Changing Climate and Energy Governance

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1.1. INTRODUCTION

"Energy and climate are nearly synonymous"
"Nobody is investing because it's such a long-term perspective, with high costs and uncertain prospects. […] So it is very important that governments continue planning and start sharing the risks. They need to take it seriously"
"We need a certain measure of central policy-making and planning. It is not enough to have the market decide everything"
"We have the Energieakkoord which speaks of CO2 reduction and the wish to implement CCS, but we do not have a vision"
"Typically Dutch is that we try to meet goals through minimum effort"[1]

One of humanity's gravest problems in the 21st century is climate change and the threat it poses to the state of our planet and humankind. Governments, businesses, NGOs and experts across the globe are considering the problem and trying to find solutions to limit the earth's temperature rise by finding and implementing ways to reduce greenhouse gas (GHG) emissions (most notably CO_2). So far, we have not been very successful as global emissions continue to rise and vulnerable nations (fe., island nations) are experiencing the woes of flooding and human disaster. Yet change is on the horizon. During 2015's Paris

1 Quotes are, in order, from: interview with someone from a knowledge centre, with a European Commission official, with a private sector representative, with someone working for an NGO, and with a Dutch government representative.

Climate Conference (also called 'COP-21') leaders from over 170 countries ambitiously agreed to limit global warming to well below 2℃. This agreement entered into force in 2016, yet does not guarantee success because it hinges on countries' willingness to act. There is no strong enforcement mechanism. Recently, the United States have announced their exit from the COP-21 agreements.

Concerted efforts to limit CO_2 emissions date from 1990 with the establishment of the United Nation Framework Convention on Climate Change (UNFCCC). Since then, the limited progress that has been made has been subject of much scholarly study. The severity of the problem and the difficulty of reaching a solution make it a prime example of a (super) wicked problem (cf. Lazarus, 2009; Levin et al., 2012; Maréchal & Lazaric, 2010; Webster, 2008) with four features and potentially catastrophic consequences:

> "time is running out; those who cause the problem also seek to provide a solution; the central authority needed to address them is weak or non-existent; and irrational discounting occurs that pushes responses into the future. Together these features create a tragedy because our governance institutions, and the policies they generate (or fail to generate), largely respond to short-term time horizons even when the catastrophic implications of doing so are far greater than any real or perceived benefits of inaction" (Levin et al., 2012:124).

Lacking an easy test for a potential solution and a way of knowing precisely how our society will be affected by climate change, decision-makers are constrained by the choice they have to make between short-term gain (for example, economic gain) and the long-term gain of preventing climate change (Levin et al., 2012:126-128).

The search for a logical solution begins with addressing emission sources: most notably the energy sector, industry, transport, and housing. The majority of global emissions is energy-related, and even when emissions are not directly related to energy, they often stem from human practices that are 'energetic'[2] (Shaw, 2011:744). The energy sector alone was responsible for more than two-thirds of GHG emissions in 2010 (IEA, 2013:15). Energy being used in industry and transport furthermore accounts for almost 60% of the European Union's (EU) final energy consumption in 2014 (European Commission, 2016:20)[3]. It therefore makes sense to seek concerted action by addressing climate change and energy (production and use) as two sides of the same coin. Processes of European governance

2 Waste treatment is an example of a human practice that is energetic.

3 The EU publishes its statistical pocketbook for the energy sector each year at [https://ec.europa.eu/energy/en/data-analysis/energy-statistical-pocketbook].

geared toward dealing with these challenges often result in a re-articulation of political space beyond the state. The result of such a re-articulation is a web of "complex relationships of mutual interdependence among regions, organised interests, member states and the Union itself" (Hueglin, 1999:249). That makes them interesting to study.

