MSc. Thesis

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The use of process management for addressing different perceptions in formulating the ‘Energiestrategie regio Rotterdam Den Haag’

TU Delft

MRDH

‘‘The art of simplicity is a puzzle of complexity’’
–Douglas Horton–

The use of process management for addressing different assignment perceptions in formulating the 'Energiestrategie regio Rotterdam Den Haag'

By

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In partial fulfilment of the requirements for the degree of Master of Science in Sustainable Energy Technology at the Delft University of Technology.

To be defended publicly on Wednesday July 3 (2019) at 16:00 at hall A, faculty of Technology, Policy and Management.

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This thesis is confidential and cannot be made public until June 27, 2024.

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Preface and acknowledgement

I want to emphasise that the views and conclusions of this study are those of Nicolai Versloot (later called the researcher). To conduct this research properly, the 'Metropolitan region Rotterdam The Hague' has provided the necessary information to the researcher, but the procedure of interpreting and processing the data has been an effort of the researcher.

I experienced the start of this research as very difficult; the frequent changes in the research design –as I daily encountered new information which undermined my paradigm– made me feel insecure. Knowing that I know so little often made me feel completely lost...

…With the coming of the spring sun, my stimulating supervisors and a defined scope, the pilot light turned into the holy fire. It has been a long trajectory, in which I could experience periods of joy and satisfaction towards the end. After my green light meeting, I discovered the intelligence of process management by having a wealth of insights. Now I am able to see the great intellectual and emotional addition of working on this thesis. I am proud of the result.

Aan Ferry,
Iemand die ik benijd; een leeuw, als het gaat om werkmentaliteit.
Een strijder, als het gaat om verantwoordelijkheid nemen, zeker in zware tijden, want ook dit dossier is niet gemakkelijk..
Een leider, die me liet zien dat doen waar je in gelooft soms gepaard gaat met harde keuzes.
Een orakel, die telkens de tijd nam om mijn 1000 vragen te beantwoorden.
Een rots in de branding die ik vaak nodig had om uit het diepe te komen.
Een woordkunstenaar/metafoorknutselaar die mij de diepte van taal deed inzien.
Maar vooral een mens, met het hart op de juiste plek.

Aan Thomas,
Een gedreven wetenschapper, wiens honger naar kennis& oplossingen nooit staakt.
Iemand die zijn interesse volgt, waardoor er duurzame energie en overtuiging achter schuilt.
Zeer hulpvaardig, geduldig, en stimulerend en zeer stabiel, in tijden van eigen instabiliteit.
Een sterke waker van de wetenschappelijke methode.
Iemand wiens zeer heldere feedback scherpte in eigen gedachtewereld aanbracht, en welke mij later tot een betere schrijver zal maken.
En aan het eind van de dag, een goedlachse sympathieke vent.

Nicolai Versloot
Delft, July 2019

Abstract

Introduction. To contribute to the reduction of global warming, The Netherlands signed the Paris Agreement on 12-12-2015, which dictates that in 2030, a reduction of 55% in CO_2 emissions compared to 1990 must be achieved (P. Boot et al., 2016; Sociaal-Economische Raad, 2013). To meet these goals, several Dutch regions started their Regional Energy Strategy (RES) formulation process in 2016. A RES is a collaboration of private and public parties that strives to effectively balance energy supply and demand within the regional boundaries by focussing on sustainable energy generation, energy savings and the benefits from economies of scale (Schuurs & Schwencke, 2017). Going through such a process with the relevant stakeholders will ultimately result in new regional policy in the field of energy. The 'Metropolitan region Rotterdam The Hague' (MRDH) is one of the 30 regions of the Netherlands. Its diverse economic activity, great variety in municipality sizes and key economic and infrastructural players such as the Port of Rotterdam and Greenport West-Holland contribute to the region's complexity. The MRDH started the RES formulation process in February 2018 and endeavours to deliver the outcome in July 2019. The owners of this process are its 23 municipalities, its waterboards and the province of South-Holland.

Knowledge gap. In the field of process management, several core values exist which play a role in each process, such as trust, openness, progress, and content. Scientific literature does not express the weight of these values, as these depend on the process' context. Additionally, it is unclear how a high level of complexity impacts the process architecture and potential process interventions. In the field of regional governance very limited scientific literature is available. That in itself is remarkable, as the process approach is growing steadily (Boogers, Klok, Denters, & Sanders, 2016). Regional governance –a governance level in between the municipal and provincial level– is controversial. The scientific debate focuses on several aspects. First, regional governance would lead to administrative chaos and complexity. Second, regional governance could lead to the hollowing out of local governance, thereby reducing the democratic quality. Lastly, the question is what organisational form of regional governance can best be employed; is it monocentric, a concentration of regional governance in one authority, or polycentric, a fragmented system of collaborative arrangements into which independent municipalities are free to enter?

Central research question. The process' stakeholders have different perceptions of the RES assignment. These 'different assignment perceptions' are caused by the abstractness of the assignment, and the fact that the original assignment has been changed by the influences of the interim reports of the Climate Agreement. The Climate Agreement is a national treaty that mainly aims at the reduction of CO_2 emissions in the Netherlands. The fact that the stakeholders perceive the assignment differently leads to several problems in the formulation process. Some of these problems even form a severe threat to the core values of process management. To solve these problems, the process managers perform a variety of process interventions to align the perceptions of the stakeholders.

The main research question is: *'How are problems resulting from stakeholders' different perceptions of the assignment 'Energiestrategie regio Rotterdam Den Haag' addressed by the use of process management?*

Research design and methods. This study applies the case study method on the MRDH region. To answer the research questions, both qualitative and quantitative methods are used. First, an examination is made of what the leading assignment for the RES MRDH is and how it has been influenced by the Climate Agreement. Second, the assignment perceptions of the owners are examined through 26 stakeholder interviews. The parties that published the RES assignment (i.e., IPO, VNG, UvW and the Ministry of Internal Affairs) are interviewed on their perception as well. These data are analysed using the qualitative data software 'ATLAS TI'. Through a workshop with the process managers it is determined how the different assignment perceptions impact on the process. Utilising an influence tree, the consequences of these different assignment perceptions are visualised. It has turned

out that real problems that actually occurred in the process could be linked to the consequences. Next, the process coordinator has been interviewed several times to analyse the context and the performed process interventions of these problems through a lens of process management. The last part describes the currently relevant problems that still need process intervention(s). For one problem, a 'solution-panel' has been gathered, consisting of several experts, to find suitable process interventions.

Results. The findings show that the interim deliverables of the Climate Agreement demand a higher level of detail of the RES outcome. The interviews indicate that the majority of the owners share the following image: 'The RES is a municipal and regional plan that is based on facts and figures, intended to work towards a future energy system in pursuit of the regional or national climate objectives' (Section 5.5.1, Figure 7). The assignment perception of the Ministry of Internal Affairs and the umbrella organisations comes down to: 'The RES is a masterplan which combines multiple perspectives. Eventually, these different dimensions must be merged and realised in the municipalities' spatial environment' (Section 5.7). Concerning process management, the process architect and coordinator have chosen to implement two foundations for a robust process course. These provide solidity, controllability and should prevent problems. Nevertheless, ten problems have been identified as a result of different assignment perceptions. Six of them have been resolved by conducting municipal consultations and the extension of the process lead time. These process interventions have been performed to secure an adequate involvement of the municipalities' official organisation to the RES formulation process. Another process intervention included the reframing of the RES to meet the expectations of specific stakeholders. Next, to stimulate the spatial integration of the assignment, the spatial area civil servants were invited for the workshops during the spring of 2019. Lastly, bilateral meetings were held between the process coordinator and the aldermen of the municipalities to clarify points of view and to adjust the aldermen their attitude in the RES process. To solve the problem of 'the national RES assignment demands for concrete top-down objectives while the RES needs bottom-up collaboration', the solution panel has suggested that process management can be employed for creating a safe environment in the pursuit of 'shared ownership' of the assignment.

Discussion. An interpretation of the applied process management is that the high complexity of the region has led to a wide range of assignment perceptions which in turn needed comprehensive process architecture and several process interventions. Besides, the process managers value the core values of process management of De Bruijn, Ten Heuvelhof, & In 'T Veld (2010) depending upon the process agreements and the agreed level of ambition. Also, the results led to the assumption that the core value 'progress' forms a trade-off with 'content'.

Concerning regional governance; 'administrative chaos and complexity' carries a negative emotional charge. The popular thought is that administrative chaos and complexity causes reduced democratic legitimacy, less trust due to the multitude of partners, and poor effectiveness. These are incorrect by fact. Therefore, the researcher opts for new terminology: 'administrative intensification'. The results of the democratic quality of the RES can be interpreted as excellent, as only two of the 23 municipalities have no (or partial) influence on the RES formulation process. In fact, these two municipalities were not represented as they had internal problems. Based on this result, the findings of Boogers et al. (2016) –indicating that around 90% of the alderman having an effective influence on regional decision-making– can be confirmed.

Further research. Regarding process management, further research should examine the RES formulation processes of the other Dutch regions to discover how the core values of process management have been applied, and whether relations between the process context and the core values exist. In the field of regional governance, further research should investigate how this 'new renewable energy implementation challenge' can be poured into the current multi-layer governance system while preserving democratic legitimacy. Furthermore, when regional governance structures resulting from the RES process have been set up, further research should be undertaken to investigate the effectiveness of the collaborations in such structure.

Contents

List of Tables

List of Figures

Nomenclature

Acronyms

BDU= brede doel uitkering (a subsidy for decentralised authorities)
CBP= Central Planbureau (Netherlands Bureau for Economic Policy Analyses)
GE= Generation energy, which is a company of the consortium.
GR= wet gemeenschappelijke regeling (joint provisions act)
IPB= Interbestuurlijk Programma (Inter-Governmental Program)
IPO= Interprovinciaal Overleg (Interprovincial Consultation)
LES= lokale energie strategie (local energy strategy)
NPRES=nationaal programma RES (national program RES)
PA= process architect
PBL= Planbureau voor de Leefomgeving (Netherlands Environmental Assessment Agency)
PC= process coordinator
PZH= provincie Zuid-Holland (province of South-Holland)
RES= regionale energie strategie (regional energy strategy). By 'The RES' is meant: 'the energiestrategie regio Rotterdam Den Haag'. Sometimes 'RES MRDH' is mentioned to emphasise.
Uvw= Unie van Waterschappen (Union of Water Boards)
VNG= Vereniging Nederlandse Gemeenten (Association of Netherlands Municipalities)

Glossary

Administrative network energy= bestuurlijk netwerk energie
Administrative workshop= bestuurlijk atelier
Alderman= wethouder
Municipal Executive= college B&W
City council= gemeenteraad
Civil network energy= ambtelijk netwerk energie
Civil workshop= ambtelijk atelier
Commissioning party = opdrachtgeversteam
Councillor= raadslid
Decentralised authorities= decentrale overheden
Decision-making= besluitvorming
Environment and Planning Act= omgevingswet
Hollowing out of local government= uitholling lokaal bestuur
Joint provisions act= wet gemeenschappelijke regeling
Legally fixing= wettelijk vastleggen
Local government= gemeentebestuur (college B&W+ gemeenteraad)
Civil servant= ambtenaar
On arm's length of local governance= verlengd lokaal bestuur
Steering committee= stuurgroep
Spatial environment= ruimtelijke ordening
Umbrella organisations= koepelorganisaties

Encyclopaedia

MRDH= metropolitan region Rotterdam Den Haag. Although this abbreviation contains the word 'region', it stands for the organisation. When 'MRDH region' is mentioned, the geographical area is intended.

Policy sector= the sectors of the Climate Agreement; electricity, built environment, industry, agriculture and land use, and mobility.

Policy domain= the policy domains of municipalities; spatial environment, recreation, tourism, employment et cetera.

Process managers= the process architect and the process coordinator

Product RES= the final document that will be delivered in the summer of 2019.

RES owners= the 23 municipalities of the MRDH region, the waterboards of Delfland and Schieland, and the province of South-Holland.

Umbrella organisations= UvW, VNG and IPO.

Workshop (atelier)= a meeting with all relevant stakeholders where their input is requested.

1 Introduction

Section 1.1 describes the background of a 'regional energy strategy' (RES) and in particular the one in the 'Metropoolregio Rotterdam Den Haag' (MRDH). During this RES formulation process, which started on 1-2-2018, multiple complex challenges -which are disturbing for a good process continuation- have emerged. Section 1.2 looks at these complex challenges and thereafter, the most relevant challenge is distilled. In Section 1.3, the knowledge gap and literature study is presented, followed by the problem statement, the research objective, the main- and research questions, and the scope in Section 1.4. The this research is related to the SET track is discussed in Section 1.5, and its attempt to contribute societally and scientifically is described in Section 1.6. Section 1.7 closes the gates with an outline of the study.

1.1 Background

1.1.1 Energy strategy region Rotterdam The Hague

To reduce the speed in which the atmosphere is carbonised, 174 countries, including The Netherlands, have signed the Paris Agreement on 12-12-2015. For the Netherlands, this means that, in 2030, a reduction of 55% fewer CO_2 emissions compared to 1990 must be achieved (P. Boot et al., 2016; Sociaal-Economische Raad, 2013). In 2050, CO_2-neutrality must be reached as the final point on the horizon. CO_2-neutrality, which equals 'Carbon neutrality' is covered as: 'through a transparent process of calculating emissions, reducing those emissions and offsetting residual emissions, net carbon emissions equal zero'. (DECC, 2009). To meet these objectives, in 2016 the 'Vereniging Nederlandse Gemeenten' (VNG) designated seven pilot regions to draft their 'regional energy strategies' (RES). These regions were Friesland, West-Brabant, Midden-Brabant, Drechtsteden, Hoge-Veluwe, Midden-Holland, and Metropolitan Eindhoven. The Coalition Agreement of the Rutte III government states that this regional approach will be implemented nationwide, which means that all 30 regions of the Netherlands must have a RES in place before 2021 (VVD, CDA, D66, & Christenunie, 2017). In this way, the regions contribute to the national climate objectives.

A RES is, and can be defined as, a joint venture between several parties within the region, such as knowledge institutions, business and public institutions, brought together to take regional steps towards the national climate targets effectively. Balancing energy supply and demand within the regional boundaries with potential for sustainable energy generation, energy savings and benefits from economies of scale are the major priority (Schuurs and Schwencke, 2017). By this supra-municipal coordination, energy supply and demand can be brought together efficaciously (Ibid.). In the RES, a chapter must be included on projects which are already running and which, by means of collaboration and knowledge sharing, can be accelerated. The strategies are drawn bottom-up, from a regional perspective, based on socio-technical developments (VNG, 2017b). The Metropolitan region Rotterdam Den Haag (MRDH) and key players such as the municipality Rotterdam and The Hague, the Port of Rotterdam and Greenport West-Holland followed the examples of the seven pilot RES'es and started the formulation of their own RES in February 2018. Different consultancy agencies are being appointed for each region to guide the process. For the MRDH, the company 'APPM management consultants' guides the process. The scope of this RES formulation is from February 2018 till July 2019.

The commissioning party, which consists of the civil group of representatives of the RES owners, agrees that the MRDH is a region that requires special attention in this formulation process regarding its high level of complexity. An elaboration of this complexity is presented in the case description. Another problem is that the laws and regulations may change during the process. 'The Klimaatakkoord' is currently drafted, of which the result will impact the RES assignment. Finally, there are the standard process challenges such as the cost-benefit distribution, governance of the

complex network, political sensitivities and substantive dilemmas. Given the complex characteristics of this regional assignment, the RES formulation has been built upon a process in which the stakeholders come to a joint outcome employing a complex network.

1.2 Problem orientation

1.2.1 The general problems and their effects

The main problem of the RES formulation concerns the complex nature of the assignment and its related context. For example; this region includes 23 municipalities, both large and small (in terms of residents), of which each municipality has a different speed when it comes to the commitment and the implementation of sustainability plans. Based on the interviews conducted by the researcher with representatives of the participating municipalities (Section 5.5), it has been observed that the majority 'feels' the urgency of accelerating in the energy transition whereby effective and targeted steps are taken, while in other municipalities limited financial resources and FTE1's have been made available. Therefore, these mostly smaller municipalities depend heavily on the surrounding municipalities. Another example is that there are concerns that the involved sections of the national government does not provide the legal and financial resources to the decentralised authorities to carry out the assignment adequately. There are many other examples which accumulate the complexity. These 'complex challenges' are known for their persistence; there is no ready-made solution because the case-context relationship is unique. Besides these process challenges, the overarching problem is the climate transition, which is labelled by Lazarus, Babcock and Barkow et al. (2009) as a super wicked problem (Section 2.3.1). Another issue is that the assignment is carried out under high time pressure.

The combination of the above mentioned challenges results in not having enough time to thoroughly investigate the challenges and to tackle them in a satisfactorily manner which in turn hinders the progress in terms of support, recognition and continuity. Often, unresolved challenges remain, and they later turn up again, which consequently causes irritation among the process managers and the client team. Additionally, it is a missed opportunity that there is no time to make-well-thought-out decisions (partially) based on academic literature or lessons learned from the formulation process the other pilot RES'es. In fact, these powerful sources can deliver high added value in quality to the RES process.

1.2.2 Preliminary work for obtaining the central challenge of this study

Preliminary work was necessary before the research design could be set up. First, it was examined which complex challenges exist, and whether these are appropriate to address in this study. This was carried out through a consultation of commissioning party in the form of a workshop (scheduled at the end of regular periodic meeting on 29-9-2018), in which broadly supported challenges arose through an open discussion. Then, these challenges were judged on their relevance and workability by the process managers, i.e. the process coordinator and -architect. The full procedure of this preliminary work is presented in Appendix C. After a list of seven appropriate complex challenges was gathered, the process managers filtered out 'challenge 1': 'the fact that stakeholders possess different perceptions of the RES assignment'. Henceforth, this is abbreviated to 'different assignment perceptions'. According to them, this challenge was worth investigating in the sense that this challenge touches upon the core of process management. Finally, the decision was taken that the challenge of different assignment perceptions would be the main focus of this study.

[1] Full Time Equivalent

1.3 Literature study

Although a ready-made solution to the central problem cannot be found, there is literature available that touches on it. The literature study is divided into three parts; regional governance, process management and perceptions. Usually, the topic perceptions is treated as a subpart of process management, but as this study specifically focuses on 'perceptions', this topic is discussed separately.

1.3.1 Insight into the effects of regional governance

In the end, the outcomes of the RES formulation must be implemented in the form of regional or local policy. From the moment of implementation onwards, one can speak of 'regional governance'. Since the RES is a product of the region –knowing that there is an explicit focus on supra-municipal collaboration– literature on regional governance is very relevant. Besides, the figures on regional governance provide more insight into the potential power of the RES.

Regional collaboration[2] in the Netherlands is relatively developed in comparison to other countries, and besides, it is still changing in form and quantity. Klok, Denters and Boogers (2018) call the collaboration structure in the Netherlands 'polycentric', which means that it consists of a fragmented system of collaborative arrangements in which independent municipalities are free to enter. The municipalities spent on average 13% of their money on regional partnerships (Ibid.). Even though there is not much scientific literature available on regional governance, the few articles that do exist are compelling and relevant to the job that the MRDH performs.

1.3.1.1 Recent developments in regional governance

Although the proposed so-called 'district formation' (gewestvorming), 'mini-provinces' (mini-provincies) and 'city regions' (stadsregio's), which essentially come down to region-scale governance platforms, have not been successful, the municipal boundaries have been enlarged. As a result, the number of municipalities in the Netherlands has decreased from 1015 in 1945 to 388 in 2017 (Klok et al., 2018). Another development is that the joint provisions act (wet gemeenschappelijke regeling, WGR) and many versions of it have been introduced. Lastly, compulsory partnerships (functional regions) have increased in importance, such as police regions, youth care regions, labour market regions and environmental services (Ibid.).

1.3.1.2 The political debate

1.3.1.2.1 Administrative chaos and complexity

In recent years, a political debate is conducted on this regional governance, which is according to opposition, 'again an extra governance layer'. According to this group, this layer creates 'administrative chaos and complexity'. A popular thought is that this aforementioned 'administrative chaos' may have negative consequences for the mutual relationships in partnerships and therefore also for its administrative effectiveness and its democratic quality, as explained by the following. If municipalities with many changing partners in many different contexts collaborate, mutual trust will be difficult to build, collaboration is without obligation and the effectiveness is little. Furthermore, because of its chaos, this collaboration is hard to monitor democratically (Traag, 1993). Note this paragraph defines complexity (which is the same as administrative chaos) as: 'the gross amount of municipal collaborations' (Boogers et al., 2016; Klok et al., 2018). These collaborations can be based on public law (the so-called Joint Provisions Act, or Wet gemeenschappelijke regeling [WGR]), on private law, or informal arrangements. Only in this section, this definition of complexity will be employed. The remarkable fact is that the amount of regional collaborations is still growing in the Netherlands (Boogers et al., 2016).

[2] Note that in the literature study and analytical framework the word 'cooperation' is commonly used. The researcher prefers 'collaboration', as it implies a more active type of participation and shared ownership of the end product (English language and usage, 2019).

1.3.1.2.2 Shifted local governance versus extended local governance

Regional governance can lead to the hollowing out (uitholling) or the complementation (aanvulling) of local governance. The first boils down to 'shifted local governance (verlegd lokaal bestuur), which means that the city council has little or no influence/control on regional decision-making. The latter translates into 'on arm's length of local governance' (verlengd lokaal bestuur), which means that regional governance contributes to the realisation of local policy goals. In the scientific debate, the above-mentioned is expressed as 'democratic quality'. Democratic quality is the ability of residents or their representatives to be able to influence decision-making at the regional level. In the Dutch representative democracy, the emphasis is on indirect representation, which in this case is the city council as the directly elected parliament.

1.3.1.2.3 Monocentrism versus polycentrism

For proponents of regional governance, the proper institutional structure has been a hotly debated topic in Europe, in academic circles and in political arenas (Baldersheim & Rose, 2010; Hulst & Montfort, 2007; Teles, 2016). In this debate, two main positions exist: 'monocentrism' and 'polycentrism'. Both monocentrists and polycentrists recognise the need for some form of regional governance to avoid problems that will emerge in a system of completely independent municipalities. These problems include possible production inefficiencies (diseconomies of scale), allocation inefficiencies (failure to internalise spatial spill-over effects), and effects on regional economic growth, prosperity, and employment. But monocentrists and polycentrists differ in the institutional arrangements they propose for overcoming such problems. As Ostrom (1989) has argued, these differences pertain to two institutional factors. First, monocentrists have a preference for concentrating regional governance in one authority that is responsible for regional governance. Second, monocentrists also have a preference for uniformity of institutional design. Clear and consistent regulation developed at the national level and translated to local levels will reduce uncertainties, lowering transaction costs and increasing the chances for successful collaboration (Klok et al., 2018). Alternatively, polycentrists prefer a "fragmented" system in which independent municipalities are more or less free to enter into collaborative arrangements. Here the main vehicle for regional governance is essentially voluntary intermunicipal collaboration. Moreover, polycentrism also favours multiformity in institutional arrangements, allowing moulding of institutional arrangements to issue-specific contingencies and local circumstances (Ibid.).

1.3.1.3 Two studies that provide a good picture of regional governance in the Netherlands

First, the research of Boogers et al. (2016) is discussed extensively, and then the most relevant conclusions in relation to the RES are presented. The study of Klok et al. (2018), which was roughly written by the same authors, has examined the structure of intermunicipal cooperatives (IMC) of Dutch municipalities and their effects on the perception of transaction costs and the effectiveness of the partnership. This research will not be discussed. However, since the latter research often confirms the findings of the first research, many references to this article are made to strengthen or complement the key findings.

The outcome of the study is that The Netherlands counts 390 municipalities; these have a total of 779 partnerships in various forms. The municipalities have an average of 16 partnerships each. The legal form of these partnerships is, in 71% of cases, a WGR. The remainder employs private-law forms of collaboration, such as a foundation, but also NV's, BV's or a cooperative. It also appears that collaboration in a WGR has a positive effect on regional effectiveness, as it offers a guarantee for transparency and accountability, and it enhances the influence of the aldermen and the involvement of residents and organisations.

Regarding 'shifted local governance versus extended local governance' (or democratic quality in other words), the authors find that 89% of the municipalities believe that their alderman can effectively influence regional decision-making. The councillors are much less represented in regional governance; only 1.63 of the councillors are represented in a regional board, of which 72% thinks that they have, to

some extent, influence on regional decision-making processes. Though, in case a councillor lacks influence, he can usually exert influence through his alderman. In only 4% of the cases, residents, organisations and institutions were involved in regional decision-making. When looking from a broader perspective, 50% of the municipalities indicate that regional governance leads to local complementation. Only 8.7% of the cases indicate that regional governance results in the hollowing out of local governance.

Regional collaboration turns out to be effective, in particular for the smaller municipalities, for the formulation and implementation of policy in particular. According to Klok et al. (2018), another reason is that free-rider problems are less likely to stifle effective collaboration. In terms of effectiveness, the authors find that 75% of the municipalities indicate that regional governance yields visible results for both the municipality and the region.

Zooming in on the administrative chaos and complexity, which is measured in the gross number of partnerships, only the number of collaboration partners appears to have a small negative effect on democratic legitimacy. Remarkably, it turns out that if municipalities cooperate more often in new relationships (i.e. less congruently), which is associated with more complexity, the effectiveness is greater. Klok et al. (2018) show that complexity, which has been measured more sophisticated in this research, has no relation with the perceived costs or benefits of the IMC's.

1.3.2 Process management

Process management can be defined as, ''supervising a process in which several actors (organisations) are involved in a social and/or public administrative challenge, in which not one actor, but the collective, has decision-making authority and the power of perseverance. This collective must come to (as much as possible) supported proposals, decision-making and actions'' (Korsten, 2016, p. 15). Conditions for this process are equality of the participants, reciprocity, openness and trust (Ibid., p. 5). According to De Bruijn and ten Heuvelhof (1998), ''process management is about making decisions in consultation with parties from the environment of the organisation'' (p.120). Process management is often used for so-called 'wicked problems', i.e. problems that are characterised by multi-problems and incomplete, contradictory and changing requirements that occur over the course of developing the service or product (Provan & Kenis, 2008). The idea of process management is that the parties in the process make substantive decisions at these decision-moments, which are defined beforehand in the process agreements (De Bruijn et al., 2010). The academic literature contains success factors, pitfalls, strategies and tools which can be employed in process management. The way networks work around the joint obstacles becomes a key to network action (Mandell & Keast, 2007).

1.3.2.1 Limitations of the use of process management

Scientific literature of process management and network governance in combination with (super) wicked problems often puts forward that, specifically during the initial phase of the process, it is of utmost importance to connect the stakeholders, to highlight the various perceptions and interests and to formulate a shared problem definition. This literature is only partly useful for the central problem of this study since the above-mentioned efforts have already been employed as much as possible by setting the process goals (Appendix G, points of departure note). The limit of these efforts lies in the ambiguity/uncertainty of the RES assignment. Once again; this uncertainty was evident in advance, and the choice was made to start despite this uncertainty.

It is a characteristic of processes that try to address either (parts of) (super) wicked problems or general infrastructural- and complex multi-stakeholder problems; there are no pre-planned paths. The process that is applied in the RES MRDH, if it comes to problems, is cursed with its unique complex characteristics; it is therefore very difficult to compare this region to other Dutch regions. Although the theory of Yin (2014) states that the results of this case study cannot be generalised geographically, they can be generalised theoretically.

1.3.3 Perceptions

A problem that process managers oftentimes face is that stakeholders or organisations involved in the process have a completely different view of a fact or phenomenon. These processes, which are aimed at problem-solving for joint action problems, are often frustrated by the existence of divergent or conflicting perceptions concerning the problem involved, the best solution and the actors who should participate. Sometimes the actors disagree with one another not only about goals or means but also about the nature of their disagreements (Rein & Schön, 1996). To resolve blockages, actors need to adapt at least a part of their perception or accept and acknowledge different perceptions. The problem is twofold. First, these perceptions are stable and do not change easily. Second, actors are not able or willing to adapt their perception (Kickert, Klijn, & Koppenjan, 1997).

1.3.3.1 What is a 'perception'?

''A perception is an image through which the compound, enigmatic world which surrounds actors can be made sense of and be acted upon'' (Kickert et al., 1997, p. 82). Several substitutes are used to illustrate this concept, although they do not mention precisely the same:

- Frames (Rein & Schön, 1996);
- Belief systems (March & Olsen, 1976; Sabatier, 1988; Smith, 1992);
- Theories in action (Argyris & Schon, 1978);
- Causal maps (Weick, 1979);
- Paradigms (Hall, 1993).

When different actors attempt to define a problem, a difference in their perception of that problem is inevitable. One can talk about 'framing' a problem, because the same problem can be described in different manners. The way the problem is perceived determines what the interaction is about, which solutions are appropriate and which actors should be involved. According to Crozier and Friedberg (1980), the definition of the problem entails the 'bounded rationality' which actors use to select their strategies. Since problems are not objective entities, but social constructions, there is not one best problem definition, nor one ultimate solution (Kickert et al., 1997).

According to Sabatier (1988), a belief system includes problem definitions, causal assumptions and fundamental values. Fundamental values are part of the 'deep core' of the belief system which defines the person's, organisation's, or coalition's underlying identity and which is much more resistant to change than the outer layers, which are in case of an organisation, basic strategies, a multitude of instrumental decisions, and policy positions. In other literature, often the same distinction is found between more or less changeable aspects of perceptions (Kickert et al., 1997). The development of perceptions has its dynamics.

1.4 Problem statement, research objective, research questions and scope

1.4.1 Problem statement

The crux of the challenge is that the RES assignment, as described in the documents known at the beginning of the trajectory (i.e. February 2018), entailed much freedom for interpretation. This freedom –which can also be perceived as ambiguity– applies to everyone involved, not only for all owners but also the umbrella organisations, the Ministry of Internal Affairs, and private parties. Even though clear process objectives have been set, the progress of the RES formulation continues to be hindered by the fact that stakeholders have different perceptions of what precisely a RES and its functions should be.

The problem formulation is:
'The progress of the RES formulation is subject to several problems that have to do with different perceptions stakeholders have of the assignment.'

1.4.2 Research objective

The aim of this study is to describe what the consequences of different assignment perceptions are, to find out which consequences have a negative impact on the process (to be called problems) and how some of these problems have been addressed in the past. The latter part of the study will describe the problems struggled with today, and how –if possible– these can still be addressed.

The research objective is:
'To explore and describe what the problems resulting of 'different assignment perceptions' currently are, and have been in the past, and how they have already been or can be addressed through process management.'

A consequence is considered negative if it puts 'good process management' at risk. What good process management means is covered in Chapter 2. Attention should be paid to the difference between the words 'challenge' and 'problem'[3]; the subtle difference has a big effect on the line of thinking throughout this study. The result of the workshop with the commissioning party brought forward the challenge of different assignment perceptions. It is called a challenge and not a problem, because at this point in the research, it is unknown whether the consequences of this challenge will have a positive or a negative impact on the process. Albeit there are also positive effects of this challenge, these are not interesting for this study. One can only speak of a problem if, after a thorough investigation, it appears that a consequence of a challenge has a negative impact on the process. The words 'problems', 'negative consequences' and 'negative effects' are used interchangeably throughout as they mean the same.

[3] In the study, the words 'problem', 'challenge' and 'issue' often appear. Although these words might look similar at first sight, the researcher uses the terms more nuanced.

A *challenge* is something subjects are confronted with whereby, at first sight, it seems to offer resistance. However, by tackling/addressing this challenge, opportunities may arise, actually enriching the previous situation. Upfront it is unknown what fighting this 'seeming obstacle' will bring.

An *issue* is like a complication, because the challenge has already been explored/examined here, and it turns out that there is a negative impact on the situation, which can of course be resolved, to neutralise the situation, but there is little chance that something positive will come out.

A *problem* is more demarcated and acknowledged than an issue, meaning that there is a better view of the situation, and the impact is generally more severe.

As for many of the complexity factors, which are encountered during the RES process, the consequences/effects are unknown upfront, the researcher prefers labelling them as 'complex challenges'. When these challenges are being elaborated and examined, some of the consequences get the right to be named an issue or problem. However, the literature on process management often refers to 'overcoming issues'. The researcher's opinion is that the word issue is ascribed too quickly. Only during his literature study, he will conform with this language usage.

1.4.3 Main- and research questions

The main research question (MQ) is:

'How are problems resulting from stakeholders' different perceptions of the assignment 'Energiestrategie regio Rotterdam Den Haag' addressed by the use of process management?

The different research questions (RQ's) are:

1) What is the leading assignment for the 'Energiestrategie regio Rotterdam Den Haag' and how has it been influenced by the Climate Agreement?
2) How is the RES assignment perceived by the owners (i.e., MRDH municipalities, province of South-Holland, and water boards), the umbrella organisations IPO, VNG, UvW, and the Ministry of Internal Affairs?
3) What are the consequences of the different assignment perceptions?
4) Which of these consequences has had (or need) process interventions, and to what extent do they threaten the process?
5) How has process management been applied to prevent or address problems within the scope of the study?
6) What are the currently relevant problems and how can they be addressed utilising process management?

1.4.4 Scope of the study

The research was conducted in the period first of February 2018 (the moment the preliminary memorandum is signed), until the first of April 2019. In this period, there are already deadlocks that arose and consequently were overcome utilising process management. Besides, there are significant process challenges that are already playing a role and/or await the RES (and its implementation) in the future. Information on these current and future dilemmas is collected at the end of this research time frame.

Geographically, the scope is limited to the 23 municipalities of the MRDH. These are: Albrandswaard, Barendrecht, Brielle, Capelle aan den IJssel, Delft, Den Haag, Hellevoetsluis, Krimpen, Lansingerland, Leidschendam-Voorburg, Maassluis, Midden-Delfland, Nissewaard, Pijnacker-Nootdorp, Ridderkerk, Rijswijk, Rotterdam, Schiedam, Vlaardingen, Wassenaar, Westland, Westvoorne, and Zoetermeer.

1.5 Relation to the SET master track

Although the master sustainable energy technology (SET) is mainly focused on technology, the track 'energy and society', which is positioned in the TPM faculty of TU Delft, is predominantly concerned with issues regarding the energy transition. Given the large numbers and variety of actors, different interests, backgrounds and political orientations, the combination of public administrative knowledge and process management skills offer a solution to these issues. As Rohracher and Spa (2013) state that process management is a powerful tool used for addressing major complex socio-technical problems such as the energy transition, this problem is rightly accommodated within the expertise of SET and TPM.

1.6 Societal and scientific relevance

1.6.1 The scientific contribution

This study will not add any new theory to the process management discipline. However, it will offer a good example of how process management is applied to administrative challenges in the energy domain. In addition, the two process managers of the RES MRDH were requested to rate the core values of process management (Section 2.3), which will contribute to validation of the core values of process management from the theoretical framework (Section 2.2).

In the field of regional governance, this study will contribute to the scientific debate on 'administrative chaos and complexity', the effect of regional governance on the democratic quality, and the discussion on monocentrism vs polycentrism.

1.6.2 The societal contribution

This study contributes societally in two ways, one for the RES MRDH process itself (which is related to the problem definition in Section 1.4.1, and one for other regions in which the RES will be formulated or is being formulated right now.

For this RES, this study will lead to:

- The facts about how all stakeholders think about the assignment RES and what their expectations are. The process managers and the commissioning party can respond to this, and they can also apply the correct frame to the parties to get the RES sold.
- The facts about the perceptions of the umbrella organizations and Ministry of Internal Affairs of the assignment. This will give the process managers and the commissioning party a more formal picture of their roles, responsibilities and power relations, which eventually enhances stakeholder management.
- A better understanding of the legal status of certain documents (about what is mandatory and what is not). This will lead to more strategic choices.
- An enhanced understanding of the subject matter by the process managers. Since specific choices, in terms of process design, process interventions and their outcomes will be presented in an analytical way, choices can be better substantiated. This will also be a result of a reflection with the theoretical framework.

For other RES'es, this study can aid in terms of:

- An easier process. This study will identify friction on several layers. Once this study is finished, these findings will be presented during conferences and working groups, which may ultimately lead to a smoother process for other regions.
- Second, by being a reference point or example approach, this document attempts to enrich the other Dutch regions in terms of time-saving, quality and confidence, as this study pursues to show how the complexity challenges of this MRDH region can (successfully) be addressed. Besides, it is a bonus if other regions will run into the same problems as described in this study. This study will then provide comparable solutions.

Especially in this era, it is crucial that much research is conducted on this field since the energy transition in the Netherlands is still in its infancy (ECN, 2017; Jonker, 2018). This research hopes to contribute -societally and scientifically- to the momentum The Netherlands currently has in the energy transition.

1.7 Outline of the study

This study is structured as follows:

Chapter 2 presents the key concepts and an analytic framework, based upon a deep dive into the literature on process management. Also, an attempt is made to answer questions such as 'what is good process management', and what are specific values a process manager should pursue? Finally, the effectiveness of governance networks is treated.

In Chapter 3, the research design is presented. It starts with the search for a relevant and workable challenge in the given context, in which the commissioning party is questioned using a workshop. After, the main research method and the corresponding data gathering tools are discussed, while paying attention to the limitations and drawbacks of these tools and the overarching research method.

Chapter 4 describes the context of the RES formulation. First, the socio-economic, geographical and historical factors are presented. After, the institutional context, the daily practices and the role in the RES of the MRDH are elaborated upon. To get acquainted with the daily management and the underlying networks,
the project organisation, including the central positions, is displayed. By shining light on the civil- and the administrative network energy, a piece of underlying governance structure is offered. The chapter closes off with ‘meeting types’, which discusses the contact moments, the frequency and the purpose of these diverse meetings.

In Chapter 5 the research phase 'assignment and perceptions' is analysed. By treating both the assignment of the RES formulation in RQ1, and an analyses of the different perceptions of this assignment in RQ2, the background to the problem is covered.

Chapter 6 deals with the phase ‘assessment of consequences’. In this chapter, the consequences of the fact that everyone has a different perception of the assignment, and whether these consequences form a threat to the process, are examined. Subsequently, the issue is put into perspective.

Chapter 7, phase ‘process management applied’, describes how problems from the past have been addressed through process management, or how the still-playing issues can be tackled, looking through the eyes of external specialists and process management experts, or by evaluation reports from the pilot regions. Besides, this chapter functions as a reflection on the sharpness on the earlier process management analyses.

Chapter 8 consists of answers to the research questions and the conclusions, the limitations of these conclusions, suggestions for follow-up research and recommendations.

2 Theoretical framework

For answering RQ 3,4,5 and 6, it is necessary to use a theoretical framework that provides a tool for the identification of problems within the RES formulation. Besides, without this chapter, it would be impossible to understand specific process management interventions from the past. Section 2.1 looks at what process management is, what wicked problems are, and why process management (and in particular network governance) is used to deal with (parts of) wicked problems. Section 2.2 discusses the scientific core values/success factors of process management and network governance. Section 2.3 elaborates upon the 'analytical framework'; it extracts which theory from the theoretical framework is relevant for the formulation of the RES in the MRDH. Section 2.4 closes the chapter by presenting the conclusion.

2.1 What is process management?

In the following, the reader is introduced to the core of process management. The information is primarily an enumeration and contains few contradictions. The purpose of section is not to find out whether there are any conflicting theories, but rather to apply it.

2.1.1 Definitions of process management

Below, some definitions are presented that touch on the concept of 'process management'. Each one of them illuminates a different angle of the concept.

Process management can be defined as ''supervising a process in which several actors (or organisations) are involved in a social and/or public administrative challenge, in which not one actor, but the collective, has decision-making authority and the power of perseverance. This collective must come to (as much as possible) supported proposals, decision-making and actions'' (Korsten, 2016, p. 15). Process management is multi-actor oriented (Diepenmaat, 2011).

''Process management involves making decisions in consultation with 'parties' from the environment of the organisation. Synonyms for process management are open decision making, interactive decision making or stakeholder management'' (Bruijn & ten Heuvelhof, 1998, p. 120).

Process management involves the reduction of substantive uncertainty, in a process with open and transparent information provision and knowledge sharing, in which enrichment of the problem definitions and solutions takes place. The problems and solutions follow each other dynamically. Problems are deliberately enlarged or scaled up in order to find a solution with other perceptions, interests and actors (De Bruijn & Ten Heuvelhof, 2012).

2.1.2 The added value of process management

From the above definitions, it is clear that process management is a form of organisation that aims at 'becoming stronger by collaboration'. It is clear this is not about the type of challenges in which only one party has (almost) all decision-making and perseverance power, all knowledge and budget control (Korsten, 2016). Process management involves multi-actor decision-making between interdependent actors, each of whom is unable to do the job himself, usually because each individual party does not have enough resources, such as money, power, knowledge, or skills. As a matter of fact, process management has arisen for challenges that cross organisational boundaries. Therefore, one can talk of interorganisational challenges (Termeer & Königs, 2003). In addition, the following key benefits can also be obtained from employing process management. Some aspects have an overlap with the core mentioned above.

- Goal enrichment: the separate goals of different organisations are mixed and combined, which is why enrichment takes place for every organisation. The whole is greater than the sum of the parts (synergy).
- Long-term interest spread: the less powerful groups, which initially were not given the chance to represent their interests, are given their voice in the process. Because a weak latent interest can gain momentum at some later moment, it is tactical to take this little interest into account at the present moment.

Next, process management is used to resolve the so-called 'wicked problems' (Section 2.1.3), as regular project management is unable to handle these highly complex challenges. According to De Bruijn et al. (2010), the essence of the process approach in a network versus a project-based approach, is that the decision-making is about the process design rather than the content. The process design is the result of negotiation. Although there is a template design for projects and standard procedures, each process is different and must therefore find its own course.

2.1.3 Wicked and super wicked problems

Wicked problems can be defined as problems being characterised by multi-problems and incomplete, contradictory and changing requirements that occur over the course of developing the service or product (Provan & Kenis, 2008). Conflicting interests characterise policy processes, and problem definitions are dynamic and unpredictable (Kickert et al., 1997). Wicked problems lack clarity in both their goals/objectives and solutions. Rittel & Webber (1973) have beheld a wicked problem as the opposite to a 'tame problem'. Wicked problems are present everywhere; the development of innovative products or processes, catastrophe help, answers to crime and terrorism, help to psychiatric patients, responding to school absenteeism, climate change, and so on. These types of problems entail such a high level of complexity that one single actor cannot tackle the issue by himself.

