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The Norwegian Energy Crisis of 2021-22

A preliminary post-mortem

Master's thesis in POL3900 Masteroppgave i statsvitenskap

Supervisor: Jonathon Moses

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Abstract

This paper examines what led up to and sparked the 2021-22 Norwegian energy crisis and how the neo-liberal framework of the energy sector compounded the problem, as well as the resulting decline in legitimacy for the government. The paper looks at how liberalism and mercantilism have been competing theories for governance of the Norwegian energy sector over time. By examining how neo-liberalism replaced neo-mercantilism as the dominant ideology of governance. This looks at the decline in public control caused by neo-liberal policies, through the lens of the transfer of power to the European Union, increase in legalism, the decline in democratic control resulting in a reduction in legitimacy. The findings of this paper contradict mainstream narratives blaming the energy crisis on lack of rain and the Russian invasion of Ukraine. This paper found that a neo-liberal governed energy sector, created the crisis by too high levels of export, in a period of too low levels of inputs, in a quest for profits. The government's inability to rein in the energy sector, caused by their abandonment of control to the market and European Union, exacerbated the problem and have led to a decline in legitimacy.

Sammendrag

Denne artikkelen undersøker hva som førte til og utløste den norske energikrisen 2021-22 og hvordan det nyliberale rammeverket for energisektoren forsterket problemet, samt den resulterende nedgangen i legitimitet for regjeringen. Oppgaven ser på hvordan liberalisme og merkantilisme har vært konkurrerende teorier for styring av norsk energisektor over tid. Ved å undersøke hvordan nyliberalismen erstattet nymerkantilismen som den dominerende styringsideologien. Dette ser på nedgangen i offentlig kontroll, forårsaket av nyliberalistisk politikk, ved overføring av makt til EU, økning i legalisme, nedgang i demokratisk kontroll, som resulterer i en reduksjon i legitimitet. Funnene i denne teksten bestrider det rådende narrative, som skylder energikrisen på mangel av regn og den russiske invasjonen av Ukraina. Denne teksten fant at en nyliberalt styrt energisektor skapte krisen ved for høye eksport nivåer, i en periode med for lave nivåer av regn, i en søken etter profitt. Regjeringens manglende evne til å regulere energisektoren, forårsaket av deres oppgivelse av kontroll til markedet og EU, forverret problemet og har ført til en nedgang i deres legitimitet.

Acknowledgements

I would like to thank my thesis advisor Jonathon Moses for his patience and insightful feedback, without his input this paper would not have been written.

I also wish to thank my parents for everything, but especially watching my daughter, whilst I wrote this thesis.

Stavanger May 2023

Thomas Svendsen Silseth

Introduction

How was the Norwegian “energy crisis “of 2021 and 2022 a result of the declining public control of Norwegian Energy resources. Why did almost every talking head interviewed on the subject, do their level best to pretend this was not market failure? And why are we only discussing the short-term causes of the crisis, and not the structural deficiencies that caused them? This paper intends to answer how the energy crisis is the last chapter in a struggle between the competing ideologies of mercantilism and liberalism. How by neo-liberalism provided the framework necessary for this energy crisis of 2021-22. We will examine from a historical and theoretical perspective how declining public control of Norwegian Energy resources manufactured and compounded the energy crisis of 2021-22, as well as how this has affected the legitimacy of the government a result.

In 2020, the average spot price of energy on the Nordic energy market broker Nord Pool was 10,93 Euros (Eur) per megawatt hour (MWh). At the time, it was the lowest price since the inception of Nord Pool in 2008. In 2021, the average price had increased to 62,31 Eur/MWh, the highest recorded in Nord Pool history at that point. In 2022 the average system price had increased to an unfathomable 135,86 Eur/MWh on the Nord Pool exchange. (Nord Pool. System price)¹ There was immediately talk of an energy crisis. Hundreds of articles in the leading Norwegian newspapers proclaimed an energy crisis to be in effect and by late spring and early summer 2022 there was even talk of rationing electricity in the major news outlets; the national broadcaster NRK (Holm & Torstveit, 2022), the largest broadsheet newspaper *Aftenposten* (Valderhaug & Hager Thoresen, 2022), and the largest tabloid *Verdens Gang* (VG) (Aslaksen, 2022)

The Norwegian Water Resources and Energy Directorate felt compelled to inquire from Statnet (Norwegian state-owned enterprise responsible for owning, operating and constructing the stem power grid in Norway) what policy options and alternatives could be employed in a crisis and referred obliquely to rationing. (Nordberg & Paulen, 2022) By the end of July, the minister in charge of Oil and energy published a statement on the crisis and trying to alleviate fears of

¹ All Norwegian translations in this text are my own, any errors are mine alone.

rationing. (Aasland, 2022) In the statement a multitude of reasons for this calamity was mentioned, gas and energy prices in Europe due to the war in Ukraine, lack of rain, and less snow melting. The minister did mention exports of energy, and price differences in the different regions of Norway. As well as having informed the producers in energy that the government expected them to retain enough water to produce sufficiently come winter. In the minister's statement he did not fully explain how this energy crisis was fabricated and promulgated and though truthful in its content, its sin was omission.

In this thesis I will demonstrate that the core reason for this crisis can be traced back to declining public control of energy resources, motivated by neo-liberalism. This was brought about by treating energy not as a public utility and competitive advantage, but as a market commodity. By integrating Norwegian power production, with the European markets, the Norwegian government has abandoned its industrial policy and relinquished the levers of control it possessed to regulate and alleviate the situation.

By abandoning state control and an active industrial policy, the Norwegian government handed over control of its energy resources to market forces. By removing government control and rewriting regulations, the Norwegian government intended for its energy regulation to be more market controlled, in line with the corresponding trends in European Union regulation. I intend to show that the current situation is not a proverbial act of God-situation, but the natural result of state policy or lack thereof.

The combination of abandonment of an industrial policy, the abandonment of public control over energy, to market forces, by treating energy as a commodity, instead of a public utility and the abandonment of state management, in favour of European Union mechanisms of control, has created the perfect framework for a manufactured crisis.

Norway is self-sufficient in energy and a net energy exporter. A situation where rationing is publicly discussed on a departmental and even ministerial level, is preposterous. Norway is not without energy resources. According to the CIA World factbook, Norway was in 2020 the 4th

largest exporter of natural gas, and the 7th largest exporter of crude oil, measured in dollars. (CIA, 2022).

There has been a lot of writing about the causes of this crisis, as cited in the papers above. There has been a lot of research done on how the energy sector has been transformed into a neo-liberal construct by authors such as Thue (1992) (1996) and from a broader welfare state perspective by Wahl (2009) as well as the broader implications for government and society by Østerud (2003). Egeberg and Trondal had examined how legalism was being employed to make the Norwegian energy sector subservient to the European Union. (2011) (2014). However, when this thesis was started, there was only a single rapport written by Lekve and Helle (2022), published by DeFacto that tried to explain what caused the crisis and how to possibly remedy the situation. At the time it received a lot of critique, but mostly from those with a vested interest in the status quo.

This paper looks further than Lekve and Helle's examination of the causes of the crisis and attempts to explain the long term theoretical and historical trends that enabled the crisis, what compounded the crisis and what this crisis has done to the legitimacy of the government.

The idea of this paper came into being when the minister for oil and energy Terje Aasland published a press release to alleviate fears of rationing. Together with the DeFacto report on the energy cables, they are the basis for our discussions of the sparks that set off the crisis, but also how this manufactured crisis has led to a decline in the government's popularity and legitimacy.

This crisis was manufactured by a combination of factors. We will examine the obvious causes, such as European demand increasing prices in Norway and lack of precipitation, which were the most cited causes by all the talking heads on television. But we cannot understand this problem without a thorough analysis of the historical and theoretical framework that laid the foundations for the modern Norwegian energy sector. A nation with such a degree of abundance in energy does not require rationing, unless scarcity has been artificially created. By looking at

the underlying structural framework, we can find out how that came to be, and put the myth of scarcity to rest.

To understand this crisis, I will analyse the rise and fall of competing theories of industrial policy in the Norwegian energy system, and by implication Norwegian industry. By look at the historical change of governance-theory from mercantilism to classical liberalism, though to neo-mercantilism and finally to neo-liberalism, I intend to show that the crisis was caused by the implementation of neo-liberal policies in how the energy sector was governed. I intend to show how this is the root cause of the structural weakness, that provided the necessary foundation for the Norwegian energy crisis of 2021-22 to have such a grave impact.

Secondly, we are going to have a historical look at how these theories informed the governance of the energy sector and the industrial policies of Norway. From the first panic laws of 1909, their function in praxis with a real-world example of Odda Smelteverk. How Odda fared better in the crisis of the 1920's than can be said for the current crisis, because of the mercantilist polices. We will examine how the government abandoned control in favour of market mechanisms and how this problem was compounded by the European Union. We are going to examine how neo-liberalism by implementing market mechanisms and safeguarding them from popular will and government action, is not only hurting the people of Norway, but undermining the legitimacy of the government.

Theoretical perspectives

Industrial policy in the mercantilist tradition

To understand the Norwegian energy crisis of 2021-22, we need to look at the theoretical basis of industrial policy as well the framework that governs energy resources and distribution in Norway over time. This section will look at the theoretical frameworks that historically have competed for dominance in how domestic industry is to be governed. This will provide us with an understanding of the framework necessary for the manufacture of the 2021-22 energy crisis.

State industrial policy can trace its roots as far back as ancient Egypt. David Warburton in his article *Before the IMF: The economic implications of unintentional structural adjustment in ancient Egypt* (2007), illustrated how Keynesian economic theory could be employed in understanding how state agrarian policy, used surplus to create a state industrial policy by regulating markets, trade and demand stimulus, thereby creating monuments known to every schoolchild:

“The Crown also required workers for major construction projects. According to the Egyptian *Weltanschauung* of the New Kingdom, Pharaoh was responsible for the construction of major divine temples. In return for temples, gods would sanctify the ruler’s legitimacy. The temples had their own income for daily activities, but the Pharaoh kept responsibility for construction and quarrying. Such projects in the Nile Valley could have been accomplished by corvée labour, but quarrying expeditions in the deserts required rations.”(2000:71)

By exploiting the natural resources provided by the Nile River, the state was able to transform a successful agrarian policy into what became an industrial policy. Without going into all the details of Ancient Egyptian industrial policy, this example illustrates that state industrial policy is nothing new and has a long history to draw from. By controlling supply, the state was able to exert a disproportionate control of the economy, thus increasing its relative strength compared to its neighbours, and create amongst other things, monuments still seen today.

If we jump forward and examine the roots of modern state industrial policy, they are a product of the mercantilist theory of economics. Mercantilism in its simplest form, is the state policy of building the economy larger and less dependent on foreign inputs. An example of this is the mercantile policies of Louis the 14th's minister of finance Jean Baptiste Colbert.

“The goal of this policy was to provide gold and funds into the state treasury, [...] However, according to the mercantile doctrine, the flow of gold to the treasury should not only come from outside, but also to a significant extent from the country's own industry. One of Colbert's major goals was therefore to develop industry, so that France could become a self-sufficient country.”(Grimberg 1987:119&121)

This policy was intended to make the nation state of France and by extension its monarch more powerful. Or as LaHaye succinctly puts it: “mercantilism is economic nationalism for the purpose of building a wealthy and powerful state.” (Henderson & LaHaye, 2008) Though without going into the forces that drove mercantilist policies forward, in the French example cited by LaHaye the policies were characterized by the following key points:

“Domestically, governments would provide capital to new industries, exempt new industries from guild rules and taxes, establish monopolies over local and colonial markets, and grant titles and pensions to successful producers. In trade policy the government assisted local industry by imposing tariffs, quotas, and prohibitions on imports of goods that competed with local manufacturers. Governments also prohibited the export of tools and capital equipment and the emigration of skilled labor [...]. At the same time, diplomats encouraged foreign manufacturers to move to the diplomats' own countries.” (Ibid)

Mercantilist theory has been described as a zero-sum game view of the economy. (Ekelund & Tollison, 1981:9) There are inherent problems with considering most wealth to be only measured in bullion, because it ipso facto limits wealth to a zero sum, if state A has more gold, correspondingly state B has less gold. This, however, is a gross simplification of the principles involved. But the point for our purposes is to understand the idea of economic policy, be they agrarian, industrial or trade, have a long intellectual tradition. If the *raison d'etre* of the state of

France was to support and aggrandize the King of France. Therefore, having a coherent plan for how to muster and harness the resources of the state in furtherance of this goal, is not only wise, but logical. Just as the ancient Egyptians transformed agrarian policy, into an industrial policy, in furtherance of their goals as pointed to by Warburton. The same principles apply, when Colbert attempts to transform the state finances of France from a late medieval feudal economy, into a proto-industrial powerhouse. To borrow a neo-Marxist analysis of the fact, it can be considered industrialization, before industrialization. Summarized as “the development of rural regions in which a large part of the population lives entirely or to a considerable extent from industrial mass production for inter-regional and international markets” (Kriedte & et all 1981: 6-9) Though a more fitting characteristic name might be the use of “proto-factory” as suggested by Coleman. (1983:448)

The relevance for our purposes is not to get into the debate pertaining to the phrases, but the description of a process of guided development. The most important point here is the idea that the state can guide the economy in furtherance of economic goals. The motivation of the state may be motivated by the lust for personal aggrandizement as Grimberg notes in in his book on Louie the 14th, or some more noble goal. The point of the mercantilist theory is to show that the state does have tools to employ if it wishes to further economic growth and strengthen its finances. Having domestic industry, funds and disposable wealth, secured the monarch and state. Therefore, laying the groundwork for the state to involve itself in economic policy, to further its own interest, regardless of goal, is relevant for our case, because it illustrates that this is a pattern of behaviour ingrained in most modern states, since the birth of the Westphalian system.

A further point regarding mercantilist theory, is that the king is the state, as Louie the 14th is claimed to have said. And any promotion of the kings’ finances, is the increase of the power of the state, you have the framework for a state interventionist policy in favour of its primary interest. In the original sense, the monarchs power. However, in future, the ideas of the divine right of kings will be replaced with the ideas of popular sovereignty, with the ruler acting on behalf of the people, to their betterment. (Bendix, 1983:5-18) We will return to this perspective further on in the text, in the chapter on legitimacy.

The liberalist critique of mercantilism

Having examined the thesis of mercantilism, its connection to the state, as an economic theory and policy to improve the states. We have briefly looked at the motivation of the state to increase its relative power in pursuit of glory for its ruler. We have seen how this led to providing security, relative to its neighbours, by developing and enabling industrialization, before industrialization. The thesis does have its antithesis in classical economics, free-market theory and neo-liberal economics, which we will examine in this chapter. Liberalism has competed with mercantilism for several hundred years, and to understand the energy crisis of 2021-22, we must first examine the basic principles of economic liberalism, to fully grasp how and why neo-liberalism created the framework for the energy crisis.

Mercantilism's most famous critic was Adam Smith who in his seminal 1776 work *The Wealth of Nations* lambasted mercantilist policies such as subsidies and tariffs. In book IV; Of the Principle of the Commercial or Mercantile System, critiques protectionist tariffs as neither serving the state nor the economy at large. In his second chapter the much referred to, but only mentioned once, the invisible hand reference is mentioned:

“As every individual, therefore, endeavours as much as he can both to employ his capital in the support of domestic industry, and so to direct that industry that its produce may be of the greatest value; every individual necessarily labours to render the annual revenue of the society as great as he can. He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it. By preferring the support of domestic to that of foreign industry, he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an *invisible hand* to promote an end which was no part of his intention. Nor is it always the worse for the society that it was no part of it. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it. (Book 4, Chapter 2)

Despite the inflation that has gone into the phrase ‘invisible hand’, instead of pertaining to domestic production as opposed to imports, neo-classical economists have made the phrase encompass all parts of free-market economics. (Basu, 2010) The relevant points for our purposes are that even in classical economic theory, which started out as a critique of mercantilist thought, there was still room for favouring domestic industry. So even in the classical economic text, *The Wealth of nations*, derided as a bible for free market proponents, there is the recognition of the advantages of domestic production and industry. As Smith points out, it has to do with security, and that security and economic input can lead to an outcome [not] “always the worse for the society”. This is one of the reasons why in our discussions, it is important to discern between classical and neo-liberalism.

Though these positions and meanings are still debated, with some accusing Smith of straw man arguments against mercantilist writers, in his promotion of laissez-faire economics. (Anderson & Tollison 1984) The opposite has also been suggested in the debate, in the same journal, arguing that “Adam Smith, [...] provided a general, philosophical defence of the market [...]” (Rashid, 1986).

What makes Smith relevant to our discourse, is that he represents the anthesis to mercantilist thought and as a promoter of the free market. These theories have competed over control of the Norwegian energy sector, since its beginning. Smith’s ideas today are, however, widely convoluted and confused by advocates for free market policies. Dr. Paul Sagar points this out in a 2018 article on the subject, which is worth quoting at length:

“For it has been his fate to become associated with the strain of Right-wing politics that rose to dominance in the early 1980s, and which continues to exert a strong influence on politics and economics today. Usually known as neoliberalism, this development is most famously associated with Ronald Reagan and Margaret Thatcher. But it is in fact a movement with deep intellectual roots, in particular in the mid-century writings of the economists Friedrich Hayek and Ludwig von Mises. Later, the Chicago economist Milton Friedman and the British policy adviser Keith Joseph championed it during the 1980s, as did the extensive network of

academics, think tanks, business leaders and policymakers associated with the Mont Pelerin Society. “(Sagar, 2018)

“Neoliberals often invoke Smith’s name, believing him to be an early champion of private capitalist endeavour, and a founder of the movement that seeks (as Thatcher hoped) to ‘roll back the frontiers of the state’ to allow the market to flourish. The fact that there is a prominent Right-wing British think tank called the Adam Smith Institute – which since the 1970s has aggressively pushed for market-led reforms, and in 2016 officially rebranded itself a ‘neoliberal’ organization – is just one example of this tendency.” (Ibid) We will return to the rise of neo.-liberal policies in our section on state strength and industrial policy. For now it is important to recognize that it can be seen as an antithesis to the mercantilist and neo-mercantilist policies promoted (in part by Keynesian economics) after the first and second world war.

If we return to Smith, lets summarize; despite being touted as promoter of neo-liberal economic reforms, we have seen examples of even in his critique of mercantilism, still make allowances for the merit of domestic industry. Thus, on the one hand, we have the thesis of economic nationalism of mercantilist thought, so derided by Smith and many of his contemporaries, providing the anthesis, and from this there is an argument to be made that David Ricardo’s theory of competitive advantage is the synthesis. This theory also helps provide a robust defence for the control of Norwegian energy sector, in a modern market.

Comparative advantage and trade

David Ricardo theory of comparative advantage² posits that countries benefit from trade and specialization. The idea being that a country has a comparative advantage at producing something if they can produce it at lower cost than their trading partner. However, the counterintuitive supposition of the theory is that the comparative advantage does not have to be absolute for trade to be beneficial, nor does it mean necessarily that you are the best at doing it. (Landsburg, 2022)

“Economic theory suggests that, if countries apply the principle of comparative advantage, combined output will be increased in comparison with the output that would be produced if the two countries tried to become self-sufficient and allocate resources towards production of both goods. It is being able to produce goods by using fewer resources, at a lower opportunity cost, that gives countries a comparative advantage.” (EconomicsOnline, 2021)

In Norway’s case we have a competitive advantage due to the access of cheap electricity and can produce amongst other things energy intensive products, with comparatively cheaper inputs, like aluminium and certain chemicals that require a lot of energy to produce.

