutions and governments target performance and technology which preserve the nature and mitigates the burden on people within the affected area. Despite Norway maintaining 97% renewable sources for its electricity supply there is also a grand potential for energy efficiency. To build up the renewable energy industry EL & IT wants to implement governmental subsidy-

programs that makes it profitable to invest in renewable energy and energy efficiency as well as developing infrastructure. EL & IT wants to use gas instead of other emission intensive energy carriers, replace onshore fossil fuel with renewable energy sources and work toward electrification of the NCS and transport industry. Climate-friendly ICT-solutions is also a recurring theme in the plan of action. EL & IT support Norwegian activity that contribute to use of renewable energy in other countries through export, but on the condition that it does not harm Norwegian industry.

It is quickly evident that the EL & IT has a strong opinion towards the necessity of a transition. They even claim, “the transition has to start now”. This is bluntly a claim to challenge the existing petroleum regime. This becomes clearer when they suggest their workers has the knowledge and “potential” to develop electricity-based industries.

However, this statement is found in their action plan which was established in 2011 a couple of years ahead of the oil price crisis. Later it they approve of “realistic plans on electrification of the NCS. This change in attitude might suggest that there has been a regression in the enthusiasm for an immediate transition. Considering EL & IT have feet planted in both camps there is a case for claiming that the oil price crisis might have influenced their policy preference. It is worth mentioning they do renew their commitments to transitions, but markedly less so.

Fagforbundets leader, Jan Davidsen, considers the transition the largest of all time, but we can decide what and how resources are used, and it is possible to decide our future. He wants to build a “renewable-nation” and include climate issues as part of the societal battlegrounds. He looks towards renewable energy sources as an emerging industry which can replace the jobs in the petroleum industry (Christensen & Ruud, 2013).

4.1.3 Political cooperation or realignment?

At the same time LO pushed the issue of impact assessment in the regions Lofoten, Vesterålen and Senja (LoVeSe) which has been a point of contention as the region is one of the primary tourist destinations in Norway. This is also reflected in the internal divide of LO which the text will return to. During a KonKraft-meeting LO participated in formulating the need for high and sustained activity in LoVeSe. KonKraft, an industry cooperation organization, has been part of discussion of the O&G sector’s influence on Norwegian economy and how to better focus on R&D and recruitment for the O&G-sector. The KonKraft-cooperation is limited to industry

actors such as LO, NHO, Norsk Industri, Industri Energi, Fellesforbundet, Equinor and Norsk Olje og Gass. All of these actors are heavily affiliated with the O&G sector. Industri Energi and Fellesforbundet are both trade unions that have a large number of members working in the industry. LO is arguably the least affiliated with the O&G sector within this organization. In 2011 the government “demoted” the impact assessment of LoVeSe to “knowledge-gathering” which was met with some disappointment but was still received positively overall. KonKraft was also invited to work with the Oil and Energy Department (OED) on the challenges and potential of an increased effort in petroleum extraction on the Norwegian continental shelf.

During this period LO participated in two KonKraft-meetings one of which discussed the LoVeSe-case. In their annual report (2010) they: “promoted high and sustained activity on the shelf and the significance of risk assessment”. LO, Fellesforbundet and Industri Energi are the only labor unions represented. This *institutional arrangement* is inherently regime-reinforcing as their main objective is to influence national strategies for the petroleum industry which maintain competitiveness and attracts investments.

The year 2012 saw little attention paid from LO in regard to climate issues outside of presenting the report from 2011 that the OED commissioned. A recovering market and political campaign ahead of 2013 might be possible reasons for the low activity.

While the climate issue is not entirely avoided there are indications that most of the environmental and transition discussion took place internally, without much public outreach. One of these indications emerges when we look at LO and its affiliated unions through a media search which promptly reveals a sharp increase in public discussion as seen in Figure 3. This increase could indicate that they are just being more outspoken in media about climate and transition issues, or that it has taken some time for it to be discussed. A third alternative might be that the initial years was used to figure out their position in domestic issues. It is worth mentioning that the last congress was in 2005 and it was the last time it was a membership discussion on the internal policies of LO. Due to the international activity of LO it becomes evident that climate issues were not foreign to the union. The discrepancy between domestic and international activity could have its roots in a domestic “catch-22”. Where LO is divided between the majority will of the unions that want to pursue a faster transition and securing maintaining the security of the petroleum-workers security. The immaturity and uncertainty of renewable energy sources at the time may have contributed to the lack of domestic activity as well. However, upon reflection it is recognized that examining the transcripts from discussions during congresses might have yielded different results.

4.2 2013 – 2017

4.2.1 Political context developments

In 2013 the labor party government is replaced by the Conservative party. The new government does not have any direct affiliation with the labor unions meaning that the labor movement loses important access to policymaking instruments and arenas. Following the government change an unexpected drop in oil price resulted in severe downsizing within the O&G and supply industry. The government-owned Statoil (now Equinor) had to fire several thousand employees. For comparison, in the beginning of the year the price of oil was 108\$ per barrel. In the final period it was at 58\$ per barrel. It was assumed that this substantial price drop was going to have a significant influence in Norwegian society. Upon passing its plan of action LO calls to the state to act as an active driver and facilitator for developing technological solutions. The action plan argues that the public sector has a central role as developer and actor in developing industries, job-creation, infrastructure and securing jobs through active policy in the districts. Counties must contribute through independent industry- and employment plans, facilitate for investments and participate in transition processes.

Estimations on investment levels in the petroleum industry suggested a decline even throughout 2016. This has implications on disenfranchised workers. The diminishing number of jobs is assumed to be exacerbated due to the supply industry having to look outside of Norwegian borders to win tenders. However, the negative developments are somewhat offset by the approval of the Johan Sverdrup field which has occupied several Norwegian contractors. LO pushed Statoil to choose Norwegian companies, which has been crucial for several of the contractors. Despite this the industry estimates a decrease of 24'000 jobs. LOs fight to conserve job losses in the petroleum sector was founded on the impression that LO is first and foremost an employee organization with its highest priority on protecting its members interests.

During this period Fellesforbundet championed the opinion that unnecessarily many jobs were lost and there was too little done to retain the competence and knowledge previously found in the industry, and that this could have been offset by investing in R&D and maintenance work. The union has been promoting the need for transition subsidies to the government on behalf of the petroleum related ship-building industry.

The second crisis was the dramatic drop in the oil prices, and employees were once again under pressure. Fellesforbundet criticism of the short-term thinking of the government symbols some of the worries in the decarbonization debate. If Norway, with one of the highest standards in

the world, outsource the O&G industry it might lead to an increase in emissions as competitors might not have the same standards. Without Fellesforbundets criticism less discussion might have been had which to some degree demonstrates the union putting media pressure on the government to maintain and facilitate for Norwegian industry actors continued investments. By doing so Fellesforbundet's action pulls a weakened industry back into the future of Norwegian energy politics. One can speculate if action such as this did not happen it could have contributed to a destabilization of the regime. However, this is an indication of an actor displaying how they can mediate toward regime-favoring policy, or at least shut a window of opportunity.

The oil price crisis was persistent throughout this period, and the shift in government induces a wholly new set of policies. Going from a labor oriented political party toward a conservative reduces the level of political power of LO. That being said, it is difficult to "guesstimate" how a labor-government would have dealt with the oil price crisis. Speculatively, if LO and Ap managed to maintain their position in the government access to the decision table LO could have acted differently during the oil price-crisis as they would have greater influence in the decision-making process.

Fortunately, the Sverdrup-field was a success and attracted strong interest. During this period LO continued to work on preserving as many jobs as possible despite the decreasing investment levels. LO attempted to convince Statoil to choose Norwegian companies over foreign to stimulate the Norwegian market, flexing its political influence.

