

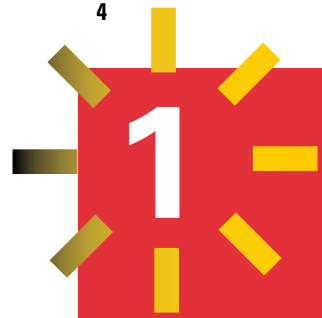


Groningen Energizes

Programme
2015 – 2018

Contents

1. Introduction	4
2. What do we want to achieve?	6
Energy neutral 2035	8
Energy City	8
Sustainable City	8
3. Where do we stand now?	10
Review 2012 – 2014	12
New developments	12
The current challenge	15
4. How will we proceed?	16
Our role	18
Strategic choices	18
Setting goals and monitoring progress	19
5. What are we going to do?	20
Priorities 2015 – 2018	22
Long-term opportunities and initiatives	24
The sustainable city: broadening and connecting	25
6. Communication	28
7. Organisation, finance, reporting	32
Organisation	34
Finance	34
Reporting	34



Introduction

Groningen Energizes. For the past few years, this has been our working title for a multi-track programme to realise our ambitions to be an energy neutral city by 2035 and to reinforce our position as an 'energy city.' We will continue with *extra* energy. Extra energy is necessary for four reasons.

Much has been set in motion in the first few years, but it is now becoming clear that we have to upscale our efforts, plough ahead, and get results. 'We' means us as well as society as a whole, residents, companies, and knowledge institutions. Sustainability demands involvement and everyone's efforts. In terms of implementation the municipality plays only a modest role. Moreover, we consider it our task to stimulate and bring together other parties, create conditions, remove potential obstacles, point the way, and actively contribute to generating awareness and support.

Technical and social developments in the area of energy and sustainability are happening at a rapid rate. Increasingly more often citizens, entrepreneurs, and knowledge institutions rather than the government take the initiative to change and innovate. This grassroots movement is of great importance and is crucial to the success of the intended energy transition. We want to give it our full support. This requires extra effort, and in part, another role.

The third reason concerns to the gas extraction problems and the associated initiatives for a new perspective for the region, with a big role for energy and sustainability. As an 'energy city', the city plays a pioneering role in this.

'Sustainability is a basic assumption in everything we do,' as we wrote in our coalition agreement. This is the fourth reason for extra

effort. We are broadening our programme towards sustainability in a more general sense. Indeed, a sustainable society not only concerns energy, but also space, economy, raw materials, food, the regional environment, social relationships, and individual behaviour. We are going to anchor sustainability more firmly in all regular policy programmes.

In this programme, *Groningen Energizes 2015 – 2018*, we present you with our focused ambitions and strategic choices*, building on what was set in motion over the past few years, intensifying our efforts and upscaling successful experiments. We are taking big steps forward in the use of geothermal and residual heat and in the further development of Groningen as a Smart Energy City. We bring innovations for the long term into focus. This is important in order to effectively play the role of stimulator and connector. What is required to become energy neutral? Where are the opportunities? What can we do in Groningen? Whose efforts are required for that? What should we lobby for?

In order to maintain our course and speed on the path to the long-term goal, we are developing a joint *roadmap* with interim targets that are as specific as possible. Together with our regional partners, we are combining our efforts for to realise an energy neutral city with those for a new, sustainable, economic perspective for the region.

* *The Work plan Groningen Energizes 2015 – 2018 (in Dutch) was published at the same time as this programme, and offers information on specific projects and activities.*



What do we want to achieve?

Our ambitions follow the *Master Plan Groningen Energy neutral*. At the same time, our focus is broadened to sustainability in a more general sense. In our coalition agreement, we decided that sustainability is 'a basic assumption in everything we do.'

Energy neutral 2035

Our ambition is for Groningen to be energy neutral in 2035. This means that all energy used in our city, by households, businesses, and institutions, will be generated sustainably. This can be done in one's own immediate surroundings or indirectly elsewhere in the Netherlands or in the world. The goal is to no longer emit any CO₂ in 2035. In order to realise this ambition, we must continue to work on saving energy and on replacing fossil energy sources with sustainable sources of energy (solar, wind, heat, biomass). This allows us as a city to contribute to the intended global energy transition.