1.2. WHAT'S THE BIG DEAL?

The European Union's import of raw materials is six times higher than its corresponding export[4]. As the world's largest regional energy market, Europe's challenges with respect to climate change, sustainable energy access and technological advancement are exemplary for the challenges faced worldwide. The European Union is trying to be a global climate leader by advocating stringent GHG emissions reductions and pursuing an ambitious internal climate policy. In reality it has to deal with 28 sovereign member states (MS); each has a different view of the problem and on the pathways available to solve it. Since the Lisbon Treaty (2009), the EU shares energy policy competences with its member states. The EU's climate policies have followed global climate agreements and developed steadily since the 1990s.

Table 1.1 shows the three areas EU climate policies focus on: GHG reduction, adoption of renewable energy (RES) and improving energy efficiency (EEff). Though the three focus areas linked energy and climate from the onset, the EU had to wait until 2007 before both policy fields were mentioned in one and the same policy package. The Climate and Energy Package (third column in table 1.1), part of the *Europe 2020* strategy, introduces binding goals on GHG emissions reductions and RES. Energy efficiency is left with indicative goals and voluntary implementation. Willingness to act is also embedded in the legally binding goals, since member states are free to reach them any way they want. The EU has only shared competence with member states in the area of energy policy; a nation's energy mix is completely left to its sovereign decision making. At most, the EU can try to coordinate policies and policy results through soft coordination (benchmarks, peer pressure, common reports, and so on). Furthermore, the difficulty many member states have with reaching the Europe 2020 targets has led to their refusal to accept another batch of binding targets for the period after 2020. The *Climate and Energy Framework* for 2030 is altogether based on indicative goals.

The Netherlands is one of the EU's few natural gas producers. The *Slochteren gas* bubble has given gas a big role in the Dutch energy mix and, due to its economic importance, the Netherlands has been unwilling to let the EU decide on matters pertaining to gas. The

4 As stated by Commissioner Potočnik (DG Environment) at the EEAC Conference in October 2012.

Table 1.1. The rise of binding targets for EU climate & energy policy — 1990 to 2010

	Pre-Kyoto	**European Climate Change Programme (ECCP)** and additional legislation	**Climate and Energy Package** and additional legislation
	(1990 - 1997) *Aimed at 2000*	**(1998 - 2006)** *Aimed at 2010*	**(2007 - 2010)** *Aimed at 2020*
Greenhouse Gases (GHGs)	No European policy (discussion on CO_2 tax, which was not adopted).	EU ETS (2003)	EU ETS review (2008, 2009) with one EU-wide ETS target including aviation
			Effort Sharing Decision (national non-ETS targets)
		Fluorinated Gases Regulation	Fluorinated Gases Regulation review
Renewable Energy (RES)	Mainly national policies! ALTENER	Mobile Air-Conditioning Systems Directive	Further implementation
		Voluntary agreement with car manufacturers (1998/1999)	Mandatory standards for cars and vans
		Renewable Electricity Directive (2001)	Renewable Energy Directive (RED) & Fuel Quality Directive (FQD)
		Biofuels Directive	
Energy Efficiency (EEff)	SAVE	Energy Services Directive	Energy Efficiency Directive (EED)
		Combined Heat and Power Directive	
		Ecodesign of Energy Using Products Directive	Further implementation
		Energy Labeling Framework Directive	Energy Labeling Framework Directive review
		Energy Performance of Buildings Directive	Energy Performance of Buildings Directive review

Source: adapted from Climate Policy Info Hub, 2017 [http://climatepolicyinfohub.eu/european-climate-policy-history-and-state-play].

Netherlands is also home to Europe's largest port in terms of size (Edelenbos, Gerrits & Van Gils, 2008:51) and market share (Port of Rotterdam, 2013): the Port of Rotterdam. After the 2004 corporatisation, the Rotterdam Port Authority (PoR) now has the status of a public limited company[5]. It is furthermore a typical example of a landlord-type port. Somewhat a-typical about the port is the amount of industry located on port land. The port is by far the largest port in Europe, and also houses one of the world's largest (petro)chemical port clusters (PoR, 2016a:12). Between 2010 and 2015, the port and port-related industries were responsible for about 3,5-4% of Dutch GDP (Van den Bosch, Hollen, Volberda & Baaij, 2011:ii; Van den Bossche, Kleingeld, Van Schijndel, Yagafarova, 2016:15). The port