4.2.2 Vision for the future

In LOs action program LO states intentions to work for expanding the existing petroleum industry. Part of this reason is because they want to maintain labor activity in rural as well as urban areas. Many jobs in the petroleum industry are centered in rural areas and abandoning rural facilities are detrimental to workers situated in the periphery. In response, LO wants to open new areas step-by-step. This can improve the knowledge foundation by incrementally improving the competence of decentralized facilities that otherwise might not attract highly skilled workers. Improving the knowledge foundation raises the expected standards which might spur technological development. However, this has to be managed in accordance with interests from the fishing industry and the tourist industry Furthermore, LO wants to outline a risk assessment of new parts of the Barents Sea, Norwegian Sea and Skagerrak. They point out

that there is a distinct difference between performing a risk assessment and approving survey- and extraction activity. LO also consider bringing O&G onshore a possibility for developing a new industry that is both profitable and climate friendly. LO suggests that the government should be focusing on developing green technology such as wind-, solar-, bioenergy and wave-based energy. LO especially focus on testing and implementation of CCS-technology and development of markets for alternative uses of CO₂. In addition to developing CCS-technology they also consider it necessary to increase the focus on expanding the existing hydropower infrastructure. The two energy sources, in addition to wind, has to be developed in tandem in a way that balance the power supply system.

The plan of action was heavily criticized by scientists and environmental organizations (Heyerdahl, 2013). One of the critics is the Cicero-scientist Anne Therese Gullberg. The criticism is directed towards LOs unwillingness to leaving the oil in the ground, and that there is no intent in the program that suggests that LO aim to reach the 2-degree target. Despite this criticism LO are praised for their explicit statements on the necessary changes needed. In essence, it is evidence of unsupported policy intent that amount to no action and maintain the status quo. Gullberg claims that while CCS-technology is a nice gesture it is a technology that belongs to the future, and more radical change is necessary if we are to reach the 2-degree target, especially in the petroleum industry. LO-aktuelt, a news outlet for LO, contacted three different environmental organizations to assess the LO plan of action. One organization claimed that LO was evolving to become lethargic and putting breaks on the transition. A second point to internal issues as the cause for the lack of change. These organizations were unanimously negative toward LOs support of impact assessment outside of LoVeSe and development of onshore gas infrastructure.

In response, the LO climate advisor Anne-Beth Skrede states that leaving the oil be is out of the question for LO, but it is obvious that the labor movement should be a part of the transition (Heyerdahl, 2013). She points to the political majority that still support oil and gas-extraction in Norway. She also mentions that the industry already has cut 40% of the emissions the last 20 years and the only other way to make large cuts in Norwegian industry is to abandon it. Instead, LO wants to make the majority of the cuts in transportation, building and housing. Upon the question of why LO does not work for a climate revolution she responds:

No. It has nothing to do with what role LO is supposed to have. LO is a labor organization, not an environmental organization. Our mandate is to focus on what our members are preoccupied with, and as of now it looks like salary and work conditions are ranked higher on their agenda. (Heyerdahl, 2013)

Fagforbundet, the largest LO-affiliated trade union in Norway, suggests implementing green taxation as one alternative. They also consider the precautionary principle as the preferred modus operandi within the petroleum sector. This stance is evident in their wish to protect the vulnerable areas of the Norwegian continental shelf (NCS), including LoVeSe.

Fellesforbundet has been actively promoting CCS-technology which they deem necessary to achieve the targets set by the Paris climate agreement.

In the 2015-2019 plan of action EL & IT has included the statement: “the EL & IT unions support realistic plans on electrification of NCS. The reward of reduced CO2 emissions justifies the investments and contribute to achieve climate targets” (p. 54). In the action program, the union considers itself a representative of industries that might have solutions and wants to be a force that make formal commitments to practical action. And states that it is especially true of the energy- and ICT-branch, but also the electro-branch has “substantial potential” to contribute to energy saving technology. However, the plan also comments on the dichotomy between climate-friendly opportunities and the petroleum dependence and suggests reducing the extraction tempo and avoid opening new fields. “We have to enter a phase where we transition to a society and an economy that is not so dependent on oil” (p. 67). Furthermore, the plan support implementing a climate law.

In combination with a new climate-strategy 2017 also saw the integration of the new climate-law in Norway. This is something LO has been working on for several years. LO has also been working on conducting climate- and environment-meetings that has been carried out with representatives from industry, trade organizations, government, politicians, environmental organizations and the scientific community. LO considers the establishment of cooperation between the central organizations in labor and the Ministry of Climate and Environment a success. One of these collaborations led to a joint campaign for climate in the labor sphere called “Working together for green jobs – tripartite cooperation for a low-carbon economy”.

During the spring of '17 the government released an industry brief focusing on how Norwegian industry is going to be “Greener, smarter and more creative”. The shift is based on developing

new testing centers for emerging technology, heavy investments in R&D, access to capital and a new export-strategy. LO has worked on “coordinating” the brief to the labor movement. LO itself started the process of formulating a new research policy-strategy. That, for the first time, fund research that support the petroleum industry and competitiveness.

Fagforbundet does also subscribe to R&D to developing a future based on renewable energy sources. An offensive climate-policy has to be put in the context of developing new forms of production and employment. Fagforbundet point out the necessity of relying on energy efficiency as well as developing alternative energy sources. Furthermore, gas power plants built in Norway should be based on full-cleansing technology. A necessary step in the right direction would be to further commit to international agreements.

Fellesforbundet established the “10 commandments of industry”. These commandments aim to promote climate- and environmental policy through public procurement, R&D, knowledge and just transitions. The union joint-commissioned an explorative report thorough Sintef with the intention of finding industrial opportunities and job creation by implementing grand-scale CO2-management in Norway. Fellesforbundet has also been working towards improving coordination between public policy agencies that provide risk mitigation measures. These actors are Enova, Innovasjon Norge and Forskningsrådet. Additionally, Fellesforbundet has requested more consultations in the parliament to make sure the labor sphere is better integrated in policies. Fellesforbundet does also consider the 2013 LO congress a success indicating they are happy with the results and implementation in LO, as it means LO continues in its tracks from before. Considering Fellesforbundet participation in developing the framework it is safe to say that Fellesforbundet influenced the LO action program.

EL & IT propose in their action program that their aim is to also work for the Government Pension Fund of Norway investing in climate friendly innovation and development along with divestment in coal and O&G from tar sand and oil shale.

Most unions consider a “hard” transition as unfeasible and that it is not possible to just abandon the industry without a concise plan. The discussion thus revolves around the when rather than if. This becomes even clearer in the period 2017-2021.

LO restated its intentions of working for expanding the O&G industry. One of the technologies LO promoted heavily was carbon capture and storage technology. Focusing on CCS technology would allow Norway to continue its petroleum activity. CSS technology would legitimize the argument of “clean petroleum” further. When LO proposed CCS as a viable solution it was met

with arguments such as it only postpones the weaning off petroleum and not remove it. Fellesforbundets policy is in line with LOs. By further investing in the industry via developing CCS, a technology which require a petroleum industry, it continues to commit the Norwegian economy. CCS-policies stabilizes expected investment levels lowering the threshold for investors sitting on the fence. While it upholds and possibly even increase the number of jobs in the industry, it does not deter investors. One would expect that there is a threshold for investors between the cost of investing in CCS technology leading to continued petroleum activity, and the cost of leaving the industry in pursuits of other sources of revenue. However, such a calculation is outside the scope of this thesis.

Fagforbundet propose a green tax as an alternative solution. Taxation retracts from potential profits and does not provide an opportunity for future gains compared to CSS. The two solutions each symbol a different perspective. The LO/Fellesforbundet CCS-investments is a policy intended to attract investments leading to stabilization of the regime. The tax proposed by Fagforbundet increases the threshold for investments and ultimately stop reinforcement of the regime.