Energy City

Wanting to remain at the forefront as an 'Energy City', Groningen intends to further expand the local knowledge available and opportunities in the area of sustainable energy and economy, dedicating them to regional as well as Dutch and global economic development. The conditions in the city and region of Groningen, with our knowledge institutions, gas infrastructure, innovative businesses, a strong agricultural sector, our space and our people, are favourable.

Sustainable city

A more sustainable city in a more sustainable world is the underlying goal of our energy programme. We want to emphasise and flesh out this goal more broadly, because sustainability not only involves energy and money, but also our living environment, our food, raw materials, the (local) economy, and how we behave toward one another. This is why we are anchoring sustainability more firmly in all regular policy programmes.

A sustainable city is a city...

- ... where residents and visitors feel at home, i.e., that provides an excellent quality living environment.
- ... that is set up sustainably, and continues to further develop that quality.
- ... willing to share the responsibility for negative long-term effects and effects that manifest themselves elsewhere.
- ... where government, citizens, businesses, and knowledge institutions share the responsibility for 'sustainable development' of and in the city.
- ... with an innovative economy that responds to sustainable opportunities and provides work for people from lower and higher levels of education.

The energy transition

A global revolution is taking place, known as the energy transition. What is at stake is limiting global warming to two degrees. Should this be unsuccessful, a further autonomous warming is imminent, by as much as six degrees. This would have disastrous consequences, but even two degrees will result in great social damage. The generally accepted cause of the climate change global warming is the emission of CO₂ due to human activities. Because of the increase in the CO₂ content in the atmosphere, slightly more heat from solar irradiation is retained in the atmosphere, instead of being reflected back into space. In fact, the CO₂ balance is disturbed: the carbon which was taken out of the atmosphere by plants in the course of millions of years, is being returned to the atmosphere in two centuries.

Climate change, therefore, is permanent. It is expected that it will take at least 10,000 years before a new balance has been established. The global objective is to stop emissions of CO₂ emissions entirely by the middle of this century. What counts is the cumulative emissions since the beginning of the industrial revolution. From this it can be deduced how much emission is still possible within the two-degree objective. It is known as the 'carbon budget.' In 2013, the International Energy Agency indicated that the budget still allows us to burn 20 to 30% of the known fossil fuel reserves until 2050 to create an 80% chance that this objective will be achieved. This renders the great majority of the fossil fuels 'unburnable.' The task is building a low-carbon energy supply.

Society's need for energy can be divided into three groups: Energy is required for heat, propulsion, and electricity. It can be made sustainable using the technology available now, but considerable innovations are required to create a reliable total supply. Sustainable energy

can be generated using solar power, wind, biomass, geothermal heat and hydroelectric power, to name a few examples. In a city like Groningen, heat represents more than two thirds of the energy requirement. Herein lies an important key to change. However, saving by means of improving efficiency and preventing unnecessary consumption is paramount. The interim targets for the Netherlands are an increased share of renewable energy generation from more than 4 percent now to 14 percent in 2020, and a further increase of this share to 16 percent in 2023. European countries are subject to the 20-20-20 objective: 20% reduction in 2020.



3

Where do we stand now?

In the new programme, we continue what was set in motion and build on what was achieved in the past. We also look around us to see what has changed in our environment and where new opportunities are emerging.

Review 2012 – 2014

Master Plan

The Master Plan (2011) formulated the ambition to make Groningen energy neutral by 2035 and reinforce Groningen's position as an 'Energy city.' In the implementation programme (2012), we chose to concentrate on a limited number of promising themes and emphatically adhere to the economic impact of new initiatives.