Climate change, such as problems in education policy and public health, is a wicked problem. It avoids straightforward articulation and is impossible to resolve in a way that is simple or final. Our changing conversations around climate science and conservation, the unique regional factors that determine the local consequences of climate change, and our ability to present endless possible solutions (as well as the irreversibility of these solutions) require we approach climate change with holistic and collaborative reasoning in search of long-term, future-focused solutions (Johnston, 2018). Climate change is sometimes even categorised as a 'super-wicked problem' (Lazarus et al., 2009; Levin et al., 2012; Levin, Associate, Cashore, Bernstein, & Auld, n.d.). On top of the characteristics of wicked problems, super wicked problems entail even more complex properties.

2.1.3.1 The breaking down of a (super) wicked problem

To find a solution for (super) wicked problems, the complexity needs to be reduced. To prevent climate change, it was decided to set specific objectives in agreements, such as the Paris Agreement (2015). The countries that have signed this treaty are bound to their individual objectives. When these individual objectives are achieved, the global objective, which is 'a less than 2 degrees Centigrade temperature rise in the 21st century' will be met. In this way, the problems' complexity is reduced. Rather than a global problem, it is now broken down to subproblem, which appears more manageable, and besides, parties are held juridically responsible. At each organisational level, interventions can take place, such as the implementation of public policy, laws and regulations, thereby regulating one or more layers thereunder. How these national objectives are subsequently pursued differs per country. In the Netherlands, the solution contains a mix of bottom-up and top-down approaches. Within this approach, each sub-objective again ensures a reduction of complexity, so that achieving these sub-objectives is organisationally feasible for the layer below.

2.1.4 From shared goals to process management

As a consequence, Metze and Turnhout (2014) state that current knowledge and decision-making structures are inadequate for dealing with (super) wicked problems. In such a situation, actors usually not only have a different interest, but they orient themselves to different values and norms, and they have separate information. This diversity means that parties must enter into 'the open dialogue' and collectively acquire knowledge in order to share perspectives and bring along knowledge about the phenomenon. Korsten (n.d.) calls this 'deliberation'. Since these actors cannot impose their will on each other, process management is desirable. The idea behind process management or network management is that the government says goodbye to the pretensions of being the centre of power and a knowledge monopoly (De Bruijn, 2004). By doing so, the government recognises that there is a variety of reality definitions. The actors complement each other in those reality definitions, or there is overlap.

2.1.5 (The role of) network governance

Process management is about change. Change in complex issues. Complex issues cannot be separated from network collaborations since a process always contains more than two actors. Provan and Kenis (2008) state that complex problems which cross the organisational boundaries ask for a corporation. Also, a collaboration in the form of a network is seen as one of the most successful strategies to handle complex issues (Head & Alford, 2017; Noordegraaf, Geuijen, & Meijer, 2011). Since the quality of the network governance has so much influence on the entire process, a full section is devoted to this. Network governance currently has many applications, for example in crisis management, family assistance and in the energy transition.

2.1.5.1 Definitions of network governance

According to Kenis and Provan (n.d.), the definition of network governance is ''connecting or sharing information, resources, activities and competencies of at least three organisations to achieve an outcome together'' (p.1).

According to O'Toole (1997), ''a network consists of several organisations, which are connected by some form of structural dependence, whereby one unit is not subordinate to the other by a formal position'' (p. 45). A group of organisations (and not individuals or parts of organisations) that coordinate their joint activities through different types of equivalent relationships (Ibid.).

In this study, all the aforementioned definitions are an adequate description of the way in which the 'civil network energy' works together (Chapter 4). The RES can be seen as the product of this partnership.

2.1.5.2 The rise of networks and emergent strategy's

Networks, networking, network organisation and network management have been researched for their underlying mechanisms and effectiveness since 1970. Management scientist Mintzberg (2007) distinguishes between 'deliberate strategy' and 'emergent strategy'. The deliberate strategy involves 'thinking before doing'. First, an integral plan for the future of the company or organisation is devised and determined, followed by the implementation. Strategic planning takes place at the start of the process and determines the direction. The emergent strategy is based on facilitating strategy design during the process, in which the direction can always change (De Wit & Meyer, 2010).

Until the 1970s, there was a clear role of an intervening government. With a 'top-down' strategy the government created and implemented her policy. The intended (deliberate) strategy was usually developed hierarchically (and vertically) and implemented as a policy in the executive organisation. In the 1980s, a shift took place in the approach to complex processes and issues; a transformation from deliberate to emergent strategies (Mintzberg, 2007). Moreover, the 'bottom-up' approach received more attention. Among other developments, this rise of attention was the result of a continuous increase in the complexity of society (sometimes referred to as the 'spaghetti society'), which has been caused by, among others, rapid technological and social change. The predominant position of the

hierarchical vertical approach (top-down) was taken by the network approach, in which horizontal connections in networks of, public and social actors play a fundamental role (De Wit & Meyer, 2010). In this network approach, the process gradually refines the proposed strategy by the emergence of new influences and insights from new actors and different perspectives.

2.2 What are the core values of good network governance and process management?

This section summarises both the core values (also called success factors) of process management and network governance. Only the core values of process management will be used for the analytical framework in Section 2.3. In case a core value is stated **bold**, it will be used for the analytical framework. As the significance of the commissioning party is irrefutable (since her driving force underpins the progress of the RES formulation), the success factors of network governance are given as well. Thus, the network governance core values apply to the governance of the commissioning party.

2.2.1 Process values and process architecture

The academic literature only gave a few sources that truly focused on the values of a good process, in which the word 'process' is unattached from additional flavour. Much literature focuses on success factors for processes in product innovation, business process management, water resource management or knowledge management. Important to mention is that many of the given core values relate to both the process architecture and to how the process should be managed, which implies that these values are being pursued by the process manager.

According to De Bruijn et al. (2010), all processes –despite their unique characteristics– can be generalised. That means that many concepts, such as pluriformity, ambiguity, exit rules, and, substantive coupling, come back in every process. Since this book is very comprehensive, its information is not presented in this theoretical framework. Nevertheless, these concepts are used in the study to analyse the process and to describe/label the occurring phenomena.

2.2.2.1 The core elements of a process design by De Bruijn et.al.

According to De Bruijn et al. (2010), a good process requires the elements below. They are called the 'core elements of a process design'. It is postulated that these requirements can be met through the right process design. The explanation of the core elements and sub-paragraphs are directly quoted or paraphrased. If this is incomplete, the explanatory notes are summarised.

1. Openness; the initiator does not take unilateral decisions, but adopts an open attitude. Other parties are offered an opportunity to participate in steering the decision making, and therefore also to highlight the issues they are interested in and that they feel would be placed on the agenda. Therefore, openness concerns both the choice of participants and the decision-making agenda.

1.1 All relevant parties are involved in the decision-making process; the total of parties being invited should be an accurate representation of the parties that have an interest in the decision making. Also, different parties should be involved in different phases. Next, parties with obstructive power also have to be invited and, in some cases, weaker parties that deserve protection should be invited as a moral argument example.
1.2 Process agreements as a means to make substantive choices, since this merely leads to an indication of how the decision-making process will proceed.
1.3 Transparency of both process design and process management. Transparency in the sense that parties can check the integrity of the process and whether or not it offers them enough opportunities. The (role of) process manager should be transparent as well; this prevents mutual distrust.

2. Protection of the core values; openness is not always appealing to parties invited to participate in a process. Every party will have its own interests, and runs the risk that these interests are not sufficiently addressed. At the end of the process, one or several parties may therefore not be satisfied with the result, while it is difficult for them to withdraw from the process at that stage. This is why there is a second category of design principles that result from the idea that the parties that commit themselves to a process –thereby taking a certain risk, perhaps even sticking their necks out– must be offered sufficient protection. How? They must be confident that their core values will not be harmed, regardless of the outcome of the process.

2.1 Protecting parties' core values. Regarding their core values, the parties must be sure that they will not be forced to adopt a particular behaviour to make choices against their will.
2.2 Commitment to the process rather than to the result. This open space regarding the substance creates safety and space.
2.3 Commitment to subdecisions may be postponed. Commitment to subdecisions may feed the notion of the process being a funnel trap. If this notion becomes well established, there will be strong incentives for distrust and resistance.
2.4 There are exit rules. Parties may leave the process even before the final decision making. This eliminates the funnel rap perception; it creates safety, space and it will nourish cooperation and decision making.

3. Progress; the first two core elements offer an insufficient guarantee that a decision-making process will be good. If open decision making is opted for (core element 1), and parties' core values are protected (core element 2), chances are that even there is a discussion and negotiation, still no decision is made. Perhaps the outcome will include nothing but sluggish processes that will never produce a clear result. The third category of design principles addresses the need for the process to show sufficient momentum and progress.

3.1 Stimulate 'early participation'. A slow start may paralyse the process. Therefore, early participation must be appealing to parties.
3.2 The prospect of gain as an incentive for cooperative behaviour. Parties strife for a gain, and when the process architect ensures to maximise chances of gain towards the end of the process, parties will participate wholeheartedly.
3.3 Creating 'quick wins'. There should be a balance between quick and gains later in the process since it is not beneficial when parties leave early because the gain is too far away.
3.4 Ensure that the process is heavily staffed. Heavy in this sense means people with authority. Heavy people in the process is beneficial for the image of the process and external authority. Also, the commitment in their organisations will be natural rather than bound by formalisation. Last, a heavy representative is more likely to dissociate himself from his own organisation's standpoints.
3.5 Transferring conflicts to the periphery of the process. The layered organisational structure allows parties with contrasting viewpoints not to be in direct conflict with each other.
3.6 Tolerance towards ambiguity. Since the exact meaning of a feel-good word such as 'efficiency' or 'quality' is left open for interpretation, parties portray agreements with 'constructive ambiguity' as a victory.
3.7 Using options for command and control created by the process. This can be an incentive to join the process and act cooperatively.

4. Substance; parties participating in an open process (core element 1) should be given sufficient protection of their position (core element 2), while there should also be sufficient guarantees that progress will be made in the decision-making process (core element 3). As a fourth requirement, this progress should meet certain substantive quality standards. After all, there may be strongly conflicting interests that force parties to make decisions that are substantively poor and perhaps even incorrect. Therefore, it is crucial that the process has a sufficient number of substantive elements.

4.1 The roles of experts and stakeholders are both bundled and unbundled. There is a line where the decision-making process drifts too far away from the substance. Although parties have a different

tolerance towards the distance between process and substance, substantive experts can use their knowledge to facilitate the process, which on his turn gives confidence to the participants about whether everything is scientifically proven.

4.2 From substantive variety to selection. In the beginning, all options have to be kept open because it can detract from the quality of decision making if parties limit their ideas and insights to early.

4.3 The role of expertise in the process. Scientific assessments turn out to be more effective if they are shaped like processes. Also, the interaction between scientists and the decision makers allows the envisioned quality of the decisionmakers to be effectuated.

2.2.2.2 Success factors of co-creation according to A. Korsten.

Process management overlaps with the term 'co-creation' (Korsten, 2016). Co-creation also aims for cooperation, in which all participants have an influence on the process and the result of this process, such as a plan or product. Characteristics of co-creation are a dialogue, the search for connection, decisiveness and focus on the outcome. According to (Ibid.), conditions for this process are **equivalence** of the participants, **reciprocity**, **openness** and **trust.** Openness is already described extensively by De Bruijn et al. (2010) in Section 2.2.2.1.

2.3 Analytical framework

In this section, the 'analytical framework', which has been derived from the theoretical framework, is presented. This framework is applied to the empirical case material in RQ4. The way this analytical framework was drafted is explained in detail in Appendix B.

2.3.1 Explanation of the analytical framework

In Table 1 one sees which ratings have been assigned to the core values for process management by the process architect and the -coordinator. These core values come from Section 2.2, in which they are stated **bold**. The text often explains these values well. This explanation was also used as a briefing for the process managers. In case a discussion arose about the multi-interpretability of the core values, a supplement is provided at the bottom of the tables, in which is described how the process mangers perceived that core value and filled in their rating accordingly.

PA stands for the process architect and PC stands for the process coordinator. Furthermore, a short motivation of one or two sentences is given by both to substantiate their given rating. Throughout this study, these motivations are quoted. Note that these quotes originate from the 'drafting the analytical framework' workshop that is described in Appendix B. The final rating is calculated by taking the average of both ratings. Only this final rating is used further in this study.

Table 1: The ranking including a short motivation of the core values of process management.

Process management	Rating PC	Substantiation PC	Rating PA	Substantiation PA	Final rating
Openness	9		10	In particular for process, role and influence	9.5
Progress	7	Important	6	Progress is relevant but quality can be leading. A 'step on the place' can be good	6.5
Protection of core values	10	Safety and a safeguard of the course of the process	9	Very relevant; safeguarding of value's in the points of departure note	9.5
Content	9	This is what it is all about	8	In the end, it is about the content. Always draw the link to this. Without content no process	8.5
Reciprocity	6	Is affected by the level of ambition.	6	Was not yet necessary till this point. Besides, it is not needed, as the total ambition is a result of individual contributions.	6
Trust	8	As long as people see this process as THE process	7	This must be THE process of the parties. No parallel process.	7.5
Equivalence	9	Boundary condition; respect for each other's values	9	Very relevant	9

Reciprocity: the extent to which the participants in the process grant each other prosperity, so that they agree upon choices that are not directly beneficial to themselves.

Equivalence: that all parties are treated equally. That does not mean that they have equal influence on the process (which is called equality), since that is not the case.

Trust: the extent to which the participants have faith in the process architecture/course of the process. They entered the rating with the knowledge that this process is the only process that is going on in this field (see their substantiation).

Progress. Process architect; this is relevant, but it is a trade off with respect to quality.

Protection of core values. The process managers entered a rating considering this value also applicable for the safeguarding of the core values of the points of departure note, rather than solely the core values of the participants.

2.3.2 Further use of the final ratings

The final ratings are further used to judge the consequences of the challenge of different assignment perceptions as being problems. Chapter 4 will elaborate on this. Also, the function of the rating procedure is to rationalise the instinctive convictions of both the process architect and the -coordinator, which will serve as support for Chapter 4, when the 'severity of the threats is determined'.

2.4 Conclusion

Although there are many different definitions of process management, they all agree upon ‘becoming stronger by collaboration’. As the content follows from going through the process together, the agreements are made on a process level. Process management is often used to tackle (a part of) wicked problems. When these unclear problems are broken down regional and municipal scale level, oftentimes a process is the right tool to address these subproblems. Network governance is inextricably linked to process management. Processes often emerge from an existing network.

In scientific literature, many core values of process management can be found. Based on a workshop, it turned out that the process architect and -coordinator roughly gave the same appreciation to these core values. Equivalence of the parties, protection of the core values, openness/transparency and support for decision-making were awarded the most important. Reciprocity and the role and position of the network manager were ranked as least important.

3 Research design

In this chapter, the research design is presented. In Section 3.1, the main research approach is given. In Section 3.2, one finds which methods have been chosen to obtain the requested data types to answer the research questions. Section 3.3 covers the division into research phases, in which an explanation of the research execution is displayed. The way the results of the research questions are analysed is discussed in Section 3.4, and, the limitations and the drawbacks of this research set-up are explained in Section 3.5. Section 3.6 closes the chapter by presenting the conclusion.

3.1 Main research approach

Since the nature of the research demands for the description of a socio-scientific phenomenon, a qualitative research method evident. This study uses the intrinsic case study method. The choice for this particular method is clarified later in this chapter. A case study can be defined as: 'An empirical inquiry about a contemporary phenomenon (e.g., a 'case'), set within its real-world context—especially when the boundaries between phenomenon and context are not clearly evident' (Yin, 2003). According to Yin (2014), there are at least three criteria for applying the case study method.

3.1.1 Criteria for the application of the case study method

The first criterion is determined by the kind of research questions that a study tries to address (Shavelson, 2002). Accordingly, case studies are pertinent when your research addresses either a descriptive question such as "What is happening or has happened?", or an explanatory question such as "How or why did something happen? In this research, the main- and research questions all start with 'how', 'what' or 'which'.

Second, by emphasising the study of a phenomenon within its real-world context, the case study method favours the collection of data in natural settings, compared with relying on 'derived' data (Wiley, 1986). Swanborn (1996, p.5) adds: ''Since the collection of data from various sources is required and thus permitted in case studies, this method is well suited to identifying heterogeneous aspects, such as motives, perceptions and policy beliefs.'' Given a large number of viewpoints towards the RES assignment and the multi-angle perspective on what the RES is intended to do, multiple types of data are required to clarify the relationship between the case and its context. The case -the main unit of analyses- is defined as 'the issue that all involved stakeholders have a different perception of the RES assignment'. Its context is predominantly shaped by 1) the RES assignment 2) the governance structure of the commissioning party, and 3) the MRDH region (Figure 1). The research of these contextual factors is covered, although not discrete, in the research questions.

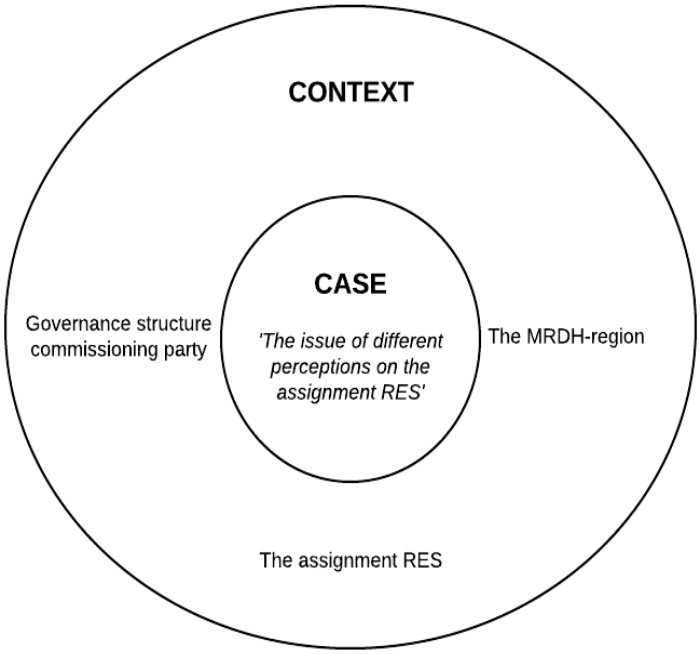

Figure 1: Case context description.

Third, the case study method is now commonly used in conducting evaluations. Authoritative sources such as the USA GOA (1990) and others have documented the many evaluative applications of the case study method. The evaluative nature of this study is therefore well suited for the case study method.

Since this research is about the RES in the MRDH region, the research is labelled as a single case study. Also, this study is rather intrinsic than instrumental, since it is conducted to learn about a unique phenomenon on which the study focuses (Harling, n.d.). The subject of the case is of primary interest. The researcher started with the examination of the RES as a phenomenon. That order is of great importance in this choice for the prefix 'intrinsic'.

3.1.2 Why has the MRDH been chosen as case?

First, the MRDH is a vast and diverse region containing a considerable amount of complexity, which raises questions about whether the RES assignment is an appropriate solution, and if the desired outcome is feasible or not. The MRDH exists as an organisational form for only three years now, and especially in the field of energy policy and -collaboration, there is a big difference between the Northern municipalities (former Stadsgewest Haaglanden) and the southern part (former Stadsregio Rotterdam). Besides, this region both contains two of the largest four municipalities in the Netherlands, and adjacent to it, the port of Rotterdam, as well as the Greenport, are large energy consumers on a national scale (Chapter 4). Among many others, these complex factors bring along interesting challenges and questions. The starting situation in many other regions, such as Drechtsteden and Goerree-Overvlakkee, is much simpler. Questions, concerning this complexity, arise such as:

- Is the RES formulation feasible in this region anyhow?
- Does the RES assignment offer enough degrees of freedom to draft a RES which is suitable for this diverse region, rather than building a product which is too confined by the protocol, entailing that it will not be useful? In other words: ''is it relevant?''
- Is the applied process management in this region different than other regions? If so, how? How is dealt with this considerable amount of complexity?

Next, this region is the first to start with 'RES version 2.0' (Interview Gerry Fenten, Appendix A). For a researcher, this (semi) experiment arouses the interest. The first seven regions, which drew up version RES 1.0, were mainly explorative by nature. Therefore, these were also called the RES pilots. They were initiated to see what resources the decentralised authorities needed from the national government to carry out the assignment properly. Afterwards, the RES assignment was reshaped (to 'RES version 2.0') by the lessons drawn from these pilots. This biennial convergent adjustment cycle (plan-do-check-act) ensures that the RES is in line with the legally required investment plans of the network operators and establishes the required certainty, to an increasing extent, for heat transition plans for neighbourhoods (Klimaatberaad, 2018). This time, there will for sure arise new hurdles or teething problems, which can generate special situations/outcomes, specifically in combination with the high level of complexity.

Also, the period in which this research was conducted, the RES MRDH formulation process was in its heat of the moment. At the time of writing, the seven regions have already completed their RES formulation process by yielding the product, of whom some have already continued to the implementation phase. Other regions are still to start. The RES MRDH is currently being drawn up; you cannot sit closer to the fire when your primary interest is on process management. This also holds a relationship with argument 2 (of the semi-experiment RES 2.0) when it comes to autonomy (independence). Processes that take place at the national level, such as the preparation of the Climate Agreement, affect this RES process. Only when the Climate Agreement is completed, which will happen before the summer of 2019 according to Politieke redactie (2018), the RES assignment is cemented. The commissioning party claimed during the 'preliminary workshop' (Appendix C) that the quicker the formulation of this RES takes place, the more the assignment can be filled in to own interest. Of course, there are also disadvantages associated with an autonomous process. For the researcher, it is interesting to see how desirable this autonomy is, and how this wish can be embedded in the process design.

Finally, in this region, the division of roles and tasks can lead to interesting conflicts. Initially, in 2015, the province of South-Holland was not at all pleased with the establishment of the MRDH as the MRDH took over many functions from the province of South-Holland (this was before the RES). This is known from participative observation, and besides, it has been checked by the process coordinator. Nevertheless, individuals with a certain stature from the province of South-Holland were in favour of accommodating the RES at the MRDH (Section 4.3), while being aware that the influence and power of the province of South-Holland would become smaller. Since the division of roles has not been clearly defined in the assignment, this confusion can lead to barriers in this region. How does this piece of sensitive history affect the process, in particular regarding the roles, during the commissioning party meetings?

3.2 Research methods

Both qualitative and quantitative methods are used, therefore this study can be seen as a mixed method research. In fact, quantitative methods (in which numerical calculations are used to obtain the required data) are only partly used to answer RQ2 and RQ4; the rest uses qualitative descriptive and explorative methods on the subject matter. The data collection consists of four parts: participative observation, active participative observation, desk research, and semi-structured interviews. These methods are commonly used in the case study method. A brief overview, together with the official categorisation of the methods, is presented in Table 2.

Research question (RQ)	Research phase	Which data needed?	Research approach and data type	Corresponding methods and global execution	Analyses
1. What is the leading assignment for the 'Energiestrategie regio Rotterdam Den Haag' and how has it been influenced by the Climate Agreement?	A	The original RES assignment as described in the points of departure note, and the interim publications of the Climate Agreement.	Desk research Qualitative	Review of the interim publication of the Climate Agreement	Description of the relevant core of the documents.
2. How is the RES assignment perceived by the owners (i.e., MRDH municipalities, province of South-Holland, and water boards), the umbrella organisations IPO, VNG, UvW, and the Ministry of Internal Affairs?		The viewpoints/perceptions towards the assignment by these parties.	Empirical data gathering Qualitative and Quantitative	Semi-structured interviews with: -The 23 municipalities; the civil servants responsible for the energy domain are interviewed. -Both waterboards. -Province of South-Holland. -IPO, VNG, UvW. -Ministry of Internal Affairs.	First, the interviews are transcribed. Then, ATLAS TI is used for: a. Open coding b. Axial coding With the function frequency, the frequencies of the given answers are counted for a generalised image of the region.
3. What are the consequences of the different assignment perceptions?	B	An overview of how these different assignment perceptions influence the process, from the eyes of the process managers. This overview may not contain value judgements.	Empirical data gathering Qualitative	Semi-structured interviews with the process managers. Participative observation; all meeting types.	

4. Which of these consequences has had (or need) process interventions, and to what extent do they threaten a good process?	B	The rating (judgement of the severity) of the consequences by the process managers, substantiated by a short motivation.	Empirical data gathering Quantitative	Semi-structured interviews with the process managers at the same time.	First, the final ratings are determined by taking the average of the process architect and -coordinator. Then, the dressed influence tree is worked out.
		Superficial information about examples of the consequences (which are now called problems) and how they interrelate.	Empirical data gathering Qualitative	Semi-structured interview with the process coordinator.	
5. How has process management been applied to address or prevent problems until 4-2019?	C	Descriptive information about the problems, their interrelations, the desired solutions and which process interventions have been performed.	Empirical data gathering Qualitative	Semi-structured interviews with the process coordinator and (active) participatory observation.	The interviews are transcribed, then the relevant core of the interview is copied or rewritten.
6. What are the currently relevant problems and how can they be addressed utilising process management?		Descriptive information about the problems, their interrelations and, if known, their desired solutions.	Empirical data gathering Qualitative	Semi-structured interview with the process coordinator and (active) participatory observation.	The interview is transcribed, then the relevant core of the interview is rewritten and placed in this study.
		Solution to one of the problems.	Empirical data gathering Qualitative	A 'solution panel' is gathered: -Arlette van den Berg (PhD candidate who has compared different RES regions) -Ruud Schuurs (who has written the evaluation of pilot RES'es 'slim schakelen' (Schuurs & Schwencke, 2017). -Thomas Hoppe, associate professor TU DELFT. Domain: energy and policy. -Process coordinator.	The information will be recorded, transcribed and then the relevant core is copied or rewritten and placed in this study.

Table 2: Methods and data overview.

3.2.2 Participative observation

Based on the contribution to this research, the participative observation is seen as the main research method. Participative observation is the process which enables researchers to learn about the activities of the people under study in their natural setting through observing and participating in those activities. The aim of participative observation is to create an intimate relationship with the group for a longer period (De Walt & De Walt, 1998). During the research period and beyond (from 1-2-2018 until 1-4-2019), the researcher himself works as a project assistant of the RES, meaning that he walks with the whole process, entailing his presence at all meetings (Table 3) with the exception for the administrative workshops and administrative network energy meetings. At the beginning of the project, the researcher announced to the group that he would conduct a scientific research besides the daily activities. Since the researcher worked as a project assistant, the process coordinator and himself had the impression that he was regarded as a project mate rather than a social-scientific researcher. Up until this moment, the researcher has felt accepted within the group. The specific stance of the researcher is positioned between a 'complete participant' and a 'participant as observer', according to the definition of (Kawulich, 2005). In case a quote of the process coordinator is mentioned and not equipped with a specific occasion, it comes either from the participative observation or the bilateral interviews.

3.2.3 Workshops; active participative observation

During the process, workshops are organised in which either the alderman or the civil servants of the regional parties gather. This is a more active approach than the participative observation as mentioned above, which is why it is named 'active participative observation'. The RES is formulated through an interactive process involving the owners and other relevant regional parties. The civil- and administrative workshops are the key moments in this (APPM, DELFT, & GE, 2018). During the scope of the research, 5 administrative- and 5 civil workshops have been organised. The function of these workshops is to acquire involvement/commitment among the parties and to gain insight their attitude towards the assignment. Each workshop is centred around a topic. More information on this funnelling principle and how this relates to process management can be found in Section 7.1.2. Furthermore, the workshops are seen as a moment of socialising. Colleagues having a drink after the meeting is part of the workshop. During these conversations, both visions and experiences are shared, and friendships and strategic partnerships are born or maintained, resulting in, among others, more support for the RES.

3.2.4 Semi-structured interviews

For RQ2, all owners (the municipalities, the water boards, and the province of South-Holland) and the umbrella organisations (VNG, UvW, IPO) are interviewed. The Ministry of Internal Affairs (Ministerie van Binnenlandse Zaken) is also consulted because the original idea of a RES has arisen there, and the Ministry of Internal Affairs is closely related to the process and content of the Climate Agreement. To discover the parties their 'the perception of the RES', the following questions are posed:

1. Can you describe the RES assignment in your own words? So how do you, as a municipality, interpret the assignment?
2. When do you see the RES assignment as successful? (is that simply when it meets your answer to question 1?
3. What do you, as a municipality, want to get out of the assignment? So how can the assignment be beneficial for your municipality?

The research method interviews is applied to obtain different types of information, depending on the phase of the research. Neither unstructured (in-depth) nor structured (standardised) interviews are used, since that the researcher knows in advance which category of answers he wants. Mostly, the interviews are conducted in real life for maximal communication transfer. This is easily arranged since the researcher participates as a project assistant and an interview round, employed for the actor scan,

must be carried out along the region's municipalities anyway. If the interviewee is little available, the interview is taken by telephone. When after an interview it turns out that an answer is missing, is asked for by email.

The interviews with the municipalities, the province of South-Holland and waterboards were conducted in combination with process advisors from the province of South-Holland for time-saving purposes. The process advisors asked for information concerning the heat transition that is currently going on. Usually, two hours were scheduled for the interviews. First, the process advisors asked their questions, and then the researcher went through the RES questions, which usually took half an hour. The task of the researcher was to get a picture of how the municipalities and waterboards looked at the RES, and in particular when they would consider the RES a success. The interviewees often came up with a few answers almost instantly. In retrospect, it also turned out that there was much overlap in municipalities' answers. The researcher also had to obtain which renewable energy projects, including their potential yield, were currently in the pipeline. This question was important for calculating how much renewable energy still must be added to the 'energy-mix' (Appendix F) of the region in the short term. The interviews were not recorded but written down digitally. Subsequently, a bundled report was made and returned to the interviewees for checking. Possible changes were then implemented and the report was sent again, including a quest for definitive approval. Although this review procedure is laborious, it ensures quality, which is must regarding the sensitivity of the data.

The other interviews, which were conducted mostly face to face with members of the umbrella organisations and the Ministry of Internal Affairs, were recorded by cell phone. The researcher always asked for permission to do so. If occasionally an interview was conducted by telephone, it was written down digitally meanwhile. These interviews took about one hour. Which questions are asked depends on the role the interviewee has in relation to the RES. For the roles umbrella organisations and the Ministry of Internal Affairs, questions were asked on the origin of the RES and how they considered the functions of the various roles (municipality, province of South-Holland, national government). The question 'when do you consider the RES as a success?' is also asked. The reports of these 1-on-1 interviews were returned for verification, although the second check has been omitted.

3.2.5 Desk research

Lastly, desk research is an important method throughout this study. The documents that need to be examined are the documents about the RES assignment from the umbrella organisations, the points of departure note (uitgangspunten notitie) from the Ambtelijk coördinatieteam (2017), and evaluation reports of RES'es from other regions. Since the researcher is a project assistant, he has access to all these documents.

3.3 Research phases and execution

The entire research is split into three phases: A, B and C (Table 2).

Phase A (RQ1 and 2) is called 'RES assignment& perceptions'

This phase is meant to be an introduction to the subject matter. By describing both the RES assignment in RQ1, and the perception of the RES assignment of various stakeholders RQ2, the background to the problem is covered.

Phase B (RQ3 and 4) is called 'assessment of consequences'

In this phase, the consequences of the fact that everyone has a different perception of the assignment, and whether these consequences form a problem to the process, are examined. Subsequently, it is analysed how heavy these problems weigh, or in others words, to what extent they threaten 'good process management'.

For these steps, it has been chosen to interview the process managers, since they form the daily project management. Their opinion is considered important since they identify opportunities, threats, and because they are the linking pin to the organisations that influence the process from above. On top of that, they are held as the ultimate responsible for the process results. For these reasons, their viewpoints are of utmost importance to the answers of RQ 3,4, and also 5.

For RQ3, one workshop of 1.5 hours takes place with both the process architect and -coordinator. The other project assistant takes minutes so that the researcher can focus on the discussion. During this workshop, all consequences of different assignment perceptions are collected. It does not matter whether these consequences have already been addressed, or not. To have a clear overview of all consequences and their elaborations, some consequences –if necessary– again broken down into sub-consequences, in which the relations are pointed out using straight arrows (Figure 2). During this workshop, it is attempted to obtain a schematic overview as shown in Figure 3; this overview is called the 'bare influence tree'. The consequences are neutrally charged, meaning that they do not contain a value judgement.

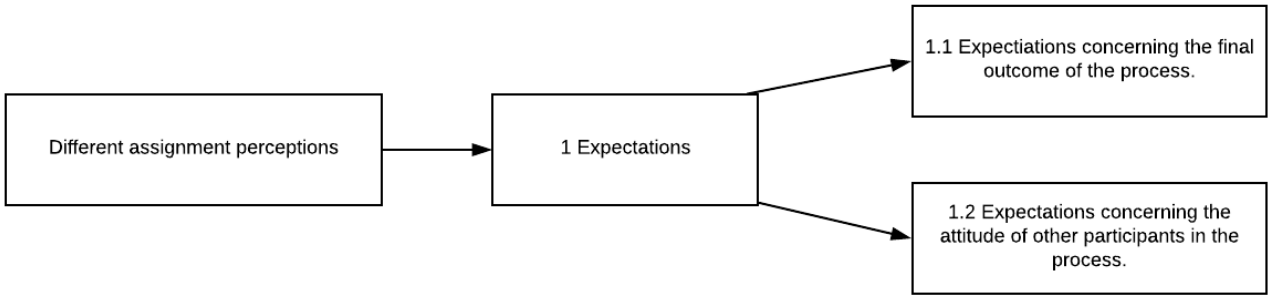

Figure 2: Work breakdown structure of consequence 1.

The role of the researcher during the discussion is to split up/disentangle certain arguments by probing questions, since he thinks that many arguments are based on instinct/feelings. Next, he aims at clarifying/reaching consensus among the process architect and -coordinator, since, in these discussions, people often put things differently while they mean the same thing. It is not a problem if there is an disagreement, but then it must be valid; both must acknowledge this disagreement. The participative observations serves as triangulation in this process. When the bare tree is completed, RQ3 is fulfilled.

The researchers has deliberately chosen to interview the process architect and the -coordinator at the same time, not separated, since the discussions will allow both of them to recall a greater amount of memories, both in width and in depth. Many happenings and process interventions have occurred during the scope of the research, and when a 1-on-1 interview takes place, a certain part of the memories remain unexposed. A possible pitfall of this 'merged interview' is that both individuals are less open or honest. Though, since the bond between the two is good and the atmosphere is always relaxed, the researcher considers this chance to be small.

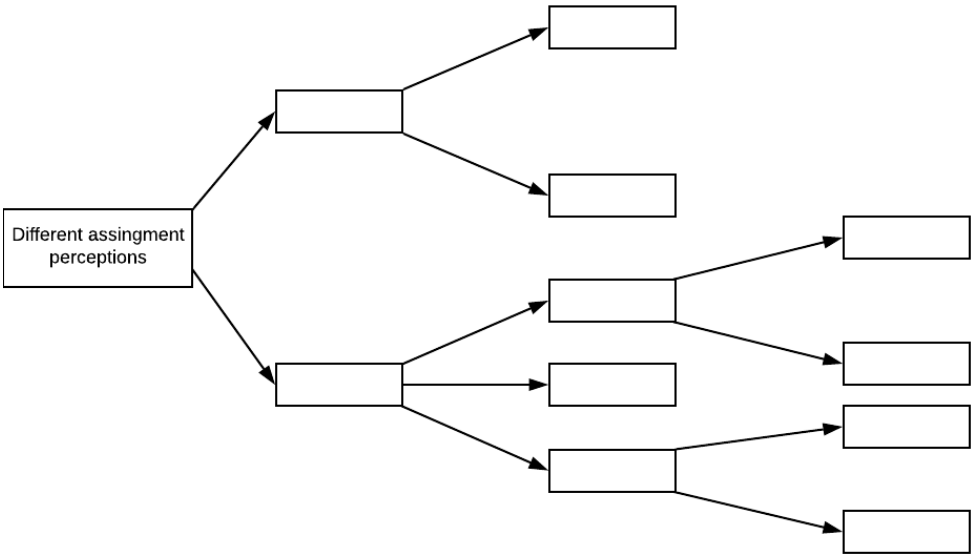

Figure 3: Draft of the bare influence tree.

For RQ4, the 'rating procedure' is conducted to estimate the severity of the problem. The process managers are going to rate every consequence based on how problematic it is for the process. The rating 1 means 'no problem', and a 10 means 'a grandiose problem with a major negative impact'. They carry out this rating based on the practical framework that is confirmed by themselves in Section 2.3. For congruency, they have to include a short motivation per given rating. The rationale of this rating procedure is to obtain extra validation and a sense of solving-urgency.

Next, multiple interviews with the process coordinator are held, to find out if there are any real life examples/cases corresponding to the provided consequences. After, it is asked whether these cases have already had or still need process interventions. This information is then depicted in a 'dressed influence tree'. In comparison with the bare influence tree, the dressed tree provides much more context and depth.

Phase C (RQ5 and 6) is called 'process management applied'

This phase describes how problems from the past have been addressed through process management and which problems remain unaddressed today. For one unaddressed problem, the one which the process coordinator likes to be solved, a solution panel is employed.

In RQ5, problems that already have been addressed (meaning that they either (partly) have been resolved or that they are left for what it is) are described. Also, the relations (mutual influences) of these cases are asked for. During the interviews with the process coordinator, the researcher asks specifically what the desired solution to problem is, and which process interventions have been performed for achieving this outcome. This research question is descriptive by nature. The participatory observation serves as triangulation.

For RQ6, the process coordinator is interviewed to describe the problems present today that still need process interventions. For one question, a 'solution-panel' will be gathered, in order to find appropriate process interventions. The solution-panel contains: Arlette van den Berg (PhD candidate), Ruud Schuurs (independent consultant), Thomas Hoppe (assistant professor Multi actor systems& energy policy) and the process coordinator (Appendix A). Because these people have a fresh, neutral and sharp view of the problems in this region, this knowledge can potentially be used to tackle one of the remaining problems. During this session, the researchers first gives an introduction to his study and the problem context. Then, he describes the central problem in detail. After, he guides the panel discussion.

Which research question is answered in which section?
Below in Table 3 is depicted which research question is answered in which section.

Table 3: Overview on which RQ in which section.

Research question	Section
RQ1	5.1 until 5.4
RQ2	5.5, 5.6
RQ3	6.1
RQ4	6.2
RQ5	7.2
RQ6	7.3

3.4 Data Analysis

This section elaborates on how the different data types per research question are analysed. For the entire section holds that, in case data has been extracted from a document, it has always been checked whether that has happened completely, so that no relevant information is missing. In case of doubt, the process coordinator is contacted to give his opinion.

1) What is the leading assignment for the 'Energiestrategie regio Rotterdam Den Haag' and how has it been influenced by the Climate Agreement?

Since the full assignment description of the RES and the subsequent adjustments are laborious, only the relevant core is distilled. This core is preferably copied literally and otherwise summarised as concisely as possible.

2) How is the RES assignment perceived by the owners (i.e., MRDH municipalities, province of South-Holland, and water boards), the umbrella organisations IPO, VNG, UvW, and the Ministry of Internal Affairs?

The interview answers were transcribed directly after the interviews were carried out. The subsequent steps for data treatment and analysis are described below. The qualitative data software tool 'ATLAS TI' is used for all the steps.

a. Open coding; raw labels are linked to the provided answers.
b. Group coding; overarching labels (categories) are linked to the open codes. By doing so, clear groups of answers are formed.
The researcher has attempted to logically bundle the open codes, 'also called answer elements', in group codes. Because it has been attempted to delineate the group codes as such that they have a mutually exclusive content, each open code only occurs in one group code.

The researcher is aware that he has added information to the research results because he has performed the coding procedure himself. There was not enough time to perform cross-coding. To safeguard the scientific procedure, the process coordinator, who is seen as an expert in this field, has checked the coding procedure.

c. The function 'frequency' is used to count the codes (answer elements) belonging to each category, to provide a generalised perception of the RES, seen from the municipalities, the province of South-Holland and water boards from the region.
d. The function co-occurrence table, in which an overview is presented of how often two open codes co-occur in the answer of one respondent. Some of these insights can be of conceptual value.

3) What are the consequences of the different assignment perceptions?
4) Which of these consequences has had (or needs) process interventions, and to what extent do they threaten a good process?

After the workshop with the process managers, the 'bare influence tree' is neatly worked out (Figure 3), thereby finishing RQ3. By interviewing the process coordinator, the problems that match the elements of the bare influence tree are categorised. The first category is 'already addressed in the past'. These problems are used as input material for RQ5. The second category is 'currently relevant', of which one problem will be addressed in this study. The problems of the latter category are input for RQ6. The amount of problems worked out in RQ5 and RQ6 is determined upon the outcome of RQ4.

Also, the calculations are performed. Given the equal authority the process architect and -coordinator have during the RES formulation process, their ratings have the same weight. When the process architect awards an 8 and the process coordinator awards a 7 for a particular problem, the resulting rating is 7.5. Strictly speaking, a consequence can only be called a problem if it has a value greater than 1.0.

5) How has process management been applied to prevent or during the scope of the study?

The interview with the process coordinator is transcribed first, and after, the relevant core of the interview is distilled and rewritten if necessary, which will never be at the expense of the content. Quotes are used to illustrate the key findings in the interviews. The outcome is a descriptive record. The relations (mutual influences) of these described cases are drawn with curved arrows in the dressed influence tree.

6) What are the currently relevant problems and how can they be addressed utilising process management?

First, the unsolved problems will be described as in RQ5. The discussion during the solution panel is recorded and will be transcribed later on. The useful core of this text is distilled and placed in this study.

3.5 Limitations and drawbacks of the research

According to Yin (2014), drawbacks of the case-study method include the time-consuming process of data collection and the question to which extent the results can be generalised, since only one unit is examined (Johannesson & Perjons, 2014). The results from this case study cannot be generalised to other regions, which decreases the utility of this researched. However, by displaying the character of this case in detail in Chapter 4, the results are deductible/traceable, meaning that it is hopefully possible for future readers to extract useful outcomes.