5 Owned by the Municipality of Rotterdam and the Dutch State.

area alone emits roughly 30 million tonnes CO_2 per year (Wuppertal Institute, 2016:19), making it a prime target for GHG reduction efforts due to the potential scale and impact reduction efforts can have in the region. Compared to the Dutch national CO_2 emissions, the port area is responsible for ±20% of the Dutch contribution to climate change. Conventional energy sources such as oil, coal, and gas are supplemented by renewables and techniques to mitigate the negative climate effects of industry and shipping. Energy policy and sustainability thus co-exist inside the port, and can converge or clash.

1.2.1. Rotterdam in the European economy

Due to its status as Europe's largest port and important hub for European economy, there is a strong connection between the port of Rotterdam and the EU. The interconnectedness of energy markets within Europe and across the globe has had unsettling effects on the Dutch energy market. The German *Energiewende*, based on *en masse* investments into alternative energy sources (for example, solar power and wind) subsidised by the EU, is one such example. The large-scale production of shale gas in the United States is another. It has lowered coal prices and tipped the scales in favour of this — rather polluting — energy source; a development which stands in direct competition with the EU's wish to decarbonise (European Commission, 2011a:2). The surplus energy that is flooding the Dutch market has had an unsettling effect on the price of energy and has created a trade-off in the Dutch market, because clean power plants (gas-powered) are being shut down in favour of coal-fired plants. An example of the latter is the Enecogen plant which has deconstructed and sold its turbine. Investments in clean energy and air in The Netherlands are also being mitigated by the lack of investments in sustainable energy elsewhere, such as Eastern Europe. Poland, for example, is one of the largest countries in the EU and still mainly runs on coal. The low carbon price in the EU Emissions Trading System (ETS) has made it unattractive for industry to invest heavily in sustainability (Sandbag, 2013); an effect which is strengthened by the coal surplus stemming from the USA.

Globally, nation states have committed themselves to a temperature rise 'well below 2°C'. Progress is monitored by a UN body: the Intergovernmental Panel on Climate Change (IPCC). Yet this global goal cannot be enforced by any global judiciary. Binding agreements can, however, be found at EU-level. In the absence of an overarching port policy in the EU, many EU regulations from different DGs impact the port on a day-to-day basis. Climate and energy regulations are a good examples, and when one looks at how they are translated nationally, a complex picture arises.

A cursory glance at the table above implies that the local ambitions are in line with European ambitions, and reason would state that there should therefore be no conflict between the two. However, the complex dynamics of the energy market also give rise to problems. Seemingly aligned goals may be conflicting due to other constraints, such as varying implementation of directives across the EU, political pressures within a country or economic interdependencies. Furthermore, the industry that is active in the port has its own preferences and operations, yet the port as a whole is seen as a big polluter. With the PoR being the landlord for the industry, the port authority can make demands to its 'renters'. An interesting question is how the PoR could steer the industry to meet PoR and policy goals so that the port ceases to be perceived as the largest polluter. Such steering becomes complex when considering the fact that many of the businesses present in the port are multinationals, and that business responds to global trends.