EL & IT on the other hand change the sentiment in the urgency of transition. Previously they affirmed that the transition would have to start “now”. In the 2015-2019 plan of action the narrative becomes more careful which might suggest a shift in language that support continued investments in the O&G sector. This might be due to several reasons. Firstly, the union might have reconsidered their position because of the oil crisis. The union has members that were affected by the crisis and has to adjust the wording to better reflect the members’ situation. Secondly, actors with opposing preferences could have convinced the union to reevaluate their position. Thirdly, it could be a part of a negotiation between unions. Lastly, the union might have found that electrification of the offshore industry could stimulate members already within the industry and provide new jobs for its audience. The last point sticks out as the union considers itself a representative of a solution-oriented industry.

4.2.3 Political cooperation or realignment?

The KonKraft cooperation was also heavily involved in responding to the crisis and provided a report examining the opportunities available on the NCS. Despite the growing interest of ‘17 in investments is expected to be lower in 2018 than 2017 and many actors struggle to survive. KonKraft has established a committee mandated to suggest how to improve the competition

and value-creation on the Norwegian shelf. Comparatively, LO spent parts of 2015 aiding Store Norske Spitsbergen Kulkompani in diversifying. “Store Norske” is a state-owned company that has mainly run the coal industry on Svalbard. Due to prices the community is struggling and looking for alternative industries to pursue which LO participated in.

The future of the petroleum sector has been in contention within LO. Some unions want to push for a stronger environmental policy but face unsurprising resistance from petroleum-affiliated unions. In the preceding days of the conference, the union leader of Fagforbundet, which represent employees in the public sector, Stein Guldbrandsen estimated there were a majority in LO that was prepared for a more “offensive climate policy” and that a unified LO is imperative to be a driving force (Vårt Land, 2013). Fagforbundet claims that the labor movement has a central role to play in developing climate-friendly measures and should serve as a motivator to its own members. Cooperation with the environmentalist movement must be central. Fagforbundet is also the only examined union that has a chapter focused on “alliance building” with three different intents; strengthen the political cooperation, strengthen relations between employee organizations and other movements, and actively participate in civic discourse.

El & IT Forbundet, representing telecom-, electro- and IT-employees, and Norsk Tjenestemanslag (NTL) representing government employees, both support Guldbrandsens claim. EL & IT understands that there is an ongoing power struggle between social and political spheres. EL & IT wants to start building alliances between the labor movement and the environmental movement. Without the cooperation of the labor movement there will be no change (Vårt Land, 2013). Kjersti Barsok, the second in command (at the time) in LO Oslo and a central figure in NTL, suggests that the labor movement can be the bridge between Norway as an oil nation and a renewable energy nation (Barsok, 2013).

2014 also saw the emergence of the conference “Broen til Fremtiden” (translated as Bridge to the Future). The annual conference is a collaboration between the labor movement (Fagforbundet, EL& IT, NTL), environmentalists, the Church and scientists working towards building a climate-solution from below. Specifically, “a democratic, planned, just transition that creates 100,000 climate jobs, and allows for slowing down the country’s rapacious oil and gas extraction” (Broen til Fremtiden, 2021). While LO Norway is not credited as an organizer they have participated on different occasions.

The 2013 LO-congress was considered a success within Fellesforbundet as they managed to get key union-policies included in the LO plan of action. There were also positivity surrounding parliament white papers on industry policy. Fellesforbundet did also participate in developing LOs climate strategy. The periodic report from Fellesforbundet also points out the climate targets set for 2050 and acknowledge solutions within renewable energy and how Norwegian markets competence and experience makes gives a comparative advantage. However, the report also highlight that a transition would be costly and full of risks considering the immaturity of the markets. This is considered to be the reasoning behind calls for compensating political frameworks.

The LO leader Hans-Christian Gabrielsen demanded increased tax cuts for the oil industry which struggled. He wanted to reduction of investment write-offs to go from 6 to 3 years leading to an earlier return on investment from oil companies. An alternative could be to increase the non-taxable income to speed up the projects that are reasonable and economically beneficial. These suggestions have been criticized for the state to take a larger risk in petroleum investments than what they already do which, inadvertently or not, puts the risk and potential consequence on the people of Norway (Jortveit, 2016).

NTL and Fagforbundet are strong advocates for unifying LO in the climate issue. Ahead of the 2017-congress NTL point out the growing focus on climate issues. The NTL leader John Leirvaag considers the necessity of climate change as a non-issue, but that the weight of the conversation is now rooted in the speed of the transition (Bråthen, 2016). Mette Nord, leader of Fagforbundet and member of APs central committee, register that the climate conversation appears to be different depending on where you work. An example of this is the municipalities where members experience the effects of climate change in their daily work (Bråthen, 2016).

In recent years the impressive growth of Miljøpartiet De Grønne, the Norwegian Green party, has become evident. In the most recent election, they managed to collect 3.9% of all votes falling just short of the election threshold of 4 % which would qualify them for leveling mandates. As part of their political campaign, they have been working for/inviting the labor union to participate in their political vision. On the national convention of Miljøpartiet De Grønne (MDG) in 2014 Hilde Opoku claimed that the partnership between MDG and the labor movement was something to strive for. “We have to become the new Labor Party” she proclaimed (Heyerdahl, 2015). She considers the growing interest in the conference Broen til Fremtiden as a sign of change in LO, and that the local LO-union has put MDG as one of the recommended political parties to vote for in the upcoming local election. This marriage

proposal has also been carried over to the most recent election campaign where the new leader of MDG, Une Bastholm, states that there will be no transition without the unions. Further, she states that the communication between politicians and the labor movement has been poor. When asked if support from trade unions is a prerequisite necessary to be part of the next government, she replies that support from unions are necessary to become a broad “people’s party”. But regardless of MDGs participation in government, without the support from trade unions it is impossible to achieve climate policy (Skårderud, 2020). Compared to the 2009-2013 period new interest was taken in the labor movement. With the emergence of MDG and their marriage-proposal to the labor movement they seek to gain legitimacy from the labor movement offering political support and legitimacy in climate issues in return. This might be the very beginning of a new alliance likened to how unions in the past have gained political power.

It becomes clear that there are some groupings between the trade unions. On the one hand is the more “radical” group represented through “Broen til Fremtiden”. This group is calling for an increased attention to climate issues, transitions and the role of labor unions in transitions. Broen til Fremtiden is hosted by Fagforbundet, EL & IT forbundet, Greenpeace, The Church of Norway and various environmentalist groups among other actors. The intention of the conference is to discuss climate issues and connect the labor and environmentalist movements. The alliance is built with bottom-up change in mind as both movements recognize that there are shared issues between the two movements, and it would be mutually beneficial to cooperate. EL & ITs confidence in the capabilities of the industry they represent indicates that (previous) niche-technology is maturing and gaining momentum. A shift in union’s issue salience can be interpreted as increased political leverage *if* unions decide to exert political power through available means. As is seen with EL & IT there is a slight back-slide in their sense of urgency, but maintain their position on the need and direction of transitions. However, following the three prerequisites for changing allegiances it comes to an impasse regarding destabilization. The reinforcing structures become highlighted through the other coalition group represented by KonKraft.

4.3 2017 – 2021

4.3.1 Political context developments

The oil prices start rising again leading to new jobs opening up again as Norwegian suppliers start winning contracts for new projects. However, the shipbuilding-industry are still struggling. Investments in O&G is estimated to accumulate to 180 billion for 2020, with an expected decrease to 166 billion for 2021. Because of the pandemic consequences the oil price saw yet again a drop. This naturally led to renewed insecurities in the supply industry. After another cooperation between trade unions and associations, through KonKraft, they managed to get the parliament to approve of a taxation package with the intention of alleviating the slowed activity. LO reports that this package has contributed to saving thousands of jobs in the supply industry.

