

The Renewable Energy Directive at a provincial level

A case study on the provinces Groningen, Overijssel and Utrecht



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Preface

After graduating my bachelor Urban and Rural Development I decided to start the pre-master Geography, Planning and Environment (GPM). This thesis is the final product of the pre-master and my first year as a University student.

In front of you lies the thesis “The Renewable Energy Directive at a provincial level”, of which the basis is a literature study that was conducted among several provinces. In addition, in-depth interviews were done with people involved with policy in these provinces. The thesis has been written to finish the Pre-master Human Geography at the Radboud University in Nijmegen, during the period February 2016 till August 2016.

The research question was formulated together with my supervisor, MSc E. Bondarouk. At some points the research was difficult, but through extensive research and guidance of my supervisor, I was able to answer the main question of the research.

I would like to thank my supervisor for her guidance and support during the process. I also wish to thank all interviewees for their cooperation. Without conducting these interviews I would not have been able to conduct this research.

I hope you enjoy reading.

Jelle Bouwhuis

Best, July 31, 2016

Disclaimer: The results of this research are indicative. The researcher cannot guarantee the correctness of the used material, and thus does not accept liability for further use of this research.

Summary

Global warming is a worldwide problem and is acknowledged at a worldwide scale. Several treaties and protocols confirm this. One of the most prominent protocols is the Kyoto protocol, which was adopted by the United Nations on the 11th of December 1997 (United Nations, 2014). The European Union implemented several policies and measures in order to meet the Kyoto protocol targets and thereby reduce the effects of global warming. One of these policies is the Renewable Energy Directive (Council Directive 2009/28/EC) (European Commission, 2014). In 2009 the EU introduced the Renewable Energy Directive to encourage development and use of energy from renewable sources (Oliver, 2013).

The European Renewable Energy directive describes it is necessary to control the European energy consumption and stimulate a more frequent use of renewable energy in order to reduce greenhouse gas emissions and comply with the Kyoto Protocol. To reach these goals and visions every EU Member State was required to formulate its own national policy in order to implement the directive and thereby inform the European Commission on what measures were taken to promote renewable energy (Oliver, 2013). Individual targets were set for each Member State regarding the percentage of energy which originates from renewable energy sources. In the case of the Netherlands, the 2009 Renewable Energy directive determined that 14% of the gross final energy consumption needs to come from renewable energy sources by the year 2020 (Statistics Netherlands, 2010). In order to reach this final target of 14% renewable energy in the Netherlands, the Dutch government involved cities, municipalities and provinces in reaching the 14% goal through agreements and consultations. Therefore the Dutch national government created the National renewable action plan (Ministry of Economic Affairs, 2010).

After the implementation of policy by the national government, it was up to the provinces to implement policy at a local scale. The provinces agreed to comply with the target 14% by the year 2020 and each province has its own way to reach this goal. However, whether this goal is going to be reached is yet to be seen, because former directive goals have been proven hard to reach.

The provincial authorities have the authority to draw up integration plans, according to the regulations of the spatial planning act. However, it is up to the provinces themselves to implement policy into their structural visions and environmental plans (Ministry of Economic Affairs, 2010). Mainly for this reason, little is known about the compliance process of provinces when it comes to European Directives.

This research focusses on the backgrounds and reasons on how the Renewable Energy Directive goals are represented in policy at a provincial level and how can differences between provinces be explained. Therefore, the main goal of the research is to provide an insight into what extent the Renewable Energy Directive goals are represented in policy at a provincial level and to what extent provinces differ among each other, by analysing several provinces and their policy on renewable energy in combination with the factors and processes that influence provincial goal representation.

In order to research this the following question was formulated:

“To what extent are the European Renewable Energy Directive goals represented in policy at the provincial level and how can differences with regard to the extent of EU goal representation between provinces be explained?”

In order to research this question, a qualitative approach was used in which empirical research is done. The method used to conduct this research was a multiple case study in which three provinces were compared to each other on the criteria organisational structure, organisational capacity and inter-organisational relation. The reason why only three provinces are researched is due to time limitations.

All the necessary information was gathered through literature research and in-depth interviews with policy makers and actors involved in the policy process of the relevant provinces. The concerning policy makers and actors were involved in the policy making process of provincial level policy on Renewable Energy. As regards to other actors involved, when necessary interviews were conducted with representatives of interest organisations that were involved in the policy making process. This for example, can be knowledge institutes and businesses.

Answering the main question the following can be concluded: In most cases, the goals of the Renewable Energy Directive are represented in provincial policy. However, differences between the provinces can be concluded. Both the provinces Groningen and Overijssel show a representation regarding the percentages of renewable energy, whereas Utrecht cannot confirm to the target of 14% renewable energy by the year 2020. Based on the variables analysed these differences can have multiple origins.

Both the factors organisational structure and organisational capacity seem to have an influence on goal representation. However, regarding the factor inter-organisational relations no conclusions can be made about the influence on goal representation, because too little is known about the communication between the different parties. When looking at this research as a whole this means is that the organisational circumstances do influence the goal representation of Renewable Energy Goals in provincial policy.

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1. Introduction

1.1 Project framework

Global warming is a worldwide problem and is acknowledged at a worldwide scale. Several treaties and protocols confirm this. One of the most prominent protocols is the Kyoto protocol which was adopted by the United Nations on the 11th of December 1997. The main goal of the protocol is to reduce the CO₂ emission of the developed industrialised nations. This protocol is a consequence of the climate treaty of the United Nations Framework Convention on Climate Change which dates from 1992. In the protocol all the EU Member States and 164 other countries promised to reduce greenhouse gas emission by 8% regarding the year 1990, in the period 2008-2012 (United Nations, 2014). One critical points however was that the protocol would only enter into force when the nations joining are responsible for at least 55% of the total CO₂ emission in 1990 (York, 2005). On the 18th annual climate conference in Doha 2012, the participating countries agreed on a second commitment period from 2013 till 2020. Joining this second commitment period repeatedly included Europe, of which the commission argues that the EU is consequently on track to meet its Kyoto targets (European Commission, 2014).

The European Union implemented several policies and measures in order to meet the Kyoto protocol targets and thereby reduce the effects of global warming. One of these policies is the Renewable Energy Directive (Council Directive 2009/28/EC) (European Commission, 2014). In 2009 the EU introduced the Renewable Energy Directive (Council Directive 2009/28/EC) to encourage development and use of energy from renewable sources (Oliver, 2013). The directive describes it is necessary to control the European energy consumption and stimulate a more frequent use of renewable energy in order to reduce greenhouse gas emissions and comply with the Kyoto Protocol. Together with energy savings and more efficient use of energy, these are the main components of the measures taken to reduce greenhouse gas emission and comply with the Kyoto protocol and to fulfil the commitments beyond 2012. These factors have an important role in strengthening the energy security. Besides this, the directive describes that the production of renewable energy is often depending from local or regional, relatively small enterprises (European Parliament, 2009). To reach these goals and visions every EU Member State was required to formulate its own national policy in order to implement the directive and inform the European Commission on what measures were taken to promote renewable energy (Oliver, 2013). Besides this individual targets were set for each Member State regarding the percentage of energy which originates from renewable energy sources.

In case of the Netherlands, the 2009 Renewable Energy directive determined that 14% of the gross final energy consumption needs to come from renewable energy sources by the year 2020 (Statistics Netherlands, 2010). Compared to other European countries the Netherlands produces little renewable energy. For example, in the year 2010, only 4% of all energy in the Netherlands came from renewable sources, compared to approximately 47% in Sweden. By 2014 the Netherlands reached a point where 5,6 % of the energy used came from renewable energy sources. The year 2015 is not calculated yet (Statistics Netherlands, 2015). In order to reach the final target of 14% renewable energy in the Netherlands, the Dutch government involved cities, municipalities and provinces in reaching the 14% goal through agreements and consultations. Therefore the Dutch national government created the National renewable action plan (Ministry of Economic Affairs, 2010).

After the implementation of policy by the national government, it is up to the provinces to implement policy at a local scale. Provinces formulate regional policy and draw plans for the region by setting guidelines for new developments such as location and expansion for new construction areas. Besides this, the provincial government is responsible for creating a healthy environment with clean water, soil and air. Provinces are able to regulate this by regulating the emission of for example

transport, industry and other sources. In order to create this healthy environment, the provinces are also responsible for stimulating the use of sustainable energy and meeting the targets for the production of renewable energy (Government of the Netherlands, N.D.).

Differences in implementation of the directive between the Member States have already been concluded by the mid-term evaluation of the Renewable Energy Directive (Kampman, et al., 2015). This research however, will specifically focus on the implementation of Renewable Energy directive by Dutch provinces.

The provinces agreed to comply with the target 14% by the year 2020 and each province has its own way to reach this goal. However, whether this goal is going to be reached is yet to be seen, because former directive goals have been proven hard to reach. The goals of the former Directive 2003/30/EC were proven not to be reached and therefore were replaced by the Renewable Energy Directive 2009/28/EC (European Parliament, 2006). In case of the Renewable Energy Directive the Dutch national government, as mentioned before, made multiple agreements and consultations with the provinces. The agreements and consultations cover different fields of activity, but are all of importance for the implementation of the Renewable Energy Directive. Various laws and a Climate-energy agreement give direction to what provincial policy needs to comply with. Provinces have the opportunity to organise renewable energy on a more local scale by the means of the spatial planning act, environmental licences, RCR (wind energy) and the crisis and recovery act (Ministry of Economic Affairs, 2010). This results in a situation in which each province is allowed to implement the Renewable Energy Directive in its own way, as long as it is according to the minimal guidelines and licence procedures made by the Dutch government.

The national renewable action plan Netherlands describes that the provincial authorities have the authority to draw up integration plans, according to the regulations of the spatial planning act. However, it is up to the provinces themselves to implement policy into their structural visions and environmental plans (Ministry of Economic Affairs, 2010). Mainly for this reason, little is known about the compliance process of provinces when it comes to European Directives. Researches on other policy fields also describe that policy can differ between provinces (Kuindersma, et al., 2015). The main question that originates from this is: To what extent are the European Renewable Energy Directive goals represented in policy at a provincial level and how can differences between provinces be explained? This question is important to answer, because if the goals from the Renewable Energy Directive are proven not to be reached the European Union can instigate legal proceedings against the Netherlands. These proceedings may lead to a judgement by the European Court of Justice and when the state continuously shows non-compliance following proceedings can include fines imposed by the Court (Treib, 2014).

1.2 Europeanisation

Europeanisation refers to the process of change in which European ideas, policies, values and culture are interpreted by the Member States and have to comply with European legislation to achieve their objectives (Flockhart, 2006). Europeanisation deals with the impact of the European Union on the Member states and thereby frames the implementation process of the European Renewable Energy Directive. In case of the Renewable Energy Directive, the process of change is that the Netherlands needs to comply with a target, in which 14% of the gross final energy consumption needs to come from renewable energy sources by the year 2020. The first generation literature on Europeanisation is often associated with the impact of European integration on the Member States. However, the second generation of analysis is aimed at the often emphasised as involuntary nature of adaption of European legislation (Adshead, 2002). In this research Europeanisation can be seen as a process at a local level in which the local governments adjust their policies to European standard, which makes local policy making a European aspect (Börzel & Risse, 2000). When referring to the Renewable

Energy Directive, this directive can be seen as a form of Europeanisation, because the Dutch government and thereby the provinces are obligated to implement European policy. Dutch national and local policies need to change their policies in order to comply with policy made in Brussels. From this point of view Europeanisation can be seen as the implementation of a policy which originates from the European Union.

Europeanisation is a process which can be seen as a bottom-up and a top-down process. As far as the bottom-up process goes, a relatively simple rationale for the degree of Europeanisation can be found in the influence a country can practice on policy made at a European level. The bigger the influence of a country on the European policy instrument the less a country, and thereby local governments need to adjust their own policy (Börzel, 2001). At a provincial level it can also be said that when provinces are involved early in the policy-making process or influence the process possible problems can be prevented. In case of the Dutch provinces, this is done through the House of the Dutch provinces in Brussels in which all provinces are represented. In most cases the provinces which showed an active lobby at European level have to adapt less when implementing new policy (Börzel, 2001).

This research however, will focus on the top-down process, because this research pays attention to the influence of the European Union on the political institutions, policies and political forces within a member state (Hang, 2011). Top-down implementation can be defined as executing a policy decision by executive order, statute, or any other authoritative decision that desires certain effects (Matland, 1995). From this top-down point of view, Europeanisation causes changes in domestic policies and institutions as a response to European challenges (Hang, 2011).

The process of Europeanisation is of a similar influence on each of the provinces implementing the Renewable Energy directive. Therefore Europeanisation is not a factor that leads to differences between provinces. Europeanisation only explains the process of a policy formulated at the European level goes through, before reaching the provinces.

1.3 Objectives

From the project framework can be derived that more insight on the implementation of the Renewable Energy Directive (Council Directive 2009/28/EC) by Dutch provinces is desirable, because little is known about the compliance process of provinces when it comes to European Directives. The problem asks for more backgrounds and reasons on how the Renewable Energy Directive goals are represented in policy at a provincial level and how can differences between provinces be explained. The objective is formulated as followed:

The main goal of the research is to provide an insight into what extent the Renewable Energy Directive goals are represented in policy at a provincial level and to what extent provinces differ among each other, by analysing several provinces and their policy on renewable energy in combination with the factors and processes that influence provincial goal representation.

A deeper understanding on how the Renewable Energy Directive goals are represented among provinces can provide leads on the implementation process of European directives at a provincial level.

Type of research

This research will consist out of a multiple case study. Typical for this kind of research is that the researcher focusses on only a few research units, which will be studied in-depth. A multiple case study allows the researcher to analyse certain units across different settings. The main goal of the multiple case study is to examine several cases in order to understand differences and similarities in

the representation of the Renewable Energy Directive goals and the differences in representation between provinces (Baxter & Jack, 2008).

1.3.1 Societal relevance

The possible results of the research can provide a contribution to policy development at a provincial level concerning the implementation of European directives. Research will be done on the representation of European directive goals on a provincial level in several Dutch provinces. Policy makers in these provinces receive input on how the process of directive implementation is accommodated and what possible factors influence the process. This research will not resolve any problems within the implementation process, but strives to describe the situation and provide an insight on what differences occur among different provinces, focussed on the Renewable Energy Directive.

1.3.2 Scientific relevance

The topic of public policy implementation is widely researched on multiple government layers, however, little research is done on the implementation of European directives by regional level governments. The scientific relevance of this thesis is based on the comparative analysis of the representation of Renewable Energy Directive goals in different Dutch provinces. Narrowing down, this research will contain a description of the differences in the representation of the European Renewable Energy Directive goals in provincial policy. Differences between provinces are expected, because provincial authorities have the authority to organise renewable energy on a more local scale and draw up integration plans to achieve the Renewable Energy Directive goals (Ministry of Economic Affairs, 2010). The mid-term evaluation of the Renewable Energy Directive already concludes different interpretations at a non-EU level (Kampman, et al., 2015). The goal of this thesis is to contribute to the explanation why these differences occur among Dutch provinces.

1.4 Research questions

In order to research the previously described objective a central question and several sub-questions are formulated, of which the main question is as followed:

Main question

"To what extent are the European Renewable Energy Directive goals represented in policy at a the provincial level and how can differences with regard to the extent of EU goal representation between provinces be explained?"

In order to answer the main question, sub-questions are formulated.

Sub-Questions

In order to examine the Renewable Energy Directive, it is first of all important to know what the current state of the Renewable Energy Directive is and what the European Union requires from the Member States.

1. *What are the demands of the European Union regarding the goals in the Renewable Energy Directive?*

The Dutch national government is the first organisation to implement policy made by the European Union. Decisions made at this level determine what possible guidelines, laws and licence procedures on a national level will look like.

2. *What is the current Dutch policy on renewable energy?*

After the national government implemented the European policy it is up to the provinces to implement the policy at a local scale and thereby specify certain parts of the policy on local conditions and abilities.

3. How are goals from the Renewable Energy Directive represented in provincial policy?

As mentioned in question three it is up to the provinces to implement the policy at a local scale. On certain elements provinces are free to implement policy regarding local conditions.

4. What are the differences in representation of the Renewable Energy Directive goals at a provincial level?

In order to make any conclusions, it is important to know why there are differences among provinces and how it can be that these differences occur.

5. How can the differences of representation of the goals from the Renewable Energy Directive between provinces be explained?

2. Theoretical framework

This section provides the theoretical framework of this research, by pointing out different key elements which are necessary to research in order to answer the sub- and main question of this research. Paragraph 2.1 first shortly explains goal representation, which is the dependent variable in this research. In specific, this is defined as ‘Renewable Energy Directive goals represented in provincial policy’. Second paragraph 2.1.1 clarifies the importance of possible differences between European and national policy. After this paragraph 2.2 describes the organisational factors influencing the ‘Renewable Energy Directive goals represented in provincial policy’ on a provincial level. Finally, this results in a conceptual model in paragraph 2.3.

In order to analyse the phenomenon of goal representation, multiple theoretical approaches were used. These theories each have a slightly different approximation towards implementing public policy. A combination of the different approaches lead to the appropriate approach to this research. The theoretical framework is mainly aimed at organisational factors and not at political factors, because the political opinions about reaching the renewable energy goals are rather divided.

2.1 Goal representation

By goal representation is implied to which extent the goals formulated in provincial policy correspond to the goals described in the European Renewable Energy Directive. Besides goal representation, the research will focus on whether differences in goal representation occur between provinces, given the fact that differences in implementation of the directive between the Member States have already been concluded by the mid-term evaluation of the Renewable Energy Directive.

The phenomenon goal representation is strongly related to the implementation of public policy, which is a subject that is intensively debated by different scholars. Implementation knows many different forms and shapes considering different cultures and institutions, for example, top-down and bottom-up implementation (Hill & Hupe, 2002). As mentioned in paragraph 1.2 the implementation process of the Renewable energy directive is a top-down process. Therefore the following definition of implementation by Lester and Goggin (1998) is used in this research.

“Policy implementation is a process, a series of subnational decisions and actions directed toward putting a prior authoritative federal decision into effect” (Lester & Goggin, 1998).

Many organisational factors such as the organisational structure, the organisational capacity and inter-organisational relations have an influence on the implementation process. Therefore it is known that the implementation of European directives is not a trouble-free process. As argued by Muijen (1995) one reason for poor implementation and thus poor goal representation is limited and slow acceptance of European Directives within the Member States (Muijen, 1995). A further explanation of the influences on goal representation is described in paragraph 2.2.

2.1.1 European versus national goals

As mentioned before the implementation of the Renewable Energy Directive is a top-down process starting at the European Commission down to the Dutch provinces. In between these two governing bodies the Renewable Energy Directive is implemented by the national government. During this phase, it is possible adjustment are made to the directive its original intentions (Cerna, 2013).

The original European policy intentions can be seen as the ideal regulations and measures that policymakers attempt to introduce. The intentions of a policy should directly relate to the policy outcome (Hupe, 2011). A disruption in this relation occurs when implementing officials at a national

level do not fully understand the context formulated on a European level, or simply assert different standards.