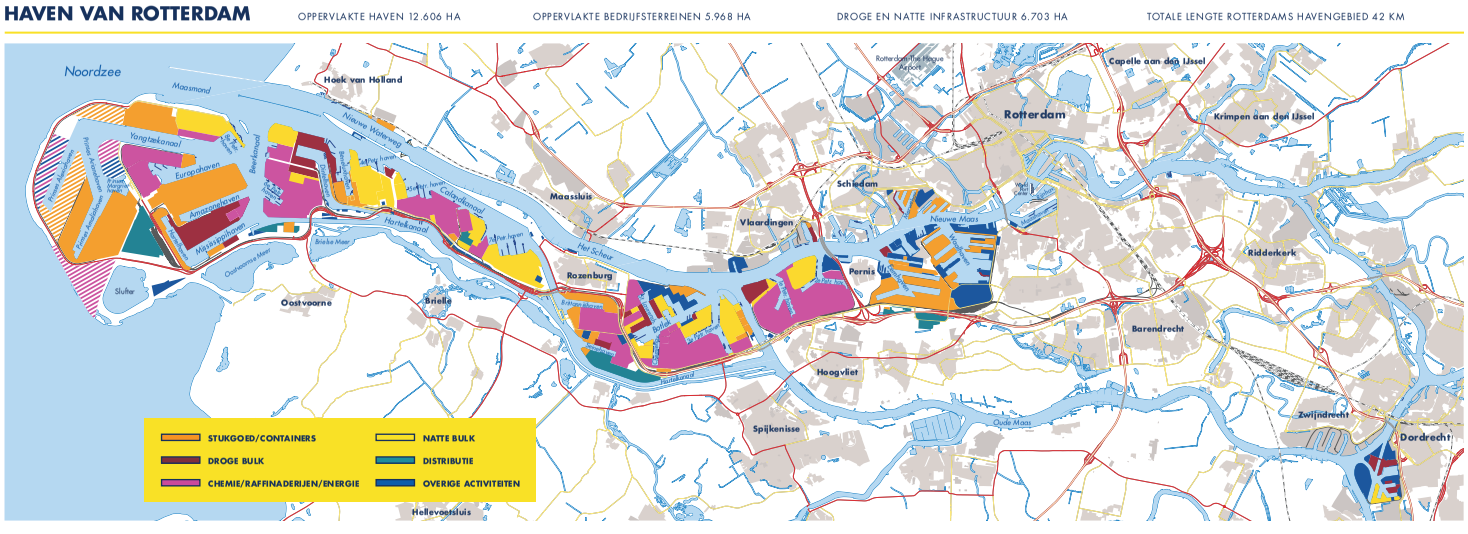
For the Port of Rotterdam, energy and sustainability are interconnected[6]. In its Energy Port magazine, the Port Authority argues that "energy efficiency measures and renewable energy (wind, biomass) will help a lot to cut emissions, but carbon capture and storage (CCS) will also be necessary to reach this ambitious goal" (Port of Rotterdam, 2010:4). In its yearly reports, the Port Authority — see figure 1.1 for a general map of the port area — outlines progress in the transition towards more sustainability. Cleaner energy production and use make up the largest parts of its sustainable ambitions[7] to reduce CO_2 emissions by 50% in 2025 and increase the share of renewables to 30% (Port of Rotterdam, 2016:72). The Port of Rotterdam realises that in order to maintain its competitive position, a transition towards renewable energy, biomass, and a clean chemical industry is necessary. Given the high rate of energy imports and exports in Rotterdam, the port is of major importance to the European economy. Its strategic decisions regarding this energy hub function are summarised in its *Energy Port* concept. Rotterdam Energy Port is a "growth concept focusing on infrastructure, transhipment, production and knowledge with regards to energy in the port of Rotterdam"[8]. The concept was coined to help combat external confusion surrounding the identity of the Port of Rotterdam and to provide a marketable concept. Developing the Energy Port is part of the policy and mandate of the Port of Rotterdam Authority, although it needs support from the wider Port Community to make it happen. The concept consists of five pillars and a backbone. The five pillars are the LNG hub, the coal and biomass hub, the CO_2 hub, (sustainable) electricity generation, and energy ef-

6 And not only for the PoR. Policy documents of the Dutch government and the EU often explicitly mention energy and climate issues in one breath. Scholarly articles focusing on sustainability can hardly avoid mentioning energy (policy).

7 See for example p. 83 of the 2010 report, p. 44 of the 2011 report, p. 35 of the 2012 report and p.30 of the 2013 report at [https://www.portofrotterdam.com/nl/havenbedrijf/financiën/jaarverslagen].