Implementation programme, evaluation 2014

The implementation programme had eight tracks:

1. Energy savings
2. Wind energy
3. Solar energy
4. Heat
5. Biobased Economy
6. Mobility
7. Knowledge and Innovation
8. Our own organisation

The first six are substantive tracks. The seventh track is intended to reinforce the tracks pertaining to knowledge and innovation. A last track involves our own organisation, in which we work on sustainability in our municipal operational management. The implementation programme of 2014 was evaluated and the findings were presented in the spring council. (*Groningen Energizes. Review 2011- 2013, Outlook 2014- 2018*). The conclusion was that continuing on the path mapped out is insufficient to assume that the long-term goal will be achieved. Extra effort is required.*

[note] * More information on the results obtained and focus points per track can be found in the Work plan Groningen Energizes 2015-2018.

Survey of 3,500 city residents (2015)

At the beginning of 2015, we asked approximately 3,500 city residents their opinion regarding and experience with energy (savings). The survey showed that city residents find energy saving measures important. Familiarity with projects such as Groningen Lives Smart (GLS) and Grunneger Power (Power from Groningen) can be improved upon. 40% of those surveyed were familiar with Grunneger Power, while GLS rang a bell with 20% of them. It is also notable that the recovery period for energy-saving measures is often estimated to be longer than is actually the case. So there is still a lot to gain.

New developments

We are implementing our policy in a rapidly changing world. This means that, with our focus on long-term goals, we must still be constantly on the look-out for new developments and new opportunities as well. This section highlights several new developments that are important to our energy policy. The following developments are partly the same as those we discussed with the council in the Review/Outlook in November 2014, updated and supplemented as needed. We also outline several new developments here.

National Energy Agreement

The Dutch 'Energy Agreement for sustainable growth' was signed in September 2013 by the government and approximately 40 social partners. The Energy Agreement strives for 14% sustainable energy in 2020 and 16% in 2023. Municipalities are expected to forge coalitions of local and regional parties within the 'energetic society.' This principally targets an acceleration of energy savings in the built environment and more local, small-scale generation.

Northern energy agenda 'Switch'

In response to the National Energy Agreement, the Northern Netherlands offered the Dutch Government a contribution exceeding the proportional amount, to wit 22% in 2020. The northern energy agenda 'Switch' is dedicated to four acceleration paths: system integration and balancing; gas in transition; offshore wind energy; savings and decentralised generation. This involves large-scale developments which will also modernise the northern economy.

Initiatives from the Groningen society/ Energy transition

A development seen throughout the Netherlands and especially in Groningen, is a grassroots movement: dozens of local/ regional energy cooperatives are taking over the role from large energy companies by supplying sustainable energy produced regionally where possible. The revenues are reinvested locally, either in new energy production or in social projects.



Local initiatives are becoming more important and appear to be more promising than centrally directed changes. The energy transition is tilting from top-down to bottom-up. We consider ourselves fortunate to have a local society that is often ahead of the municipality in presenting sustainable initiatives. Examples of such local initiatives include the energy cooperatives Grunneger Power and Noorden Lokaal Duurzaam (the Locally Sustainable North), neighbourhoods that are aiming for energy neutrality, the ‘edible city’ with food being grown at 60 sites, and initiatives from associations of undertakings.

Energy Academy Europe

Groningen University and Hanze University of Applied Sciences are devoting a great deal of attention to education and research in the area of (sustainable) energy. In concrete terms, the efforts by these knowledge institutions have resulted in the set-up of the Energy Academy Europe, the practice laboratory ‘Entrance’ and an increasing number of start-ups. These facilities and everything (young) researchers and entrepreneurs will realise there are likely to result in an increasingly important international role for Groningen as an ‘Energy City’.