A cause of disruption in an implementation process like the Renewable Energy Directive often relates to the administrative layers of governments. Each government organisation strives after a certain degree of administrative autonomy. It then depends on the goals of the different government organisations whether a policy is just implemented or policy adjustments are required. When policy adjustments are required it causes changes in what was originally formulated in the directive (O'Toole, 2000). In case of the Renewable Energy Directive, a first encounter in which such adjustments possibly need to be made is the national level.

If any adjustments are made in policy documents at a national level this can cause that documents are not entirely executed in the way they were intended (Hill & Hupe, 2002). When it comes to policy at a provincial level, this is always based on national policy. Therefore if any policy adjustments made at a national level it is likely that European goals are not represented in provincial policy.

2.2 Organisational factors

There are several organisational factors that influence the goal representation. Most of these factors are related to the implementation process of an organisation (Spillane, Reiser, & Reimer, 2002). In order to judge the policy implementation process, there must be a starting point. If none action is taken to begin with, implementation cannot happen. Also, there must be a final goal in implementation. Implementation cannot be judged on whether it succeeded or failed without a goal against which to judge it (Pressman & Wildavsky, 1984). Implementing public policy is a delicate process and the policy intentions and the policy output are closely related to each other. In between the policy intentions and the policy output, a number of activities can be distinguished; problem identification and agenda formation, formulation, adoption, implementation, and evaluation' (Anderson, 1975). The implementation of a policy thus is only a small part of a much bigger policy making process. Even though implementation is only a small part of the total process it is influenced in multiple ways and is determining for the policy output. Studying the subject of policy implementation is crucial to identify and remove possible barriers in the implementation process.

2.2.1 Organisational structure within the province

The structure of an organisation determines the implementation process. Structure can be defined as *"A formal system of task and reporting relationships that controls, coordinates and motivates employees so that they work together to achieve organisational goals"* (Buchanan & Huczynski, 2004). Structure is the basis for regulating organisational activities. Therefore an organisation needs a system in which tasks and relationships are defined, so that members of the organisation know what is expected of them in the implementation process. Without a functioning system of tasks and relations, an organisation will not be able to do the job demanded and deliver a correct policy output (Klitgaard & Light, 2005).

When structures within an organisation are unstable the capacity to implement reduces. A factor for unstable structures is poor information flows (Hill & Hupe, 2002). The following paragraph will explain this term.

Information flows

Communication and efficient information flows are crucial within an organisation, because the information in an organisation is used as a basis for decision making (Bozarth & Handfield, 2006). The purpose of correct communication is to ensure that the recipient interprets the message the way it is intended. Therefore an organisation needs clear information flows to make sure the message send is received by the right person. No organisation has the same way of communicating, the information

flow of an organisation is often determined by the distribution system members of the organisation made up, and exists mostly out of verbal, written or electronic communication between the sender and the receiver (Durugbo, Tiwari, & Alcock, 2013).

According to Miller(2011), there are numerous ways in which information can move. The more classical models emphasise the vertical chain of flows between supervisors and employees (Miller, 2011). In today's organisations horizontal relations become more and more important.

Every organisation strives to a smooth chain of process. In order to satisfy the needs of the employees, communication and information flows need to be effective at the different levels of: (1) Organisation wide communication involving employees, (2) Departmental communication involving different departments, and (3) Team communication within a team or a group (Heath, 2006). The communication within and between these levels is what keeps an organisation running. The smoother the information flows the higher the chance on a correct policy output. Still, there can be interference in the communication which hinders a good understanding of the message send. The most common types of interference are unfamiliar language, poor transmission, poor reading and listening and negative attitudes towards what is communicated (Nousianen, 2008).

The consequences of poor communication can affect the relationships within the organisation. For example, when a certain department presumes they do not receive the correct information in order to perform their tasks, this can accumulate to the point where they find themselves in a lack of confidence. This results in an organisation that can no longer maintain the best performance (Nousianen, 2008). In order to function at its best people should have neither too little nor too much irrelevant information. When information is incomplete during the implementation process crucial information can be overlooked, which leads to a different implementation and can cause differences in goal representation. Therefore an organisation should be designed in a way that both the individuals and departments that need to coordinate their efforts have lines of communication that are included in the organisational structure (Tran & Tian, 20013). Mintzberg (1998) argues that organisations and their lines of communication can be categorised as categorisation function, liaison position, taskforce and commissions, and matrix structures (Mintzberg, 1998).

Categorisation by function

When an organisation is categorised by function an organisation is structured by knowledge, skills, working process and function. An advantage of this is that it makes room for specialisation in separate fields of work. But when the focus is too much on specialisation it distracts the attention from the total output. Individuals will focus more on their own targets than the organisational targets. The missing link in this structure is that there is no central mechanism to coordinate all activities.

Concerning goal representation a categorisation by function can lead to two possible results. First, it can reduce the duplication of work because responsibilities are clearly defined for each department. Second, there is no double checking the results, which can cause important aspects are overlooked.

Taskforces and permanent commissions

A taskforce is formed to execute a single special task, and later can be dissolved. A permanent commission is an interdepartmental group of a more permanent nature which regularly comes together to discuss common interests.

Concerning goal representation, taskforces and permanent commissions, because of the involvement of staff brings multiple perspectives to the table, which can prevent that implementation aspects of the single task are overlooked. On the other hand the one-task focus can lead to a mindset in which

the context of the overall problem is lost. Resulting in an approach not suitable for the complexity of the overall problem.

Matrix structures

The matrix structure is an organisational structure that facilitates the horizontal flow of both skills and information. Employees in a matrix organisation report their performance in two ways. Performance is reported to the project manager whose authority flows horizontally across different departments. Besides this employees also report on their overall performance to the head of their department whose authority flows vertically within the department. For example, all engineering draughtsman are part of the drawing unit and report their results to their head of the department. The same draughtsman may also be assigned to different project teams and need to report to the project leaders too (Mintzberg, 1998).

Cornering goal representation, a matrix structure makes sure that procedures are instituted to ensure cross-departmental cooperation and interaction towards the achievement of the goal. Thereby it prevents that implementation aspects are overlooked and combines forces to tackle the overall problem.

The structures according to Mintzberg (1998) define the supervisory relationships, departmental structure and workflow within the organisation. At this point, no conclusion can be made on which structure is the most successful regarding goal representation. Expectations are that the matrix structure benefits the goal representation, because it facilitates interdepartmental cooperation, and thus ensures that all aspects are reviewed.

2.2.2 Organisational capacity of the province

Also the capacity of an organisation is important for the policy output, because it is a determining factor on whether objectives can be reached (Smith, 1973). Organisational capacity is commonly defined as “*The ability of an organisation to fulfil its goals*” (Bryan, 2011). Despite this definition, the organisational capability remains a vague concept in the literature. Knowing organisational capacity is an elusive concept, organisational capacity is frequently mentioned to be an important variable in organisational analysis. The vagueness of the concept has been noted by various scholars (Christensen & Gazley, 2008). The following paragraphs will explain the organisational capacity through a resource based view. This approach is based on behavioural and sociological paradigm, which considers organisational factors and their fit in the environment as a determinant of success (Barney, 2001). The resource-based approach to understand the capacity sees resources as the main indicator for capacity.

This resource-based view on an organisation helps to understand which resources produce a sustained advantage for an organisation and is probably one of the most accepted definitions, because these resources are directly associated with the needs of the through the policy influenced groups and individuals. When an organisation cannot meet the needs of these groups and individuals an organisation is considered under-resourced and lacking capacity (Barney, 2001).

Several scholars mention it is important to acquire resources to increase the organisations capacity (Ingraham & Joyce, 2003). For example resources such as financial resources and human resources (Graddy & Chen, 2006). In this research financial resources can be defined as the ability to fund the reform effort, which are the measures and projects as described in the provincial energy programmes. The human resources in this research can be seen as having enough staff with the professional expertise and skills to do the activities associated with the reform efforts of the programme.

Besides resources, capabilities are an important part of the capacity of an organisation. Various scholars see the organisational capacity as the ability to absorb and manage resources (Ingraham & Joyce, 2003). From this perspective, it is argued that capacity is the know-how of the organisation. An organisation must have the ability to make use of these resources to contribute to the performance of the organisation. Therefore the organisational capacity in terms of capabilities is defined as “*the ability of an organisation to perform a coordinated set of tasks, utilising organisational resources, for the purpose of achieving a particular end result*” (Helfat & Finkelstein, 2007). Capabilities thus are the skills of an organisation to transform inputs to outputs and combine the resources to achieve the desired ends. Capacity thus does not only exist out of resources, but capacity also includes the knowledge of an organisation to assemble resources in a specific way. However, this research will only focus on the resources since that is the most measurable factor.

In relation to goal representation, it can be said that certain resources such as financial resources and human resources can lead to advantages in the implementation process (Barney, Wright, & Ketchen, 2001). Differences in these resources between the provinces should point out provincial differences in the policy output.

2.2.4 Inter-organisational relations of the province

Another influencing factor on implementation is inter-organisational relations. According to O’Toole (1995), many policy implementation problems come from problems of inter-organisational collaboration (O’Toole L. J., 1995). Inter-organisational relations consist out of a range of vertical and horizontal relations between policy making organisations that are involved in the implementing process. The horizontal relations can be defined as connections between organisations that are primarily responsible for policy implementation and organisations related to the policy subject (Hill & Hupe, 2002). In case of the Renewable Energy Directive, this are organisations such as the Dutch Construction and Infrastructure Federation, Business Organisations for the installation and technical retail sector, EnergieNed, Industry Association for Organic Residues etc. (Ministry of Economic Affairs, 2010). Horizontal intergovernmental relations mostly are relations which take place among institutions that are in the same sphere of government. These relations are often based upon opportunism and a consistent approach based on facts and knowledge. By this approach stakeholders and interest groups often seek to control aspects of their interest in order to strive after their goals and influence a policy according to their vision (Rossignoli & Ricciardi, 2015). The vertical chain can be seen as the different levels of government through which a policy is implemented. Pressman and Wildavsky (1984) argue that the shorter this vertical chain is the higher the chance on congruent implementation. The vertical chain must be as short as possible (Pressman & Wildavsky, 1984; Winter, Dinesen, & May, 2008). In this research the horizontal relations are most important, because the vertical chain is the same for each province.

The reason why horizontal relations are important to the implementation process can be found in the uncertainty of the political environment. Within this environment critical resources are often controlled by other interest groups or stakeholders, instead of the one organisation that is implementing a policy. For this reason, most public institutions depend on the assistance of other institutions. This dependency arises the need for such institutions to cooperate (Smith F. , 2002).

By getting a certain form of control over its horizontal relations the implementing organisation can create a predictable flow of resources which can steer the policy output in a certain direction (Mizruchi & Galaskeiwicz, 1993). What makes this way of implementing policy so complex and difficult is that often a stakeholder or interest-group has a valid claim to participate in policy formulation and decision making, and thereby influence the policy output (Hill & Hupe, 2002). It is the preferences of the stakeholders that influence the implementation process. It is this group that is required to adapt the new policy, and are the most affected by the policy. The policy is more likely to be vulnerable to these influences when those who need to be regulated are powerful organisations.

Furthermore, there is no disparity in negotiating and bargaining powers of institutions on the same level. The dependency of organisations towards each other differs according to the need of such relations (Smith F. , 2002).

The necessity a certain organisation has to influence a policy is often determined by the background of the organisation and possible previous experiences in the same policy field (Smith, 1973). Therefore it is most likely to say that in the case of the Renewable energy directive potential influences come from environmental organisations, energy producers and consumers of renewable energy. It is only during the implementation phase that stakeholders, interest groups or individuals can express their interests. It is at this point policies can be changed to suit the needs of interest groups, and thus the risk is that the intended goals of the policy are repudiated (Smith T. , 1985).

Regarding goal representation of the Renewable Energy Directive goals in provincial policy this means that there is a possible chance that the inter-organisational relations of a province influenced the goals in such a way that they became more preferable to them. Whether this is positive or negative regarding goal representation cannot be concluded yet.

2.3 Conceptual model

In this research the policy implementation process of the Dutch provinces is the central subject, to research to what extent the European Renewable Energy Directive goals are represented in policy at a provincial level and how these differences between provinces can be explained. To research this, relevant factors from multiple theories are determined as influential factors and are expected to influence the policy implementation process on a provincial level.

When policies are implemented the implementer of the policy can experience tensions and/or conflicts from those who are affected by the policy. These tensions can trigger a change in the policy formulated. When public policies are acknowledged as a tension generating force the necessity to consider the context of the implemented policy grows (Smith, 1973). The relevant factors from which these influences come are, as mentioned in chapter two: (1) policy adjustments, (2) the organisational structure within the province, (3) organisational capacity of the province and (4) inter-organisational relations. The conceptual model in figure 1 shows the relevant factors in this study concerning goal representation at a provincial level.

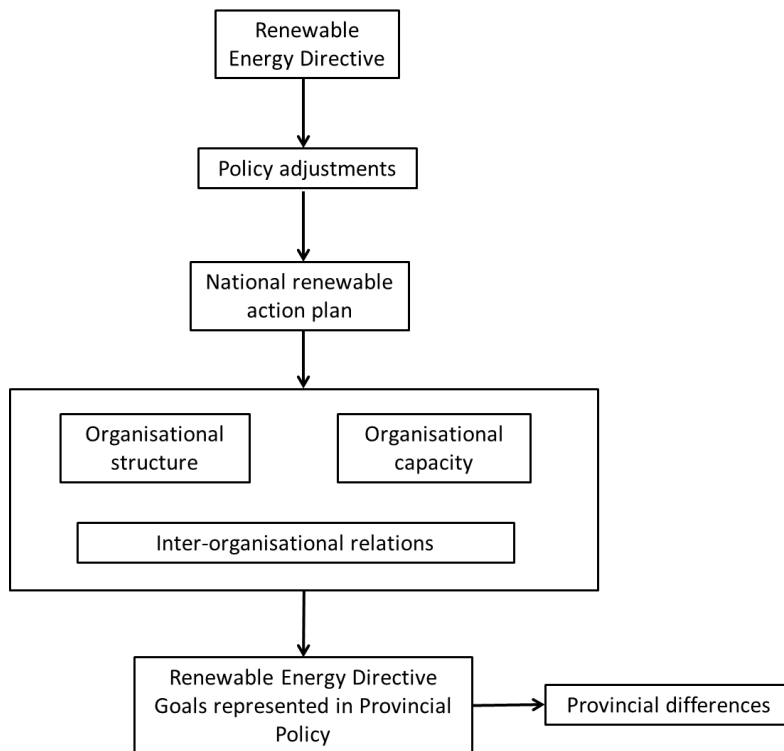


Figure 1. Conceptual model

The model starts at the top with the current active Renewable Energy Directive, which resulted in a national action plan. In between these two policy documents the variable policy adjustment can be found. This variable represents the changes in the policy intentions of the Renewable Energy Directive when implemented in national policy. If changes were made this will directly affect the goal representation in provincial policy, because provincial policy needs to directly obey the National renewable action plan. From this point on the implementation process starts for the provinces.

The Renewable Energy Directive is as mentioned one of the documents central in this study. The directive provides the legislation, which through the national renewable action plan are guidelines for the provinces in establishing energy policy. On the provincial level, the National renewable action plan is implemented and converted to regional policy. During this process, the policy is subject to the influencing factors organisational structure, organisational capacity and inter-organisational relations.

First, the organisational structure can influence the goal representation of the Renewable Energy Directive in provincial policy by information flows and organisational culture. The main influences of organisational structure find their origin in internal communication and commitment. When an organisation has trouble communicating properly it can be hard to make decisions. This eventually will reflect in the policy output. It can lead to policies which are not reliable and do not contain the correct measures according to the initial policy formulated in the Renewable Energy Directive.

Second, the organisational capacity can influence the goal representation of the Renewable Energy Directive in provincial policy through resources and capabilities. When an organisation does not have the ability to utilise the available resources it is most likely it will not achieve its goals. Resources and capabilities thus are the two main factors influencing the organisational capacity. In relation to goal representation it can be said that certain capabilities and resources can lead to advantages in the implementation process (Barney, Wright, & Ketchen, 2001).

Third, the inter-organisational relations have an important role on whether the goals of the Renewable Energy Directive are represented in provincial policy. The horizontal relations of a province, existing out of stakeholders and interest groups can influence the policy intentions by negotiating with the organisations primarily responsible for policy implementation. The reason they negotiate is often to seek control of aspects with their interest, in order to strive after their goals. When the intentions of the implementing organisation contradict with the preferences of stakeholders and interest groups, they most likely want to change these to their advantage. When a stakeholder is important enough for a province to work with a province is more likely to compromise with the preferences of a stakeholder, changing the policy output.

3. Methodology

This section discusses the methods that were used to research the main- and sub questions. First, the research strategy briefly describes the approach towards the subject and the kind of research that is done. Second, the case selection is clarified in order to identify the provinces researched. Finally, the operationalisation of the research is described through the subjects researched.

3.1 Research strategy

For this research, a qualitative approach was used in which empirical research is done. The method used to conduct this research is a multiple case study in which several provinces were compared to each other on multiple criteria. In total three provinces that acknowledge being involved in policy on Renewable Energy were researched. The reason why only three provinces were researched is due to time limitations

Necessary information was gathered through literature research and in-depth interviews with policy makers and actors involved in the policy process of the relevant provinces. The concerning policy makers and actors were involved in the policy making process of provincial level policy on Renewable Energy. As regards to other actors involved, when necessary interviews were conducted with representatives of interest organisations that were involved in the policy making process. This for example can be knowledge institutes and businesses.

Regarding the literature different sources of literature were used to conduct this research. This material mainly focused on policy documents from the European Union and the provinces selected to research. The documents used from the European Union were the Renewable Energy Directive 2009/28/EC and related documents. On a national level, the National Renewable Energy Action Plan of the Netherlands was analysed in order to examine whether this conversion caused possible errors in the implementation of the policy by provinces. When it comes to the provinces the Climate-energy agreement between the state and provinces and local policy documents relating to 2nd generation biomass have been used.

The use of existing material had certain privileges, because the material was already available and respondents have no till little influence on the research. Another advantage of using existing material was that during the research it was possible to combine material from different sources in order to conduct a comparative research (Boeije & 't Hart, 2009)

As mentioned, for researching the representation of the European Renewable Energy Directive goals at provincial level three provinces were studied and therefore the research consists out of a multiple case study. The multiple case study enabled the researcher to explore differences between provinces (Yin, 2003). The goal of this research was to identify if, and why there are differences in goal representation of the relevant provinces. From this a comparison was made (Baxter & Jack, 2008). According to Ragin (1987), “*a comparison provides a basis for making statements about empirical regularities and for evaluating and interpreting cases relative to substantive and theoretical criteria*” (Ragin, 1987). Therefore in this study a comparative approach was used to research the implementation of the Renewable Energy Directive in three provinces.

3.1.1 Case selection

When focussing on renewable the Dutch provinces made a clear distinction between the different sources of renewable energy. The Climate- energy agreement between the state and provinces distinguishes wind energy, biomass/ waste, solar power, biofuels, thermal storage and geothermic energy (Dutch national government, 2009). These are the sources of energy appointed as renewable energy sources and thus are the sources to achieve the national target of 14% renewable energy.

The Climate- energy agreement between the state and provinces also points out that each province is involved in different themes and also has one theme on which the province is the head of the interprovincial cooperation, shown by T in Table 1. This makes that most provinces focus on different themes when it comes to renewable energy sources. Table 1 shows the division of responsibilities among the Dutch provinces, shown by the X (Dutch national government, 2009).