“Having a comparative advantage in X, Country A sacrifices less of Y than Country B. In terms of two countries producing two goods, [different prices for inputs, for example] mean different opportunity costs ratios.” (EconomicsOnline, 2021) According to Ricardo’s theory, if nations specialize in lieu of this, if combined with increased trade, this will increase world output. “However only when the gradients are different will a country have a comparative advantage, and only then will trade be beneficial.” (Ibid)

² This text uses comparative and competitive advantage interchangeably.

Norway has a comparative advantage to other industrialised countries in cheap inputs for certain products and an industrial policy that favoured this industry. Given the parameters proposed by Ricardo, the principle of comparative advantage is the economic foundational theory of the Norwegian industrial/energy policy we are discussing. However, I hasten to add, that the theory does not require neo-liberal free trade to work, it requires a bit of neo-mercantilist pushing to encourage domestic producers to specialize.

The theory does have its drawbacks and as noted in the Oxford encyclopaedia of economic history, it does point out that in its modern iterations it does point out that arbitration and external market price governs export, perhaps more than any perceived advantage.

“In its modern formulation, the theory of comparative advantage starts from a consideration of production decisions in autarky (a state without trade). [...] The structure of output will be determined by the confluence of supply and domestic demand. Some goods will be cheap and others relatively expensive. As long as autarky is maintained, prices will diverge across borders, except in the peculiar case of identical factor endowments, tastes, and technology. With the introduction of trade to this system of closed economies, arbitrage tends to break down the divergences. Economies export goods that command higher autarky prices abroad than at home. *In a world unfettered by restrictions on trade, exchange continues until goods prices are equalized everywhere.*” (My italics) (Thomas, 2005)

So when Norway started constructing large energy exchange cables to the German and British markets, they eroded one of the primary competitive advantages of Norwegian industry. This was done by importing the price of energy from abroad, because arbitration forces prices towards equalization. We will return to this point in the discussion, but I wish to emphasise that Norwegian industrial policy had a competitive advantage through cheap energy. By connecting the Norwegian grid to the European market, we have negated this advantage, and this threatens Norwegian industry as well as consumers. Or to put it more succinctly, sometimes, free trade is not beneficial for society as a whole.

Permit me to quote Paul Krugman's critique on the subject: "However, showing that free trade is better than no trade is not the same thing as showing that free trade is better than sophisticated government intervention." (Krugman, 1987:134) He further points out in his writing to important arguments against free or unrestricted trade, strategic trade policy, where the government shifts excess returns from foreign to domestic firms and that government policy should favour industry that yields externalities. Meaning that export subsidies and import restrictions can keep foreign firms from competing with domestic firms, increasing the relative welfare of the country. (Ibid:134-135) The same critique has also been voiced by Galbraith, pointing out that "[...] none of the world's most successful trading regions, including Japan, Korea, Taiwan, and now mainland China, reached their current status by adopting neoliberal trading rules." (Galbraith, 2008:69) And that any country unwise enough to rely on competitive advantage in agriculture "is condemned to perpetual poverty" (Ibid:70) Thus illustrating the weakness of the theory, it only works if what you specialize in is considered worthy of a high price. Though as Mark Koyama notes in his mostly negative review of Galbraith's book, he does concede:

"This sometimes makes for more informed and interesting analysis than economists like Joseph Stiglitz or Paul Krugman can offer. Stiglitz et al. still inhabit an intellectual universe where it is thought useful to view the policies of government as those of a benign dictator maximizing social utility. Galbraith, on the other hand, seems to understand that regulation is often driven by special interests rather than by government benevolence." (Koyama, 2009:104)

Koyama's critique of Galbraith does naturally lead us onto the next point, determiners of policy. So given competing theories of international trade and industrial policy, we are left with some interesting questions and perspectives. Who chooses the different policies and why? In the historical section, we will see that Norway has gone from mercantilist, to liberal, to neo-mercantilist over to neo-liberal. This next section will illustrate why some states chose a more interventionist policy. In this theoretical framework, the determiner of policy labelled strong or weak industrial policy can be outlined in the following manner:

State Strength and industrial policy

State strength in the context of industrial policy pertains to; “the degree to which national policy makers, a category that includes elected and appointed officials, are insulated from domestic interest-group pressures. [...] Strong states are characterized by a high degree of centralization of authority, a high degree of coordination among state agencies, and a limited number of channels through which societal actors can attempt to influence policy.” (Oatley, 2012:95) All of these states can be argued as promoting a neo-mercantilist industrial policy at one time or another. For our purposes it is relevant to look at what states promote a strong state industrial policy, that I define as a neo-mercantilist policy and why Norway once chose to pursue one.

Three of the largest and most well-known proponents of a strong-state industrial policy is that of post-second world war; France (Hart, 1992), Japan (Johnson, 1982), and Germany (Foreman-Peck, 2014). Arguably up till the 70s the British could also be counted in this group. (Pardi, 2017) One can also consider the cases of China, Japan, South-Korea and certain exclusionary corporatist states of Latin America. (Case, 252) American political scientists have written quite a lot about this, looking at the Asian economic questions, and the root of their success in following a developmental model that differs from what was American economic gospel after the second world war. In the 90’s Japan was all the rage, and in the 2000’s it was China, the number of textbooks on the subject is enormous, but can be employed to explain industrial policy in Norway as well, using the same methodology as for parts of Asia. For example:

“State strength can be thought of as the capacity of state actors and state institutions to autonomously devise and implement public policy; shaping the preferences and interests of other actors; intervening in and transforming economic and cultural structures. State strength can be mapped out in terms of bureaucratic insulation and policy-making coherence. Specifically, bureaucracies that are sufficiently insulated from societal and international forces can impose coherent interrelated and mutually supportive economic and societal policies, devised by elite-level pilot agencies.” (Case 2005:252)

Now Case does consider the strong government in a context of Asian-Pacific states, and attributes the strong states to an authoritarian tendency. Pointing out that most of the strong government countries tend to be authoritarian regimes and that when implementing democratization, strong state-policies tend to falter, because the insulated become open to influence. (Ibid:252-253) This line of argument does have some merit for the Asia-pacific but at first glance appears not to relevant for a Norwegian context. Norway has not since the implementation of parliamentarianism in 1884 been considered an authoritarian state, by comparison to the countries the above-mentioned quotes are referring to.

However, a case can be made that there are certain factors that do overlap with the hegemonic power of the Japanese Liberal democratic party (LDP) in the post second world war Diet and the Norwegian labour party holding an equally dominant position from 1945 to the 90's. This period in Norwegian history has been characterized by the historian Jens Arup Seip, as "The Norwegian parliament in exile, from Elverum (1945) to Kings Bay (1963)." (Kjøås, 2023) Though intended partly as a play with words, it was meant as an observation on the power of the Labour party, vis a vis parliament, with all policies being decided by the party, before being rubber stamped by parliament after a pro forma debate. However easy it would be to characterize the Norwegian government as a one-party state in the post war consensus, it must be underscored that they were democratically elected and unlike a number of the examples Case bases his argument on, they did not come from an old aristocracy or moneyed elite, but (mostly) from a working class background, yet unlike those parties in the Asia-pacific, an opposition was tolerated and a natural part of parliament. Case does refer to the LDP hegemony as soft authoritarianism, a perhaps fitting common bracket, for the two, but a useful shorthand for our purposes. The relevant point for us is to realize that state strength is not an absolute, but on a continuum and that this not only changes over time but takes different forms.

When considering the choices of strong contra weak state policy in the Norwegian perspective, I believe the most relevant perspective for analysis is this: Several of the strong states are former imperial powers, and great powers. Whilst at the same time, some are former colonial possessions, like South-Korea and Taiwan. Norway was under the Swedish crown until declaring independence in 1905 but had worked for independence over several year up till that point. One argument worth noting in conjunction with choice of policy is an imitation of its

former masters. In the mercantilist theory, industrial policy is a way to increase state power, and by extension the legitimacy and prestige of its monarch. When looking at the economic state policies of several of the more successful post-colonial states in the Asia-Pacific, there is an impetus for both political independences, intertwined with an economical component to promote independence. Both in self-sufficiency, but also in the creation of domestic industry, to secure said independence. Therefore, I would argue that Norway chose a strong industrial state policy in pursuance of independence and self-sufficiency and recognizing that wealth and industry guarantees independence instead of reliance on foreign powers.

So why did Norway abandon this policy? I can only propose an incomplete explanation for the Norwegian case, as this is a full thesis on its own. I would argue that the industrial policy is a function of state power, and state legitimacy in a symbiotic and self-reinforcing relationship. The power to direct industry is increased by success, and the legitimacy of this policy increases consequently. The rise of Neo-liberalism can therefore be considered a reaction to the industrial-policy failures of the 70's in for example Britain. In the Norwegian case, it came later, and picked up speed in the 80's and 90's.

By repeated failure of strong-state industrial policy, the guiding principle of that policy, which we referred to as neo-mercantilism was thrown into disrepute. A lot of ink has been spilled on the subject, but for a short and succinct introduction I can recommend a working paper by Kitson and Mitchie; *The deindustrial revolution: The rise and fall of UK manufacturing, 1870-2010*. (2014) They point out that in the British case, the industrial policy was thrown out in favor of short-sighted policies favoring "The city", meaning short sighted financial capital and trading. Not unlike the changes implemented in Norwegian energy sector, except of course, the Thatcher government also sold most of the public utilities to boot, thus compounding the problem. Secondly, I believe the European Union is partly to blame. The European Union is not in favor of strong state industrial policy and has fought it tooth and nail in many places. As Norway is gradually more and more subservient to the European Union, the idea of an independent industrial policy with neo mercantilist governance is anathema to our new colonial masters, but this is a point we shall have to return to in the sections concerning the European Union.

For our purposes it is worth noting that strong industrial policies come as a function of independence and legitimacy and that success breeds further success. But if we are to understand this concept fully, we are going to have to delve into the concept of legitimacy and legalism in the next chapter.

State legitimacy, and legalism in a neo-liberal context

If we consider the power and independence of the state as a function of legitimacy, there are several factors to consider. Ignoring questions like that of divine right of kings, or the functions inherited in the assailed concept of feudalism. The contemporary legitimacy of the state can be considered the degree of which its inhabitants have faith in it. When the industrial policy appears to be working, people have faith in it, and when there was a decline in the 70's, people lost faith in it. As the influential theorist Max Weber put it: "the basis of every system of authority, and correspondingly of every kind of willingness to obey, is a belief, a belief by virtue of which persons exercising authority are lent prestige" (Weber 1964: 382) Weber separates sources of legitimacy into 3 main categories, tradition; that the institution has been there for a long time. Secondly that of the leader's charisma, making people more inclined to follow and lastly that of legality, the rule of law granting legitimacy. There are competing and complimentary views on the legitimacy of the state, to those that focus on coercive power, such as Ripstein, 2004) Those that focus on it form a perspective of justice and legality such as Hampton (1998) and Thornhill (2011) and critics of that perspective like Williams (2005) Succinctly put, one might argue for the Stanford Encyclopedia of philosophy definition:

"The normative concept of political legitimacy is often seen as related to the justification of authority. The main function of political legitimacy, on this interpretation, is to explain the difference between merely effective or *de facto* authority and legitimate authority." (Fabienne, 2017)

If we consider legitimacy in a political framework, a more fitting perspective for this analysis might be that of Reinhard Bendix and his writings on popular sovereignty. He points out that it does have a strong traditional basis, going all the way back to Germanic tribes as described by

Roman historians in the first century AD. “The tribes were governed by chieftains who ruled with the aid of a council of elders. Such chieftains succeeded one another on the basis of hereditary claims, provided that their accession to the throne was confirmed through an act of acclamation by the leading warriors of the tribe.” (Bendix, 1978 :8) The same observations are of course noted by Snorri Sturluson in the kings saga’s of Norway, noting that kings were elected by popular acclaim at Things and could be deposed if considered tyrannical by the same. One might therefore make an amended analysis of the traditional aspect of Weber and argue that in the Norwegian context the tradition of legitimacy is derived partly by tradition and in whatever form it takes, it is derived from popular sovereignty. For the energy sector, it has had a high degree of legitimacy because it appeared to work for every everybody, consumer and industry alike. As noted by Bendix, in modern times, “Participation by the public in national affairs has widened; the earlier dichotomy between rulers and ruled has become blurred. Noble birth and inherited wealth have ceased to guarantee authority. At the same time, nation-states have emerged with frontiers that are clearly defined and relatively stable.” (Ibid:9) Basically people have a tradition for participation and this participation has only increased in modern times, since the French revolution, as seen in the spirited debate outlined in the introduction to this paper, the people have involved themselves in the energy debate, because it affects them adversely and directly.

Bendix further adds; “In the nation-state, all is well as long as the citizens believe that the government knows what its about, has the ability to deliver on some of its promises, and has sufficient force to back up its commands when necessary. [...] But once the trust based on such feelings is disturbed, conditions can change quickly. [...] Thus wherever power is vigorously pursued and exercise, ideas of legitimacy tend to develop to give meaning, reinforcement, and justification to that power.” (Ibid:17)

If we consider this in the context of popular sovereignty as promoting something ascribed as a public good, such as an industrial policy, the exercise of it creates its own legitimacy. If the popular will is for promoting its welfare, state policy vigorously exercised in pursuit of this policy creates and grants legitimacy in furtherance of that goal. And as noted by Bendix, if unable or unwilling to deliver on its promises, this weakens the legitimacy of the rulers, be they kings, governments or parliaments. The popularity of the government of Norway and the

Labour party, can be understood through this prism. We will return to the ideas of popular sovereignty and mandate at a later stage, but I wish to underscore the importance of a popular mandate in the pursuit of policy, be the industrial or any other, as directly influenced by policy.

If we try to employ some of these definitions, and lines of argument pertaining to legitimacy to the Norwegian context, that of legalism and tradition seem most valid, when considering the questions pertaining to industrial policy. Norway's energy sector is regulated by law, and several government departments, that enjoy a high degree of legitimacy, since their inception that we will examine in the chapter called The panic laws. If we consider legitimacy as derived from a legal compact. That would be in a legalistic sense like that of Thornhill (2011). In the modern sense, the state's power is derived in part from the legitimacy of its compact with the people in furtherance of both the stability of and the goals of the state. Though legalism, can also be a negative instrument. Thornhill points out how legalism could be employed in creating stability for governments, by removing thorny issues and citing Italy as an example, transferring them to constitutional courts.

“it formalized procedures for resolving conflicts over the rights expressed in the constitution, and it enabled the state to deflect to the law many factual contests over political legitimacy. [...] the Constitutional Court enabled the state to hold contests over distinctively volatile matters outside the centre of the political system. [...] conflict over rights did not automatically consume vital resources of state legitimacy. The Constitutional Court formed an instrument in which the basic elements of societal design contained in the constitution – rights – could be applied through society at a diminished level of intensity, and the court increased the legitimacy of the state by preserving and enforcing principles enunciated as rights without causing a fully inclusionary convergence of society around singular demands or contests. (Thornhill, 2011: 334)

This means that there are two functions of the legalistic framework of legitimacy, firstly that of equality before the law, everyone is judged by the same laws as pointed out by Max Weber, and secondly as shown by Thornhill, that by creating an independent arbiter, such as judicial courts, politically devise and volatile questions can be resolved, without losing too much

political capital and legitimacy. This of course must be seen in conjunction with the principal of popular sovereignty and legitimacy derived from executing the will of the people. If the people are clamouring for one or two political goals that diverge, this might cause a rift in political coalitions and political popularity of parties, if they are not seen to implement certain policies. By moving certain thorny and volatile issues to the courts or independent arbiters, outside the political realm, the issue can be avoided by political leadership. Thus, saving them from expending political capital and thus legitimacy by referring to the arbiter, instead of taking the consequences of having to make their own decision.

This legalistic framework is quite important for a correct understanding of the energy crisis of 2021 - 2022. If we consider the legalistic perspective on the current industrial policy, it has been intertwined with neo-liberal free market ideology. Both an emphasis on the rule of law and private property rights and by extension private enterprise, are pillars of the bourgeois society. By marrying the two concepts, a neo liberal society in its most extreme form promotes the old idea of the night watchman state. Libertarian theorists such as Robert Nozick in his book *Anarchy, state and utopia* (1974) formulated ideas of an ideal state as minimal, limited in scope and responsibility; primarily concerned with upholding the rule of law and enforcing property rights and enforcing the non-aggression principle.

Whilst the night watchman state can be argued to be the logical end state of the neo-liberal state, the proponents of neo-liberal markets are not necessarily right-wing libertarians such as Nozick. However, as previously mentioned, in our discussions pertaining to Adam Smith and his proponents, free market thinking as advocated by Adam Smith, has been employed by libertarian leaning groups such as the Adam Smith institute and others, to promote free market principles at the expense of all other considerations. If you will forgive the oversimplification, it can be summed up as; private property and free market - good, state – bad.

If we take this analysis further, it is principal espoused by proponents of free market ideology, that the state should not interfere with the markets. This guiding principle is often enshrined in law. This became evident during the crisis of 2021-22, with the government trying to interfere in the energy sector, but claiming they could not interfere with the markets. The most well-

known expression of the free-market ideology are the four freedoms of the European Union, with their "four freedoms" refers to the free movement of goods, services, people, and capital within the EU's borders. While this principle is often seen as a cornerstone of European integration, it is also closely linked to neoliberal economic theory.

Neo-liberalism, the Eu and the foundations of the crisis.

To understand the energy crisis of 2021-22, we need to examine the neo-liberal underpinnings that created the framework for the crisis. Neo-liberalism is an economic ideology that emphasizes the importance of free markets, individual freedom, and minimal government intervention in the economy. One of the key tenets of neoliberalism is the belief that removing barriers to trade and investment will lead to economic growth and prosperity. Barriers primarily being that of states. (Hall, 2011) The four freedoms of the European Union reflect this neoliberal perspective by promoting the free flow of goods, services, people, and capital across national borders. By removing barriers to trade and investment, the EU aims to create a level playing field for businesses and individuals, encouraging competition and economic growth. (Kunzlik, 2013)

However, critics of neoliberalism argue that this approach can lead to economic inequality and the erosion of workers' rights, as companies may seek to exploit cheaper labour in a bid to maximise profits. Additionally, some argue that the four freedoms can undermine national sovereignty and democracy, as decisions about economic policy are made at the EU level rather than by individual member states. This argument is proposed by Bruff (2014), describing neo liberalism as authoritarian as opposed to democratic, by forcing neo-liberal policies on an unwilling populace. This idea was Further expanded by Byrne:

“[...] efforts to insulate neoliberal policy-making from democratic pressures through the introduction of new constitutional and legal rules which preclude public debate over certain policies, and because of increasingly punitive penal and crime policies designed to contain the fallout from the creation of an ever-growing number of losers in the game of neoliberal capitalism.» (2017:2)

So, if we consider the four freedoms of the European Union as primarily aimed at promoting economic integration and growth, they are also intricately linked to the principles of neoliberalism. These principles as we have discussed, emphasize the importance of free markets and minimal government intervention in the economy. And combined with an increasing legalization of the political process, neo-liberal proponents ensure the continuity of their principles, despite being in contrast with the legitimate political process of popular sovereignty. By removing the judgement of their principles, from the political arena to the legal arena, as exemplified by Thornhill's example of the Italian constitutional courts. The same process can be seen in Norway, with questions pertaining to the energy system being referred to supernatural bodies such as ACER and ESA, who will take the Norwegian government to court, should they act in contrast to the neo-liberal underpinnings of the association agreement. This use of legalism, to protect unpopular policies, helped exacerbate the energy crisis of 2021-22.