Gas extraction and earthquakes

In 2013, the province of Groningen had a report drawn up on the consequences of the gas extraction and how to deal with them. In its report “Vertrouwen in een duurzame toekomst” (Confidence in a sustainable future), the Meijer Committee emphasises the importance of a new sustainable perspective for the region. The Committee expressly considers energy transition and a biobased economy as opportunities. The ‘Economic Board’ has already been formed and budgets have been made available. In the past two years, the discussion about gas extraction and the earthquakes problems has only intensified. Gas extraction has been slowed down and is expected to be further reduced. This means that the need

for alternative energy sources is increasing and becoming more urgent. There are extra opportunities for alternatives that use the existing gas infrastructure: biogas and power-to-gas. A third development is the unfolding process of repair and reinforcement of earthquake damage, in which energy saving measures are included at the same time. Making houses more sustainable in this process is clearly an added bonus.

The current challenge

A programmed approach is relatively new on our journey towards 2035. Nevertheless, much has been achieved and set in motion. All the same, we are still far removed from the ultimate goal: an energy neutral city. In order to achieve it, we will have to make an extra effort on all tracks.

Support for sustainability policy is growing: committed residents are taking all sorts of initiatives. This grassroots movement is of great importance, and we want to give it maximum support. At the same time we discovered that large groups still have a lot to gain in the area of knowledge and concrete action.

The developments identified here emphasise the growing significance of, and need for, the energy transition and indicate where our attention should be focused. Above all, they show that there are many opportunities in Groningen, in both the city and the region, not only to participate at the forefront, but also to play a prominent and guiding role as an ‘Energy City’. Last but not least, we want to combine our energy objectives with the joint efforts to achieve a new economic perspective for the whole region. We therefore formulate our current challenge as a three-pronged approach:

Upscaling

We commit to achieving larger numbers, to strengthening up our current policy, and to realizing a broad sustainability approach covering several portfolios. We also fully commit to collaborating with the region.