Table 1. Themes per province Climate- energy agreement between the state and provinces (Dutch national government, 2009)

	Gr	Fr	Dr	NH	Ov	Gld	Fl	Ut	ZH	NB	Zld	Lb
CO2- reduction / - Storage	X								X			
Sustainable energy												
Wind energy							X		X		X	
Solar power		X						X			X	T
Thermal storage		X	T					X	X			
Biomass 2nd generation	T		X		X	X		X	X		X	X
Tide energy											X	
Natural gas transition	X		X									
Geothermic			X									
Innovation			X									X
Residual and sustainable heat			X	X					T			
Decentral power generation										T	X	
Energy reduction	X				X		T			X		
Building and living												
Constructional					X	X		X	X	X		X
Planning						X		X	X	X	X	X
Agriculture		X	X		X						X	X
Dike boards		T	X									
Non CO2 greenhousegases	X				X			T				
Mobility		X	X	X	X	T						
Climate neutral organisations				X						X		
Licenses										X		
Knowledge and innovation			X	T								
Monitoring				X	T						X	
Alliances			X		X	X	X		X			
Financing								X				
Market initiatives												

Table 1 shows on what themes the provinces work and which provinces show similarities on the themes they work on. The decision on which provinces should be researched is based on multiple criteria. First, it was important that the provinces researched focus on the same theme in order to compare the provinces, second the themes needed to be represented in the Renewable Energy Directive, to see whether the goals were implemented correctly. Third, it needed to be a substantial amount provinces to research in order to find out whether there were similarities or contradictions between the provincial policies. As table 1 shows the themes with a substantial amount of provinces to research were solar power, thermal storage, biomass 2nd generation, energy reduction, constructional, planning, mobility and alliances. Due to the fact that the period for this research is only 5 months and may cost the researcher an approximate 504 hours, it is only possible to research one of these themes. Therefore the theme Biomass of the 2nd generation is chosen, because this theme is as table 1 shows most popular among provinces and has the potential to develop in every province, since biomass in the Renewable energy directive is mentioned to be *“the biodegradable fraction of products, waste and residues from biological origin from agriculture, forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste”* (European Parliament, 2009). This makes the provinces Groningen, Drenthe,

Overijssel, Gelderland, Utrecht, Zuid-Holland, Zeeland and Limburg the potential provinces to research.

From the provinces Groningen, Drenthe, Overijssel, Gelderland, Utrecht, Zuid-Holland, Zeeland and Limburg only three provinces have been researched. The first province to research in this case study is the province Groningen. Main reason to research Groningen is because this province provided the action plan Biomass which is the example for other provinces according to the Climate- energy agreement between the state and provinces (Dutch national government, 2009). Therefore it is expected that the province is active on this policy theme and shows good results during the analysis.

Without researching the context of each of the policy documents of these provinces in advance of the study a selection is made. The selection is made on the characteristics: the amount of Biomass installations for energy supply to third party, the amount of Biomass installations for company use and biomass potential for energy per province. Knowing that these characteristics do not form a complete image on what provinces exactly do when it comes to biomass it gave an indication of the involvement of provinces in the theme. Table 2 shows the amount of biomass installations and the biomass potential for energy per province. The amount of biomass installations for energy supply to a third party gives an indication on how active a province is in the supply of energy from renewable sources. The more Biomass installations for energy supply to a third party the more likely a province has an active position towards energy from renewable sources, especially biomass.

In order to decide which other two provinces should be researched they needed to suffice with two criteria. The first criteria for provinces to be researched is that they show differences from each other rather than similarities, because this study focusses on the differences in goal representation. Second, the provinces to be researched needed to have a concrete policy document on renewable energy, including biomass. With these criteria in mind looking at table 2 the provinces Overijssel and Utrecht seem appropriate to research in combination with Groningen, because Overijssel shows the highest number of Biomass installations for energy supply to a third party, while Utrecht shows to have none of these installations. Besides the numbers shown in table 2, both provinces Overijssel and Utrecht have formulated policy documents regarding renewable energy, including biomass.

Table 2. Amount of Biomass installations and biomass potential per province (AVIH, N.D.; Dutch national government, 2009)

Province	Amount of Biomass installations for energy supply to third party	Amount of Biomass installations for company use	Biomass potential for energy per province in Penta joule
Drenthe	1	10	4 PJ
Overijssel	4	37	10 PJ
Gelderland	3	41	9 PJ
Zuid-Holland	1	15	34 PJ
Zeeland	1	3	6 PJ
Limburg	2	16	25 PJ
Utrecht	0	5	3 PJ
Groningen	2	6	12 PJ

Based on the aspects in table 2 and the availability of policy documents the final research targets for this research will be the provinces Groningen, Overijssel and Utrecht.

3.2 Operationalisation

In paragraph 2.4 a conceptual model is presented which describes the concepts that will have a vital role in this research. The variables from the conceptual model will be further operationalised through the aspects shown in table 3.

Table 3. Variables and aspects

Variable	Aspects
Goal representation	<ul style="list-style-type: none">• Differences and similarities in European and National policy• Differences and similarities in Provincial policy goals
Organisational structure	<ul style="list-style-type: none">• Information flows
Organisational capacity	<ul style="list-style-type: none">• Financial resources• Human resources
Inter-organisational relations	<ul style="list-style-type: none">• Horizontal relations

First, the variable goal representation was researched by the aspects differences and similarities in European and National policy and Provincial policy goals. The European Renewable Energy Directive was researched by coding the policy document on the relevant aspects to the study. Relevant aspects of the European policy document are for example, the exact reasons to develop the policy and the overall targets and biomass targets set by the European Union. The main goal of this aspect was to find out what measures and targets were set by the European Union. After the analysis of the Renewable Energy Directive the same steps were taken for the National action plan, so that possible differences can between both policy documents became clear. If any big differences would occur it would have been necessary to evaluate whether to continue the study, because when the national policy goals do not correspond to the European policy goals is impossible for the provincial policy to show goal representation.

After analysing the European and national policy, the provincial policy was analysed on whether the goals formulated in the policy fulfil the goals set in the European policy. The reason for this is that Implementation cannot be judged on whether it succeeded or failed without a goal against which to judge it (Pressman & Wildavsky, 1984). Each policy document was read individually to compare the three documents of the different provinces. A comparison pointed out the differences in goal representation regarding national and European policy and between the provinces. All the documents that were analysed were created between the years 2007 and 2012. Because the provinces have different timeframes it is possible that some programmes still partly active and will be finished within the next year.

Second, the variable organisational structure was analysed on the aspect information flows. The information flows were analysed by a network analysis based on the literature and policy documents available, in order to find out whether the provinces show differences in their networks. The network analysis for each province was displayed a graphic model which reflects the connections made to establish the provincial policy output. The model shows whether the communication patterns differ among provinces. The structure analysis points out whether an organisation operates through matrix structures, liaison positions, taskforces and permanent commissions or categorisation by function.

Third, the organisational capacity was analysed. Because the capacity of an organisation is characterised by an organisations ability to utilise its available resources and thereby achieve its goals, this was analysed through the aspects financial and human resources of the provinces and the accomplishments made during the last policy term. Financial resources were analysed by the investments made to accomplish the goals formulated in the policy. The human resources were analysed through the availability of staff with the professional expertise and skills to do the activities associated with the reform efforts of the programme.

The fourth variable Inter-organisational relations was analysed through the horizontal relations. Most of these horizontal relations became clear when making the network analysis. The difference was that when analysing the organisational structure the main focus was on internal relations. When analysing the inter-organisational relations the focus was on the external relations of the province. A visual image of these relations made clear whether provincial differences occurred. Besides this, when possible the organisations a province has a relation with were analysed by the type of organisation and the potential type of influence. This made clear what possible influences the relating organisations had.

Besides analysing the available literature, interviews were done with actors involved in the policy making process of each province. The following people were interviewed:

Person	Organisation	Function	Reason
[REDACTED]	Province Groningen	Senior policy maker sustainable energy	Involvement in policy making process of the province Groningen.
[REDACTED]	Province Overijssel	Programme secretary 'Nieuwe energie'	Involvement in policy making process of the province Overijssel.
[REDACTED]	Province Overijssel	Project leader 'Overijsselse Aanpak 2.1: Renovatie Koopwoningen'	Involvement in policy making process of the province Overijssel.
[REDACTED]	Natuur en milieu federatie Utrecht	Project leader 'Servicepunt Energie Lokaal'	Closely involved with provincial policy of the province Utrecht. And an advisory role towards the province.

The first intention was to interview one person involved in the policy making process of each province. Unfortunately, the province Utrecht was not available to do an interview on Energy policy within the province. Luckily the Natuur en milieu federatie Utrecht was able to provide most of the information necessary. The Natuur en milieu federatie Utrecht works closely together with the province Utrecht and provides the province with advice regarding renewable energy. Therefore, the Natuur en milieu federatie Utrecht knows about the processes and structures within the province.

Although an interview with the Natuur en milieu federatie Utrecht may seem inappropriate concerning their rationale in nature environment protection, the organisation was objective and based their opinion on previously obtained results. All interviews conducted were semi-structured and based on the interview guide in appendix A.

Finally, the results of the literature analysis and the interviews lead to a conclusion in which the provinces were compared and differences and similarities were pointed out.

3.2.1 Constant comparative method

As mentioned multiple policy documents have been researched and interviews were done to gather information. Both the policy documents and the interviews were analysed on the basis of Grounded theory. Grounded theory is a research method that guides the researcher in data collection and helps the researcher to develop a theory that explains the process, action, or interaction (Creswell, 2007). In Grounded theory three originally three steps are used to analyse data like documents and interviews. However, for this research only a few steps of the grounded theory are used, because the main goal was not to develop a theory, but to compare policy documents with each other.

The steps of grounded theory used in this research were open coding and categorisation. Open coding is known as the analytical process by which concepts are identified and the dimensions of these concepts are discovered. In open coding the researcher develops categories of information about the topic studied by breaking down the information. By breaking down the information is implied that the researcher labels the pieces of information that are important to the study.

After labelling categories are created. The labels that are considered to be about the same subject are put together in one category. The researcher then looks for several subcategories within each of these categories (Creswell, 2007). The categories make it easier for the researcher to determine whether there are differences between the policy documents.

4. Goal representation

This chapter analyses the goal representation of the different levels of government. First, the goals of the National renewable action plan are compared to the goals of the European Renewable Energy Directive, in order to find out whether adjustments are made on a national level. After the national goal representation, the provincial goal representation is analysed to see whether the provincial goals correspond with the national and European goals.

4.1 National goal representation

During the implementation process it is possible that a government institution makes adjustments to the policy handed to them by a higher level institution, in order to comply with their goals. This chapter analyses both the European Renewable Energy Directive and the National renewable action plan on goal differences. The analysis of these two documents is extremely important to research the goal representation of the Renewable Energy Directive in provincial policy. Because if adjustments were made on the intentions of the Renewable Energy Directive before reaching the provinces, these have to be made when drawing up the National Action Plan.

4.1.1 European policy intentions

In the European directive 2009/28/EC of the European Parliament and of the Council is described that the directive focusses on the control of the European energy consumption and thereby the increased use of renewable energy sources (European Parliament, 2009). The intention of the directive is to establish a common framework for the promotion of energy from renewable sources and set mandatory targets for the gross final consumption of renewable energy. Therefore two main subjects of the directive are the reduction of greenhouse gases and reducing the dependence of the European Union on energy import. In order to achieve these reductions important aspects for Member States to focus on, according to the directive are energy savings and efficiency.

An important guideline for the European directive is, as mentioned in the introduction is the Kyoto Protocol. Therefore the directive provides a package of measures to reduce greenhouse gas emission and comply with the in the past made agreements of the Kyoto Protocol of the United Nations Framework Convention on Climate Change. With the targets of the Kyoto Protocol in mind the European directive also aims at further reduction of greenhouse gases beyond 2012. Therefore the directive established mandatory national targets of a 20% share of energy from renewable sources in Community energy consumption by 2020. Besides the community target the directive mentions individual Member State targets can vary. The target for the Netherlands set by the European Commission is 14% renewable energy by 2020. According to the directive, the purpose of these mandatory national targets is to provide certainty for investors and encourage a continuous development of technologies to generate renewable energy from all kinds of sources. For example the improvement of technologies such as the conversion of biomass for residential and commercial applications in order to use energy from renewable sources in a more efficient way.

In order to capture the national targets, the directive mentions that each Member State needs to adopt a national renewable energy action plan. This action plan sets out the national targets for the share of energy from renewable sources consumed in transport, electricity and heating and cooling in 2020. In addition, the action plan also needs to take into account the effects of other policy measures relating to energy efficiency on final consumption of energy. Besides this, the national action plan also needs to include adequate measures to achieve the national overall targets, including cooperation between local, regional and national authorities, joint projects and national policies to develop existing biomass resources and mobilise new biomass resources for different uses.

The directive considers that each Member State is different, because energy potentials and starting points vary between the Member States. This is the main reason the directive points out that the Community target of 20% needs to be translated into individual targets for each Member State. Each Member State must ensure that the share of renewable energy calculated for the Member State is at least at its national overall target for renewable energy sources in transport, heating and the production of electricity by the year 2020. The overall target for the European union is to reach its 20% target for renewable energy consumption in 2020 and a 10% share of renewable energy in the transport sector. The differences between the Member States in potentials and starting points make that the directive operates with different schemes of support at a national level for each Member State. By a support scheme is implied any instrument, scheme or mechanism applied by a Member State or a group of Member States, that promotes the use of energy from renewable sources by reducing the costs of that energy, increasing the selling price or the volume of such energy purchased in. Instruments according to the directive that can be counted as such support schemes are: investment aid, tax exemptions or reductions, tax refunds, renewable energy obligation support schemes including green certificates and direct price support schemes. Another important aspect of the directive considering the Member States is that the directive facilitates the cross-border support of renewable energy without affecting national support schemes. Cross-border support implies an optional cooperation between the Member States, which allows a Member State to make agreements with the other Member States in order to support their energy production and reach national targets. By facilitating these agreements the directive creates opportunities to reduce the costs of achieving the national targets the directive mentions and makes it appropriate to facilitate the consumption of renewable energy produced in the other Member States and enable to Member States to count renewable energy consumed in other Member States towards the own national targets. In order to utilise the agreements the directive requires flexibility measures. These flexibility measures take the form of for example, joint projects between the Member States or joint support schemes.

Also what the directive means to establish is the possibility to come to an economic growth through an innovative, sustainable and competitive energy policy. Because the production of energy from renewable sources is often related to local and small businesses, the opportunities for growth and employment in regional and local energy production from renewable sources is important. The directive therefore supports national and regional development measures, to encourage the exchange of production technologies related to energy from renewable sources between local and regional development initiatives. To stimulate a development of a market for energy from renewable energy sources the directive takes into account the positive impact of regional and local development opportunities, export expectations, social cohesion and employment possibilities in particular for regional small and medium-sized enterprises. The directive endorses support for demonstration and commercialisation of decentralised energy technologies, which provides the use of more local energy sources and increases local energy security and energy supply. By this decentralisation, the directive supports community development and cohesion by creating job opportunities at a local level.

When focussing on the energy itself, the aspect in the directive of great importance is the guarantee of the origin of energy from renewable sources. Each Member State must be able to guarantee the origin of electricity, heating and cooling produced from renewable energy sources. The directive describes that the guarantee of origin has the function of proving the consumer that a given share of the quantity of energy was produced from renewable sources. The directive mentions that a guarantee of origin has to indicate at least: (1) the energy source from which the energy was produced and the start and end dates of production, (2) the identity, location, type and capacity of the installation where the energy was produced, (3) whether the installation benefits from investment support, and to what extent the unit of energy benefits from a national support scheme,

(4) the date on which the installation became operational and (5) the date and country of issue and a unique identification number. The Member States need to recognise the guarantee of origin by these elements. A Member state then may refuse to recognise a guarantee of origin only with well-founded arguments. When such refusal appears the Member State needs to inform the Commission (European Parliament, 2009).

European biomass measures according to the Renewable Energy Directive

The Renewable Energy Directive of the European Parliament and of the Council defines biomass as: *“the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste”*. Biomass is argued to be the only source of energy that contributes to all energy sectors, namely electricity, heating and cooling and transport. Biomass is therefore argued to be one of the most important sources of renewable energy for the European Union (Eurostat, 2015).

In order to exploit the full potential of biomass, the Renewable Energy Directive describes that both the Community and the Member States need to promote greater mobilisation of timber resources and the development of new forestry systems. According to the Commission these biomass resources need to be managed in a sustainable manner. Therefore the directive mentions it is appropriate to monitor the impact of biomass cultivation, such as through land-use changes, including displacement, the introduction of invasive alien species and other effects on biodiversity, and effects on food production and local successes. In order to do so, the Member States need to develop national policies on the development of existing biomass resources and the mobilisation of new biomass resources for different uses. All the measures taken by Member states need to fulfil the requirements of the administrative procedures, regulations and codes and the calculation of the greenhouse gas impact of biofuels and bioliquids as described in the Renewable Energy Directive.

The administrative procedures include that the Member States need to ensure that the national rules concerning the authorisation, certification and licensing for plants associated with the transmission and distribution network infrastructures for the production of electricity, heating or cooling from renewable energy sources, and to the process of transformation of biomass into biofuels or other energy products, are well balanced. For this reason, the Member States need to ensure that all procedures including spatial planning are well coordinated and contain transparent timetables for determining planning and building applications. When it comes to calculation of the greenhouse gas impact of biofuels and bioliquids member states need to comply with the calculating method as described in the Renewable Energy Directive (European Parliament, 2009).

4.1.2 National policy intentions

The National renewable energy action plan Directive 2009/28/EC is based on the actual Directive 2009/28/EC of the European parliament and of the Council and therefore shows similar policy intentions. The action plan of the Netherlands describes how the Netherlands intends to achieve the Renewable Energy Directive target of 14% renewable energy in 2020. The Dutch government does not set out a blueprint for the management of sustainable energy, but only provides targets and a framework, incentives and direction. According to the National action plan, to achieve the 14% target market players concerning renewable energy are an important aspect, therefore the action plan mentions that a stable investment climate on the long term in the Netherlands is needed. The creation of a market for renewable energy involves also the creation of a solid energy supply that can meet the demands for sustainable energy. The national action plan argues that for the creation of such a supply it is important to make the supply of energy cleaner and more efficient, promote smoothly running energy markets and create a healthy and stable investment climate. According to the national action plan, this must result in a clean, affordable and secure energy supply.

Energy saving according to the national action plan is also an important aspect of the policy. Therefore the target for clean and efficient energy saving is set at 2% saving per annum since 2011. Together with these energy savings, the Dutch renewable energy policy is motivated by the need to tackle climate issues, to secure the energy supply in the Netherlands and to preserve affordable energy on the long term. Besides this, the National action plan encourages innovation and economic activity.