Or as Foucault put it, it is a rewriting of the social compact from that of the social state, to the market state, where 'good government' keeps away from business, and the market becomes the governing principle, from which all other government decisions flow. So instead of government regulating the market on behalf of society, the neo-liberal system now has a society regulated by the market. (Foucault, 2008: 131-145)

This peculiar situation has been critiqued by Mariana Mazzucato, who has written on how the state is suffering from a fear of governance and out-sources its thinking, partly based on a fear of failure and a deep ingrained idea that states are not fit to govern. Though her perspective is primarily British, which has suffered harder neo-liberal rule, than can be said of Norway, her critique is merited, especially in the case of Energy:

“Thus, limiting our understanding of the role of the public sector to one that simply “administers,” “fixes,” “regulates,” and at best “facilitates” and “de-risks” the private sector prevents us from thinking creatively about how to allow public sector vision, risk-taking, and investment to lead and structure the necessary transformational changes. One impact of public

choice theory has been to undermine faith in the positive power of public institutions.”
(Mazzucato, 2016:141)

The same critique is echoed by Asbjørn Wahl in his book, *Velferdsstatens vekst – og fall?* (The rise and fall of the welfare state?) (2009) Wahl argues that neoliberalism, which emphasizes individualism, free markets, and limited government intervention, was promoted as a response to the economic and social crises of the 1970s. He describes how neoliberal policies were implemented including deregulation, privatization, and cuts to social spending. He describes this as an attack on the welfare state, writing:

“The form and content of the welfare state is, as we have seen, first and foremost an expression of power relations in society. When these power relations have changed in the direction of increased market power, the attacks on welfare schemes come as a necessary result of this change. A stronger market orientation of the welfare state is [...] also in full swing.” (Wahl, 2009:120)

Though the focus of the book is on the welfare state, he considers Norwegian energy policy and industrial policy as an import factor in financing the welfare state and that the institution had a high degree of legitimacy, both as a public utility and as an object of public ownership, outside of the control of market forces. But now, the state is abandoning control, in favour of capital and market interests. (Ibid:116) He notes the detrimental impact liberalization and neo-liberal policies have on the welfare state and on the populace as a whole and warns against the intellectually lazy praxis of confusing national wealth, as measured in economic growth and gross domestic product, as to that of national welfare. (Ibid:122) The idea that the rising tide lifts all boats is a fallacy in economics, especially if one disregards ownership and distribution.

In this section we have examined the theoretical underpinnings that inform the historical trends that led to the energy crisis. They are essential to understand the actions and consequences for the Norwegian energy sector, that we will explore in the next section. Mercantilism and liberalism have competed for governance of industry and neo-liberalism have constructed the

framework for the crisis. Let us first look at how neo-mercantilism supplanted liberalism when the original framework for the energy sector was constructed.

Historical context

The historical section is divided into parts, firstly we will see how the panic laws of the early 1900's can be seen as supplanting of economic liberalism, in favour of a strong state neo-mercantilist industrial policy. Secondly, we will visit a real-world example of this in the chapter on Odda Smelteverk, that illustrates how these policies worked in praxis, and how they also prevented collapse, when a crisis arose. In the chapter called The 1990s and the decline and fall of public control, we will see how neo-mercantilism was supplanted by neo-liberalism as the governing ideology for the energy sector. Then we shall examine how the energy sector was intertwined and the problems of neo-liberalism was compounded by the European Union and the European Economic area agreement. And lastly, we will examine how the energy system works in praxis today. To illustrate that the market need not be the only solution, we must take a broader historical perspective than the DeFacto report, that shows that the Norwegian energy system can be run under a different governing system, but also why this changed. The only way to understand why the Energy Crisis of 2021-22 can be considered fake or manufactured, is by taking a historical approach, so that we can see that the structure that enabled the crisis, was a neo-liberal construction.

The Norwegian panic laws of the early 1900's

Despite its tranquil reputation, this is not the first energy crisis Norway has had. At the time, conservative members of parliament described it as a panic, and for the historical context of our inquiry, a panic will suffice. In 1906 the Norwegian parliament passed a statute regarding concession governing the ownership of waterfalls in Norway. To understand what was derisively labelled as a panic-law by (economically liberal) members of parliament at the time, we will have to examine the context of the law.

At the turn of the last century, several industrial processes had been discovered that required large inputs of electricity to complete. So, around the 1900's there was a blooming of industrial activity in Norway, where comparatively cheap electricity was abundant and readily available for utilizing. This comparative advantage was noted at the time by international capital interest and led to a building boom in the western and south-western parts of Norway.

“In Norway the conditions are particularly favourable for power developments owing to the great height of the falls, often accompanied by easy storage and equable flow. The capital costs of power developments at the most favourable sites in that country has (sic!) been as low as £6 to £7 per kilowatt developed, while at moderate cost would be £14 to £15. In the U.S.A a standard cost would be about £26, the cost at Niagara being from £23 to £30. In Scotland power has been developed at a total capital cost of £26 per kw.” (Pring, 1921)

The economic ramifications of cheap energy and mostly ice-free harbours, to ease logistics, meant that the required building blocks for industrial production were present. Foreign capital from the United Kingdom, France and other continental powers, was available and as a consequence started buying up waterfalls and their surroundings. The laws governing this at the time, The Norwegian Watercourses Act of 1887 laboured under the principle of private property and predated a lot of the technological innovations regarding the husbanding of energy from waterfalls and lacked an understanding of its consequences.

In 1906 growing public concern had shifted the situation. Several large Norwegian hydropower resources were in foreign hands, Hydropower had gained greater importance and value in connection with the energy needs of power-intensive industry. And there was growing concern with the shortcomings of the legislation, principal fears being that as long as it was based on private property rights, any foreign interest could end up buying all the waterfalls and as long as foreign interests were largely responsible for the purchase and utilization of the hydropower resources, they would also control all its wealth, relegating Norwegian interests to the side line. (Bjørnsvik, 2009)

This predicament led to heated debates both in parliament and in the public press. The process has been characterized as “one of the greatest challenges faced by the classically liberal state of Norway. (Hanisch et al., 1999:35) Anti-mercantilist thinking and classical liberal economic theory had a strong following in Norway up to that point. The Norwegian parliament had since the 1830’s worked to remove privileges, barriers to entry and any vestige of mercantilist policies in favour of free enterprise as espoused by classical economists. (Ibid:39) A leading proponent of free market policies and so-called liberalization of the economy was Anton Martin Schweigaard, a lawyer and economist who wrote in favour of the abolition of mercantilist policies. Schweigaard was considered a leading proponent and quite influential in politics, both inside and outside of parliament as well as in business. (Ibid:37-39) (Mardal,2023)

It is therefore in this tradition of anti-mercantilist economic thinking that Norway finds itself at the middle and end of the 1800’s. Free-market and liberalization was the order of the day. Yet even in the politically inhospitable territory of liberalism, there was still room for the government. Schweigaard was no libertarian, and though his night-watchman state, bear some passing resemblance to the writings of Nozick, characterizing them as such would do him an injustice. Schweigaard amongst others did support the state in building of major and minor parts of infrastructure, such as bridges, canals, railroad and the postal system. (Hanisch et al., 1999:39) This illustrated that even in their most anti-mercantilist politics, there was still a role for government, beyond a night-watchman.

Given the aforementioned, historical and political trends, it is understandable that legislation around waterfalls and their use in industry was a cause of considerable debate at the time. The idea that the state should infringe on private property rights and free enterprise was considered anathema at the time. Yet on the other hand, there was a growing realization that electrical power could be a source of wealth. Norway had been a great exporter of mostly unprocessed commodities like fish, lumber and minerals. Combined with one of the largest shipping fleets in the world, the nation was not unfamiliar with commerce, and recognized the importance of the natural resource. Even the conservative party, long a champion of free enterprise, partly recognized in the end, the predicament and the need for legislative change.

“When foreigners could freely buy up waterfalls, there was an immediate fear that their grip on Norwegian business would become too strong. There was therefore even deep agreement in the Conservative Party that national protection of Norwegian natural [resources] was needed. The political issue of contention was primarily whether protection against domestic capital interests was also needed. Those who joined the "consolidated" [Liberal party] voted that not only foreign but also Norwegian capitalists had to have a [concession], and that after a number of years the state should be allowed to take over waterfalls and power stations free of charge (hjemmfallsretten). The final [sic] result in 1909 was that licensing obligations and the right of repatriation would apply to all waterfall purchases, in addition to licensing obligations for mining companies and when purchasing forests.” (Tvedt, 2023)

In 1906 the Norwegian parliament passed a statute regarding concession governing the ownership of waterfalls in Norway. This law, later modified and expanded in 1909 and 1917, limited the private ownership of waterfalls. A succession of governments passed a number of laws to secure public ownership and control of this natural resource. Derisively labelled “The panic laws”, at the time, they were a source of great controversy and contributed to the fall of several governments and a much-publicized Norwegian supreme court case in 1918, to establish the validity of the statutes. I believe this choice can be explained by the new quest for independence, outline in the chapter on strong-state industrial policy.

The law specified that every individual or entity wishing to purchase the rights to exploit the energy potential of a waterfall, was required to procure a permit for each waterfall. Furthermore, this permit or concession, was limited in its timeframe, with the default of 60 years. At the end of the concession’s runtime, the waterfall, and its hydroelectric installation, reverted its ownership back to the state of Norway. This is the foundation for a Norwegian industrial base, based on cheap renewable energy, providing a competitive advantage in production, that despite all public discourse of a post-industrial era, still perseveres. Secondly concessions are publicly administered and was not the subject to the vagaries of market forces, ensuring a continuity of supply, at a reasonable rate, and under public control. (Hanisch et al., 1999:35-36) Though in the writing on the subject, Hanisch et al., being classically trained in economics (and history), seem much more concerned by the infringement of the state in private property and free

enterprise, rather than celebrating the tremendous foresight involved in securing the natural resources for the public good.

By securing the rights to the waterfalls, by allowing their exploitation for a predetermined period, the government secured on the one side, foreign capital to invest in the waterfalls and retained the possibility of their return in the future, to the public. This can be seen partly as a compromise between the free market proponents like Schweigaard, yet at the same time recognizing certain mercantilist principles of trade and industry. Let us for lack of a better term, refer to it as neo-mercantilist.

Merely providing raw resources, has seldom left an economy stronger, it is in the processing of said resources that most wealth is generated by the producers. In the case of the exploitation of waterfalls, the transfer of energy at the time was so wasteful, due to technological constraints, that it necessitated the construction of industry near the source of energy. This made negotiation and legislation easier, because as a source of cheap energy was geographically fixed, it created a local non-transferrable monopoly. If considered using the lens of comparative advantage, the comparative advantage lay in the access to cheap energy, providing the ability to produce energy intensive goods cheaper and with lower inputs than in comparable geographic locations. When combined with an already large merchant fleet and ready access to water, being one of the main modes of transport at the time, the advantage of building there was obvious. So even with the attack on mercantilist principles in the Norwegian political scene, recognizing the error of selling the rights permanently to foreign investors was realized and prohibited. Lets call this policy a neo-mercantilist, industrial policy, for sake of argument.

If permitted to speculate, I believe it was caused by the realization of the enormous potential wealth that could be exploited. Free market proponents might dislike state intervention, yet in this case ended up, after considerable controversy and debate, going for a neo-mercantilist option, most likely in recognition of the potential enormous profits to be made, by doing so. As Tvedt (2023) pointed out, this applied in forestry and mining as well. It is worth noting that the conservative party, representing gentry and landed elite, were not necessarily the free-market proponents one sees today. Their wealth was to a large degree connected to the possession of

natural resources and land. Therefore, recognizing the value of retaining ownership seems logical, despite the arguments presented by free-market proponents like Schweigaard. One might argue that their notions of wealth had roots in a mercantilist world view of economics, much more than the (at the time) modern liberal economic theories.

By securing the right to administer concessions to waterfalls (and forestry as well as mining), one can make an argument that the very liberal state of Norway, - that Hanisch et al. thought went further in the anti-mercantilist policies than other Scandinavian states, was pursuing a mercantilist policy, through legislation and concessions, in cooperation with industry and market forces. The legal framework provided the state a right to interfere in private property and enterprise, yet also created legitimacy for both parties. Industry, not as a foreign exploiter, but as a temporary concession, guaranteed by law. With the rule of law as a cornerstone of bourgeois state, this created a common ruleset for both parties, creating predictability and what financial reporters like to refer to as ‘market confidence’. Hanisch et al points out that the Hjemmfallsretten, had to be decided by the constitutional court and that it marked a change from the liberal economic state where the free market policies of Adam Smith were challenged and opened the door for more government intervention. (1999:49)

The compromise between mercantilism, and free market proponents, secured the foundation of the future industrial policy of Norway. This law provided a standard for which to deal with foreign capital interests, with regards to the exploitation of natural resources. It is impossible to understate the importance of this law, for the present prosperity of Norway. The Neo-mercantilist template and legislative framework and tradition it spawned can be argued to have served as a blueprint for the legislation concerning Norway’s oil and gas, discovered in the 70’s. And the policies enacted in conjunction with that discovery, also followed similar mercantilist programs, instead of allowing all of it to be bought up by foreign capital. A decision which indisputably has served Norway well. For our context, we must recognize the laws as the foundation of a state industrial policy, from which all else flows. Both as a principle of state intervention in enterprise, but also as a blueprint for popular control. Following this principle has made Norway one of the most affluent societies in the world, the abandonment of this policy threatens to make paupers of ordinary citizens in need of heating their houses.

The example of Odda – industrial policy in praxis.

Having examined the legal framework from a macro perspective, let us now examine the principles at work in a micro perspective. We have looked at how the argument between mercantilist and free-market proponents went during in the chapter regarding the so-called panic laws. This chapter will show how employing neo-mercantilist policies to guide industry leads to a pursuit of competitive advantage and when crisis appears, this policy has laid the groundwork for how to fix a crisis in the market. This example shows, that unlike the crisis of 2021-22, if the underlying framework is sound, a crisis in the market, does not have to lead to collapse or the immense government bailouts seen in Norway during the energy crisis.

This section is an example of neo-mercantilist policies at work, as well as an illustration of David Ricardo's comparative advantage at play. The reason for this is that mercantilist principles employed, did not hinder the establishment of industry, it merely provided a framework and guiding hand to it. So even with the limitations imposed on private ownership of waterfalls, there was still rapid industrialization and construction of industry. One example of this is in Odda, where The North Western Cyanamide Company, were among the leading industrial facilities of their kind in Europe. Established in 1906, after the aforementioned "Panic laws" were enacted, they still proved to be formidable operations.

"Both Norwegian saltpetre and calcium cyanamide could be used as raw materials in the chemical industry and to produce explosives. Explosives were part of the arms industry but were also used in connection with road construction and other development works where blasting was required. Later, calcium cyanamide was used as a raw material in the plastics industry. In reaction with water forms calcium carbide acetylene gas, which was used, among other things, as lighting in mines and streetlights. Acetylene gas was eventually used in welding. Input factors in the production of calcium carbide was coke and limestone, in addition to copious amounts of electrical power." (Bjørsvik & Nilsen, 2020)

Recognizing that the process required immense Electrical power, a cheap source was sought. Norway had two important features going for it, providing a comparative advantage to British

domestic production. Firstly the topographical features of large waterfalls, that could be exploited to produce cheap and renewable electrical energy, without the need for expensive inputs, like coal in British domestic production. Secondly the geographical proximity of the Norwegian fjords, to the United Kingdom and Western European markets, argued for the location of new production facilities in Norway.

To secure electrical power supply, a company was formed and bought the rights to several waterfalls. Since the law pertaining to ownership of waterfalls was enacted in 1906, they did apply for a concession, whilst underscoring that the company believed to have the full right and ownership of the waterfalls. This is conjunction with the principles of free market, and free establishment. However, to avoid delays litigation this view, they still applied for a concession, de facto conceding the states' rights to judicate. (Though a principled court case on the relative merits of the neo-mercantilist polices vis a vis liberal economics and legality, could have been quite beneficial for the author of this text.) A concession was granted to the joint stock company formed to produce electrical power; Aktieselskabet Tyssefaldene, on the 10th of May 1906. There are two important elements to note in the conditions for the concession. The joint stock company Tyssefaldene was given a concession for the waterfall, as long as all members of the board were Norwegian citizens. And the British Sun Gas company in charge of the plant was given a 30-year lease on the land. However, at the time, no fixed time limit was enforced on the Norwegian company. (Andersen & Haug, 1989:54-58)

Without going into all the questions of ownership and limited liability companies, the British-run company was instructed to make a Norwegian subsidiary, located in Norway, with at least two thirds' Norwegians on the board of directors, and that exclusively Norwegian labourer's and functionaries were to be employed at the factories, as well as Norwegian materials employed in construction. On these conditions a concession was approved in 1908. (Ibid:93-95)

So, in the granting of concessions, free market principles of the free establishment of industry and transfer of private property was supplanted, by (at the time,) modern mercantilist praxis. By favouring domestic ownership, capital could be invited in on favourable terms, leases

granted, and concessions provided, whilst securing domestic ownership and providing a framework for Norwegian industrial partnerships. By mandating Norwegian citizens on the board, the state also secured a level of influence, directly over the company, that in all fairness must be considered larger, than if it was purely a foreign run and owned enterprise. A recurring problem for today's legislators, when dealing with foreign multi-nationals outside of domestic legislative reach.

Despite the limiting factor of restricted and limited control over water resources, the project went forth and two factories were established and rapidly expanded. The production capacity was referred to at the annual shareholders meetings, whose minutes were published in the Financial Times. "The production capacity at the carbide factory increased from 32,000 tonnes per year to 80,000 tonnes before the First World War. Correspondingly, capacity at the cyanamide factory increased from 12,000 tonnes to around 72,000 tonnes pr.annum". (Financial Times, 1913-1)

The constraints of hjemmfallsretten did not prove an insurmountable barrier to entry, it merely precipitated the need to include locals in a joint venture, and a bit of legal and financial manoeuvring. Most of the technology used in the process was international, with some Norwegian patented techniques. But in general, this was an international operation, financed by mostly international capital, intended to produce for the international market. However, given the new constraints, Norwegians were required on the board of directors, and a number of conditions outlined in the granting of concession were intended to share the wealth. Amongst these was the need to use local contractors and suppliers in both construction and production. (Bjørsvik & Nilsen, 2020) It can therefore be argued, that mercantilist principles secured that; if not all the wealth was retained, a large portion of it was retained, then would have been, by free market -principles, providing no incentive or legal requirement to do so.

At the same time, it must be recognized that Norwegian capital interest were not in a position to secure all the required funding for an undertaking of this magnitude. Thus, foreign capital mostly from England and France, helped provide the basis for construction. (Ibid, 2020) So by securing foreign capital, and marrying it with Norwegian capital as well as an exploitable

resource, the mercantilist principles worked in conjunction with free enterprise, to create and distribute wealth further than they would have, if they were not required by law to do.

Despite the success the plants were deeply affected by the First World War and the recession of the 20s and closed. Only to be reopened in 1924 as Odda Smelteverk which continued production up till 2003. (Kraftmuseet, 2019) The point of note here, is that whilst there was a general decline in international markets and in part that foreign actors went bankrupt. Local remaining companies, and Norwegian industrialists now had both the capital and the experience to take over and resuscitate the company. (Ibid:157-159) A situation that was not feasible 20 years previously. This did show that industrial production was viable in Norway, despite the limitations on private property, as outlined in the new laws regarding waterfalls. For our purposes the most important element to consider about this part of the story, is that when there was a crisis in international markets, that led to shut-downs in Norway, the mercantilist policies implemented a decade earlier, had provided enough time to mature, so that even if the international owners were having problems, the locals could take over and were incentivised to do so because of the comparative advantage of local production.