During 2020 a concern about the Norwegian power capacity and consumption toward 2030 has emerged. Substantial plans for emission reduction within the power industry has been made. This concern is exacerbated by reductions in the transportation and the petroleum industry. At the same time a growing interest in hydrogen-, battery production and data centers require large amounts of power. In response, LO and NHO has started a project to consider the needs of the various industries in relation to the potential power production. A large amount of these projects aims to be realized within 2030. The emission cuts in the industries are a necessary part of achieving the target goals set in roadmaps and resolutions.

2020 also saw the European Green Deal ratified which is expected to have a large influence on Norwegian politics. The green deal includes climate law, sustainable investment plans, just transition-regulation, policy for a circular economy and a new industry strategy. It also provides new emission targets for 2050, disconnect between economic growth and resource-usage, and social justice. LO participated by submitting suggestions and conversations about the European project with policy actors such as the Norwegian Ministry of Foreign Affairs.

The estimation on petroleum investments in 2019 have now reached a level comparable to 2012. The year 2019 gave particular interest to the mineral industry as it provides the foundation for industrial jobs in the districts resulting in releasing a new mineral industry strategy. It acknowledges the commentary LO provided, and they are still participating with the industry to begin the process of extracting minerals needed for the green shift. The industry is also an important prerequisite for the green shift and sustainable production and social life. Norway has large mineral resources that are useful for the rest of the world. LO participated in

hosting an event where prerequisites and opportunities were the main topic. However, renegotiations by “other interests” creates frustration within the industry. LO continues its support in ensuring a solid framework for future production and employment in Northern Norway.

With the petroleum market slowly returning to its level before the crisis pressure to reinforce the O&G regime ease. However, yet again does crisis strike. This time it is the COVID-19 outbreak, rendering a halt to large portions of the workforce. The continued insecurities of the market make investments less likely to occur. While KonKraft does manage to get a tax-deal alleviating struggling companies it puts the industry under continued pressure. Combined with the development of new CCS-testing facilities marks a new stage for the O&G industry as it reinforces the possibility of continued extraction and stabilize the insecurity of the market. However, as is evident in the growing concern regarding power capacity and consumption the industry is put under scrutiny. Emerging technology is steadily getting more attention as the technology matures.

The ratification of the European Green Deal signifies an additional layer from landscape pressure as it intervenes in large portions of the Norwegian decision-making system. Pressure from an intergovernmental organization further signifies growing consensus in the global community that something has to change.

4.3.2 Vision for the future

The new plan of action was decided in medio-May 2017. The NTL leader Barsok commended the direction LO was moving towards. She highlights the inclusion of protection of the ice cap and the role of governmental institutions in the green shift (Hansesen, 2017). In their plan LO writes that 2050 is the target year for a Norwegian low-emission society, and that they support the EU-target of 40% emission reduction in 2030. Again, LO focuses on CCS as a solution. Their aim is to get CCS-projects fully implemented by 2020. LOs vision is to ensure that innovation and emerging jobs are created in existing firms although they recognize the importance of entrepreneurial activity and companies. To support established firms and industries LO wants to invest more where Norway has a comparative advantage, connect knowledge networks and adapt political tools to promote industrial production, including the O&G industry. Specifically, LO claim that facilitating for stable long-term investment in minerals and O&G should be a priority and executed with care.

Due to the extraordinary circumstances surrounding the COVID-19 pandemic much of the attention of LO was directed towards emergency management and mitigation. LO worked specifically towards mitigation of jobs lost. Despite the situation society had to carry on with “traditional” work even if a bit hampered. In 2020 the government put forth the CCS-strategy called “Langskip” which aim to develop the Norcem cement factory in Brevik. In line with previous acts LO and other actors continue working for investment in CCS-technology in relation to Fortum’s energy recovery facility in Klemetsrud, Oslo. The facility hopes to provide broader technological solutions to multiple industries and contribute to more CO₂-management. In the yearly report LO point out that CCS, circular economy and just transitions are the topics which has had the most attention.

LO has supported several research projects this period as well, but again only one stands out in a climate context; subsidies to a project mandated to investigate a full-scale CO₂ management in Norway. CCS, plastic, continuation of the roadmaps to sustainable society and the global sustainability goals are the issues that has commanded significant attention in the industry-political department of LO in 2018. LO also had a meeting with a representative from Forskningsrådet with the interest of promoting the relationship between science and research policy, the development of society and LOs importance in this relationship. LO had invested less in R&D in 2019 compared to previous years. One of the projects LO supported was a contribution to a science report on the UN sustainable goals.

During the 2017 LO-congress and the national election Fellesforbundet was able to participate in shaping policy in both cases. Fellesforbundet feel like their policy preferences was well integrated in the LO plan of action and statements.

The year of 2019 has also been characterized by an interest in wind power. LO notes that the public discussion has been driven by resistance toward onshore power, and excitement toward offshore wind. LO has provided a consultation note on both sides. The focus on offshore wind as an alternative represents a niche gaining momentum. LO express a continued interest in public procurement and are expecting to deliver a plan of action of green and innovative procurements by 2020. While LO has previously advocated for public procurement as an important tool in developing and managing active industry politics. However, 2019 is the first year where LO has specifically promoted public procurements as a means for future value-creation, employment and transitions related to climate and digitalization. Public procurement is a tool which allows for fast-tracking innovations by having government-led institutions set demands to what is “acceptable” procurements.

The plan of action-draft for the 2021-congress was criticized for its duality on climate change and petroleum policy. On one side, the draft embraces the updated EU climate target of 55% emission cuts by 2030. On the other, the draft writes that it should not:

“create uncertainty in regard to access to mineral extraction, forestry and long-term access to areas for searching for oil and gas resources and as such should pursue an active search-activity” (Hellesnes, 2020).

The leader of EL & IT, Jan Olav Andersen, says that EL & IT is going to propose changes to the draft. Alfheim, leader of Industri Energi, considers previous discussions conclusive and that emission cuts combined with CCS developments is possible. Despite previous bridgebuilding by Fagforbundet they do not support continued investments in O&G but prefer easing out of the industry while developing emerging energy industries (Hellesnes, 2020). Barsok of NTL claims impatience despite the positive developments within LO and call for more cooperation between unions along with political willpower in facilitating (Håkonsen, 2020).

Fagforbundets plan of action calls for increased investment in renewable energy and a reward system which promotes energy saving. They want to work for a downsizing of the O&G sector in accordance with the Paris-agreement targets. They work for a continued effort in conservation of the LoVeSe region along with other vulnerable areas on the NCS.

EL & ITs new 2019-2023 action plan emphasize the necessity decarbonizing the Norwegian economy and consider the knowledge-bank of former petroleum workers as key to the future economy. The union considers a full phase-out the only viable solution, but on the long-term. To compensate for the energy loss, they suggest a strong increase in renewables and add that carbon capture and storage technology should be a subject of investigation. Electrification is viewed as a good tool to induce a transition within the O&G and transport industry. EL & IT acknowledges that the activity on NCS will remain high for the foreseeable futures with the expectation that climate, environmental, health and safety standards remain at its highest. In the case of LoVeSe, EL & IT aim to work against risk assessments.

Despite the welfare and jobs, the industry has provided it is evident that the O&G sector at some point will decline because of resource scarcity or CO₂-price increase. EL & IT is concerned that Norway is going to lose its technological comparative advantage if oil investments are not diverted to R&D and incentives in the emerging industries. The knowledge

base found in O&G is convertible to offshore wind, hydropower or other renewable energy sources. Further suggesting that EL & IT are proclaimers of emerging energy technology.

The action plan of '17 reaffirmed LOs position on the petroleum sector, a long stable expansion of the sector and investment in CCS. Fellesforbundet were happy with the action plan suggesting that they also subscribe to the same vision. Fagforbundet on the other hand is opposed to continuing investment in the O&G sector. Fagforbundet suggests to rather focus on emerging industries and that they would prefer to work toward facilitating those. One of these suggestions is offshore wind. The focus on offshore wind in 2019 as an alternative represents a niche gaining momentum and that there are actors willing to invest in its development.