A common disadvantage of participatory observing is that by sharing experiences with the investigated group, the researcher will gradually identify with it and therefore (sub)consciously copy behaviour, ideas, feelings and ambitions. Because of this phenomenon, one is no longer able to perceive the group at a distance. This is often referred to as 'going native'. The chance of a distorted image is therefore great (Ferdie Migchelbrink consultancy, n.d.). Another disadvantage is that the members of the commissioning party behave different than usual since the researcher has revealed carrying out a scientific research (Kawulich, 2005). This phenomenon can undoubtedly play a role in political environments since the members are aware of themselves not leaking sensitive information.

Drawbacks of interviews are their time consumption, and secondly, it is never sure whether the interviewee is up to date with the ongoing processes and whether the information, in case the information is right, is appropriately communicated to the researcher. To overcome the latter, the interview report has always been sent back for a check.

Finally, objectivity cannot be guaranteed, due to the participatory observation, since observations are subjective by definition. Throughout the entire research, it is attempted to minimise subjectivity. Many of the observations are in fact mirrored with the process managers, through personal conversations and the periodic meeting. In addition, the researcher has bilateral consultations with the 'strategic advisor spatial economic policy' (later referred to as the strategic advisor), which is his supervisor from the MRDH, every two weeks. During these meetings, the researcher discusses his observations; these are subsequently mirrored against the energetic-historical perspective from the strategic advisor.

3.6 Conclusion

The intrinsic case study method is chosen for this study because the research demands the description of complex social phenomenon. Both qualitative and quantitative research methods are used to analyse the data. By means of an interview with the process managers, the analytical framework was derived from the theoretical framework and applied for the problem analysis. Employing six research questions, classified under the successive phases of 'RES assignment & perceptions', 'assessment of consequences', and 'process management applied', the main research question is fully considered. The primary research methods used are participatory observation, active participatory observation, semi-structured interviews, and literature study. For RQ2, the qualitative data analysis tool ATLAS TI is used to understand the relationship between process and network management on one side and this particular RES formulation case on the other. For the analysis of RQ4, the problems caused by the challenge of different assignment perceptions are rated. The limitations and disadvantages of the research are due to the built-in disadvantages of the chosen research methods. To limit the subjectivity of the research, triangulation is used.

4 Context description

In this chapter, the context of the RES formulation is described. First, it should be noticed that, when 'MRDH region' is mentioned, the geographical area is intended. The acronym MRDH on its own points towards the organisation. The information of this chapter is based upon an interview with the strategic advisor spatial planning and a literature study. In Section 4.1, a description of the socio-economic, geographical and historical factors is given. In Section 4.2, the institutional context and the daily practices of the MRDH are described, as well as her role in the RES formulation process. The narrative of the run-up towards the start of the RES process is described in Section 4.3. Section 4.4 provides the project organisation, followed by a short introduction round. Also, the relation of this project organisation with the rank and file -which is in this case, the civil and administrative network energy- is elaborated upon. In Section 4.5, the 'meeting types', in which the contact moments, the frequency and the purpose of the different meetings are discussed. In Section 4.6 the process costs are given. Section 4.7 closes the chapter by presenting the conclusion.

4.1 Relevant aspects of the MRDH region

4.1.1 Demography

The MRDH region contains 2.3M people in the year 2018 (CBS, 2018). The region includes two of the four largest cities in the Netherlands; Rotterdam and The Hague, with a respective population of 638,000 and 534,000 (AlleCijfers, 2018; CBS, 2018). Around these agglomerations are small and medium-sized municipalities. The smallest municipality is Brielle and has 17,000 residents in May 2018 (Brielle, 2018). When the MRDH was established in 2015 (Section 5.2), it was the first time that the municipalities started working together on this scale.

4.1.2 Heterogeneity with regard to economic activity

In addition to this diversity in municipality size, there is also great heterogeneity in the business (Becker & Kuipers, 2018; Franken & Nieuwenhuyzen, n.d.). The municipality of Westland runs its economy mainly on the production of food and flowers. The economies of the municipalities of Pijnacker-Nootdorp and Lansingerland are focussed on horticulture. Delft is characterised by its university of technology and its technical research institutions. Both Rotterdam and The Hague both contain large service sectors. In The Hague the focus is on international institutions such as the European Court of Justice and the national government. Rotterdam and the neighbouring municipalities perform many port-related activities, ranging from petrochemistry to transport and logistics. A general trend of the entire province of South-Holland is that digitalisation and automatization are being developed rapidly to enhance the efficiency of the production processes, which explains the name 'Digital Delta' (Franken & Nieuwenhuyzen, n.d.).

A characteristic of this business diversity is a relatively steady economic growth; the more an area focusses on solely one sector, the more volatile the growth curve is. When the (inter) national economy deteriorates, it directly hurts the port of Rotterdam, while The Hague remains relatively untouched. Finally, it should be noticed that regional economic growth is lagging behind in comparison with the regions Eindhoven and Amsterdam (Manshanden & Koops, 2018).

4.1.3 Rotterdam depends upon the region with respect to residual waste heat distribution

Rotterdam possesses large quantities of residual waste heat from the port of Rotterdam (HIC, haven industrieel complex) and besides, there is a high potential for geothermal energy generation in the area of South-Holland (IF technology, 2016; Warmtebedrijf Rotterdam, 2018). Both cause Rotterdam to be a big supporter of an extensive regional heating network. As Duursma (2017) states that this business case can be profitable only if many large parties participate, Rotterdam depends upon the collaboration with the regional parties.

4.2 About the joint provisions act MRDH

4.2.1 Establishment

The MRDH was established at the beginning of 2015. The MRDH is a contraction of the former ‘Stadsregio Rotterdam and the ‘Stadsgewest Haaglanden’. Around the time of establishment, the belief among the smaller municipalities prevailed that, given the size of these two cities, Rotterdam the Hague would be too dominant in this collaboration. Nowadays, that fear is tilted; the small and medium-sized municipalities now also advertise support for this regional vehicle. These smaller municipalities benefit from the large cities as they lack resources themselves. The joint provisions act MRDH allows them to benefit from the knowledge, money and expertise of the big cities.

4.2.2 The MRDH stands for bottom-up collaboration in the field of transport and business

The strength of this collaboration lies in the bottom-up construction. The wish of the 23 municipalities wanting to work together has been put into practice in the current joint provisions act (gemeenschappelijke regeling). In addition to the 'economic business climate' (economisch vestigingsklimaat) branch, this joint provisions act also includes the 'transport authority' branch.

4.2.3 In the field of energy, the MRDH has a facilitating role

As the MRDH neither has legal power, nor enough human, financial and knowledge capacity, it can only offer facilitation. The only exception is for the transport branch; the MRDH does perform execution/implementation in this case. The MRDH only has 90 employees, while 20,000 men are working at the municipalities. When the municipalities search for collaboration, the MRDH provides the initiative, but the municipalities themselves must carry out the execution/implementation. Therefore, the ownership of the RES stays with the 23 municipalities, the province of South-Holland and the waterboards. The role of the MRDH can be seen as the ‘glue’ between the stakeholders. The slogan of the MRDH speaks accordingly: 'from, for and by 23 municipalities' (Metropoolregio & Haag, 2017).

4.2.4 What can be the added value of the RES in this region?

As the MRDH played a major role in initiating this process, the strategic advisor was asked to explain the added value of the RES to the region in relation to the context, as described in this chapter. The content underneath are the words of the strategic advisor and can be considered as a ‘sum of the sounds from the region’.

The RES is an extension, building upon the initiatives that already exist and the technologies that are currently available. The aim of the RES is to not interfere with local projects, but to achieve supra-municipal connections. Where the overview and the power of one municipality stops, the RES starts.
Moreover, the RES is driven by the urge to take steps immediately. A pitfall in the energy transition is to seek out everything down to the bottom. Strategic advisor: 'do not continue to think endlessly, just do it now'.

The RES is far from comprising ‘everything’ in the field of energy initiatives. There are currently a lot of initiatives being set up to contribute to the national climate objectives. There is not one party that governs this totality of projects; it is one big puzzle consisting of small links. According to the strategic advisor 'poldering' is the art here.

It is very likely that there will also appear sub-regional collaborations. There may even be partnerships with parties from outside the regional boundaries. In this context, the RES is seen as the lubricant; opportunities are found, and preparations are made for the implementation phase.

Another important remark is that many surrounding cities and villages of the port of Rotterdam are heavily dependent on her due to employment. Though, they also experience adverse effects such as air pollution, stench, and nuisance. For both reasons, it is of critical importance that the energy transition runs smoothly, especially for these areas. The RES can play a role of significance in this transition.

4.3 The run-up to the RES MRDH

A cascade of events happened which ultimately led to the start of the RES formulation in the MRDH on 1-2-2019. In this section, these historical events are described chronologically to provide insights into diplomatic relations and the division of roles.

It began with an administrative meeting in August 2016, in which aldermen indicated that they were repeatedly asked by residents; 'which heating alternative should be chosen when the gas boiler is replaced?' The aldermen had no ready-made answer to this question. Therefore, in September 2016, the start of the 'routeplan energietransitie' (roadmap energy transition) was deployed in the 'Alliantie Duurzaam Rijnmond' (Alliance Sustainable Rijnmond, ADR) municipalities. Although this alliance no longer exists today, it consisted of the municipalities of Albrandswaard, Barendrecht, Brielle, Capelle ad IJssel, Hellevoetsluis, Krimpen ad IJssel, Lansingerland, Nissewaard, Maassluis, Ridderkerk, Schiedam, Vlaardingen and Westvoorne at that moment.

For an inventory of the progress of the ADR in the energy transition, the 'routeplan energiekaart' (energy infographic or energymix) was then drawn up for every single municipality, by the energy consultancy firm 'Overmorgen'. In Figure 4, the energy infographic is depicted for the municipality of Krimpen aan den IJssel. The energy infographic shows, for a specific municipality, what the energy supply and demand currently is, and what the estimated demand will be in 2050. As stated in the Paris Agreement, CO_2-neutrality must be achieved in 2050. Based on the algorithms and assumptions of Overmorgen, the energy infographic depicts where this sustainable electricity generation should come from (which percentage of wind and solar et cetera). The same principle applies to renewable heat; is that obtained from geothermal, residual heat or waste incineration heat? Based on the interviews held by the researcher (Appendix A), it turned out that these energy infographics played a crucial role in raising awareness of the fact that this region faces an immense challenge.

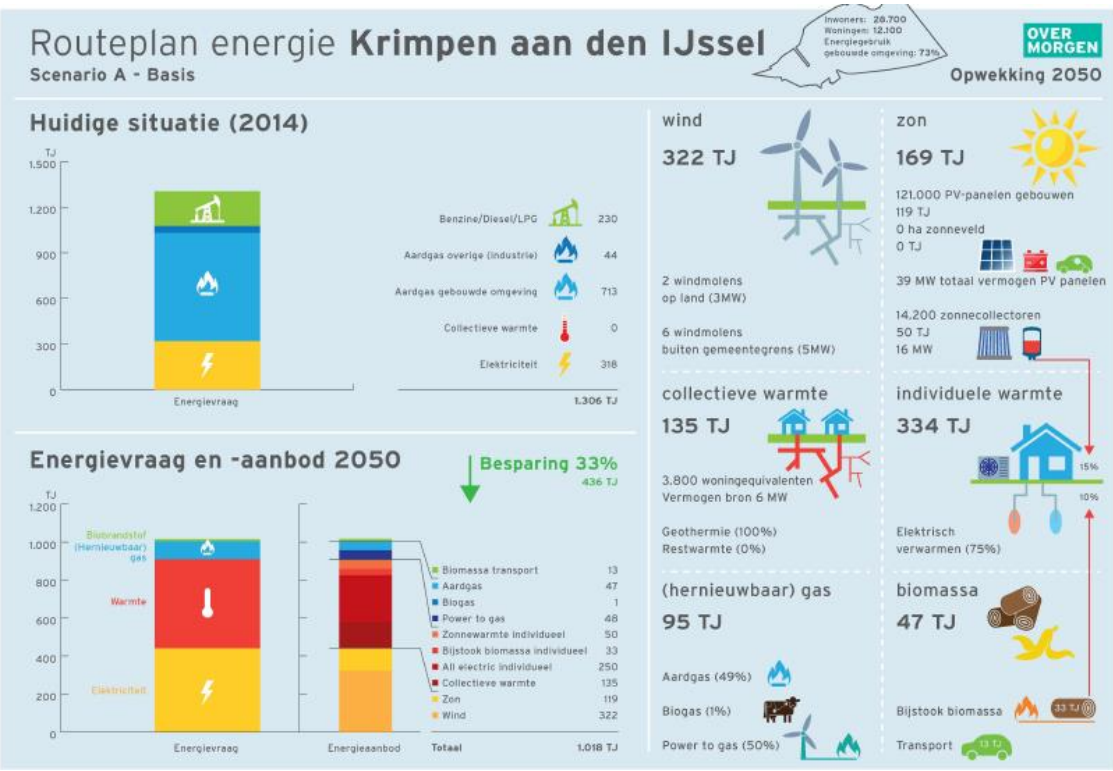

Figure 4: Energy infographic of Krimpen aan den IJssel ("Routeplan energie -Krimpen aan den IJssel," 2017).

On 23 February 2017, the roadmap energy transition was shared among municipalities and other stakeholders at a meeting of the civil network energy. The main conclusion of that meeting was that, to face this challenge successfully, a regional approach is crucial. On April 6th 2017, during an administrative meeting for the ADR, a clear signal was given to think about forming a collaboration

by expanding the borders to the MRDH region. In the northern part, that 'collaboration urgency' was less felt at that moment. Jan van Belzen (alderman Barendrecht), Marco Oosterwijk (alderman CDA, Krimpen ad IJssel) and Ferry Beerepoot have had several conversations in this Northern part (Haaglanden and PZH) to sound out the options. After, Broer Duursma (strategic advisor spatial economic policy, MRDH) gave the order to draft the energy infographics also for the Northern municipalities. Then, the data of all 23 infographics were added up to generate a view of the regional assignment (Appendix F). This one is called the 'Energymix MRDH'. As can be seen from this graph, around 157.000 TJ of renewable energy should be generated extra to achieve CO_2-neutrality in 2050. Since there are only 32 years available to reach this objective, the challenge is of colossal proportions.

When the energy-mix and spatial data were merged, it turned out that there was too little physical space to generate the estimated future energy demand. An integral heat system could be developed, but that would require close collaboration between parties. The parties who were pro collaboration were: Rotterdam (Astrid Madsen), the province of South-Holland, Delft (administrative, not on a civil level) and the MRDH, which opted to be the driving force in the initiation phase. The MRDH did not want to do the job itself, but it supports this initiative, by providing its network and meeting rooms. The position adopted by the MRDH in this process is in line with their mission, as discussed in Section 4.2.
At an administrative meeting of the ADR, on 22 June 2017, it was decided to extend the ADR constitution with the focus on energy. At that moment, the ADR was about to be annulled, which would mean that the regional initiative would fall apart. By choosing for continuity, the regional initiative could be maintained. Furthermore, it was expressly stated during the meeting that collaboration within the MRDH municipalities is desirable. On the 24th of August, the ADR collaboration has been extended again, now with the name 'Alliance Energy Transition' and a new focus; collaboration in the MRDH region with solely a focus on energy. The successful working together of the ADR hitherto offered a strong foundation for collaboration.

From November 24th onwards, conversations again took place in the Haaglanden. During these gatherings, attempts were made to build upon the governance structure and the administrative assignment. Later, on September 11, a meeting took place with Han Weber (chairman of the Provincial Executive), Stephan Brandligt (RES chairman and alderman of Groen-Links Delft), Marco Oosterwijk and Jan van Belzen, about the role of the province of South-Holland in this process and a strategy for effectively upscaling the collaboration to MRDH level. These people were the front runners on the administrative level. After that, the routeplan energie transitie for the entire MRDH region has been completed, in which the importance of collaboration was emphasised.

On 3 November 2017, at an administrative network energy meeting, Marco Oosterwijk presented the points of departure note (Appendix G) of the 'Energy strategy regio Rotterdam Den Haag'. The document was received positively; a unanimous agreement was reached on the collaboration. On 10 October 2017, during the civil network energy meeting, the same presentation was held. Hans Chouffour, a civil head from the province of South-Holland, announced that in particular this process is fully supported by the province of South-Holland. Subsequently, the process has started on 1-2-2018. On this date, the declaration of intent was signed by the province of South-Holland, the waterboards and all municipalities of the MRDH. This moment reached the press (Figure 5).

Figure 5: The signing of the letter of intent on 1-2-2018 ("Gemeenten starten uitwerking van regionale energiestrategie," 2019).

4.4 The Project organisation

A project organisation has been formed for the RES formulation. This project organisation is displayed schematically in Figure 6This set-up is constructed in such a way that efficient and effective work can be delivered while the cooperating parties still have influence and control to a certain extent.

It is important to notice that the civil- and administrative network energy has been running since 2015, in which all 23 municipalities, the waterboards and the province of South-Holland cooperate. At the end of 2017, when the idea of establishing a RES began to emerge, a project organisation has been formed as a representative distillation of the civil- and administrative network. This organisation is called the 'commissioning party'. This party was the initiator of the RES. These members will have a daily commitment to the RES, while the commitment to the process of the civil- and administrative network is only moderate. The job descriptions are given below.

4.4.1 Job specification and reference data

1. **RES chairman.** Stephan Brandligt, alderman of Groenlinks.
2. **Process coordinator**. He is appointed on behalf of the RES owners. He works for the BAR-organisation.
3. **Process support**, working for 'Haute Equipe' and Nicolai Versloot (Nicolai), who has been appointed as an intern at the MRDH.
4. **Process architect**, working for APPM management consultants (APPM).
5. **Process managers**: process architect and the process coordinator.
6. **Commissioning party**: waterboard of Delfland, municipalities of Rotterdam, The Hague, Westvoorne, Krimpen aan de IJssel, Westland.

Administrative network energy

The Administrative network Energy is the gremium in which the commissioning party of the RES takes decisions, shares knowledge and experiences. The group consists of:

- The (administrative) delegation of the municipalities.
- The water boards.
- The province South-Holland.

Part of this network is selected for the steering committee, having an administrative delegation of the:

- The province South-Holland.
- The Waterboard of Delfland (on behalf of the water boards).
- The municipalities of Rotterdam, The Hague, Delft, Krimpen aan de IJssel, Barendrecht.

This steering committee is the administrative client of the RES. The members are actively engaged in the collaboration by taking care of external relations.

Civil network energy
This is a civil representation of the parties participating in the administrative network energy. The civil network energy MRDH guides the execution of the agreement on civil level and is an advisory body for the civil commissioning party. The roles/tasks of the members are defined as being:

- Co-executors of this agreement.
- Ambassador of the RES.
- The first point of contact for your own organisation, and ensure the translation of local viewpoints to the RES.
- Provide support for decision-making to their councillors in the administrative network.
- Approachable for actions taken from (members of) the civil commissioning party.

Civil commissioning party
The official delegation from the administrative network energy, supplemented by an employee of the MRDH and the RES coordinator. This team ensures the execution of the RES assignment, steers (external) contractors and prepares administrative and civil consultations. Next, it is internally and externally committed to the formulation of the RES. They report adequately on the progress of the agreement and results.

Steering committee
This group is formed by the representatives of the administrative network energy, and has a daily occupation concerning process decision-making and redirecting in case of obstructing changes. From all stakeholders, this group has the highest power.

Coordinator RES
The coordinator RES has a connecting role in the execution. He has to enthuse, inspire, connect, organise and give direction. He is approachable and available to all the parties and stakeholders and ensures that everyone is heard and involved. Although the coordinator is part of the commissioning party, he is not bound to any of the parties involved.

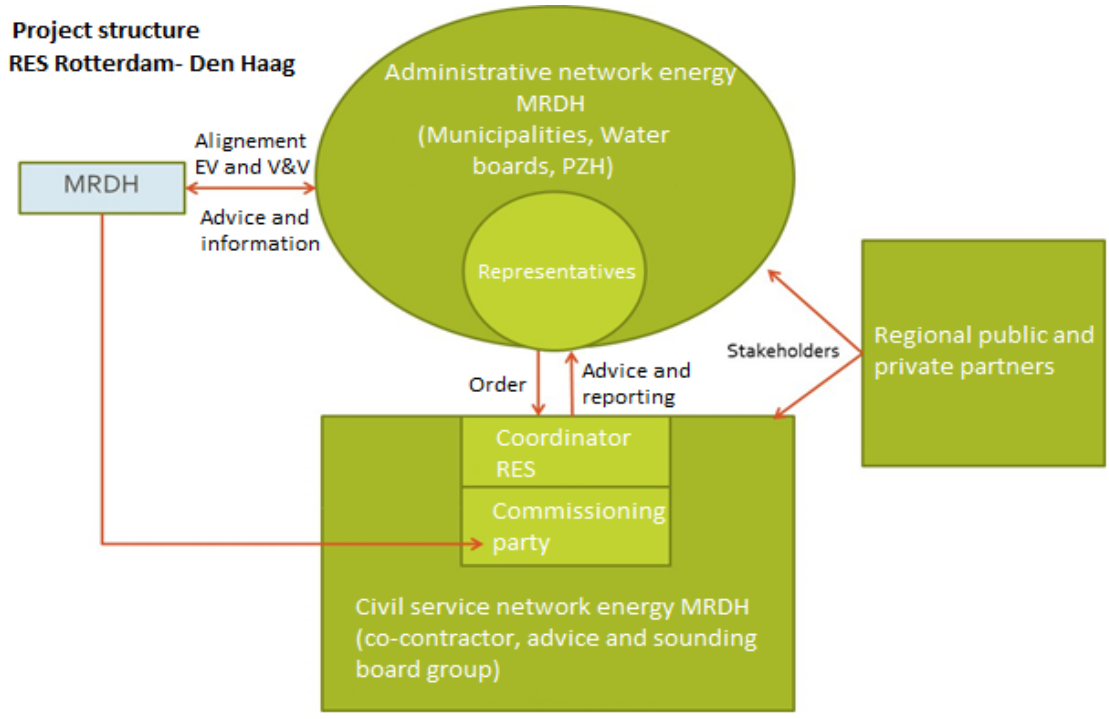

Figure 6: Project structure of the RES.

4.5 Meeting types

Table 4: Meeting types.

Name/type	Who	Frequency	Purpose
Commissioning party meeting	Process managers, process support, commissioning party	Once per three weeks	- updating - discussing - making process choices
Periodical meeting progress RES	Process managers, process support	Once per three weeks	- managing the progress/making process adjustments - doing background work
Periodical meeting	Administrative network energy	6 times a year	- updating - searching for project connection
Periodical meeting	Civil network energy	6 times a year	- updating - searching for project connection

4.6 Process costs

In Table 6 the process costs are depicted. The numbers have been rounded off.

Table 5: Process expenses RES 2018 and 2019.

	Total expenses	Payed by	Global expenditure
2018	**€378.000**	**€328.000** municipalities **€50.000** province of South-Holland	**€163.000** process coordinator, process assistant, space rent, communication **€155.000** advisory consortium **€60.000** savings for 2019
2019	**€338.000**	**€278.000** municipalities **€60.000** savings from 2018	**€125.000** advisory consortium **€185.000** process coordinator, process assistant, space rent, communication **€28.000** for last part of process

4.7 Conclusion

Regarding the fast-growing population, the enormous diversity in business activity and the spatial fragmentation, there is a big challenge for this RES formulation process. Although each participant is aware of its dependency upon others, it proves to be difficult to bridge the gap. The RES is supposed to allow these parties to find each other. The idea of intermunicipal collaboration started in the ADR municipalities. As this plan was received positively, and since the energy infographics of Overmorgen pointed out that regional collaboration is crucial, the collaboration boundaries were extended to the MRDH region.

5 Analyses phase A: ‘assignment and perceptions’

In this chapter, RQ3 and RQ4 are answered. Sections 5.1 until 5.4 cover RQ3 and Section 5.5 and 5.6 cover RQ2. In Section 5.1, the framework of the RES assignment is outlined as well as the parties related to the assignment. Section 5.2 focusses on the Climate Agreement, its legal status, and its influence on the RES formulation process in the MRDH. This section will also present which course is being sailed, and the motivation behind it. In Section 5.3, the relevant pieces of the leading assignment are presented, and in Section 5.4, the most impactful happenings for the process as well as their resulting directional changes of the RES are described. In Section 5.5 is examined how the so-called ‘owners’ of the RES (the 23 municipalities, two waterboards and the province of South-Holland) see/interpret the assignment. Section 5.6 presents how the umbrella organisations and the Ministry of Internal Affairs perceive the RES assignment. Section 5.7 closes the chapter by presenting the conclusion.

5.1 Framework of the assignment, involved parties and their roles

5.1.1 The leading assignment, its room for interpretation and doubt about the legal status

The leading assignment to which the owners of the RES must comply is the one described in the points of departure note, see Appendix G; this ‘assignment document’ will be elaborated in Section 5.3. This document has been signed by a declaration of intent on 1-2-2018, and therefore it is the assignment which is actively carried out by the process managers. However, a declaration of intent does not offer legal binding. Anyone can, at any time, step out of the process without consequences. From a legal point of view, nothing is mandatory. This fact proves to be difficult for many stakeholders. Even more fundamentally, the question is whether the RES will actually be legally secured in the environmental visions, since the Climate Agreement has no signature yet.

In the points of departure note, which is the leading assignment, is much room for interpretation. In order to guarantee the open process, there are primarily process agreements stated in the points of departure note; only little is stated about the content. This points of departure note was formulated based on the Coalition Agreement, which in turn refer to the objectives set by of the Paris Agreement of 2015. Deducted from these objectives, the ultimate objective of the RES is a 'clean, reliable, affordable and safe energy supply in 2050'. The process coordinator himself has written the points of departure note.

5.1.2 The role and power of the Association of Netherlands Municipalities

The Association of Netherlands Municipalities (Vereniging Nederlandse Gemeenten, VNG) is an organisation that represents the interests of all Dutch municipalities. Its mission is to work for a strong local government (VNG, 2017a). The VNG is a party that often mediates between the municipality and the higher authorities. For that reason, the VNG has chosen a coordinating role in the nationwide RES approach. Thus, the VNG publishes RES manuals and comes up with clear overviews, including briefings of the Climate Agreement, so that the regions can prepare and execute their RES’es in a well-informed manner.

5.1.3 The Interprovincial Consultation

The Interprovincial Consultation (Interprovinciaal Overleg, IPO) takes care of the joint interests of the provinces, on the one hand by playing an informative and guiding role in the (formal) preparation of policy that is important for the provinces, and on the other hand through knowledge sharing and information provision to provincial partners and stakeholders. The aim is to contribute to the quality, effectiveness and efficiency of public administration (IPO, 2019). In this nationwide RES process, the IPO safeguards uniformity. The IPO coordinates, it draws frameworks and works on the development of a common calculation system whereby assumptions and boundary conditions are determined.

5.1.4 The Union of Water Boards

The Union of Water Boards (Unie van Waterschappen, UvW) is the national association of Dutch water boards. The water boards are responsible for the management of flood defences, regional water management and the treatment of wastewater. The UvW represents the water boards in the (inter)national playing field, promotes the interests of the water boards and promotes knowledge exchange and collaboration (Unie van Waterschappen, 2019). The role perception of the IPO in the nationwide RES process can be found in Appendix I.

5.1.5 The Ministry of Internal Affairs

The Ministry of Internal Affairs is one of the eleven ministries of the national government. The ministers and civil servants formulate policy, prepare legislation and regulations, and are responsible for coordination, supervision and policy implementation. The ministry stands for effective public administration and public authorities that the public can trust (Ministry of Internal Affairs, 2019). The detailed role perception of the Ministry of Internal Affairs in the nationwide RES process can be found in Appendix I.

5.1.6 The role of the 'Inter-Governmental Program'

In the Inter-Governmental Program (Interbestuurlijk Programma, IPB), issued on 14-2-2018, is stated that the IPO, VNG, UvW and the Ministry of Internal Affairs will take the collaborative lead to give a precise interpretation to the RES. On the basis of the nationwide RES approach, these governmental bodies are responsible for the legal fixing for at least the period up to 2030, in environmental visions (NOVI, POVI, GOVI), and for the waterboards, in the water policy plans (Provincie Zeeland, n.d.; Rijksoverheid, 2018; Temple, 2018).

5.1.7 The role of the 'Netherlands Environmental Assessment Agency' and redistribution key

The 'Netherlands Environmental Assessment Agency' (Planbureau voor de Leefomgeving, PBL) and the CPB will quantitively sum up all 30 RES'es on 4-6-2019 (VNG, 2019). The PBL is an independent organisation; this is legally determined (van Santen & Kalse, 2019). By employing the calculation, it will discover to what extend CO_2-neutrality in 2050 can be reached. In case the summation does not meet CO_2-neutrality, a redistribution will take place, meaning that the national (renewable) energy gap will be allocated to the regions via a redistribution key, also called the 'escalatiemodel' (escalationmodel). The commissioning party MRDH argues that the government has to import the energy deficit from abroad. Accordingly, it states that 'the job is finished for regions which have attempted to realise their maximum potential energy generation'. After all, the regions are not held responsible for achieving the Paris Agreement objectives; the national government is. Besides, the government has many resources at its disposal. It controls the phasing out of coal-fired power stations, the extraction of gas in Groningen and the Wadden Sea, wind power at sea, and import, among others.

5.1.8 The role of the 'Netherlands Bureau for Economic Policy Analyses'

The 'Netherlands Bureau for Economic Policy Analyses' (Centraal Planbureau, CPB), is a research institute with a focus on finding scientific evidence which can support policy makers in their decisions (CPB, 2019). For example, they examine the election programmes of different political parties in terms of financial consequences. Also, the CPB releases prediction. The CPB is an independent organisation (Parlement, 2019).

5.1.9 The National program RES

The NPRES stands for 'national program RES'. The common denominator of national programs is that they form a collaboration between the national government (the Ministry of Internal Affairs), social organisations, (knowledge) institutions and companies, to serve a societal goal. The power of a national program lies in short communication lines, clear procedures, and the removal of unprofitable top margins (Provincie Groningen, 2019; Voedingsmagazine, 2019.). The NPRES was set up by the Ministry of Internal Affairs, IPO, VNG and UvW; it is a means to reach the national climate objectives (which are in turn deducted from the Paris Agreement). The National RES Program supports the regions in making the RES'es by knowledge sharing and -development, process support (in decision-making, participation), data support (analyses, calculation methods), a learning community, an expert pool and account holders (RES, 2019). The NPRES has been established after the Green Deals RES (Section 5.6.2). Therefore, it is used by the regions which started their RES formulation processes after 2017. The reader should bear in mind that:

- The NPRES has no legal status.
- The NPRES reflects the strategic, tactical and implementation vision of the Ministry of Internal Affairs and the umbrella organisations. The underlying drivers are the Paris Agreement objectives.
- Throughout this study, several individuals mention the 'national government', while they sometimes mean the NPRES. As this has often been the case during interviews, it has not been corrected. In contrast, when the 'help from the government in terms of legal/financial frameworks' is mentioned, NPRES cannot be substituted.

5.2 The Climate Agreement and its relation to the RES

The Climate Agreement is a treaty that mainly aims at the reduction of CO_2 emissions in the Netherlands (Klimaatberaad, 2019). Thereby new jobs will be created, cities will become cleaner and quieter, and houses more comfortable. The formulation of the Climate Agreement is a process. The start took place on 23-2-2018, and according to its provided schedule, the signing and implementation will take place in the first quarter of 2019. First, the objectives of the Climate Agreement will be discussed, which is followed by the schedule and the legal status of the agreement. This section ends with 'how the RES relates to the Climate Agreement.'

5.2.1 The objective

The main objective by the Coalition Agreement is a 49% CO_2 reduction in 2030 in comparison with the levels in 1990 (VVD et al., 2017). This objective corresponds to the main objective of the Climate Agreement. Nevertheless, the Climate Agreement is unclear about whether CO_2-neutrality has to be reached in 2050. It indicates that the 'Klimaatwet' (Climate Act), which on 21-2-2019 still awaits approval of the first chamber, provides frameworks for the Climate Agreement (Klimaatberaad, 2018). This legislative proposal indicates that a 95% CO_2 reduction compared to 1990 is intended (Wynia, 2018). Schuurs & Schwencke (2017) confirm this objective. However, according to many other sources, which go after the Paris Agreement, the Netherlands must be CO_2-neutral in 2050 (Manshanden & Koops, 2018; P. Boot et al., 2016; PBL, 2018). To make it even more confusing; the Coalition Agreement states that the EU has the legal possibility to adjust the objectives of the Climate Agreement in 2020. For international concern, the cabinet argues for an increase to a 55% CO_2 reduction in 2030 (Klimaatberaad, 2018; VVD et al., 2017).

5.2.2 Process and timeline

The Climate Agreement process is scheduled as depicted in Table 6. The timeline is presented to indicate deliverables, which can practically be laid aside to the RES MRDH formulation process. Each deliverable influences the RES assignment; it tightens, it reshapes, but mostly it forces the assignment to be worked out in more detail.

Table 6: The deliverables of the Climate Agreement process (Klimaatberaad, 2019; SER, 2018).

Date	Deliverable
10-10-2017	Coalition Agreement 'Faith in Future' (vertrouwen in de toekomst) announces the advent of the Climate Agreement.
23-2-2018	The cabinet announces the start of the Climate Agreement.
10-7-2018	Proposition for 'Proposal for Outline Climate Agreement' (ontwerp voor hoofdlijnen Klimaat Akkoord).
28-9-2018	Analyses of 'Proposal for outline Climate Agreement' by the PBL.
21-12-2018	'Design of Climate Agreement' (Ontwerp van Klimaatakkoord)
1-1-2019 till 1-4-2019	Calculation of the integral package of measures by PBL and CPB. Straight after that, the implementation phase starts.

5.2.3 Legal status

As described earlier, the Climate Agreement currently has no legal status. Through an e-mail dialogue with the climate council helpdesk, it is known that the Climate Agreement is most similar to a 'covenant'. The covenant is a policy instrument which has an informal character with regard to a clearly defined target group, in which reciprocity generally exists (Rijksoverheid, 2019). Covenants are commonly used in complex multi-actor issues in areas such as the environment or climate. According to Bressers, Midden, and Bartels (1994), a covenant is ''a written document, in which the legal status is deliberately eluded. Therefore, severe sanctions cannot be imposed when partners fail to meet their commitments'' (p.254).

To acquiring legal status, the agreement has to be signed by the involved parties. What the exact rules are concerning this procedure is unknown. In case it turns out that 20% of the parties will not sign, what happens then? This lack of clarity is inherent to the political nature of this type of process.

What is certain however is that the Climate Agreement is formulated in consultation with the participating parties. Even though the Climate Agreement is often associated with 'burden sharing', public support is considered to be important (Klimaatberaad, 2018).

5.2.4 Strategy choice for the RES MRDH with respect to the Climate Agreement

5.2.4.1 The spectrum of 'how much you obey the guidelines of the Climate Agreement'

Of some region is said that they do not care much about guidelines of the Climate Agreement. These regions have the vision that, as long as the Climate Agreement is not legally secured, they are free to do whatever they want. Therefore, they bend the assignment to their will. The only thing that these regions have to adhere to are their own points of departure notes they have signed at the beginning of their processes.

On the other side of the spectrum there are regions which exactly follow the guidelines of the Climate Agreement, which incorporates a delayed start of their RES formulation. An advantage of this strategy is that these regions will never be confronted with radical changes. A disadvantage of this 'wait and see' approach is that the assignment is put in concrete; you cannot deviate from it. Perhaps it turns out that measures have to be taken or specific policy has to be adopted which appears to be harmful for the owners.

5.2.4.2 The strategy of the RES MRDH; the 'golden middle way'

The RES MRDH can be seen as an intermediate form of the aforementioned extremes. It does take into account the guidelines of the Climate Agreement, but the main focus is on 'how to maximise the added value for the region'. In the administrative networks gatherings in September and November 2017, it was decided that the points of departure note is considered as the main directory, and that whenever something is published in the Climate Agreement affecting the RES, it is decided together how it changes the course. This approach is conceived of as the 'golden middle way'. In this way, the owners will not be confronted with significant changes once the final version of the Climate Agreement is released. Moreover, according to the process coordinator, it appears that civil servants in the region tend to hang on to the Climate Agreement s' guidelines, probably because it feels safe. Fortunately, what has been published in the Climate Agreement concerning the RES so far differs only slightly from the points of departure.

The process coordinator's job is to connect the RES formulation process with the Climate Agreement process. The process coordinator also tries to influence interrelated processes with the RES in such a way that the RES MRDH does not deviate too much from the points of departure. The process coordinator compares his role with that of a curling player: ''the path must always be prepared to pursue the right direction'' (interviewee Ferry Beerepoot, Appendix A).

5.3 The leading assignment; the points of departure note

The leading assignment is placed in Appendix G. This seventeen paged document is the only assignment which has been signed by the owners. Below, a summary of two pages is given in which only the highlights are mentioned.

5.3.1 Summary points of departure note

5.3.1.1 Cause of the RES

Under the Paris agreement of December 2015, countries are working on the reducing of greenhouse gas emissions. The aim is to ensure that the temperature rise does not exceed 2 degrees Celsius compared to 1990. Countries and regions are asked to prepare plans and to report on them. Within the MRDH region, there are currently many initiatives on different themes for achieving climate neutrality in 2050. The approaches of the municipalities vary in terms of pace. Currently, there is a lack of a comprehensive overview of these initiatives. To shape the energy transition, the region should work broadly and coherently on the themes such as (CO_2-free) high and low temperature, generation of CO_2-free electricity distribution + storage, and CO_2-free mobility. All these topics are interconnected and most have a spatial impact. In this way, the white spots in the total energy mix can be visualised and the focus can be on removing common bottlenecks for implementation.

It is important to note that the energy transition can only be realised if collaboration is set up with other stakeholders such as energy companies, housing corporations, waterworks, heavy industry, etc. The energy strategy must be broadly supported. Insight into (regional) opportunities and how to seize these still need to be worked out.

5.3.1.2 The added value of a regional approach

- To gain insight into frameworks and options for local system choices in order to continue to guarantee security of supply and balance in the energy system. Municipalities decide for themselves which local solutions fit best.
- To gain insight into which regional energy (infrastructure) is required.
- To provide insight into the spatial impact of the energy transition.
- Coordination with regional stakeholders to keep a similar pace (governments, network operators, private energy producers, investors).

5.3.1.3 Conclusions of the Energiemix MRDH

- The transition assignment is comprehensive and complex.
- All solutions (energy sources and efficiency measures) are needed.
- No municipality in the region can be completely self-sufficient in the field of sustainable energy: the municipalities depend upon each other, areas and partners beyond oneself.
- Renewable sources cannot be controlled properly in terms of energy generation. In order to achieve energy security (throughout the year), conversion alternatives and storage will be required

5.3.1.4 Relevant parties

In the elaboration of this assignment, other essential stakeholders such as network operators, the Port of Rotterdam Authority, Greenport West-Holland, Heat Alliance, housing associations (united in the Maas umbrella and SVH), water companies, energy companies and other relevant knowledge and implementation partners are called upon. The aim here is to

- Ensure that the RES offers feasible and appropriate insights, and
- To organise as much support as possible for the RES (if necessary, relevant stakeholders will be invited to participate in the steering committee).

5.3.1.5 Process, results, and actions

The long-term goal is the realisation of an affordable, reliable, clean and safe energy supply for everyone in the Rotterdam The Hague region in 2050, which means a low-CO_2 energy supply that consists of multiple sources through which conversion and storage are employed. Security of supply can also be provided in times with low renewable generation.

Another goal is to provide insight into what is possible and needed at the regional level to make the change to an affordable, reliable, clean and safe energy provision possible for the municipalities. The main results are thus:

- A Regional vision on the energy transition towards 2050 and
- A translation into opportunities (what can the municipalities do now?) in the short term.
- How and by whom can the opportunities be initiated, and which (partial) cooperation is needed between the participating parties (municipalities, water boards and the Province of South-Holland).
- The RES is not the final piece but, together with the local energy strategies, the foundation on which parties can continue to work on the implementation in the coming years.

The RES will provide:

- Insight into the spatial, social and economic impact that the energy transition has (based on the existing Energy Mix, Appendix F).
- Insight into opportunities (including sources for heat and electricity, inside and outside the region) and limitations (in particular economic and spatial) for the energy transition.
- Identify interdependence and cohesion in the region and how opportunities can be seized.

<u>Monitoring</u>

In order to be able to follow the interim progress of the RES, a report will be drawn up (at least) twice about the progress in 2018. Reporting is done based on the milestones and intermediate steps from the action plan and finances. A final report will be drawn up after the end of the project.

5.3.1.6 Foundations

- CO_2 neutrality is not a condition. The work is based on technical, spatial, economic and social opportunities.
- The total energy supply and demand of the region will be the starting principle.
- There will be an iterative process (finding a balance between what is regionally possible and locally desirable and feasible). This can also lead to new insights into the local situation.

5.3.2 Reflection on process management theory on the points of departure note

Ambiguity. The long-term goal of the RES MRDH is the realisation of an affordable, reliable, clean and safe energy supply for the region. The terms affordable, reliable, clean and safe are ambiguous. The function of these 'feel good' terms is to minimise the number of controversial substantive agreements at the start of the process. Additionally, these terms call for a process as they have to be elaborated on in later stage. Also, these ambiguous terms are very appealing to parties, as the ambiguity allows them to interpret these terms in their own way. Lastly, who can object to 'affordable, reliable, clean and safe energy supply'? The parties can present this process to their supporters as a victory (Fisher & Ury, 1981). These arguments together stimulate goal enrichment[4] at the start of the process.