Odda Smelteverk can be considered a microcosm of a neo-mercantilist industrial policy, that recognized that the comparative advantage provided by proximity to England and a ready supply of cheap energy, created the possibility for domestic industry. Instead of focusing on the free-market principles of Adam Smith, the Norwegian parliament enacted several laws, creating the foundations of an industrial policy we might refer to as neo-mercantilist. The stand in stark contrast to the free-market principles of free enterprise and private ownership, however, they provided an impetus to create domestic firms, staffed by both Norwegian labour and management. This insured in Odda's case, that when foreign consortium for various reasons faltered, a consortium of Norwegian companies and interest were able to not only take over but run the company quite successfully for the next several decades. This outcome was by no means guaranteed, had the Norwegian government pursued a free-market policy, which did not incentivise local profit-sharing.

To summarize, industry itself built the hydropower plants to ensure power for industry, The electrical intensive industry ensured value creation, jobs and export income. This is how Norwegian industry gained a completely unique competitive advantage: Access to comparatively cheap electrical power and it remains the industry's most important competitive advantage to this day. The Norwegian industry of artificial fertiliser, aluminium, steel, alloys, paper and electrochemical products are based the same basic premise – access to affordable electric hydropower. (Lekve & Helle, 2022)

Secondly it provides a vindication of the modern iteration of a neo-mercantilist industrial policy, by regulating the establishment of business and private enterprise, it secured not only a sharing of wealth, but that Norwegians learnt how to do the job themselves, from the shop floor to the board of directors. If we consider neo-mercantilist industrial policies as not necessarily a zero-sum game, as in the old iteration of the theory, in the case of Odda, it merged foreign capital and industrial demand, with an area that had a comparative and competitive advantage in providing the processed raw materials through a combination of technology, topological features and geographic proximity. The example of Odda is a case-study in strong state industrial policy practicing neo-mercantilist mechanisms instead of a the free-market theory which was all the vogue at the time. By regulating ownership as well as labour and construction, important knowledge was transmitted and secured that Norway would not become merely a industrial banana republic, but one with joint ownership and control of its resources and its processing. Lastly it illustrated that if the framework governing the resource was sound, a crisis in international markets, need not be terminal for the industry of society at large, like the Energy crisis of 2021-22.

Unfortunately, we now need to look at where things started to go wrong. This system served its purpose, but was replaced. Its replacement, I will argue provided the framework for the Energy crisis of 2021-22, and in the next section we shall see where the rot began.

The 1990s and the decline and fall of public control.

Up until the 1990's the energy market in Norway was mostly run as a public utility, with a local monopoly. The energy sector provided cheap energy for industry and consumers and provided a comparative advantage for industry. The individual consumer could not choose where to buy power from, and had to settle for the local plant regardless, a local monopoly, for all intents and purposes. The local plants were obligated to sell at close to cost of production and ensured cheap and accessible energy to the local consumers. There was little profit to be made, and due to a lack of capacity of storage and transfer, it was not easily exported either. This could in periods of heavy rain, forced the plants to release stored water, without any production. From a business point of view this constituted a waste of theoretical profits.

The laws outlined above and how the hydroelectric resources were managed, (until the passing of the spuriously labelled "liberalization of the energy market" of the early 1990's), were within a framework which can be described as conforming to the "Strong state" spectra of industrial policy. By the late 80's a blue wind was blowing in Europe, Thatcherite ideas and Chicago school of economics were dominating parts of the public discourse. This led to the rise of neo-liberal politics and is directly to blame for the manufactured energy crisis of 2021 and 2022.

But let's not get ahead of ourselves, first we need to examine how this decline of public control and neo-mercantilist policies, in favour of more free-market policies, created the prerequisites for the Energy-crisis of 2021-2022.

"From the latter part of the 1980s, this understanding of the power system's societal role was challenged by groups who believed that electric power should be regarded as an ordinary commercial product. [Rather than a public utility.] The change took place through a liberalization of the power market from the beginning of the 1990s. The change came to the fore in a new energy law and the creation of a Nordic commercial market for electric power. The production of electricity should in principle be a commercial production where the producers should have ordinary business objectives, primarily to create large profits for their owners."(Wicken & Hanson, 2011).

By liberalizing the energy infrastructure, Norway abandoned its neo-mercantilist industrial policy. In the 1970's and 80's, this energy policy was mostly concerned with satisfying demand for power and so-called power balance. Meaning that Norway had sufficient amount of domestic reserve production in its reservoir, to prevent scarcity and rationing. The new energy law changed the administration of energy resources into one of the most liberal markets in Europe, based on free market-principles, where consumers can purchase power from a multitude of suppliers, and the local grid is separated from this process, despite their local monopoly. It has been argued that this change in policy, created a short-sighted energy policy as opposed to that of the neo-mercantilist one. (Christiansen, 2007) This is the primary structural prerequisite for the energy crisis of 2021 and 2022.

Thue refers to it as a reform where the economists took over from the engineers when the law was written. (Thue, 1996:92) Their input seems to be of implementing market principles into the legislation. Whilst previously, societal considerations in conjunction with industry were paramount, the economists argued for societal economic profitability. Questions regarding marginal rates and profitability came more into the forefront during the 80's and the economists laboured for energy to be treated as any other market commodity. (Ibid: 95-96) Logically if profits are the primary focus, the other considerations receive less attention. The energy crisis of 2021 and 2022, are a perfect example of profit chasing going wrong.

“The economists' way of thinking represented a clear break with the prevailing price and investment criteria in the sector. Both the State powerplants and the municipalities' electricity utilities mainly used principles that the price should be based on self-cost. The income was to cover the costs of production and transmission of power, and in the recovery of self-cost, old and new facilities were considered together. This method of calculation was closely related to the fact that electricity was seen as a welfare good and an instrument of district/rural policy and industrial policy. The economists believed that the prevailing criteria for pricing and investments led to too little return on investment - i.e., to overinvestment in the electricity sector in relation to other sectors in society. Many also believed that too much emphasis had been placed on dry year protection and fixed power supplies [to industry].”(Ibid:97) And as we shall

see later in this text, putting less emphasis on this, in favour of profits, led to the crisis of 2021-22.

Thue goes a long way in suggesting that economist, in favour of market governance are to blame for the reform, even down to listing the number of economists relative to other professions in the governing body of the oil and energy department.³ Pointing out that economists trained in the 70s and 80's were influenced by the Chicago school of economics, led them to push for a market agenda, disregarding the principles that had governed energy policy in Norway up to that point. (Ibid:103) This is also supported by the director of the NVE (at the time) wrote that after having built the energy, economists pointed out there was money to be made here, by increasing 'efficiency' instead of the previous focus on energy security. (Diesen, 2007:44) (Efficiency in this case meant selling more abroad.)

This assault on public ownership and control in favour of market mechanisms is a matter of historical record, and the trend has been noted in hundreds of publications since the 80's. Asbjørn Wahl noted in *The Growth and fall of the welfare state?* He points out that to market orient the public utilities, and thus weaken the welfare state, you open for a redistribution of wealth and power from below, to the top. There are powerful economic actors with a vested interest in reorganizing the welfare state, and one way to do it; is to remove control of public utilities and sources of income. (Wahl, 2009)

The Energy law of 1991 was a radical free-market shift from the idea of energy as a public utility, to a market driven commodity. Norway became one of the first countries in the world to entirely let the market mechanisms control supply. (Skonhoft, Noreng 2021) The rationale behind this thinking was that market mechanisms would be superior to public planning and that the actors would act more economically rationally, if decision making was governed by supply and demand mechanisms. However this thinking does not appear to take into consideration that electricity is an inelastic commodity, a problem we return to during the Energy crisis of 2021-

³ In 1990 it was 51 out of 123 (Ibid:97)

22. This ideology was heavily influenced by a report from the leading business school of Norway, Norges Handelshøyskole, published in the late 80's. Einar Hope was part of writing this paper and in a unusually self-congratulatory article in a book published by the NVE, he gloated of the success and underscores the fundamental principles of the reform. "The goal of the whitepaper was increased efficiency, by using market based power distribution, competition and regulation." (Hope et al., 2007) Or in other words, implement free-market principles into electricity governance again, to make more money.

The main points of the law were summarized in a report by Astrid Rambøl and Magnus Marsdal in 2022, with the following 4 points:

1. The company that produced power was to be separated from the business that owned the power grid. Thus the power producers had to compete in a market where neither of them [producers] could benefit from being in control over the energy grid.
2. Where the energy company was previously a public monopoly in its geographical area, there would now be market [with] competition, and customers would have to choose their own electricity supplier.
3. The energy plants remained in public ownership, but were now to be run as if they were commercial enterprises with economic gain as the goal. They were often reorganized into joint-stock companies.
4. Soon, an exchange was to be established for the trading of power contracts, so that Norway had the world's first functioning and full-fledged spot price exchange for trading in power contracts. (Rambøl & Marsdal, 2022)

The chief executive of The Norwegian Water Resources and Energy Directorate at the time, Erling Disen called a revolution and leading the way in letting market forces be the governing principle for the distribution of electrical power. (Disen,2007)

From this point onwards, the governing principle of Norwegian energy has been market forces. The historian Lars Thue, when trying to summarize the shift pointed out that after being a public utility, the energy sector was transferred into a business. He gravely noted at the time that: "For

this reform to work, it required that elected officials to a significant degree abandoned control over the utility companies to the markets and the board of directors.”(Thue, 1992) Alas he was right. The strong state industrial policy of the energy sector was abandoned in favour of the economists wish dream of market control and regulation. The neo-mercantilist vision of providing wealth and security for consumers and industry was replaced by a system primarily concerned and motivated with profits, making all else secondary. This is the framework that made the Energy Crisis of 2021-22 possible. We will see how the chase for short-term profits, despite lack of precipitation, forced Norway to consider possible rationing of electricity. In stead of limiting production, profit chasing only meant more export, because that is what happens, when market logic is the only governing factor.

[Enter the European Union and The Agreement on the European Economic Area](#)

The European Union was founded between France and Germany, to govern their respective interests in coal and steel. Two of the major inputs to war-making capacity and the foundations of the modern industrialized state. The European Union has however changed from an instrument and proponent of strong government industrial policy to a promoter of right-wing economic so-called free-market policy. Enshrined in the Maastricht treaty of 1992, the four freedoms of the European Union are the free flow of: goods, capital, persons and services. This was a substantive shift from the Steel and Coal community, this has subverted the foundational principles of the Union and common market, to that of market forces and capital interest. This shift, though initialized at a much earlier point, reached high gear with the Maastricht agreement. One of the ways this was felt, was in Norwegian energy policy and legislation.

The European Union has laboured since the 80's to create an internal energy market. “The commission in particular has over the past several decades, sought adoption and implementation of several “packages” of liberalizing legislation, with a controversial third package winning approval by the European parliament (EP) in April 2009 and by the Council in June 2009. In 2007, dissatisfaction with the lack of competition and frequency of discrimination in the energy market had led the European Commission to make another push to open access to Europe's gas

and electricity grids, where the first package and the second package were judged to have largely failed in their aims.” (Buchan, 2010:358)

The Treaty of Lisbon further expanded on the principles of the Maastricht treaty. In the treaty’s article 176 A, it is underscoring the need to ensure the functioning of the energy market and promote the interconnection of energy networks. (European Union, 2007) This can be viewed as a continued effort to promote market mechanisms, for what is in essence an inelastic good, with a local monopoly in what has traditionally been administered as a public utility. As mentioned earlier, this has led to some controversy and push back, from amongst others, Germany and France. (Traditionally proponents of strong-state industrial policy.)

In the case of Germany, the European Union, was unable to push through market reforms via government, and resorted to using anti-trust legislation, to break up some of the major stakeholders. (Buchan, 2010:358) As discussed previously on the soft authoritarianism of neo-liberal policies, this is a prime example of the champions of neo-liberal politics, using extra-parliamentarian means, to force through their politics.

This is not a new thing, the push from the European Union, to move power from elected bodies to legislative ones and move power to unelected bodies has been at a steady process for decades. A Norwegian government study, called *Makt og demokrati utredningen*, published in 2003 pointed out that parliamentarian rule had been weakened in all levels of government. One of its findings, were that power was moved into the courts, and that they to an increasing degree took their cues from the European Union. (Østerud et al, 2003)

To put it more succinctly, the European Union has for the last decades been a promoter of free-market, neo-liberal policies and so-called liberalization. Or as Buchan puts it with regards to Energy:

“The commission has been the champion of liberalization in the European energy market. Knowing the resistance from some governments, it was understandably slow in the 1990s to

start its liberalization drive. Yet once launched in this direction, the Commission has doggedly persisted, even after energy security and climate change began to eclipse liberalization as an issue. Its main goal is to curb the natural monopolies of the gas and power networks by ensuring open, non-discriminatory access for all third parties to these grids.” (Buchan, 2010:361)

The way the commission works in implementing policy is by legislation on a super-national level. Introducing laws through the previously mentioned packages and using the courts to enforce its policies. There are several problems with this approach, that appeared for Norway in the so-called Energy crisis of 2021-2022. One of these problems is that unfortunately for Norway, the regulators for Energy and gas are the same in the European union and are treated as much the same commodity. From a legal standpoint Benson and Russel (2015), noted that the EU had by 2010 enacted no less than 350 energy policy instruments. And we will see in the discussion part, how this hampered any coherent government response to the crisis in 2021-22.

As the European Union championed neo-liberal reforms in the energy sector, the same process, though much more radical, was pushed through in Norway, with the 1990 Energy law. These two processes, though not necessarily coordinated, must be seen as symbiotic. There has been written plenty of analysis pointing to the different levels of the decision-making process. And where they connect, such as Egeberg and Trondal (2011), and Claes (2002). Though for our purposes since Norway is not a member of the European Union, but through the European Economic area agreement, where the rubber hits the road, so to speak, is where there is a difference in EU legislation/policy and/or goal, compared to national legislation/policy and or/goal. Veggeland (2009) referred to it as incongruence, and Jevnaker (2014) referred to it as misfit.

In this process, however, if we compare the European Union goals with that of what was championed by the Norwegian Water Resources and Energy Directorate (NVE) there is a striking similarity in both ideology, goals and how the policy was implemented. For future reference, a comparative study of the symbiotic process, might be well worth further study. However, if we return to the processes, it can be seen to be working in parallel. The legislative manoeuvring intended to achieve a liberalization of the energy sector was championed both in

the EU and by the NVE. It is worth noting, that Norwegian reforms went further than the EU had at the time, but clearly had the same neo-liberal ideology informing their plans. Just as the reforms of the EU are impossible to understand, without a grasp of free-market and neo-liberal economics, neither are the reforms enacted in Norway. Concurrently, both sides also pushed for connecting national grids to each other, to facilitate exchange and trade in energy. A point we will return to in the discussion.

By examining how the European Union's championing of neo-liberal market policies, it is worthwhile to examine how this connects to the Norwegian administration of energy resources. Norway signed an association agreement with the EU, the European Economic Area agreement in 1992, that came into effect in 1994. (Lovdata) It's a dynamic agreement that regulates Norway's inclusion in the European Economic area. The treaty is the primary conduit for the spreading of European energy market policy into the Norwegian energy system. Laws and ordinances adopted by the European Union is sent via this agreement for inclusion in Norwegian law. It is thus also the primary point of contact for the promotion of the European Union's agenda of free-market principles and the transfer of sovereignty to the super-national level, away from the nation state and into the European Union system. The primary enforcer and watchdog of this policy is the EFTA Surveillance authority (ESA), which according to their webpage monitors compliance with EEA rules and regulations.

The agreement subserves Norwegian legislation to that of the European Union. With some estimates as high as 20% of all laws enacted in Norway coming from the European Union, (Andreassen, 2014) The influence can be characterized as substantial. Norway has the theoretical right to refuse to include new legislation, but this right remains theoretical, since the Norwegian government has never dared to employ it. There are other points of contact, such as bilateral agreements, however the agreement is the most important implementer and spreader of EU policy into the Norwegian system according to a whitepaper by the Norwegian foreign office. (NOU 2012:35)

Authority was transferred from the traditional regulator NVE, and moved to independent organisations, such as The European Union Agency for the Cooperation of Energy Regulators (ACER), established in 2011. The various bureaucratic technicalities should not steal too much of our time, but if we maintain a macro perspective, Hammer notes that coordinating functions, regulatory authority was decoupled from political governance and implemented in line with EU policies. (2002, 661-663) This means that even if Norway politically wishes to change its energy policy, this will bring them into conflict with EU treaties and regulatory authority. Thus, transferring authority of what used to be a public utility, to market control, administered by EU regulatory authority. In a broader sense, it transfers political decision making to the courts for control. This compounded the Energy crisis in 2021-22, by hampering any curtailing of exports. This legalistic trend has been pointed to over time and an article on the subject is worth quoting at length:

“Despite the EU's supranational character in most policy areas, it has nevertheless been common to say that the member states enjoy a form of administrative sovereignty. This means that even if the EU's policy (for example in the form of laws) comes about in a supranational way, it has still mainly been up to national authorities to bear the responsibility for the required implementation. As the EU's laws have largely been given in the form of directives, this may have given national authorities considerable room for adaptation in the implementation phase. However, there are many indications that administrative sovereignty is also under pressure, which is expressed in at least three ways: Firstly, we see a tendency for the Commission, often supported by a rapidly growing number of EU agencies, to become directly involved in how EU legislation should be practiced by cooperating closely with national directorates and supervision, preferably without incorporating national ministries accordingly. which thus gets a "two-hatted" role in relation to its own ministry on the one hand, and in relation to the Commission and EU agencies on the other. In a certain sense, national directorates and supervision thus become parts of two administrations: a national as well as a common union administration. This challenges the parliamentary governance chain parliament-government-ministry-directorate. Secondly, there are signs that EU legislation in the form of regulations is being applied more often, which also gives national authorities less room for manoeuvre in the implementation phase. Thirdly, the Commission and certain EU agencies have the right to make binding decisions in individual cases. Together, this is believed to lead to a more uniform implementation of Community policy.” (Egeberg & Trondal, 2014).

So by transferring power, regulatory authority and changing how laws are transferred for implementation, the European Union has effectively removed national sovereignty and the national bureaucracies from the decision making process. This can be seen in conjunction with the soft authoritarianism described by Bruff (2014) and Byrne (2017) in previous chapters. So not only moving power away from parliaments but also the national bureaucracy, using legalistic technics, to implement policies without regard for sovereignty nor popular will. As noted in the chapters on legalism and legitimacy, this deracinates government legitimacy, when faced with a problem like that presented in 2021-22, because their actions are curtailed by super-national legislation and control. The European Union has preformed the largest “power grab”, in modern times, and successive governments have failed to stop it, either for fear of the European Union or out of loyalty to it.

The current Norwegian energy system in praxis

So having examined how energy policies and priorities have changed over time in Norway, I believe it is well worth having a look at the current system. Before we consider the cables, it is worth looking at the system as a whole. Here is a rough illustration of the various bidding zones in the Nordic region from Nord Pool. (2015)

When looking at this map, it is necessary to also consider the cross-border energy cables that enable import and export of energy. Nord Pool published a revised explanation document for the system in March (2022) that outlines the various points of connection.



“The NO2A Line Set consists of the following connections:

- NO2 ↔ TT NL
- NO2 ↔ TT DE

The NO1A Line Set consists of the following connections:

- NO1 ↔ NO5
- NO1 ↔ NO2

The DK1A Line Set consists of the following connections:

- DK1 ↔ SE3
- DK1 ↔ NO2

The SE3 Line Set consists of the following connections:

- SE3 ↔ DK1
- SE3 ↔ NO1” (Nord Pool, 2022)

In short, the system has a number of connections. We are familiar with the connections to Denmark and Norway, but the list also mentions two important cables to Germany and the Netherlands through bidding zone 2, south and south-western Norway. However, this list fails to mention the link between Norway and Great Britain, which is also linked to bidding zone 2. (Statnett, 2021) The reason for this might be that this connection is outside the internal energy market of the European Union, but the explanation document does not specify a reason for this. Nevertheless, the above list and illustration provides a rough explanation of the current structure of the Nordic bidding area, as well as a list of the primary cables, whose influence we will look at in the next section. However, so far, we have only examined the rough outlines of the system. To truly understand how it works in praxis, we need to examine how it works, and what underlying principles govern its day-to-day operation, for this my primary source is the NVE and their publications.