4.3.3 Political cooperation or realignment?

In the lead up to the 2017-congress Fagforbundet expressed desire to make sure that petroleum investments were a thing of the past by 2050, including investments that would lead to emissions after 2050. The leader of Fellesforbundet opposed this as there would be no way to know what would happen in 2050 and that the 2017-congress has a mandate for the current situation rather than what happens in 2050 (NTB, 2017). These statements emerge as a response to a union-commissioned report by Samfunnsøkonomisk analyse. The purpose of this report was to consider the costs of downsizing the O&G sector. The results showed 63'000 less jobs if both searching and opening of new fields were to stop while only 27'000 less jobs if only search activity stop. However, the lost jobs can be offset by increasing public investments and consumption (NTB, 2017). The EL & IT leader underscores that this report indicates that there are alternatives available which does not imply mass-unemployment and a social crisis. He further suggests that Norway might rather want to “win the race of the new jobs than be last man standing in O&G” (NTB, 2017).

The divide between the two groups was prominent in the 2017-congress and the two coalitions were once again pitted against each other when representatives of Industri Energi & Fellesforbundet threatened to leave LO if the congress formally decides to protect the LoVeSe region. This display of collective bargaining led to a compromise between the two groups which resulted in moving forward with a risk assessment of some of the more remote areas of Lofoten, but leaving the areas closes to the shoreline (Heyerdahl. 2018).

The 2019 national convention of the labor party Ap was marked by their decreasing political support with only 24.8% of the votes (local election). This is a decrease of 2.6 percentage points

compared to 2017 (parliamentary election) and a whopping 8.2 percentage points in 2015 (local election). This is important as it might have led to a change in discourse within the political party, and by extension the labor movement. This correlates with the sudden rise in media attention in 2019 even to the same month. During this convention one emerging topic that upset the labor movement: realignment in political constellations. The party-leader, Jonas Gahr Støre, declares from the lectern that climate issues is going to be the deciding factor in the next parliamentary election and that a political alliance with the green party is not out of the question.

In august 2017 the MDG leader Rasmus Hansson suggests stopping all forms of oil extraction and dismantle the industry within 15 years. This is something the leader of LO sharply goes against and considers it “unrealistic” and “sidelines MDG within politics”. This is supported by the EL & IT leader Thorsen which does not consider emission cuts unrealistic but dismantlement “absurd”. Thorsen fears that the oil industry would just be replaced by coal. Hans-Christian Gabrielsen, LO-leader, reminds us of that the industry is moving in the right direction with heavy cuts on in expenditure in the industry. He encourages the industry, and especially the employers, to not forget that a high level of activity and an unfortunate cost development led to the mistakes of 2009 and 2010. He considers it necessary to continue investments in the industry while we develop green alternatives (FriFagbevegelse, 2017).

Despite the stark contrast in vision between the labor movement and the green party, interests seem to converge. Fagforbundet is among the unions willing to consider an alliance between labor movements, the labor party (Ap) and the green party with the condition of being able to produce policies that are executable. The petroleum related unions are strongly opposed to cooperation between the two political parties. The leader of Industri Energi states that “it is not possible to support AP if the party initiate a national cooperation with MDG” (Karlsen & Gilbrant, 2019). The criticism by Industri Energi gathers strong supported by Fellesforbundet-leader Eggum claiming that it is an awful idea. The growing interest for MDG within LO also becomes evident in party politics. A news article by Aftenposten refer to a poll done by LO which maps what policy issues are the most important in the upcoming election, and which party is the most “suitable” to resolve the issue. According to this poll the climate issue score highest with 15% and MDG is considered by 41% of the voters to be the best candidate to solve it. Comparatively, only 11% consider Ap to be best suited (Spence, 2019).

The other group is represented by the KonKraft initiative, an industry forum organized by trade unions such as Fellesforbundet, and trade associations and industry firms. During trying times

for the O&G industry the KonKraft cooperation worked hard for preserving and even expand the sector. While maintaining an effort to retaining both investments and workers, the cooperation also investigated opportunities to expand competitiveness and value-creation on the NCS. These activities are clearly intended to carry on the petroleum sector and the institutional cooperation between labor organizations, employer associations and industry actors does reinforce the regime. There is little to no indication that there have been much internal (and publicly available) discussions on climate issues in the surveyed documents. Industri Energi does not offer any easy access to its documents and did not respond when I contacted them. They have expressed their concerns to media which has been the basis for their activity in this thesis. Both Industri Energi and Fellesforbundet share the opinion that the political infrastructure does not manage to compensate for the renewable energy markets which are still immature. In other words, the petroleum industry has to be a provider to the Norwegian society until markets are improved and workers in transition gets new guarantees. The two unions recognize CCS as a viable and important technology to develop. However, further investments into technology that enables and legitimize petroleum activity do create regime supporting policies.

4.4 Summary of analysis

This chapter summarize the general findings of the analysis and attempts to answer the first sub-question: *What are trade unions' preferences of a sustainable future? Are they changing?* An overview of positions is provided in appendix 4.

While LO serve as a strong actor within the Norwegian decision-making system they are at a standstill due to internal conflict. The conflict on the 2017 congress serves as an example of this. On one side is the radical “coalition” of unions such as NTL, EL & IT and Fagforbundet. These unions are mostly affiliated with employees in the public sector and white-collar work except for EL & IT which represent telecom, energy and electro, and IT workers. On the other is the unions heavily intertwined with petroleum work which are reluctant to abandon the industry and its workers. Industri Energi and Fellesforbundet are the largest unions that on the conservative side.

From the two coalitions it is possible to draw a distinction in how they operate. The transition-based coalition continuously attempt to promote the need for a transition. This is a clear indication of an intent to destabilize or disrupt the existing system where petroleum has a firm

grasp of the Norwegian economy. EL & IT being the one promoting the most urgent change. While they do generally promote electrification, they are not limiting the options towards which road to transition it is necessary to take. The “Broen til Fremtiden” conference is an example of how the actors are merging and facilitating cooperation between the labor movement and the environmentalist movement (Kivimaa et al., 2019b). The participants at this conference engage a wide variety of actors wanting to initiate a transition. The transition-unions do have some agency, but it is possibly EL & IT which carries the most as expanding electrification and other renewable industries they will most likely attract a large number of members. EL & IT also claim that there are solutions to the transition within their union. Apart from EL & IT, the other unions do not have much issue ownership, especially compared to Industri Energi and Fellesforbundet. By participating in the conference, they associate themselves more with the issue they want to influence possibly gaining more ownership in the long-term. However, at the moment they are outsiders to the niches attempting to develop and there is no sign of promoting just a singular niche and seem to be open to multiple niches. It is then natural to consider this coalition as a systemic intermediary, with the exception of EL & IT which might have some overlap between being a systemic and a niche intermediary.

While Fellesforbundet, Industri Energi and LO are not specifically mandated to intermeditate with the intention of transitions, they have been intermediating in the sector for a long time between workers, industry representatives and the government. Unlike an intermediary established to intermeditate towards a transition they already have an inherent mandate to protect their workers and members. However, the protecting workers is not the only facet that constitutes their mandate, namely that the workers they are mandated to protect does in fact work in petroleum. As I pointed out earlier, an industry sector might have niches and regimes within itself, but in this thesis, I consider the O&G sector as a singular, overarching regime. As the other unions have started to interact with what was Fellesforbundet and Industri Energi’s focus the two unions have started to take a more active role in defending the industry. This is evident in the different work done through the KonKraft cooperation. Under severe pressure from political movements and other trade unions they have focused on developing CCS technology. This is in line with their ambitions of maintaining and expanding the O&G sector and suggest a more incremental approach to transitions compared to establishing new industries while dismantling the O&G sector. However, neither Fellesforbundet, Industri Energi nor LO are actively seeking domestic change outside of CCS. They recognize the worth in other alternatives such as solar, but are generally not focused on them. This breaks with the

prerequisite of them acting as transition intermediaries, even though they resemble regime-based transition intermediaries (Kivimaa et al., 2019a). Possibly, this might give intermediaries a new dimension as the petroleum-unions is intermediating in a transition context, but want to maintain the status quo. Although, they are not denying climate change, they are opposed against climate change being a part of trade union's mandate. Suggestively, they might represent a regime-intermediary who primarily attempt to use intermediary activity to resist transitions.