According to the process coordinator, one should delay the moment of concretisation of the ambiguous terms for as long as possible. The argument for doing so partially overlaps with the argument of the principle 'from variety to selection', which is discussed in Section 7.1.2.1.1. The first argument is that –during the period in which the ambiguous objectives are not yet elaborated on– improvements are made (or just happen) to the quality of the collaboration and the underlying network. The players can explore each other's roles and interests, and relationships of trust are established. De Bruijn et al. (2010) term this 'social learning'. Secondly, joint learning occurs about the RES assignment itself. Information is injected in terms of scientific facts, and opinions, resulting in the establishment of a common framework during this period. This is called 'cognitive learning' (Ibid.). Finally, if the ambiguous terms are translated into concrete objectives too fast, the dynamics of the process is ignored, which would be unfortunate, since the process itself must do the work (Ibid.). In conclusion, one can call this use of ambiguity 'constructive ambiguity'.

The process has also experienced the downside of the ambiguous terms, which is that the set objectives are not SMART (specific, measurable, acceptable, realistic, time-related). Several parties have complained about this issue, especially when the process had been running for a while. The participative observation brings out that these parties want to see 'concrete' objectives and claim that the vague ambiguous terms have little value. These parties often want to proceed to the content agreements as soon as possible. These cynics neglect the dynamics of the process (Ibid.).

With a view to the analytical framework, this ambiguity increases trust (which is ranked 7.5 by the process managers) and commitment to the process rather than to the result, as parties have to retain their commitment for a specified period. Besides, ambiguity stimulates the core value openness (ranked 9.5), as the parties interpret the ambiguous terms in a way that it touches upon the parties' interest, which is inviting at the start of the process.

5.4 Influences that changed the direction of the RES

Table 7 presents an overview of all external influences which impacted the RES formulation process in the period of research (from 1-2-2018 till 1-4-2019). Subsequently, these influences are further elaborated in Section 5.4.1. Both 'what' has happened, and 'how the formulation process changed accordingly' is described. The purpose of this section is to portray the evolution/advancement of the original assignment. These changes, in combination with the fact that the RES formulation is already challenging from a substantive point of view, make it even more difficult to get a grip on this workpiece. This complexity is the root cause of the problem statement (Section 1.4.1). Note that only the influences which changed/elaborated the RES formulation process are described. Furthermore, only the core of these changes is given, as details do not contribute to answering the research questions.

[4] The mixing and recombining of the separate goals of different organisation. The whole is greater than the sum of the parts (synergy).

Table 7: Influences that changed the direction of the RES.

What	Released by	Date of release
Design of Climate Agreement (ontwerp van Klimaat Akkoord	Klimaatberaad	21-12-2018
Proposal for Outline Climate Agreement (Voorstel voor hoofdlijnen Klimaatakkoord)	Klimaatberaad	10-7-2018

5.4.1. Description of influences that (slightly) impacted the direction of the RES

5.4.1.1 Proposal for outline Climate Agreement

What?
The proposal was published on 10-7-2018. This publication called for a deeper elaboration level. The most compelling example is that actual locations must be designated for wind turbines, solar parks and biomass plants, while in the points of departure, it did not go deeper than 'the solution space'. The reasoning behind the low level of detail of the points of departure note is to leave room for future developments.

How has this influenced the RES formulation process?
An elaborated product requires more detail in the process, which means that specific individuals must make more (detailed) choices. It also implies that the RES formulation period will be extended.

5.4.1.2 Design of Climate Agreement

What?
In terms of content, the product RES is more elaborated than in 'the proposal for outline agreement'. The requirements are higher and more detailed.

How has this influenced the RES formulation process?
This publication illustrated the progress of the RES at the national level, which makes the regional process more rooted. It emphasised that the RES MRDH is just a part of a big puzzle, which, according to the process coordinator, provided tailwind on the side of the commissioning party. Process coordinator: ‘‘This piece of national context showed that we were not a too fanatic frontrunner.’’ Next, it has brought the commissioning party the insight that the points of departure note will not satisfy the demands of the Climate Agreement; much more content has to be provided than it was conceived of this release.

5.5 What is the perception of the RES according to the owners?

In this section is examined how the so-called ‘owners’ of the RES (the 23 municipalities, two waterboards and the province of South-Holland) see/interpret the assignment. Based on the interviews conducted by the researcher with these owners in the spring of 2018, it appears that perceptions of the assignment are diverse.

The following questions were asked to the ‘owners’ of the RES:

1. Can you describe the RES assignment in your own words? So how do you, as a municipality, interpret the assignment?
2. When do you see the RES assignment as successful? (is that when it meets your answer to question 1?
3. What do you, as a municipality, want to get out of the assignment? So how can the assignment be beneficial for your municipality?

Since the researcher has asked question no.2 during the interviews and no.1 and no.3 via email, on which only ten individuals responded, the 'density' of the questions is different. That does not matter; a representative image of the region can still be created.

Each section contains one interview question. Per question is presented:

- The result: a graphical overview (Figures 6,7,8 of the answers and a short commentary on what each code group encompasses.
- Interesting/relevant co-occurrences. Note that, in the analysis of co-occurrences, the largest number is two, which is relatively low. This is because the respondents gave fairly nuanced answers, resulting in a small change of having two identical answer elements in one quotation.
- A short commentary on the interpretation of the results. Note that this is the perception of the researcher.

5.5.1 Question 1: 'Can you describe the RES in your own words?'

5.5.1.1 Results

Figure 7 shows the results of the answers to question 1 using a bar chart. One can see the group codes followed by a percentage. The groups are mutually exclusive, which means that no open code falls within two groups (Section 3.4). To provide the reader a feel for the chart, a general description of which open codes fall within the group codes is provided. Subsequently, the header co-occurrences explains which open codes co-occurred with other open codes within the same answer.

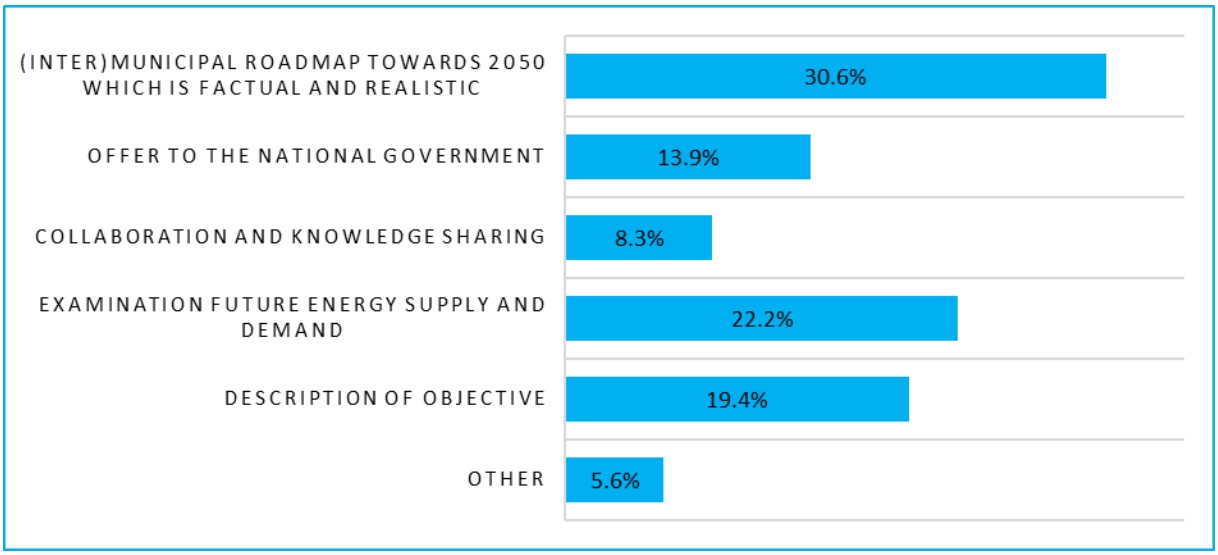

Figure 7: Answer to question 1: 'How would you describe the RES in your own words?' 13.9% means that 13.9% of the total amount of open codes (answer elements) fall in the group 'Offer to the national government'.

'Description of objective' describes either the objective as stated in the points of departure note (which is a payable, clean, robust and safe energy system) or sometimes as the goals in de Climate Agreement.

'Offer to the national government' is about the delivery of a product RES in which is shown that this region has put in maximal effort in the pursuit of the national climate objectives.

'Examination future energy supply and demand'; does not need an addendum.

'Collaboration and knowledge sharing'; does not need an addendum.

‘(Inter)municipal roadmap towards 2050 which is factual and realistic’ is about an integral perspective towards the goals in which natural and recreational areas are respected. Also, the plans should be substantiated by facts and figures to decrease political influence. These data can also be used for the intramunicipal plan, which is called the ‘lokale energie strategie’, (local energy strategy), abbreviated to LES. The RES is demanded to be realistic and feasible.

‘Other’ comprises of the quotes ‘nothing is mandatory yet’ and ‘stimulation of a discussion in the city council’.

5.5.1.2 Co-occurrences of open codes

Co-occurrence rate 2:

The answer element ‘examination potential renewable energy generation’ was linked to ‘living environment and spatial quality’.

Co-occurrence rate 1:

Respondents who spoke about ‘joint action’ also talked about ‘respect for the values of the different municipalities’ and ‘respect for the landscape and recreation’. Also, the RES being an integral task showed a correlation with ‘a tool for weighing up interests in the environmental vision’.

The respondents who spoke about ‘putting conditions on the agenda and creating for their own municipality’ connected this with ‘heat plan and heat vision’ and the connection between ‘policy and decision-making on the LES’.

5.5.2 Question 2: ‘When do you see the RES assignment as successful?’

5.5.2.1 Results

Figure 8 shows the results of the answers to question 2 using a bar chart. One can see the group codes followed by a percentage.

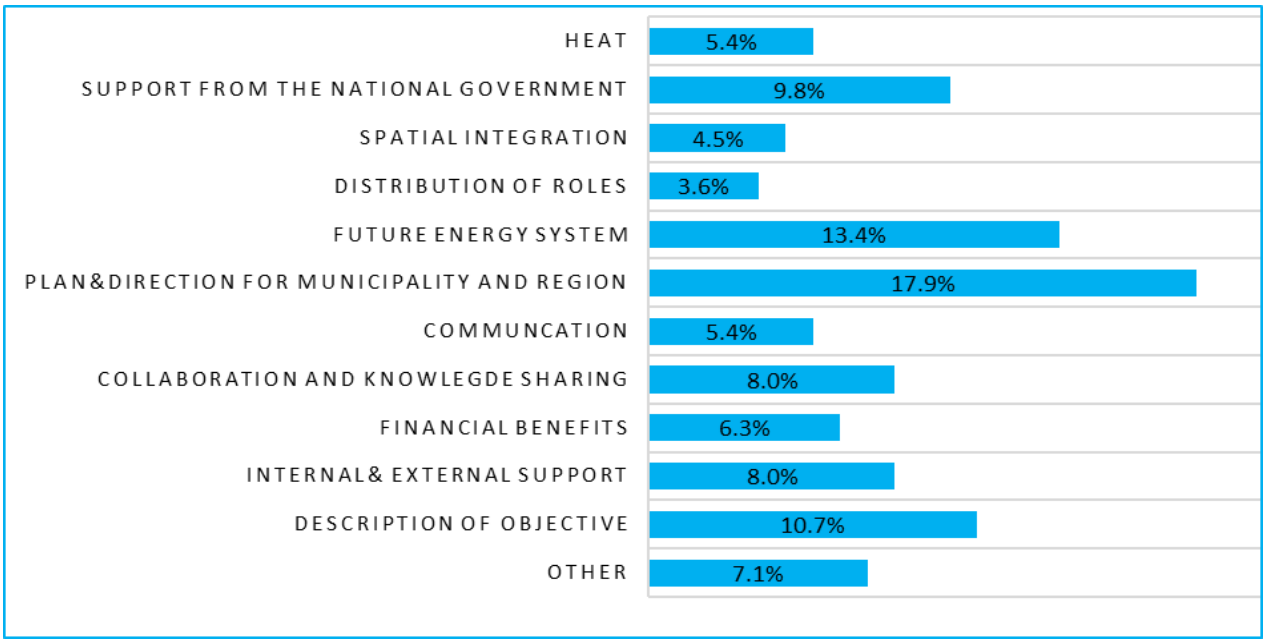

Figure 8: Answer to question 2: ‘When do you see the RES assignment as successful? 5.4% means that 5.4% of the total amount of open codes (answer elements) fall in the group ‘Heat’.

‘Heat’ comprises of heat plans and connection to the heat network.

‘Support from the national government’ comprises both juridical and financial aid. Moreover, it is expected that the government helps to remove any blockage in the energy transition.

‘Spatial integration’ is about an integrated approach to rural the area. Also, insight in the consequences of spatial policies which the RES will produce is wanted.

‘Distribution of roles’; a precise determination of who does what. The stakeholders and their interests should be clearly defined.
‘Future energy system’ comprises matching the future energy supply and demand on a regional scale. Also, it is about the underlying energy storage and distribution system, and alternative generation sources.

‘Plan& direction for municipality and region’ is about a clear plan, where the main job is being broken down in delimited parts. This should provide insights into how different projects can be connected. Also, facts and figures should be used to create a realistic and feasible roadmap towards the climate targets.

‘Communication’ is about the monitoring of the progress and its reporting to the people, the city councils and the national government. It is also about having a good (motivational) narrative towards the people.

‘Collaboration and knowledge sharing’; does not need an addendum.

‘Financial benefits’ is about the benefits of scale from which the municipalities can benefit if they jointly purchase renewable energy solutions. Also, acquiring insight in profitable business cases for the market participants is meant.

‘Internal& external support’ is about the involvement of people, aldermen, councillors. The RES should be broadly supported, and this process should generate support for future regional collaboration.

‘Description of objective’ is about the replenishment of the municipal energy gaps in 2050, providing maximal effort to reach these goals, and to come up with an ambitious offer to the national government.

‘Other’ is about a lobby towards the European Union and other trade organisations, space to experiment and power to take unsupported decisions.

5.5.2.2 Co-occurrences of open codes

Co-occurrence rate: 2 (which was the highest).

When ‘action perspective’ was meant, also ‘clear projects; no vague business’ co-occurred in the answer.

The respondents who mentioned ‘Lobby towards the national government’ also brought forward ‘being ambitious in generating the maximum amount of energy possible’.

5.5.3 Question 3: 'How does the RES benefit your organisation?'

5.5.3.1 Results

Figure 9 shows the results of the answers to question 3 using a bar chart. One can see the group codes followed by a percentage.

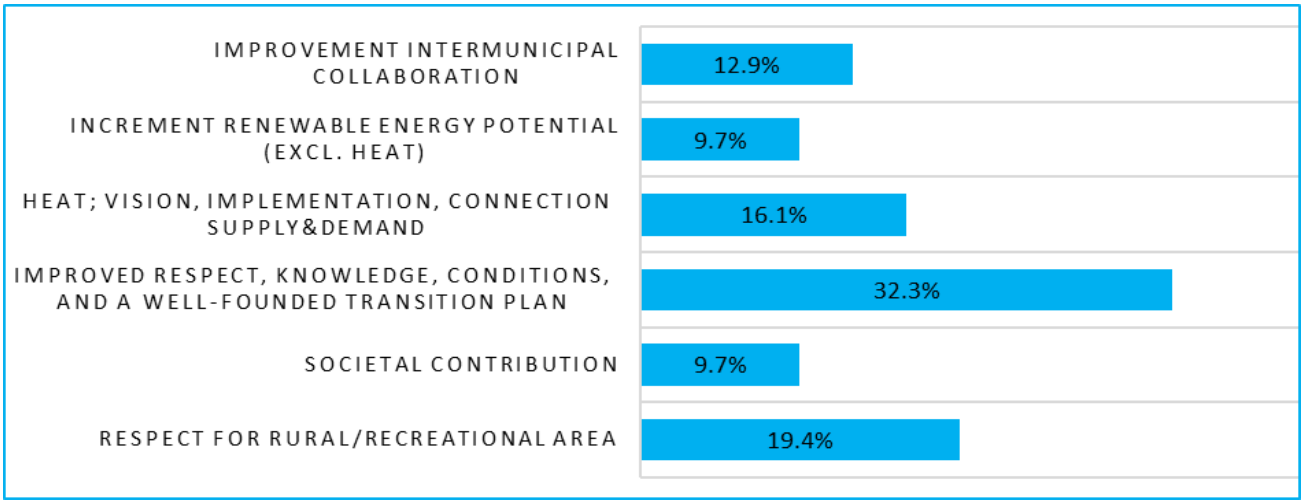

Figure 9: Answer to question 3: 'How is the RES beneficial to your organisation?' 12.9% means that 12.9% of the total amount of open codes (answer elements) fall in the group 'Improvement intermunicipal collaboration'.

'Improvement intermunicipal collaboration'; linkage of projects, working together.

'Increment renewable energy potential (excl. heat)' is about the stimulation of aquathermy and enlarging the surface area for renewable energy sources.

'Heat; vision, implementation, connection, supply& demand' is about heat network (warmtenet) establishment, support for heat vision (warmtevisie) and heat exchange plans.

In 'Improved respect, knowledge, conditions, and a well-founded transition plan', the individual municipality is placed central. It is mainly about shaping an intramunicipal energy transition plan/strategy which is based on facts and figures and is therefore feasible, obtaining knowledge and expertise, and to put requests on the agenda to the municipality succeed.

'Societal contribution' comprises raising public awareness, public support and acceptance.

'Respect for rural/recreational area' comprises of finding a balance in the environmental plans for energy generation and recreation. Also, the rural area should be respected.

5.5.3.2 Co-occurrences of open codes

Co-occurrence rate: 1.

The respondent who spoke about 'the determination of boundary conditions and putting requests on the agenda' explicitly spoke about the establishment of the heat network and heat exchange plans.

5.6 The perception of the umbrella organisations and the Ministry of Internal Affairs of the RES and how do they perceive there role?

In this section is described how the umbrella organisations, consisting of 'Association of Netherlands Municipalities' (VNG), 'Interprovincial Consultation (IPO), the 'Union of Water Boards' (UvW), and the Ministry of Internal Affairs perceive the RES assignment. See Section 5.1 for their introduction. For the VNG and the UvW, the following questions are asked:

1. Can you describe the RES assignment in your own words?
2. What are the chances and barriers in the formulation process?
3. What is your organisation's role in the formulation process? And what are the roles of UvW, IPO and VnG?
4. Do you have a specific view/opinion on how process management or the governance of the commissioning party should be applied in this process?

In all interview reports (Appendix I), the headers indicate which topics the interviewee discusses. A summary of these interviews is distilled and placed below (Section 5.6.1).

5.6.1 Summary of the interviews

The umbrella organisations and the Ministry of Internal Affairs perceive the RES assignment as a bottom-up collaboration platform in which agreements are set up with public parties, the business and social organisations on the energy transition in the region. An analysis is made of these regional parties' energy consumption and the opportunities that exist in the region for energy savings and generation, and to identify other possible CO_2 reduction opportunities. The sectors built environment, electricity and mobility are included in the assignment. Although other sectors (industry, agriculture/land use and mobility) are not embedded in the scope of the RES, the region is free to include these, as well as other themes such as climate adaptation. The assignment aims to achieve the national energy supply objectives. In addition, the RES helps to integrate the energy generation into the landscape with as much involvement as possible from the related parties. There is not one 'RES assignment'. Apart from having an assignment description and the given that the RES must contribute to the climate agreement, every stakeholder has a different angle of interest in the RES, which is why each stakeholder will come up with a different narrative on what the RES is and how the RES satisfies their interests.

In the conventional energy system, the decentralised authorities were not much involved. As renewable energy generation technologies will be built in the spatial environment, the decentralised authorities will be involved. The RES'es version 1.0 were pilots in which had to be discovered 1) what tools are needed, 2) what the regions can potentially contribute, and 3) what contribution the regions want to make. For these pilots, it was discussed upfront which measures were necessary to carry out the pilots appropriately. It has turned out that the decentralised authorities have a more significant role in the transition. Therefore, the role of the UvW, VNG and the Ministry of Internal Affairs in this assignment is to involve the rank and file of the stakeholders to shape this bottom-up process. The decentralised authorities should take the 'directors role' rather than the 'sending role'. These authorities should not release blueprints, but they must initiate, by actively asking what organisations want, what exists already, and what the opportunities are. Interaction is key. Also, these organisations will play a central role in the implementation phase. Additionally, these organisations have to work together with the Ministry of Internal Affairs to make the RES formulation process successful, which has resulted in the establishment of the NPRES (Section 5.1.9).

5.7 Conclusion

RQ1. What is the leading assignment for the 'Energiestrategie regio Rotterdam Den Haag' and how has it been influenced by the Climate Agreement?

Although the only valid assignment for the RES MRDH is the points of departure note, there exist a variety of briefings and manuals of what a RES should look like. The points of departure note's long-term goal is the realisation of an affordable, reliable, clean and safe energy supply for everyone in the Rotterdam The Hague region in 2050. These four ambiguous terms were chosen deliberately. First, the number of controversial substantive agreements at the start of the process is minimised. Second, these terms call for a process as they have to be elaborated on in later stage. Third, the public support is enhanced as each stakeholders interprets these terms to his own interests.

CO_2-neutrality is not a condition for the RSE MRDH. The work is based on technical, spatial, economic and social opportunities. Side targets are to find opportunities for the municipalities on the short term, how and by whom these opportunities can be initiated, and to build a foundation on which parties can continue to work on the implementation in the coming years. The added value of a regional approach is to gain insight into frameworks and options for local system choices in order to continue to guarantee security of supply and balance in the energy system. Municipalities decide for themselves which local solutions fit best.

The Climate Agreement, which is expected to be published in the first semester of 2019, has a clear vision of what should be included in the RES. It has been decided for the RES MRDH not to deviate much from this agreement to prevent any surprises later on. The interim deliverables of the Climate Agreement only state that the product RES must be worked out to a higher level of detail.

RQ2. How is the RES assignment perceived by the owners (i.e., MRDH municipalities, province of South-Holland, and water boards), the umbrella organisations IPO, VNG, UvW, and the Ministry of Internal Affairs?

Even though the respondents gave 26 different answers on how they perceive the RES assignment, there is a common thread. Considering their 3 largest answer groups, one can roughly answer question 1 and 2 with: 'when it is a municipal and regional plan, which is based on facts and figures, to work towards a future energy system in pursuit of the regional or national climate objectives. After asking how the RES would help their own organisation, 32.2% of the answer elements was about a well-founded transition plan, in which mutual municipal respect prevails, knowledge sharing is essential, and proper physical and legislation boundary conditions are outlined. 19.4% of the answer elements was about respecting rural and recreational areas.

The umbrella organisations and the Ministry of Internal Affairs mention that there is not 'one single RES'. They perceive the RES as a masterplan which combines multiple perspectives. Besides, as everyone has a different angle of interest in the assignment, there exist many perceptions of what a RES is and what its purpose should be. As the RES attempts to combine aspects, such as the financial- and societal benefits, as well as several sectors, such as the built environment, electricity and mobility, the assignment is considered multi-dimensional. Eventually, these different dimensions must be merged and realised in the municipalities' spatial environment. By means of a bottom-up process involving a broad range of stakeholders and by focussing on win-win situations, opportunities can be found. The decentralised authorities indicate that they play a vital 'directing role' in this process as the RES will be realised in the spatial environment.

6 Analyses phase B ‘assessment of consequences’

In this chapter, RQ3 and 4 have been worked out. Note that only the results are shown; the procedure behind it is given in Appendix D. Section 6.1, which corresponds to RQ3, presents the ‘bare influence tree’ that is a result of different assignment perceptions, which the central challenge of this study. In Section 6.2, which corresponds to RQ4, the ‘dressed influence tree’ including its mutual influences is given. Besides, this section provides an inventory of the problems or aims that have had or still need process interventions and to what extent they threaten this process. Section 6.3 closes the chapter by presenting the conclusion.

6.1 What are the consequences of different assignment perceptions of the RES?

In Figure 10, the bare influence tree is presented. In this tree, one can see what the consequences are of the stakeholders having different assignment perceptions, which is the main challenge of this study. This tree has been set up in collaboration with both process managers through a workshop, see Appendix D. Below the tree is a concise description of what all the ‘consequence blocks’ –which are called elements from now on– entail. Although the process managers agreed upon this tree, the creation of this tree is not an exact science; it remains a perception of the process managers. Therefore, the reader should sometimes interchange ‘is’ for ‘is perceived/considered by the process managers as’. In addition, the tree is simplified. The generic influences are pointed out with straight arrows. The direction of the arrow must be interpreted as ‘has influence on’. The word ‘influence’ has been chosen instead of the word ‘relationship’, as the influence is moving in one direction. Meaningful mutual influences have been omitted in this figure. These relationships are added in Section 6.2, when the tree is ‘dressed’. Note that the element descriptions are neutrally charged; no value judgment has been assigned to them.

Note that:

- The acronym ‘RES’ refers to both the RES process and the end product. Sometimes a distinction is made between RES process and product RES; this becomes evident in the element descriptions.
- A representative is a broad concept; it can be an alderman, a civil servant or a spokesperson. The province of South Holland and nearly all municipalities have both a civil servant and an administrative representative. This is not the case with the water boards.
- When referring to a representative or alderman, the pronoun 'he' is used, since they are more often men. Also, conciseness plays a role.
- Although it is straight forward what the influence of one element is on the other, it is sometimes further explained.

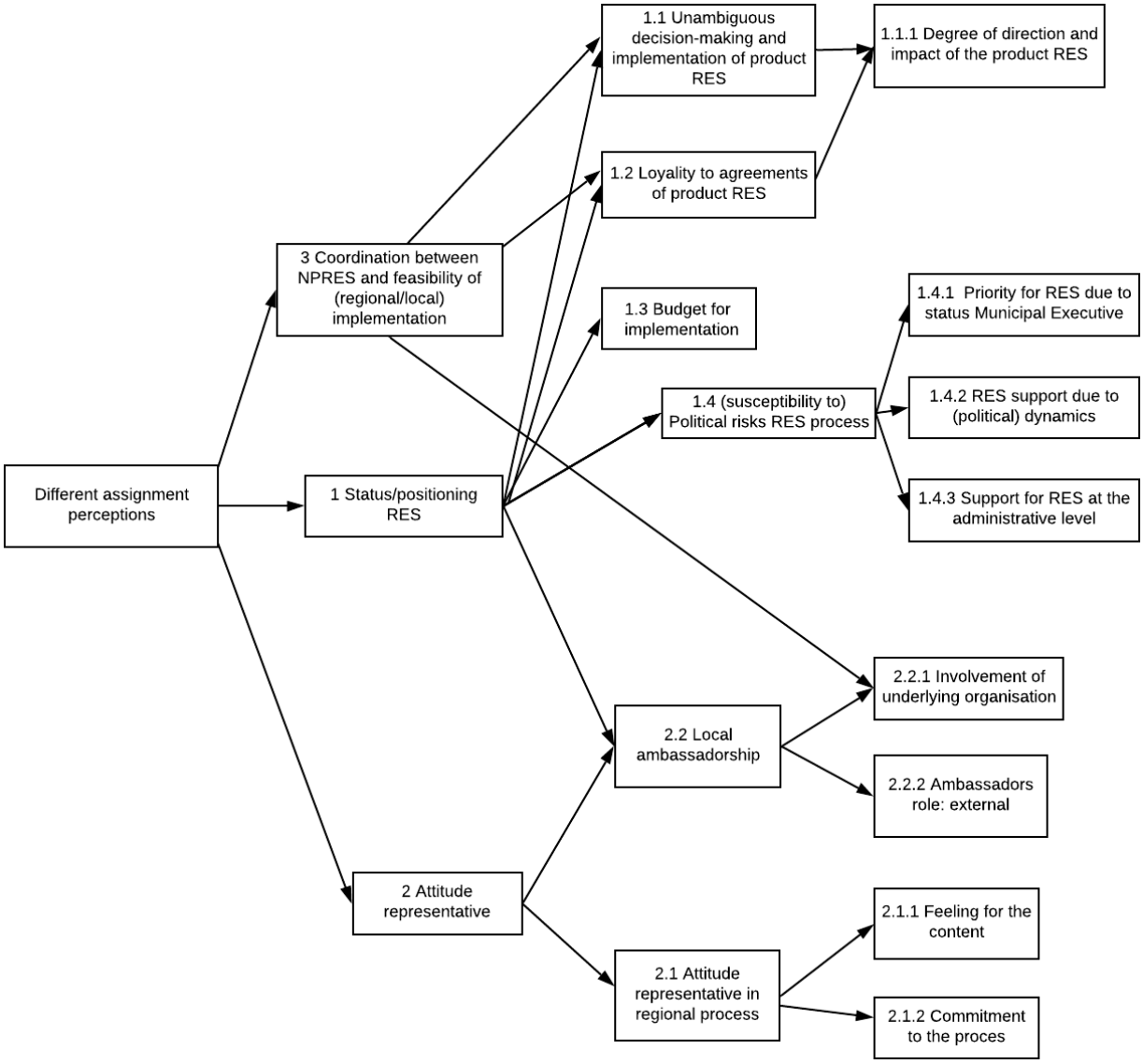

Figure 10: The bare influence tree.

The central challenge: Different perceptions of the RES assignment
All parties involved have a different perception of what the RES assignment entails and what it should achieve/realise. For more information, see the results of RQ1.

Status/positioning RES (1)
The status refers to how important the process and product is seen or how heavy it weighs. The positioning relates to which function the RES outcome must fulfil and what its place/position is within the portfolio of projects of a municipality. Since each regional party has a different frame of the RES, it also receives a different status/positioning.

Unambiguous decision-making and implementation of product RES (in different policy domains) (1.1)
There are many ways to implement the agreements, which are a result of the RES, in different policy domains. Does the RES process only remain a 'for your information', or will the content be recorded in the environmental visions? Depending on the status/positioning of the RES(1), a different procedure of local determination of the agreements of the product RES will be required.

Degree of direction (mate van sturing) and impact of the product RES (1.1.1)
This is about how leading the product RES will be, and how much impact it can make eventually. By 'impact' is meant to what extent it contributes to the objectives of the points of departure note. This element depends on the unambiguous decision-making and implementation (1.1), as this will determine the formal/legal value of the agreements of the RES. Also, this element depends on the loyalty to agreements of the RES (1.2), as a part of the agreements will be based on trust. The higher the loyalty to these agreements, the higher the impact.

Loyalty to the agreements of product RES (1.2)
This element concerns the extent to which the parties adhere to the agreements arising from the product RES. Many of the agreements will be given the status of a covenant (Section 5.2.3) and are therefore not legally required to follow. This loyalty directly depends on the status and positioning of the RES (1).

Budget for implementation (1.3)
The higher the status/positioning of the RES (1), the more money a municipality is willing to spend on the implementation.

(Susceptibility to) Political risks for RES process (1.4)
This element relates to the political risks for the RES process within a municipality. The words 'susceptibility to' are between brackets because these political risks are limited by the status and positioning of the RES (1). The more robust this status/positioning, the less influence these political risks will have. There are three types of political risks:

Priority for RES due to status Municipal Executive (1.4.1)
If a Municipal Executives falls or if an alderman or councillor resigns due to circumstances, the municipality will adhere less to their predetermined plans as stated in their coalition agreement. Usually, it is the progressive processes/projects that are being cut first, such as the RES.

RES support due to (political) dynamics (1.4.2)
Support from the dominant political movement is desired for the RES process. This element is also about other dynamics, such as the earthquakes in Groningen, which have a positive impact on the RES process.

Support for RES at the administrative level (1.4.3)
If the RES, for whatever reason, receives commitment at the civil level but not at the administrative level, there is the possibility that the product RES will not be accepted at the administrative level once it is finished. This will cause problems as there probably will not be a second RES formulation process in this region.

Attitude representative (2)
This is about the representative's attitude in this process and his own municipality, his view of the RES and the extent to which he wants to bring the product to a successful outcome.

Attitude representative in the regional process (2.1)
There are several attitudes that a representative can take on during the negotiations; for example, he is supportive, critical, nonchalant, involved, et cetera.

Feeling for the content (2.1.1)
This element reflects the feeling, in terms of knowledge depth and connection, of/with the RES content.

Commitment to the process (2.1.2)
This element is the degree to which the representative shows commitment to the process steps and the extent to which he is willing to accept its repercussions. The better the attitude in the process (2.1), the higher its commitment.

Local ambassadorship (2.2)
To what extent the representative involves parties/departments in the RES process, both internally and externally.

The involvement of the underlying organisation (2.2.1)
The extent to which the representative involves the relevant departments (that are necessary to implement the RES successfully) within his organisation in the process, such as spatial planning department, the underground infrastructure, et cetera. This also works the other way round; the extent to which the municipal departments can articulate their desires to the representative.

Ambassadors role: external (2.2.2)
The extent to which the representative involves all external parties in the process that are necessary for the RES to be successfully implemented. For example, the housing corporations, the associations of owners (vereniging van eigenaren), energy companies et cetera.

Coordination between national requirements and the feasibility of (regional/local) implementation (3)
The connection between the vision of the NPRES and the concrete objectives that result from it on the one hand, and the local/regional feasibility and possible bottom-up on the other hand.

6.2 Which of these consequences have had or need process interventions and to what extent do they threaten the process?

6.2.1 The 'dressed influence tree'
The 'dressed influence tree' is shown in Figure 11. It has been created based on interviews with the process coordinator and the participative observation. This tree provides a clear picture of how the process coordinator thinks that the process, in terms of mutual influences, works. This dressed tree, in combination with the 'severity column' of Table 9 or Table 11, provide a more holistic picture than the bare tree in Figure 10, which leads to the reader having a better perspective and depth of the process and its resulting process interventions. Also, the tree shows how specific imbalances pass-through to other elements.

The blue (think of calmness) blocks indicate which elements have had process intentions. The red (think of alarm!) blocks indicate which elements still need process interventions. The green element represent the unsolved problem that will be address in this study.

The relevant mutual influences are indicated by curved arrows. 'Relevant' in this context means that red or blue elements are involved; elements that have had or still need process management interventions. The description of these influences is made clear in Section 7.2 and 7.3 underneath the headings 'influence on other elements'. Here, also the real life cases of the element are provided, which are essential for understanding the influences.

The reason why the arrows (mutual influences) have been reported before they are explained in depth is to show the reader the complete picture. It would be a waste to put the figure in again with only a little new information. Note that these influences do not belong to the conclusion of this chapter, but to the one of Chapter 7.

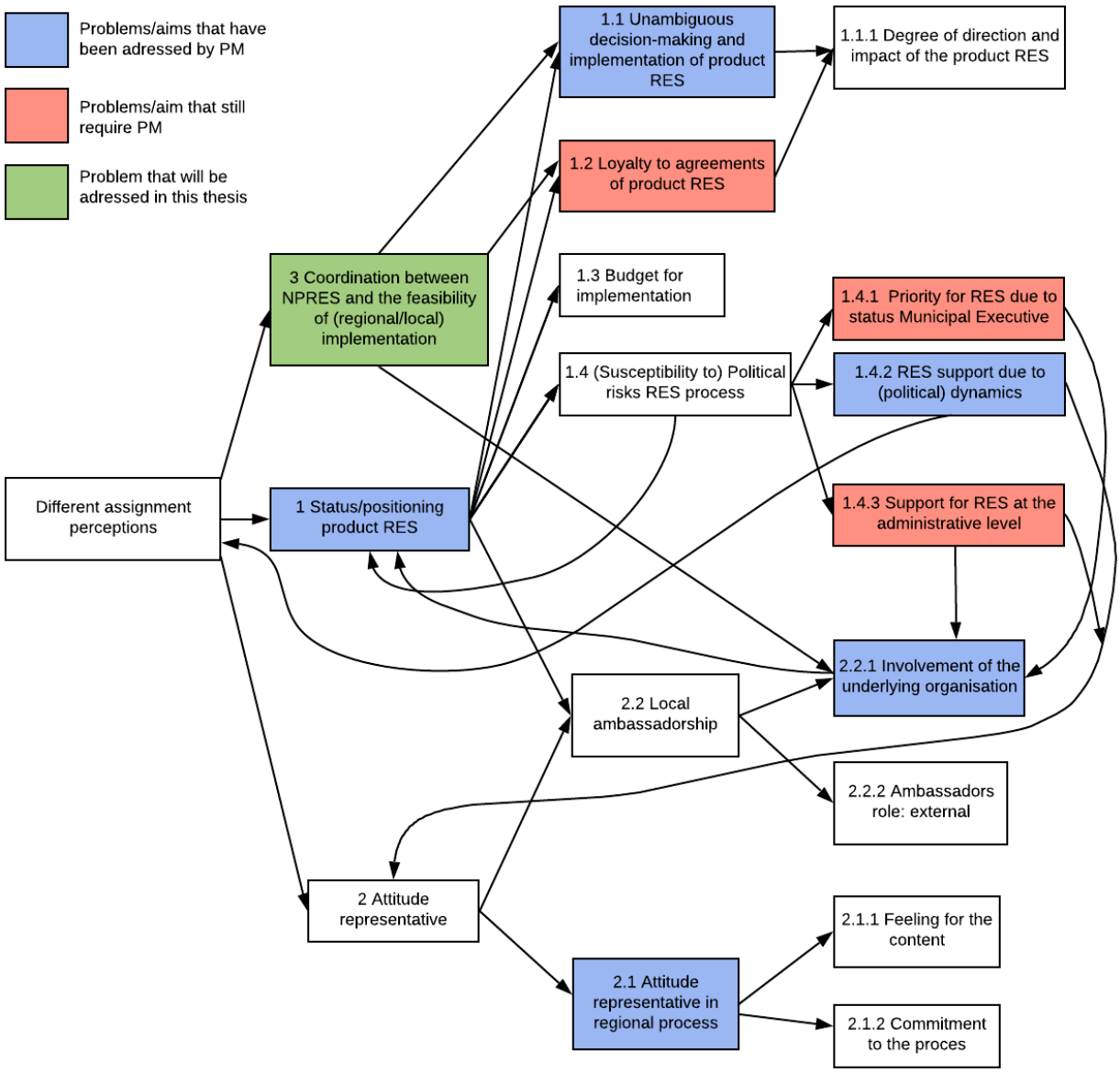

Figure 11: The dressed influence tree.

6.2.2 Overview of the problems/aims and their 'severity'

Table 8, which forms the input for Chapter 7, shows the overview of all problems/aims that have had (colour blue) or still need (colour red) process interventions. The colour green stands for an unsolved problem that will be addressed in this study. In this table, the process interventions are concisely described point by point.

The ratings (also called the 'severity') indicate how much weight is assigned to the problems. These ratings give a feeling for the urge for process interventions, and besides, it functions as extra validation. This severity is a value judgement based on the analytical framework. These ratings were obtained in the workshop for RQ3 and 4 (Appendix D). During this meeting, the process managers were asked 'how important this element is for the effectiveness (yield) of the RES', expressed from 1 (no importance) to 10 (vital importance). The procedure of this workshop is presented in Appendix D and the final grades, which is the average of both ratings, are shown in Table 8. It should be mentioned that:

- The process managers had to base their answers on their previously assigned ratings for the core values of good process management (Section 2.3). Also, they had to equip their rating with a short substantiation.
- The process managers have agreed upon Figure 11 and its context before determining the severity.
- The question 'how important this element is for the effectiveness of the RES' was interpreted in two ways, depending upon the specific element (Table 9, column problem/aim). For element 1, 1.1 and 1.2, there is no problem; there is an aim. Therefore, the question: 'How important is this aim for the effectiveness of the RES' is more appropriate. For element 1.X, 1.4.1, 1.4.2, 1.4.3, 2.1 and 2.2.1, which are threats to the process, the question: 'What is the importance to resolve this problem for the effectiveness of the RES' is appropriate. So for the latter part of this study, the nuance between problem and aim has been made. An element can be a problem as well as an aim.

The last column 'status' contains a referral to Section 7.2 (RQ5), in which the addressed problems/aims are described, or to Section 7.3 (RQ6), in which the problems/aims that still need to be addressed are listed. This division is rounded up (afgerond), as it is never that black or white whether a problem or aim is completely addressed. If a problem is successfully addressed to date, it goes to Section 7.2.

Problem 1.X is depicted in the table but not in Figure 10 and Figure 11, as it a result of the addressing of problems/aims, and not a problem in itself. All of this will be clearly illustrated in Chapter 7.

Problems 1.4.1 and 1.4.3 will be described but not addressed in this study because too many unknowns are playing a role in finding an adequate solution to these problems. Aim 1.2 will not be addressed either since it has turned out to be a resultant of element 1 and 3. By solving/satisfying these, this aim is automatically addressed. Only for problem 3, a solution will be devised through a 'solution panel' (Section 7.3.2).

Table 8: The severity and substantiations of the consequences that have had or need process interventions.

Consequence	Rating PC	Substantiation PC	Rating PA	Substantiation PA
Aiming for alignment of the status/positioning of the RES (1)	9	The quality and the future use of the RES depends this aspect.	9	The status/positioning determines the commitment to the RES and the extent to which this is a building block for policy choices
Aiming for unambiguous decision-making (1.1)	8	The quality and the future use of the RES depends this aspect.	8	Unambiguous decision-making among the various involved (public) parties ensures a clear status and the possibility to use the RES effectively
Aiming for loyalty to agreements (1.2)	8	We should be open for anticipating on this type of behaviour	7	Certainly if the formal status of the product RES is not strong (it still needs to be translated into environmental policy), non-formalised commitment to the product is important for effectiveness.
Some municipalities refused the consultations (1.X)	9	Essential for the process continuation.	8	It can (potentially) be highly decisive (contribute to the status and therefore effectiveness of the RES) if the consultations are referred to by the aldermen. There is, however, a dependence on the aldermen: to what extent are they willing to do that?
Priority for RES due to status Municipal Executive (1.4.1)	7	The train does not stop. They will lose influence on the content.	5	Moderate/restrained climate policy can also be an adequate guide in the RES. That does not affect the effectiveness.
Low RES support due to (political) dynamics (1.4.2)	7	In the end, they have to commit to the RES anyway, since the Climate Agreement demands it.	5	The RES can be a relatively apolitical story without any problem.
No support at the administrative level; only commitment at the civil level (1.4.3)	7	In the end, they have to commit to the RES anyway, since the Climate Agreement demands it.	9	Aldermen have an extremely important role in status/positioning of the RES, especially towards the city council and society.
The representatives having an unsupportive attitude in the regional process (2.1)	8	Equal attitude and involvement is a boundary condition.	8	This determines –particularly in the formulation process of the RES– the status to a large extent because representatives (also towards other representatives) can increase (or decrease) this status with their attitude. This affects the effectiveness of the RES.
The involvement of the underlying organisation (2.2.1)	8	If this does not happen, we have a problem.	9	Linking the involved organisations is very relevant in the formulation of the RES and therefore influences the recognisability and acceptance/appreciation of the RES.
The NPRES sets concrete top-down objectives while the strength of the RES lies in bottom-up collaboration (3)	4	It is not our problem as we run through our own process. Only 'the rules of the game should' be clear.	5	In the case of the RES MRDH, this link between the NPRES objectives and the region has not been established; the region determines its own ambition (although, there is coordination in the sense that it is ultimately about impact in CO_2 and PJ's).