8 Rotterdam Energy Port Marcom Plan, 2013. Author's translation. Internal document.

Figure 1.1. Map of the Rotterdam port area
Source: PoR, 2016b:11.



ficiency. The backbone covers all energy infrastructure necessary to make the pillars viable. In practice, this infrastructure amounts to pipelines for residue heat, CO_2, utilities, and resource trade. The goals of the Energy Port concept are to solidify and ameliorate the investment climate in the Port of Rotterdam in order to continue its development into the 'sustainable power house' of North-West Europe, and developing into a global hub for energy commodities such as LNG, coal, biomass and CO_2[9].

The context in which the governance of the Rotterdam Energy Port is grounded needs to be analysed if we want to draw meaningful conclusions regarding EU climate and energy policy and how it plays out in Rotterdam. Figure 1.2 presents a highly simplified view of the arena and relevant interests along the axes of competitiveness versus sustainability, and a concern for reaching the set EU policy goals for 2020 versus low concern for reaching these goals. While at face value the Port of Rotterdam Authority seems to strive for the same goals as the European Commission, their relationship is not clear-cut and is influenced by other actors. In other words, they are not the sole actors in Energy Port matters. The inclusion of the Dutch state, the municipality of Rotterdam, and the industry present on port land is an inclusion of necessity. With this addition to the picture that was sketched above, we are observing a dynamic context in which the Port of Rotterdam has to operate. Turning back to the illustrative case of this thesis, the above assertion allows us to draw

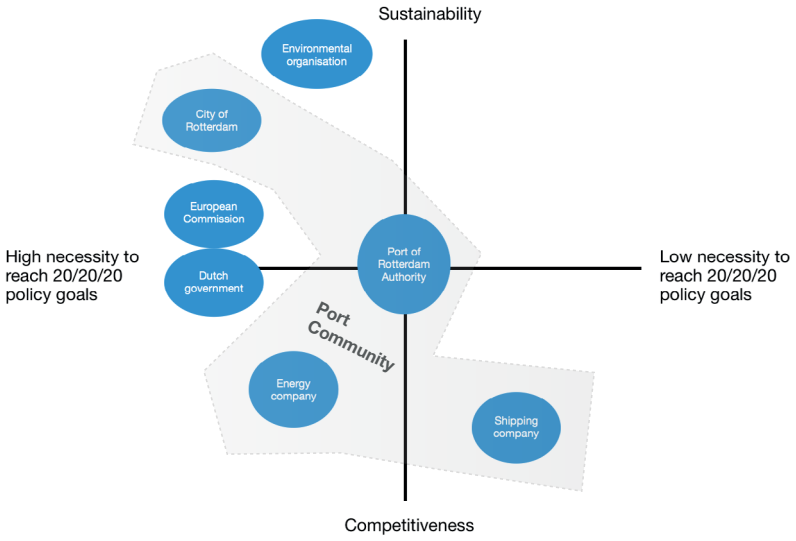


Figure 1.2. Major climate and energy stakeholders with differing interests
Source: author's own composition based on conducted research. Highly simplified.

9 See previous footnote.

an important conclusion to further steer inquiry: the relationships between the Energy Port actors are embedded in a wider multi-level and multi-actor context which may have fundamental consequences for these relationships over time. Rotterdam Energy Port has a multi-level governance aspect due to the participation of actors such as governments, companies, NGOs, and even citizens, both national and international. However, whenever multiple actors are present, there will be multiple goals and strategies to achieve these goals as well. Sometimes these contradict and cause tension.

Figure 1.2 lacks nuance[10], though already shows that actors at multiple levels of governance have differing interests when it comes to climate and energy objectives. Interestingly, the PoR sits at the middle of the figure which potentially gives it the means to relate to stakeholders on all sides of the spectrum. It also means the PoR can be drawn into the conflicting interests of others. The challenge is how to manage the major actors identified in the figure. Add to this picture the EU's tendencies to Europeanise policies, either through soft or hard law, and the PoR is facing both an advocacy problem and a potential loss of sovereignty, putting pressure on the organisation. Not only is the context it operates in changing, but the way the PoR influences governance is changing as well. All things considered, this topic is definitely a big deal. That brings us to the research question this research project seeks to address.