5. Discussion

5.1 What effects are influencing trade unions' preference to transition?

All three crises might have had a consolidatory effect on the unions which exemplify why trade unions are different than other intermediaries. Namely, their primary responsibility is to protect the interests of their members (Heyerdahl, 2013). Despite volatile market behavior the petroleum-unions kept the position to maintain or even expand the O&G sector. The volatility in the labor market might indirectly have led to a volatile union power because of how tied unions are to the workers. At least compared to other transition intermediaries that are mandated to work solely on transitions. Ensuring the future is part of protecting workers interests and some unions have argued there is no point in trying to protect the petroleum workers of 2030 or 2050 if there are none left by 2025. The crises created a sense of urgency which might have pushed unions to be more conservative in this period than they otherwise would if there had been no crisis. One reason for this is the immaturity of the other energy technologies as Fellesforbundet points out. If the technology had been more developed during crises it could be more likely that we would have seen politicians and industry leaders initiate processes to develop alternative energy sources. Simply put, the immaturity of the technology might have led to the windows of opportunity the crises provided.

Another reason to why unions banded together could be due to reinforcing processes from political or institutional pressure (Roberts & Geels, 2019). Through participation in KonKraft and Ap there might be forces that push strongly towards maintaining the petroleum industry, suggesting a broader lock-in issue. This is perhaps more obvious in the KonKraft situation where LO is on the board with Industri Energi and Fellesforbundet and other industry actors with massive interest in a continued petroleum activity. While representation is an important union tactic for instigating political change, they are also susceptible for being influenced themselves. This is part of the challenge by unions using functional representation as a means to gather political power (Streeck & Hassel, 2003). This does not have to be a conscious effort of attempting to convince each other in a competitive sense, but even with the intention of cooperating with the aim of finding a mutual solution could taint the organization. Alternatively, LO might throw out climate policies as the landscape pressures from the crises creates shared issues between the labor movement and the petroleum actors. The narrative change in EL & ITs position on petroleum extraction supports this perspective.

Pressure from organizations outside of Norway, such as the EU Commission, does not necessarily consider smaller communities which LO and other unions are adamant should be protected. In fact, unions have actively been trying to expand the O&G sector to sustain jobs and communities “all across” Norway. A deal like the European Green Deal force smaller communities to change, and quite possibly rob them of their primary source of income/jobs. The disassociation of worker’s livelihood can also damage people’s identity creating problems other than unemployment. Suggestively, it might lead to a decrease in the perception of union effectiveness further exacerbating unions declining membership numbers. Additionally, supernational agreements such as the European Green deal could disenfranchise union power. This highlights some of the paradoxes within the labor movement. The lack of spatial accountability in sustainable transitions is one of the most important points within the just transition movement. As Mette Nord points out, there are differences in the climate conversation depending on where you work (Bråthen, 2016). Municipalities experiences with climate change varies depending on what the municipalities have as their source of income, expertise and more. This might be a strong indication to why unions and white-collar workers that traditionally does not have strong ties to the petroleum industry have started to involve themselves.

5.2 How are trade unions attempting to change the labor movement in relation to transitions?

If LO and the labor movement decides to pick up on the offer from MDG they could get positions within the political party structure. If MDG aligns itself successfully with the labor movement it would put LOs relationship with Ap under pressure. LO demonstrating that they have offers elsewhere, albeit not nearly as strong as their alliance with Ap, it could give LO more leverage in policy-discussions. Consequently, in the next period Ap responded positively to a possible alliance between labor and climate movements. This signify aligning interests which might be necessary to take the transition from discussion to action.

While a strong functional representation within Ap makes it possible for the labor movement to influence the party politics directly it does not exclude Ap from influencing the labor movement. This might be especially true for LO as they have the strongest link to Ap. Considering the longevity of this link it is possible that their interests have become increasingly intertwined as they come to agreements over long periods of negotiation regardless if it has

been conscious negotiations or not. This “echo chamber” like effect might serve as a reinforcing process for actors tied to the petroleum industry leading to a lock-in.

As the timeline of the media analysis shows there was little open discussion of climate change in a domestic context.³ It wasn’t until 2013 transitions started to become a discussion topic within the unions, and it was LO that was the recurring figure in media. The sharp rise in Fellesforbundet’s media activity came in response to the alliance proposal between the labor and green movement. Fellesforbundet threatened to leave LO if they accepted the proposal. By using such an extreme measure, they managed to leverage the result in their favor. The absence of climate issues in official documents and petroleum unions in media might suggest that they are reluctant to discuss it, and it is only necessary when prompted by potential realignments such as the MDG proposal. Instead, they leave the defense of petroleum activity to LO.

Traditionally LO has followed the position of the unions with the most issue ownership (Houeland et al, 2020). This tradition is disrupted by the unions attempting to influence LOs position on the O&G sector. It leads to a question of the accessibility to deliberation forums. On the one hand, the LO-congress invites and maintain an open forum for discussion on its position. On the other, if these suggestions are held as a formality it is hard to argue that the forum is open. Assuming that contention is high enough that each party’s proposition is polarized as it gets more contentious. If the decision on LOs position is determined by unions such as Industri Energi and Fellesforbundet exclusively, would not the KonKraft-cooperation not be an indirect participant in the LO-policy formulation?

As the analysis has shown, the trade unions wanting to change the labor movement’s biggest actor, LO, have been working towards promoting alternatives and delegitimize the current regime. This has been done through establishing networks such as the Broen til Fremtiden-conference. Looking back at the three conditions for loosening lock-ins, the labor movement that want to focus on developing alternative energy sources are supporting different niches with offshore wind as a recent favorite (Roberts & Geels, 2019). The growing interest in climate issues in LO is clear with representatives stating that LO is ready for change and statements

³ There has been discussion on climate change in the international labor movement since at least 2000. Interestingly enough, this seemingly has taken a long time to translate to domestic unions in Norway. LO has been an active participant in the international discussions, but I expect this to be the result of wanting to merge just transition principles to international agreements on climate change. A final consideration is that Norway is a special case as it is part of the EES and not a “full” participant in EU, but still is one of the largest suppliers of O&G leading to a dichotomy. Compared to smaller unions with less international presence, LO is in international issues able to take a harder towards carbon emissions without directly having to confront workers about it, in line with the broader just transition perspective. However, this is outside the scope of this assignment.

documenting an evolving debate. The broader labor movement seems intent to push a climate issue agenda. All the while unionized industrial workers are in decline and the workers related to Fellesforbundet and Industri Energi lessen. The question becomes then, how long the petroleum-affiliated unions are able to maintain a monopoly on issue ownership. If LO defects from the petroleum-based policy regime a huge player will have switched sides putting pressure on policymakers. The postponed conference of 2021 might signal further political defection in the labor movement, and possibly LO defecting?