The following section of description and included figures are all from the NVE homepage (2016/23). I have tried to retain as much as possible of the original text, because it not only provides a factual basis for the current system but also their rational and what factors they employ in judging these decisions. I advise giving special note to their emphasis on economic perspectives, economic rational and only occasional reference to social welfare, i.e., neo-liberalism in praxis. Certain portions have been abbreviated and reorganized for clarity, but provides an excellent overview nevertheless:

“Today, Norway is connected to Europe through multiple interconnections and is part of the European market coupling for the Day-Ahead market. [...] Norway produces roughly 130 TWh in a normal year, [...] 96 % of power production in Norway stems from hydropower. A large share of the production capacity is flexible; hydropower storage possibility is 85 TWh. In 2015, Norway had a net export of 14.8 TWh. On average, in the last five years, the net export has been 11.3 TWh. However, in 2011, Norway was a net importer (7.6 TWh). In the Nord Pool area in 2015, total consumption was 402 TWh, of which 374 TWh was traded in the Day-Ahead market (same area). This means that 93 % of consumption was traded at Nord Pool’s Day-ahead market.” (Ibid)

So as previously mentioned, Norway is a net exporter of Energy, with most of domestic energy generation being generated by hydropower. Though total exports of energy are miniscule compared to the oil and gas exports, they have an oversized influence on our discussion and influence on the domestic market.

[..] As a result of the large hydropower capacity, Norway has a considerable surplus of power in periods with good hydrological conditions, e.g., snow melting, periods with high precipitation, etc. During such periods of oversupply, it is typically profitable to export power from Norway to other countries. Countries like Denmark have a high production of power and low prices when it is windy. In such conditions, it is often profitable for other countries to import power from Denmark. By doing so, it is, for example, possible for the Norwegian hydropower producers to save water in the hydro reservoirs for later, when the water has a higher value.” (Ibid)

This made a lot of sense from the 60’s and 70’s when the first cables connecting the Norwegian energy grid to foreign markets were established. Both Denmark and Sweden were reliant on different sources of energy, who’s production was not contingent on precipitation, making them theoretically and mostly in praxis independent of each other. As previously mentioned by the chairman of the NVE, the primary concern of his department and its engineers were in that time period to ensure sufficient supply and provide alternative sources if needed. The primary concern of this period and the original cables were motivated by supply security and of energy as a public utility, not a commodity for profit maximisation. It is therefore disheartening to continue citing the next paragraph of the NVE’s current analysis.

“The price difference between two countries will decide whether it is profitable for a country to export or not during a given hour. By building interconnections to other countries, it is possible to utilize differences in the power system between countries and increase social welfare for the entire area. This means that interconnections enable the society to achieve the same level of security of supply at a lower cost. [..] “ (Ibid)

In the current NVE analysis, the cables function as a vehicle for profit maximisation. The security argument is still present, but the guiding principle is profit. The above paragraph is a business economic argument and shows a lack of understanding of the supply and demand curve, when trading in an inelastic good. The energy crisis of 2021-2022 is a direct consequence of the above-mentioned policy. Employing the different prices in foreign markets, export of energy was found to be vastly more profitable than domestic consumption. By exporting power, you could demand a higher price in foreign markets, like Germany and the Netherlands, which drove up the prices for domestic energy in Norway exponentially, and all the while emptying Norwegian magazines of water, creating additional scarcity. In fact, this neo-liberal policy provided higher prices, less efficiency, less social welfare and large economic problems for business reliant on energy, in fact it disregarded any competitive edge Norwegian industry had and relegated us to the industrial equivalent of a banana republic.

“Water values are important in a hydropower system such as the Norwegian model, and it is complicated to calculate the exact terms, but in simple terms, the water value is the alternative value, if used in a later point in time instead. The fundamentals of power production varies between the countries, as does the demand, i.e. the load curves. This implies that prices in adjacent countries often fluctuate more within a day than in Norway where we typically have a flatter load curve. In addition, there can be relatively large price variations between seasons, with low Norwegian prices during the Summer. Denmark on the other hand, has relatively small seasonal differences. All else equal, this means that Norway normally exports more during the Summer. These differences are important drivers for investing in interconnector capacities.”
(Ibid)

Above the NVE does it's best to provide a socio-economic argument for the construction of further cables abroad. There is a valid argument for having cables, for energy security. Those were built to connect us to the Danish and Swedish grid 50 years ago. Therefore, the security argument for further construction of cables, does not hold water. The only logical reason for further construction of cables is to facilitate further export and profit. However, having recently had an energy crisis due to unregulated export and record profits, I can understand why the NVE presents a different line of argument centred on security instead.

“Norway is currently divided into five bidding zones (NO1-NO5). The division of bidding zones reflects physical structural congestions (transmission constraints) in the grid. [...] A consequence of having multiple bidding zones is that different zones can have different wholesale prices, reflecting the underlying supply and demand given the grid constraints. A system without bidding zones, on the other hand, would have required the TSOs to use more resources on redispatch measures. In turn, this would have resulted in increased costs for system operation and, all else equal, increased grid tariff.” (Ibid)

This is neo-liberal economic speak for saying, the country is divided into grid areas and bidding zones, because the price of energy is different in regions due to topography. The NVE argues that therefore it is better to have differentiated bidding zones, moving the price of energy transfer in the regions to the consumer, instead of guaranteeing an equal service, as this would cost more. By creating different bidding areas and ipso facto different markets, they divest central control and responsibility. The bidding zones also provided some of the best arguments against further construction of export cables, by providing a control group for the unplanned market failure of 2021-22. Historically the bidding group in the middle of Norway, centred around the area of Trøndelag, has been one of the more expensive areas for power, in part due to industry and partly due to a much harsher climate compared to the south and south-west of Norway, with comparatively less preponderance of hydroelectric energy production. However, during the 2021-22 Energy crisis, the prices in the south and south-west of Norway increased dramatically, compared to a large, but not dramatic increase in Trøndelag. The primary driver of increased prices was foreign demand and the existence of export cables with available capacity to supply this demand, connected to the South and South-western bidding zones. A point we will return to later in this text.

“An efficient wholesale market with bidding zones reflecting grid topology will yield efficient price signals for both generators and consumers alike. The wholesale price is an important input both in the short run, e.g. planning of next days’ generation or consumption, and in the long run e.g. for seasonal planning of maintenance as well as for investment purposes e.g. where to build power plants and where to place large consumption units. The wholesale marked price is also important for the TSO when considering grid reinforcement or investing in new infrastructure. The price differences indicate the marginal benefit of expanding capacity between these zones.

Consistently large price differences indicate a large potential welfare gain if the cross-zonal capacity is increased.”(Ibid)

The above paragraph illustrates that market thinking has entirely permeated the NVE and that by subserving planning to neo-liberal free market principles, the Norwegian energy policy is not only subservient to the principle of market forces, but it is their guiding light in providing “signals” and considerations for future investment and construction. The NVE seems to be more concerned by creating economic textbook markets, rather than providing a public service. It is also a cause for concern that when they note “consistently large price differences” [as a source of] potential welfare gain”. What the NVE is arguing for here, does not appear to be that since energy prices in Trøndelag is lower than in the South-West, something should be done to help the South-West. On the contrary, the economic rationale is that since energy is cheaper in Trøndelag, due to constraints on cross-zonal transfer capacity, further investment on transfer capacity is validated. All else being equal in the Norwegian energy-market, this means that the consumers of Trøndelag, should pay to increase cross-zonal capacity, leading to more export from Trøndelag, through to the South-West (and further on – all else being equal), thereby increasing the price for power in Trøndelag to the same crisis levels as the South and South-west of the country. It is my firm opinion that one would have to have been trained as an economist, to argue that this can be defined as a “Welfare gain”.

“Norway has had market-based dispatch of generation since 1971 when Samkjøringen, a common pool for generators, was established. Over the years, this has developed into a common Nordic market, and today, Norway and the Nordic countries are part of the European market coupling through a single price coupling mechanism called Price Coupling of Regions (PCR). This means that large parts of Europe are coupled through a complex price setting algorithm called EUPHEMIA. In order to calculate prices and cross-border flows, EUPHEMIA includes cross-zonal transmission constraints given by the TSOs. With this input, EUPHEMIA calculations maximizes social welfare for the entire PCR-area (i.e. let electricity flow to where it has the greatest value).”(Ibid)

In the NVE's own words, the price calculation lets energy flow to where it has the greatest value. To liken this to maximising societal welfare is the ultimate in neo-liberal new-speak, where maximising profits in some magical manner benefits the whole of society. It does harken to the observation often erroneously attributed to John Maynard Keynes that; 'Capitalism is the extraordinary belief that the nastiest of men for the nastiest of motives will somehow work for the benefit of all.' Clearly the guiding principle is market economic forces, the ways to measure success and argue for development are all market economic variables. And the result of the blind faith in market forces, provided Norway with an energy crisis in 2021-22.

Having looked at the current system in praxis, the theoretical basis for its governance, and the historical process that led up to the manufactured Energy Crisis of 2021-22, we can now take a closer look at the calamity itself. As mentioned in my introduction, the DeFacto report was one of the only scientific reports on the subject, when this thesis was started. However, they only provided a snapshot of the situation. To fully understand why this energy crisis arose, we have seen the historical trends and the theoretical shifts in governance and structure, which are essential to understand a crisis which is first and foremost caused by shoddy framework. In the next section, we will look at the DeFacto rapport, as the start of our discussion, look at its criticism, but also add to the analysis. I intend to show that the crisis of 2021-22, is much larger than energy prices and cables, but a perfect illustration of an imperfect system, with man-made faults, that deracinates the legitimacy of the government.

Discussion, the Norwegian energy crisis of 2021 -2022

The Energy cables

There are many competing narratives for why Norway had an energy crisis in 2021 -2022. In this section we will examine some of the most prevalent explanations and look at why I believe the rise of neo-liberal market policies are ultimately to blame for this calamity.

In May 2022, the independent research institute DeFacto published its analysis of the 2021-22 energy crisis in Norway, commissioned by an interest group called Industriaksjonen. The group consists of mostly trade union activists and the rapport was financed by labour union funds. (Lekve & Helle, 2022: 3) The report looks at the energy crisis of 2021 and early 2022 and had a broader mandate to examine the crisis than the government led investigation, and also with considerably more interesting findings, as well as suggestions for solving the problem in the future. They concluded rightly that one of the underlying structural deficiencies that caused the energy crisis of 2021 -22, was the energy cables connecting Norway to its neighbours, and their findings are worth quoting at length:

“Norway has had power cables abroad since 1960. Until last spring, we had a total of 15 foreign cables to Sweden, Denmark, Finland, Russia and the Netherlands.” (Ibid:8) We have previously discussed the reason for the original power cables as an insurance policy against drought years, and harsh winters. Traditionally the cables to Denmark and Sweden, which were first, provided a buffer against the vicissitudes of climate by providing an alternative source of power, that was not linked to precipitation. So, whilst in most years, Norwegian domestic production would be mostly sufficient for the domestic market, this safety mechanism provided security, as previously discussed by the chief of the NVE Erling Diesen quoted in the section on decline and fall of public control. (Diesen, 2007:44) This push, previously discussed led to the opening of more of the above mentioned cables, to provide further outlets for Norwegian energy, called by the economists at the time increasing efficiency and thus increased profits.

“With the opening of the NordLink cables to Germany in May 2021 and the North Sea Link to England a few months later, two successive demand shocks hit the Norwegian power market. With the opening of these two cables, Norwegian export capacity increased to 80 TWh (terrawatt hours), well over half of a total normal annual production of 155 TWh. The effect on electricity prices was immediate and very strong. When NordLink was opened, electricity prices in Oslo and price region NO1 [Oslo and south-eastern Norway] doubled from June to September, from 55 øre per kilowatt hour (KWh) to 110 KWh. Then, when the North Sea Link came into operation in the autumn of last year, there was another doubling of prices. From November last year to January this year, electricity prices in Oslo rose from 110 to 220 KWh.”(Ibid, 8-9)

The De Facto report points to the radical increase in price on the Norwegian bidding market Nord Pool in price region NO1 Oslo and south-eastern Norway. This is a relevant perspective for a research institute in the capital, situated in the mentioned region, however, it does leave out that the increase was even worse in NO2, which also has the larger number of cross-border cables as measured by capacity, namely the cables to Great Britain, the Netherlands, Denmark and Germany, thus making it the primary hub of export and also the region suffering the largest price shock. Surrounding regions that had the ability to provide energy across bidding zones were also affected by this, but given constraints on the ability to transfer power, this was to a certain extent constrained. It is worth mentioning that the NVE is looking at increasing cross-zonal capacity, to enable further export and thus increasing the problem to more bidding zones. The report goes on and notes that;

“It may seem paradoxical that it is not primarily the extent of power exports, but rather which countries and markets the exports go to, that seem to explain electricity prices to the greatest extent. The explanation here is linked to price formation on the Nord Pool energy exchange. For the power producers, it will be beneficial to sell to the highest bidder, which is typically located in high-price markets such as Germany and the UK. At the same time, the Norwegian power companies are also dependent on being able to deliver the power, and to achieve this they are dependent on sufficient exchange capacity with the markets they would prefer to sell to.”(Ibid:9)

Logically as long as energy firms as well as speculators on the energy exchange Nord Pool treat energy as a commodity to be sold to the highest bidder, the profit motive will also govern distribution and price. Given the constraints of the Norwegian system, when one considers the demand for energy in the European market, prices are given to increase. At the same time, energy firms acting on Nord Pool have an incentive to export as much as possible to the market that provides the best price, ie foreign markets. This is the inherent rational of market principles and a logical consequence of implementing market governance of what used to be a public utility. The firms operating in this system, are usually organised as limited liability companies, and they have an obligation to their shareholders to maximise profits. This is no random environmentalist conspiracy, a theory promoted by authors such as Kent Andersen (2022), but the rational actions of market actors, in a market governed system. Logically the actions of the actors in this system follows the rational of the market and the profit seeking motivation of free market principles. Therefore, if there is a high degree of demand in Great Britain, the Netherlands and Germany for electric energy, the primary constraint on export and therefore increased prices, all else being equal, are the cables. De Facto has also reached the same conclusion and writes:

“If there is no capacity to transport electricity to Germany and the UK, they will have to sell in the Norwegian or Nordic markets with lower prices. It is therefore not primarily the export itself that creates the high prices, but the increased capacity for high-price markets where the power can be sold. This is called the 'alternative price', which corresponds to what the power could have been sold for. When Norwegian private customers or companies nevertheless buy the power, because they need it, they will have to pay the same as if the power producer sold to the highest bidder in the German or British market. For that reason, it is the opening of the last two foreign cables, NordLink and North Sea Link, which has been decisive for the higher Norwegian electricity prices from last summer until today.” (ibid:9)

The report was criticised by the energy sectors combined employers' union and advocacy group Energy Norway. Director Toini Løvseth (2022) contradicted findings in the report in an article published in *Verdens Gang*, one of the largest newspapers in Norway. She disagreed that it was the cables to Germany and England that brought the increase in price. Citing a study from Statnett, she maintained that the two cables to Germany and Great Britain only accounted for

10 per cent of the increase in price, but that this was negligible since Norway already had 15 cables beforehand, that connected us to the foreign market and their associated prices.

This rather peculiar rebuttal implicitly agrees that the cables as a whole increase prices for energy in Norway, since it connects us to the European energy market, but disagrees that those two cables are wholly to blame. This is a valid line of argument but fails to see the forest for the trees. The connection to the European energy market (including Great Britain) means that countries not self-sufficient in Energy wish to purchase energy from suppliers at a market rate. She does not appear to acknowledge the logical consequence of importing increased European demand into the supply and demand calculus of the Nord Pool system.

Permit me therefore to repeat parts of the section that dealt with competitive advantage previously mentioned. In a closed system prices will diverge across borders, except in the peculiar case of identical factor endowments, tastes, and technology. With the introduction of trade to the (fairly) closed energy sector, arbitrage tends to break down the divergences. Economies export goods that command higher autarky prices abroad than at home. And as previously quoted: “In a world unfettered by restrictions on trade, exchange continues until goods prices are equalized everywhere.”(Thomas, 2005) Therefore when Norway opened large energy exchange cables to the German and British markets, they eroded one of the primary competitive advantages of Norwegian industry. By importing the price of energy from abroad, because arbitration forces prices towards equalization. By connecting the Norwegian grid to the European market, and through unregulated export, we have negated this advantage, and this is one of the primary catalysts for the energy crisis.

In the same article, Løvseth pointed to two points that influenced the energy price, without actually saying they were more important, she did imply that the De Facto reports findings therefore were invalid, writing that:

“Prices have also been driven up by less access to hydropower in southern Norway, due to unusually little rainfall since last autumn. Magazine filling in the region is currently 10-20

percentage points below normal. The tragic war in Ukraine has exacerbated the problems somewhat, but electricity prices had multiplied long before the war started. [...] Then they skip over the fact that Russia has withheld gas deliveries to Europe since last summer, at the same time that southern Norway entered a long drought with little rainfall for hydropower.” (Ibid)

These two positions are some of the most echoed in the debate, by proponents of the neo-liberal status quo and are well worth examining. Let’s deal with the Russians first and the German connection. A press release from the German federal statistical office published on February 24th 2022, when the war in Ukraine started pointed out that: “Germany imported in particular crude oil and natural gas to the value of 19.4 billion euros – that was a 49.5% increase and accounted for 59% of all imports from Russia.” (No10, 2022) A different press release pointed out that «Natural gas was the major energy source for industry in 2020, accounting for 31.2% Households used mostly natural gas to meet their demand for housing energy (41.2%) in 2019” (NO44,2022) However, when examining the distribution of inputs, 47,1 % of electricity fed in were from renewable energy sources. Out of this, only 3 per cent was from waterpower, in Q1 2022, down from Q1 2021. Though it did not stipulate if this was from Norway or other sources, it does however give us a indication of how the war in Ukraine influenced the Energy sector. Surprisingly little in the case of Germany if their own statistics are to be believed. Basically, the source of demand for Norwegian hydro power, cannot sufficiently be explained through the lens of the war in Ukraine and the resulting gas shortage.

If we examine the Norwegian export of oil and gas and look at the figures, the Norwegian petroleum directorate published the following: “Norwegian production of natural gas covers approximately 3 per cent of global demand, however, as an exporter Norway is a significant player. Norway is the third largest exporter of natural gas in the world, behind Russia and Qatar. In recent years, Norway has supplied between 20 and 25 per cent of the EU and United Kingdom gas demand. Nearly all oil and gas produced on the Norwegian shelf is exported. Combined, oil and gas exceed half of the total value of Norwegian exports of goods. This makes oil and gas the most important export commodities in the Norwegian economy.» (2022)

That is not to say that the war in Ukraine has not influenced European energy markets, because they clearly have. Norway has been exporting record amounts of gas in the same period at inflated prices, to cover demand. There have been murmurings from European sources, amongst others the champion of neo-liberal politics, the Economist, that Norway was making a killing on the expense of the Europeans. (2022, September 8) The sentiment was also echoed in a Time Magazine article on the same subject.⁴ (Abend, 2022) However for our purposes we are discussing hydro energy and not gas and oil, which only counted for 3 per cent of Norway's total energy export.