Also what the National action plan mentions establishing is a responsibility for local and regional authorities when it comes to generating energy from renewable sources. Therefore the Climate Agreement between the municipal authorities and the government and the Climate and Energy Agreement between the Government and the Provinces have been established. The municipal agreements mainly focus on role model municipalities, land-use, their influence as stakeholders of energy and waste companies and stimulate energy efficiency. The agreements made by the provinces, relate mainly to include spatial planning, manure processing, large-scale solar power projects, incentives for the production of biofuels, large-scale production installations for biofuels, promoting the use of residual heat and regional collaboration. However, the provinces are allowed to make their own division on renewable sources to reach the 14% target set by the European Commission (IPO, 2010).

When focusing on the energy itself in the National action plan the guarantee of origin of energy from renewable sources is a recurring aspect. According to the Dutch national action plan, and as mentioned in the Directive 2009/28/EC of the European parliament and of the Council guarantees of origin must be issued for energy from renewable sources. The Dutch policy marks a company called CertiQ as responsible for issuing guarantees of origin and supplies this information to Agentschap NL. Analysing the Dutch national action plan except for the level of execution and some changes in calculating methods the action plan successful includes the demands set by the Directive 2009/28/EC of the European parliament and of the Council (Ministry of Economic Affairs, 2010).

In order to comply with all these intentions, the Dutch national government refers to several acts and measures (appendix B). The measures and acts to fulfil the requirements of the Renewable Energy Directive as described in appendix B exist out of existing national and, if applicable, regional legislation concerning authorisation, certification, licensing procedures and spatial planning applied to installations and associated transmission and distribution network infrastructure.

National biomass measures according to the National renewable energy action plan

In 2006 the amount of biomass available in the Netherlands accounted for energy production was around 82 PJ. 68 PJ of this available biomass was related to waste streams such as domestic and industrial waste. Depending on the exact scenario, it is expected that approximately between 189 PJ and 245 PJ of biomass will be available for energy applications on a national level in 2020. Expected is that the main part of the biomass available in 2020 comes from waste and residual products from agriculture and fisheries. The national action plan also calculated the required amount of biomass for the year 2020, which is approximately 334 PJ.

According to the National renewable energy action plan Directive 2009/28/EC, the measures for the generation of renewable energy from biomass are included in the SDE (Stimuleringsregeling Duurzame Energieproductie). This support scheme is initially aimed at the energy produces and offers long-term financial security by covering the unprofitable component of projects. The receivable subsidy from this scheme for the generation of renewable energy from biomass is based on the difference between the basic amount and the energy price. The scheme also offers the ability to apply additional quality standards for fermentation installations and incinerators. Therefore the directive describes it is appropriate for each biomass stream, to specify specified whether it is

converted into bioenergy via fermentation or via a thermal conversion. To monitor the impact of these biomass products the National Renewable energy Action Plan appointed multiple organisations to promote and compare biomass products this will be documented in a national information base in which the Ministry of Housing, Spatial Development and the Environment, Interprovincial Consultative Body, Association of Waste Businesses and Agentschap NL are working together.

The Dutch Cabinet also has set climate-related targets concerning biomass. These targets were created in collaboration with different industry sectors and are set out in the Clean and Efficient Work Programme. In this work programme the nature, forestry, landscape and wood chain (NBLH sector) indicated that it intends to contribute 32 PJ of renewable energy in 2020. In order to do so, a detailed plan has been drawn up. Important measures from this plan according to the national action plan are: (1) The Government will encourage the various authorities to make a contribution to the supply and processing of biomass. (2) The NBLH sector is endeavouring to maximise the supply of wood and non-wood biomass from residual streams for the production of renewable energy. (3) The NBLH sector is promoting more intensive landscape management. (4) The NBLH sector is endeavouring to conclude multiannual agreements with the energy companies for a guaranteed and constant take-up of biomass products. (5) The Government and the NBLH sector will jointly investigate in pilot projects how short rotation planting can be implemented at specific locations to generate energy-related income. Expected is that given the price paid for land in the Netherlands it seems unlikely that land will be used for the cultivation of energy crops, given the hectare balance which still remains higher for arable crops.

On the external development of the availability of biomass streams no known significant changes are expected within the agriculture or forestry sector. However, the national action plan describes the ambition of these sectors is stated in the Covenant Schoon & Zuinige Agrosectoren (Clean & Efficient Agricultural Sector Agreement). The sectors promise in this covenant to make a contribution to the overall Clean & Efficient renewable energy targets. The requirements of the administrative procedures and regulations are managed through the Environmental Management Act. Together with the Dutch national policy the National action plan presumes a greater availability of biomass (Ministry of Economic Affairs, 2010).

4.1.3 Conclusion

In conclusion, the Dutch national government established a document that very well represents the general goals and target of the European Renewable energy Directive. The main purposes of the Renewable Energy Directive such as the 14% target, the guarantee of the origin etc. are all represented in the national action plan through existing legislation and newly established measures and protocols.

When looking specifically at the measures concerning biomass the Dutch national government established a good framework for promoting and mobilising biomass sources. Also, the administrative procedures and regulations are taken care of by existing legislation. Only the mobilisation of new biomass resources can be called into question. Even though the government and the NBLH sector will jointly investigate new options, expected is that given the price paid for land in the Netherlands it seems unlikely that land will be used for the cultivation of energy crops.

As far as this comparison goes no critical policy adjustments were found. The National renewable energy action plan in this sense should not be an influence on the representation of the Renewable Energy Directive goals in provincial policy. However, regarding the provinces what stands out is that they are free in the division of their energy sources.

4.2 Provincial goal representation

In order to make a provincial analysis first it is important to understand the provincial policy documents. The analysis of the policy documents can point out whether goals and working methods differentiate between provinces. Based on the case selection made in chapter three, the provincial policy documents regarding renewable energy of the province Groningen, Overijssel and Utrecht are analysed. All the documents analysed are created between the years 2007 and 2012. Because the provinces have different timeframes it is possible that some programmes still partly active and will be finished within the next year. At this moment only the province Groningen has formulated a programme for the last term (2016 -2020) of the Renewable Energy Directive. Interviews revealed that the provinces Overijssel and Utrecht are still formulating a new energy programme. For this reason it is not the current programmes that are analysed, but the programmes that are or are almost finished.

4.2.1 Groningen

In the context of this research the province Groningen knows two important policy documents. Namely the 'Programma Energie 2012 – 2015', which is most recently finished policy on renewable energy and the action plan Biomass, which is the example for other provinces according to the Climate- energy agreement between the state and provinces. The 'Programma Energie 2012 – 2015' describes which role and ambition the province Groningen has when it comes to energy transition. As regards to the action plan Biomass, this covers the intention the province has when it comes specifically to biomass. Although the action plan Biomass only covers the period 2007 – 2010 it describes the goals the province has for the year 2020, which is the year the European Union refers to as in when the goals on renewable energy need to be accomplished.

Action plan Biomass 2007 – 2010

The action plan Biomass 2007 – 2010 shows the importance for biomass in the province. The action plan at this time described that by 2020 42% of the renewable energy in Groningen consists out of bio-energy from biomass. The province, therefore, mentions it will facilitate initiatives by on the one hand execute biomass projects itself and on the other hand support initiatives and project by third parties.

The province initiated to do this by creating a multiple year programme and a support programme. The multiple year programme describes biomass projects which can be executed by the province itself by the hand of preconditions and policy frameworks. This aligns with the ambition of the province to be active in the planning phase of the projects on biomass initiatives. The support programme describes the province will commit time, expertise and financial needs to support concrete biomass initiatives stemming from third parties or projects coming from other programmes.

Since the action plan is no longer of use for the province Groningen it is irrelevant to further elaborate the Action plan Biomass 2007 – 2010. The conclusion from this policy document is that biomass has a high priority for the province Groningen and is an important factor to realise the provincial 2020 goals (Provincie Groningen, 2006).

Programma Energie 2012 – 2015

According to the 'Programma Energie', the province Groningen makes use of a strong ambition for sustainable energy and economy. The province is part of the energy transition and strives after energy management based on sustainable sources. The external context of the document focusses on European and national policy, the Green Deal Northern-Netherlands and the relation to the structural vision, infrastructure and spatial planning. The internal focus of the programme is the POP and the College programme which aim at the development of a vision.

The policy principles of the province Groningen are the fundament for the 'Programma energie'. These principles are based on the 'Provinciaal Omgevingsplan 2009 – 2013' and the 'Coalitieakkoord 2011-2015'. The ambition of the 'Provinciaal Omgevingsplan 2009 – 2013' is as follows: The province wants to position itself national and international as a frontrunner on energy policy and contribute to the European and national energy and climate targets. The energy transition is central to the reduction of the use of fossil fuels through energy savings, mobilise sustainable energy and increase efficiency. Target is a sustainable energy supply in 50 years.

The 'Coalitieakkoord 2011-2015' aims to position the province as energy region of the Netherlands and Europe. On the one hand, the energy is of an economic importance for the province, but Groningen also wants to be leading in the energy transition. The province concentrates on sustainable energy production and energy savings, which contribute to solving the environment and climate problem. The main target is stimulating sustainability and innovation and the province sees chances through new sustainable economic activities, jobs and knowledge.

The main goal of the 'Programma Energie 2012 -2015' is to contribute to the energy transition and economic structure enhancement by building further on a sustainable energy cluster and speed up decentralised sustainable energy generation. The 'Programma Energie' supports this by focussing on the provincial tasks, organising the people and resources efficiently, looking for the necessary coordination and through this support the management board of the province Groningen. Specifically, this means the programme takes care of:

- Coordination of departments within the province;
- Defining a clear structure;
- A financial structure fitting the programme structure;
- Coordinating the input of other programmes and projects;
- Administrative support;
- Lobby on relevant subjects;
- Coordination of external partners.

The policy goal of the 'Programma Energie' is to contribute to the European and national climate targets of 20% CO₂- emission reduction regarding the year 1990, 20% energy savings and 14% renewable energy in 2020. In order to achieve these targets, the province focusses on supplying support to plans and projects that contribute to the energy transition and economic structure enhancement. The provinces support this by the means of lobby, manpower, resources, policy, communication and regulation. Seen the role of the province, which according to the 'Programma Energie' is often not primarily responsible, the province uses the term maximum effort. By maximum effort the province means: lobby, take part in external project teams, think along, finance, subsidies and spatial planning. Summarised the province takes part in the development and (co)finances projects (Provincie Groningen, 2011).

Results at this point

Over the years the province Groningen increased the percentage of renewable energy in the province by 1,5%. In 2012 the province produced 9,5% renewable energy. At this point, the province produces 11% renewable energy.

The results regarding the other goals of the directive are not known at this moment, because the analysis for the years 2014 and 2015 are not yet carried out by the province (Pijlman, 2014).

4.2.2 Overijssel

The province Overijssel knows many different documents that relate to renewable energy. Where most provinces have one or two policy documents in which all factors concerning renewable energy are described, Overijssel has a dynamic past when it comes to energy policy.

In 2008 the province Overijssel formulated the 'Uitwerking Programma Energiepact Overijssel' to reduce CO₂ levels in Overijssel. The ambition was a reduction of 30% in 2020 based on the level of CO₂ in the year 1990. The 'Energiepact' consisted out of agreements between parties involved and the province. The province its role was to set a framework, inform, connect and regulate based on the subjects energy savings in companies, energy savings in housing, solar power, wind energy, soil energy and energy infrastructure.

By 2010 the province formulated the 'Versnelling CO₂-reductieprogramma Energiepact' with the ambition to speed up the emission objectives towards 2017. This document emphasises other forms of financing than subsidies. In 2011 the province formulated the document 'De Kracht van Overijssel Hoofdpijnenakkoord 2011-2015' in which the province dropped the emission objectives. The new ambition is to accomplish a share of 20% renewable energy in 2020. To accomplish this target Overijssel aims both at the production of renewable energy and energy savings. To support this target the programme 'Nieuwe energie' was developed, which is a further development of the 'Uitwerking Programma Energiepact Overijssel'. This 'Programmaplan 2012-2015' supposes that the province needs to focus on creating a proper investment climate for renewable energy and energy savings (Wetzels, et al., 2013).

Renewable energy goals in Overijssel

In order to achieve the provincial targets, they focus on four major sources of energy for producing renewable energy. Besides producing energy the province also focuses on energy savings in housing and companies.

Energy sources

The first source the province focusses on is biomass. Biomass will be responsible for 80% of the provincial target of 20% on renewable energy. This means a large proportion of the energy in Overijssel will come from GFT waste, sludge, wood shavings, protein or other fermentable sources. By 2023 Overijssel wants to produce 10 PJ of renewable energy from biomass. To achieve this 50 till 100 bio-energy-installations are needed. Therefore the province stimulates initiators to actually build a digestion plant or use biomass in other ways (Provincie Overijssel, 2009). The provincial policy on bio-energy is defined in the spatial vision Overijssel and stimulates sustainable energy production by fermentation of biomass close to the source, as long as it compromises to the objectives of food safety (Willigenburg, Nolten, Hazelhorst, Jacobs, & Hoek, 2013).

Second, the province stimulates geothermal energy. The 'Energiepact 2008' of the province Overijssel mentions geothermal energy as one of the sources to reduce CO₂ emission. To make use of the geothermic potential the province is committed to monitor and regulate the use of geothermic heat (Willigenburg, Nolten, Hazelhorst, Jacobs, & Hoek, 2013).

A third source is wind energy. The province Overijssel looks to expand the capacity of this source of energy. The current capacity of all eleven wind turbines in Overijssel is 30 MW. The province aims to expand the capacity to an amount of 85,5 MW, in order to produce 1,1 PJ electricity yearly. The placement of wind turbines is according to the province a municipal consideration. Initiators can request municipal cooperation for the placement of wind turbines. If then a municipality refuses to cooperate, the initiator can request the province for an embedding plan. The placement of wind

turbines according to the province is only allowed in the so-called viable search areas (Provincie Overijssel, 2009).

The fourth source of energy is solar power. Overijssel wants to generate 0,5 PJ primary energy from solar power, available by 2023. In order to achieve this target, the province stimulates solar energy in housing and solar energy on agricultural buildings. Therefore, the province stimulates individuals, cooperation's and agricultural companies to include solar energy in new constructions by the means of a sustainability loan, agreements, an energy fund and subsidies (Provincie Overijssel, 2009; Willigenburg, Nolten, Hazelhorst, Jacobs, & Hoek, 2013).

Energy savings

In the project plan 'Nieuwe Energie' the province focuses on energy savings in companies. The plan specifically aims at an optimal use of the existing measures and programmes, in order to save 9 PJ energy by the year 2020. The existing instruments will be further developed and efforts are directed on the connection between the instruments and the environmental management act. The province wants to reduce subsidies and pay more attention to supervision.

For energy savings in housing the province aims at new profitable techniques. Overijssel mentions investments will be needed to reach the private home owners and adjust the current housing stock, in order to achieve a reduction of 330 kiloton CO₂ in 2020 compared to the CO₂ levels in 1990. The programme 'Energiepact 2008' mentions several measures to achieve this goal. These measures come down to improving the existing housing stock, closely monitor new constructions and reduce the use of energy in housing (Willigenburg, Nolten, Hazelhorst, Jacobs, & Hoek, 2013).

Results at this point

Over the years the province Overijssel increased the percentage of renewable energy in the province by 2,9%. In 2012 the province produced 5,7% renewable energy. At this point, the province produces 8,6% renewable energy. In addition, the province also reduced their energy usage with 22,7PJ since 2012. In 2012 the province used 72,7 PJ energy in total. At this point, the province only uses 50 PJ energy (Provincie Overijssel, 2016).

4.2.3 Utrecht

The province Utrecht only has one policy document relating directly to this research. The policy document 'Duurzame energie ruimtelijk ingepast' (Sustainable energy spatial adapted) is part of the 'Ruimtelijk actieprogramma 2012-2015', which implements the Structural vision 2012 – 2028 of the province. The document 'Duurzame energie ruimtelijk ingepast' describes how the province its spatial policy applies to the production of sustainable energy.

Duurzame energie ruimtelijk ingepast

The province Utrecht mentions its policy aims at the production of sustainable energy that has a spatial impact on a provincial scale and focusses on the aspects in which initiatives are expected. The focus of the provincial policy thus will be on wind energy, solar power in rural areas, bio-fermentation and other forms of sustainable energy that only have limited spatial impact. The initial ambition of the province was to achieve a goal in which 20% of the energy produced in the province comes from renewable sources. However, the province argues that when all realistic possibilities for biomass, solar power, geothermic energy etcetera are used only 10% of the energy demand will come from renewable sources by 2020. This means not only the province its initial goal will not be reached, but also the national target of 14% will not be met. The preservation of their energy supply thus is slower than expected.

In order to achieve the provincial goal of 10% renewable energy in 2020, the province stimulates municipalities and initiators to enable the production of sustainable energy. From a provincial

standpoint, the province provides a certain framework. The province in the document 'Duurzame energie ruimtelijk ingepast' refers to the Provincial Spatial and Structural vision 2013-2018 for any additional legislation. In addition, the province argues that the policy formulated offers space to the production of renewable energy in rural area's if adapted well (Provincie Utrecht, 2012).

The Provincial Spatial and Structural vision 2013-2018 contain several articles to encourage and preserve the production of renewable energy (table 4 and 5). The structural vision accentuates mainly what the province want to accomplish together with their partners when it comes to spatial developments. As to the Spatial vision this document focusses on the execution of the structural vision by municipalities. The articles in the structural vision relating to renewable energy can be found in table 4.

Structural vision

Table 4. Articles from the structural vision province Utrecht (Provincie Utrecht, 2012).

Article	Purpose
Space for sustainable energy	In this article, the province emphasises that they have the ambition to be climate neutral by the year 2040. In addition to this, the province argues this is not only about CO2 reduction, but also about independence from fossil fuels. The province sees it as its task to create space for the production of renewable energy.
Wind energy location	For wind energy, the province argues their policy aims to create space for wind turbines by indicating area's in which wind turbines suit the surrounding environment.
Energy from Biomass	The province stimulates energy production from biomass, if the available biomass is used as sustainable and efficient as possible. The province does distinguish biomass combustion and fermentation. In addition, the province mentions the spatial impact of small-scale biomass combustion installations is minimal and can be realised when it complies with the environmental license. The location for large-scale biomass combustion installations according to the province need to be well considered.
Landscape	This article emphasises that every development in a rural area needs to suffice with the core qualities of the landscape.

Table 5 shows the three articles from the spatial vision that relate to renewable energy according to the province Utrecht

Spatial vision

Table 5. Aspects of the spatial vision province Utrecht (Provincie Utrecht, 2012).

Article	Purpose
Experimental space for sustainable energy	This article focusses on space for innovative forms of sustainable energy production and the possibilities to combine functions that energy and functions that create energy.
Urbanisation of rural areas	This article focusses on expansions in rural areas. The article prevents innovations in rural areas from happening when they are not in conformation with the conditions laid down.
Landscape	This article emphasises that every development in a rural area needs to meet the core qualities of the landscape.

Results at this point

For the province Utrecht, it is not possible to measure the progress over the last years, because no accurate numbers are available. The one conclusion that can be made is that at this point 2,4% of the province its energy comes from renewable sources (appendix E).

4.2.4 Conclusion

When comparing the provincial document of the provinces Groningen, Overijssel and Utrecht some differences stand out. Remarkable is that all three provinces have set different goals on renewable energy for the year 2020. The province Overijssel is the most ambitious with a goal on renewable energy of 20% by the year 2020. Second, comes the province Groningen with a target of 14% renewable energy, which is exactly the national target. Third is the province Utrecht with a remarkable target of 10% renewable energy by 2020, which is lower than the national target.