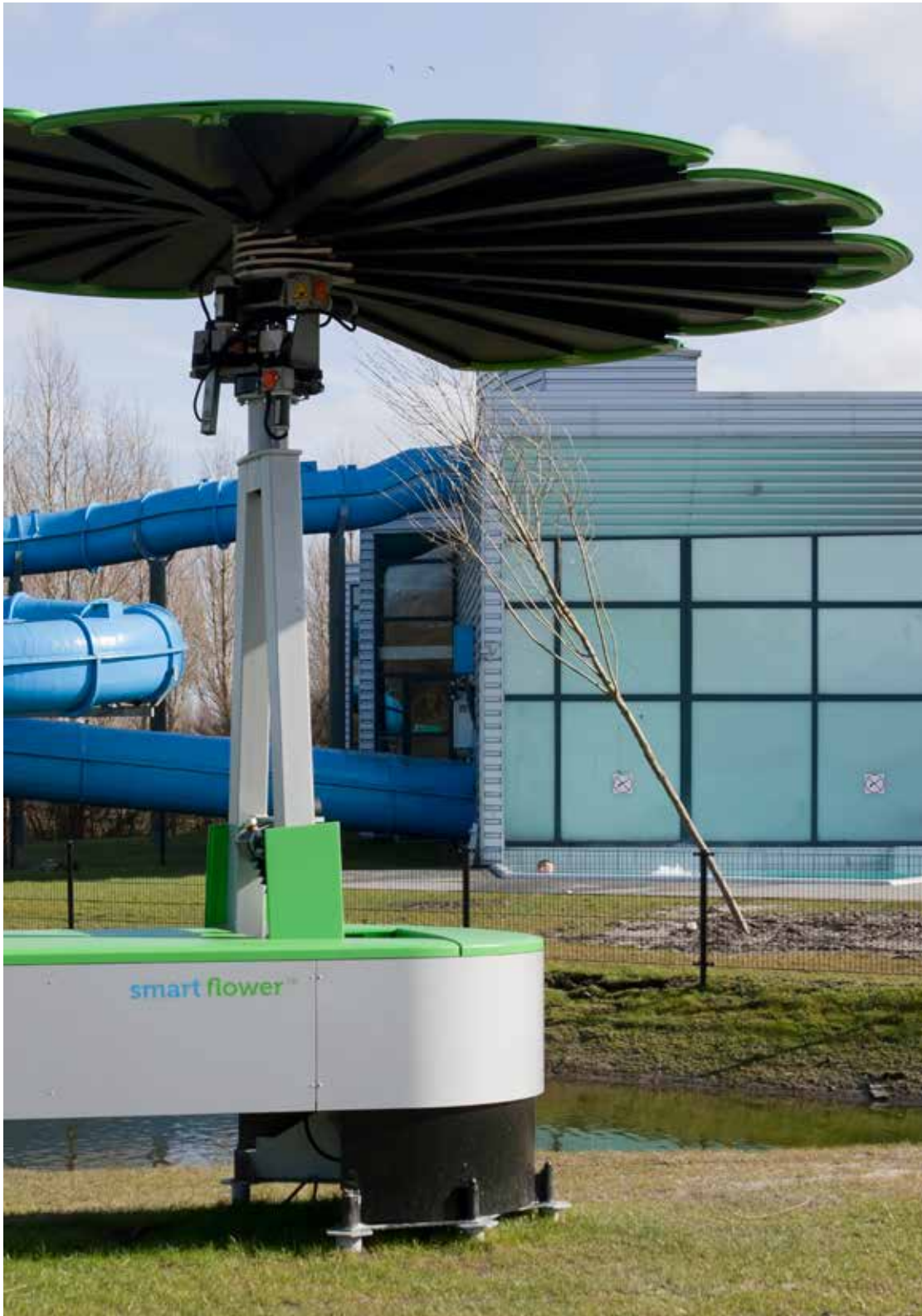
Innovation

We also opt for technological and social innovation. On the one hand, we provide knowledge institutions and businesses with the opportunity to research and apply new technology in the city. On the other hand we facilitate and stimulate neighbourhood

initiatives. We want the city residents to make new connections together and take steps towards energy savings and sustainable production.

Roadmap

Together with companies, knowledge institutions, and residents, we are making a roadmap with concrete interim targets, a schedule, and monitoring on the way to the final objective of ‘Energy neutral in 2035,’ while at the same time mapping out ways to contribute to a new sustainable economic perspective for the region. In the next few chapters, you will read what this three-pronged approach means to for the interpretation of our role, the strategic choices, and policy priorities.



4

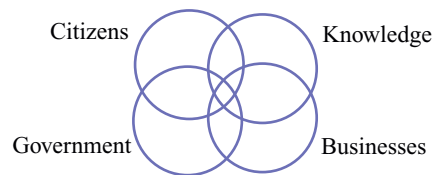
How are we going to proceed?

We have significant ambitions in our energy and sustainability policy. Realising them requires upscaling, broadening, and innovating. As a municipality, we ourselves are not an important implementing party. But we can make the difference by 1) fulfilling an appropriate and effective role; 2) making strategic choices for the best opportunities; and 3) joining our partners in drawing up concrete objectives and monitoring whether we are on the right track.

Our role

In our Municipal Executive agreement we wrote: 'Above all, be of service, as we are aware of the fact that we are just one of the players shaping society.' Where energy transition is concerned, this awareness is emphatically appropriate. The Municipality of Groningen is only one of the many players in the energy and sustainability debate. Being energy neutral by 2035 will only succeed if all other players also participate. Important other players include residents, knowledge institutions, and businesses, all of whom are driven by their own perspectives and interests in seeking cooperation in order to arrive at new solutions. The European Commission is also realising that innovation should be substantiated this way, which is illustrated in the following model.

Quadruple Helix Model



Stimulating, inspiring, bringing together

The energy transition has been in progress for a number of years now. Studies on what is happening, on the effects and results, show that the significance of grassroots initiatives is increasing. The role of municipalities is changing. Transition expert Jan Rotmans says the following about that: 'No longer as the director, but as a facilitator. Not pulling and dragging, but connecting and seducing. Not organising it yourself, but providing others with opportunities. Not prohibiting, but providing room for innovation. Not scheduling, but organic development. And no broad collection of projects, but break-through projects.'*

* Jan Rotmans, *In het oog van de orkaan (In the Eye of the Hurricane)* (2012) p165