Table 9: Concise overview of problems/ aims treated in this study. The colours are taken from Figure 11.

	Problem/aim	Severity	Performed process interventions	Status
1	Aiming for alignment of the status and positioning of the RES	9	•Consultations •Process lead time extension	Solved→ Section 7.2
1.1	Aiming for unambiguous decision-making and implementation in other policy domains of the product RES	8.5	•Consultations (the same as for element 1) •Process lead time extension	Solved→ Section 7.2
1.2	Aiming for loyalty to agreements of product RES	7.5	Analysed but not elaborated on.	Currently relevant→ Section 7.3
1.X	Some municipalities refused the consultations	8.5	•The refusing municipalities had to send an email •The refusing municipalities have received a letter which stated that refusal is their responsibility	Solved→ Section 7.2
1.4.1	Priority for RES due to status Municipal Executive	6	Analysed but no process interventions are performed.	Currently relevant→ Section 7.3
1.4.2	Low RES support due to (political) dynamics	6	•Framing. The selling point of the RES focusses on financial benefits and energy autonomy.	Solved→ Section 7.2
1.4.3	No support at the administrative level; only commitment at the civil level	8	Process interventions that can mitigate the problem are discussed.	Currently relevant→ Section 7.3
2.1	The representatives having an unsupportive attitude in the regional process	8	•Improved quality of the periodically released documents •Personal conversations with representatives with an unsupportive attitude	Solved→ Section 7.2
2.2.1	The involvement of the underlying organisation	8.5	•Twice a year, a presentation is given on how to involve spatial area officers to this file. •Spatial area civil servants had to join the workshops of the spring 2019. •Consultations (the same as for element 1)	Solved→ Section 7.2
3	The NPRES sets concrete top-down objectives while the strength of the RES lies in a steady build-up of bottom-up collaboration	4.5	Treated in this study.	Currently relevant→ Section 7.3.2

Problems/aims that have been adressed by PM

Problems/aim that still require PM

Problem that will be adressed in this thesis

6.3 Conclusion

RQ3. What are the consequences of the different assignment perceptions?

After a workshop with both process mangers, a 'bare influence tree' explaining the consequences of different assignment perceptions of the RES was set up. A bare influence tree can be seen as a 'work breakdown structure'. As the process managers are in charge of committing process interventions, their image is of vital importance to this research. They suggest that there are three primary consequences of stakeholders having different assignment perceptions: the status and positioning of the RES, the attitude of the representative of an organisation in the RES process, and the connection between the requirements of the National Program RES (NPRES) and the local/regional implementation. The NPRES reflects the strategic, tactical, and implementation vision of the Ministry of Internal Affairs and the umbrella organisations. Its underlying driver is the realisation of the Paris Agreement objectives. The first two consequences are related to the perceptions of the regional parties, while the third relates to the assignment perceptions of the NPRES. These three consequences (or 'elements', when related to the tree) have become the fundamental branches of the bare influenced tree that branch out into other consequences. The bare influence tree is neutrally charged, meaning that the elements are not judged on their weight/value.

RQ4. Which of these consequences have had or need process interventions and to what extent do they threaten the process?

To begin, specific cases can be attached to some of the elements of the bare consequence tree. The tree is transformed into the 'dressed influence tree' as it acquires more depth and context. The 'severity ratings' are added, describing the importance of the problem being solved or the aim being pursued. Finally, the essential relationships between the elements are presented to show the mutual dependencies.

What all these cases have in common is that either they have had process interventions (colour blue) or they still need process interventions (red). For the green element, process intervention(s) are devised through a 'solution panel'. This study describes a total of 10 elements, which are divided into 'problems' and 'aims'. An aim (or pursuit) means that there is not necessarily a problem, but it is important for a standard to be achieved, such as an equal status/positioning of the RES, unambiguous decision-making and implementation in other policy areas, and loyalty to the product RES. Process interventions are needed to achieve these aims. Given the influence of multiple elements of the status/positioning RES, equality between the stakeholders regarding this element is crucial. Its severity rating is the highest of all (9) which corroborates its strong influence on other elements. The element 'aiming for unambiguous decision-making and implementation in other policy domains of the product RES' and the involvement of the underlying organisation, which are both rated with an 8.5, have both had multiple process interventions to safeguard their aims. Hence, the practice is validated by the severity ratings.

Based on the ratings, it seems that the problems 'priority for RES due to status Municipal Executive' and 'low RES support due to (political) dynamics' are not severe, as they are rated a 6. The last political risk, which involves municipality X that has no commitment at the administrative level, is rated an 8. Since this latter complex problem lacks information, it is not addressed in this study.

7 Analyses phase C ‘process management applied

This chapter looks at how process management has been applied in the RES formulation process. After extensive preliminary research, the main research question will be answered in this chapter. Section 7.1 looks at two foundations for increasing the process robustness. It describes which choices have been made to ensure that the process runs smoothly. In Section 7.2, which answers RQ5, is described how process management has been applied in the past to address problems. Section 7.3, in which RQ6 is answered, looks at how the problems that still play today can be addressed. The input from Sections 7.2 and 7.3 is directly based on Table 9. Section 7.4 closes the chapter by presenting the conclusion.

7.1 Two foundations for process robustness

In this section, the two foundations that safeguard process robustness (and to some extent control) are discussed. They are intended to provide the process with robustness, controllability, and to prevent problems. These foundations have been agreed upon and implemented upfront. Those are 1) the process goal is 'put in the maximum effort' instead of achieving energy neutrality, and 2) the five workshops that form the backbone of the process. Both are related to the process architecture. Below, the foundations are explained in detail. All information from this section has been obtained through an interview with the process coordinator.

7.1.1 The process goal is 'to put in the maximum effort' instead of achieving energy neutrality

Public support is about the regional parties being happy with the process–not necessarily with the product. It is important that people acknowledge that the steps taken to arrive at the product (which is called ‘the narrative’) have been logical. This narrative is of great importance to all stakeholders, as well as to the national parties. This narrative forms a basis of trust both among the stakeholders and towards the process. If it can be demonstrated that the regional parties are enabled to make meaningful decisions and that the RES is formulated accordingly, the foundation of the process will be robust. Part of this relates to the objective of the RES (Appendix G), which is to put in maximal regional effort rather than the commitment to a fixed goal such as energy neutrality, which brings along peace and space rather than pressure. In the points of departure note, this is expressed as: ‘reaching an almost CO_2 neutral region’. The process coordinator: ‘‘In contrast to RES’es in other regions, the RES MRDH aims to reach what is possible instead of forcing yourself to achieve an objective such as CO_2-neutrality or energy neutrality. This bottom-up character reduces pressure, coercion and the perception that sacrifices have to be made.’’

This goal of ‘putting in the maximum effort’ was decided at the administrative network energy meeting of 3 November 2017. The rationale behind this goal is that the people are going to resist a too strict and –above all– unrealistic RES. By first looking at what the region wants to achieve, the region remains liveable, enhancing general support. Process coordinator: ‘‘This goal removes the sharp idealistic and unrealistic edge of the energy transition.’’

7.1.2 The five workshops

Over the entire RES formulation period, which consists of five phases five workshops (Section 3.2.3) are organised both at the civil- and administrative level (so ten workshops in total). These workshops form the backbone of the process (Appendix H). Each workshop consists of a main theme in which the regional parties can make their voices heard. Although the workshop themes are equal for the civil servants and the aldermen, the questions for civil servants focus collecting information about feasibility and implementation while the questions for the aldermen are reflective (validation) and strategic by nature. In the beginning, all possibilities are kept open, and workshop after workshop the amount of possibilities is decreasing, whereby the final deal –the product RES– is gradually formed. During a workshop the participants are asked questions such as: 'what do you mean by this?' and 'how would you define words such as affordable and reliable?' During the workshop, a common denominator presents itself, or a core, on which everyone more or less agrees. This core is underlined and serves as input for the next workshop. To prevent this study from going too far into the contents of the product RES, only the titles of the workshops are given below in Table 10.

Table 10: Overview of the workshop titles in the RES MRDH formulation process.

	Workshop Title
Phase 1	To mark the point of departure
Phase 2	Development of the perspectives
Phase 3	Elaboration of the perspectives
Phase 4	Development design RES
Phase 5	Administrative ambition determination

Each time the information of a workshop has been processed, a moment of reflection takes place. Questions are asked such as:

- Is this result satisfactory?
- Does this result provide sufficient input for the next steps?
- Is the chosen path in line with the points of departure note?

The boundary conditions for the workshops are openness, transparency and the attendance of a wide range of parties with a considerable amount of authority. Both of these conditions correspond to a core value of process management (Section 2.2.2.1). Before each workshop, the organisation looks at which parties are suitable to invite with regard to the theme of the workshop. To maintain an overview, umbrella organisations are invited instead of individual organisations.

7.1.2.1 Reflection on process management theory

7.1.2.1.1 From variety to selection

With respect to the five workshops (Section 7.1.2), one can clearly acknowledge the phenomenon 'from variety to selection'. This type of process architecture stimulates that the ambiguous objectives –an affordable, reliable, clean and safe energy supply– are made SMART (specific, measurable, acceptable, realistic, time-related) later on in the process, and that parallel to this, substantive variety gradually consolidates into the final package deal–the product RES.

Why is 'from variety to selection' so important (for this process)?

- One wants to lure a large number of parties to the process. This is done by keeping all substantive options open at the beginning (variety). Parties enter into a process if they expect their interests to be satisfied. By immediately reducing the solution space, the process loses substantive options and the parties who support these options. Core value: openness (all relevant parties are involved in the decision-making process).
- Commitment. For the RES process, it was decided not to allow to jump back to variety when specific decisions had been made. If the parties agreed on a substantive issue, there was no turning back. This promotes continuous alertness and commitment from the parties.
- The process managers want the parties committed to the process for as long as possible. The longer the parties are committed, the better the underlying networks and connections become organised, and the harder/more costly it is to quit at the end of the process. Besides, 'freezing' occurs; parties renounce their (solid) viewpoints and frameworks, which is a breeding ground for decision-making later in the process. In the RES process, the aforementioned phenomena occurred and generated widespread support for the process and the interim results, even though some parties disagreed. These observations are based on the participative observation. Core values: protection of core values (parties commit to the process rather than to the result).
- Substantive options that are not obvious now (think of expensive high-tech energy storage and -generation systems) may become the best option in the future. Nobody knows what the future looks like–certainly not in the field of energy management. Therefore, substantive options that may now be under-evaluated should also be carefully considered.
- The quality of decision-making is improving. If all options are kept open in the beginning of the process, the final solution has overcome multiple solutions. Thus, the chosen option will be more authoritative (De Bruijn et al., 2010).

7.1.2.1.2 From process to content

To make the final substantive objectives of the RES SMART is challenging in terms of both concreteness and timing. In terms of concreteness, the question is: 'can we already determine an (intermediate) ambition for the year 2030 based on the desired worldview of 2050?' 'Is this picture reasonable and acceptable for 2030?' Process coordinator: ''Do we dare to elaborate to this level of detail, or do we stick to guidelines?'' The point is that, once these final objectives are set, they must be achievable. When it comes to timing, the question arises when to determine the ambition of 2030; is that now –as the end of the RES process is approaching– or is this question forwarded to the package deal RES?

From process management theory, one can recognise a force field in these dilemmas. The main pro-argument for arriving at accurate objectives in this process is that ultimately, the whole process was centred around this (and how to reach these objectives). The process' content is partially formed by the final tangible objectives. 'A process without content is empty.' This statement is backed up by the analytical framework. The core value 'content' received an 8.5 on average, with a substantiation such as: 'this is where it is all about'. Another pro-argument for accurately formulating the final goals is that the process managers do not want to disappoint the parties; they have been waiting long for these final results. If parties do not get what they are promised, then the core value trust (7.5) is affected.

The main-counter argument is that it can be a 'recipe for failure' if concrete objectives are set that are not 100% sure to be achievable. A lot is at stake. Both the participating parties and the outside this process associate a 'successful energy transition' with the achievement of these objectives. If these objectives are not met, the public frame of 'the energy transition has failed' can come to life. Of course, nobody can tell now whether these goals are being achieved. However, also in this process exist parties that have a sense of whether the objectives are achievable or not. It this is handled messy, it betrays trust (this core value is rated 7.5) in the process managers and the entire process.

7.2 How has process management been applied to address problems from 1 February 2018 until 1 April 2019?

This section answers RQ5; it describes how the problems that emerged during this period were addressed through process management. As can be seen in Table 9, problems 1, 1.1, 1.X, 1.4.2, 2.1 and 2.2.1, which are coloured blue, are discussed in this section. The type and amount of context given per problem are dosed such that the reader can understand the process interventions. In some cases, the 'solution' is described, which represents a solution direction or the desired outcome. The process interventions are employed to achieve this solution.

7.2.1 Aiming for alignment of the status and positioning of the RES (1)

7.2.1.1 Context

The developments of the Climate Agreement have led to an inequality in the status and positioning of the RES process and product. Due to the interim publications of the Climate Agreement (Section 5.4.1), the RES is increasingly perceived as an implementation tool for achieving the national energy transition objectives, which demands more of the RES process than before. This disturbance puts pressure on the formulation process in the MRDH. It brings confusion about how mandatory the RES is. The RES MRDH gives no obligations to anyone while the nationwide RES –which is formulated in the Climate Agreement– does. As a result, some parties that will only really start working once the final version of the nationwide RES assignment, which is the 'official' RES from their point of view, will be released. However, if the RES MRDH is finished, the chance is minimal that another RES process will be walked through. It has been made clear in several letters to the municipalities that 'this is the only process'. Therefore, it is possible that the municipalities that no longer commit to this RES process will soon be confronted with a RES that is complete for only 70-80%, which is considered to be a problem by the process coordinator.

7.2.1.2 Solution

The solution lies in levelling the status and positioning of the RES among all municipalities, which can be done by adjusting the frame around the RES. When the status and positioning is more or less equal, the municipalities will naturally conform to the original plan. Although the frame may be placed slightly differently depending on the character of the municipality, the status/weight of the RES should be as equal as possible.

7.2.1.3 Performed process intervention(s)

Consultations. The process intervention consisted of consultations with all municipalities, which comes down to a conversation with the process coordinator and the process assistant from the RES side, and the relevant employees of the municipalities such as the councillor, alderman and civil servants of relevant policy domains on the other side. In urgent cases, the subject went to the council committee or the Municipal Executive, in which the process coordinator performed a presentation and guided a discussion afterwards. After such a consultation, the RES was able to seep through the organisation involving the relevant employees. These employees could speak their voice on how their duties intersect with the RES and what they require from the RES to successfully perform their task. At least, they should have been able to comment on the content of the RES.

Process lead time extension. To accommodate these consultations in the process, the lead time has been extended. Initially, the process would finish at the end of 2018. Now, it will finish in the summer of 2019. These consultations and its municipal processing took place in the last three phases. Also, this lead time extension provided the municipalities more time to comment on the content. The pace of the process was so high that the municipalities no longer could make appropriate internal choices regarding the RES. Also, the representatives came to consult unprepared.

7.2.1.4 Reflection on process management theory

With regard to the process lead time intervention, there were three possible interventions:

- Option 1: turn it back: request the representatives –and thereby their municipalities– to work harder. An argument for this option is: 'you want this product. If you want a well-functioning end product, you have to change your priorities or work harder.'
- Option 2: the process coordinator distances himself from the process. An argument for this option is: 'you gave me this assignment, and you do not deliver your input in time. I cannot deliver your desired product without your input within the scope of the process.'
- Option 3: process lead time extension. Bend with the process. The bottlenecks could be remedied by extending the process.

Option 2 was chosen for two reasons:

1. The process coordinator is the disinterested facilitator (core value; an open process, rated a 9). The commissioning party is the client that asked for a substantiated roadmap in the energy transition for this region. Therefore, the process coordinator treats the commissioning party as a customer, which means that he has to act upon the (change of) demand. If the commissioning party (and the RES owners; municipalities, water boards and the province of South-Holland) are prepared to provide more time and money for the change of course, the process coordinator must oblige.

   The process allowed for time extension. Firstly, the municipalities were prepared to pay the extra money and to comply with allow for the extra time. Secondly, this delay did not conflict with the points of departure note –a document that can be perceived as the shared core values (ranked 9.5) of the RES owners. De Bruijn et al. (2010) describe a 'core value' as 'a value that is crucial to a party's existence'. Therefore, the points of departure note guarantees the safety of all owners. Since this process lead time extension did not conflict with these core values, 'The process must do the work' creed was applied. This creed increases process success (Ibid.) Thirdly, the parties of the consortium (CE Delft and Generation Energy) that performed the substantive calculations of the RES process were asked to write a process vision instead of a project vision before the RES process started. As a result, bending with the process did not conflict their strategy.

2. The provision of extra time for the representatives and their organisation to process the documents of the RES ensured more commitment to the content. After the provision of extra time, the argument 'no time to read it' would not hold. In this way, they were given the opportunity to get better acquainted with the RES content. Core value: content, rated an 8.5.

7.2.2 Aiming for unambiguous decision-making and implementation in other policy domains of the product RES (1.1)

7.2.2.1 Context

The process coordinator: ‘‘To seize the opportunities, we must arrive at unambiguous decision-making and implementation in other policy domains.’’ Why should decision-making and implementation be unambiguous? The RES is a shared ambition in which rules and preconditions are determined regionally while leaving enough freedom to give substance to the assignment at a local level. The RES will not dictate on the local interpretation. For example, the underground cabling will play an essential role for Rotterdam, while for Westvoorne, the recreational area will be a guiding principle for its LES. To succeed on the supra-municipal scale, the ‘connection points’ between municipalities must be equal, so that the municipalities ‘speak the same language’, which is why unambiguity is so important. This unambiguity has a significant impact on the affordability of the regional energy transition, which is a core value of the assignment (points of departure note, Appendix G). The market parties, a stakeholder group that is considered essential in the transition, have an area of distribution that exceeds the municipal boundaries. Differences in the decision-making and implementation of the product RES are reflected in the legal and financial conditions of the energy infrastructure per municipality. To ensure efficiency and affordability, the supra-municipal legal and financial conditions must be uniform among the region.

7.2.2.2 Solution

The city councils must be adequately included since they will ultimately perform the decision-making and approve the implementation of the RES. Hence, the councillors must be able to check and speak their minds on the interim results of the RES.

7.2.2.3 Performed process intervention(s)

Consultations. During the consultations for aim 1, this topic was also discussed. Although improving element 1 results naturally (Figure 11) in an improved element 1.1, there was talked about unambiguous decision-making and how the RES will be legally fixed in several policy domains during these consultations.

Process lead time extension. See the process intervention for aim 1.

7.2.2.4 Reflection on process management theory

See Section 7.2.1.4: the performed process interventions are the same as for this problem, so is the reflection on theory.

7.2.3 Some municipalities refused the consultations (1.X)

7.2.3.1 Context
A few municipalities have rejected these consultations for various reasons, which takes away certainty and control, as the process managers have to trust upon good communication between the municipal representative and the underlying organisation (2.2.1).

7.2.3.2 Influence on other elements
This problem relates to all political risks (1.4). There are usually political issues going on, resulting in less support or priority for the RES, which make these municipalities less receptive to consultations with the process managers. Both problem 1.X and its influences are left out of Figure 11.

7.2.3.3 Performed process intervention(s)
This problem was presented to the steering committee. After consultation with the commissioning party, the steering committee replied that:
‘‘We will continue with the process; there will be no waiting. Nevertheless, it must be made clear which parties have accepted this consultation and which parties have not. The ‘refusing municipalities’ will receive a letter in which it is clearly stated that these municipalities are at serious risk later in the process, as in particular, the councillors did not have the chance give their opinion on the interim results of the product RES. The process management will not be held accountable for any problem later in the process resulting from the refusal of this consultation.’’ To initiate this formal procedure, the process coordinator wanted the refusing municipalities to write him an e-mail clearly stating that they refuse the consultation.

7.2.4 Low RES support due to (political) dynamics (1.4.2)

7.2.4.1 Context
There may be several reasons why the RES is not a popular file in a municipality. Although often the dominant political movement is the cause, there are also other dynamics which influence the popularity of the RES. Generally speaking, it is about providing room for adapting the selling point of the RES to the current political reality.

As an example, in the municipality of Westland (Section 4.1.2), the political parties ‘Forum voor Democratie’ (Forum for Democracy) and the ‘Partij voor de Vrijheid’ (Party for Freedom) received 31% of the votes in the provincial council elections 2019. Both parties consider addressing global warming unimportant (FvD, 2019; PVV, 2019). In fact, the party is opposed to the Climate Agreement. Some local parties that were elected during the municipal elections in March 2018 feel connected to the anti-climate position of Forum. As a result, the support of the Climate Agreement and its resulting agreements have decreased significantly. This is problematic since the municipality of Westland has an critical role to play in the RES process in terms of energy consumption and the heating network.

7.2.4.2 Influence on other elements
What happened in this case is that a different frame of the RES (Different Perceptions of RES Assignment) is being considered, so that the RES still maintains its public support and status/positioning (1)

7.2.4.3 Solution
The solution is to frame the narrative/selling point of the RES for residents and businesses attractively. This narrative depends on the (political) dynamics that play at that particular moment. In addition, expectations play a role in creating the right frames. A part of these expectations is recorded in the

interviews of RQ2. The process coordinator: ‘‘Although I want the status, positioning and commitment of the RES to be equal among the stakeholders, the RES may be sold differently in every municipality. Every municipality must be approached differently. If the public support is low, it may mean that we have presented the narrative too one-sided. Currently, it is possible that the focus is too much on infrastructure and technology. We need a compelling narrative for every domain.’’

7.2.4.4 Performed process intervention(s)

In the municipality of Westland the RES narrative/frame changed its focus on the financial benefits of the RES and the sustainability of the greenhouse horticulture. The RES was introduced through low energy bills for companies and residents, profitable business cases, and an independent generation of heat and electricity (which is attractive to market gardeners (‘tuinders’)).

7.2.4.5. Reflection on process management theory

This process intervention (the change of frame) could easily be applied because preventive measures had been taken at the start of the process. Therefore, this section will not be devoted to the process intervention itself, but to one of these measures.

7.2.4.5.1 Four ambiguous keywords that not only appeal to the climate activist

Besides the four ambiguous terms –affordable, reliable, clean, and safe energy supply– can be interpreted for every party in the way they want (ambiguity, Section 5.3.2), these terms also satisfy the non-climate activist. In fact, the word ‘clean’ is at place three (after reliable) of the sequence, thereby reducing its importance. Even if a parties’ point of view is that ‘climate change does not exist’ there are still gains to be made from this process. This was done for two reasons. First, the process values are appealing to the average Dutch person. Given that the Netherlands political system is a representational democracy, the parties are more likely to participate in this process, if it enjoys grassroots support. By appearing pragmatic– the process is inviting for all types of parties. Second, these broad terms offer space for changes in local political dynamics.

It was known in advance that the municipality of Westland has many populist supporters. Both parties consider addressing climate change as unimportant (FvD, 2019; PVV, 2019). When the RES is sold in this municipality with rigorous slogans such as ‘‘We have to get rid of natural gas’’ (‘‘We moeten van het gas af’’), they might be reluctant, thereby putting popular support for the RES at risk. Thinking of ‘how to sell the RES’ is a continuous activity that responds to local (political) dynamics. Everywhere there are different political realities. Therefore, a robust regional process must provide room for local interpretation. That is why it is essential that the selling point of the RES is not one-sided.

The core values that can be related to the above-mentioned argumentation are initially hard to determine. One can relate transparency (which is part of openness, rated a 9.5): ‘whether the parties can see if the process offers them sufficient opportunities to promote/address their interests’ (De Bruijn et al., 2010). The four ambiguous keywords –that not only appeal to the climate activist– and the rest of the points of departure note (Section 5.3) would provide this transparency. However, –strictly speaking– transparency addresses the possibility ‘whether parties can see if their interests are/will be met’, not ‘if parties do see their interests met’. Therefore, a better core value here would be ‘public support’. Unfortunately, this core value does not exist in this study. To illustrate the aforementioned; if there was only one ambiguous keyword presented in the RES’s points of departure note, ‘sustainability’ for example, one could call this transparent (when the process agreements are included of course), but the public support would probably be lower.

7.2.5 The representatives having an unsupportive attitude in the regional process (2.1)

7.2.5.1 Context

The municipal elections took place on 21-3-2018. The councillors of the period before the elections have witnessed the run-up to the RES formulation (Section 4.3). Experiencing this run-up process provides emotional attachment to the RES and an understanding of the context and content. Since the majority of councillors and aldermen had been replaced, the RES process had to regain its support among the new aldermen. Therefore, on 20-7-2018 an extra catch-up session was held. During this session, it turned out that they were not up to date with the content because they missed a part of the context, and besides, they could not catch up with the speed of the process. It turned out that the attitudes of the aldermen towards the RES were very different, which was caused by an incomplete or incorrect briefing from the previous alderman or civil servant. Some of the representatives perceived the RES process as if they were gradually funnelled into a trap. This meeting has magnified the differences. The positive thing was that the pain points came to the surface, enabling the process managers to know where to put the focus on.

7.2.5.2 Solution

The attitudes towards the RES had to be adjusted. According to the process coordinator, adjusting the attitudes of the representatives is a continuous process.

7.2.5.3 The performed process intervention(s)

First, the process coordinator had bilateral meetings with the representatives with an unsupportive or non-conforming attitude in order to explore the root cause of their attitude towards the RES process. ‘‘Why does this representative look frustrated?’’ Also, it was explored weather the new representatives had new interests, views or core values. The process coordinator entered the conversation with these municipalities at the civil level, and the RES chairman the administrative level. At the end of the meetings –after the exploration phase finished– the process coordinator and the RES chairman tried to align the frames of the representatives to bring about an equal view of the RES. Important to note is that –if needed– the process coordinator changed the parties’ feelings of being slowly funnelled into a trap (‘a camel nose’), to going through the process of full understanding. Note that this was a different type of conversation than the municipal consultations.

Second, the information documents that are released periodically had to be of higher quality and needed more context. The emphasis of this expansion was on making the run-up to the RES clear, so that the readers could understand the underlying ‘why’ of this process. This turned out to be a laborious task, given the high speed of the process.

Third, an additional meeting was held with all aldermen. This meeting was planned to take place after the bilateral meetings to allow the process coordinator to better understand the frames of the aldermen. The meeting highlighted the steps that were taken before the municipal elections until the present moment. The steps were not taken again, but it was explained what the process is for and what is happening at the national level. This meeting ended with an event that gave opportunity for informal interaction. In this way they could better assess each other's roles in the process.

7.2.5.4 Reflection on process management theory

7.2.5.4.1 An actor scan is a continuous activity

In this case, the process coordinator combined the necessary frame adjustment with a second actor scan. During the additional meeting (process intervention three), the process coordinator asked about the fears of the representatives and whether specific interests or perceptions had changed in the meantime–thereby looking at possibilities for substantive coupling. Since many changes had occurred at the national level, opportunities and threats were re-identified. During the meeting, he addressed these issues. Therefore, the statement that ‘an actor scan is a continuous activity’ by De Bruijn et al. (2010) is confirmed by looking at this process.

7.2.5.4.2 Protection of the parties' core values

When the process coordinator reassured the aldermen –by showing the space and flexibility in the process– that the process was not a trap, and that their core values (rated 9.5) are protected at all times, the aldermen became a lot more relaxed. Their attitude in the regional process changed positively.

7.2.6 The involvement of the underlying organisation (2.2.1)

7.2.6.1 Context

Often it happens that a representative does not adequately inform its underlying organisation (consisting of the city council and other policy domains) about the RES. This also works the other way round; the underlying organisation is not able to articulate its interests/desires to the representative so that he cannot promote the interests in the regional process. In both cases, the underlying organisation is not adequately engaged in the RES formulation process. The RES process can only succeed if different policy domains (such as the built environment, recreational area, spatial environment, energy and practical disciplines such as underground cabling) within an organisation collaborate (see interviews with VNG, IPO, UvW and BZK, Section 5.6). An additional advantage of early collaboration is that the solution space can be reduced at an early stage, which saves time later in the process. Besides, it is vital for public support to say that everyone had the opportunity to think along.

7.2.6.2 Influence on other elements

The status and positioning (1) is something that is not formally recorded; it lives in people's minds. The better an entire organisation is involved in a file, the more meaningful this file becomes to the employees. Therefore, the internal communication –which is safeguarded by the consultations– is fundamental to the success of the RES.

7.2.6.3 Performed process intervention(s)

Twice a year, via the administrative spatial area network of the MRDH, a presentation was given by the RES chairman in which he appeals to the aldermen to get involved with the spatial area civil servants in their municipality to engage them to this file.

Also, the process managers invited (with urgency) the spatial area civil servants to attend the workshops during phase four and five in the spring of 2019.

Consultations. During the consultations of aiming for equality in the status/positioning RES, this problem was also raised.

7.2.6.4 Reflection on process management theory

7.2.6.4.1 Pluriformity

Pluriformity is the extent to which the representative does not speak for his entire party (De Bruijn et al., 2010). Since the civil servants from the municipalities' spatial planning domain were involved in the RES process in later stages, the pluriformity of the energy officer is limited. This double connection with a municipality strengthens/stabilises the image of a municipality. Additionally, it functions as a check on the input of the energy civil servant in the regional RES process.

7.2.6.4.2 The limits of process management: resources. 'Where process management ends and trust begins'

At the start of the process, it was agreed that the regional process would not involve local intervention. Process coordinator: ''If I am invited by a representative of the municipality of Brielle to do a presentation, I will, but I would not do that on my own initiative.'' In fact, the representative of the municipality is fully responsible for internal communication and involving the underlying organisation. This is recorded in the distribution of responsibilities at the start of the process. Also,

many energy civil servants told the process coordinator that they would set up a communication channel to the spatial area civil servant. The question is: can the process coordinator rely on this?

A large part of the process success is based on this internal communication/involvement. One can even call it a success factor with regard to the final package deal RES. It will be a significant problem if it turns out that an organisation has not/hardly been involved and therefore does not support the process outcome. A lot is at stake. Therefore, relying on the energy civil servants is a process risk.

The critical question is: what is the manageable extent of the sphere of influence? On the one hand, the bigger the better, because then one has the most control over the outcome. However, resources such as time and money are limited. Therefore, it is essential to mark where the sphere of influence/scope of the process ends and to properly guard this boundary with measures to clarify areas of responsibility. It was elected to indicate the boundaries of this RES process with a proper division of roles. However, no penalties are given to people who do not fulfil their responsibilities. To conclude, the sphere of influence in this process is limited by resources such as time and money. At the boundaries of the process scope, trust –in the sense that parties fulfil their responsibilities and have their own affairs in order and– begins.

7.3 What are the currently relevant problems that need process management?

This section answers RQ6; it describes the problems/aims present today for which no solution has yet been found. As can be seen in Table 9, problems/aims 1.2, 1.4.1 and 1.4.3 will be described in Section 7.3.1. For problem 3, an attempt is made to find a solution, which is done in Section 7.3.2.

7.3.1 The currently relevant problems

7.3.1.1 Aiming for loyalty to the agreements of product RES (1.2)

7.3.1.1.1 Context

At a given moment the product RES will be finished. What can then happen in the meantime (the process coordinator considers this very likely because this is already happening), is that parties will the cut corners of the product; they are going to put things to their favour and will give their interpretation to agreements. What if municipality X, for which it has been agreed that it will get 70% of its heat energy from the port of Rotterdam, will in reality only get 50% from the port? If everyone does this on a small scale, it means that the final ambition will not be achieved. Besides, it results in divestments, inefficiency, high costs, poor use of the infrastructure, an unnecessary burden on the environment and so on. The little bits can have a major impact at the system level.

7.3.1.1.2 Solution

People are allowed to exhibit strategic behaviour, as long as it benefits the RES. According to the process coordinator: ‘‘We must ensure that we incorporate incentives in the process so that people start to exhibit strategic behaviour that contributes positively to the results of the RES.’’ The question is how?

This currently relevant problem will not be addressed since it has turned out to be a resultant of element 1 and 3. By solving/satisfying these, this aim is automatically addressed.

7.3.1.2 Low municipal priority for the RES (1.4.1)

7.3.1.2.1 Context

If municipalities have a low priority concerning the RES (which is related to progressive climate policy), it usually has an underlying political cause. This problem relates to the entire Municipal Executive having internal problems, or even being outgoing (demissionair) resulting in performing only highly necessary tasks.

Although the problem can occur to other municipalities, the municipality X is used to illustrate a real case; its real name is left out of the study. The Municipal Executive of municipality X fell due to great controversy in the climate domain. The executive is currently outgoing, meaning that it deals just with the critical decisions. Therefore, it does not stick to its initial plans –as stated in the coalition agreement– any longer. In addition, the municipality is difficult to reach and it has refused the consultation (problem 1.X). For the process managers, it is hard to control this situation.

7.3.1.2.2 Influence on other elements

What happens in this process is that when the priority for the RES within a municipality decreases, the attitude of the representative (2) becomes les (pro)active or he even quits, and the organisation is no longer actively involved in the process (2.2.1). The attitude of the municipality and its representative change into a 'wait and see approach' with regard to the RES process.

7.3.1.2.3 The limits of process management: 'When authority relations are affected'

The process coordinator takes care not to undertake process intervention that might negatively affect authority relations. Of course, he prefers, for example, the municipality of Rijswijk to be actively involved during the entire process; this will make the RES process and product to be of higher quality, and the public support of the municipality of Rijswijk for the product will be higher. However, the moment the process coordinator interferes with the intermunicipal process, authority relations get confused. The municipality of Rijswijk is the client of the process coordinator: hierarchically, the municipality outranks him. The process coordinator asserts 'to know his place' and therefore labels this situation as 'none of his business'.

Nevertheless, there exist ways within the reach of process management to circumvent the burden of this problem. These means were not employed because their effectiveness was estimated to be low. To conclude; based on this process, the sphere of influence of the process stops at authority relationships. Thus, problems that stress the limits of authority relations must be accepted in the context of the RES.

7.3.1.3 No support at the administrative level; only commitment at the administrative level (1.4.3)

7.3.1.3.1 Context

It is possible that a municipality has not approved the RES at administrative level while there is a commitment on the civil level. This situation only applies to municipality Y (the real name is left out of this study). Municipality Y has civil servants actively committed to the RES formulation process while the letter of intent (Figure 5) has never been signed. As municipality Y is not involved at the administrative level, the alderman and councillors are not able to give their opinion on the interim product, neither do they exert any influence on the final outcome. When the product RES is ready, there is a chance that municipality Y will not approve it. This will have negative consequences. As it is decided that 'this is the only RES process', there will not be a follow-up process after the publishing of the Climate Agreement.

7.3.1.3.2 Influence on other elements

In this case, the underlying organisation at the administrative level was not involved (2.2.1) in the RES formulation, which has led to the lack of an alderman as representative, which is an extreme case of (2).

7.3.1.3.3 The limits of process management: 'The law'

There is no law that requires aldermen to sign for agreements, processes or projects. Therefore, it is the individual alderman's choice to commit in writing to a process or not. In the history of the RES it has occurred that an alderman did not sign the RES letter of intent. This problem lies beyond the scope of the process. This problem exceeds the control of process management.

Nevertheless, the process managers can perform interventions that exist within their power to limit the potential damage caused by this unsolvable issue. For example, it can cause a domino effect: if one municipality does not commit in writing, others may follow suit and the process or the commitment to the process becomes feeble. However, there are steps the process manager can take to prevent other domino's from falling. The desired situation is that the parties that start doubting are pulled in the right direction. To pursue this, two process interventions were carried out. First, the process coordinator chose to create a particular atmosphere that emphasised the intrinsic motivation of the parties to participate in this process. The process started to use slogans such as ''We believe in this'', ''We want this because we find this process of great value'' frequently. Second, the RES chairman wrote a letter to the municipalities with the same message and he emphasized how this collaboration was established and how the outcomes of this process could partly remove the uncertainty in the energy transition.

To conclude, the control of process management is limited by law. In such cases, the core of the problem cannot be tackled. The process manager can perform process interventions that deal with the matter nonetheless. To retain support among the stakeholders (and thereby its credibility), the process manager must employ –and explicitly show to this the stakeholders– these means.

7.3.2 The problem addressed by the solution panel

7.3.2.1 The NPRES sets concrete top-down objectives while the strength of the RES lies in a steady build-up of bottom-up collaboration (3)

7.3.2.1.1 Context

The NPRES wants to see concrete/numerical results regarding renewable energy implementation, such as the number of kWh to be installed or the greenhouse gas emission reduction expressed in tons of CO_2 per year et cetera. This is logical, as the NPRES must adhere to the objectives of the Paris Agreement (Section 1.1.1). Therefore, it wants to control the regional energy transformation processes by rolling out the same blueprint/template nationwide and monitor the overall progress. In this way, the NPRES will not be faced with unpleasant surprises. This vision is reflected in the climate agreement (Section 5.2), and besides, it is often confirmed by the interviews (Appendix A), the preliminary workshop for the central challenge of this thesis (Appendix C) and the participatory observation.

This top-down 'convulsive vision' does not match the reality of the decentralised authorities, in which the product RES will come down. The RES is a new type of assignment in which the decentralised authorities have to enter the discussion in order to resolve this assignment collaboratively, which is because the renewable energy technologies must ultimately be integrated into the spatial environment, in which several policy domains come together. According to the interviews from Section 5.6 as well as Appendix A, the NPRES does not take this required bottom-up approach into account well enough, ''Which is caused by a disconnect of the strategic and implementation vision of the national government.''–process coordinator.

7.3.2.1.2 Solution(s) that have already been acknowledged somehow for other problems/aims

PhD candidate: ''We must first think of the feasibility of the objectives. We think too much in figures and concrete outputs while we forget the path.'' Process coordinator: ''In the RES MRDH, we started with the determination of the desired outcome, which is a view on how we want the world to look like in the future. The RES MRDH is a process which steadily takes steps towards that worldview. The contribution to the climate objectives is a result of this process, not the other way round. The RES MRDH is not designed to conform to the national objectives.'' (Section 7.1.1).

Process coordinator: ''We see that the mindset of the spatial area civil servants is gradually changing. Rather than thinking of 'where to get this kwh from', they think of assessment frameworks/value frameworks for spatial implementation. Also, process thinking is becoming more popular; the civil servants think of how to implement the windmills and solar panels in the Environmental Act.''

7.3.2.1.3 Process interventions that have already been performed

Independent consultant: ''The city councils should not be involved too early, and certainly not too late, as they may feel uninvolved resulting in rebellion. You have to involve the city councils in a relaxed manner; it takes time to connect them to the content.''

Process coordinator: ''Initially, the city councils had to be informed by the representatives without intervention of the process managers. Later, we discovered the representatives inform their city councils to their own standards, which is a risk. Therefore, we guaranteed a certain amount of involvement by doing the consultations.''

7.3.2.1.4 Solution directions still to be pursued

Independent consultant: ''Regarding structures, we need a different type of administrative collaboration; this reform need to be pursued, thereby maintaining decision-making into the regular democratic processes. Energy is an apolitical subject. The roadmaps for the energy transition should only be based on science and pragmatism. In addition, thinking in four-year cycles is devastating when

it comes to long-term visions such as energy. Besides, Energy must become a spatial integration factor, just like housing, recreation et cetera.''

Independent consultant: ''To change the entire collaboration mindset, we must see what is possible from bottom-up, it takes time, requires a cultural change.''

Independent consultant: ''Process management is not solely about the content; it is about the facilitation of the process. Therefore, process management should be a tool to create a safe environment, in which that shared ownership of this assignment must be built together gradually. It should not be built upon accountability, results, milestones, but on entering the conversation. There is now product RES 1.0, which will be revised every phase (every two years). The role of process management is to ensure that this evolution is guaranteed through the connection from below, not top-down.''

7.3.2.1.5 The recommended process interventions

Independent consultant: ''I would opt for new collaboration infrastructure consisting of frequent work groups in which the right people come together.''

7.4 Conclusion

RQ5. How has process management been applied to prevent or address problems within the scope of the study?

To begin, two foundations for process robustness are applied to increase the chances of success. They provide solidity, controllability, and problem prevention. First, the process goal is 'to put in the maximum effort', rather than achieving energy neutrality. This bottom-up character reduces pressure, coercion, and the possibility that sacrifices have to be made. The second is the five workshops that form the backbone of the process. For each workshop, the number of possibilities decreases and the product RES is gradually formed. Furthermore, there have been six problems or aims which have had process interventions.

In the second foundation, one can acknowledge the principle 'from variety to selection'. This principle was applied for many reasons. First, the process has to be attractive to a large number of parties. Second, to not allow to jump back on earlier substantive decisions enhances commitment. Third, parties can be committed to the process for as long as possible, thereby enhancing social learning and cognitive learning. Fourth, substantive options that are not feasible now may become the best solution in the future. Finally, the quality of decision-making improves.

Aiming for alignment of the status and positioning of the RES
The new requirements from the interim releases of the Climate Agreement disturb the original status and positioning of the RES, which creates polarity between the RES participants. Equality in the status and positioning of the RES can be pursued by placing slightly differently frames around the assignment, depending on the character of the municipality. The performed process interventions have been municipal consultations, in which the process coordinator has performed a presentation and guided a discussion afterwards involving the councillor, alderman, and civil servants of the relevant policy domains, ensuring that the relevant individuals of each municipality are connected to the process. The process lead time has also been extended to perform these consultations and to provide time to let the municipalities comment on the content. This intervention has been chosen for in particular for a few reasons. First, the process coordinator is the disinterested facilitator. Second, the process allowed for lead time extension. Third, this intervention did not clash with the points of departure note and the initial plans of the consortium.