Table 1.2. Climate and energy policy goals aligned?

	Rotterdam	Netherlands	European Union
CO2 reduction	50%*	20%	20%
Share of renewables in energy mix	20%	14%	20%
Energy savings	20%	1,5%**	20%

* = in 2025, ** = per year until 2020.

Sources: cited documents in this chapter and the RCI and Dutch Ministry of Economic Affairs websites.

1.3. RESEARCH QUESTION AND AIM

In order to realise its long-term local strategies, the Port of Rotterdam Authority — responsible for port strategy and development — and the Port Community[11] as a whole seek support from the EU. The EU, in turn, needs ports and industry to realise its energy and climate objectives. The ensuing relationship between the European Commission and the Port Community has its own complexity and struggles. The PoR feels that a certain degree of support from the

10 More nuancing is added in chapters four, five and six of this dissertation.

11 The word 'community' implies that everyone part of it feels that they are part of a community, which does not necessarily have to be the case. In this respect he word 'community' reflects the eco-system of the port.

European Union is necessary to achieve its Energy Port goals, which is why efforts are made to lobby at the European level. Successive Dutch governments have been staunch advocates of climate change mitigation and the Dutch academic community is very active. In terms of results, the country is lagging behind (chapter 4 discusses this in more detail). To successfully get through what has been dubbed the "energy transition", radical change[12] is considered necessary. Possibilities for GHG reductions in the Rotterdam port area are vast and, due to the region's large contribution to Dutch emissions, efforts to decarbonise in the port play an important role in overall Dutch climate change mitigation efforts. Many expect the Port of Rotterdam to do everything possible to limit their GHG emissions. The two newly built coal-fired power plants have been subject of public discussion even before they opened. At the same time, even though reduction potential is high and the Dutch have committed themselves to EU climate and energy goals, the expectations are not met with satisfying results. Why not? That is the focus of this dissertation. It asks the following question:

> *How do the European Union's efforts to address climate and energy issues affect the Rotterdam port community, and what role can the Port of Rotterdam Authority play in its governance in order to reach climate and energy policy goals?*

The aim of this dissertation is to explain how decisions made at EU level can impact the port area in Rotterdam[13], and how relevant actors — in particular the Port of Rotterdam Authority due to its special status as a privatised landowner — operate within the black box of climate and energy governance. Chapter two will discuss the term 'governance' at length, but for now governance is defined as "the various institutionalized modes of social coordination to produce and implement collectively binding rules, or to provide collective goods" (Börzel & Risse, 2010:114). The special focus given to the PoR does not mean it is an all-powerful actor. The port authority is just one of many actors within a larger network in which actors are mutually interdependent. This dissertation zooms in on the PoR, without losing the whole picture, in an effort to give recommendations regarding how they can improve their public affairs. Understanding the impact of EU policies can help improve governance in order to deal with policies more effectively. Since governmental authorities at multiple hierarchical levels are involved and governance takes place at these different levels and including societal and business actors as well, the research question will be approached from the perspective of multi-level governance. As such, the national government can be

12 Not necessarily meaning rapid change.

13 It should be noted that logistics, a very important activity in a port, is not the focus of this thesis. This study will only address issues concerning climate and energy as they come up in Rotterdam Energy Port (potentially applied to transport) but not, for example, containerisation. The Rotterdam port 'area' is defined as the formal tract of land that is part of the port of Rotterdam.

viewed as a stakeholder in climate and energy governance, and is therefore identified as an important actor in this study.

The dissertation also provides insight in how actors in the port can organise their public affairs to influence future policies to their benefit. It does not show in detail how EU climate and energy policy was made until now, but rather treats policy goals until 2020 as a given and shows what the consequences of current policies are for the Port of Rotterdam. What have these policies enabled and what have they thwarted? The results are interesting for public affairs scholars precisely because this study focuses on how governance actually works in an empirical case. Governance is a game of stakes and priorities, and developing an understanding of which buttons to press, or which tools to use, to get certain outcomes is of great value for public affairs. After all, every actor needs to find a working mode of governance for themselves and vis-à-vis other actors.