The war on its own is not a sufficient explanation for the price increase, because the price increase had come over time. Whilst it is correct that the Russian stop on exporting gas to Europe and primarily Germany increased their demand for alternative suppliers, the primary source of this supply was Norwegian gas. The price for Norwegian gas soared and there were spillover effects in the hydro energy market. So, on the one side there is clearly a link, because Germany need other sources of energy than Russian gas, however at the same time, the price of Norwegian hydro energy had also increased over time, so what gives. There is a better explanation than the Russian invasion of Ukraine, and we will return to this at a later stage. For now, let us consider Løvseth's second point.

Løvseth wrote that “[...] unusually little rainfall since last autumn. Magazine filling in the region is currently 10-20 percentage points below normal.”(2022) Both stated facts are at first glance factual. Yes, there was less rainfall during the winter of 2021/22. And at the time she wrote the article in May 2022 filling in the reservoirs was indeed 10-20 per cent below normal. However, this explanation, and forgive me for saying, only holds water if you examine the figures isolated for those two years. “In 2020, the country had more rainfall than average and eventually the country's reservoirs reached their highest point since 2015.”(Farmer, 2021) This created an excess of Norwegian energy supply and therefore export increased drastically. The article points out that in a normal year, France is the great exporter, but in 2021 Norway was the largest exporter in Europe. The reason for this change, the article cites EnAppSys BV director Jean-

⁴ As a point of interest, both articles quoted the neo-liberal champion and former leader of the pro-Eu organization “Ja til EU”(Yes to EU[membership]), Paal Frisvold. To my great dismay, nobody found the time to point out the irony of the champion of the European Union's neo-liberal policies in Norway, was having second thought, when that system did not favor the European Union's consumers.

Paul Harreman who claimed Covid-19 postponed a lot of maintenance and repairs in the French nuclear production and transportation capacity, preventing France from exporting as much. (Ibid)

So, with French nuclear power production reduced, and French energy exports correspondingly reduced, this created a European demand for cheap energy that could be supplied from Norway. Exports shot through the roof, prices soared, and magazines were drained as a consequence. This presents us with a much better explanation for the crisis the Løvseth's assertion that it didn't rain as much that winter. Prices were already soaring before the energy crisis, they only reached a crisis point when the selling didn't stop, even though it hadn't rained as much. That's a recipe for creating artificial scarcity, where there was none the year before.

Løvseth's argument is true if we consider her position on precipitation purely in the season of 2021 to 2022. She has a valid point that so far that precipitation and melting snow was lower that particular season, compared to previous ones. Hydropower relies on large reservoirs that are constantly refilled, and that refilling is of course seasonal. In Norway it does rain more in the fall, snows in the winter and that melts in the spring, generating more water for the reservoirs that can be released through the turbines to create electrical energy. These facts are not disputed by anyone as far as I am aware. However, that line of reasoning is only true if we look at that season. The year previous, precipitation had been high. The magazines were brimming with capacity and were filling up.

In one season, we went from full magazines to depleted magazines, and as mentioned in the introduction of this paper, the Minister in charge of Oil and energy felt the need to publish a statement on the crisis and trying to alleviate fears of rationing. (Aasland, 2022) In the statement he also cited lack of rain, and less snow melting. Echoing the arguments of the energy sector as proposed by Løvseth. The minister also mentioned exports of energy, and price differences in the different regions of Norway. As well as having informed the producers in energy that the government expected them to retain enough water to produce sufficiently come winter.

That particular slip of the tongue is the most important piece of the puzzle. The minister had informed energy producers that the government expected them to retain enough water to produce sufficient energy come winter. I almost feel compelled to repeat the line, because of the magnitude of information it contains. The minister for oil and energy, whilst writing an official press release, to calm to public on the possibilities of rationing, mentions that one of the steps taken, to alleviate the crisis, is to inform the energy producers that the government expects them to retain enough water to produce energy during the wintertime.

That single line does a lot more to explain the crisis than Løvseth's entire rebuttal of the DeFacto rapport. The reason for this requires us to examine the line and break down it down into two parts. The latter part of the sentence is the most important given our rebuttal of Løvseth's line of argument. The government expects them to retain enough water to produce energy during the wintertime. The sentence beggar belief but was written in an official ministerial press release. The implication of the sentence is not only of external scarcity, but that the energy producers have not retained enough water in the magazines to ensure sufficient energy production come winter. Hence the fear of rationing, necessitating the ministerial press release in the first place. The sentence is an implicit admission that the energy producers have been emptying the magazines at a higher rate than precipitation should allow. This supports Farmer's assertion that Norway became the largest energy exporter in 2020/2021. The logical conclusion from the minister's sentence, given the information provided on export, is that the energy producers, were chasing record profits, by emptying the magazines, when demand was high in Europe, to command higher prices.

Whilst exporting record amounts of hydro energy to Europe, due to a lack of Russian gas and French nuclear power, Norway in return imported the high prices of Energy to its domestic market, creating a previously unthinkable explosion in prices. This chasing of profits is to be expected in a capitalist system, governed by profit. The problem however, transformed into a crisis however, when precipitation did not follow production. At the point where production was high, but water inputs were unusually low, the energy producers should have curtailed production, to ensure continuity of production during wintertime. They clearly did not, and this exacerbated the crisis. By chasing record profits, for a short-term gain, as is logical given the business run thinking of the energy system, it became apparent that if you let a system be

governed by the intrinsic logic of the market and profits, there was little incentive nor instruction, to do anything else.

The government expects the energy producers to retain enough water in the magazines to keep up production during wintertime. Why is there a need to even say this. Clearly because it needed to be said. The energy producers were not ensuring sufficient capacity in the magazines come wintertime, given lower precipitation rates than usual. The energy producers in a market system responded to market forces, and market demand. The energy producers responded to market demand, by increasing production, to increase profits. Prices rose, but since inputs did not, a crisis occurred. Løvseth's argument only works if we only look at a tiny part of the equation. She fails to mention that production was at record levels, export was at record levels, and prices shot through the roof. The increased exports in and of themselves are not the problem. Increased production, without consideration of reduced input is the problem that sparked the crisis. Løvseth's arguments therefore only covers the last part of the tragedy but fails to examine act one and two. However, as a representative of the energy sector, I have no problem understanding why she wishes to blame external factors rather than things that could change the status quo.

With magazines brimming at capacity in 2021, energy prices should be lower. The cost of production for a kilowatt/h of Norwegian hydroelectricity usually estimated to be at around 12 Øre, or just about a single Euro cent, depending on currency fluctuations. (Bjørnstad, 2021) It is decided by law, after an estimate of the price of production by the department of Oil and Energy, in regard to concession sales for industry. At the same time, as that article was published in late 2021, the average Nor Pool price for the south-western production area was nearly 1400% higher. (Ibid) The primary determiner of price in this equation is demand, and supply is an aggregate of input (precipitation) and the price of production. Demand in this case only being limited by supply and capacity to export. This means that the price for production is fairly low. Going into 2021, prices should be low, because the magazines were full. If we exclude trade from the equation, logically, demand should be at average Norwegian levels, and given a surplus of production capacity, and the price of production being relatively constant, one will logically expect prices to decline. They did the opposite, and if all else is equal, they can be only a single reason for this, foreign demand. Through the year, there was

less precipitation, which should have increased prices, however, there is no comparable case in Norwegian history where prices increased for hydroelectric power, to such obscene levels, without the ability to import foreign demand into the equation. Therefore, it is blindingly obvious to any casual observer, that the reason for the price crisis was related to foreign demand, and that the price explosion was caused by not regulating this.

I hasten to underscore that increased production for export, combined with a decrease in inputs is the spark that caused the energy crisis of 2021/2022. Notwithstanding the real fear and alarm it caused at the time, I still maintain that the crisis was fake, i.e., manufactured. The underlying structural problems of the Norwegian energy sector are to blame. It is clear that the energy cables and the actors governing them are at fault in the short term and sparked the crisis. On the other hand, there could be no crisis without the abandonment of neo-mercantilist policies in favour of market governance and neo-liberal ideology. The structural framework is to blame, without it there could not be a comparable energy crisis of such magnitude. This is why the crisis is fake, because we manufactured it through neo-liberal policies, greed and failure of government industrial policy. Let us once again return to Terje Aasland and his press release.

[Terje Aasland tries to fix the crisis.](#)

We have discussed the latter part of the sentence, let us now examine the most important part. The first part is that he had informed the energy producers about the government's expectation. This in and of itself is an interesting point. The minister did not order the energy producers, nor did the minister instruct, compel or demand. The minister in charge of energy resources in Norway, *informed* the energy producers of the government's *expectation*. (My italics.) Informed and expected are a very peculiar choice of words if we consider the following.

Most of the hydroelectric power is publicly owned. As previously discussed in the chapter on the The Norwegian panic laws of the early 1900's, the waterfalls are public property, leased on a clearly defined timeframe. After the lease expires, the waterfall, and any associated structures return to public ownership. Large parts of the energy production facilities in the west of Norway

and south-western Norway are owned by the local government. That means that most of this is run by the local government. After the energy laws of the 1990's they ceased to be run as a public utility department and were separated from local government, into government enterprises or stock companies, usually owned by local government. (This is a broad generalization on my part, since the organization of this was left up to the multitude of local governments. The organizational solutions they decided upon varied greatly from place to place, as well as the rapidity of its implementation. For any broad generalization, there are at least 5 exceptions. Given these caveats I beg your indulgences as we proceed.)

So given the fact that the energy producers are publicly owned, the minister should be able to instruct them in accordance with the government's wishes. Given the fact that the government sets the laws for the management of energy resources and as the elected representatives of the people to govern the nation, it is only natural that they have the authority to instruct, order and administer a publicly owned entity at a lower administrative level of government. However, the minister wrote that he informed the energy producers, of the government's wishes. The implication for any government that wishes to be perceived as one of action, would be of instruction, command and direction, in this case we got informed.

The reason for this dissonance can be gleaned in the chapter outlining the decline of public control over the energy resources. Through the implementation of neo-liberal market policies, the government abandoned state control and the states' ability to direct the energy producers, now nominally limited liability companies. In the neo-liberal run world, the government does not interfere nor has the right and power to control what are nominally independent and private enterprises. The minister did not write that he ordered the energy producers, because he does not have that authority. Through the implementation of neo-liberal market policies, the government has abandoned the neo-mercantilist policies that provided the right to govern its energy sector, as a public utility and subservient part of its strong industrial policy. By leaving market forces in control of the energy sector, the minister in charge of what is in fact publicly owned enterprises, were relegated to informing the producers of the government's wishes. As far as I am concerned, the real crisis and scandal of 2021 and 2022, lies in this grave sentence.

Let us return to the idea of popular sovereignty as Reinhardt Bendix outlined and repeat his assertion. “In the nation-state, all is well as long as the citizens believe that the government knows what its about, has the ability to deliver on some of its promises, and has sufficient force to back up its commands when necessary. [...] But once the trust based on such feelings is disturbed, conditions can change quickly. [...] Thus wherever power is vigorously pursued and exercise, ideas of legitimacy tend to develop to give meaning, reinforcement, and justification to that power.” (Bendix, 1978 :8)

The legitimacy of the government comes in large part from the voters. Their support and provided legitimacy is linked to the government’s ability to [be perceived to] provide for the welfare of its people and pursue a policy to that effect. The governments’ ability to command is linked to that goal and the voter’s perception of it. If we consider Aaslands statement, it can be seen as in pursuance of the goal of welfare of the people, by securing energy supplies for the wintertime. His statements did not meet harsh critique at the time, and the energy sector wisely did not protest in public their right as a limited liability company to only answer to their shareholders.

Despite this action on the face of it, being in furtherance of public welfare, the government is being harshly criticised from so many fronts, that examining it warrants its own research. The government popularity and therefore its implied legitimacy is plummeting on such a stark downward trajectory that the ruling labour party is in crisis and its coalition partner looks to be halved in the next parliamentarian election. The labour party has gone from being the caretaker of the neo-mercantilist policies in the post second world war order, to a neo-liberal promoter, with a corresponding collapse in support. This collapse in popular electoral power can be explained by Bendix’s statement regarding being perceived as exercising power in furtherance of goals. This is by no means the only explanation, but it is one of the most important ones for our timeframe. This paper however is not principally concerned with the current troubles of the labour party, and I merely note that there are however a multitude of books on the subject, from the fawning; Brandal et all (2011) to the critical; Wahl (2009).

For our purpose however, the important bit is to note that by not commanding, the minister tacitly admitted that he did not have the right to command what is perceived to be a public good, owned by the public, intended for the public welfare. The logical consequence of this is that the minister did not command, because the system created in the 90's and made worse through EU policy, did not allow him to do so. As previously noted on the idea of popular sovereignty, in the Norwegian context, the tradition of legitimacy is derived partly by tradition and in whatever form it takes, it is derived from popular sovereignty. When this sovereignty is not exercised, or not seen to be exercised, this legitimacy erodes.

So why was the government's authority not exercised, or only so meekly exercised? From the perspective of legitimacy as we discussed in conjunction with Bendix and Weber, the government is entitled to govern, and enjoys a high degree of legitimacy if the governing is seen to be promoting the public welfare. In the case of the Energy crisis of 2021-22, fighting exorbitant price increases and a manufactured scarcity, would clearly fall into this category. If the magazines are running out of water, due to below average precipitation, it would only be logical for the government to curtail exports, if exports led to scarcity at home. However, the government did not impose export restrictions, when faced with a shortfall in water stored in magazines. This is the second part of the crisis, and perhaps the most telling part, we return once more to the neo-liberal ideology.

The government hid behind laws, treaties and the specter of the European Union. The government citing treaties and ACER regulation could point to the fact that it did not have the authority to instruct the energy producers. This was of course not said directly, however several statements critiquing the opposition to unregulated export, in pursuit of record profits, was derisively referred to as wanting to "cut the cables", as if this was a zero-sum game. The Labour party mayor of Oslo Raymond Johansen was quoted as saying: "To cut the power cables is «gefundenes fressen». (De Rosa, 2023) Arguing that it was opportunistic and cheap populism to "cut the cables". He echoed the argument that in Europe the price increases are blamed on the Russian invasion of Ukraine. And that it was a particularly silly notion that the cables were somehow to blame. In his eagerness to fight this apparent calamity, he failed to recognize that for Norwegian hydroelectric power, prices are a function of production and foreign demand. Let me once again reiterate from the section concerning comparative advantage: With the

introduction of trade to this system of closed economies, arbitrage tends to break down divergences. Economies export goods that command higher autarky prices abroad than at home. In a world unfettered by restrictions on trade, exchange continues until goods prices are equalized everywhere.” (Thomas, 2005) The cables import German and British demand, and thus increase prices for Norwegian consumers. Export should fundamentally be about selling a surplus, not creating scarcity at home, a point that appeared to have passed Raymond Johansen by.

The consequence of this action and this line of argument can be seen in the declining popularity of the government and the increasing levels of dissension even within its own ranks. The government is paying enormous energy subsidies to private consumers to blunt the brunt of the spike in energy prices, yet their popularity is tanking. I believe that this is because the actions and arguments presented by politicians like Terje Aasland and Raymond Johansen decrease the legitimacy of the government. By arguing that there is nothing the government can do, except subsidizing and informing, the government is arguing that there is nothing it can do, because all the factors governing prices relate to forces outside their control, be they Russian aggression or lack of precipitation. However, as I have conclusively shown, these factors should only be able to impact energy prices to a limited degree. If legitimacy is a function of being perceived to exercise power, in favour of the public good, claiming you do not have the power to influence something, intrinsically decreases the governments legitimacy. As long as the government attempts to blame any other factor than the cables and the neo-liberal legalistic construction that governs it, the government is likely to decrease its perceived legitimacy, as well as the legitimacy of the energy system it is trying to protect. The reasons for this self-defeating strategy are not obvious at first glance, but permit me to provide a possible culprit for this peculiar need to confuse the debate, with pettifoggery, straw-man arguments and if not outright lying, being in my opinion quite selective with the facts.

The European Union and legalism

If “cutting the cables” were how the Labour party were fighting dissention at home, there was a different push at the same time, from the European Union. As we have previously discussed, the European Union has the champion of liberalization in the European energy market. As Buchan noted; Its main goal is to curb the natural monopolies of the gas and power networks by ensuring open, non-discriminatory access for all third parties to these grids.” (Buchan, 2010:361)

However in recent years, the European Union have slightly changed their tune, arguing that a free energy market has to do with a green transition. The European Union has attempted to paint neo-liberal policies in a shade of green, to promote them. The European commissioner for energy Kadri Simson from Estonia was quoted in 2021: “Here in Europe, we see all the advantages of a common energy market. A more comprehensive electricity market helps us deliver more renewable power.”(Finansavisen, 2021) Kadri Simson warned against the Norwegian government Citing fears that limiting exports would decrease future investments in renewable energy. (Ibid) In the same meeting the previous minister for oil and energy Tina Bru parroted the commissioner and repeated the arguments that the cables were not to blame, lack of precipitation was. (Sørsdal, 2021) At the time, the Russians hadn’t attacked yet, so that excuse was not available to the minister at the time.

The green argument has been heard before and is very popular amongst supporters of the European Union in Norway, particularly in the liberal party. It has been criticised as a hollow argument, only intended to promote building of more renewable energy in Norway by luminaries such as Hogne Hongseth, a leading expert on renewable energy in Norway writing that “So far, wind power in Norway has mostly only led to increased Norwegian power exports.”(Hongseth, 2021) And, illustrating that a broken clock can be right twice a day, by the far-right. Kent Andersen of the Norwegian far-right website Document.no published a book on the subject blame the energy crisis on the EU’s so-called green agenda and capitalist interests masquerading as environmentalists. (2022) Both argue that there are interest pushing for building more renewable energy, principally wind, and that a lot of this impetus comes from the European Union. However, this is not the cause of the crisis.

The cause of the crisis is European demand for energy, hiking up prices in Norway. Increased production of renewable energy in Norway, is a drop in the bucket for the total European demand. It is impossible to argue that Norway could build enough capacity to satisfy European demand for energy. German hydro energy demand is largely determined by gas prices. If they increase, they look for alternatives. Germany is happy to consume Polish coal power, as well as French nuclear power when possible. They would appreciate if the energy were green, as outlined by the EU commissioner for energy, but in reality they are pragmatists. Their first concern is securing enough energy at an affordable rate, for domestic private consumption and industry. All other perspectives are secondary.

As Buchan pointed out: “Its main goal is to curb the natural monopolies of the gas and power networks by ensuring open, non-discriminatory access for all third parties to these grids.” (2010:361) There is an underlying free market ideology of trade being good and that this is good for everyone. Once we look past the green argument, it is obvious that the goal is to secure power, and to make it as easy to trade it as possible to the highest bidder. As previously mentioned in our section on the European Union, Kunzlik pointed out that the European Union wants to remove barriers to trade and encouraging competition and economic growth. (2013) This policy is guided by a neo-liberalist ideology. And as Hall pointed out; emphasizes the importance of free markets, individual freedom, and minimal government intervention in the economy. One of the key tenets of neoliberalism is the belief that removing barriers to trade and investment will lead to economic growth and prosperity. Barriers primarily being that of states. (Hall, 2011)

Once there was talk in Norway of cutting the cables due to the price shock of 2021-22, the European Union sprang into action. As we discussed in the chapter on the European union, The way the commission works in implementing policy is by legislation on a super-national level. Introducing laws through the previously mentioned packages and using the courts to enforce its policies. From a legal standpoint Benson and Russel (2015), noted that the EU had by 2010 enacted no less than 350 energy policy instruments to govern the energy sector in this direction. Norway is not a member of the European Union, but through the European Economic area agreement, we are subservient to large parts of this law and European Union bureaucracy.