The thesis has mostly been focusing on how trade unions attempt to change the labor organization from the bottom-up. Not much has been said for the potentiality of a top-down perspective. From the analysis that has been provided it is clear that the unions attempting to instigate change typically has been from unions that want a future based on less petroleum activity. That being said, it might prove valuable to consider the what a top-down perspective could offer. As has been demonstrated, unions such as Fagforbundet and EL & IT have been trying to merge and develop networks through the Broen til Fremtiden-conference. The petroleum-related unions, excluding LO in this instance, have been more absent in the public debate. They have rather performed intermediary activities with the intention of managing the discontent of its members by slating the government for neglecting the workers during the crises. Instead, they focused on the other industry actors in KonKraft. There has been no obvious power-exchange between the Conservative government and the unions. This might be due to the Conservative Party entering government in 2013 thus rendering the unions superfluous (in the Conservative Party's view) to the decision-making process. Ap, and thereby LO, losing the election might also cause LO to have to redirect their efforts from climate or transition issues to fighting for redistribution of wealth. However, in these aspects the thesis is somewhat lacking, but could be a valuable contribution to understanding union intermediation dynamics.

At this point in the thesis, I have established that there have been crises putting pressure on policy regimes and coalitions have emerged. Each of these developments allow for opportunities of major policy change (Roberts & Geels, 2019). As the analysis and discussion of the crises shows, there has been little indication that policymakers have taken advantage of the situation during or after the crises. In the case of LO, it even gave indications of consolidation rather than a push for change. However, the two coalitions vying for issue and policy ownership in LO creates an opportunity for change from a bottom-up perspective. Working to shift public discussion, highlight the deficiencies of petroleum energy sources and

promote the potential benefits of participating in the early development of alternative energy sources.

5.3 Broader reflections

Common for most unions is the interest given to CCS-technology compared to other technological solutions. CCS-technology mitigates consequences of CO₂ emissions and does lead to new jobs for workers disenfranchised by phasing out the petroleum industry. However, the CCS policy-pathway allow for continued investments in petroleum. This might be a two-folded issue due to the prolonging of petroleum resources. Firstly, it allows for more emissions through traditional petroleum activity. Secondly, the policy itself puts the policy pathway in a that support the current regime, rendering the policy to create a larger policy infrastructure. These processes contribute to strengthening lock-in effects (Roberts & Geels, 2019).

EL & ITs confidence in the capabilities of the industry they represent indicates that (previous) niche-technology is maturing and gaining momentum. A shift in union's issue salience can be interpreted as increased political leverage *if* unions decide to exert political power through available means. As is seen with EL & IT there is a slight back-slide in their sense of urgency but maintain their position on the need and direction of transitions.

Declining member number shares might suggest that (industrial) trade unions experience some sort of desperation or temporality (Orskaug, 2020, p. 5). Unions worrying about possibly being phased-out can react in two ways, promoting transitioning to renew itself or withstand the oncoming pressure. Based on the analysis and discussion in this thesis it is fair to say that petroleum-related unions focus on maintaining the status quo. One reason for this is that they want to protect its members jobs. Another is that the institution itself wants to protect itself. Few, if any, organizations performing intermediary functions plan for its own dismantlement. Considering that some of these trade unions have a long history it is difficult to not assume the representatives and union workers want to leave their organization. While the organization is working for and representing the "boots on the ground" it could be a fallacy to ignore the identity-shaping aspect of organizational life. As such, it might prove beneficial for future studies to conduct organization specific research to understand its members and employees' attitudes towards transitioning, especially within "non-sustainable" trade unions.

Looking at LOs participation in the destabilization and aid in transitioning the coal mines at Svalbard it becomes evident that LO isn't averse to participate in transitions and destabilizing

processes. However, coal is widely regarded as one of the “dirtiest” energy sources, and the comparatively small size of Svalbard put next to the broader Norwegian society. But to the workers of Svalbard, these are important questions, and it provides a glimpse of the transition discussion. The question then is if this process is possible to recreate within the petroleum industry.

6. Conclusion

The thesis started out with the research question “*Are trade unions reacting to the increasing urgency of climate action, and if they are why and how do they react?*”, divided into 3 sub-questions. The first question asked what trade unions considered to be the future and if they were changing. In order to answer this question, I conducted a document analysis of the trade unions official papers, and a media content analysis. The document analysis was done to trace changes in policy preferences. The media analysis was done because of three reasons. Firstly, the media analysis allowed me to collect additional data in the periods where it was difficult to retrieve official documents. Secondly, it allowed me to verify the policy preferences from non-official sources such as newspapers. Thirdly, it provides information and opinions that can assist in linking events together. From the analysis it became evident that there are two different visions of what the future should involve from the perspective of trade unions. One vision worked for a faster transition based on replacing petroleum activity with renewable energy sources such as wind power. This group of unions worked towards this was through public statements against continued extraction, calls for urgency and establishment of a conference focusing on climate and labor bridgebuilding. The other vision focused on maintaining and expanding the current petroleum activity investment. This was based on discrediting the urgency and promoting the development of carbon capture and storage technology instead. LO, the main actor in the labor movement, has continued to follow its principles of taking the same position as the unions with the highest issue ownership. In this thesis they have been represented by Fellesforbundet and Industri Energi.

The second sub-question posed the question of what effects were influencing the unions’ ambition to transition. This question was examined in chapter 5 by using the multi-level perspective framework and political defection various exogenous and defection events were investigated. The exogenous pressures came mainly from 4 different events in addition to the overarching climate change developments. Three of the four events were the aftermath of the financial crisis in ’08, the oil crisis of ’14 and the COVID-19 pandemic. The last event that has been discussed is the change of government in 2013. This was a change from the labor party Ap to the Conservative Party. The results of the analysis and discussion suggest that the crisis could have created a consolidation of union preferences. This was due to the workers of today getting laid off without any phase-out. A second perspective suggests that regime actors outside of the petroleum-affiliated unions and LO were able to influence their policy through the functional representative strategy. A third pressure came from international agreements such

as the European Green Deal which detracts from the union power as it detracts from union power through new legislation and circumvent the national decision-making system.

The third sub-question asks how unions attempt to change the labor movement in a transition context. To answer this question, I used LO as a representative for the general labor movement as they comprise for half of the organized workforce and are as such the supreme actor in the labor movement. Here the political defection concept was used to explain how the transition-associated unions work may be interpreted as political defection in action. It becomes evident that there are lock-in processes holding LOs policy preference development in check. One example is the institutional arrangements they are part of, highlighted by LOs interaction with KonKraft. A second example is how the crises has provided overlapping and shared problems for the petroleum-affiliated unions and LO. The third example is found in the increasing focus on CCS-technology which necessitate continued petroleum activity to be worth pursuing.

However, there are also indications of processes easing the lock-in as well such as EL & ITs eagerness to invest in other solutions. The mounting political pressure from MDG and recently Ap also suggests there has been an increase in how much influence or pressure has been put on policymakers, which in this case would be the policymakers of LO. There has been little evidence of actual destabilization from LOs side so far, but this might be what the next battle is going to be about if LO are to participate in accelerating the transition.

In conclusion, the thesis demonstrates that there are existing reinforcing processes that want to maintain LOs policy preferences, but within LO there are union-coalitions pushing for taking a stance against continued petroleum activity. The question for the future will then be how LO will cope with the sustained pressure from Ap, its close political ally, MDG an emerging political party and member-unions competing for issue ownership?

7. Appendixes

Appendix 1. Codebook

Guiding question: *What creates pressure to change?*

Code	Description
Landscape pressure	Slow evolving movements that generate pressure and facilitates change. Example: climate change, declining union density
Crisis-driven pattern	Developments related to the concept of crises generating incentives for policymakers to change policies. Top-down change.
Coalition-driven	Developments related to the concept that suggest pressure is exerted from a niche-group that challenge a regime-group. This can be through increased economic returns, technological inefficiencies or other. Bottom-up change.