The following sub-questions will structure the analysis:

I. Which EU climate and energy policies are relevant for Rotterdam Energy Port? (*chapter 4*)
   A. How do these policies affect the domestic level?
   B. Can national and supranational policy goals be aligned in practice and which constraints can be identified?
II. Which (multi-level) governance mechanisms are present in the implementation of these policies? (*chapters 5, 6 and 7*)
   A. What is the role and position of the Port of Rotterdam Authority?
   B. How are non-governmental actors involved in the process?
   C. To what extent is governance successful?
III. How can the governance of climate and energy in the Rotterdam port area be improved? (*chapter 8*)
IV. What are lessons the Port of Rotterdam Authority can learn for its public affairs management of future rounds of climate and energy policy-making? (*chapter 8*)

This dissertation aims to provide an inside view into how climate and energy governance works between the EU and the port of Rotterdam. The illustrative case that has been chosen is the Energy Port, which is divided into two nested cases: the CO_2 hub and the LNG hub. It is important to note that both nested cases provide potentially viable solutions on the medium term, yet perhaps not on the long term. Multi-level governance is used as a conceptual framework to guide data collection and analysis. MLG is interpreted as a hybrid model of governance in which both hierarchical and non-hierarchical mechanisms play an equally large role. As a consequence, power and influence — public affairs — are important concepts for the analysis. Insights from framing theory are therefore used to show how (political) narratives differ from action that is undertaken. Two narratives guide

the reader through this dissertation: a political (power-driven) narrative, and an industrial narrative. Politics and industry are presented as two different realities that are in close contact with each other, yet operate on a different logic. What is necessary problem framing in politics does not necessarily represent industrial reality and vice versa. These realities complicate governance processes in which all parties are vying to get their vision across. The dissertation culminates in one overarching conclusion: without vision and active governmental steering, the governance of climate and energy will not bear fruit. The consequence for public affairs management is that insight is gained into what works and what does not work in climate and energy governance, which aids in the identification of valuable instruments to change governance and future policy-making.

1.3.1. Scientific Relevance

The scientific relevance of this dissertation is a strengthening of research, which thus far is very scarce in number, done on the interplay between the European Union and a port authority. It provides insight on how such a port authority — with ambitions focusing on (durable) energy that are compatible with EU ambitions — can be positioned within multi-level governance theory. Multi-level governance as a theory has been undergoing a reconceptualisation in the past few years to include mechanisms through which the participation of non-public sector actors can be studied. It is therefore not only possible to study the Rotterdam Energy Port case using this approach, but also desirable so that MLG as a theory can be further tested and improved. The results of this dissertation are also relevant for public affairs studies. The PoR's ambition to be at the centre of an energy carrousel makes it very important to position it within a broader context consisting of many players such as the Dutch State, the European Union, private sector companies, NGOs, and even citizens. As each actor has their own priorities, agendas, and ways to frame problems and their solutions, uncovering how governance mechanisms work between the EU level and the port level helps further ideas about how to best organise interests in the area of climate and energy. Lastly, generated data from this thesis can also be used in similar studies to position other actors with a similar status, although question marks can be placed concerning the validity of such generalisations. It is not the aim of this dissertation to produce results that are generalisable across policy sectors.