So, when the Energy crisis erupted in 2021-2022, how did the European Union react towards Norway's moves to limit exports to ensure sufficient capacity in the magazines? The European Commission's spokesperson Tim McPhie was quoted reminding the public that Norway is part of the EEA and is bound to follow the EU's energy legislation:

“This means that even if EU law allows for ways to protect the capacity in multi-year storages, for example through the introduction of a specific requirement for minimum filling, no such decision can involve closing the borders to limit power exchange in the internal market for electricity, says McPhie.” (Falnes, 2022)

As we previously discussed in the section on legalism and legitimacy, here we can see how it is being employed to prevent the government of Norway from doing the sensible thing, which is to limit export in order to prevent scarcity and rationing at home. Just like Thornhill (2011) pointed out in his example of the Italian constitutional courts, transferring decision making from elected officials to the courts, we see here the European Commission's spokesperson attempting to do the same thing. The European Commission did its best to as Thornhill would put it: “[attempt] “to hold contests over distinctively volatile matters outside the centre of the political system” (Thornhill, 2011: 334)

The European commission did its level best to deny any limitation on exports, citing treaties and legal technicalities. So, whilst Norway was experiencing an energy crisis, due to preposterous levels of export driven demand and contemplating rationing, the European Union maintained that it was business as usual. This is in my opinion partly why the crisis can be argued to have been manufactured. When the government realized that exports were threatening energy security, they were told that they were not able to do anything about it, by the European Union. As far as I am concerned, this is a larger scandal than the energy producers selling more than they should. The energy producers are free market actors working with an incentive to

maximise profits. The government however made this system and had signed all these agreements with the European Union prohibiting them from correcting the problem when it arose. It is my impression that this badly impacted the credibility of the government and its perceived legitimacy.

As we previously discussed in the parts concerning legalism and legitimacy, they can overlap when used for good and can decrease legitimacy when used as an excuse for inaction. As Max Weber pointed out, there is the principle of equality before the law. At other end of the spectrum is Thornhill pointing out that legal techniques can be employed to avoid volatile discussions. In this case, legalism cannot be seen as increasing the legitimacy of the government, but more as an illustration of its impotence and lack of action. The European Union and its courts have promoted a neo-liberal understanding of law that promotes free markets above all else. In the case of the Norwegian Energy crisis, it was employed to prevent any sensible action on the subject. As Bruff (2014) pointed out, the European Union is forcing neo-liberal policies on an unwilling populace. And as expanded by Byrne:

“efforts to insulate neoliberal policy-making from democratic pressures through the introduction of new constitutional and legal rules which preclude public debate over certain policies, and because of increasingly punitive penal and crime policies designed to contain the fallout from the creation of an ever-growing number of losers in the game of neoliberal capitalism.» (2017:2)

The governments response and reduction in legitimacy

Both Great Britain and the European Union were opposed to any cuts in exports, because they considered it discriminatory. (Falnes, 2022) Therefore, between domestic pressure caused by the Energy crisis, and the legal obstructionism of the European Union on the other hand, the Norwegian government was forced to improvise. Anonymous source close to the government were cited claiming; “throughout the summer, quiet diplomacy has taken place around the planned export brake. The Norwegian authorities have held meetings with both the EU

institutions and countries such as Denmark, Sweden, Germany, the Netherlands and Great Britain to discuss the matter. The discussions have taken place both at official level and at a higher political level - including at prime ministerial level.”(Ibid)

In the end a consensus appears to have been reached, and the Norwegian government announced in late January 2023 that there would be not export ban, but that there would be a new law holding the energy producers responsible for maintaining sufficient water in the magazines to prevent scarcity, in cases of low precipitation. The law included the following primary mechanisms of control:

- “Legislation of the producers' responsibility to contribute to the security of supply for power.
- A formalization of the reporting scheme for hydropower producers from summer 2022.
- Requirement that manufacturers prepare strategies to ensure security of supply and access for the energy authorities to supervise and control these, including sanctions.
- Access for the energy authorities to intervene in magazine allocation in situations where there is a real danger of energy shortages.
- Clarification that, for reasons of security of supply, restrictions can be set on foreign connections in situations where there is a real risk of energy shortages.” (Ertesvåg & Bjørnøy, 2023)

In the end the Norwegian government appears to have bent to the European Union on the principle of reducing export as discriminatory but been given a concession that if the magazines are at critical level, they are allowed to limit production to prevent critically low levels. Importantly the announcement made no reference to the price explosion or any move to fix this. The underlying tenant of the announcement was that the European Union’s position was valid, and with regards to price regarding price, “they were working on it”. (Ibid)

For all intents and purposes, the government got an energy crisis imported through arbitrage and European demand. Increased demand also increased prices on the Nord Pool exchange. The

neo-liberal construct of Nord Pool did not provide sufficient safeguards for domestic consumption, and only served to increase exports and production, despite a lack in precipitation. When faced with a self-inflicted energy scarcity crisis as well as a corresponding explosion in energy prices, the government lacked the tools and legal authority to do anything about it. By my reckoning it took the government nearly half a year, from Terje Aasland publicly telling the producers to not export so much that rationing was contemplated, to the government announcing laws regulating the same. This is not conducive to any favorable analysis of the crisis. It is a perfect illustration of how a commonsense policy was not enacted in the neo-liberal construction that is the Norwegian Energy sector, when they first re-organized it. Secondly it is a damning indictment of the government's legitimacy to regulate a publicly owned resource vis a vis the European Union and their neo-liberal project. And lastly it is a damning inditement on the government's allegiance to the European Union above the welfare of its own people and industry.

If we compare the energy crisis of 2021-22, with the Panic laws and the example of Odda, the government acted slowly and has made only limited changes to the governance of the publicly owned resources. When the panic laws were enacted, neo-liberal economic policy as advocated by Schweigaard was the dominant theory for running the economy. When faced with a change in circumstance, the government acted. The government realized that yes one could make a short-term profit, by selling the waterfalls to foreign interest in accordance with Laissez-faire economic theory, but one could create a lot more wealth by regulating it in a neo-mercantilist system. Wisely the government challenged the principle of private property and principle of free establishment and created the panic laws and Hjemmfallsretten.

These laws, set preconditions and demands on the use of Norwegian labour and materials, and management. The laws provided for profit sharing mechanisms, as well as the building of domestically controlled industry. These laws were a clever combination of neo-mercantilism combined with recognition of the theory of comparative advantage. The laws provided an excellent legal foundation for the industrialisation of parts of Norway, employing foreign capital yet retaining a substantial degree of control and enabling of increased spill over effects into the local economies. The result of these laws were felt for the next 100 years in Norwegian

industry and cheap electricity for private citizens (A not unsubstantial side-effect given the harsh climate.).

The last point worth looking at, is that the system survived the test of time in the long run, but the most important hurdle was in the 20's. As previously discussed in the latter part of the section on Odda, the world economy was in crisis after the first world war. In the case of Odda, both French and British interest were experiencing trouble after the war and the companies went bankrupt. But due to the wise policies of the neo-mercantilist Panic laws, the locals had accumulated enough skill, know-how and capital, to take over the production. The comparative advantage was still there, Odda could produce materials with lower input costs than its competitors and was geographically in close proximity to the European market. So, despite the crisis, not only was production able to restart, but it was also able to thrive.

When compared to the calamitous Energy crisis of 2021-22, the neo-mercantilists clearly did a better job at making a legal framework, and later handling the crisis that spilled over from a European war. The current government and administration should reconsider it's blind loyalty to the neo-liberal construct promoted by the European Union and from within its own ranks. The problem with economists is that they think they can run a country as if it was a shop. Public utilities are treated as commodities. Norway went from thinking that energy security and providing of cheap energy to consumers and industry was not only a source of comparative advantage, but a question of public welfare. And ended up listening to the neo-liberal economists within the NVE and the European Union, and together they scrapped the neo-mercantilist ideas and laid the groundwork for the most calamitous energy crisis in 50 years.

The cost of the Energy crisis has not been computed yet. The cost for private consumers and the subsidizing of private consumption of energy, to prevent families from going bankrupt, is still being paid out and planned to continue out 2024. The prices for business and government departments and enterprises went through the roof. There is no single data set available currently to compute the extreme increase in price and its effect on the economy as a whole. The shock to business has led to a price increase, a cost of living crisis, a string of bankruptcies, high inflation, increased interest rates and an economy in shock. I believe this could have been

averted by more stringent control of the energy sector and exports. That is not to say that Norway would not have felt any of the problems if it had not exported as much and imported higher energy prices from Europe, but what should be clear, is that a large portion of it could have been avoided, by not turning a European gas shock, into a Norwegian (energy) crisis.

The legitimacy of the energy system and the government has come into question after this crisis. As I have pointed out, the foundations of legitimacy are rooted in the exercise of power, legalism and in tradition. When the government and the system it governs, is seen to be working in favour of the public welfare, it enjoys a higher degree of legitimacy. Abandoning this responsibility in favour of blind allegiance to the neo-liberal construct of the Energy laws and the European Union, has not improved the standing of the government. The system it governs is being questioned and they are facing internal troubles, as well as a public reaction to their perceived lack of action. Proposing plans to reform the system, by only building more renewable energy, does not fix the underlying problem, nor the problem of exorbitant prices. The labour party as the senior coalition partner has received most of the public's criticism. The junior coalition partner The Centre party, which proposed limiting export before the election, yet did nothing once in government, has seen its public support halved. Again, I am not claiming that all of this loss can be attributed to the energy crisis, and their lacklustre handling of it, it is undoubtedly a contributing factor.

The government has been seen doling out money, to get out of the problem, instead of fixing the underlying mechanism that caused it. After at least 6 months of negotiations, cajoling and back room talks, the government was able to implement a law to prevent the energy producers from re-creating the catastrophe once more. In political terms, it can be characterized as rearranging the deckchairs of the titanic, after asking the icebergs permission. The Nord Pool system is still in place. Norway continues to import high energy prices through arbitration from Germany and Great Britain. The Norwegian government has abandoned the comparative advantage that provided the basis for our industry, in favour of being the energy equivalent of a banana republic. This development is what the European Union wishes, they have no need for Norwegian industry, because they have domestic industry. What they require is energy, preferably renewable, but any will do. Consequently, we are allowed to be subservient to the neo-liberal construct of the European Union and function as a battery for their industry and

consumers. Judging by the critique cited in the Economist and Time Magazine in the beginning of this section, we should also primarily sell them cheap energy. As far as the European Union is concerned, there is no room for a strong state industrial policy in Norway, only to function as a generator for European growth.

What should be done to fix this crisis and suggestions for further research.

The first and most important suggestion I can make in fixing this crisis, is to abandon the blind adherence to the neo-liberal institutions created by the energy laws, and subservience to the European Union Energy system of governance. Electric energy in Norway is publicly owned and should first and foremost be considered a public utility, secondly a primary source of our comparative advantage. By treating energy purely as a commodity, we are negating a comparative advantage, through arbitration and harming Norwegian industry and consumers, by importing European energy prices.

There needs to be a complete reform of how the system is governed, combined with strong regulation and limitation on exports of Energy. Until such a system is in place, my suggestion would be to impose a price cap on all domestic consumption. This ensures stability for consumers, as well as industry and has an oversized effect on our economy, compared to the negligible profits generated by exports of hydro electric energy. Norway primarily exports gas and consumes little of it. The European Union primarily needs Norwegian gas. The European Union has comparatively little use for Norwegian hydro electric energy, and by comparison this export is a drop in the bucket. Naysayers might say that this jeopardizes our access to the European markets, I would counter that as the primary exporter of gas to the European Union, they need us a lot more than we need them.

Lastly, I would argue that building more renewable energy should not be left to the private sector and should be controlled and preferably owned by the public. Norway has left all of this investment to mostly foreign capital, without any of the regulations imposed when we allowed them to build hydro-powered industry. This should be rectified and if Norway wishes to become

the green generator of Europe, that is well and good, but only by creating a Norwegian industry for this, will that vision have any legitimacy in the broader populace. Oil and gas will not last forever, and Norway needs to invest and control whatever green industry we plan to replace it with. This cannot be left to foreign capital, but requires a strong state industrial policy, with a neo-mercantilist vision, that ignores neo-liberal market thinking, in favour of the public good.

When looking at the calamity which was the 2021-22 energy crisis, I was left with several questions that I was quite tempted to explore. There were questions and digressions that had to remain unanswered or only cursorily examined.

There has been in lot of writing on the Labour party's decline since the 80's. A lot of ink has been spilled on the subject, but as far as I am aware, no definitive answer has been provided. This episode illustrates how the Labour party has constrained its ability to act, because of the neo-liberal shackles it has created for itself. The most common critique of the Labour party, levelled against it by old members, (and former members) is that they do not recognize their own party. I believe this might be because of the party's move from social democracy, to a neo-liberal political stance, influenced by characters like Tony Blair and Gerhard Schröder. I would like to see further research into this topic in lieu of the current calamity. There is a local election this fall, and a parliamentary election in two years. I hope someone can take the time to preform a political post-mortem on the party after that election.

Secondly, I believe a structural analysis of the NVE and their move to neo-liberal policies is in order. A simple explanation suggested by Thue, and partly supported by NVE director Erling Diesen was that there were more economists than engineers and that tipped the scale. I would suggest that there is little analysis of the inner workings of the NVE that precipitated the shift to the Neo-liberal wet dream that the Norwegian energy system has become. This is well worth further scrutiny.

Lastly there is a need to look at how neo-liberal ideology, free market thinking and the abandonment of political governance to the courts is undermining the legitimacy of the government of Norway. Makt og Demokrati-utredningen previously quoted in the chapter on

legalism does conclude that power is being transferred to the courts and that governance is abandoned in favour of legalism. They conclude that democracy is in retreat in all levels of government. I believe that this trend undermines democracy and intrinsically the legitimacy of the government. If as Bendix and Weber suggests, legitimacy is generated by exercising power in ways perceived to gain the public good, leaving decision making to the courts, undermines the governments power and also legitimacy. This is well worth further research.

Conclusion

In this text we have looked at what caused the Norwegian Energy crisis of 2021-22, both in the short on long term. There is a valid argument that in the short term the crisis was caused by a lack of rain in the 2021-22 season. There is also a valid line of argument that European demand for energy due to a lack of Russian gas, increased prices to a level previously not seen on the Norwegian energy market.

However, as I have conclusively shown, the magazines were full in 2020 and brimming with capacity. The scarcity feared in the summer of 2022 would not have been possible without unprecedented levels of export, through the increased export capacity of the energy cables, as pointed out by the DeFacto raport.

But as we have seen this only scratches the surface. Neither the insane levels of export, nor the importation of European prices would have been possible, without the neo-liberal reorganizing of the Norwegian energy sector. This problem was also compounded by our adherence to European Union energy regulation. So that in the summer of 2022, Terje Aasland could see what the problem was, but was limited to informing the energy producers, that the government expected them to act rationally. It took the government another 6 moths of negotiations, back - channel discussions and legalistic wrangling to enact a law formalizing the energy sectors responsibility to not export so much energy, as to jeopardize Norwegian energy security.

It is my contention that the government abandoned the neo-mercantilist, strong state industrial policy that it had pursued for nearly 100 years, in favour of a neo-liberal free market ideology. I have shown the origin of the neo-mercantilist policy, and how this favoured Norway in praxis using Odda Smelteverk as an example. Furthermore, we have examined the point where this policy was abandoned in favour of neo-liberal market control of the energy sector, and how this problem was compounded by our connection to the European Union and their energy market project.

Lastly, we have examined how the neo-liberal system uses legalism to suppress popular sovereignty and democracy as well as how this influences the legitimacy of the government and the system it administers. I have shown that power is transferred away from government to legal control mechanisms, that implement unpopular policies. In the manufactured energy crisis of 2021-22, the logical thing to do, when prices exploded and magazines were emptying, would be to limit export and set a price cap for domestic consumption. Instead, the government was unable to do either. It was forced to beg the European Union and Great Britain for the right to limit production, but only in cases where there was a real chance of emptying the magazines. Secondly, they had to subsidise private domestic consumption a move which cost immense amounts of money for the government. The same mechanism could however not be used for private enterprise and government departments, due to European Union legislation. These were forced to pay the exorbitant rates, and the resultant shock on the Norwegian economy is still impossible to calculate accurately.

I have argued that this inaction has gravely damaged the legitimacy of the government and that of the neo-liberal construction it protects. The use of legal mechanisms to force governments to do nothing whilst their own population and industry suffer, has made them look impotent. If as Bendix pointed out that legitimacy is a function that depends on the exercising of power, as well being perceived as doing it for the public good, this government has acted too slowly, and with too much difference to the neo-liberal project of the European Union, instead of what should be their primary concern, their own populace. As of writing this text, there will be a parliamentary election in 2 years' time, and I am convinced that the population will punish them for their erroneous priorities.

To summarize, this crisis was caused not by the Russian invasion of Ukraine or less than usual rainfall in Norway. It was caused by greed and the implementation of neo-liberal market mechanisms, as well as a blind adherence to that system, even when it failed. The consequence of the abandonment of a neo-mercantilist industrial policy has been to abandon a strong industrial policy in favour of being the energy equivalent of a banana republic on the periphery of the European Union. The government's failure to act, when faced with laws and regulations that prohibited them, has made them lose popularity but also legitimacy. So, whilst the consequences for the economy have yet to be tallied, I fear this decline in legitimacy will cost even more.

Sources cited

- Aasland, T. (2022, July 29). Regjeringen tar grep om kraftsituasjonen i Sør-Norge. Regjeringen.no. Retrieved September 18, 2022, from <https://www.regjeringen.no/no/aktuelt/regjeringen-tar-grep-om-kraftsituasjonen-i-sor-norge/id2923220/>
- Abend, L. (2022, March 25). Why Norway Is Suddenly Profiting From the Ukraine Conflict. Time Magazine. Retrieved April 18, 2023, from <https://time.com/6161024/norway-gas-windfall-ukraine-war/>
- Andersen, A., & Haug, I. (1989). Smeltedigelen: - en industrisaga: Odda smelteverk gjennom 80 år. Odda: NORD 4 bokforlag og Smelteverket.
- Andersen, K. (2022). Et varslet Energisjokk: Og Den Grønne Pengemølla Bak: Sakprosa om et Profitabelt Samfunnskupp. Oslo: Document forlag.
- Anderson, G. M., & Tollison, R. D. (1984). Sir James Steuart as the Apotheosis of Mercantilism and His Relation to Adam Smith. *Southern Economic Journal*, 51(2), 456–468. <https://doi.org/10.2307/1057824>
- Andreassen, K. E. (2014, February 10). EU-Press mot grunnloven. Retrieved April 01, 2023, from <https://www.uib.no/aktuelt/62150/eu-press-mot-grunnloven>
- Aslaksen, M. T. (2022, July 6). Varsler Mulig Strømrasjoning: – Norske Produsenter Har et Samfunnsansvar. VG. Retrieved January 18, 2023, from <https://www.vg.no/nyheter/innenriks/i/mrkwbE/varsler-mulig-stroemrasjoning-norske-produsenter-har-et-samfunnsansvar>

Basu, K. (2010). *Beyond the Invisible Hand: Groundwork for a New Economics*. Princeton, NJ: Princeton University Press.

Bendix, R. (1978). *Kings or people: power and the mandate to rule*. University of California Press.