Another difference standing out from this comparison is the approach the provinces used to formulate their policy. Both the provinces Groningen and Overijssel used their targets as an approach to explain their measures, their personal roles and the intentions of the province. Utrecht however mainly aimed at the spatial aspects of renewable energy production.

When looking at the progress the provinces made over the years the Overijssel made the most progress with an increase in renewable energy of 2,9%. With an increase of 1,5%, the province Groningen is in the second position. For the province Utrecht, however, it is not possible to measure the progress over the last years. It can only be said that at this point 2,4% of the province its energy comes from renewable sources.

Finally what stands out from the analysis of the policy documents is that the provinces often give very little indication on the division of energy sources. This makes that the measure taken by the provinces are not always clearly formulated in their policy documents and often exist out of a link towards their structural and spatial document. Therefore in order to make a comparison between the province, the further focus of the research is aimed at the percentages of renewable energy production.

5. Analysis of the organisational factors

This section describes the analysis based on the theoretical framework in chapter 2. The variables organisational structure, the organisational capacity and inter-organisational relations are analysed for each of the province Groningen, Overijssel and Utrecht. The results of the analysis are based on the relevant and available literature of the provinces. In addition, the interviews are used to provide additional information.

The results of this analysis are indicative, since the factors analysed are only part of a much bigger implementation process.

5.1 Groningen

5.1.1 Organisational structure

The province Groningen consists out of 800 civil servants of which most are located at the province hall, only a small part works in the field. All these 800 civil servants are accommodated in four types of departments, which are the staff department, supervision and execution department, the policy department and the programme and project management department. First, the staff department is responsible for facilities management, personnel and organisational information provision. Second, the supervision and execution department is responsible for the maintenance of canals and roads. The third department, the policy department is responsible for the policy concerning traffic, transport, spatial planning and society. Last the programme and project management department is responsible for the management of programmes and project, including the 'Programma Energie 2012 – 2015'.

The province Groningen has a flat organisational structure which consists out of two management layers, namely a board of directors and the heads of the departments. The board of directors is responsible for the execution of the policy from 'Gedeputeerde Staten'. The second management layer, the heads of the departments control the departments on the basis of integral management. They are responsible for the products and services of their departments and an efficient use of the personnel and means available (Provincie Groningen, N.D.).

Figure 2 shows the organisational structure as described by the province Groningen.

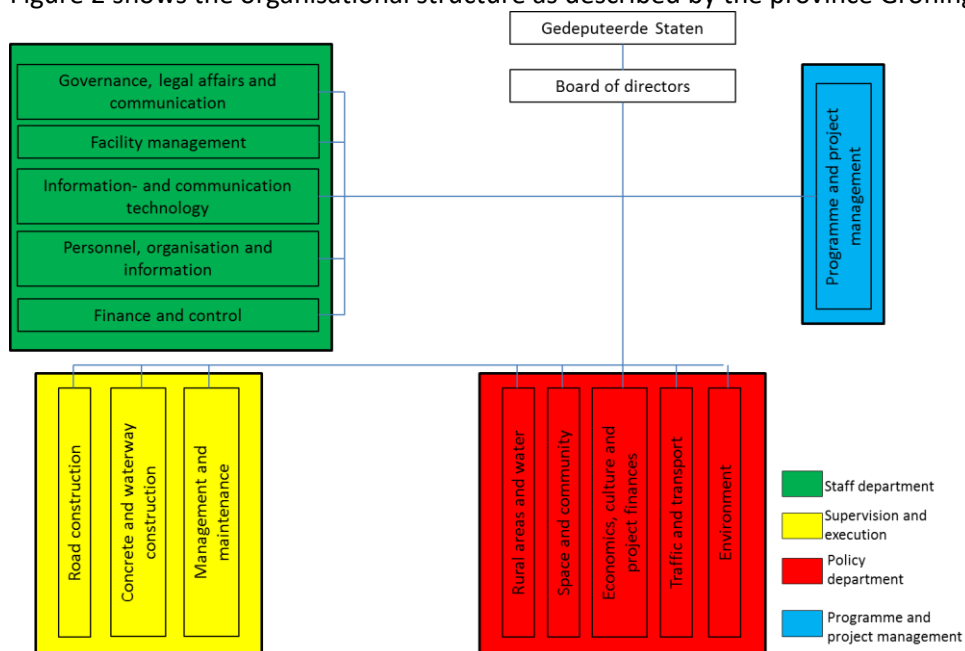


Figure 2. Organisational structure province Groningen (Provincie Groningen, N.D.).

The important aspect of the province Groningen from its organisational structure that stands out from the interview (appendix C) and the literature is that the province makes use of a matrix structure. Figure 2 shows the structure according to the province Groningen. The department marked blue in figure 2 is the programme and project management department. All programmes and projects managed by the programme and project management department involve employees from different departments. Regarding the 'Programma Energie 2012 – 2015' this means the programme is part of the matrix unit, and that according to the theory of Mintzberg (1998) the programme is not only part of one of the departments, but involves employees from different departments, which have to report both to the head of their department and to the programme manager (Mintzberg, 1998). Therefore the 'Programma Energie 2012 – 2015' is subject to influences from almost every department operating within the provincial organisation.

5.1.2 Organisational capacity

Financial resources

The energy programme of the province Groningen relevant for this study is as describes in chapter four is the 'Programma Energie 2012 – 2015'. This programme describes precisely what is spend on the programme and how it is used. Table 6 shows the intended investments on the 'Programma Energie 2012 – 2015' of the province Groningen for the years 2012 -2015.

Table 6. Financial investments 'Programma Energie 2012-2015' province Groningen (Provincie Groningen, 2011)

	2012	2013	2014	2015	
Programme management	50.000	50.000	50.000	50.000	
issuing of licences large-scale energy projects	64.250	53.500	37.375	21.250	
Energy valley	190.000	180.000	165.000	150.000	
100.000 vehicles plan	150.000	150.000	150.000	150.000	
100.000 housing plan	175.000	175.000	175.000	175.000	
Strengthening energy sector	750.000	750.000	750.000	750.000	
Initiatives greening energy sources villages/neighbourhoods	250.000	250.000	250.000	250.000	
Revolving fund	3.000.000				
Total	4.629.250	1.608.500	1.577.345	1.546.250	9.361.345

Overall the province invested €9.361.345 in the programme. What stands out from this table is that the amount of money invested declines when further in the programme. The investments made in the year 2012 account for nearly 50% of the total investments in the programme in the years 2012 till 2015. This can be explained by the fact that the province in 2012 made a one-time investment of €3.000.000 in a revolving fund.

Human resources

As mentioned in paragraph 6.1.1 the province Groningen makes use of a matrix structure, which means the personnel involved in the 'Programma Energie 2012 – 2015' is both involved in the programme, but is also part of a department. The department programme and project management is the central leader of the programme, but it is carried out by personnel of different departments. For the province Groningen, no numbers are available of how many people or FTE are involved in the programme.

5.1.3 Inter-organisational relations

In the interview with the province Groningen (appendix C), the interviewee focussed mainly on the Northern cooperation. When looking at table 7 this suggests that the Northern cooperation, including the Energy valley, provides most of the partners province Groningen has. As described in table 7 appendix F displays the relations involved in the Northern cooperation.

Table 7. Inter-organisational relations province Groningen (Provincie Groningen, 2011).

Organisation	Association to renewable energy
Energy valley	Energy Valley positions the northern part of the Netherlands as the energy region of the Netherlands. The foundation can be seen as a network organisation which of public and private partners to stimulate regional growth opportunities. The foundation is associated with a large number of companies, government organisations and institutes that make a contribution to strengthening the position of the region as energy region (Provincie Groningen, 2011). A complete list of all members can be found in appendix F.
Green deal	The national government makes deals with the community regarding sustainable growth. From this standpoint, the province Groningen is active in a cooperation between municipalities, the northern provinces, SER Noord-Nederland and Energy valley (Provincie Groningen, 2011).
Hansa Energy Corridor	The Hansa Energy Corridor brings together partners from the Northern Netherlands and the North of Germany to develop projects around energy and sustainability (hansaenergycorridor.eu, 2016).
Municipalities	The municipalities are the governing bodies, which are able to actively maintain and control the policy output on a local level. Provinces work together with municipalities to control the execution of policy. In addition, the municipalities are in better position to judge spatial issues concerning renewable energy.

When looking at table 7 the following stands out: most of the inter-organisational relations of the province are a result of the Northern cooperation. In this cooperation, the province knows many partners from all sort of origin including social organisations, other government bodies and businesses. The province Groningen thus has a relatively big network addressing all different kinds of organisations.

5.2 Overijssel

5.2.1 Organisational structure

The province Overijssel consists out of 750 civil servants who ensure that provincial policy is executed. All these civil servants convert policy into action and are accommodated in eight departments, which are Project- and programme management, Space and accessibility, Economics and culture, Nature and environment, Roads and canals, Public services, Operational management and Governance management.

The province Overijssel also has an organisational structure consisting out of two management layers, namely the board of directors consisting out of two directors and the heads of the departments. The board of directors is responsible for the execution of the policy from 'Gedeputeerde Staten'. The second management layer, the heads of the departments controls the departments on the basis of integral management. They are responsible for the products and services of their departments and an efficient use of the personnel and means available. Figure 3 shows a graphic of the organisational structure of the province Overijssel.

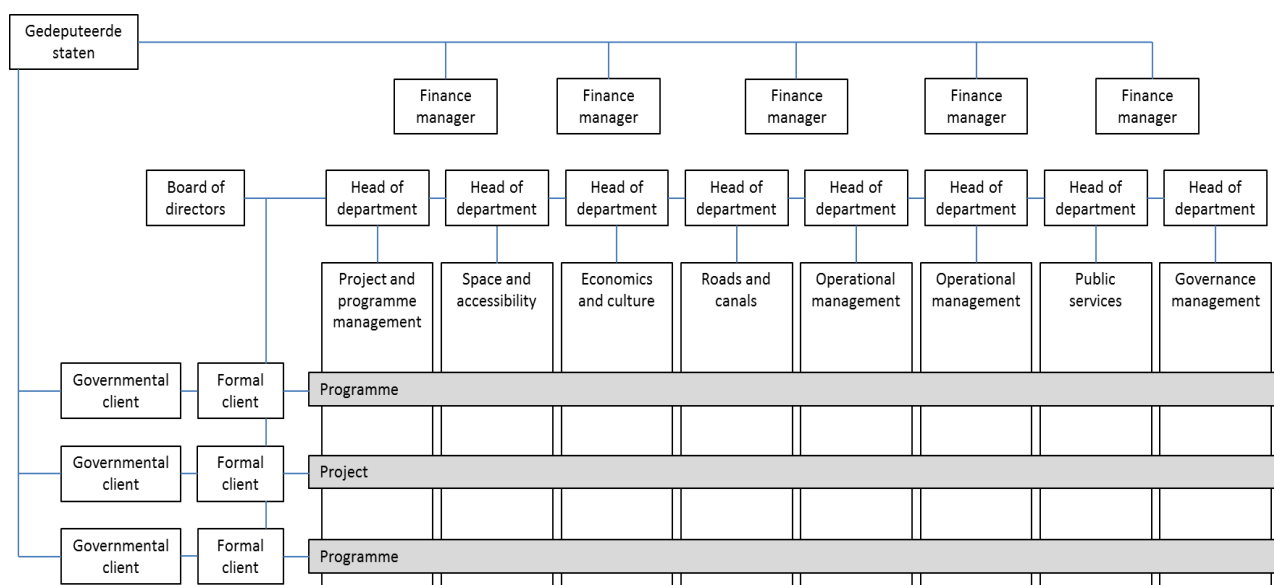


Figure 3. Organisational structure province Overijssel (Provincie Overijssel, 2016).

The province Overijssel operates through departments in vertical lines. Horizontally on these lines, one can find the programmes and projects of the province. The ‘programma energie’ is one of these horizontal programmes. By organising this programme horizontally the programme receives input from different departments and creates a dependency from these departments. From the interview with the province Overijssel (appendix D), it became clear the province uses a matrix structure which in the theory of Mintzberg (1998) means the programme is not part of one of the departments, but is subject to influences from multiple departments operating within the provincial organisation (Mintzberg, 1998).

In the case of the province Overijssel, the commissioning comes from economics, because the accent of the college for this period is on strengthening local economies and creating employment. According to the province, the investment in energy transition positively impacts the economy. By creating an extra dependence the financial manager becomes responsible, or at least positive towards the idea.

5.2.2 Organisational capacity

Financial resources

Remarkable about the province Overijssel is that there is no concrete document that shows the exact investments made in programmes regarding renewable energy over the period 2011- 2015. One of the documents to tell something about the investments over this period is the document ‘De Kracht van Overijssel Hoofdlijnenakkoord 2011-2015’.

According to the document ‘De Kracht van Overijssel Hoofdlijnenakkoord 2011-2015’, the province invested a total of 29 million euros in environment and energy over the period 2011-2015. The division of the 29 million euros is as follows:

Remediation soil and asbestos	€ 18 mln
Healthy and safe living environment	€ 8 mln
Programme sustainable development	€ 2 mln
Climate and drought	€ 1 mln
Total Environment and energy	€ 29 mln

What stands out from these investments is that none of them are directly connected to the production and/ or promotion of renewable energy sources, while the same document argues the province pursues the target of 20% renewable energy by 2020 (Provincie Overijssel, 2011).

Another document called the 'Herijking Programma Nieuwe Energie' describes only the investments of the province on renewable energy over the years 2014 and 2015. For the years 2014 and 2015 according to this document a budget of 17,5 million is available for renewable energy. The division of the 17,5 million euros is as follows:

Support for local initiatives	€ 0,4 mln
Accessible energy advice by supervision of companies	€ 1,1 mln
Performance targets companies and branch-aimed learning groups	€ 1,0 mln
Approach 3.0 energy savings housing	€ 5,0 mln
Pilots for innovation and application of new harvesting methods	€ 2,0 mln
Assignments, hiring and personnel	€ 2,0 mln
Remaining projects	€ 2,8 mln
Continuing subsidies in 2015	€ 3,2 mln
Total 2014 and 2015	€ 17,5 mln
(Provincie Overijssel, 2014)	

Human resources

The province Overijssel, similar to the province Groningen makes use of a matrix structure. According to the interview (appendix D), their energy programme is part of a separate programme team. This team does not operate vertically, but operates horizontally within the province and receives input from multiple departments within the provincial organisation.

5.2.3 Inter-organisational relations

According to the interview with the province Overijssel (appendix D), the province argues that they are actively involved with stakeholders and partners. Table 8 shows the partners of the province Overijssel and describes the relation of the partner to the subject of renewable energy. The partners displayed in table 8 are only the ones found in the relevant policy documents and interviews.

Table 8. Inter-organisational relations province Overijssel (Provincie Overijssel, 2014).

Organisation	Association to renewable energy
VNO NCW	<p>Business organisation VNO-NWC is committed to create an excellent business and settlement environment.</p> <p>Regarding renewable energy the organisation believes energy policy needs to be aimed at four pillars: facility insurance, affordability, clean energy and making use of economic opportunities in national and international markets (VNO NCW, 2015).</p>
NMO	<p>‘Natuur en Milieu Overijssel’ is an independent social organisation which cooperates with government organisations, companies and inhabitants in order to create a clean and sustainable Overijssel.</p> <p>Natuur en Milieu Overijssel gives advice and supports starting energy initiatives and municipalities with the realisation of their energy targets. In addition, Natuur en Milieu Overijssel gives advice to social real estate like schools and healthcare facilities (Natuur en Milieu Overijssel, 2016).</p>
BEON	<p>The BEON, also known as the Bio-energy cluster Eastern Netherlands is a cluster of businesses and institutions, which goal is to encourage bio energy in the Netherlands. The cluster wants to expand their strong position in the field of technological development resulting in a robust contribution in strengthening the economic and international knowledge position (BEON, 2008).</p>
Municipalities	<p>The municipalities are the governing bodies, which are able to actively maintain and control the policy output on a local level. Provinces work together with municipalities to control the execution of policy. In addition, the municipalities are in better position to judge spatial issues concerning renewable energy.</p>
Enexis	<p>Enexis stands for a reliable and affordable energy transport. Now and in the future. Therefore sustainability is a permanent part of their work. Enexis is a public company with a social task. They have the responsibility to cope with energy, environment and materials in a sustainable manner. To fulfil this responsibility Enexis knows three focus area’s: sustainable networks, sustainable society and and sustainable Enexis (Enexis, 2016).</p>
KvK (Dutch Chamber of commerce)	<p>The knowledge and coordination point (KCP) is based in the chamber of commerce and supports the developments of market focussed and energy saving solutions for private home owners. In order to do so, the KCP works together with the province Overijssel, the 25 municipalities, foundation Pioneering, Kennispoort regio Zwolle, Kennispark Twente, Bouwend Nederland, Uneto, VNI, Blok-voor-Blok Hardenberg and Deventer and MIO Enschede (Kamer van Koophandel, 2012).</p>

When looking at table 8 the following stands out: The province is mostly involved with social organisations. The province further has two connections with the business sector, found at this point. These are the connections with the VNO NCW and the KvK. However, the province created a pretty big network by getting involved with organisations such as the KvK and VNO NCW. Both these

organisations have an enormous database of companies and businesses, which can possibly benefit new cooperation's.

5.3 Utrecht

5.3.1 Organisational structure

The Provinciale Staten, Gedeputeerde Staten and the commissioner of the king together form the executive board of the province and is supported by an organisation of 800 civil servants. Head of these 800 civil servant is the direction, in figure 4 mentioned as the board and directorate support. The board and directorate support fulfils a liaison position between the executive board and the administrative organisation.

The board and directorate support, directs, on behalf of the Gedeputeerde Staten the process of the organisation. Hereby the province aims at a intergraded approach, excellent management, a network approach to challenges with partners in the region, renewing of the management tools and particularly on awareness.

Unlike the other provinces, Utrecht does not operate in a matrix structure in which projects and programmes are organised horizontally and are subject to influences from multiple departments operating within the provincial organisation. Figure 4 shows the organisational structure of the province Utrecht.