Aiming for unambiguous decision-making and implementation in other policy domains of the product RES
To ensure the RES is an impactful document, the status and positioning of the document must be equal for the parties. The unambiguity of decision-making and implementation is significant for the affordability of the regional energy transition. To realise unambiguous decision-making and implementation in other policy domains, the councillors must be able to check and speak their minds on the interim results of the RES. This has also been safeguarded by the municipal consultations and process lead time extension.

Municipalities refusing the consultations
Some municipalities rejected these consultations for various reasons, taking away certainty and control as the process managers have to rely upon good communication between the municipal representative and the underlying organisation. The 'refusing municipalities' received a letter in which it was clearly stated that they are at serious risk later in the process. It was also mentioned that the process management would not be held accountable for any problems resulting from the refusal of this consultation.

Low RES support due to (political) dynamics
In the municipality of Westland, the parties 'Forum voor Democratie' (Forum for Democracy) and the 'Partij voor de vrijheid' (Party for Freedom) received 31% of the vote in the provincial council elections. Forum voor Democracy regards the climate problem as unimportant and opposes the Climate Agreement. Therefore, in the municipality of Westland, the frame was moved to the financial benefits of the RES and the sustainability of the greenhouse horticulture to sell the RES. There was room for this process intervention as the points of departure note is motivated pragmatically and not ideologically. This allows for a local narrative of the RES process to be used, thereby adapting to the political dynamics.

Unsupportive attitudes among representatives to the regional process
The municipal elections took place on 21 March 2018. Since the majority of councillors and alderman had been replaced, the RES process had to regain support. Therefore, on 20 July 2018, an extra 'catch-up session' was held with the alderman. It transpired that the attitudes of the aldermen to the RES were very different. To adjust these attitudes, the informative documents which are released periodically were provided with more context. Second, the process coordinator and the RES chairman held conversations with those representatives who had unsupportive attitudes to adjust their frames. During those conversations, the parties were told that their core values are being respected at all times. Third, an additional meeting was held after the bilateral meetings. The meeting highlighted the steps that were taken before the municipal elections until the present moment. To better assess each other's roles in the process, the meeting ended with an event that gave opportunity for informal interaction.

The involvement of the underlying organisation
It often happens that a representative does not adequately inform their underlying organisation (the city council and other policy domains) about the RES. The reverse also occurs, when the underlying organisation is not able to articulate its interests/desires to the representative, such that they cannot promote their interests in the regional process. To prevent these problems, consultations were held and the spatial area civil servants attended the process workshops. The pluriformity of the energy civil servants decreased since the process management now has dual connection to the municipalities.

RQ6. What are the currently relevant problems, and how can they be addressed utilising process management?

Aiming for loyalty to the agreements of product RES
In the July 2019, the product RES will be finished. The parties can then cut the corners of the product adjusting it to their needs, and give their interpretation of the agreements. This affects the whole because it is the collaboration that makes the RES so powerful.

Low municipal priority for the RES
The Municipal Executive of municipality Y resigned due to controversy in the climate domain. The executive is currently outgoing (demissionair), meaning that it deals only with critical decisions. As a result, it does not uphold the initial plans described in the coalition agreement. In addition, the municipality is difficult to reach and it has refused the consultation. The process management cannot resolve this problem since authority relations will be affected. Problems that stress the limits of authority relations must be accepted in the context of the RES.

No support at the administrative level; only commitment at the administrative level
Municipality X has civil servants actively committed to the RES formulation process, while a letter of intent has never been signed. As municipality X is not involved at the administrative level, the alderman and councillors are unable to give their opinion on the interim product, nor do they exert any influence on the final outcome. When the product RES is ready, there is a change that the council of municipality X will not give its approval. It is the individual alderman's choice to commit in writing to a process or not. Therefore, the control of process management is limited by law. Nevertheless, the process managers can perform interventions that exist within their power to limit the potential damage caused by this unsolvable issue.

The NPRES sets concrete top-down objectives, while the strength of the RES lies in a steady build-up of bottom-up collaboration

The NPRES wants to see concrete/numerical results regarding renewable energy implementation; therefore, it intends to control the regional energy transformation processes by rolling out the same blueprint/template nationwide and monitoring the overall progress. This top-down 'convulsive vision' does not match the reality of the decentralised authorities. According to the solution panel, a different type of administrative collaboration is needed. This must consider what is possible from the bottom-up, which requires a cultural change. Energy must become a spatial integration factor. Process management should be a tool to create a safe environment, in which the joint ownership of this assignment is built gradually. It should not be built upon accountability, results, and milestones, but rather on entering the conversation. To begin, a new collaboration structure of frequent work groups should be implemented.

8 Conclusion

In this final chapter, the conclusions of this study are presented. In Section 8.1, the research questions including the main research question are answered. In Section 8.2, the limitations of this study are given. Section 8.3 presents the discussion through a reflection on the conclusions and an overview of the contribution to scientific literature. In Section 8.4, the recommendations for policy makers are discussed. In Section 8.5, the chapter closes off with the recommendations for further research.

8.1 Answer to the research questions

1) What is the leading assignment for the 'Energiestrategie regio Rotterdam Den Haag' and how has it been influenced by the Climate Agreement?

The only leading assignment of the RES MRDH is the points of departure note. The long-term goal of this is the realisation of an affordable, reliable, clean, and safe energy supply for the Rotterdam region of the Hague by 2050. CO_2-neutrality is not a condition. The work is based on technical, spatial, economic, and social opportunities. Side targets are to find opportunities for the municipalities in the short-term, identify how and by whom these opportunities can be initiated, and build a foundation on which parties can continue to work for the implementation in the coming years. The added value of a regional approach is the insights into frameworks and options for local system choices, thus guaranteeing the security of supply and balance in the energy system. Municipalities may decide for themselves which local solutions are best suited.

However, as the Climate Agreement predicts that there will be one RES concept to which all regions must comply, it has been decided that the RES MRDH should not to deviate widely from this agreement, thus preventing later surprises. The interim deliverables of the Climate Agreement state that the product RES must be worked out to a higher level of detail, including the designation of actual locations for wind turbines, solar parks, and biomass plants and an elaboration of the implementation phase.

2) How is the RES assignment perceived by the owners (i.e., MRDH municipalities, province of South-Holland, and water boards), the umbrella organisations IPO, VNG, UvW, and the Ministry of Internal Affairs?

In the interviews, the majority of the owners described the RES assignment and its measure of success as 'a municipal and regional plan, which is based on facts and figures, to work towards a future energy system in pursuit of the regional or national climate objectives'. The RES could help their organisations by being a well-founded transition plan, in which mutual municipal respect prevails, knowledge-sharing is essential, and proper physical and legislation boundary conditions are outlined (32.2% of the answer elements). The RES is also about respecting rural and recreational areas (19.4% of the answer elements).

The umbrella organisations and the Ministry of Internal Affairs mention that there is no 'one single RES'. They perceive the RES as a masterplan which combines multiple perspectives. As everyone has a different angle of interest in the assignment, there exist many perceptions of what a RES is and what its purpose should be. As the RES attempts to combine aspects including the financial and societal benefits –as well as several sectors, such as the built environment, electricity, and mobility– the assignment is considered multi-dimensional. The decentralised authorities indicate that they play a vital 'directing role' in this process, as the RES will be realised in the spatial environment.

3) What are the consequences of the different assignment perceptions?

The bare influence tree was set up in collaboration with the process managers during a workshop to visualise the consequences of different assignment perceptions. This tree is similar to a commonly known 'work breakdown structure', and it highlights three main consequences: the status and positioning of the product RES, the attitude of the representative of an organisation, and the connection between the requirements of the NPRES and the local/regional implementation. The NPRES reflects the strategic, tactical and implementation vision of the Ministry of Internal Affairs and the umbrella organisations. Its underlying driver is the realisation of the Paris Agreement objectives. The consequence of 'status and positioning of RES' has the largest sphere of influence. The first two are related to the perceptions of the regional parties, while the third relates to the assignment perception of the NPRES. These consequences also branch further into sub-consequences. The bare influence tree is neutrally charged and contains no value judgements.

4) Which of these consequences has had (or needs) process interventions, and to what extent do they threaten the process?

First, a 'dressed influence tree' has been set up. This tree provides a clear picture of the mutual relationships of the elements and which consequences have had or still need process intervention. This dressed tree, in combination with the 'severity ratings' below, provide a more holistic picture than the bare tree. The consequences –or 'elements'– are divided into 'problems' and 'aims'. An aim (or pursuit) means that there is not necessarily a problem, but it is important that a certain standard is achieved, which can be effectuated by process interventions. For example, the process coordinator aims to equalise the status/positioning of the RES among the stakeholders. As can be seen in the table below, the severity (the extent to which the consequence threatens the process) of the consequence status and positioning RES, and the involvement of the underlying organisation , are rated the highest. This corroborates a multitude of performed process interventions.

Table 11: Summary of the dressed influenced tree and the severity ratings.

Problems or aims (that result from different assignment perceptions)	Has had or need PM?	Severity
Aiming for alignment of the status/positioning of the RES (1)	Has had	9
Aiming for unambiguous decision-making (1.1)	Has had	8
Aiming for loyalty to agreements (1.2)	Need	7.5
Some municipalities refused the consultations (1.X)	Has had	8.5
Priority for RES due to status Municipal Executive (1.4.1)	Need	6
Low RES support due to (political) dynamics (1.4.2)	Has had	6
No support at the administrative level; only commitment at the civil level (1.4.3)	Need	8
The representatives having an unsupportive attitude in the regional process (2.1)	Has had	8
The involvement of the underlying organisation (2.2.1)	Has had	8.5
The NPRES sets concrete top-down objectives while the strength of the RES lies in bottom-up collaboration (3)	Need	4.5

5) How has process management been applied to prevent or address problems within the scope of the study?

To prevent process problems, two foundations for process robustness are applied. First, the process goal is 'to put in the maximum effort', rather than 'achieving energy neutrality'. This bottom-up character reduces pressure, coercion, and the possibility of sacrifices being required. Second, the process architecture consists of five workshops which form the backbone of the process. For each workshop, the number of possibilities decreases and the product RES is gradually formed.

In the period from 1 February 2018 to 1 April 2019, the municipal consultations were the most commonly applied process intervention. They were used to equalise the status and positioning of RES, unambiguous decision-making and implementation in other policy domains of the product RES, and the involvement of the underlying organisation. During these consultations, the process coordinator updated the municipalities' councillor, alderman, and civil servants of the relevant policy domains, sometimes via the council committee or the Municipal Executive, to involve these individuals and invite them to comment on the RES content. In combination with this intervention, the process lead time was extended to provide more time for the organisations to manage the RES. Another process intervention was performed in the municipality of Westland, where the new frame of the RES assignment focusses on the financial benefits of the RES and the sustainability of greenhouse horticulture. The RES is introduced through low energy bills for companies and residents, profitable business cases, and the independent generation of heat and electricity. In addition, to stimulate the spatial integration of the assignment, the spatial area civil servants were invited to the workshops during the spring of 2019. To serve the same goal, the RES chairman gave two presentations on 'how to involve the spatial area civil servants to this file'. Finally, personal conversations were held to encourage the representatives in the RES process to adjust their attitudes.

6) What are the currently relevant problems and how can they be addressed utilising process management?

There are four relevant problems at the time of writing, with no solutions identified to solve the core issue. For problem four, a solution panel has been employed to address the problem. The first three problems lack essential contextual information.

The first problem is that the Municipal Executive of a specific municipality resigned due to controversy in its climate domain. The Executive is currently outgoing (demissionair), meaning that it deals with only critical decisions. In addition, the municipality is difficult to reach and it has refused the consultation. This has consequences for the RES formulation process because the municipality cannot give its input. As a result, it is uncertain whether this municipality will support the outcome of the RES. Another problem is that a specific municipality has civil servants actively committed to the RES formulation process, despite the letter of intent not being signed. When the product RES is ready, there is a possibility that this municipality will not approve it. Third, a major concern is that parties will cut the corners of the product RES when it is finished. The fourth problem is that the NPRES sets concrete top-down objectives, while the strength of the RES lies in a steady build-up of bottom-up cooperation. This top-down 'convulsive vision' does not match the reality of the decentralised authorities. To address this problem, the independent consultant has articulated during the solution panel that process management should be used as a tool to create a safe environment in which joint ownership of this assignment can be built. As a concrete intervention, the consultant said that a new collaboration structure of numerous work groups should be implemented.

In the case of 'no support at the administrative level; only commitment at the administrative level', the process coordinator chose to create a particular atmosphere that emphasised the intrinsic motivation of the parties to participate in this process. Second, the RES chairman wrote a letter to the municipalities with the same message and he emphasized how this collaboration was established and how the outcomes of this process could partly remove the uncertainty in the energy transition.

The main research question

'How are problems resulting from stakeholders' different perceptions of the assignment 'Energiestrategie regio Rotterdam Den Haag' addressed by the use of process management?

The municipal consultations have been the most frequently applied process intervention for the status and positioning of the RES, unambiguous decision-making and implementation in other policy domains of the product RES, and the involvement of the underlying organisation. During these consultations, the process coordinator updated the municipalities' councillor, alderman, and civil servants of relevant policy domains, sometimes via the council committee or the Municipal Executive. These employees have voiced their perceptions of how their duties intersect with the RES and what they require from the RES to successfully perform their tasks. As such, they feel they have been able to comment on the content of the RES. In combination with this intervention, the process lead time has been extended to provide more opportunity for relevant civil servants of the municipality to manage the content of the RES. The process coordinator observed that these consultations have resolved the problems or satisfied the aims. A few municipalities have rejected these consultations for various reasons. These 'refusing municipalities' have received letters stating that they are at serious risk in the process, as the councillors have not had the opportunity to give their opinions on the interim results of the product RES. The process managers and the commissioning party of the RES formulation, MRDH, will not be held accountable for any problem arising later (or during the process) resulting from the refusal of this consultation.

Other process interventions include the reframing of the story of the RES to meet the expectations of specific stakeholders. To stimulate the spatial integration of the assignment, the spatial area civil servants were invited to attend the workshops that took place in the spring of 2019. In addition, three presentations were given via the administrative spatial area network of the MRDH by the RES chairman in the City of Delft, in which he sought to convince aldermen of other municipalities in the MRDH region to contact the spatial area civil servants in their municipality to adequately engage them to this file. These process interventions have given the involved parties insight in the true depth –the multidimensionality– of the RES assignment. As a result, it has been observed by the process coordinator that the problem-solving capacity of the spatial area civil servants has increasingly reached a high level of abstraction. They begin thinking about assessment frameworks and value frameworks for spatial implementation, rather than the implementation itself. Thinking in terms of processes has also become increasingly more popular among these civil servants. Finally, personal conversations were held with the aldermen who had unsupportive attitudes to the RES process.

To resolve the last problem ('the NPRES sets concrete top-down objectives, while the strength of the RES lies in a steady build-up of bottom-up cooperation') the independent consultant said during the panel that process management could be employed as a tool to create a safe environment in which joint ownership of this assignment is built. According to him, the RES should not be built upon accountability, results, and milestones, but upon entering the conversation. The role of process management thereby is to ensure that this evolution is guaranteed through the connection from below, and not top-down. To begin, the independent consultant articulated that a new collaboration structure of frequent working groups should be implemented.

The control of process management is limited by law and resources. Besides, problems that stress the limits of authority relations must be accepted in the context of the RES. Nevertheless, the process managers can perform interventions that exist within their power to limit the potential damage caused by this unsolvable issue. In the case of 'no support at the administrative level; only commitment at the administrative level', the process coordinator chose to create a particular atmosphere that emphasised the intrinsic motivation of the parties to participate in this process. Second, the RES chairman wrote a letter to the municipalities with the same message and he emphasized how this collaboration was established and how the outcomes of this process could partly remove the uncertainty in the energy transition.

8.2 Limitations

Limitations to data gathering
The reader should bear in mind that this study is heavily based on interviews with the process coordinator, who does not want to run any risk with the sensitive information he provides to the researcher. Therefore, it is not sure whether he is has been fully open or whether he has answered truthfully.

Next, the entire influence tree (both dressed and undressed) has been set up based on a workshop with both process managers. Although they are the individuals who are in charge and decide upon possible process interventions, other involved individuals from the commissioning party may have a different opinion on how the influence tree should look like. Also, the context provided at the problem description in Chapter 7 only relies on the information of the process coordinator. Nevertheless, on top of participative observation, many influential people the researcher has met during the study confirm the majority of the vision of the process manager.

Furthermore, the reader should bear in mind that these interviews have been held during the spring of 2019. How the process coordinator and architect have filled in the influence trees is a snapshot. This means that this tree may look different if the interviews were conducted earlier or later.

Next, the interviews with all owners of the RES were held in the spring of 2018. Their perception of the RES assignment may have changed over time, especially given the fact that there have been municipal and provincial states elections, and with the progress of the Climate Agreement.

Finally, there is a selection bias: only the civil servants have been interviewed during this study. Residents cooperatives and private companies have been left outside of this study. Although the RES process is dominated by public parties, the selection may not be representative.

8.3 Discussion

First, three key insights on process management are discussed. As process management theory has been applied to analyse the RES MRDH process and to explain phenomena, the existing literature can only be confirmed. After, two key insights in the field of regional governance are discussed. The conclusions of this study do contribute to the scientific debate. It is important to mention that the RES is not equal to regional governance. The RES is a process from which regional governance/regional collaborations arise. For that reason, the effectiveness of regional governance will not be discussed.

Related to process management literature

Why are the core values progress and reciprocity undervalued in this process?

The ratings of the core values of process management (Section 2.3) that were assigned by both process managers offer validation for the core values of process management from the theoretical framework (Section 2.2). Although De Bruijn et al. (2010) do not rate/value these core values, meaning that they do not make a distinction between important and less important core values, there is only confirmation to this framework. In this section, the researcher tries to explain why the process managers have valued some core values of the relatively low. To illustrate the contrast; the core values that will not be treated in this section –openness, protection of core values, content, and equality– are rated on average an 8.8.

Progress (6.5) is inferior to the content

The substantiation of the process architect given for the core value 'progress', which he rated a 6, was: ''The ultimate goal of starting the RES process is to create content that is beneficial to all municipalities.'' The process coordinator, which gave a 7, only mentioned that progress is 'important'. In this RES process, the prospect of gain as an incentive for cooperative behaviour plays a significant role (Section 2.2.2.1). As indicated in Section 7.1.2, this progress is mainly stimulated by inviting a wide range of parties with a considerable amount of authority. Besides, the sequence of workshops safeguards the pace of the process.

The RES is a high-speed process; this is often confirmed during the commissioning party meetings. It has often been observed through participative observation and interviews with the process coordinator that parties have lost their connection with the content. To catch-up, process interventions were needed. First of all, the municipal elections played a role: as a result, all new aldermen had to be brought up to date through personal conversations with the process coordinator. Second, two new process phases have been built in for the municipal consultations, so that the relevant staff members of the municipality could be involved into the file (Appendix H). The process managers have inserted these interventions because (public) support is considered so important in this process as well as the commitment to the content. Based on the aforementioned context, the researcher believes that progress is only rated with a 6.5; the process managers see content as a trade-off with progress.

Reciprocity (6) is influenced by the ambition level

The process coordinator gave this core value a 6 with the argument: 'reciprocity is affected by the level of ambition'. The process architect also gave it a 6 with the argument: 'reciprocity was not yet necessary until this moment. Besides, it is not needed, as the total ambition is a result of individual contributions. Both process managers are trying to say (and they have confirmed) that the amount of reciprocity required depends on the level of ambition, which is related to the process goals. As indicated in Section 7.1.1, the process goal is 'to put in the maximum effort' instead of achieving energy neutrality, which boils down to making an inventory of what is possible/feasible in terms of the generation of renewable energy, and after, what is desired. Based on these questions, which are answered in phase one, the product RES will be further elaborated. Thus, the RES is as 'tailor-made' as possible, implying that fewer sacrifices/reciprocity is demanded.

The need for a sense of urgency

Process management can only succeed if there is a sense of urgency among the main stakeholders (Kotter, 1995). A sense of urgency means that the stakeholder should feel a drive to start a process in order to tackle an issue. If a process architect enters the scene too early, when there is no sense of urgency for a process yet, there is a risk that the process will stagnate (De Bruijn et al., 2010). Therefore, the question is: 'what did the parties see as the benefits of regional collaboration?' In other words: what were the main reasons for collective action[5]? And why should this collective action happen at this moment in time?

The substantive component points to the conviction that an issue needs to be solved, and the process-oriented component relates to the conviction that the issue can only be solved through collaboration utilising a process (De Bruijn et al., 2010). In the RES process, the substantive component and the process-oriented component of the need for a sense of urgency can be clearly acknowledged.

The substantive component
The energy infographics/energy mixes (Figure 4). These graphics point out the position of each municipality in the energy transition by showing its energy mix today, and its energy mix of 2050 in case the municipality wants to achieve energy neutrality. The map clearly shows that massive, nearly impossible, steps must be taken by each municipality. Besides, an energy infographic was made for the entire MRDH region (Appendix F), which is the sum of all individual municipal mixes. From this map, one can clearly see that the renewable energy potential to achieve energy neutrality is available. The problem is that this potential is spread over the entire region. The researcher thinks that this insight stimulates people to think of regional collaboration. During the solution panel (Section 7.3.2), the PhD candidate (Appendix A) called this precursor to action 'a disincentive'.

The process-oriented component
This component is related to the insight that collaboration is required to make the heating network cost-effective. Although this argument is related to the one above, it focusses on cost-effectiveness rather than the renewable potential. Based on the actor scan interviews, the majority of the interviewees were aware of the high potential of (waste) heat in the province of South-Holland coming from waste incineration, the residual heat from the port of Rotterdam, and the geothermal sources. In addition, the interviewees showed awareness that the heating network is only financially lucrative on a large scale as the sales volume must be adequate to cover the investment costs. This insight stimulates regional collaboration. The above-mentioned is backed up by question three of the actor scan interviews. It is remarkable that when one asks: 'how does the RES benefit your organisation', that the respondents give answers which are not directly related to their own benefits. Mainly the answer categories 'improvement intermunicipal collaboration' (12.9%) and 'heat; vision, implementation, connection of supply and demand' (16.1%) are very much focussed on a joint effort. Moreover, a substantial part of the respondents wants to use the facts and figures from the RES to substantiate their own municipal transition plan (32.3%). Both findings indicate that these respondents are highly aware of the energy transition being a regional effort and that the LES (local energy strategy) is strongly dependent on the RES.

[5] Collective action occurs when a number of people work together to achieve some common objective (Encyclopedia Britannica, 2019).

More complexity ultimately leads to a comprehensive process architecture and more process interventions

It was known from the beginning that this was one of the most difficult areas of RES formulation, due to its high degree of complexity (Chapter 4). This complexity has been confirmed by the process coordinator, the strategic advisor spatial economic policy of the MRDH (Appendix A), and Thomas Hoppe (this supervisor of this thesis, Appendix A), through participative observation, and during an interview with Roosmarijn Sweers (Appendix A). According to these individuals, some factors that contribute to the region's complexity are as follows:

- Very large and small municipalities – from the municipality of Brielle having 17,000 residents (Brielle, 2018) to the municipality of Rotterdam, which has 638,000 (AlleCijfers, 2018)
- The varying numbers of FTE[6] per municipality in the energy and sustainability policy domain – for example, the municipality of Rotterdam has 80 FTEs (process coordinator), while the municipality of Brielle only has 0.5 FTE on this file (Geradine Roskam, Appendix A)
- Population size – the region contains 23 municipalities and 2 water boards. The average for the RES regions is 17.32M/30 regions = 580,000 residents, while the MRDH region has 2,300,000 residents.
- The port of Rotterdam and the Greenport as stakeholders
- The fact that the North and South side of the region have never worked together before (Section 4.3) and the MRDH region has only existed for four years
- The diversity of economic activity in the region (Section 4.1.2)

It is common sense that this complexity –which boils down to diversity– results in a wide variety of interests and perceptions. During the preliminary workshop, the commissioning party confirmed that these different assignment perceptions are the greatest challenge of the RES MRDH. The process managers shared this opinion. The bare influence tree (Figure 10), drawn up in collaboration with the process managers, indeed shows that these different assignment perceptions have a significant influence on the entire process.

These different assignment perceptions have led to a comprehensive process architecture and serval process interventions. First, the two robustness foundations that belong to the process architecture (Section 7.1) have been employed to accommodate these different perceptions. Goal enrichment takes places as a result of determining the common starting point, by asking what exactly we want as a region, and by keeping the solution scope broad (Section 2.1.2). Second, the actor scan was performed at the start of the process (February and March 2018), wherein the researcher asked the owners for their thoughts, interpretations, and interests concerning the RES. This scan enabled the process managers to understand the multitude of perceptions. Third, many process interventions were performed, such as the municipal consultations and the personal conversations with the municipality representatives (Section 7.2). These interventions were mainly intended for equalising the status/positioning of the RES. Imbalances in this status/positioning were the direct result of the variety of different assignment perceptions (Figure 10).

In conclusion, one can say that a high degree of complexity results in a high variety of assignment perceptions, which in turn lead to a comprehensive process architecture and many performed process interventions.

[6] FTE=full time equivalent, meaning 40 hours per week.

Related to the scientific debate on regional governance

'Regional governance leads to administrative chaos and complexity': true, but the pros outweigh the cons.

As noted in Section 1.3.1.2, the regional governance systems in which municipalities operate in the Netherlands have a relatively complex structure. It is commonly thought that this complexity ('administrative chaos') has negative consequences for the mutual relationships in partnerships, administrative effectiveness, and democratic quality. In addition, trust and effectiveness will be limited by numerous voluntary partnerships. Remember that this paragraph defines complexity –or administrative chaos– as 'the gross amount of municipal collaborations' (Boogers et al., 2016; Klok et al., 2018). These collaborations can be based on public law (the so-called Joint Provisions Act, or Wet gemeenschappelijke regeling [WGR]), on private law, or on informal arrangements. Only in this section of the study, this definition of complexity will be employed.

On the basis of the study of this RES process, using participative observation, the researcher concludes that approximately a quarter of the interviewees of the actor scan have experienced administrative chaos and fear that the partnerships may become disordered. These individuals also complained about the overflow of information.

The arguments that either undermine the negative effects of administrative chaos or emphasise the positive sides of regional collaboration are the following:

1. According to Boogers et al. (2016), these negative expectations of regional governance need some nuance. First, there is a relatively good culture of collaboration: the majority of the municipalities find such collaborations useful, trustworthy, consensus-based, and business-like. Second, in terms of democratic quality, approximately 90% of the municipalities have influence on the regional decision-making processes through the alderman, and almost three-quarters have a direct influence via the municipal councils (Ibid.). It is only the accountability of regional governance to the city council and the involvement of residents and organisations that is deemed inadequate (Ibid.). Third, regional governance appears to be effective in terms of administrative effectiveness, performing better than is often assumed. Almost 75% of the municipalities indicate that regional governance yields visible results for the municipalities and more than 75% for the region (Ibid.).
2. As stated in the above-mentioned section (on the need for urgency), and as the independent consultant mentioned during the solution panel (Section 7.3.2), regional collaboration is vital in the field of the energy transition. This new type of assignment, in which renewable energy technologies such as windmills and solar panels are implemented in the spatial environment, requires bottom-up collaboration on a supra-municipal scale level. Although there may be disadvantages associated with regional collaboration, this is of the utmost importance.
3. During the RES process, there was an attempt to limit the complexity in two ways (Appendix G, points of departure note):
    - The RES is considered a useful addition to the existing local energy policy. It will not interfere with local policy; rather, it will be a useful regional extension.
    - It has been made clear that 'this is the only process'. There will not be a second RES process. This will be the foundation for future energy management.

Finally, an argument from a more general perspective points to a net positive return from regional governance: the number of regional collaborations is still growing in the Netherlands (Boogers et al., 2016). Knowing that these partnerships are voluntary in general, meaning that the municipalities can enter and exit freely, confirms a net positive return.

As 'administrative chaos and complexity' carries a negative emotional charge, the researcher opts for new technology, based on the scientific arguments and his observations during the RES formulation

process: ‘administrative intensification’. Although it appears that a quarter of people are worried about increasing complexity, the popular view –that it leads to a reduced democratic legitimacy, less trust due to the multitude of partners, and lower effectiveness– is incorrect. In addition, the significant benefits of regional collaboration are less likely to become evident when one talks about ‘administrative chaos and complexity’. Administrative intensification is much more neutral: it covers the facts, which are that the number of collaborations has grown, but the frame is positioned such that people leave room for positive associations. It would be a shame if the negative frame of ‘administrative chaos and complexity’ suppressed the growth of regional governance.

‘Regional governance leads to the hollowing out of local governance’: true for 2/23 cases. However, the fault for this lies not with the regional collaboration.

As noted in Section 1.3.1.2, regional governance can lead to the hollowing out (uitholling) or the complementation (aanvulling) of local governance. The first boils down to ‘shifted local governance’ (verlegd lokaal bestuur), which means that the city council has little influence or control over regional governance. The second boils down to ‘on arm’s length of local governance’ (verlengd lokaal bestuur), which means that regional governance contributes to the realisation of local policy goals. In the scientific debate, the aforementioned is expressed as a ‘democratic quality’. According to Boogers et al. (2016), 50% of the municipalities indicate that regional governance leads to local complementation. Only 8.7% of the cases indicate that regional governance results in the hollowing out of local governance. The remaining municipalities have no explicit opinion. Of the aldermen, 89% state that they have an effective influence on regional decision-making (Ibid.).

Focusing on the RES process, the situations in which municipality X became outgoing and the RES file was consequently dropped and in which municipality Y has never shown commitment at the administrative level, one can indeed speak of the hollowing out of local governance. In both cases, the administrative sides of the municipalities were not, or only partially, involved in the RES formulation. If the outcomes of the RES had been accepted/legally fixed in municipalities X and Y, they would not have been able to give their input at the administrative level. However, in these two cases, the fault lies not with the RES process. The municipality has not contributed to the process due to problems of their own.

The same applies, albeit to a lesser extent, the involvement of the underlying organisation. For some municipalities, the process coordinator suspected that the representatives were not adequately involving the underlying organisations in the process. To overcome this, the municipalities have been extensively consulted and the process lead time has been extended. The fact that some municipalities have refused this consultation is not the responsibility of the process managers. If the municipality is insufficiently involved in the RES process, leading to less control of the city council, the fault lies with the municipality itself.

As only two of the 23 municipalities have no (or only partial) influence on the RES formulation process, and the blame for this is not attributed to the RES, the democratic quality of the RES is considered excellent. As stated earlier, the involvement of the city councils in the RES process has been sought, since it is these bodies which will ultimately decide the implementation of the RES outcomes. It was confirmed during this RES process that 89% of the aldermen had an influence on regional decision-making.

8.4 Recommendations for policy-makers

The recommendations given in this section are based on the experiences of the researcher and his investigation of the RES process. Therefore, an 'integral recommendation' is provided for the regional governance/collaboration structure, with regards to the new decentralised energy system. This recommendation is aimed at the policy-makers who influence this structure/system.

A short recap from the scientific debate: polycentric VS monocentric regional governance

As noted in Section 1.3.1.2, monocentrists have a preference for concentrating regional governance in one authority. Monocentrists also have a preference for uniformity of institutional design. Alternatively, polycentrists prefer a 'fragmented' system in which independent municipalities are more or less free to enter into collaborative arrangements. The reader must bear in mind that the current form of regional governance in the Netherlands is a result of 50 years of evolution, in which various reforms have been brought about. Based on the researcher's observations during this RES process, he finds support for the views of both monocentrists and polycentrists. The researcher's opinion is that an in-between solution would be best suited for this field of regional collaboration.

The regional body of 'conventions and communication'

A regional body should be established for 'conventions and communication', consisting of independent experts and lots of data. These experts know the region and its historical perspective well. This body could have the form of a 'Joint Provisions Act' [WGR] and it would be an apolitical body, meaning there were no related elections. According to the independent, 'Energy is an apolitical subject. The roadmaps for the energy transition should only be based on science and pragmatism. In addition, thinking in four-year cycles is devastating when it comes to long-term visions such as energy'. In this body, there should be a regional clause containing conventions, principles, and calculation methods. This clause controls the uniformity of the region; it assures that different parties use the same parameters and language. This is necessary because the energy system's infrastructure is interconnected. The grid operators, energy companies, and private generators must comply with the same conventions. The entire region must be able to rely on these standards.

Furthermore, this regional body must provide a communication channel to the NPRES, communicating problems and requests and performing the monitoring of the progression. This communication should go two ways. Second, this body provides workshops and lectures for civil servants involved in the energy file. This is vital, as the independent consultant and the process coordinator said during the solution panel that few civil servants understand how the interaction between the different municipal policy domains works. Third, this body resolves the demand for a central communication point between the NPRES and the region. This is a good step towards addressing problem 7.3.2 ('The NPRES sets concrete top-down objectives while the strength of the RES lies in a steady build-up or bottom-up collaboration'). The role of the IPO, VNG, and UvW shifts to the background with the arrival of this body because these umbrella organisations are too focussed on spreading blueprints and templates with which each region must comply, while both the process managers, the PhD candidate during the solution panel and Gerry Fenten (on behalf of the Ministry of Internal Affairs) during her interview, mentioned that 'every single region is too unique to fit premade templates. Every region needs a tailored approach'.

The search for voluntary bottom-up collaborations

Sub-processes can be set up to find effective collaborations (in terms of energy supply and demand, benefits of scale, etc.) within the region. Each public or private party is free to launch such a process. This is useful because there is much diversity within the region. For example, the glass garden municipalities such as Pijnacker-Nootdorp and Lansingerland are known to have partnerships, as well as the municipalities of the island Voorne Putten (Westvoorne, Hellevoetsluis, and Brielle). Allowing the rise of these fragmented collaborations provides 'greater and more diversified connectivity' and enables 'local governments to solve collective action dilemmas using horizontal networks' (Feiock, 2007, p. 57; Tavares & Feiock, 2014, p. 12). In addition, this bottom-up view of collaborations is precisely the approach of the 'Green Deal RES' (Section 5.6.2) and the vision of Gerry Fenten

(Section 5.6.4) and the independent consultant (Section 7.3.2). The basic agreements of these processes must be aligned with the regional conventions. At the start of every process, these conventions are made clear to the participating parties by the regional body of conventions and communication, so that their energetic volume additions do not interrupt the heating network or the electricity grid.

The aforementioned described ‘plug-and-play system’ provides the private and public parties with the freedom to collaborate only if it benefits the organisation itself, which means that democratic quality and administrative effectiveness can continue to be met. This is reinforced by the assumption that the legally fixing of laws and agreements will continue to be the responsibility of the layers of Thorbecke (municipal, provincial, and national). According to the researcher and Boogers et al. (2016), the safeguarding of these two values is essential for the success of regional governance.

8.5 Recommendations for further research

The main research question of this study has been answered completely. Nevertheless, further research could usefully explore the topics described in this section.

How process management is applied in other RES'es

This study has looked at how process management has been applied to formulate the RES MRDH. As soon as other regions are examined by means of a comparative study, the applied process management can be put in perspective. An interesting research question could be 'How are the core values of process management valued in other regions (Section 2.3)?' This will mainly contribute to process management in the energy transition on the regional scale level.

What changes are needed to make this new renewable energy implementation challenge - which requires spatial integration- a success?

First, it should be examined how the RES'es can be merged with the current institutional decision-making. The Netherlands deals with Thorbecke's house; decisions are taken democratically on several institutional layers. The RESS processes connect these multiple layers of governance and requires decision-making on multiple levels simultaneously. Therefore, this type of assignment is new, and new forms of collaboration must be explored. Further research should be undertaken to investigate:

- Whether a regional administrative layer for this type of assignments is the most efficient?
- How these types of assignments can be depoliticised?
- Which legal frameworks are factual, which are supportive, and what exactly is the freedom of each governmental layer?

Second, it should be examined how the domain 'energy' can be integrated with the other policy domains of the municipality. Sustainable energy technologies land in the spatial environment. Currently, 'energy' is not yet part of the municipality's environmental plans. Besides, this type of assignments demands for an increase of the level of abstraction, meaning that municipalities have to think from a value framework (or assessment framework) for spatial integration issues. Further research should determine how to organise this type of assignment within the municipalities. Can the energy domain simply and effectively be added to the built environment, employment, recreation et cetera?

The effectiveness the regional collaborations

Remarkably, it turns out that if municipalities cooperate more often in new relationships (i.e. less congruently), which is associated with more complexity, the effectiveness is greater (Klok et al., 2018). When the regional governance resulting from the RES has been set up, further research should be undertaken to investigate its effectiveness.

International research

The above-mentioned further research is focused on Dutch territory. It can be interesting to look at countries that both have a similar public administration system (including a relatively small gap between the layers of governance) and that are pioneers in the energy transition. Thus, the further research questions can also be applied to countries that fulfil these criteria.

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Appendixes

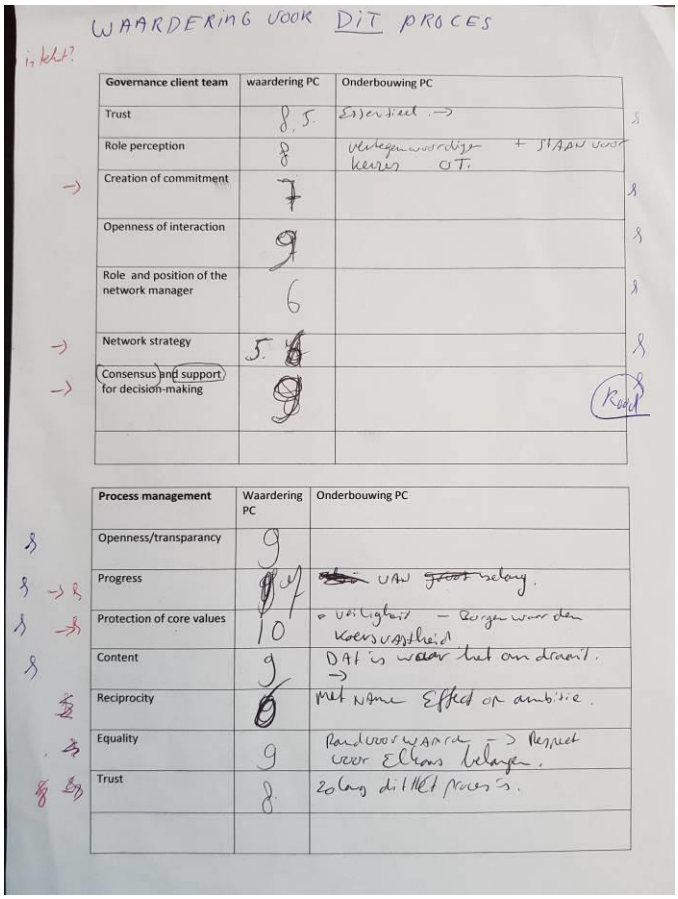
A: List of persons interviewed

Sequence: name, organisation, function.

1. Mr. H. van der Linden, municipality Albrandswaard, programme manager sustainability.
2. Mr. A. van der Maas, municipality Barendrecht, senior adviseur energietransitie.
3. Mrs. G. Roskam, municiaplity Brielle, policy advisor sustainability.
4. Mr. E. Weeder, municipality Cappelle ad IJssel, senior policy advisor environment.
5. Mrs. M. Kaiser, municipality Delft, senior policy advisor climate.
6. Mr. M. Stulp, municipality Den Haag, senior policy employee sustainability
7. Mrs. B. Bruinsma, municipality Hellevoetsluis, sustainability director
8. Mr. A. Bosker, municipality Krimpen ad Ijssel, region engineer
9. Mr. R. Wijsman, municipality Lansingerland, senior advisor sustainability
10. Mrs. K. Schipper, municipality Lansingerland, process leader energy neutrality
11. Mrs. R. Beulen, municipality Leidschendam-Voorburg, policy advisor sustainability
12. Mrs. A. Pronk, municipality Maassluis, advisor heath and energy transition
13. Mr. L. Morauw, municipality Midden-Delfland, policy employee sustainability.
14. Mr. J. Smith, municipality Nissewaard, advisor.
15. Mr. P. Bell, municipality Pijnacker- Nootdorp, policy employee heat transition.
16. Mr. R. Groeneveld, municipality Pijnacker- Nootdorp, policy employee sustainability.
17. Mrs. J. Rombouts, municipality Ridderkerk, cluster coordinator sustainability.
18. Mrs. S. Savkoor, municipality Rijswijk, policy advisor sustainability.
19. Mrs. A. Madsen, municipality Rotterdam, programme manager energy transition.
20. Mr. F. van Zelst, municipality Vlaardingen, proces advisor energy transition.
21. Mrs. G. Bathoorn, municipality Vlaardingen, organisation manager.
22. Mr. G. Ankone, municipality Wassenaar, policy employee.
23. Mrs. L. Bakker, municipality Westland, strategic advisor sustainability.
24. Mr. W. van der Spoel, municipality Westvoorne, policy advisor sustainability.
25. Mr. P. Verheggen, municipality Zoetermeer, programme manager sustainability.
26. Mr. J. Lako, municipality Zoetermeer, policy advisor environment and space.
27. Mr. J. Wubben, Hoogheemraadschap Krimpenerwaard, advisor wastewater chain.
28. Mr. O. Helsen, Hoogheemraadschap Delfland, senior policy advisor.
29. Mr. H. Geerders, province of South-Holland, senior policy advisor energy.
30. Mrs. R. Sweers, regio Drechtsteden, senior policy employee energy.
31. Mr. R. Kleefman, IPO, advisor energy transition.
32. Mr. R. Romijn, UvW, policy employee.
33. Ms. M. Bosman, VNG, programmateam energy
34. Mr. B. Duursma, MRDH, strategic advisor spatial economic policy.
35. Mr. F. Beerepoot, BAR-organisation, coordinator RES.
36. Mr. F. de Groot, APPM, management consultant energy, mobility, infrastructure.
37. Mr. D. Langelaar, APPM, management consultant.
38. Mr. R. Schuurs, independent strategic consultant sustainable entrepreneurship
39. Mrs. A. Van Den Berg, PhD candidate to governance structure RES'es in Brabant
40. Mr. T. Hoppe, associate professor TU Delft on Multi-actor systems

B: The drafting of the analytical framework

To draft this analytical framework, first, an interview was held with the process managers. During this interview, the core values of process management and network governance extracted from the theoretical framework (Section 2.2) were presented, with a verbal elaboration of the researcher. It is considered crucial that both the process architect and the -coordinator understand exactly what is meant by the core values in the tables. Although both process managers were allowed to fill in an extra core value which they considered as missing, they did not use it. Next, they had to assign ratings to these factors based on their perception of importance for this RES process. Hence, they first stepped into the ring for discussion. Why? In this way, the multitude of process information researches the surface, employing that their rating is based on more information. Nonetheless, they had to give an individual rating. Subsequently, both have to give a short motivation for the given rating, consisting of one or two sentences (Figure 1 and 2). Lastly, the final rating is calculated by the researcher by taking the average of both ratings.