1.3.2. Practical Relevance

Ensuring the societal relevance of this dissertation has been done firstly through close cooperation with the port community, mainly with the Port of Rotterdam Authority. Given the complexity of the problem of climate change, the challenge for the Port Authority lies

in reducing its very large carbon footprint whilst maintaining competitiveness and remaining attractive for businesses to settle. This challenge can be viewed as a threat, but can also be framed as an opportunity to find new ways of capitalising on the strength of a cluster to reach a desired goal: a cleaner port. Secondly, the thesis is primarily focused on the interaction between the EU and the port area in the field of energy and climate policy. The study paints a clear picture of the governance of these policies and what that governance means for the port authority's position vis-à-vis other actors, most notably governmental authorities. In essence, it adopts a reflexive attitude towards the consequences of governance processes and tries to act as a mirror for societal thinking about the role of governments and the private sector in solving the climate change problem. It will also provide the Rotterdam Port Authority with instruments to influence EU decision making and project funding based on an in-depth case study analysis and resulting recommendations. As such, this dissertation includes practical recommendations for the Port of Rotterdam Authority at the end. These recommendations will hopefully contribute to the *orgware* of the port — and not so much to the *techware* — and will seek to advance the Port of Rotterdam Authority's efforts to achieve its goals at the EU level. It is also my hope that the findings of this dissertation will provide reasons to reflect on the Dutch national government's climate and energy policy agenda.

1.3.3. Valorisation

Insights and lessons gained from this dissertation have been communicated with the Port of Rotterdam Authority along the way and aim to aid the PoR in improving its relationship with the European Commission. The end result will also be presented to the higher management of the Port Authority. Preliminary results and theoretical findings have also be presented at relevant academic conferences.

1.4. METHODOLOGICAL STATEMENT

This dissertation takes port authorities, with the Port of Rotterdam Authority as the studied case, as its unit of analysis within a larger context of port-related stakeholders, including the local and national governmental authorities and the European Commission. The research approach[14] consists of an embedded single-case study to allow for a deep-dive into a practically and academically relevant case and generate in-depth knowledge regarding climate and energy governance mechanisms in the port of Rotterdam. Within the main case (Energy Port), two nested cases (LNG and CCS) have been chosen. The research approach

14 Chapter 3 contains an extensive overview of the chosen methodology.

can thus still benefit from cross-case analysis of the nested cases and ensure the required depth within the case. Data was collected during the period of 2013 through 2016. Because of the rapidly changing landscape of climate and energy governance, including events after 2016 in the analysis was not doable. The analysis therefore reflects the status quo until December 2016[15]. Main methods of data collection were extensive desk research and interviews with experts from a wide variety of (public and private) stakeholders in the Energy Port. Observation and participative (action) research have also been employed due to the researcher's stationing at the Rotterdam Port Authority for two days a week during the entire research period. Interview and observation data was analysed qualitatively using MAXQDA.

1.5. THESIS OUTLINE

This chapter can be read together with the concluding chapter (ch. 8) to give comprehensive insight in the studied problem and the most important findings; what does the climate and energy governance game look like and how does it work? For people who are interested in the theoretical part of this dissertation, chapter two provides an extensive overview of literature on (European) governance — including the chosen definition of governance — multi-level governance, and its theoretical expectations. These theoretical expectations have been used as conceptual lenses through which data has been collected. Chapter three continues with a treatise on the methodological part of this study. Scholars of climate and energy policy (sub question I) will want to read chapter four, which provides an overview of global, European and national efforts to set sustainable goals and progress that has been made in reaching them. The chapter also shows how closely energy and sustainability are tied together in discourse, providing insight into the political context and dynamics within which this case study operates. Chapters five and six dive into the case study and discuss CCS and LNG at length. These chapters provide a detailed analysis of how governance works in both nested cases, using rich descriptions and much of the data collected during the expert interviews. Chapter seven brings both nested cases together in an effort to compare them and draw conclusions for Energy Port and MLG at large. It discusses what MLG's strengths and weaknesses are and ties the secondary findings into the theoretical framework. Chapter eight dives into the main conclusions of this dissertation, tying governance studies and public affairs together by showing how in-depth knowledge of governance mechanisms leads to insights regarding how to organise interests and influence governance processes. The chapter ends with empirical recommendations for the Port of Rotterdam Authority and governmental authorities, and suggestions for future research.

15 At the end of chapter 8 I have included a reflection on most recent developments (post-2016) and how they might impact the studied case.