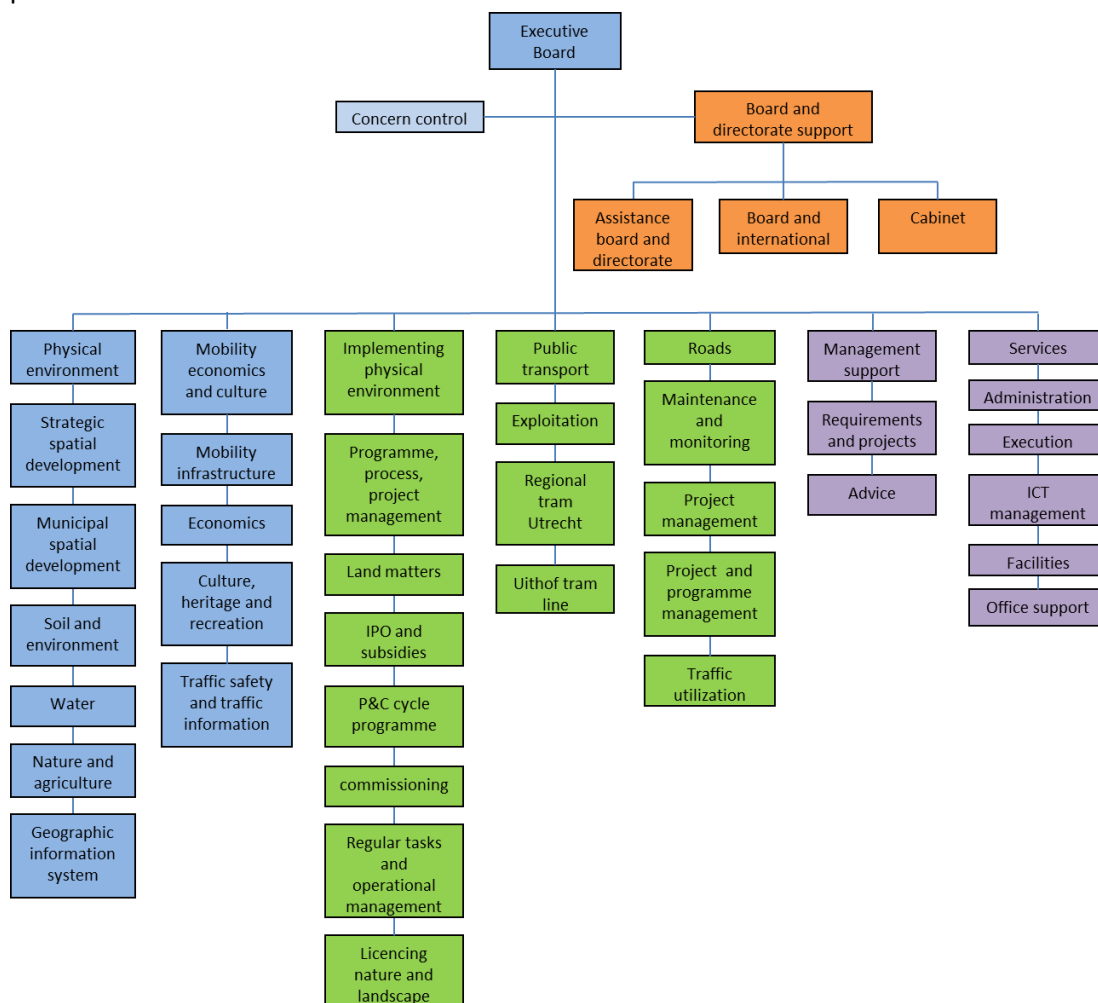


Figure 4. Organisational structure province Utrecht (Provincie Utrecht, 2015).

Policy in the province Utrecht is formulated by the executive board and assessed by the Provinciale Staten. After the policy is assessed it is up to the programme coordinator of the subject involved to coordinate the execution of the policy in the administrative organisation. The interview with the NMU (appendix E) reveals that up until a year ago there was no coordinator Energy, which means that every department was only responsible for its own subjects. In this sense, the province Utrecht can be categorised more as an organisation categorised by function, which means the organisation is structured by knowledge, skills, working process and function (Mintzberg, 1998), rather than by programmes and projects.

5.3.2 Organisational capacity

Financial resources

The province Utrecht, similar to the province Overijssel has no concrete document showing the exact investments in renewable energy over the period of their policy document 'Duurzame energie ruimtelijk ingepast'. Therefore the investments are based on what could be found in the available literature of the province Utrecht.

Like mentioned in paragraph 4.2.3 the document 'Duurzame energie ruimtelijk ingepast' refers to the Provincial Spatial and Structural vision 2013-2018. Therefore the only investments of the province in renewable energy over the period 2012-2015 are found in the spatial action programme. According to the spatial action programme the province its budget for the programme 'Duurzame energie ruimtelijk ingepast' was €60.000, to spend on development costs of documents, communication, research and process costs (Provincie Utrecht, 2012).

Because the measures for renewable energy according to the document 'Duurzame energie ruimtelijk ingepast' are part of the Provincial Spatial and Structural vision 2013-2018 it is possible more investments regarding the programme come from 'integrale gebiedsontwikkeling' and the 'uitvoeringsprogramma van de structuurvisie'. According to the document 'RAP.2 2012 – 2015' both the budget for 'integrale gebiedsontwikkeling' and the 'uitvoeringsprogramma van de structuurvisie' is € 2 mln a year for the period 2011 – 2015. This results in a total budget of 16 million euros for the period 2011-2015 on spatial developments, including renewable energy (Provincie Utrecht, 2012).

Human resources

The interview with the NMU (appendix E) made clear that during the policy period of the document 'Duurzame energie ruimtelijk ingepast' the province was arranged in separate departments. Also, there was no coordinator regarding renewable energy. There are no indications that the province Utrecht had a unit set up regarding renewable energy.

5.3.3 Inter-organisational relations

The province Utrecht according to the interview (appendix E) started a regional energy alliance with the NMU, the EBU and the U10 (table 9). However, still, it is questionable who is in charge. The goal of the alliance is to formulate an implementation programme on renewable energy. In order to coordinate this cooperation purpose of the alliance is that different actors become head of different subjects regarding renewable energy. Each head of a subject is then responsible for the realisation of it together with the other actors involved in the alliance.

According to the interview and the available literature, the province has an active partnership with following partners described in table 9.

Table 9. Inter-organisational relations province Utrecht (Provincie Utrecht, 2012)

Organisation	Association to renewable energy
ARBOR	<p>ARBOR is an Interreg IV B NEW programme, which is a North-West European Programme that fosters transnational cooperation to make the North-western Europe a key economic player and an attractive place to work and live, with high levels of innovation, sustainability and cohesion.</p> <p>Together with 13 partners from 6 European regions, the province Utrecht is involved in the development of technological solutions and regional strategy development for improved sustainable biomass utilisation (Provincie Utrecht, N.D.).</p>
EBU	<p>The Economic Board Utrecht connects sectors, which now cooperate insufficiently. In new coalitions the EBU connects companies with governments and institutes.</p> <p>The EBU challenges market participants to come with integral solutions deployable in the rest of the world (Economic Board Utrecht, N.D.)</p>
U10 Municipalities	<p>The municipalities are the governing bodies, which are able to actively maintain and control the policy output on a local level. Provinces work together with municipalities to control the execution of policy. In addition, the municipalities are in better position to judge spatial issues concerning renewable energy.</p>
NMU	<p>The ‘Natuur en Milieufederatie Utrecht’ is an independent social organisation which cooperates with government organisations, companies and inhabitants in order to create a clean and sustainable Utrecht (Natuur en Milieufederatie Utrecht, 2016).</p> <p>The ‘Natuur en Milieufederatie Utrecht’ helps and stimulates initiatives regarding energy production. In addition, the NMU is lobbies in government bodies such as municipalities and provinces to point out the nature and environment themes. The NMU is also active in controlling these governing bodies whether their policy is executed.</p>
Grid operators	<p>The province Utrecht is working in partnership with the grid operators Enexis, Alliander and Stedin. Together with these partners, the province is active in the energy transition. However, it seems to be that Enexis and Alliander are more active on this subject than Stedin.</p>

What stands out from table 9 is that the province Utrecht, similar to the province Overijssel mostly cooperates with other social organisations. In addition, the province Utrecht only has one connection to the business sector, namely through the EBU. From this standpoint, it can be said that the province Utrecht, when looking at the sort of organisation the province has a relation with their network is limited.

5.4 Conclusion

During the analysis of the organisational factors of the provinces Groningen, Overijssel and Utrecht some differences and similarities appeared. Table 10 gives a quick overview of the factors analysed and the results per province.

Table 10. Results per province

Factor		Groningen	Overijssel	Utrecht
Organisational structure		Matrix	Matrix	Categorised by function
Organisational capacity	Financial resources during the last policy period	9,3 mln	At least 17,5 mln	Total investment unknown
	Human resources	Programme team	Programme team	Departmental organised
Inter-organisational relations	Cooperation initiative	++	-	-
	Social organisations	+	++	+
	Regional alliance	-	-	++
	Business sector	+	+	-

First, the organisational structure. What stands out is that both the provinces Groningen and Overijssel make use of a matrix structure in their organisation. Utrecht, however, is categorised by function. The matrix structure in both the provinces Groningen and Overijssel make that cross-departmental interaction is stimulated, whereas in Utrecht problems regarding the energy tasks are solved in separate departments.

Second the organisational capacity, this factor is analysed through two elements. When looking at the financial resources there is a noticeable difference. The province Overijssel by far invested the most during their last policy period, which can be explained by results found in chapter 4. When comparing the investments made during the last policy period with the increase of the percentage renewable energy during the period the following stands out:

- The province Groningen increased the percentage of renewable energy in the province by 1,5% with a total investment of €9,3 mln.
- The province Overijssel increased the percentage of renewable energy in the province by 2,9% with an investment of €17,5 mln.
- For the province Utrecht, it is not possible to measure the progress. At this point, 2,4% of the province its energy comes from renewable sources.

Seeing these results it can be said the higher the investment, the more progress in renewable energy production.

Also related to the organisational capacity are the human resources of the provinces. Although no numbers are available on the amount of people involved in the implementation process, from the interviews can be concluded that the provinces Groningen and Overijssel both have a programme team concerning renewable energy, whereas the province Utrecht is departmental organised. This means that the provinces Groningen and Overijssel both at least have a few people that are regularly involved with the programme, whereas a regular involvement of certain people for the province Utrecht cannot be concluded at this point.

Third, the inter-organisational relations are analysed. What stands out from both the literature and the interviews is all three of the provinces seem to have at least one kind of dominant relation. For the province Groningen this is the cooperation initiative. The province Overijssel its relations are mostly with social organisation, but also has connections towards the business sector. Looking at the province Utrecht, a vast amount of their relations come from the regional alliance. Unfortunately, at this point nothing can be said about the influence of these relations on goal representation, because too little is known about the communication between the different parties.

6. Conclusion

6.1 Findings

Central to this research were the concepts implementation, goal representation and organisational factors. Therefore the central question is:

“To what extent are the European Renewable Energy Directive goals represented in policy at the provincial level and how can differences with regard to the extent of EU goal representation between provinces be explained?”

In order to answer this question, several sub-questions were formulated. Therefore these questions will be answered first.

1. What are the demands of the European Union regarding the goals in the Renewable Energy Directive?

The Renewable Energy Directive established a mandatory target of a 20% share of energy from renewable sources in Community energy consumption by 2020. In addition Renewable energy directive mentions individual Member State targets can vary. The target set by the European Commission for the Netherlands is 14% renewable energy by 2020.

In order to achieve this target, each Member State needed to adopt a national renewable energy action plan. This action plan has to describe the national targets for the share of energy from renewable sources consumed in transport, electricity and heating and cooling in 2020. In addition, the action plan also needed to involve the effects of other policy measures relating to energy efficiency on final consumption of energy. Therefore the European directive described the national action plan also needed to include adequate measures to achieve the national overall targets, including cooperation between local, regional and national authorities, joint projects and national policies to develop existing biomass resources and mobilise new biomass resources for different uses.

2. What is the current Dutch policy on renewable energy?

The action plan of the Netherlands describes how the Netherlands intends to achieve the Renewable Energy Directive target of 14% renewable energy in 2020. The Dutch government does not set out a blueprint for the management of sustainable energy, but only provides targets and a framework, incentives and direction. In this framework, the national government mentions that a stable investment climate on the long term in the Netherlands is needed. This according to the national action plan involves the creation of a solid energy supply that can meet the demands for sustainable energy. The national action plan argues that in order to create such a supply it is important to make the supply of energy cleaner and more efficient. In order to achieve this National action plan mentions the importance of establishing a responsibility for local and regional authorities when it comes to generating energy from renewable sources.

3. How are goals from the Renewable Energy Directive represented in provincial policy?

Regarding the goal representation in provincial policy, it became clear the provinces are relatively free in implementing the national action plan. The interviews showed that most of the provinces operate according to certain minimal demands, but further use their own interpretation.

Remarkable about the goal representation of the Renewable Energy Directive in provincial policy is that all three provinces ,according to the literature set different goals, when looking at the percentages or renewable energy production. The province Groningen set their goal at exactly the national target of 14% renewable energy by 2020. The province Overijssel was the most ambiguous

with a target of 20% renewable energy by the year 2020. Only the province Utrecht does not meet the demands of the national government by setting a target of 10% renewable energy by the year 2020.

4. What are the differences in representation of the Renewable Energy Directive goals at a provincial level?

This question is partly answered in question three. Because the provinces are relatively free in implementing the national action plan differences occur. One of the differences as mentioned in question three are the targets. Other differences can be found in the approach towards the subject. For instance, the province Utrecht used a more spatial approach towards renewable energy and therefore their measure are included in the Provincial Spatial and Structural vision 2013-2018.

Regarding the provinces Groningen and Overijssel their measures are included in a 'Progamma energie'. For Groningen, this means their document is mainly aimed at the position of the province in the energy transition. Overijssel on the other hand mainly focusses on the targets per energy source and the way in which to reach those targets.

5. How can the differences of representation of the goals from the Renewable Energy Directive between provinces be explained?

The following assumptions can be made:

- Because the provinces are relatively free in implementing the national action plan each province approached it in the way most suitable for them. This lead to the differentiation as explained in question 4.
- As concluded in chapter 4 and 5, differences occur in the progress provinces made during the last policy period. A possible relation can be found in the financial and human resources invested during this period.
- The organisational structure as described in chapter 5 pointed out a difference between the provinces. Both the provinces Groningen and Overijssel make use of a matrix structure, from which a programme team originated. The province Utrecht on the other hand, is categorised by function, which means problems regarding the energy tasks are solved in separate departments. Unlike the categorisation by function a matrix structure stimulates interdepartmental cooperation and awareness throughout the organisation.

Looking at the answers to these questions and the relation between the main concepts and the main question:

'To what extent are the European Renewable Energy Directive goals represented in policy at the provincial level and how can differences with regard to the extent of EU goal representation between provinces be explained? "

The following can be concluded: In most cases, the goals of the Renewable Energy Directive are represented in provincial policy. However, differences between the provinces can be concluded. Both the provinces Groningen and Overijssel show a representation regarding the percentages of renewable energy, whereas Utrecht cannot confirm to the target of 14% renewable energy by the year 2020. Based on the variables analysed these differences can have a few origins.

First, the organisational structure could have caused differences between the provinces. Both the provinces Groningen and Overijssel make use of a matrix structure in their organisation. Utrecht, however, is categorised by function. The matrix structure in both the provinces Groningen and Overijssel make that cross-departmental interaction is stimulated, whereas in Utrecht problems

regarding the energy tasks are solved in separate departments. Because of the use of a matrix structure, programme teams were created, which make sure that procedures are instituted to ensure cross-departmental cooperation and interaction towards the achievement of the goal. On the other hand, the categorisation by function can reduce the duplication of work because responsibilities are clearly defined for each department. The negative aspect, however, is that there is no double checking the results, which can cause important aspects are overlooked.

Second, the organisational capacity could have influenced the goal representation in provincial policy. Both the human and financial resources showed differences. The provinces Groningen and Overijssel, as mentioned before had a programme team responsible for the tasks concerning renewable energy policy. The province Utrecht, however, did not have such a team. Regarding the financial resources, a difference between the investments of the provinces during the policy period of the energy programme was noticeable. Therefore, in the conclusion of chapter 5 it was concluded that the higher the investment of the provinces, the more progress was made in renewable energy production. This also confirms the bigger the progress the higher the goals set.

Third, the inter-organisational relations also showed some differences. What stood out from both the literature and the interviews was that all three of the provinces seemed to have at least one kind of dominant relation. Unfortunately, at this point, nothing can be said about the influence of these relations on goal representation, because too little is known about the communication between the different parties.

The expectations were differences would be found in the cases researched, because the case selection is based on differences rather than similarities. Answering the main question has proved there are noticeable differences in the goal representation of the European Renewable Energy Directive goals in provincial policy. When looking at this research as a whole this means is that the organisational circumstances do influence the goal representation of Renewable Energy Goals in provincial policy.

6.2 Recommendations

After examining the results and answering the main question, there is still room for future research. From different standpoints multiple types of research are possible. First, this research provided an insight on only a few of the variables influencing goal representation. Therefore in future research, it can be researched whether there are more influences on the goal representation of European directive goals in provincial policy.

Second, this research, due to time limitations only gave an indication on goal representation in the provinces Groningen, Overijssel and Utrecht. A recommendation for follow-up research is to research the other provinces of the Netherlands, in order to find out whether the same results occur. From this research could be derived whether the provinces Groningen, Overijssel and Utrecht are an exception regarding the other Dutch provinces.

What would have strengthened this research is an in-depth analysis on the communication between the different parties involved in the implementation process. This would have strengthened the conclusions concerning inter-organisational relations. Thereby comes that interviews with these parties would have created a broader insight into the inter-organisational relations of the provinces. A recommendation for future research would be to include these parties more in the research and research the inter-organisational relation from a more network kind of approach, instead of making the province the central focus point.

6.3 Reflection

Apart from making recommendations for future research, I would like to reflect on the process and the results of the thesis.

First, the formulation of the theoretical framework turned out to be rather difficult. When starting this research it turned out there were more factors influencing goal representation than expected. This resulted in an enormous amount literature claiming to relate to the subject. On top of this, it was difficult to keep in mind that the literature needed to relate to goal representation and not only to the implementation process. With a bit of help from my supervisor, I was able to filter the literature and focus the research on four aspects that possibly could influence goal representation.

Second, the research is conducted through a multiple case study on three provinces. Due to time limitations, only three provinces were researched, but if possible, of course it would have improved the research if more provinces were researched. The choice of the three provinces is based on the amount of Biomass installations and biomass potential per province. Looking back on the research these were not the best criteria in order to select the province, because later on in the research it turned out that the provinces are free to make a division on the sources of renewable energy.

Nevertheless, the research pointed out some strong differences between the provinces, as was expected during the case selection.

Third, in combination with the multiple case study several interviews were done. It was a deliberate choice to do semi-structured interviews, because it allowed the respondents to freely express their views in their own terms. The first intention was to interview one person involved in the policy making process of each province. Unfortunately, the province Utrecht was not available to do an interview on Energy policy within the province. Luckily the Natuur en milieu federatie Utrecht was able to provide most of the information necessary. The Natuur en milieu federatie Utrecht works closely together with the province Utrecht and provides the province with advice regarding renewable energy. Therefore, the Natuur en milieu federatie Utrecht provided a critical view on the province regarding previous efforts of the province concerning renewable energy. However, as mentioned before in the recommendations more interviews with the parties involved would have created a better overview on the situation.

Finally, as already concluded in paragraph 6.1 the thesis provides an insight on goal representation of the European Renewable Energy Directive goals in provincial policy. However, the analysis of the factor inter-organisational relations could use some deepening. In this research, nothing can be really said about the influence of these relations on goal representation, because too little is known about the communication between the different parties. Therefore, in order to research this aspect one must use another approach towards this factor.

As a student myself I have learned a lot from doing this research. The process of conducting this research, in my experience, was not always that smooth. I had trouble not to drown in the amount of literature available. However, with some guidance of my supervisor, I managed to finish my thesis. The most important lesson learned was: Stay focussed on your main target and do not deviate from it too much.