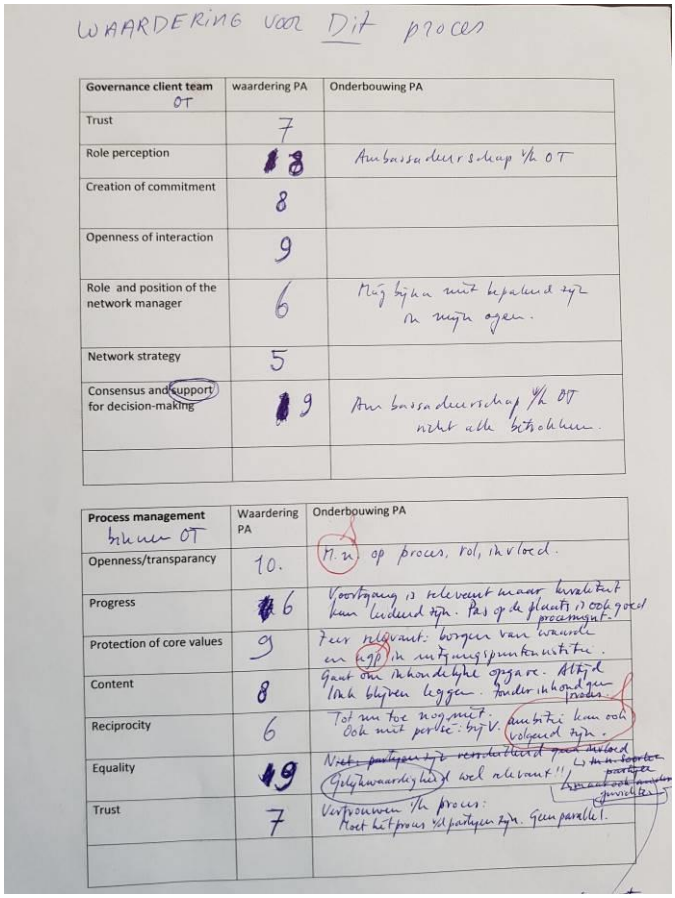


Figure 1 and 2: The result of the workshop; different challenges underneath the categories.

The core value 'role perception'

As an exception, the core value 'role perception' does not come from scientific literature. During the interviews, the process coordinator was curious about how the owners saw the division of roles. Based on this curiosity, he added role perception as a core value. Unfortunately, it could not be backed up by scientific literature.

The rationale behind this procedure and further steps

When managing the process, both the process architect and the -coordinator take into account the context of the RES (Chapter 4). Depending upon the context, they may 'customise' their appreciation for the core values. The substantiation of the assigned ratings can therefore be derived from the

context; there must at least be an explanation for why there is a deviation from the theoretical framework. If the deviation is too large, which is determined subjectively, interrogation takes place; large differences must be explained. Thus, the role of the researcher is a watchdog. By employing knowledge of the (active) participatory observation, his interviews and his desk research, he checks whether the overall picture is correct.

C: Preliminary work for the central research challenge

In order find an interesting topic of research, a workshop (empirical data gathering) was organised wherein the members of the commissioning party and the process coordinator were allowed to share what they saw as the most significant challenges during the RES formulation process, within the research's scope. An 'interesting challenge' must:

- Be one of which the solution adds value to the process.
- Be manageable concerning time (this is based on a rough estimate with many assumptions).
- Satisfy the curiosity of the researcher.

To ensure that the central challenge is acknowledged by everyone, and not only in the minds of the process managers, the whole commissioning party was consulted. This session took place at the start of the regular periodic meeting on 29-9-2018, and had a duration of one hour.

The workshop had the following course:
1) The researcher explained at which point he was in his research and that he needed the opinion of the members of the commissioning party. The researcher explicitly stated that he required process challenges rather than substantive issues. The researcher deliberately did not say anything about the theoretical framework in advance as that could influence the answers of the members. He gave the members a pile of paper on which they could write their results.
To allow the researcher to focus on the discussions, Peter, the project assistant, has been appointed as a minutes secretary.
2) On the wall, the researcher had pasted the following categories: financial, legal, political, organisational and other. If one of the members had come up with a challenge, he/she first had to share it with the group, whereafter a discussion would arise. Only when the majority agreed upon a challenge, it was written and hanged in a specific category on the wall by the relevant member, as depicted in Figure 1.
3) During the discussions, it became clear that the challenges rarely belonged to just one category. Every challenge has its effect on several categories. How such a challenge affects the process was unclear at that moment; that is something to be worked out later.
4) The meeting has ended. The members were thanked for their valuable efforts, and the input was collected.

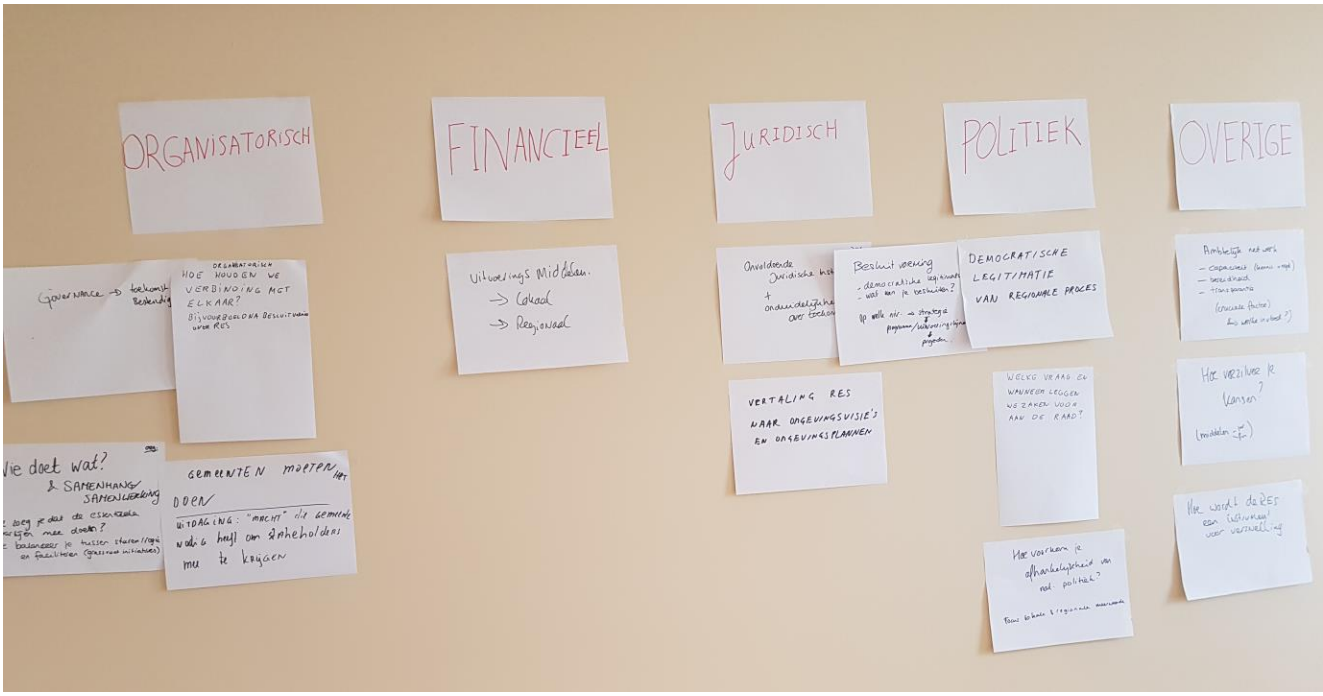


Figure 1: The result of the workshop; different challenges underneath the categories.

The input was processed after the session. The researcher tried to arrive at clear all-encompassing challenge-statements (also named challenges), which were sometimes written down in question from, upon which everyone could agree. The researcher supported these challenge-statements by quotes and facts. For brevity, these are not shown here. These seven challenge-statements were as follows:

1. There was no clarity at the start about what the RES exactly is, which has led to different assignment perceptions.
2. To what extent has the national government provided the decentralised authorities with the opportunity to carry out the RES assignment properly?
3. To what extent is it possible to run an autonomous/independent RES process and to what extent is this desirable?
4. How to get the parties that are essential for implementation at the table? How to identify these parties and how to give them an adequate role in the process?
5. How does the RES becomes an instrument that seizes opportunities?
6. How do we create support for the committees in which decisions concerning the RES are taken?
7. How do we maintain a solid connection in the governance of the RES after the formulation phase?

After a conversation with the process coordinator it became clear that challenge 6 and 7 were not relevant to this RES phase, and that examination of these would exceed the available time for this research. Therefore, only the first five challenges have been sent to all members for agreement. A few have responded to this email, some of them with some remarks. After, three challenges that meet the requirements of 'interesting' were distilled. These were challenges 1,2 and 3. Subsequently, the process managers were consulted for their personal view on 'interesting' challenges. Both indicated that the challenge of different assignment perceptions was worth investigating in the sense that this challenge frequently rears its head, and that it touches upon the core of process management (the latter was said the process architect). Whether this challenge can be properly investigated within the available time depends upon the depth of research they said.
The knot is cut; the focus of this study will be on the different assignment perceptions of the assignment.

Below, the original text of the challenge of different assignment perceptions, as it was sent to the commissioning party, is displayed. Because new insights were gained throughout the research, the original design has been slightly modified, which is normal for case studies (Tubbing, 2018). In Section 3.3, the final design of this study is presented.

'Based on the interviews with the municipalities and external parties, it seems to be unclear what a RES precisely is or what a RES should do, meaning that there is no clear defined product to aim for. This lack of clarity can lead to challenges to the process architecture and different expectations regarding the product RES.
In my research, I want to discuss the frameworks at the start of the process regarding the RES and how they were incorporated into the process. I will also discuss the developments regarding the broadly shared perception of what the RES should be during 2018. In the light of these developments, I examine the impact these developments have had on the process and how this has been handled, including a reflection on the literature.'

D: Workshop for RQ3 and 4

During the workshop for RQ3 and 4, both process managers were asked to sketch all the problems resulting from the challenge of different assignment perceptions. The detailed preparation of this procedure is given in Section 3.3. Here, a short summary is provided. During this workshop, also the analytical framework, which functions as a preparatory task for this workshop, was drafted (Appendix B). The meeting took place at APPM in Rotterdam on 26-3-2019 from 13:00-14:30.

For RQ3

The process managers received a short explanation of the workshop and its position in this study. Then, they were asked to come up with all the consequences resulting from different assignment perceptions. The final outcome of this workshop is presented in Figure 10. In the weeks after, many iterations have been performed. In this figure, the 'C' stands for (this) challenge. For sake of completeness and consensus, the researcher stimulated the process managers to discuss the given answers. Oftentimes, the researcher interrogated to assure that both process managers had the same perceptions of the answers they gave. Figure 10 can therefore be seen as a shared mind map.

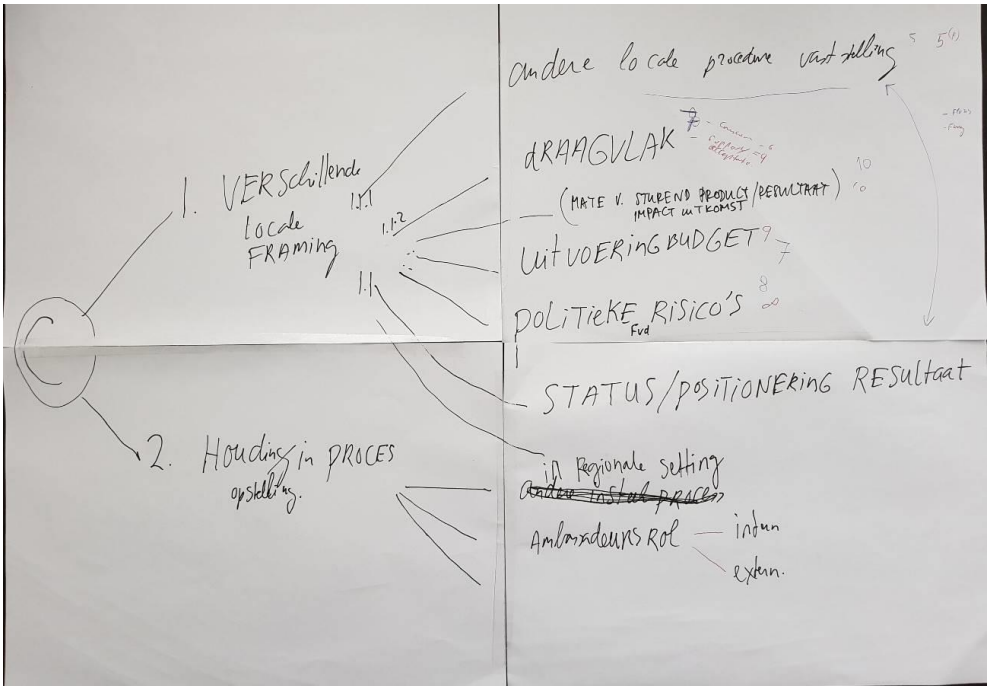


Figure 1: The unfinished bare influence tree.

For RQ4

Both process managers were then asked to rate the consequences from 1 to 10, while keeping an eye on their ratings of the core values of process management and network governance, as provided in the analytical framework. Both process managers understood the logic behind the procedure and had a clear understanding of what to do. The ratings including a short motivation is given in Table 8.

E: Relevant text of 'voorstel voor hoofdlijnen Klimaatakkoord'

Regionale Energie Strategieën (RES) zijn van belang om de ambities uit het Klimaatakkoord in de praktijk te brengen. Ze zijn een instrument om ruimtelijke inpassing met maatschappelijke betrokkenheid te organiseren. Het doel van de RES is een zorgvuldige ruimtelijke inpassing van hernieuwbare energieopwekking met maatschappelijke acceptatie en daarbij aandacht voor de benodigde infrastructuur. Met de RES wordt de samenwerking tussen overheden en hun maatschappelijke partners gestructureerd en wordt de maatschappelijke acceptatie voor de energietransitie bevorderd.

De RES leiden tot besluitvorming in het omgevingsbeleid (omgevingsvisie, omgevingsplannen, omgevingsprogramma's en omgevingsverordeningen). Hierbij is de inbreng van maatschappelijke partners essentieel. Niet alleen met het oog op bewustwording en acceptatie, maar ook om optimaal gebruik te kunnen maken van de kennis, uitvoeringsposities en capaciteiten van de verschillende partijen. Daarmee biedt de energietransitie tegelijk een kans om de democratie en de sociale samenhang in Nederland te versterken.

Wat staat er in de RES?
Om de strategische functie goed te kunnen vervullen, zullen de RES een stevige kennisbasis krijgen. Onderdelen van de RES zijn:

1. Inventarisatie c.q. analyse (als onderbouwing voor het aanbod) van:
• het huidig energieverbruik en CO_2 uitstoot van de regio;
• de infrastructurele (net)planning en lopende projecten in de regio;
• de potentie (ruimtelijk) voor hernieuwbare energie (opwekking, opslag en infrastructuur).
2. Potentieel en aanbod voor de duurzame warmtebronnen;
3. Potentieel en aanbod voor de hernieuwbare elektriciteitsopwekking;
4. Inzicht in de consequenties voor de infrastructuur in nauwe samenwerking met de Netbeheerder;
5. Regionale uitwerking van nationaal geformuleerde ambities, zoals opwekking van hernieuwbare elektriciteit op Rijksgronden.

In de RES wordt de regionale uitwerking, specificatie en vertaling van de nationale afspraken uit het Klimaatakkoord vastgelegd. De focus is de ruimtelijke inpassing van vraag en aanbod van energie. Het gaat met name om de regionale warmtevoorziening, energie- infrastructuur, opslag en om de opgave voor hernieuwbare elektriciteitsopwekking. De grootste raakvlakken bestaan dus met de sectortafels Elektriciteit en Gebouwde Omgeving. Maar ook zijn er raakvlakken met Mobiliteit (laadinfrastructuur) en Landbouw en landgebruik (hernieuwbare energieopwekking en veenweidengebieden). Het staat regio´s vrij meerdere sectoren in de RES te betrekken.

De RES zijn input voor ruimtelijke planvorming op provinciaal en gemeentelijk niveau (instrumenten uit de Wet Ruimtelijke Ordening en straks de Omgevingswet) en waterbeleidsprogramma's van waterschappen. De hantering van ruimtelijke principes borgt aandacht voor ruimtelijke kwaliteit in een vroegtijdig stadium.

In de RES wordt rekening gehouden met de interactie met gerelateerde maatschappelijke opgaven zoals in het Interbestuurlijke Programma (IBP) staan: klimaatadaptatie, circulaire economie, de woningbouwopgave en vitaal platteland.

Proces van verdere uitwerking
De regio's geven samen invulling aan de nationale klimaatopgave. Voor hernieuwbare elektriciteit wordt met behulp van kennisinstellingen waaronder het PBL in

2018 gestart met een verdeelsystematiek. Deze zal worden gebruikt wanneer alle RES samen in de zomer van 2019 niet blijken op te tellen. Dit betekent niet dat we hierop wachten, we gaan in het najaar van 2018 al aan de slag met de voorbereiding. De decentrale overheden zijn verantwoordelijk voor de uiteindelijke verdeling van die opgave over de regio's. Voor de sector Gebouwde Omgeving worden met de RES regionaal aanwezige warmte(rest)bronnen en behoefte aan infrastructuur in beeld gebracht en vraag en aanbod op elkaar afgestemd.

Bij het opstellen van de RES worden betrokken partijen (netwerkbedrijven/netbeheerders, de energiesector, de groene partijen) op regionaal en nationaal niveau betrokken in een werkstructuur. Deze werkstructuur heeft als taken de voortgang te monitoren en belemmeringen te signaleren en aan te pakken. Ook kunnen overheden en maatschappelijke partners op nationaal niveau elkaar aanspreken op voortgang, resultaten en randvoorwaarden. Bestuurlijke escalatie vindt plaats in de werkstructuur. Concretisering en eventuele aanvulling van het escalatiemechanisme wordt in 2018 nader uitgewerkt. De werkstructuur voor de RES wordt onderdeel van de governance van de NOVI voor wat betreft de ruimtelijke kaders en van het Klimaatakkoord voor overige onderwerpen.

Indien er een afweging gemaakt moet worden tussen betrouwbaarheid en betaalbaarheid van de energievoorziening, ruimtelijke kwaliteit en andere (lokale) overwegingen zorgen de overheden in het proces voor bespreekmomenten.

Kennis- en competentieontwikkeling is cruciaal. Overheden moeten kunnen teruggevallen op een heldere en professionele kennisinfrastructuur met rekenmethodieken en datasets. Objectieve toegesneden kennis en beschikbare en betrouwbare expertise kunnen onnodige discussies over feiten voorkomen en maakt de strategieën optelbaar en vergelijkbaar. Zo is op verschillende niveaus toegankelijke kennis nodig over energieverbruik en besparingsmogelijkheden, kennis voor de leidraad in de gebouwde omgeving en kennis over de ruimtelijke potentie, kosten en inpassingsmogelijkheden voor hernieuwbare energie. De nationale overheid heeft een belangrijke systeemverantwoordelijkheid om deze kennis te organiseren.

Planning
In september 2018 beginnen de voorbereidingen, de regiovorming en de analyses. Ook worden landsdekkende uniforme uitgangspunten (datasets en energiemodellen) uitgewerkt parallel aan de daarvoor benodigde afspraken in het Klimaatakkoord zodat de RES onderling vergelijkbaar en optelbaar zijn. Betrokken partijen (netwerkbedrijven/netbeheerders, de energiesector en de groene partijen) worden hierbij op regionaal en nationaal niveau betrokken.

Tevens wordt interbestuurlijk gewerkt aan de concept-Nationale Omgevingsvisie (NOVI), waarin richtinggevende ruimtelijke principes kunnen worden opgenomen.
Na ondertekening van het Klimaatakkoord vindt de formele start van de ontwikkeling van regionaal gedragen RES plaats. Dit gebeurt middels een vastgestelde "startnotitie". Onderdeel hiervan is het vastleggen van landsdekkende uniforme uitgangspunten door de besturen van gemeenten, provincies en waterschappen en besluitvorming over de regionale opdracht voor de RES.

In juni 2019 zijn dan in alle regio's concept-RES gereed. Voor het geval deze RES bij elkaar niet optellen tot de nationaal afgesproken ambities, wordt een door de decentrale overheden ontwikkelde verdeelsystematiek toegepast, zodat eind 2019 de regionale invulling van de nationale opgave verdeeld is. Voor het geval dit niet lukt, wordt een door de decentrale overheden - in samenwerking met kennisinstellingen waaronder PBL - ontwikkelde verdeelsystematiek toegepast.

Begin 2020 worden dan de uitkomsten van de RES in het omgevingsbeleid van betreffende overheden opgenomen. In het najaar wordt besproken hoe en in welk tempo de uitkomsten van de RES in het omgevingsbeleid van de overheid kunnen worden verwerkt. De RES betekenen uiteraard geen vertraging als initiatieven voor energieprojecten al passen in het bestaande ruimtelijke beleid. Waar nodig worden hiertoe tijdelijke beleidskaders ontwikkeld.

Hernieuwbaar op Land

Ook op land worden kansen verzilverd voor meer productie van hernieuwbaar opgewekte elektriciteit. Voorzien wordt een rijk geschakeerd, overwegend decentraal, hernieuwbaar elektriciteitssysteem in 2050 met richting 2030 vooraleerst Wind op Land en Zon-PV. De ambitie bedraagt circa 35 TWh productie in 2030. Daarbij wordt gewerkt met een techniekneutrale opgave. Doel is om gemeenten en provincies zo in staat te stellen een goed plan met draagvlak te maken met de Regionale Energie Strategieën (RES), binnen criteria ten aanzien van kosteneffectiviteit, doelbereik, ruimtelijke inpassing en (impact op) het energiesysteem. Wat dit betekent aan extra vermogen wind of zon ligt daarmee niet op voorhand vast. Eind 2019 is duidelijk hoe de regio's invulling geven aan de landelijke opgave.

Energie

De derde pijler is energiegebruik. Het energiegebruik in de sector landbouw en landgebruik zit voor een belangrijk deel in de glastuinbouw. Partijen zetten zich in voor een klimaatneutrale glastuinbouw, zo mogelijk al in 2040 en bouwen daarbij voort op het Innovatie en Actie Programma klimaatneutrale glastuinbouw ("Kas als Energiebron"), waarbij additioneel een sterke focus gelegd zal worden op 'inbedding in de regionale energie strategieën'.

G: Points of departure note RES MRDH

Notitie: Uitgangspunten en toelichting RES

Energiestrategie regio Rotterdam Den Haag

"Naar een betaalbare betrouwbare schone en veilige energievoorziening voor iedereen in de regio Rotterdam Den Haag in 2050"

Aan: Portefeuillehouders Energie
van Gemeenten, Waterschappen en de Provincie Zuid Holland
Gezamenlijk de regio Rotterdam – Den Haag

Door:
Ambtelijk coördinatieteam energiestrategie regio Rotterdam Den Haag:
Maaike Kaiser (Delft)
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Astrid Madsen (Gemeente Rotterdam)
Liesbeth Pleizier (Gemeente Krimpen ad IJssel)
Baukje Bruinsma (Gemeente Hellevoetsluis)
Broer Duursma (MRDH)
Ferry Beerepoot (Alliantie Energietransitie)

Versie: d.d. 18-12-2017 definitief

1. Inleiding en doel

De samenwerkende lokale overheden in de regio Rotterdam Den Haag hebben zich op 3 november 2017 uitgesproken om voor het opstellen van een Regionale energiestrategie. Deze strategie brengt in beeld welke stappen – bovenop de huidige Energietranstieaanpakken van de gemeenten en stakeholders gezet kunnen worden om te komen tot een vrijwel CO_2 vrije energievoorziening in 2050 voor de regio Rotterdam Den Haag, voor zowel de warmte- als de stroomvoorziening van woningen en bedrijven, en mobiliteit. Daarmee komen we in de startblokken om het lange termijndoel van de regionale samenwerking in de regio Rotterdam Den Haag te realiseren.
"Naar een betaalbare betrouwbare schone en veilige energievoorziening voor iedereen (in de regio Rotterdam Den Haag) in 2050"
Een doelstelling waarmee we niet alleen onze bijdrage leveren aan de afspraken in het Parijs-akkoord. Maar ook zorgen voor (nieuwe) werkgelegenheid, verbeteren economische positie regio (door lagere afhankelijkheid fossiele brandstoffen uit buitenland), stimuleren van innovaties zoals smartgrids en nieuwe manieren van energieopwekking en opslag, verlaging van woonlasten, wooncomfort van woningen en schonere lucht. We sluiten aan bij de indeling van de (energie)transitiepaden die ook op rijksniveau worden gehanteerd, t.w. : Hoge temperatuur warmte, Lage temperatuur warmte, mobiliteit, Kracht en Licht.
Er wordt al heel erg veel gedaan in de regio rond deze opgave, zowel op thematisch niveau, zoals Geothermieontwikkeling of de aanleg van de warmterotonde, als ook in de gemeenten en wijken.

Highlights
- Gezamenlijke Doelstelling Energiestrategie Regio Rotterdam- Den Haag
- Aansluiting afspraken Parijs-Akkoord
- Aansluiten bij transitiepaden energie op rijksniveau
- Lokale acties en programma's zijn leidend – Res ondersteunt en bundelt
- Bestaande (expertise) clusters zijn kennispartner/leverancier
- Regionale lobbyagenda
- Opgesteld voor samenwerkingsafspraken met het Rijk

Gemeenten hebben ambities vastgelegd en er lopen diverse programma's. De RES is aanvullend op deze lokale aanpakken en bestaande samenwerkingsverbanden, gremia en projecten en dient om deze aanpakken te ondersteunen op regionaal niveau , witte vlekken in deze (regionale) aanpakken te identificeren en waar nodig de om de regionale samenhang te laten zien. Daarbij wordt steeds een afweging gemaakt tussen wat er lokaal kan (dat blijft ook lokaal) en wat er regionaal moet, danwel effectiever is. Bij deze afweging ligt de regie bij de gemeenten zelf. Voor thema's die al goed uitgekristalliseerd zijn (bv. Warmte, geothermie) wordt aangesloten op de huidige lokale en regionale strategieën en samenwerkingsverbanden. De regionale strategie bundelt dat wat er al gebeurt en brengt in beeld wat er nog extra moet gebeuren en geeft een handreiking voor hoe dat te doen.
Met deze RES in de hand kan tevens gewerkt worden aan passende samenwerkingsafspraken met het rijk. Zoals aangekondigd in het regeerakkoord Rutte III. Via een RES kunnen we de kracht van de regio goed benutten om de juiste randvoorwaarden onder de aandacht te brengen en om belemmeringen weg te (doen) nemen. We kunnen zo de weg vrij maken voor (grootschalige) investeringen in de energiehuishouding en distributienetwerken.
We werken in fases, waarbij 2018 benut wordt om meer (be)grip te krijgen op de opgave (stip op de horizon) en welke stappen er nog wél gezet moeten worden op korte, middellange en lange termijn (handelingsperspectief), om het totale samenspel van vraag en aanbod, besparing en mobiliteit de juiste kant op te richten. Met name rond de ruimtelijke inpassing liggen er nog veel uitdagingen. Met deze RES in de hand kunnen de gemeenten (samen) bepalen op welke wijze en in welk gremia/verband ze willen samenwerken om het gestelde doel te realiseren. In 2018 zal gekeken worden welke organisatiestructuren nodig zijn en welke mate van samenwerking.
Samenhang met lopende (sub) regionale projecten en aanpakken

In dit proces is het van belang dat er effectief wordt samengewerkt. De beschikbare expertise vanuit deelnemers, maar vooral ook uit bestaande projecten en samenwerkingsverbanden wordt benut voor de RES. We kijken dan expliciet ook naar de Warmtealliantie, Aardwarmtealliantie, Greenport West-Holland, het Havenbedrijf Rotterdam en lopende VNG aanpak energiebesparing in de gebouwde omgeving, om noodzakelijke kennis en inzichten voor de RES te leveren. Daarbij wordt geen dubbel werk verricht. Wat al aan projecten en acties loopt is goed en komt samen in de RES.

Hoofdvragen

Concreet gaan we aan de slag met het beantwoorden van de volgende 3 vragen:

1. Wat gebeurt er nu al lokaal en regionaal wat bijdraagt aan de doelstelling?
2. Wat is er aanvullend regionaal nodig en mogelijk in de toekomst om de doelstelling te bereiken?
3. Wat en wie is er nodig om zover te komen?
4. Wat gaat wie doen de komende jaren om de doelstelling te realiseren

2. Aanleiding

Vanuit het Parijs-akkoord van december 2015 werken landen aan de vermindering van de uitstoot van broeikasgassen. Doel is om de stijging van de temperatuur niet boven de 2 graden te laten komen ten opzichte van 1990 en liefst niet hoger dan 1,5 graden. Landen en regio's worden gevraagd plannen op te stellen en daarover te rapporteren.

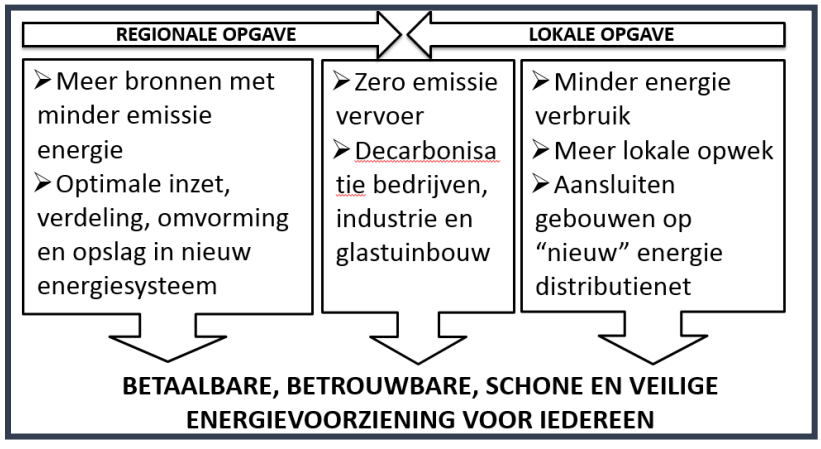
Hoewel dit een mondiale doelstelling is, liggen de acties dicht bij huis, in de gemeenten, bij inwoners en bedrijven. Beperken van CO_2 uitstoot vraagt vanuit de huidige fossiel georiënteerde economie een grote aanpassing. Geen aardgas om huizen te verwarmen, meer elektriciteit voor transport en verwarming, duurzame stroom met zichtbare impact op het landschap, opslag van energie en de aanpassingen boven- en ondergronds om energienetwerken robuust te maken. Investeringen die gepaard gaan met het realiseren van de energietransitie bieden kansen voor bedrijven en werkgelegenheid in de regio en verbeteren de concurrentiepositie.

Highlights
- Parijs-doelen CO_2 reductie
- Lokale opgave met regionale afhankelijkheden
- Impact op de ruimte
- Aandacht voor wat lokaal kan en regionaal moet
- Er gebeurt veel, overzicht en richting vraagt aandacht
- Invullen witte vlekken, randvoorwaarden voor succes in beeld
- Bieden houdbaar perspectief voor investeringen
- Zorgen voor goede uitganspunten voor afspraken met het Rijk
- Energiemix MRDH is het startsscenario

Binnen de regio zijn momenteel vele initiatieven op verschillende thema's om te komen tot klimaatneutraal in 2050. Gemeenten verschillen per thema met elkaar in tempo in de aanpak. Momenteel ontbreekt een goed overzicht van deze initiatieven en waar we met onze opgave staan . Om de energietransitie vorm te geven zullen we breed en in samenhang op de thema's (CO_2 vrije) hoge en lage temperatuur, Opwekking van CO_2 vrije elektriciteiten de distributie + opslag daarvan en CO_2 vrije mobiliteit, aan de slag moeten gaan omdat ze onderling verbonden zijn en het merendeel een ruimtelijke impact hebben. Zo kunnen we witte vlekken in de totale energiemix in beeld brengen en inzetten op het wegnemen van gemeenschappelijke knelpunten voor implementatie.

Lokaal en regionaal

De energietransitie speelt op (inter) Nationaal, regionaal als lokaal niveau. Elk niveau en project heeft een eigen opgave, maatregelen, instrumenten en stakeholders. Lokaal gaat het onder andere om het zoeken naar de beste (financiële en technische) mogelijkheden om woningen/wijken en gebouwen op alternatieven voor aardgasverwarming aan te sluiten, isolatie van gebouwen en lokale duurzame stroomopwekking. Op regionaal niveau is de opgave het beschikbaar maken van steeds meer bronnen met steeds minder emissie en het komen tot een energie systeem dat met omvorming en opslag altijd betaalbare en schone energie kan leveren voor iedereen. Daarbij gaat het om het verbinden van kansen, maatschappelijk , economisch en ruimtelijk (onder- en bovengronds). De regionale opgave betreft ook het agenderen van kansen waardoor de transitie effectiever en



efficiënter kan gaan. De wisselwerking tussen verschillende niveaus is belangrijk en moet plaatsvinden om succesvol te zijn.
Belangrijk is te constateren dat de Energietransitie alleen kunnen realiseren als we samenwerken met andere stakeholders. (Energiebedrijven, woningbouwcorporaties, waterleidingsbedrijven, zware industrie et cetera) We moeten komen tot een gezamenlijke gedragen energiestrategie paraplu. Die voldoende ruimte biedt om te experimenteren maar toch voldoende richting geeft om regionale zaken op te pakken. Deze worden in het proces nadrukkelijk betrokken op de momenten en met de rol die passend is bij de opgave voor 2018.
Regionale Energiemix - MRDH
Vanuit de samenwerkende gemeenten in de MRDH speelt al langer de behoefte om in beeld te brengen voor welke opgave ten aanzien van de energietransitie we staan. Om dat inzicht te krijgen is inzichtelijk gemaakt (Duurzame energiemix MRDH 2050) wat de huidige energie vraag is, potentiële besparing en bronnen kunnen zijn waarmee we de toekomstige energievraag zouden kunnen invullen, zijn weergegeven. Deze verkenning is per gemeente en voor de gehele regio gemaakt.

Conclusies Energiemix MRDH
- De transitie opgave is omvangrijk en complex
- Alle oplossingen (energie bronnen en efficiency maatregelen) zijn nodig
- Geen enkele gemeente in de regio en ook de totale regio kan geheel zelfvoorzienend op het gebied van duurzame energie zijn: we hebben elkaar en gebieden en partners buiten onszelf nodig
- **Hernieuwbare bronnen zijn niet allemaal goed te sturen. Om te komen tot energiezekerheid (het hele jaar door) zullen omvormingsalternatieven en opslag nodig zijn.**
- Energie infrastructuren zullen aangepast en uitgebreid moeten worden
- De regio Rotterdam Den Haag biedt kansen voor samenwerking en optimalisatie
- In de samenwerking liggen kansen om het systeem te versterken
- Inzicht in (regionale) kansen en hoe deze te verzilveren moet nog uitgewerkt worden
- Behoefte aan handelingsperspectief – waarmee willen en moeten we aan de slag en wie doet wat?
- Gemeenten hebben grotendeels zelfde soort opgaven maar zetten nu in op verschillende oplossingen, o.a. voor warmte, in de wijken en voor nieuwbouwontwikkelingen.

3. Meerwaarde van een regionale aanpak

De keuze die voorligt is om in samenwerking met decentrale overheden en essentiële stakeholders in de regio Rotterdam Den Haag een regionale energiestrategie (RES) op te stellen. Met deze RES kunnen de lokale aanpakken die er zijn worden ondersteund en versterkt. Tevens kan met de RES in de hand gewerkt worden aan goede afspraken met het rijk over de rol van lokale overheden en wat er nodig is op rijksniveau. De keuze voor een regionale aanpak komt mede voort uit de ervaringen die binnen andere regionale aanpakken uit de pilot-regeling van de VNG zijn opgedaan. Daarnaast steunt de investeringsagenda van de VNG, het IPO en de UvW op een landelijk dekkende basis van Regionale Energiestrategieën (RES). In het regeerakkoord Rutte III is tevens een verwijzing opgenomen naar regionale doelmatige plannen, waar deze RES aan zal bijdragen.
Voor de regio Rotterdam Den Haag is deze RES er nog niet.
Uit de reeds beschikbare Routeplannen energie/energiemix blijkt dat er in het uitgewerkte scenario lokaal en regionaal alles uit de kast gehaald moet worden om energie op te wekken die gebruikt wordt.

> Passage Regeerakkoord 2017-2021 – p. 32
> "Het kabinet werkt met de medeoverheden, corporaties, netwerkbedrijven en andere stakeholders een beleidsprogramma uit voor de verduurzaming van de gebouwde omgeving. Een eerste stap is het opstellen van regionale plannen met gemeenten, provincies, waterschappen en netbeheerders om per regio te komen tot een doelmatige aanpak met een optimale mix van energiebesparing, duurzame warmte en duurzame opwekking. "

Ook komt naar voren dat een deel van de energie van buiten de regio zal moeten komen. **De regionale samenwerking is nodig om te definiëren wat ons in de regio te doen staat en waar we andere partners voor nodig hebben**. De samenwerking is ook de basis om met andere regio's, provincie Zuid-Holland en het Rijk het gesprek aan te gaan op het gebied van ontwikkeling en ontsluiting van duurzame energiebronnen, investeringen in een robuust netwerk, opslag en omvorming van energie. Dit is een voorwaarde om een sterke en sociaal economisch voorspoedige regio te blijven. Daarbij staan we als regio gezamenlijk sterker.
Ook organisatorisch vraagt deze opgave een regionale benadering. De beschikbaarheid van nieuwe energiebronnen, zowel voor warmte ale elektriciteit nu nog beperkt en opschalen naar het benodigde niveau vraagt een gezamenlijke ruimtelijke afweging. Regionaal zal bezien moeten worden hoe verschillende energiebronnen het beste ingezet en verdeeld kan worden. De te maken keuzes moeten opgeteld tot een betaalbare, betrouwbare, schone en veilige energievoorziening leiden. Gezamenlijke afstemming met het rijk, provincie, netbeheerders kan bijdragen aan het integrale beeld en de totale opgave. Daarnaast kunnen via een regionale structuur meer en eenvoudiger externe middelen worden gerealiseerd en inzichtelijk worden gemaakt welke (belemmerende) wet en regelgeving aangepast moet worden. De pilotregio's uit de VNG-aanpak maken dit ook duidelijk.

De regionale samenwerking tussen gemeenten, provincie en waterschappen biedt o.a. de volgende kansen:

- Samen met partners kansen in de regio (kunnen) verzilveren.
- Inzicht in kaders en opties voor lokale systeemkeuzes om zo leveringszekerheid en de balans in het energiesysteem te kunnen blijven borgen. Gemeenten bepalen zelf welke lokale oplossingen waar het beste passen.
- Inzicht in welke regionale energie (infrastructuur) er nodig is.
- Ruimtelijke impact van de energietransitie inzichtelijk maken.
- Afstemming met regionale stakeholders om gelijke tred te houden (overheden, netbeheerders, private energieproducenten, investeerders).
- Zicht in mogelijke opschaling ontwikkeling van schone energiebronnen (stroom en warmte) versnellen.
- Instrumentarium en kennis te delen om (lokale) aanpak te versnellen (handelingsperspectief).
- Lobby strategie.
- Inzicht in voortgang van de transitie, in relatie tot de doelstelling. Nodig om de koers bij te stellen en nieuwe ontwikkelingen te kunnen volgen.
- De RES levert een bijdrage aan de totstandkoming sociale innovatie (betrekken burgers,

4. Inbedding en partijen

Deze samenwerking bestaat primair uit de lokale overheden die actief zijn in de contour van de regio Rotterdam Den Haag. In de uitvoering wordt vervolgens een nauwe samenwerking gezocht met alle partijen die nodig zijn om op regionaal niveau stappen te zetten.
Net als in andere regio's is de provincie Zuid-Holland een partner in de RES. De Energieagenda Zuid-Holland ziet op samenwerking en ondersteuning van regio's en –samenwerkingsverbanden van-gemeenten, De provincie vormt tevens een belangrijke schakel naar andere inhoudelijk georiënteerde samenwerkingsverbanden zoals de Warmtealliantie, Aardwarmtealliantie en kan een verbinding leggen met provinciale beleidsterreinen, met name voor het ruimtelijke en economische domein is dat van groot belang.
De vier binnen de regionale contour gelegen waterschappen worden nauw betrokken bij de uitvoering van de RES met een plek in de stuurgroep en in het ambtelijke netwerk.
In de uitwerking van deze opdracht wordt een beroep gedaan op andere essentiële stakeholders zoals netbeheerders, het havenbedrijf Rotterdam, Greenport West-Holland, Warmtealliantie, woningcorporaties (verenigd in maaskoepel en SVH), waterbedrijven, energiebedrijven en andere relevante kennis- en uitvoeringspartners. Hierbij is doel om 1. Ervoor te zorgen dat de RES haalbare en passende inzichten biedt en 2. zoveel mogelijk draagvlak te organiseren voor de Regionale Energiestrategie. (Wanneer dit nodig is zullen zij uitgenodigd worden om deel te nemen aan de stuurgroep.)
Het opstellen van de RES en de bijbehorende samenwerking tussen de gemeenten vindt niet plaats vanuit de gemeenschappelijke regeling van de MRDH, aangezien deze beperkt is tot economisch vestigingsklimaat en verkeer en vervoer. Voor de organisatie van de RES wordt gebruik gemaakt van het bestaande Bestuurlijk Netwerk Energie wat op MRDH-niveau is geïnitieerd. Hierdoor worden dubbele structuren en onnodige 'bestuurlijke drukte' tegengegaan. Het Netwerk kan een dubbelrol vervullen. 1. Als kennisnetwerk/verbinder en 2. Als overleg platform waarin besluitvorming plaatsvindt over de RES door de gezamenlijke opdrachtgevers.
De MRDH samenwerking van de 23 gemeenten op het gebied van vervoer en economie zoals vastgelegd in de gemeenschappelijke regeling kan worden benut voor afstemming met het Regionale Investeringsprogramma en de Roadmap Next Economy. Ook wordt het Bestuurlijk Netwerk Energie ondersteund vanuit de MRDH-organisatie. Daarnaast kan de structuur van de MRDH benut worden voor toegang tot andere netwerken, lobby, expertise of als klankbord. Op die manier is er een logische verbinding te maken met de lopende economische- en bereikbaarheidsagenda.