The success of social initiatives (of citizens and/or companies) strongly depends on whether the initiators manage to increase support for their plans, establish connections with other relevant parties (knowledge, subsidies, organisational power), remove legal impediments, and remove any resistance in established players on the energy market. As a local government, we see a role for ourselves in all these items: stimulating; inspiring; giving direction; bringing parties together; facilitating; removing impediments; and jointly finding solutions to resistance and obstacles. We will be more successful as parties feel more committed to a combined perspective. We also regard it as our task to develop that commitment. This is how we can make the difference as the municipality, even though, we can only provide a very modest share in terms of implementation.

Be a good example

In order to credibly and effectively fulfil our role, we, as the municipality, must obviously be a good and inspiring example through our own behaviour and in our operational management.

Strategic choices

In order to accomplish our objective we need to put extra effort into all strategic outlines: more projects; working on a larger scale; staying at the forefront with knowledge and innovation; making our results visible; collaborating more intensively and better on the regional level; and broadening the content.

Social and technological innovation

Innovation plays an important role in the energy transition. In addition to technological innovation, social innovation plays an important role here. Examples of this are the local small-scale initiatives emerging everywhere. Based on the awareness of the big significance of social initiatives we will stimulate, support, and facilitate them. We make an active effort to

remove impediments in statutory and regulatory requirements. Social innovation also refers to our own organisation and the new role we are taking on.

Achieving and showing results

We prioritise those projects and activities we expect to achieve results (relatively) fast. In a transition process, it is important to achieve (and show) results because it has a strong stimulating effect, even on people who are not in the vanguard. In the next few years, we will stimulate and facilitate those 'sitting on the fence' because they can play an important role in realising and accelerating the transition, whether they are residents or companies.

Regional combination of strengths

The 'Groningen energy neutral' objective was chosen by the council, but in many cases the municipality itself is not in command. We need to collaborate with many other parties: other governments; market parties; knowledge institutions; (cooperatives of) citizens; housing corporations; network administrators; financial institutions. The earthquake problems give extra urgency to combining regional strengths, not only because the problem affects us all, but particularly because the upcoming repair and reinforcement operation may be combined with sustainability improvements and the creation of a new economic perspective for the entire region.

Broadening and anchoring energy policy

In our Municipal Executive programme and in the 2015 municipal budget we announced that we want to embed and anchor the energy policy more firmly in all municipal programmes such as housing, mobility, economy, and our own operational management. This is necessary to make our energy policy even stronger than is currently the case, and to integrate it into all of our thoughts and actions. We believe that a sustainable society in the long term will not only

be worth pursuing in itself but will also provide the best guarantee for realising our energy objectives.

Setting goals and monitoring progress

In our energy and sustainability programme, we have long-term ambitions. Interim evaluation has shown that although we have taken steps in the right direction, extra efforts are still required.

Roadmap

In order to give direction more concretely and directly we are making a roadmap in consultation with businesses, knowledge institutions and residents, in which we determine and plan the interim goals for the final objective more accurately. The roadmap also illustrates how we combine our energy objectives with the common effort for a sustainable economic perspective for the whole region.

Monitoring

In order to keep up the pace and to make timely adjustments possible, we are going to monitor our efforts, results, and cost effectiveness more accurately. We are developing a monitoring programme to do so. Starting in 2015, this energy monitor will report annually on the developments and forecasts in Groningen in the area of energy consumption and generation, CO2 emissions, and the effects of sustainability measures and actions.



5

What are we going to do?

We look twenty years ahead in this programme. We are well aware that this period is far too long to be able to present an elaborated detailed programme for it. We therefore differentiate between the short and long term. In the short term, we will continue the current programme more intensively. In the long term, we want to recalculate the final objective, based on a shared regional long-term perspective, into more concrete and measurable interim targets.