Benson, D., & Russel, D. (2015). Patterns of EU energy policy outputs: Incrementalism or punctuated equilibrium? *West European Politics*, 38, 185–205.
doi:10.1080/01402382.2014.936707

Bjørnstad, S. (2021, December 22). OED: Det koster 11,57 øre å lage strøm. E24. Retrieved from <https://e24.no/norsk-oekonomi/i/7d4ym3/oed-det-koster-1157-oere-aa-lage-stroem>

Bjørsvik, E. (2009). Hissige feider om fosser. Hjemfallsdebatten i aviser. In O.A. Berkaak, Å. Gammersvik, S. Gynnild & I.J. Lyngø (Eds.), *På sporet av den tapte samtid*. Bergen: Fagbokforlaget.

Bjørsvik, E., & Nilsen, Y. (2020). "Et vestlandsk storindustri-centrum - Etableringen av karbid- og cyanamidfabrikkene i Odda fram til første verdenskrig." *Historisk tidsskrift*, 99(1-2020), 37–51.

Brandal, N., Bratberg, Ø., & Thorsen, D. E. (2011). *Sosialdemokratiet fortid, nåtid, framtid*. Oslo: Universitetsforlaget.

Bruff, I. (2014). The Rise of Authoritarian Neoliberalism. *Rethinking Marxism: A Journal of Economics, Culture & Society*, 26(1), 113-129.

Buchan, D. (2010). Energy Policy. In H. Wallace, M.A. Pollack, & A.R. Young (Eds.), *Policy-Making in the European Union* (6th ed., pp. 358-379). Oxford: Oxford University Press.

Byrne, C. (2017). Neoliberalism as an object of political analysis: An ideology, a mode of regulation or a governmentality? *Policy and Politics*, 45(3), 343-360.
<https://doi.org/10.1332/030557316X14800750043260>

Case, W. (2005). Sayonara to the strong state: from government to governance in the Asia-Pacific. In D. Goldblatt, R. Maidment, & J. Mitchell (Eds.), *Governance in the Asia-Pacific* (pp. 252). Taylor and Francis.

Central Intelligence Agency. (n.d.). Norway. *CIA The World Factbook*. Retrieved January 19, 2023, from <https://www.cia.gov/the-world-factbook/countries/norway/#energy>

Christiansen. (2007). *Rasjonalitet I Norsk Kraftpolitikk? : En Analyse Av Den Statlige Kraftpolitikken Etter Energiloven Av 1990*.

Claes, D. H. (2002). The Process of Europeanization: Norway and the Internal Energy Market. *Journal of Public Policy*, 22(3), 299-323.
<https://doi.org/101017/S0143814X02002027>

Coleman, D. C. (1983). Proto-Industrialization: A Concept Too Many. *The Economic History Review*, 36(3), 435–448. <https://doi.org/10.2307/2594975>

De Rosa, M. (2023, February 23). Ap-topp tar et kraftig oppgjør med «strømpopulistene». E24. Retrieved from <https://e24.no/norsk-oekonomi/i/AP0lMz/ap-topp-tar-et-kraftig-oppgjoer-med-stroempopulistene>

Diesen, E. (2007). NVE og energiloven. In J. Moen & S. Sivertsen (Eds.), *Et Kraftmarked blir til: Et tilbakeblikk på den norske kraftmarkedsreformen* (pp. 38-46). Oslo: Norges vassdrags- og energidirektorat.

EconomicsOnline. (2021, October 16). Comparative advantage. Economics Online. Retrieved March 6, 2023, from https://www.economicsonline.co.uk/global_economics/comparative_advantage.html/

EFTA surveillance authority. (n.d.). Retrieved February 10, 2023, from <https://www.eftasurv.int/>

Egeberg, M., & Trondal, J. (2011). Forvaltningsmessige konsekvenser av EØS/EU: Sentraladministrasjonen – norsk og europeisk. (Rapport 1). Europautredningen. Retrieved from <https://www.sv.uio.no/arena/forskning/publikasjoner/publikasjoner-2011/europautredningen-rapport1.html>

Egeberg, M., & Trondal, J. (2014). Mot en felles europeisk forvaltning? *Stat & Styring*, 24(2), 48-50.

Ekelund, R. B., & Tollison, R. D. (1981). *Mercantilism as a Rent-Seeking Society: Economic Regulation in Historical Perspective*. College Station: Texas A&M University Press.

Ertesvåg, E., & Bjørnøy, J. (2023, January 27). Nye tiltak skal hindre kraftkrise – strømeksperten skal bremses når vannstanden er lav. *Nettavisen*. Retrieved February 10,

2023, from <https://www.nettavisen.no/nyheter/nye-tiltak-skal-hindre-kraftkrise-stromeksporten-skal-bremses-nar-vannstanden-er-lav/s/5-95-878817>

European Union. (2007). Treaty of Lisbon Amending the Treaty on European Union and the Treaty Establishing the European Community, 2007/C 306/01. Retrieved April 10, 2023, from <https://www.refworld.org/docid/476258d32.html>

Fabienne, P. (2017). Political Legitimacy. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Summer 2017 Edition). Retrieved from <https://plato.stanford.edu/archives/sum2017/entries/legitimacy/>

Falnes, J. (2022, August 31). EU advarer Norge: Kutt i krafteksporten er i strid med reglene. TV2. Retrieved October 19, 2022, from <https://www.tv2.no/nyheter/innenriks/eu-advarer-norge-kutt-i-krafteksporten-er-i-strid-med-reglene/15055030/>

Farmer, M. (2021, April 19). How Norway became Europe's biggest power exporter. *Power Technology*. Retrieved January 18, 2023, from <https://www.power-technology.com/features/how-norway-became-europes-biggest-power-exporter/>

Federal Statistical Office of Germany. (2022, February 24). Facts on trade with Russia [Press release NO 10]. Retrieved April 9, 2023, from https://www.destatis.de/EN/Press/2022/02/PE22_N010_51.html

Federal Statistical Office of Germany. (2022, February 24). Facts on trade with Russia [Press release NO 44]. Retrieved April 9, 2023, from https://www.destatis.de/EN/Press/2022/07/PE22_N044_43.html

Financial Times (– 1), 19. november 1913 London

Financial Times, 28. november 1913 London

Finansavisen, (01.10.2021) EU advarer Norge mot å kutte strømeeksporten. Retrieved January 18, 2023, from <https://www.finansavisen.no/nyheter/energi/2021/10/01/7746528/eu-advarer-norge-mot-a-kutte-stromeksporten>

Foreman-Peck, J. (2014). European Industrial Policies in the Post-War Boom: 'Planning the Economic Miracle'. In: Grabas, C., Nützenadel, A. (eds) *Industrial Policy in Europe after 1945*. Palgrave Macmillan, London. https://doi.org/10.1057/9781137329905_2

Foucault, M. (2008) *The Birth of Biopolitics: Lectures at the College de France 1978-9*. Basingstoke: Palgrave Macmillan. Retrieved from:
https://eclass.uoa.gr/modules/document/file.php/LAW353/%5BMichel_Foucault%2C_Michel_Senellart%2C_Arnold_I._Davi%28BookFi%29.pdf

Galbraith, K., James (2008). *The Predator State: How conservatives abandoned the free market and why liberals should too (First Free Press hardcover ed.)*. New York.

Grimberg, C., Christensen, C., Holmboe, H., Røhr, A., Bendow, P., Langeland, A. S., & Svanström, R. (1987). *Menneskenes liv og historie : 14 : Ludvig 14.s tidsalder (New edition, Vol. 14)*. Cappelen.

Hall, S. (2011) 'The neoliberal revolution'. *Soundings*, 48, 9-28.

Hampton, Jean (1998). *Political Philosophy*, Boulder: Westview Press.

Hanisch, T. J., Søylen, E., & Ecklund, G. (1999). Norsk økonomisk politikk I det 20. århundre: Verdivalg I en åpen økonomi. Høyskoleforlaget.

Hammer, U. (2002). Kraftmarked og nettmonopol. In Falkanger, T. and Haagenen, K. (Red.), Vassdrags- og energirett (pp. 654-746). Universitetsforlaget.

Hart, Jeffrey (1992). Rival capitalists: International competitiveness in the United States, Japan and Western Europe. Ithaca, New York: Cornell University Press.

Holm, R. C., & Torstveit, M. (2022, August 8). Dette ryker først: – Vil få dramatiske konsekvenser for folk flest. NRK. Retrieved January 18, 2023, from <https://www.nrk.no/vestfoldogtelemark/rasjonering-av-strom--dette-ryker-forst-1.16055173>

Hope, E. (2007). “Bakgrunn for den norske kraftmarkedsreformen,” in J. Moen and S. Sivertsen (eds) Et Kraftmarked blir til : Et tilbakeblikk på den norske kraftmarkedsreformen. Oslo: Norges vassdrags- og energidirektorat., pp. 25–37.

Hongset, H. (2021, December 07). NTNU-professorer som vindkraftsupportere. Universitetsavisa. Retrieved September 15, 2022, from <https://www.universitetsavisa.no/asgeir-tomasgard-edgar-hertwich-espen-moe/ntnu-professorer-som-vindkraftsupportere/204238>

Jevnaker, T. (2014). Norway’s implementation of the EU climate and energy package: Europeanization or cherry-picking? (Rapport 7/2014). Fridtjof Nansens institutt. Retrieved from <https://www.fni.no/getfile.php/131879-1469869812/Filer/Publikasjoner/FNI-R0714.pdf>

Johnson, C. (1982). MITI and the Japanese Miracle: The Growth of industrial policy, 1925-1975. Stanford, California: Stanford University Press.

Kitson, M., & Michie, J. (2014). *The Deindustrial Revolution: The Rise & Fall of UK Manufacturing, 1870-2010* (Working Papers No. 459). Centre for Business Research, University of Cambridge. Retrieved from <https://www.cbr.cam.ac.uk/wp-content/uploads/2020/08/wp459.pdf>

Kjørlås, H. (n.d.). Einar Gerhardsen. In *Store norske leksikon*. Retrieved April 7, 2023, from https://snl.no/Einar_Gerhardsen

Koyama, M. (2009). Review: The Predator State: How conservatives abandoned the free market and why liberals should too - by James K. Galbraith. *Economic Affairs*, 29(1), 104. https://doi.org/10.1111/j.1468-0270.2009.1884_2.x

Kraftmuseet, (2019). The industrial history of Odda. Kraftmuseet. (2019, January 28). Retrieved January 19, 2023, from <https://www.kraftmuseet.no/the-industrial-history-of-odda/category603.html>

Kriedte, P., Medick, H., & Schlumbohm, J. (1981). *Industrialization before industrialization: rural industry in the genesis of capitalism* (p. XI,335). Cambridge University Press.

Krugman, P. R. (1987). Is Free Trade Passé? *The Journal of Economic Perspectives*, 1(2), 131–144. Retrieved from <http://www.jstor.org/stable/1942985>

Kunzlik, P. (2013). Neoliberalism and the European Public Procurement Regime. *Cambridge Yearbook of European Legal Studies*, 15, 283-356. doi:10.5235/152888713809813666

LaHaye, L. (2008). Mercantilism. In D. R. Henderson (Ed.), *The concise encyclopedia of economics* (2nd ed.). Liberty Fund.

Landsburg, S. F. (2022, August 29). Comparative advantage. Econlib. Retrieved March 3, 2023, from <https://www.econlib.org/library/Topics/Details/comparativeadvantage.html>

Lekve, I., & Helle, I. (2022). Strømpriskrisen - Årsaker og effektive tiltak. De Facto Rapport (Vol. 1, Ser. 2022). Oslo: De Facto – Kunnskapssenter for fagorganiserte.

Lovdata - Avtale om det europeiske økonomiske Samarbeidsområde. (n.d.). Retrieved March 8, 2023, from <https://lovdata.no/dokument/TRAKTAT/traktat/1992-05-02-1>

Løvseth, T. (2022, May 31). Debatt: De facto feil om kabler og strømpriser. Verdens Gang. Retrieved March 7, 2023, from <https://www.vg.no/nyheter/meninger/i/RrAL5O/de-facto-feil-om-kabler-og-stroempriser>

Mardal, M. A. (n.d.). Anton Martin Schweigaard. In Store norske leksikon. Retrieved April 8, 2023, from https://snl.no/Anton_Martin_Schweigaard

Mazzucato, M. (2016). From market fixing to market-creating: a new framework for innovation policy. *Industry and Innovation*, 23(2), 140-156. DOI: 10.1080/13662716.2016.1146124

Nordberg, I. K. J., & Paulen, S. L. (2022, June 30). Vedtak om utredning av SAKS-tiltak. Ber Statnett utrede tiltak i tilfelle en svært anstrengt kraftsituasjon. The Norwegian Water Resources and Energy Directorate. Retrieved September 10, 2022, from <https://www.nve.no/nytt-fra-nve/nyheter-sikkerhet-og-energiforsyningsberedskap/ber-statnett-utrede-tiltak-i-tilfelle-en-svaert-anstrengt-kraftsituasjon/>.

Nord Pool. (n.d.). System price. Nord Pool. Retrieved December 12, 2022, from <https://www.nordpoolgroup.com/en/Market-data1/Dayahead/Area-Prices/SYS1/Yearly/?view=table>

Nord Pool. (2015). Bidding Area. Nord Pool. Archived from the original on December 25, 2015. Retrieved December 19, 2022, from <https://web.archive.org/web/20151225045741/http://www.nordpoolspot.com/How-does-it-work/Bidding-areas/>

Nord Pool. (2022). Line Sets Explanation document. Retrieved November 21, 2022, from <https://www.nordpoolgroup.com/49594f/globalassets/download-center/day-ahead/explanation-document-for-nordic-line-sets-march-2022-.pdf>

Norway and the European Power Market. (2016, January 28). The Norwegian Water Resources and Energy Directorate (NVE). Last updated January 25, 2023. Retrieved January 25, 2023, from <https://www.nve.no/norwegian-energy-regulatory-authority/wholesale-market/norway-and-the-european-power-market/>

Norwegian Petroleum Directorate. (n.d.). Exports of oil and gas. Retrieved March 29, 2023, from <https://www.norskpetroleum.no/en/production-and-exports/exports-of-oil-and-gas/>

NOU 2012:2. (2012). Utenfor og innenfor: Norges avtaler med EU. Utenriksdepartementet.

NVE Norges vassgrags- og energidirektorat. (2016, January 28 – last updated January 25, 2023). Norway and the European Power Market. Retrieved February 12, 2023, from <https://www.nve.no/norwegian-energy-regulatory-authority/wholesale-market/norway-and-the-european-power-market/>

Nozick, R. (1974). *Anarchy, state, and utopia*. Oxford: Blackwell.

Oatley, T. (2012). *International Political Economy* (5th ed.). Boston: Longman.

Pardi, T. (2017). Industrial Policy and the British Automotive Industry under Margaret Thatcher. *Business History*, 59(1), 75–100. doi:10.

Pring, J. N. (1921). *The electric furnace. Monographs on industrial chemistry*. London: Longmans, Green & Co.

Rambøl, A. H., & Marsdal, M. E. (2022). Det store strømsjokket: Om hva som gikk galt og hva vi kan gjøre med det (p. 92). Manifest senter for samfunnsanalyse I samarbeid med Forl. manifest.

Rashid, S. (1986). Smith, Steuart, and Mercantilism: Comment. *Southern Economic Journal*, 52(3), 843–852. <https://doi.org/10.2307/1059280>

Smith, A. (1776). *The Wealth of Nations*. [S.l.]: Charles River Editors. Retrieved from <https://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=2596270&site=ehost-live&scope=site>

Ripstein, A. (2004). Authority and Coercion. *Philosophy and Public Affairs*, 32(1), 2–35.

Rousseau, J.-J., & Griffith, T. (2013). *The Social Contract*. Wordsworth Editions Ltd.

Sagar, P. (2020, August 3). We should look closely at what Adam Smith actually believed. Aeon. Retrieved March 1, 2023, from <https://aeon.co/essays/we-should-look-closely-at-what-adam-smith-actually-believed>

Skonhoft, A., & Noreng, Ø. (Year). Strøm fra strategisk ressurs til handelsvare og børsobjekt [Article title]. In *Alternative krafturedningen vedlegg1*.

Statnett. (2021, June 15). Nå er strømkabelen til England ferdigbygd [Press release]. Retrieved April 14, 2023, from <https://www.statnett.no/om-statnett/nyheter-og-pressemeldinger/nyhetsarkiv-2021/na-er-stromkabelen-til-england-ferdigbygd/>

Sørstahl, E. (2021, October 01). Advarer Norge mot å kutte strømkabler. TV2. Retrieved February 17, 2023, from <https://www.tv2.no/nyheter/innenriks/advarer-norge-mot-a-kutte-stromkabler/14264280/>

The Economist. (2022, September 8). Norway is profiting embarrassingly from war in Europe. Retrieved March 12, 2023 from <https://www.economist.com/europe/2022/09/08/norway-is-profiting-embarrassingly-from-war-in-europe>

Thornhill, C. (2011). *A Sociology of Constitutions: Constitutions and State Legitimacy in Historical-Sociological Perspective*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511895067>

Thomas, M. (2003). Comparative Advantage and Economic Specialization. In *The Oxford Encyclopedia of Economic History*. Oxford University Press. Retrieved March 12, 2023, from <https://www.oxfordreference.com/view/10.1093/acref/9780195105070.001.0001/acref-9780195105070-e-0157>.

Thue, L. (1992). Den politiske kraften. Fredrik Vogt og historien om norsk krafteksport. In K. Endresen (Ed.), *Vår vidunderlige vannkraft. Fredrik Vogt og norsk vannkraftutbygging*. Universitetsforlaget.

Thue, L., Graff, F., & Nyhus, S. (1996). *Strøm og styring: Norsk kraftliberalisme i historisk perspektiv*. Oslo: Ad notam Gyldendal.

Tvedt, K. A. (Year). Norges historie fra 1905 til 1939. In *Store norske leksikon på snl.no*. Retrieved January 9, 2023, from https://snl.no/Norges_historie_fra_1905_til_1939

Valderhaug, R., & Hager-Thoresen, F. (2022, July 1). Mørkt i sør-norske stuer: Slik kan vinteren bli hvis det blir strømrasjonering. E24. Retrieved January 10, 2023, from <https://e24.no/norsk-oekonomi/i/1OEnxe/slik-kan-vinteren-bli-hvis-det-blir-stroemrasjonering>

Veggeland, N. (2009). *Taming the Regulatory State: Politics and Ethics*. Edward Elgar Publishing.

Wahl, A. (2009). *Velferdsstatens vekst - og fall?* (p. 284). Gyldendal arbeidsliv.

Warburton, D. (2000). Before the IMF: The Economic Implications of Unintentional Structural Adjustment in Ancient Egypt. *Journal of the Economic and Social History of the Orient*, 43(2), 65–131. <http://www.jstor.org/stable/3632488>

Weber, M. (1918). *Politics as a Vocation*. In H. H. Gerth & C. Wright Mills (Eds.), *From Max Weber: Essays in Sociology* (1991 ed., pp. -). London: Routledge.

Weber, M. (1964). *The Theory of Social and Economic Organization*. (T. Parsons, Ed.). New York: Free Press.

Wicken, K., Kasa, S., & Hanson, J. (2011). Energirikdommens paradokser: innovasjon som klimapolitikk og næringsutvikling (p. 264). Universitetsforlaget.

Williams, B. (2005). *In the Beginning Was the Deed: Realism and Moralism in Political Argument* (G. Hawthorn, Ed.; STU-Student edition). Princeton University Press.

Østerud, &., & Norge Arbeids- og administrasjonsdepartementet. (2003). *Makt og demokrati: Sluttrapport fra Makt- og demokratiutredningen: Utredning fra en forskergruppe oppnevnt ved kongelig resolusjon 13. mars 1998: Avgitt til Arbeids- og administrasjonsdepartementet 26. august 2003 (Vol. 2003: 19, Norges offentlige utredninger)*. Oslo: Statens forvaltningstjeneste, Informasjonsforvaltning.



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