De regionale samenwerking staat uiteraard niet in de weg voor gebieds- of objectgebonden acties waar een of meer gemeenten bij betrokken zijn, deze lokale opgave zal in de gemeenten zelf vorm gegeven worden. Alle projecten in de regio kennen een eigen dynamiek die zich zelfstandig verder ontwikkeld. Alleen als het van meerwaarde is voor betrokken partijen en projecten zal de verbinding worden gelegd met de RES. De voorgestelde samenwerkingsvorm gaat ervan uit dat portefeuillehouders met eigen mandaat deelnemen aan de besluitvorming en dat partijen zelf voorzien in de lokale uitwerking van conclusies vanuit deze overeenkomst, besluitvorming en communicatie, ook wat betreft informeren/agenderen bij gemeenteraden, Provinciale Staten en Algemeen Besturen.

5. Proces, resultaten en acties

Het lange termijndoel is de realisatie van een betaalbare, betrouwbare, schone en veilige energievoorziening voor iedereen in de regio Rotterdam Den Haag in 2050, wat inhoudt: CO_2-arme energievoorziening, die bestaat uit meerdere bronnen en waar door het inzetten van omvorming en opslag de leveringszekerheid ook in tijden met lage hernieuwbare opwek in de energie vraag kan worden voorzien. Als het gaat om schoon, gaat het enerzijds om het verlagen van luchtvervuilende stoffen als fijn- en stik stof en anderzijds het verlagen van de uitstoot van broeikasgassen in 2050 met 80-95% terugdringen". Deze opgave alleen biedt te weinig concrete aanknopingspunten om aan de slag te kunnen. Als eerste stap (2018)wordt daarom het volgende tussendoel gehanteerd
Voor 2018 is de ambitie om:
Inzichtelijk maken wat op regionaal niveau mogelijk en nodig is, in concrete stappen, om de transitie(1) naar betaalbare, betrouwbare, schone en veilige energie voorziening voor de gemeenten mogelijk te maken. Hiermee zijn de hoofdresultaten 1. Een Regionale visie op de energietransitie richting 2050 en 2. Een vertaling naar kansen (wat kunnen we nu gaan doen?) op de korte termijn. 3) Hoe en door wie kunnen de kansen het beste opgepakt worden. En welke (deel)samenwerking is nodig tussen de deelnemende partijen (Gemeenten, waterschappen en provincie).
De RES is niet het sluitstuk maar, samen met de lokale energiestrategieën, het fundament waarop partijen de komende jaren verder kunnen werken aan de uitvoering. Het proces naar de RES moet dus ook leiden tot commitment bij partijen om – waar dit nodig is - hun rol te pakken in het vervolgtraject. De RES moet in 2018 leiden tot de volgende resultaten:

- Inzicht in de ruimtelijke, sociale en economische impact die de energietransitie heeft (basis vormt de bestaande Energiemix factsheet).
- Inzicht in kansen (o.a. bronnen voor warmte en stroom, binnen en buiten de regio) en beperkingen (m.n. economisch en ruimtelijk) voor de energietransitie
- Onderlinge afhankelijkheid en samenhang in de regio in beeld brengen en hoe kansen verzilverd kunnen worden.
- Welke (regionale) energie infrastructuur is nodig, inclusief conversie en buffering
- Een strategie met tijdpad en tussendoelen die in de regio bijdraagt aan het doel en die gericht is op uitvoering. Deze moet kunnen meebewegen met innovaties en andere relevante ontwikkelingen (flexibiliteit is noodzakelijk).
- Benoemen concrete maatregelen en vertalen naar regionale acties/uitvoeringsprogramma op korte-, middellange- en lange termijn incl. een handelingsperspectief voor deelnemende partijen,
- Inzicht in de ondersteuningsbehoefte van de gemeenten en inrichten kennis- en ondersteuningsstructuur (in 2018)
- In beeld brengen welke randvoorwaarden verbeterd/veranderd moeten worden (lobbystrategie)
- Eerste inzicht in kansen voor nieuwe business modellen en de marktkansen (en risico's) van de transitie en daarvan afgeleid groei in werkgelegenheid
- Inzicht in (EU) fondsen die een bijdrage kunnen leveren aan de ontwikkeling en implementatie van duurzame energieoplossingen.

Plan van Aanpak

Om deze resultaten te bereiken wordt een plan van aanpak opgesteld. Daarin wordt een concrete aanpak beschreven en wordt m.n. het startpunt vastgelegd (zowel ambitie, verwachtingen als eindproduct per 31-12-2018) . De totstandkoming van de RES zal gefaseerd plaats vinden. Na iedere fase is er een evaluatiemoment. Hierbij wordt het proces, de betrokken stakeholders, organisatiestructuur en de inhoudelijke vooruitgang geëvalueerd, zodat waar nodig bij gestuurd kan worden. Bij de evaluatie wordt het bestuurlijk netwerk energie betrokken

In de eerste fase zal vooral in beeld worden gebracht wat momenteel al gebeurt , welke witte vlekken er zijn en wordt een verkenning gemaakt van , wat nodig is om de energievoorziening klimaatneutraal te maken in 2050 en welke regionale samenwerking noodzakelijk is om dit doel te realiseren. In de tweede fase worden de resultaten van de eerste fase nader uitgewerkt.

Onderdeel van die aanpak zijn onder andere:

- Analyse andere RES (vanuit VNG-programma)
- Stakeholderanalyse – incl. hoe de stakeholders in het proces te betrekken
- Analyse lokale energieprogramma's – inzicht in waar we nu staan en waar ondersteuningsbehoefte ligt (middels gesprekken per deelnemer en met aandacht voor specifieke sectoren)
- Afbakening van rollen, verantwoordelijkheden en taken van betrokken stakeholders
- Projectmanagement planning (o.a. voor sectorale of thematische bijeenkomsten en expertmeetings)
- Jaarplanning/kalender – met events, communicatie- en beslismomenten
- inzicht in mijlpalen en tussenstappen
- Communicatiestrategie (primair gericht op deelnemers en stakeholders)
  Deze dient om meer inzicht te krijgen in de marktkansen (en risico's) van de transitie en daarvan afgeleid groei in werkgelegenheid. – Relevant vanwege mogelijke effecten van afbouw fossiel georiënteerde industrie.
- Uitgangspunten voor een rijks/EU- lobbyagenda

Monitoring

Om tussentijds de voortgang van de RES te kunnen volgen wordt in 2018 (ten minste) twee keer gerapporteerd over de voortgang. Rapportage geschiedt o.b.v. de mijlpalen en tussenstappen uit het op te stellen plan van aanpak, en financiën. Na afloop van het project wordt een eindrapportage opgemaakt.

5. Uitganspunten voor de uitvoering

Inhoudelijke uitgangspunten:
Ter uitvoering van deze opdracht en het bereiken van de doelstellingen is het nodig om een aantal uitgangspunten of kaders te definiëren waarbinnen de activiteiten plaatsvinden. In de eerste fase zal het met name gaan om het in beeld brengen van de visie op de RES en worden kansen voor de korte termijn in beeld gebracht. In het plan van aanpak wordt dat nader nader uitgewerkt. In deze eerste fase wordt optimaal gebruik gemaakt van ideeën en kennis in de markt (lees open aanbesteden). Daarom is het nodig om in deze notitie qua resultaten en proces ruimte te laten om gedurende het proces bij te sturen. De verkiezingen in maart zijn een logisch moment om de aanpak tussentijds te evalueren en om bij te sturen.

In deze fase hanteren we de volgende inhoudelijke uitgangspunten:

- Uitgangspunt is de CO_2-doelstelling uit het energie rapport van het Rijk:" schone, energievoorziening, die veilig, betrouwbaar en betaalbaar is. ", "uitstoot van broeikasgassen in 2050 met 80-95% terugdringen".
- Er wordt gewerkt vanuit totale energie vraag en aanbod van de regio.
- CO_2-neutraliteit is geen voorwaarde, er wordt gewerkt vanuit technische, ruimtelijke, economische en maatschappelijke kansen.
- Het regionale eindbeeld wordt weergegeven voor het jaar 2050 (gemeenten kunnen zelf bepalen of dit doel eerder bereikt moet worden).
- De uitkomsten van de RES vormen integraal onderdeel van provinciale en landelijke afstemming.
- Er wordt gebruik gemaakt van de aanwezig informatie, waaronder de uitkomsten van de Energie Mix factsheet MRDH
- De RES dient een handelingsperspectief te bieden op een strategisch niveau voor deelnemers aan de RES en direct betrokken semi-publieke stakeholders.
- De rol en opgave van de Rotterdamse Haven vraagt een specifieke gebiedsgerichte aanpak. In deze RES wordt daarmee een verbinding gelegd. De aanpak vraagt echter een dermate andere strategie dat nadere uitwerking van hoe deze verbinding eruit ziet nodig is.

Uitgangspunten voor de samenwerking:

De regionale energiestrategie vraagt om een inspanning van deelnemende gemeenten, waterschappen en provincie. Ieder heeft een eigen opgave en de regionale aanpak steunt daarop. Om de gezamenlijke opgave uit te kunnen voeren is nodig dat we werken vanuit een aantal uitgangspunten:

Uitgangspunten voor samenwerking

- Geen bevoegdhedenoverdracht, wel gedeelde verantwoordelijkheid voor de totale opgave
- Uitgaan van lokale krach, bestaande thematische lokale/regionale energiestrategien en structuren en ontwikkelkansen en richten op het verzilveren van die kansen, De RES mag het lokale en bestaande regionale proces niet remmen
- Toegankelijkheid van expertise en informatie vanuit bestaande clusters (w.o. Haven, Warmtealliantie, Geothermiealliantie, Greenports en VNG aanpak energiebesparing gebouwde omgeving/Next Generation woonwijken is essentieel om geen dubbel werk te doen.
- Er zal sprake zijn van een iteratief proces (balans vinden tussen wat regionaal mogelijk en lokaal wenselijk en haalbaar is). Dit kan ook leiden tot nieuwe inzichten t.a.v. de lokale situatie.
- Meedoen met de RES vraagt van partijen inzet in expertise capaciteit en een financiële bijdrage
- Ook in de eigen organisatie is slagkracht nodig om de Parijs-doelen te halen en om het meeste uit de RES te halen.

6. Projectorganisatie

Voor de uitvoering van de RES wordt een projectorganisatie gevormd. Deze projectorganisatie is zodanig ingericht dat er doelmatig en efficiënt gewerkt kan worden en tegelijkertijd voor de partijen de benodigde sturing en invloed mogelijk blijft. Enthousiasmeren, inspireren, verbinden, organiseren en richting geven is het credo. Deze weergave is een momentopname. Indien dat voor de goede uitvoering van de overeenkomst nodig is, kunnen in de organisatie wijzigingen doorgevoerd worden. middels een besluit van het Bestuurlijk Netwerk Energie.
Deze projectorganisatie is ook schematisch weergegeven in bijlage 1.

- **Bestuurlijk Netwerk Energie**

  Bestaat uit: (bestuurlijke) afvaardiging vanuit gemeenten, waterschappen en provincie Zuid-Holland,. Er worden daarnaast op ad hoc basis partijen uitgenodigd die van belang zijn voor de opgave.
  Het Bestuurlijk Netwerk Energie Is het gremium waarin de gezamenlijke opdrachtgevers van de RES besluiten nemen, en kennis en ervaringen delen.

- Stuurgroep met een bestuurlijke afvaardiging vanuit: Provincie Zuid-Holland, Hoogheemraadschap van Delfland (namens de waterschappen), gemeenten Rotterdam, Den Haag, Delft, Krimpen a/d IJssel, Barendrecht (namens de gemeenten)

  Is bestuurlijk opdrachtgever van het ambtelijk opdrachtgeversteam en de coördinator RES. De leden zetten zich actief in binnen de samenwerking als extern ten behoeve van de RES. De samenstelling van de stuurgroep kan wijzigen gedurende het proces om aan te sluiten bij de aanpak, dit ter beoordeling van het Bestuurlijk Netwerk Energie. Er wordt in elk geval na de gemeenteraadsverkiezingen besloten over de samenstelling.

- **Ambtelijk netwerk Energie**

  Ambtelijke Vertegenwoordiging van de partijen die deelnemen aan het Bestuurlijk Netwerk Energie. Het ambtelijk netwerk energie MRDH stuurt op ambtelijk niveau op de realisatie van de overeenkomst en is adviserend orgaan voor het ambtelijk opdrachtgeversteam
  Leden zijn:
  - mede-uitvoerder van deze overeenkomst en zetten zicht gevraagd en ongevraagd in voor de realisatie van de RES.
  - ambassadeur van de RES.

- eerste aanspreekpunt voor de eigen organisatie en zorgen voor doorvertaling van lokale standpunten naar de RES en v.v.
- zorgen voor interne bekendheid met de RES
- verzorgen besluitvorming en ondersteuning van hun portefeuillehouder in het Bestuurlijk Netwerk.
- aanspreekbaar voor uitgezette acties vanuit (leden van) het ambtelijk opdrachtgeversteam.

- Ambtelijk opdrachtgeversteam

  Ambtelijke afvaardiging vanuit het Ambtelijk netwerk Energie, aangevuld met een medewerker van de MRDH en de coördinator RES:
  Zorgen voor de realisatie van deze opdracht, sturen (externe) opdrachtnemers aan en bereiden bestuurlijk en ambtelijke overleggen en afstemming voor. Zetten zich op ambtelijk niveau intern en extern in t.b.v. de realisatie van de RES. Rapporteren adequaat over de voortgang van de overeenkomst en resultaten.
- Coördinator RES.

  Heeft een verbindende rol in bij de uitvoering, moet Enthousiasmeren, inspireren, verbinden, organiseren en richting geven. Hij is aanspreekbaar en beschikbaar voor alle aangesloten partijen en stakeholders en zorgt dat iedereen gehoord wordt en betrokken kan zijn. Is op ambtelijk niveau extern ambassadeur voor de RES. Daarnaast zorgt hij voor de voortgang van de uitvoering van het plan van aanpak. en heeft mandaat om privaatrechtelijke verplichtingen aan te gaan t.b.v. de RES en binnen de kaders van het plan van aanpak. Draagt zorg voor monitoring, tussentijdse rapportage en stelt de agenda op voor het Ambtelijk opdrachtgeversteam. De coördinator is onderdeel van het opdrachtgeversteam maar is niet aan een van de betrokken partijen gebonden
- Netwerken (diverse vormen en invulling)

  Kennis-, werk- en inspiratiesessies rondom thema's/projecten, waarbij naast ambtelijke partijen ook andere betrokken stakeholders uit bedrijfsleven, woningbouw-, mobiliteits-, industrie- en energiesector met elkaar om tafel zitten.
  Afhankelijk van het plan van aanpak en het procesverloop zal er op thema, project of sectoraal niveau kennis moeten worden opgediept en worden vertaald voor de RES.
  Daarvoor zullen in kleinere gremia, met diverse stakeholders uitwisselingsmomenten moeten plaatsvinden.

7. Begroting en dekking

Begroting

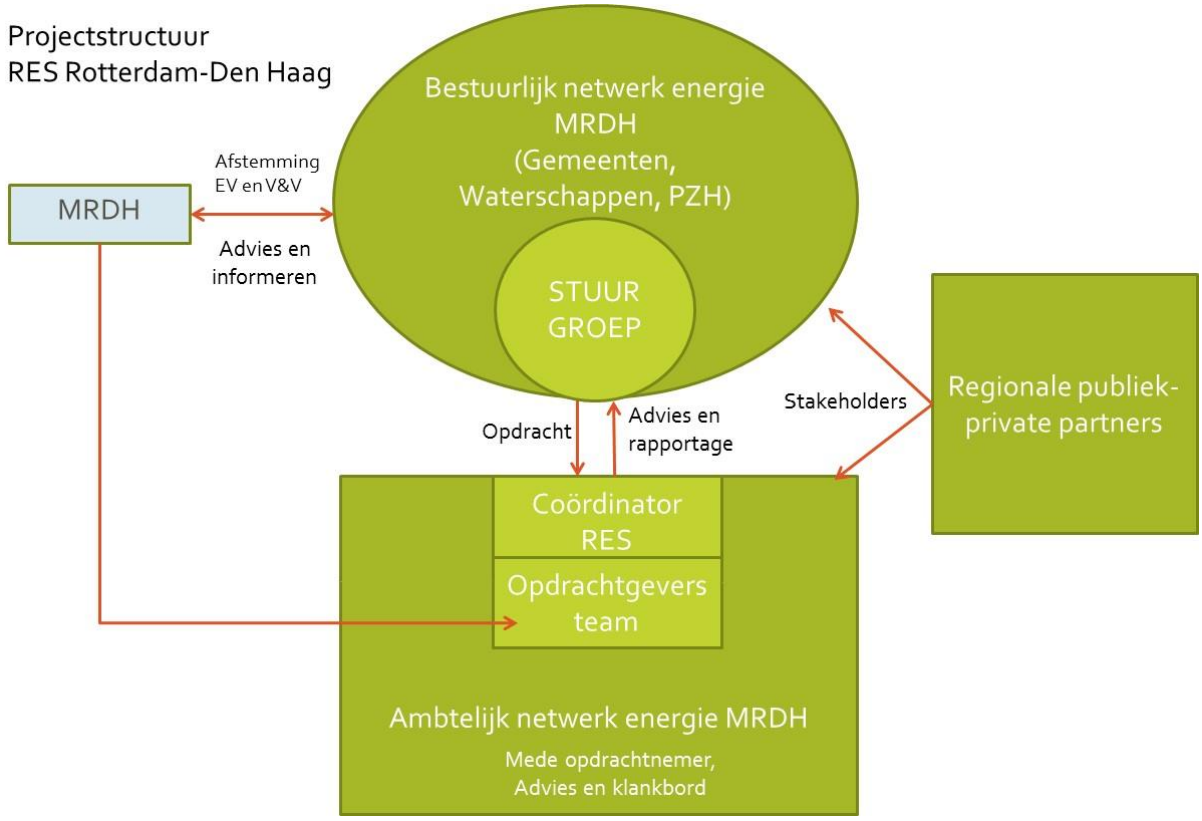
De begroting van de RES zal nader worden uitgewerkt in het projectplan en worden aangepast aan de definitieve bijdragen vanuit deelnemers. De genoemde bedragen zijn daarom beïnvloedbaar. Voor nu wordt volstaan met een totale kosteninschatting ter grootte van € 250.000 – € 300.000 voor 2018 (vergelijkbaar met midden Holland)

Dekking

Om de RES op te stellen en de doelstellingen te bereiken zijn middelen nodig.
Zoals in de presentatie d.d. 4 november en bespreking over de uitgangspunten van de RES is aangegeven, wordt van deelnemende partijen inzet gevraagd. Dit zal in de vorm zijn van uren die besteed worden aan het bijwonen en voorbereiden van overleggen, Informatie uitwisselen, interne afstemming, interne besluitvorming, communicatie en ad hoc het beschikbaar stellen van b.v. vergadercapaciteit.
De inzet van het ambtelijk opdrachtgeversteam door de partners in de RES geschiedt kosteloos.
Taken en rollen worden a.d.h.v. het projectplan nader ingevuld.
Naast inzet in tijd wordt van gemeenten een bijdrage gevraagd op basis van inwonerafhankelijke staffels. De provincie zal een bijdrage leveren die passend is bij haar rol.
Voor de hoogte van de staffels wordt 2018 gebruik gemaakt van de vastgestelde staffels van Alliantie energietransitie en zoals hieronder weergegeven:

Staffels RES	
Inwoneraantal	Bijdrage kalenderjaar 2018
0 tot 30.000	€ 4.600
30.001 tot 75.000	€ 9.300
75.001 tot 100.000	€ 14.000
100.000 tot 200.000	€ 18.500
200.000 of meer	€ 37.000

Bijlage 1. Overzicht projectstructuur



F: Energy mix MRDH

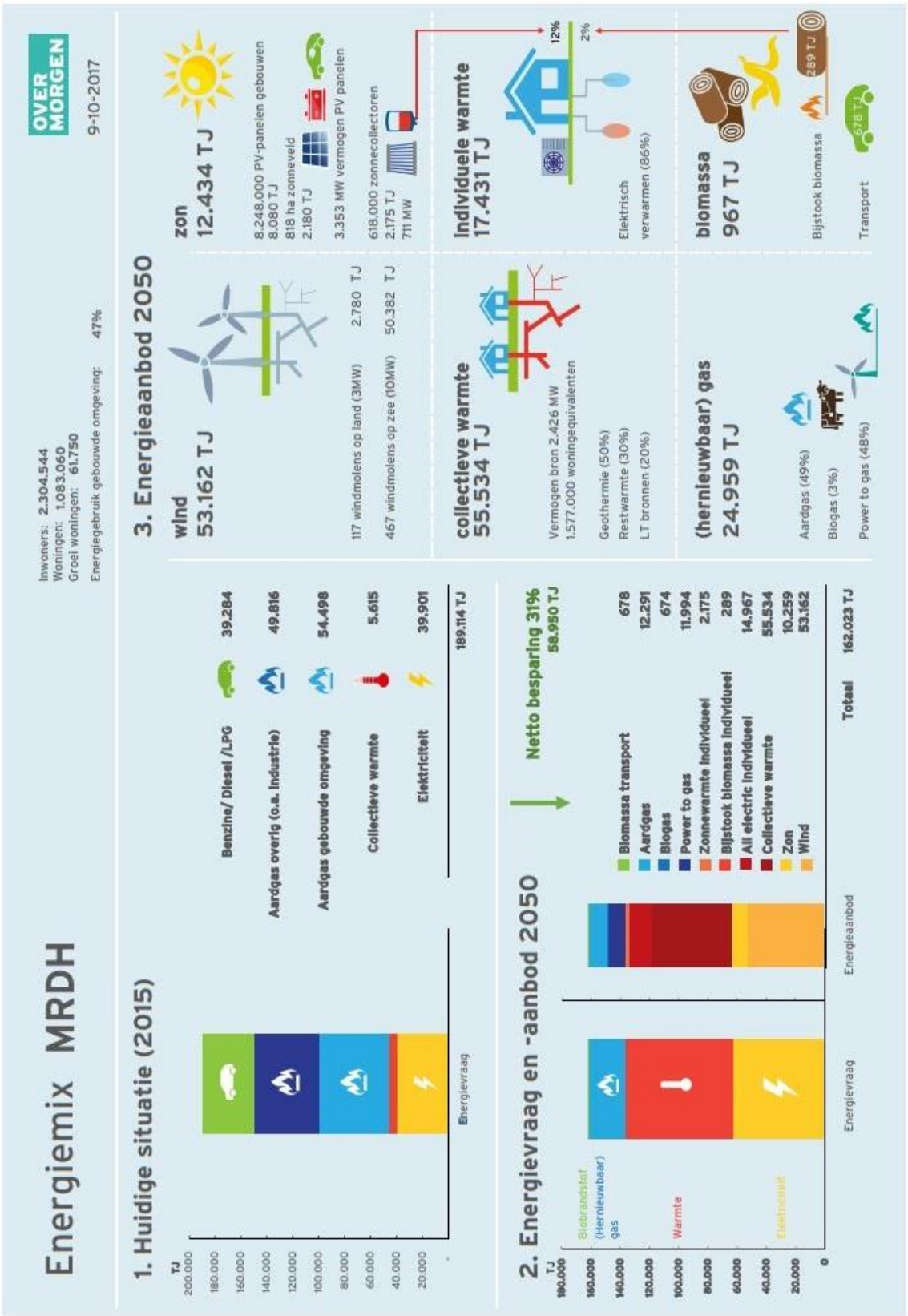


Figure 1: Energymix MRDH.

H: Phases (steps) of the RES MRDH process

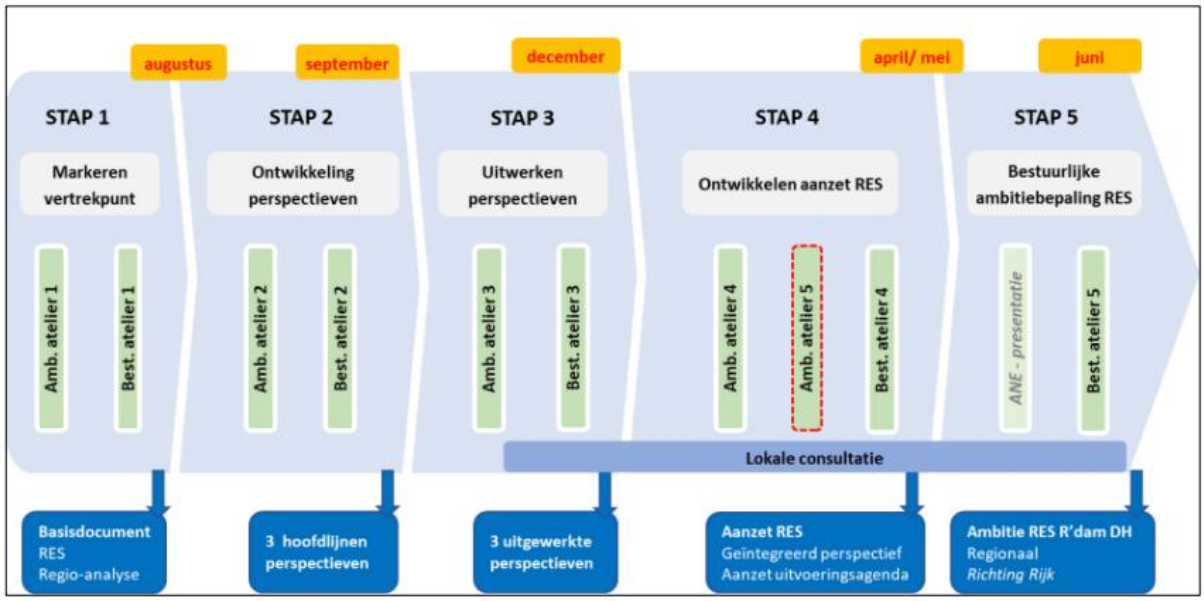


Figure 1: Phases of the RES process including the workshops.

I: The transcribed interviews of the umbrella organisations and the Ministry of Internal Affairs

The Association of Netherlands Municipalities perception of the RES assignment

An introduction to the Association of Netherlands Municipalities (Vereniging Nederlandse Gemeenten, VNG) can be found in Section 5.1.2. The interview was held by Marjon Bosman (Appendix A).

Report:

The RES assignment is a collaboration platform in which agreements are set up with public parties, the business and social organisations on the energy transition in the region. The aim is to achieve the national energy supply goals for the built environment, including electricity and heat. In addition, the RES helps to integrate the energy generation into the landscape with as much involvement as possible from the related parties.

There are barriers and limitations to this process, such as time; it will be difficult to get as many parties such as residents, organisations, et cetera as possible involved in the RES process. Thus, half a year after the release of the Climate Agreement, the RES will not be fully supported. Nonetheless, some parties at the climate tables do assume that. Municipalities (regions) are not yet able, in terms of resources and people, to appropriately shape this process participation. Specifically for the MRDH region holds that the spatial integration of wind and solar energy becomes very complicated because there are so many spatial limitations, which can result in a fragmented landscape.

As VNG, we have a clearly defined role in this process. We will inform our members as much as possible about the RES and update them about the usefulness and necessity of the climate agreement, and the RES as an implementing instrument. The decentralised authorities have asked for a more central role during the implementation phase. So we have to give it to them! The umbrella organisations will help with propagating those roles. Furthermore, the role of VNG is to lobby for the right processes' boundary conditions, meaning that the decentralised authorities will be equipped with enough time, resources, people and powers to carry out this assignment adequately.

With regard to process management and network governance, we would like to see each regional commissioning party formed by a delegation of at least five representatives and a grid operator. The VNG and the municipalities are well represented in the program council. Regional administrators have a place in the program council. It is of importance that a good connection is maintained with the social parties through the program council and the program team.

The Interprovincial Consultation's perception of the RES assignment

The Interprovincial Consultation (Interprovinciaal Overleg, IPO) takes care of the joint interests of the provinces, on the one hand by playing an informative and guiding role in the (formal) preparation of policy that is important for the provinces, and on the other hand through knowledge sharing and information provision to provincial partners and stakeholders. In this way, provinces can exchange 'best practices' and initiate innovations in provincial policy. The aim is to contribute to the quality, effectiveness and efficiency of public administration (IPO, 2019). The interview was held with Richard Kleefman (Appendix A), who works as an energy advisor for IPO.

Report:

A short history of the RES

It RES initiative started in 2008 with a group of highly driven civil servants who worked for different municipalities. They realised that individual municipalities could not achieve a high action perspective in the energy transition by solely looking within the municipal boundaries.

Therefore, they went to the Ministry of Internal Affairs to co-create a supra-municipal plan that allowed for more effectiveness in terms of action perspective. As a result, the 'Green Deals[7] RES version 1.0' have started in 2015. In 2017, these pilot RES'es have been completed. The content of 'RES Version 1.0' was about setting up a schedule/framework on a strategic level for regional energy collaboration. The 'RES Version 2.0' is way more comprehensive as it comprises the implementation phase as well.

Role of IPO in this process

In this nationwide RES process, the IPO safeguards uniformity. The IPO coordinates, it draws frameworks and works on the development of a common calculation system whereby assumptions and boundary conditions are determined. The IPO also releases 'energy potential graphs', in which the geographic limitations per renewable energy source are depicted, ensuring that each individual RES is set up according to the same guidelines. The Role of the IPO in this process will never change.

What is the RES not?

The RES is not without obligations. Besides, the RES is not a regional task. It is a method to see what is spatially possible within the region, by connecting multiple layers and perspectives. For example, considering heat as a renewable energy source in the municipality of Westland, the focus was extensively on the economic aspect, while a world of opportunities opens up when one considers the municipality as an essential link in the heating network. The RES neither is an administrative or policy body (which is exactly what we wanted to prevent), nor is it a technical task, but a societal one.

Some key statements

The following things are important for each RES. First, Engage the councillors, as ultimately the RES must be approved by them in order to anchor the RES in the municipal structure vision. If they are engaged too late in the process, there is a chance that they will oppose. If the topic politics is left aside, the civil servants can be involved in this conversation. Second, the design of the RES intends to look within the region for matching supply and demand. It is not intended to increase the power of 'the region' at the negotiating table. Third, there is not one single RES. Apart from having an assignment description and the given that the RES must contribute to the climate agreement, every stakeholder has a different angle of interest in the RES, which is why each stakeholder will tell a different story about what the RES is and how the RES satisfies their interests. An example of these multiple perspectives of the RES can be acknowledged in the starting moment of the process. Some parties see the declaration of intent as a starting point, while others recognise the points of departure note as the real starting shot.

The Union of Water Boards' perception of the RES assignment

The Union of Water Boards (Unie van Waterschappen, UvW) is the national association of Dutch water boards. The water boards are responsible for the management of flood defences, regional water management and the treatment of wastewater. In total there are 21 water boards in the Netherlands. The UvW represents the water boards in the national and international playing field, promotes the

[7] The Dutch government supports sustainable economic growth, or 'green growth', by stimulating sustainable innovation. This has a positive economic impact (growth and jobs) and avoids harm being done to the climate, water, soil, raw materials and biodiversity. Companies, community organisations and other government bodies that want to take steps towards sustainability sometimes encounter barriers. The national government can help them overcome such barriers by closing a Green Deal with other parties. In this way, the Green Deal approach aids the implementation of sustainable initiatives (Green Deals, 2019).

interests of the water boards and promotes knowledge exchange and collaboration (Unie van Waterschappen, 2019).

The interview was held with Reinier Romein (Appendix A).

Report:
There is not one 'RES assignment'. There is a climate challenge; the RES is a means to shape the climate challenge bottom-up on a regional scale by governments and other organisations in the region. An analysis is made of these regional parties' energy consumption and the opportunities that exist in the region for energy savings and generation, and to identify other possible CO_2 reduction opportunities. Based on these analyses, a regional ambition is formulated wherein agreements are made to anchor these ambitions. It has been agreed that the RES focusses on electricity and the built environment. Although other sectors (industry, agriculture/land use and mobility) are not embedded in the scope of the RES, the region is free to include these, as well as other themes such as climate adaptation.

There are enormous barriers to be overcome, as the Netherlands has never worked together in this way before. Therefore, it is necessary to get into conversation with each other by highlighting the mutual gains. The question is how the agreements on a regional will be legally secured. How do you include the general boards in this process? A critical part of the approach of the RES is the bottom-up process in which the chances of public support are estimated to be larger. Also, there will be pressure from the national climate objectives to achieve these goals by the efforts of all regions. Furthermore, the issue of the provincial elections that may lead to different standpoints in the coming period also plays a role. Many opportunities can be seized if this process succeeds; if mutual gains are found, then other tasks can also be filled in better together. Also, residents will have the feeling that they are part of the energy transition. Finally, the RES can give a boost to the regional economy.

The role of the UvW, together with VNG and IPO as decentralized umbrella organisations, is to help our rank and file to shape this bottom-up process. In addition, we will have to work together with the Ministry of Internal Affairs to make the RES formulation process successful. Therefore, we participate in the NPRES and encourage the water boards to take a position in the RES. A similar role applies to VNG and IPO.

It is of great importance that a transparent process is set up in which all parties are aware of their unique powers. At the same time, clear agreements must be made on which parties take day-to-day decisions and within which framework that happens. Legally securing all agreements in the environmental visions is a crucial part, for which the inclusion of the general boards in the process is considered essential. Knowledge and data must be accessible to everyone, and there must in no way be any discussion about the main principles. Try to keep focus while remaining open for opportunities. If possible, try to adopt the perspective of the resident. How to combine improving the living environment of the resident with the rise of renewable energy technologies?

The Ministry of Internal Affairs perception of the RES assignment

The Ministry of Internal Affairs is one of the eleven ministries of the national government. The ministers and civil servants formulate policy, prepare legislation and regulations, and are responsible for coordination, supervision and policy implementation. The Ministry safeguards the core values of democracy. The ministry stands for effective public administration and public authorities that the public can trust (Ministry of Internal Affairs, 2019).
The interview was held with Gerry Fenten (Appendix A).

Report:

Keynotes of the energy transition in the Netherlands
The last decade, there has been a transformation going on. To implement technologies such as windmills, solar collectors, heat options et cetera successfully, one has to design a process wherein all relevant parties (residents, decentralised authorities, initiators) are involved. Initially, the big energy

system which consisted of coal-fired power plants, gas nets et cetera was spatially implemented by design of the national government. By the 'Environmental Law', the input for the spatial environment has been decentralised. The provinces, municipalities and water boards are now in control. There are two key points in this transformation. First, spatial planning consisted of the domains living, working and recreation. The domain energy must be included. Second, nobody knows exactly how the energy transition should be designed.

The start of the RES'es and its challenges

Gerry got involved with the Green Deal RES version 1.0, which were all about the collaboration between the national government and the decentralised authorities. In this collaboration, the regions wanted to take steps in the energy transition. The regions expressed ambitions such as becoming 'CO_2 neutral, 'energy neutral[8]' or 'climate neutral[9]', but what do those terms truly mean? Is mobility included, and is it a must to generate all energy within the regional boundaries? The RES version 1.0 was intended to find an answer to these questions. Nevertheless, these answers will not offer effective steps towards the climate objectives. A renewable energy distribution plan should be set up, and eventually, decision-making has to be realised. In the spatial environment, the boundary conditions should be as such that companies want to invest. Clarity is the credo. Unfortunately, it turned out that the assignment was too comprehensive. Besides, there was a lack of time. Working at a regional scale level turned out to be more complicated than we thought it would be. To reach energy neutrality[10], more measures should be taken than only providing subsidies for solar panels. Although the set ambitions were beautiful, they were out of reach, for now.

With regard to the Climate Agreement, in which there are five sector tables, everyone turns their head towards the decentralised authorities. Which role should these decentralised authorities consequently occupy? These authorities must implement all the tasks coming from the sector tables, combined, on their own territory. This is quite difficult, as the tasks are fairly different, which is why IPO and VNG state that starting with the sectors built environment and electricity is enough for now because that challenge is complex enough. The sectors mobility, agriculture and land use should be kept out of the assignment for now, which is why the RES version 1.0 is only a part of the total assignment. Hence, it is about the interaction between the different sectors from the Climate Agreement. Making trade-offs between these different sectors is the responsibility of the decentralised authorities, as they are in charge of their spatial environment. The Environment and Planning Act provides the tools to carry out those tasks appropriately. The decentralised authorities are closer related to the residents, which enables the possibility for more public support for the final solutions.

The support of the national government for the execution of the RES

In the conventional energy system, the decentralised authorities were not much involved. As renewable energy generation will be built in the spatial environment, the decentralised authorities will be involved. The RES'es version 1.0 were pilots in which had to be discovered 1) what you need, 2) what you can do, and 3) what you want to do. For these pilots, it was discussed upfront which measures were necessary to carry out the pilots appropriately. It has turned out that the decentralised authorities have a more significant role in the transition. Fortunately, the pilots can be permuted radically. At this moment, when regions have already started the formulation of their RES version 2.0, it is hard to turn the agreements upside down, but meanwhile, to everyone it is clear that the RES'es that are currently formulated are significantly more advanced than the first ones.

[8] Energy neutrality means that a subject, like a house or municipality for example, produces the same amount of renewable energy it consumes (CE Delft, 2019; Essent, 2019).

[9] Climate neutrality can be defined as a process, house or company which does not contribute to climate change, meaning that the net greenhouse gas emissions equal zero (Geertsma, 2019; myclimate Foundation, 2019). CO_2-neutral and climate neutral are the same (Ibid.)

Are there enough financial and juridical frameworks in place to carry out the RES assignment appropriately? Gerry does not know. Frameworks are currently under development. Gerry would like to hear feedback on whether these frameworks provide sufficient support. The regions are not covered by the same blueprint. As said before, nobody has a clear overview of how to achieve the objectives of the Paris Agreement. Besides, The Netherlands does not work like that; each region is unique and has its specific possibilities. The assignment is an adaptive assignment. It is not a project, it is way more complex than that.

The role of the decentralised authorities in the nationwide RES process
At this moment, the RES formulation processes are dominated by the decentralised authorities, while the energy transition requires a much broader field of participants. The decentralised authorities should take the 'directors role' rather than the 'sending role'. These authorities should not release blueprints. They must initiate, by actively asking what organisations want, what exists already, and what the opportunities are. Interaction is key. Currently, too many guidelines are created and sent unidirectionally from the decentralised authorities to the surrounding parties, while these authorities should listen more and search for collaboration options. Also, the industries have a pecuniary reward as their primary motive. The decentralised authorities differ in this respect because they have a long term oriented vision and incorporate societal benefits in their trade-offs. Some projects will not be lucrative in the short term, while in the long term, these projects could be the best solutions.

The role of the national government in the nationwide RES process
The national government has many tasks to perform. First, there is not one national government; there are many departments with different interests. The Ministry of Economic Affairs, Agriculture et cetera are 'sending', while within the Ministry of Spatial Planning, collaboration is vital. Within these types of challenges, one encounters the national government in different roles. The house of Thorbecke allows the different governmental layers to take their own decisions. One should look for collaborations between those layers in order to reach the objectives, especially in the spatial environment. The same holds for residents and organisations who contribute to this transition; the rules of the game should be agreed upon.

What will happen in case a region does not meet its objective
In case a region does not meet its objectives, the national government and the decentralised authorities are responsible, meaning that we will look altogether on how the remaining energy gap will be filled. Let us take the example of the placement of 6000MW wind energy on land, a decision which has been agreed upon collectively. After, the provinces have thought of the distribution of that 6000MW. In case they would not figure it out themselves, they would jointly look for a redistribution. The same holds for the nationwide RES approach; we share the responsibility. At this moment, there is not a single province who will reach CO_2-neutrality in 2050. If each province sets CO_2-neutrality as its objective, the national objective will not be reached by far.

If a region does not put in its maximal efforts, it will be discussed administratively first. Perhaps, blaming and shaming is an option. Another possibility is to designate locations for high scale wind and solar power generation. This depends upon the progress in 2019, and the valuation of the recreational area in the NOVI (national environmental vision).

Points of attention with regard to process management
With regard to process management, one should acknowledge the different frames of the RES. In the RES, there will be trade-offs between societal- and economic values. There are so many perspectives to look upon the RES assignment. Individuals from the spatial environment have such a different perspective of the assignment than individuals from the energy domain. Especially concerning the spatial environment, it is about merging the different domains into one plan. For example, if the pavement is opened, one wants to renew multiple systems at once, otherwise it costs much money, and besides, the residents are unhappy.

Who is involved, and at which moment? One has to look from a birds eye view. If a region can show that it has worked hard, it is not a problem if the plan is unfinished in 2020. The RES is a means, not a goal. Nobody experiences benefits if there is a beautiful RES released, but no steps are taken afterwards. The RES should be a regional exploration followed by an energy distribution. It is a means to arrive at collaboration on a regional scale and decision-making about the energy and climate objectives. One should incorporate heat, electricity, and mobility, as these are closely linked.