In the short term, we will continue the current programme more intensively. We continue with a brief outline of our priorities and the most important projects for the next few years. You will find more extensive information about our *action programme in the Groningen Energizes Work plan 2015-2018*. You will also find information on promising innovative initiatives there. In the long term, we want to recalculate the final objective, based on a shared regional long-term perspective, into more concrete and measurable interim targets. On the basis of this, we will update and broaden our action programme in the next few years. At the end of this chapter, we will present a first impetus for broadening and anchoring our energy and sustainability policy in all our policy areas.

Priorities 2015 – 2018

A great deal of preparatory work was done in the first years of our energy programme. The best opportunities have become apparent.

- In our *Energy savings* track we will focus on getting results, in both the corporate as well as the private housing stock. We are intensifying our campaigns targeting (collectives of) private owners.
- Of the alternative energy sources, *solar energy* is the easiest to realise from both a technical and organisational point of view. The potential is enormous. It is also a track with many social initiatives. We are going to offer them strong support and optimum facilitation.
- In our heating company, we are steadily continuing work on the expansion and new applications of *Geothermal and residual heat*.
- An important precondition for the further development of wind and solar energy is that demand and (variable) supply of energy can be properly balanced via intelligent systems (smart grids). That is an important goal in the

further development of Groningen as a ‘Smart Energy City’ (*Knowledge and innovation track*).

- The transition to a *biobased economy* is a prominent guiding objective of our broad economic policy.
- In the *Mobility* track our energy and sustainability policy is primarily formulated in our Traffic and transportation policy programme.
- In our *own organisation* we will vigorously continue on the path mapped out, with an important role for GrESCo.
- Unfortunately, we were forced to put our ambitions in the area of *Wind energy* on hold. It turns out that the provincial policy does not provide any room for meaningful projects within our municipal borders. As an alternative, we are exploring the opportunities for new generations of small wind turbines.

An overview of current and promising projects can be found in the *Groningen Energizes Work plan 2015 – 2017*. We continue with information on several important projects to which we will (continue to) contribute in the next few years:

Energy Desk Groningen Lives Smart

Home owners in Groningen spend 107 million Euros on energy each year. The Energy Desk informs, advises, and makes things easier for private persons in order to make the private housing stock more sustainable and raise awareness on consumption. We want to install home improvements in 4,500 homes per year in Groningen (the target is label C or better). The Energy Desk will be rolled out in the other municipalities in the province of Groningen in 2015.

Clean Campaign

The Clean Campaign is focused on limiting energy consumption and stimulating making companies to become more sustainable.

The campaign is intended to limit energy consumption at 50 companies in the first phase and enable them to become more sustainable. Companies will be rewarded with extra exposure for their sustainability efforts, particularly in the area of sustainable energy and energy savings. They will also be subject to a lighter regime from the environmental inspectorate.

Zero on the Meter

Zero on the Meter means that the energy meter is at zero at the end of the year. This means that the amount of energy consumed does not exceed the amount generated. The objective is to get more than 1000 housing corporation homes to zero on the meter within 5 years. One example of a project realised in Groningen are the Voermanstraat apartment buildings. This project has resulted in more comfortable and attractive homes with no energy costs and financed through the current energy bill. In 2015 we are drawing up performance agreements with the housing corporations.

Solar panels for Home Owners Campaign

Many home owners decide to install solar panels on their own roof to produce sustainable energy. We want to encourage this positive trend by pointing out the various options available to our residents. We do so in campaigns, which include posters at bus stops, promoting zonatlas.nl, for instance, and pointing out the opportunities for combining ‘green roofs’ with solar panels.

Solar parks

The Postcoderoosregeling is a scheme that enables residents who want to invest in and profit from solar energy, but do not own any land or a roof to participate in a collective solar park. This project is coordinated and implemented by the Grunneger Power energy cooperative. The first of these solar projects in Groningen was started in 2014 on the roof of Het Dok community centre. However, as the regulations for these shared

solar projects are complicated we are striving to develop other ways to realise solar parks. We are happy with the Dutch government SDE contributions granted to develop solar parks at Westpoort and at the former Woltjerspoor rubbish dump.