Guiding questions: *What does trade unions envision for the future? What is considered the solution?*

Code	Description
Electrification	Statements that propose electrification of existing systems as important. (Emerging topic)
Energy efficiency	Statements that propose Energy Efficiency as important. (Emerging topic)
CCS	Statements that propose CCS as an important alternative. (Emerging topic)
Continued petroleum industry	Activities or statements that imply the union wants to continue petroleum activity until 2050.
Petro-industry phase out long term	Statements claiming that unions want to continue petroleum, but that phase out should take place after 2030.
Immediate phase out petroleum industry	Statements from unions that want to begin a phase out process as soon as possible (before 2030).

Guiding question: *How does trade unions work towards their envisioned goals?*

Code	Description
Network merging	Activities or statements that exemplify connecting actors and networks on different levels or domains.
Network facilitation	Activities or statements that demonstrate how trade unions manage and facilitate relationships between actors.
Vision articulation	Activities or statements that formulate or articulate visions, ambitions or demands for research or funding for innovations.
Promoting explicit transition agenda	Activities or statements that indicate intermediaries promoting an explicit transition agenda.
R&D	Investments, participation or promotion of research on energy technology. Example: investments in CCS.
Entrenching activities	Activities that reinforce or maintain the current regime. Example: developing onshore gas-infrastructure.

Destabilizing
activities

Activities that destabilize the current regime.
Example: increasing the carbon-tax".

Privileged links

Unions establishes connection or links with political parties as a means to gain political influence.
Example: Trade union representatives having high-ranking positions within political party.

End of Appendix 1.

Appendix 2. Table of LOs annual reports

Annual Reports	
2009	2015
2010	2016
2011	2017
2012	2018
2013	2019
2014	2020

Anchor text:

2009 - https://www.arbark.no/eldok/LO2009_2.pdf

2010 - https://www.arbark.no/eldok/LO2010_1.pdf

2011- https://www.arbark.no/eldok/LO2011_1.pdf

2012 - https://www.arbark.no/eldok/LO2012_2.pdf

2013 - https://www.arbark.no/eldok/LO2013_53.pdf

2014 - https://www.arbark.no/eldok/LO2013_54.pdf

2015 - https://www.arbark.no/eldok/LO2013_55.pdf

2016 - https://www.arbark.no/eldok/LO2017_1.pdf

2017 - https://www.arbark.no/eldok/LO2017_17.pdf

2018 - https://www.arbark.no/eldok/LO2018_1.pdf

2019 - <https://www.lo.no/contentassets/fc8ee6a4a26d47cba61dbbcc7c86c140/los-beretning-2019-nett.pdf>

2020 - <https://www.lo.no/contentassets/fc8ee6a4a26d47cba61dbbcc7c86c140/los-beretning-2020-nett.pdf>

End of Appendix 2.

Appendix 3. Table of action plans

Plan of Actions	2009-2013	2013-2017	2017-2021	Note: Anchor text below
LO	Not available	2013-2017	2017-2021	
EL & IT Forb.	2011-2015	2015-2019	2019-2023	
Fagforbundet	Not available	2013-2017	2017-2021	
Fellesforbundet	2011-2015	2015-2018	Postponed due to covid.	Did not have PoA only periodic reviews.

Anchor Text:

LO 2013-2017 - <https://docplayer.me/2320890-Los-handlingsprogram-2013-2017.html>

LO 2017-2021 -

https://www.lo.no/contentassets/b4855a321c3f467fa185f953ed4aa454/los_handlingsprogram_2017-2021-1.pdf

EL & IT 2011-2015 – <https://www.yumpu.com/no/document/view/4086183/handbok-for-tillitsvalgte-2011-2015-el-og-it-forbundet>

EL & IT 2015-2019 – <https://fagforeninga.no/wp-content/uploads/2018/04/EL-og-IT-Vedtekter-2015-2019.pdf>

EL & IT 2019-2023 - <https://elogit.no/forbundet-mener/handlingsprogram-2019-2023>

Fagforbundet 2013-2017 -

https://medlem.fagforbundet.no/file/cc747736bed822559a6b2e356899467b/Prinsipp_Handl-14-17-iPad.pdf

Fagforbundet 2017-2021 – <https://ep-static.fagforbundet.no/file.php?id=37805>

Fellesforbundet 2011-2015 – <https://www.fellesforbundet.no/globalassets/dokumenter/om-fellesforbundet/landsmotet-2015/hefte-3---rapport-om-arbeidet-i-landsmoteperioden-2011---2014.pdf>

Fellesforbundet 2015-2018 - <https://www.fellesforbundet.no/globalassets/dokumenter/om-fellesforbundet/landsmotet-2019/hefte-3---rapport-om-arbeidet-i-landsmoteperioden-2015-2018.pdf>

End of Appendix 3.

Appendix 4. Tables of analysis

Table 1: summary of “political context” analysis. Guiding question: What creates pressure to change?

Political Context	2009 - 2013	2013 - 2017	2017 - 2021
LO	LO respond to pressure from financial crisis by trying to save the jobs of O&G workers	LO respond to pressure from oil crisis by trying to save the jobs of O&G workers	Focus on mitigation due to COVID-19.
Fellesforbundet	Konkraft participation to mitigate the effects of the financial crisis.	Disappointed by job losses as it could have been avoided by investing in R&D and maintenance.	Unwillingness to change. Impossible to know what the future holds.
Fagforbundet	No data	No data	Participated with Fellesforbundet and other unions to get approval of a tax alleviation in for companies struggling during COVID.
EL & IT forbundet	No data	No data	No data

Table 2: summary of “Vision for the future” analysis. Guiding questions: What does trade unions envision for the future? What is considered the solution?

Vision for the future	2009 - 2013	2013 - 2017	2017 - 2021
LO	Maintains a strong position on O&G activity. Wants risk assessment of LoVeSe. Too expensive to cut emissions.	Maintain position on O&G and LoVeSe. Leaving O&G is out of the question.	Maintain position on O&G and LoVeSe. CCS is necessary.
Fellesforbundet	Konkraft participation to mitigate the effects of the financial crisis.	Working toward CCS. Cooperation with KonKraft and policy development.	Happy that LOs plan of action align with Fellesforbundets interests.
Fagforbundet	Grand challenge, but it is possible to manage resources and the future. Want to include climate issues to the political struggle.	Focus on developing renewable energy technology. Protect LoVeSe. CCS are necessary.	Wants to phase out and replace the O&G industry, and conserve the LoVeSe-region.
EL & IT forbundet	EL & IT adopt a strong position on a quick transition.	Wants a “realistic” approach to electrification of the NCS. Considers itself as representative of an industry with alternative solutions.	Full phase-out, but long term. Avoid risk assessment of LoVeSe. CCS should be researched.

Table 3: summary of “Cooperation or divide” analysis. Guiding questions: How does trade unions work towards their envisioned goals? What has changed? What is the consequence?

Cooperation or Realignment?	2009 - 2013	2013 - 2017	2017 - 2021
LO	Participation in KonKraft meetings. Wants LoVeSe-activity.	LO participates in facilitating dismantlement of coal mines on Svalbard.	Suffers from conflict between the opposing coalitions. Pressured by political parties and the non-petroleum unions, and the petroleum related unions.
Fellesforbundet	KonKraft meetings regarding LoVeSe and recruitment for O&G.	KonKraft works toward further expansion of O&G. Managed to get important points in LOs plan of action.	Maintains that the future does not necessarily exclude O&G sector. Maintaining Norwegian petroleum is a “cleaner” option than leaving it to other countries.
Fagforbundet	No data.	Co-establishes “Broen til Fremtiden”. Claims LO is ready for a more offensive climate policy. Wants to unify labor movement.	Declines intention to continue the O&G sector past 2050. Willing to build new alliances between labor and environmental organizations.
EL & IT forbundet	No data.	Participates in establishing “BtF”. Supports a more offensive climate policy.	Claims that there are options worth pursuing in renewables, and Norwegian interest should be to win the technology race in alternative energy forms.

End of appendix 4.

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