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Appendices

Appendix A: Interview guide

Interview guide

Implementatie van Europese regelgeving door provincies op het gebied van hernieuwbare energie

- Voorstellen en korte uitleg over mijn bachelorthesis;
- Vragen of respondent problemen heeft met de opname van het gesprek;

Algemeen:

1. Kunt u iets vertellen over de werkzaamheden van uw afdeling/directie/organisatie?
2. Wat is uw functie?
3. Hoe lang bent u al werkzaam binnen deze functie?
4. Wat is de rol van het Europees gevormde beleid binnen uw werkzaamheden?

Mening:

5. Wat zijn uw ervaringen tot dusver met betrekking tot de Renewable Energy Directive op het gebied van hernieuwbare energie?
6. Wat vindt u van het feit dat provincies geacht worden een eigen energiebeleid te formuleren? Hoe verloopt dit proces?

Ervaring:

7. Hoe zijn uw ervaringen met de implementatie van Europees beleid op het gebied van hernieuwbare energie in uw organisatie /provincie?

Samenwerkingen

8. Met welke organisaties werkt de provincie samen?
9. Hoe is deze samenwerking tussen de provincie en andere organisaties?
10. Spelen er, of hebben er conflicterende belangen gespeeld bij de formulering van het beleid over hernieuwbare energie?
11. Hebben deze conflicterende belangen invloed gehad op de beleidsvoering omtrent hernieuwbare energie?

Beleidsintenties:

12. In welke mate is er sprake van een centrale programmering vanuit het Rijk met betrekking tot beleid omtrent hernieuwbare energie?
13. In hoeverre heeft de provincie vrijheid om zelfstandig bevoegdheden uit te oefenen voor de verbetering en instandhouding van bronnen voor hernieuwbare energie?
14. Wat is jullie gedachte over het huidige beleid van de provincie wat betreft hernieuwbare energie?

Middelen

15. In hoeverre beschikt de provincie over middelen om het beleid voortkomend uit de Renewable Energy Directive en het Nationaal actie plan te implementeren? En zijn dit volgens u voldoende middelen? (financieel, kennis)
16. Worden er vanuit andere overheidsinstanties middelen beschikbaar gesteld voor de provincie?
17. Vormt het aantal beschikbare middelen een belemmering voor de implementatie van beleid omtrent hernieuwbare energie?

Afrondende vraag

18. Wat zijn volgens u de belangrijkste plus- en minpunten van het energie beleid op provinciaal en op Europees niveau?

Afsluitend:

19. Heeft u nog vragen aan mij over mijn thesis?

De bevindingen van dit interview zal ik samen met een analyse van het beleidsdocument verwerken in mijn thesis over de implementatie van de Renewable Energy Directive.

Wil u graag een terugkoppeling ontvangen?

Is het mogelijk u nogmaals te benaderen indien ik nog vragen heb?

Appendix B: National acts and regulations

The National renewable energy action plan includes several measures and national policy documents to reach the targets set by the Directive 2009/28/EC of the European parliament and of the Council. The national action plan especially mentions specific measures to fulfil the requirements under Articles 13, 14, 16 and 17 to 21, of the Directive 2009/28/EC, which are the articles about:

- Administrative procedures, regulations and codes;
- Information and training;
- Access to and operation of the grids;
- Sustainability criteria for biofuels and bioliquids;
- Verification of compliance with the sustainability criteria for biofuels and bioliquids;
- Calculation of the greenhouse gas impact of biofuels and bioliquids;
- Implementing measures;
- Specific provisions related to energy from renewable sources in transport.

The table below describes the exact measures taken by the Dutch national Government to fulfil the requirements of the European Renewable Energy Directive.

Article of the directive	National Acts / measures	Regulations Defined by the National Renewable action plan
Article 13: Administrative procedures, regulations and codes	Environmental management Act	This Act governs the licensing obligation for renewable energy installations. Pursuant to this Act, general rules must be observed and/or a licence must be granted to set up, maintain in operation and modify an installation.
	Spatial planning act	This Act regulates: <ul style="list-style-type: none"> • the spatial integration of renewable energy installations and the associated network structure; • the preparation of structural visions at municipal, provincial and national level, such as a regional or provincial environmental plan; • land use designation at municipal level. Specifically in the case of renewable energy projects in rural areas, it is important to ascertain whether these tie in with the activities of existing agricultural businesses.
	Flora and Fauna Act	This Act stipulates by way of ecological testing that, in the event of habitat disturbance, account must be taken of protected plant and animal species and protected areas. In principle, work carried out in public areas must not cause damage to protected plant or animal species.
	Nature Conservancy Act	This Act is applicable to Natura 2000 area (Birds Directive and Habitats Directive areas), Protected Natural monuments and Wetlands. Activities or projects which cause damage to the protected natural environment are subject to licensing.
	Crisis and recovery Act	The cabinet intends to use the Act to speed up (construction) projects, including wind energy and bioenergy projects, by simplifying and shortening procedures.

	Housing Act	Regulates the licensing obligation for construction
	Public Works Act	Regulates the licensing obligation for, inter alia, offshore wind turbines
	General Administrative Law Act	
	Law governing the general provisions of the Environment Act	The Law governing the general provisions of the Environment Act brings together around 25 regulations which relate to the living environment. This involves licences for buildings, the environment, nature and monuments, which are combined into one licence, known as the Environmental Licence. The Environment Act therefore also has an effect on the development of the national renewable energy supply.
Article 14: Information and training	Government Information (Public Access) Act	This Act guarantees the facility for citizens to request documents administrative matters from an administrative body.
		Information and exchange of knowledge relating to renewable energy via the Sustainable Energy Centre and knowledge products.
Article 16: Access to and operation of the grids	Electricity Act 1998 and Gas Act	Gas Act and the Electricity Act 1998, strengthening the operation of the gas market, improving the security of supply and including rules relating to the priority for sustainable electricity.
	Independent System operation Act	The Act consists of three main elements: <ul style="list-style-type: none"> • The transfer of operation of the high-voltage networks with a voltage level of 110-150 kV to TenneT • The creation of 'fat system operators' who themselves perform all strategic tasks and also take over economic ownership of the system. • The introduction of the group prohibition which stipulates that operation and ownership of energy systems and supply- and production activities via these systems must be carried out by separate undertakings as from 1 January 2011 .
Article 17: Sustainability criteria for biofuels and bioliquids		An independent audit will be carried out, organised and set up by the industry. This will verify compliance. The Renewable Energy Directive is binding.
Article 18: Verification of compliance with the sustainability criteria for biofuels and bioliquids		Certification is carried out for and by industry, but the government intends to help them set this up.
Article 19: Calculation of the greenhouse gas impact of biofuels and bioliquids	Renewable energy monitoring protocol	The protocol describes how the amounts of the different forms of renewable energy are calculated and reported.
Article 20: Implementing		Regulations according to Article 17, 18 and 19.

measures		
Article 21: Specific provisions related to energy from renewable sources in transport		Support schemes to promote the use of energy from renewable sources in transport.

Appendix C: Interview Groningen

Provincie Groningen

Onderwerp	Verklaring geïnterviewde
Ontwikkelingen in de provincie	<p>De provincie is al sinds 2003 bezig beleid rondom energie te formuleren en uit te voeren. In 2007 hebben wij eigenlijk ons eerste echte energieprogramma geschreven. Dat heeft een gevolg gekregen richting 2012. Wij hebben een green deal met de overheid gesloten in samenwerking met de noordelijk provincies. De green deal hebben we opgesteld rondom 5 pijlers. Uiteindelijk is dat de basis geweest voor de noordelijke samenwerking. Daarop heeft iedere provincie zijn eigen beleid geformuleerd. Wij hebben dat destijds gedaan aan de hand van de 5 pijlers.</p> <p>Het nationaal energie akkoord is in 2013 afgesloten. Als noord Nederland hebben wij gezegd dat is mooi, maar wij willen de BV. Nederland een aanbod doen, iets ambitieuzer dan het energie akkoord. Wij denken dat wij richting 2020 meer kunnen wegzetten dan de nationale doelstelling. Dat is het document switch geworden.</p>
Proces in de provincie	<p>Als provincie hebben wij een vrij sectorale indeling. Het programma energie is in die zin wel interessant. Het programma energie is een matrix programma. Dat betekent wij hebben een afdeling die heet PPM, programma en project management, daar zit de centrale leiding alleen het programma An zich wordt uitgevoerd door mensen van verschillende afdelingen. Dus die vormen niet tezamen een afdeling maar werken over de afdelingen heen aan 1 programma.</p> <p>Wij als provincie zijn geen projectontwikkelaars wij gaan de projecten niet draaien wij gaan wel nadrukkelijk in gesprek met bedrijven en organisaties om te kijken wat kunnen jullie doen en wat willen jullie doen en waar nodig zullen wij dan faciliteren.</p>
Conflicterende belangen intern	<p>Fossiele brandstoffen zitten bijna allemaal onder de grond en zie je niet op wat relatief kleine installaties na, maar als je daar vanaf wil, bijna alles wat duurzaam is zit bovengronds. Dan heb je dus per definitie impact op je landschap. In die zin is dit college echt een andere koers gaan varen. Vergeleken met het verleden is er in de politieke arena nu wel echt het besef dat er wat moet gebeuren, dat het impact heeft op het landschap en dat je dus echt ruimte moet bieden wil je daadwerkelijk stappen kunnen zetten.</p>
Haalbaarheid doelen	<p>In theorie zijn de doelen haalbaar, in praktijk weet ik niet of het gaat lukken. Hangt er ook een beetje vanaf wat je allemaal wel en niet mee zou kunnen tellen. Als je kijkt naar onze huidige productie in de provincie Groningen dan zitten wij op 11% duurzame energie productie. Met de windopgave die wij landelijk hebben afgesproken komen we al een heel eind. Daarnaast zal er nog wat biomassa moeten komen. Als je kijkt naar de wind op land discussie, waarbij het huidige college en dat is echt een doorbraak ten opzichte van het vorige college, heeft gezegd wij staan als de provincie achter de energie transitie. En dat betekent dat er ruimte moet komen en zal je ruimte moeten bieden aan de energietransitie.</p> <p>Dat denk ik dat nog wel eens lastig kan worden, omdat op dit moment de</p>

	<p>discussie en dan hebben we het met name over het windpark N33 daar is toch bevolking redelijk tegen. Nou wil dit college in gesprek met de omgeving en kijken waar zou nou met draagvlak ruimte kunnen volstaan voor duurzame energieproductie. Ik weet niet hoe dit af gaat lopen, maar daar heb ik op dit moment nog een hard hoofd in.</p> <p>Wij willen 1,5% energie besparen per jaar, dus dan gaat je finale energie verbruik al omlaag. De windproductie wordt verdubbeld. Ook worden er redelijk wat zonneparken ontwikkeld. En de Biomassa initiatieven en daarvan hebben wij al gezegd. Wij gaan er van uit als 40% van de biomassa initiatieven gerealiseerd worden dan halen we onze doelen op het gebied van biomassa. Als het gaat om wind houden we ons aan de landelijke doelstelling dus die 850MW die komt er. Nu staat er een kleine 400 dus dat wordt verdubbeld</p>
Samenwerking met partners	<p>We hebben nog geen energiefonds. Dat is nu in ontwikkeling. Het college heeft 10 mln vrijgemaakt voor het inrichten van een energiefonds de kaders daarvoor zijn net geschetst en die zijn goedgekeurd en nu moet ook het energiefonds verder ontwikkeld worden.</p> <p>De noordelijke samenwerking die werkt wel, maar het is een zoektocht de afgelopen jaren geweest, van wat is nou het meest optimale. Want in het verleden hebben we samen het 100.000 voertuigen plannen gehad, 100.000 woningen plannen. Daar zijn we wel achter gekomen dat dat niet werkt. Elke provincie heeft toch zijn eigen dynamiek. De kerntaak van de noordelijke samenwerking is om de regio in zijn totaliteit te profileren als energie regio daarin ook gezamenlijk lobby te kunnen voeren.</p>
Vershil huidig en nieuw programma	<p>Het nieuwe programma kijk meer naar waar ligt nu echt de rol van de provincie, waar kan je nu echt een rol van betekenis spelen. In het verleden hebben we heel veel subsidiepotjes gehad, is leuk en aardig en help wel een beetje, maar op het moment dat zo een subsidiepot verdwijnt zie je ook dat het effect direct weg is. Dus hoop dat je met het op gang brengen van een beweging op een subsidiepot, dat niet werkt. Dus het energiefonds zal revolverend zijn. We zitten nu veel meer te kijken, van 1 van de kerndomeinen waar de provincie zich mee dient te bemoeien is de ruimtelijke ordening. Daar heb je als provincie iets te doen. Gekoppeld aan het energieveld zie je nu dus echt de beweging van ruimtelijke ordening, wij willen meer ruimte bieden voor duurzame energie productie.</p> <p>Een stuk politieke afwegingen ligt daaraan ten grondslag. Wat ik net in het begin al aangaf is dat het huidige college echt zegt wij willen ruimte bieden voor de productie van duurzame energie. Vorige colleges waren daar behoorlijk behoudend in. Ze wilden het landschap beschermen zoals het er nu is en het liefst versterken zoals het er was.</p> <p>Het huidige programma is veel realistischer in wat de provincie kan. Het vorige energieprogramma stond nog vol met allerlei projecten, van ja dit heeft de provincie wel in samenspraak met de omgeving bedacht en dit zijn dan de projecten die kunnen bijdragen aan. Het zit hem vooral in welke rol vervul je als provincie.</p>
conflicterende belangen partners	<p>Er zijn altijd invloeden, er zijn altijd partijen die praten met de politiek om de politiek een bepaalde kant op de duwen.</p>

	<p>Wat je wel merkt, gasunie en gas terra dat zijn de bedrijven in de gas sector die hebben nadrukkelijk wel invloed. Binnen die bedrijven wordt echt wel gezien dat de slag naar natuur of duurzame energie productie gemaakt moet worden. Maar die zetten dan voornamelijk in op gas. Dus duurzaam gas. Die willen dus graag dat daar aandacht voor blijft. Dan kom je uiteindelijk toch op politieke afwegingen.</p>
Beleidsformulering binnen de provincie	<p>Je moet aan de minimale richt lijnen voldoen. Wij als noord Nederland, dat doen wij al jaren lang, wij profileren ons als energie regio van Nederland, van Europa. Daarin zoeken wij trouwens ook de samenwerking met Duitsland. En wij hebben behoorlijk stevige ambities. En die gaan zelfs een stapje verder als de ambities op landelijk niveau.</p>
Beschikbare middelen	<p>Er zijn niet specifiek middelen beschikbaar voor zover bekend. Wat we zelf wel nadrukkelijk doen is op zoek gaan naar middelen als het nodig is. Bijvoorbeeld één van de pijlers van het energieprogramma is internationalisering en kennis. Vanuit provinciale co financiering proberen wij geld op te halen vanuit Europa, rijksoverheid en de Duitse deelstaten om zodoende projecten te kunnen draaien.</p> <p>Meer middelen is altijd praktisch. Duurzame energie is nog altijd duurder dan fossiele. Subsidies zijn gebleken niet te werken daarom zegt het college meer naar reëelvorende gelden te willen.</p>
Ervaring	<p>Ervaring heeft voordelen voor de toekomst. De afgelopen jaren ook samen met de andere provincies behoorlijk geleerd hebben wat is nou wel effectief en wat niet. Heeft ook soms te maken met de situatie. Je bent voor een deel ook afhankelijk van wat er landelijk gebeurt.</p>

Appendix D: Interview Overijssel

Provincie Overijssel

Onderwerp	Verklaring geïnterviewde
Proces in de provincie	<p>Het is niet zo eenvoudig om te zeggen dat het beleid van nationaal niveau indaalt in de regio, dat wij het weer vertalen en dat het vanuit ons weer door vertaald wordt naar de lokale Gemeenten.</p> <p>Iedereen maakt voor zichzelf eigen beleid. Op nationaal niveau heb je het energie akkoord waar een aantal doelstellingen in staan. Maar je ziet op provinciaal niveau dat inderdaad iedereen daar zijn eigen draai aan geeft en schrijft eigenlijk zijn eigen energie programma. Daarin wordt veel gebruik gemaakt van landelijk vastgestelde doelen maar ook veelal wordt daarvan afgeweken.</p> <p>Dus waar wij nu mee bezig zijn: is vooral met het opzetten van een nieuw programma voor de periode tot en met 2023. Dat doen we vooral met de stakeholders buiten en met partners, van ondernemers tot medeoverheden en lokale initiatieven.</p> <p>Daarin zie je toch dat vaak de keuze wordt gemaakt een hogere doelstelling te hanteren dan landelijk.</p>
Haalbaarheid doelen	<p>Eerst stond er de doelstelling 2020. Daarvan is geconstateerd dat die niet haalbaar was op basis van doorrekeningen van de ECN. Dus het nieuwe college heeft gezegd; we willen eigenlijk niet omlaag met de doelstelling dus hebben we gezegd maken we de termijn een stukje langer naar 2023.</p> <p>De 14 % voor 2020 is nog steeds haalbaar</p> <p>De verwachting is dat het gestelde doel van 20% voor 2023 haalbaar is, maar dat moet ook blijken uit het nieuwe programma. Het lastige van die doelstelling is dat je een grote afhankelijkheid hebt van al je partners. Als zij minder voortvarend te werk gaan merkt de provincie dat.</p>
Consequenties	<p>De enige consequenties die aan het niet behalen van de doelen zouden kunnen zitten is dat ons bestuur politiek wordt afgerekend, maar dat gebeurt niet. We lopen vrij ver aan de voorkant met ons beleid ik denk als je het dan niet haalt is ook een stukje voortschrijdend inzicht. En het is wel duidelijk zichtbaar dat we alles uit de kast trekken om het te realiseren. Dus afrekenbaarheid is in die sector toch vrij lastig.</p>
Samenwerking met partners	<p>Eigenlijk zie je dat dat nu heel sterk is. We zijn nu bezig met de ontwikkeling van een nieuw programma. Dus eigenlijk heeft de provincie ervoor gekozen om het programma te ontwikkelen samen met partners. Dus de provincie is niet meer in de lead, maar ook de partners. En dat zijn 5 partners:</p> <ul style="list-style-type: none">VNO NCWNMOBEONDe gemeentenEn Enexis <p>We zijn nu ook dat programma aan het ontwikkelen en de planning is dat</p>

	<p>die eind van het jaar concept uitvoeringsprogramma gereed is. En het wordt ook samen met de partners de intentie om het uit te gaan voeren.</p> <p>Uitwisseling van kennis in energiefondsen</p>
Vershil huidig en nieuw programma	<p>Het enigste grote verschil is denk ik dat we ons realiseren dat we meer moeten doen. Als je dezelfde lijn doortrekt dat je er niet komt op je eigen gestelde doelstellingen.</p> <p>Dus het bewust zijn van de afhankelijkheid van andere partners. Dus eigenlijk wordt er op alle onderdelen die we raken gekeken van: oké wat is er nu voor extra inspanning nodig om wel op die doelstelling uit te komen. En dan proberen we ook de partners zo ver te krijgen dat ze mee gaan in die ambitie en dat we ook een stuk verantwoordelijkheid daar neerleggen.</p>
conflicterende belangen partners	<p>Dat is wel goed mogelijk. Dat is nog niet bekend, maar bijvoorbeeld dat partners meer wind energie willen dan de provincie binnen de kaders die de provincie stelt. En daar moet je dan het gesprek over voeren.</p> <p>Dit is allemaal nog in ontwikkeling. Dat gesprek is nog niet echt aangegaan, maar die dingen gebeuren en dat verwachten we ook wel.</p>
Beleidsverdeling	<p>Industrie en bedrijven, mobiliteit, duurzame opwekking, lokale initiatieven en bebouwde omgeving. We gaan later doorrekenen welke maatregelen worden genomen en hoe gaan we dat doorrekenen.</p> <p>De echt mix van energie is nog niet bepaald. Verwacht wordt dat duurzame opwekking het grootste aandeel zal krijgen.</p>
Beleidsformulering binnen de provincie	<p>We hebben een programma team. En het is dus een apart programma binnen de provincie. Het zit niet in de verticale lijnen, dus dat verschillende afdelingen samenwerken, het is een apart team energie.</p> <p>Bij ons in overheidsorganisaties zijn verticaal ingedeeld langs inhoudelijke kolommen. En daar horizontaal op worden programma's en projecten ontwikkeld. Dus die krijgen dan ook input vanuit al die verschillende lijnen, een matrix structuur. Het programma energie is bewust dus ook op die horizontale lijn gezet zodat er een afhankelijkheid wordt gecreëerd vanuit verschillende beleidseenheden die in de verticale lijnen zitten.</p> <p>Het opdrachtgeverschap ligt bij economie omdat het accent van ons college voor deze periode ligt heel erg op het versterken van lokale economie, werkgelegenheid en dat soort zaken. Maar we zien ook dat een heel belangrijk argument van de investering in energietransitie is het positief effect op je economie.</p> <p>Je creëert eigenlijk een tweedelige afhankelijkheid. Dat maakt ook dat de portefeuille houder van economie verantwoordelijk is. Of in ieder geval positief gestemd is tegenover het energieprogramma.</p>
conflicterende belangen intern	<p>Uiteindelijk wordt de opgave voor duurzame opwekking. Bijvoorbeeld de oppervlakte voor zonnevelden of de plaatsing van windturbines. Dat gaat ongetwijfeld ruimtelijke knelpunten opleveren. En volgens mij moet je daar samen uitkomen. En daar is ook wel uit te komen.</p> <p>Het enige is dat je bij overheden de inspraak van burgers heel ver hebt door</p>

	georganiseerd, dat zie je dus direct vertaald in niemand wil een windmolen in zijn achtertuin. Dat is een beetje te ver doorgeslagen, soms moet je daar een beetje meer doorpakken volgens mij anders haal je je doelstellingen niet.
Beschikbare middelen	<p>Ons beleid zelf voor de komende tijd worden middelen beschikbaar gesteld oor provinciale staten. Uit de politiek, dus eigenlijk uit de oude verkochte Essent gelden. Daar wordt een deel van toegekend aan energie. Voor de komende periode 40 mln. Daarnaast hebben we ook nog een energiefonds gevuld door alleen provinciaal geld. Beheerder daar van is extern. Zit 200 mln in. Dit fonds wordt revolverend ingezet.</p> <p>Europese gelden zijn we mee bezig, maar dat is nog niet concreet geregeld. Er zijn veel middelen beschikbaar uit Europa. We horen regelmatig geluiden dat het daar tegen de muur aan klotst. Maar wat je ziet op Europees niveau is dat het zo bureaucratisch ingeregeld is en dat er zoveel criteria worden gesteld aan welke projecten worden gehonoreerd of welke aanvragen passend zijn.</p> <p>Ze zijn wel anderhalf jaar met één aanvraag bezig dus het is wel heel tijdrovend. Je moet wel een heel perfect passen project hebben wil je het in één keer kunnen krijgen. Dus je ziet dat ze heel erg achter lopen met het uitzetten van gelden op Europees niveau, met name in de energie sector.</p> <p>We zouden meer tempo kunnen maken in de uitvoering als die Europese gelden makkelijker bereikbaar zouden zijn. En daar lopen niet alleen de overheden tegenaan, ook de bedrijven die ambities hebben.</p>
Ervaring	Eerlijk gezegd zijn wij niet heel erg bezig met de Directive, als we al een kader hanteren is dat het nationaal energie akkoord, maarja daar wijken we dus ook vanaf in positieve zin. Het leeft niet heel erg de Energy Directive binnen de provincie.
Beperkingen	De geografische beperkingen zijn wel eens plaatjes van gemaakt. Dat als je volledig energie neutraal wil zijn dat je 3000 windmolens in je provincie nodig hebt, en zonnepanelen. Plus Plus. Maar geografische beperkingen ga je wel tegenaan lopen.

Appendix E: Interview Utrecht

NMU

Onderwerp	Verklaring geïnterviewde
Werkzaamheden	<p>NMU is een provinciale stichting en we zetten ons in voor een mooie en duurzame provincie Utrecht. En dat doen we op tal van thema's dus de groene thema's zoals natuur, biodiversiteit, landschap en alles wat met landbouw te maken heeft daarnaast ook meer de energie thema's, dus de energie besparing, duurzame energie opwekken en duurzame mobiliteit.</p> <p>Onze rol is aan de ene kant, we zijn toen der tijd opgericht als lobby groep richting provincie en gemeenten, om onder de aandacht te brengen dat natuur en milieu thema's ook belangrijk zijn. Dat doen we nog steeds. Vroeger was da 100% van ons werk maar nu is dat nog 25% van het werk en voor driekwart van ons werk zijn we nu eigenlijk aan het zorgen dat beleid ook uitgevoerd wordt. Voornamelijk zelf ook proactief projecten oppakken.</p>
Middelen voor NMU	<p>Aan de ene kant hebben we een basis subsidie van de provincie om onze activiteiten te kunnen doen. Waaronder de activiteiten zoals het ondersteunen van energie coöperaties, gemeenten helpen met nadenken over beleid.</p>
Proces in de provincie	<p>Gemeenten en lokale partijen moeten het initiatief nemen en dan faciliteert de provincie. Dus het is niet dat ze actief op zoek gaan naar welke locaties hebben we, maar als er een locatie is dan wil de provincie hun expertise aanbieden. De provincie kan in sommige gevallen zeker een pro-actievare rol aannemen.</p> <p>We kunnen concluderen dat de provincie in het verleden te weinig aan energie beleid heeft gedaan. De coalitie hiervoor heeft in de 4 jaar dat ze hier zaten weinig gedaan op dit thema. Dat was bewust een politieke keuze. Ik denk dat je daar door minder staat dan bijvoorbeeld de provincie Overijssel, die al veel eerder energie als hoofd thema hadden.</p>
Haalbaarheid doelen	<p>We lopen in Utrecht nog achter. We hebben nog maar een derde van de doelstelling bereikt. De doelen zijn theoretisch haalbaar, maar praktisch nog niet, omdat we nog niet de omslag maken. Maar dat betekent niet dat we die doelen los moeten laten, maar dat we meer moeten doen om de omslag waar te maken.</p> <p>We hebben wel eens berekend, dus we zijn van de 10% aan duurzame energie uitgegaan. We zitten nu op 2,4% duurzame energie. Om naar de 10% te gaan wat moet je dan doen? We hebben alle ambities van de provincie die er liggen op vol gedraaid. En dan kom je maar op 7% duurzame energie uit, dus dan zit je nog niet aan die doelstelling.</p> <p>Een belangrijk punt is draagvlak. Eigenlijk voor alle energie projecten heb je nodig dat bewoners en energie bedrijven mee doen. Het is altijd heel goed om als provincie ambities te hebben en projecten in gang te zetten. Maar wil je echt een stap maken en energietransitie in gang zetten dan zal je echt een grote groep mee moeten hebben. Ik denk dat er meer mensen betrokken kunnen worden. Wij hebben daar een rol in nu met de ondersteuning van 40 energie initiatieven, dus energie coöperaties of ander</p>

	<p>soort energie initiatieven waarmee we van onderop bezig zijn. Dat wordt een steeds grotere doelgroep, maar we moeten nu de stap naar de grote massa zetten.</p>
Consequenties	<p>Opzich is het halen van de doelen niet direct iets waar de provincie op beoordeeld wordt. Het is wel zo dat de taakstelling voor bijvoorbeeld windenergie vaststaat en daar wordt de provincie wel op de vingers getikt als ze zich daar niet aan houden.</p> <p>Zo heeft het rijk bedacht de partijen die het energie akkoord hebben ondertekend in 2013. Ook wij hebben die ondertekend en ook de provincie. En samen moeten we die doelstelling halen. Dus de provincie is verantwoordelijk voor een aantal onderwerpen binnen het energie akkoord en één daarvan is zorgen voor wind op land.</p>
Beleidsvrijheid	<p>Het energie akkoord is niet iets wat alleen het rijk heeft vastgesteld dat hebben we met zijn alle vastgesteld. Dus alle belanghebbende partijen waaronder ook overheden. Ook maatschappelijke instellingen en het bedrijfsleven. Het is niet dat het rijk iets oplegt het is dat wij als samenleving iets opleggen. Dus vindt ik wel dat we ook aan de lagere overheden kunnen vragen daar ook aan mee te doen.</p>
Samenwerking met partners	<p>We zijn hier in de provincie Utrecht de regionale energie alliantie gestart. En het is altijd de vraag wie neemt het initiatief maar in ieder geval samen met de provincie. Dus zij zijn naar ons toegekomen en wij zijn ook naar hun toe gegaan. Met de provincie, de EBU, de U10 (de tien gemeenten). Hebben we een alliantie gevormd om met elkaar eigenlijk een uitvoeringsprogramma te maken van de doelstellingen die we hebben.</p> <p>Toen hebben we gezegd onder die doelstelling van duurzame energie hangen verschillende thema's. Bijvoorbeeld het thema grootschalige zonne-energie en dan één van die partners gaat dat trekken om te zorgen dat we dat realiseren. Wind energie, energie besparing bij particulieren, energie besparing bij bedrijven. Zo heb je verschillende thema's.</p> <p>Voor sommige onderwerpen stapt de provincie naar ons toe van jullie hebben de kennis. Andersom stappen wij ook richting de provincie.</p> <p>De netbeheerders Stedin Alliander en Enexis. Alliander en Enexis zijn wat meer bereid mee te werken aan de energietransitie terwijl Stedin terughoudend is.</p>
Vershil huidig en nieuw programma	<p>Het nieuwe programma is nog niet gevormd, maar vorig jaar is er een nieuwe coalitie gevormd. En in dat coalitie akkoord staat dat energietransitie een groot onderdeel zal zijn, er is ook meer budget vrijgemaakt, dus dat is al wel helder. En nu hebben ze dus een jaar de tijd gehad dat vorm te geven.</p> <p>In de vorige coalitie deed de provincie heel weinig aan het energie thema.</p> <p>Er zijn heel veel factoren die er voor zorgen dat de provincie er nu meer aan doet. Wij zijn wel één van degene die dat hebben aangekaart. In de aanloop naar de verkiezingen hebben we dat ook duidelijk gemaakt, van zorg dat het in jullie programma's staat en dat energie goed naar voren komt.</p>
Conflicterende	<p>Binnen de provincie heb je de afdelingen die met landschap bezig zijn en die</p>

belangen in de provincie	<p>dat inderdaad tegenwerken. De echte energie lobby van de bedrijven en de shell zitten meer op rijks niveau. Maar ook wel bij provincies zie je met name ook projectontwikkelaars. Je wil een energie transitie in gang zetten. Dus eigenlijk zou je moeten zeggen alle nieuwbouw zowel woningen als vastgoed moet gewoon energie neutraal. Maar daar zijn dus ook projectontwikkelaars en andere partijen die dat niet zien zitten.</p> <p>De belangen van duurzame energie krijgen soms voorrang op de ruimtelijke belangen. Opzich een goede ontwikkeling. Maar het is maatwerk en er moet per situatie gekeken worden.</p>
Middelen	<p>Er zijn verschillende bronnen als eerst positief de provincie heeft meer vrijgemaakt voor energietransitie. Nu 4 mln per jaar inclusief de medewerkers om dit thema aan te jagen. Daarnaast heeft de provincie middelen bij de EBU neergelegd om projecten te faciliteren waar ook bedrijfsgeld bij is dus een soort van meer geld maken met geld. Daar wordt ook nog geld van gemeenten bij gestopt.</p> <p>Met dat geld wat de provincie heeft zijn ze dus nu dat uitvoeringsprogramma aan het maken. Dat is even afwachten. Het vorig programma was dan een aanjaagfonds voor collectieve energie projecten. Ook één van die projecten trekken wij.</p> <p>Vanuit het rijk zijn er verschillende middelen nu beschikbaar voor de VNG. Europese fondsen als EFRO.</p>
Beleidsverdeling	<p>De provincie is op dit moment bezig met de herijking van de ruimtelijke structuurvisie. En daarin is nu energie een groot thema geworden.</p>
Beleidsformulering binnen de provincie	<p>Het beleid wordt geformuleerd door het college en daarna door de Provinciale Staten getoetst. En daarna gaat het ambtelijk apparaat ermee aan de slag. Ambtelijk is er nu een coördinator energie, die was er niet bij het vorige college. Toen waren er wel mensen die met energie bezig waren, maar niet echt een programma coördinator. De programma coördinator nu is verantwoordelijk het programma te formuleren en er daarna ook voor te zorgen dat het uitgevoerd wordt. Daarnaast komen er ook mensen die bezig zijn met verschillende energie thema's. Die thema's zijn ook binnen de andere onderwerpen verdeeld.</p> <p>Op dit moment was het zo dat alles in de aparte afdelingen geregeld werd. Met het nieuw uitvoeringsprogramma is het nog even afwachten hoe zij het gaan inrichten. Ik schat in dat de coördinator een paar mensen om zich heen krijgt. Maar dat verder heel veel van bijvoorbeeld het ruimtelijk beleid dat die gewoon in de afdelingen blijven en dat onderwerpen daar ingebracht worden door de coördinator.</p>
Beperkingen	<p>Utrecht is gewoon een provincie waar veel mensen wonen en waar je gewoon wat minder ruimte hebt. Dus dat is 1.</p> <p>2. het is een provincie waar al het verkeer en vervoer langs komt.</p> <p>Dus in dat opzicht wil je 14% landelijk halen dan is het niet raar dat de provincie Utrecht maar op 10 zit en een andere provincie meer.</p> <p>We hebben samen met de provincie de staat van Utrecht gemaakt dat is een document waarin we de staat van Utrecht, dus hoe staat Utrecht er nu voor.</p>

	Ook energie zit daarin. En daar de provincie Utrecht ook vergeleken met andere provincies. Dan zie je dat andere provincies meer mogelijkheden hebben. Daarom is het ook logisch andere doelstellingen te hanteren per provincie.
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Appendix F: Energy Valley Cooperation

3T Logic	Gemeente Meppel	Proces - Groningen BV
ABNAMRO Groenbank	Gemeente Stadskanaal	ProjectTeamWork
Actemium	Gensos	Provincie Drenthe
Agriport A7	Geveke Technical Solutions	Quality Services Certification BV
A-Hak Infranet B.V.	GITP	Current Renewable Energy BV
Alliander	Gjald accountants b.v.	R.R. Maritime Engineering B.V.
Animal Sciences Group	GL Garrad Hassan Nederland B.V.	Rabobank Groningen
Anser Groep / Management Resultants Noord	Goa Infra Groep	Raedthuys Groep
Arbo Inspectie Dienst BV	Green Planet - Doorten Pesse	Remeha BV
Arcadis	GreenLoans	Rijksuniversiteit Groningen
ATO-NH	GreenSpread	Rijksuniversiteit Groningen College van Bestuur
Atos Origin Groningen	Groen Gas Nederland	RIO Projects
Atos Origin Groningen	Groningen Airport Eelde	ROC Drenthe College
AVEBE	Groningen Seaports	Rumph Advies & Interim Management
Ballast Nedam	Grontmij Climate & Energy B.V.	Ruysdael, The Counselling Company
BAM Infratechniek Noordoost b.v.	GTI Noord BV (Cofely)	S&T Dependable Solutions
BIO MCN	Haffmans	Samenwerking MWH-NNN
Career Result	Hanze Development	Samenwerkingsverband VAST
Cirmac International B.V.	Hanzehogeschool Groningen	SBE
CMS Derks Star Busmann Advocaten en Notarissen NV	Heereborch BV	Schanssema Business Consulting
Comelissen Consulting Services B.V.	Heijmans Infratechniek	Schultink Strijker bouw BV
De Boer SPS	Heveskes Energy B.V.	Sinz management advies
DHV B.V.	Horizon Energy BV / SunFarmers	SMI Dokkum B.V.
Dorhout Advocaten	Icopal B.V.	SNN
Duurzame Kracht	If Technology	Stichting Duurzaamheidsplatform Heerenveen
E Kwadraat Advies	IMPACT - Universiteit Twente	Stichting Duurzaamheidsplatform Heerenveen
East-West Trade Holding BV	Inextern BV	Stichting Sensor Universe
ECN	Initio dbk	Storm Training
Eco Reest BV	Intramar insurances	Sun Solutions
Eco2Eco	Kamer van Koophandel Noord-Nederland	Sunoil Biodiesel bv
Ecofys Netherlands B.V.	Kema Nederland BV	Syntens
Econvert Consult	Kiwa Gastec Technology	Tebodin consultants & engineers
EECT bv	KNN Advies	Technaut B.V.
Eekels Elektrotechniek	Lefier	Technische Unie
E-Invest	LTO Noord	Ten Kate Vetten B.V.
EKPI Solutions	Machinefabriek Douna B.V.	TH Energy Projects
Electrabel	MAN Consultants	Tieto
Eleq	MNO Vervat	Topell Energy BV
Eneco Energie	NACAP Benelux BV	UNICA Installatietechniek BV
Enerflex B.V.	NAM	USG Innovativ
EnerGQ B.V.	NiVoGe Groep	Utility Consulting Partners BV
EnergylCT Nederland BV	Noordenwind	Value in the Valley

Enexis	Noordtj	Van der Feltz advocaten
f.a.x. Translations b.v.	Nspyre	Van Gansewinkel BV, Noord
Flexicator	NUON Power Projects	Van Hall Larenstein Instituut
Foxcoal	NV Nederlandse Gasunie	Vattenfall AB
Friesland Bank	NV Nederlandse Gasunie	Visser en Smit Hanab
Frisian Energy Systems	Omrin	VMW Taxand
Gardner Denver Nederland B.V.	Ontwikkelingsbedrijf Noord- Holland Noord (NHN)	Waterbedrijf Groningen
GasTerra	Oosterhof Holman	Waterschap Noorderzijlvest
Gemeente Assen	OrangeGas	Wetsus
Gemeente Coevorden	Paatz Scholz van der Laan	Windpowercentre
Gemeente Delfzijl	Pastoor Consult	Yacht BV
Gemeente Eemsmond	Peterson SBS Den Helder B.V.	YP Telemetrie BV
Gemeente Emmen	PlasBossinade Advocaten N.V.	ZONenergie
Gemeente Groningen	PNO Consultants	Quality Services Certification BV
Gemeente Haren	Precia-Molen	Current Renewable Energy BV
Gemeente Hoogeveen	Procap	R.R. Maritime Engineering B.V.
Gemeente Leeuwarden	ProCensus	