Zernike geothermal heat

The Zernike geothermal heat project is a unique and entirely new project in the Netherlands. It involves the supply of heating from the deep subsoil (120 °C) for 10,000 households, via a heating network in the Paddepoel, Selwerd, Vinkhuizen and Zernike districts. We are developing the project with our new heating company WarmteStad (municipality/water company) and in collaboration with four corporations, Groningen University and Hanze University of Applied Sciences. The Dutch government gave us an SDE grant of 32 million Euros to cover for the non-profitable exploitation in the initial start-up phase.

Collective Geothermal Heat Pump

WarmteStad is operating an Underground Thermal Energy Storage and heating network at Europapark, which all companies/institutions established there in that area can connect to. Follow-up projects scheduled: Collective Inner City geothermal heat pump (2017); Collective geothermal heat pump Ebbing district (2015); Collective geothermal heat pump Central Station area (2020).

Smart Energy City

Smart Energy City is the European testing ground for intelligently linking supply and demand of electric power and heat. Its goal: to fully benefit from both central and decentralised energy sources. The pilot project has been going on since 2009 in Hoogkerk. 25 households participated in the first phase. In late 2011 the second phase was started at Thomsonstraat. 22 households are participating here. In 2012 the

project was placed on the UN's 'Sustainia100', a global list of the hundred best sample projects in the area of energy, water, and food, which form the model for a sustainable future. The challenge in the next few years is to upscale the experiments into bigger units: from street to district.

Grunneger Power/Noordelijk Lokaal Duurzaam

Groningen is the leader in sustainability initiatives from residents. An appealing and successful example is the local energy cooperative Grunneger Power. Grunneger Power is associated with Noordelijk Lokaal Duurzaam (NLD). Grunneger Power and NLD enable participants to generate their own sustainable energy - alone or with others. This usually involves solar panels, on one's own roof or on suitable roofs in the vicinity. Any surplus of energy is supplied to other regional parties regionally via NLD Energie. In this way the participants realise a decentralised and joint sustainable energy plant. Grunneger Power is also pursuing an increase of up to 15% in the share of customers who purchase electricity and gas locally to 15%.

Longer- term opportunities and initiatives

Long-term regional perspective

The goal of an energy neutral city is still far away. In a rapidly changing world it is impossible to plot a specific course towards that final objective. Neither would it be at all in keeping with the role we want to play and can play. Much more important than how we achieve our goal is that all stakeholders have the same goal in mind and move in the direction mapped out together. The intended transition can only take place in this way. As the Groningen municipality, we want to formulate a shared long-term regional perspective with all relevant partners. In the Northern energy

Energy Transition Model

In keeping with the long-term regional goals, it is necessary to recalculate the long-term goals into adequately concrete interim targets on the way to that final objective. We are going to do this with the Energy Transition Model. To date, such a quantitative exercise has not been implemented for our approach. The model can also expose unused opportunities. We will start with this project in 2015 and are explicitly involving the municipal council in this.

agenda 'Switch' it was agreed that the Groningen municipality in cooperation with the province of Drenthe will initiate the Energy system 2.0 track and develop an elaborated regional model in 2015 in collaboration with other parties.

Energy Transition Model

In the past few years, the Energy Transition Model was developed with support from governments, businesses, the energy sector, and knowledge institutions. The model is 'open source' and uses common laws and known facts, such as the carbon content of fuels, or the efficiency of energy plants. This model can be used to predict what reductions in CO₂ emissions will be achieved by applying a range of conceivable measures.

Road map

Based on the results of the calculations using the Energy Transition Model, we want to make agreements with our partners on what everyone's efforts will entail in concrete terms. We formulated these agreements in a joint road map for setting the transition task targets for Groningen, including resolving the negative consequences of gas extraction. The road map is an important component of the innovation agenda of the city and region. Businesses and other partners must be able to rely on the fact that we will continue to follow on this path in the next few decades.

Innovative projects and initiatives

Stakeholders in our region already have many ideas for innovative projects. The ambition document 'De Groene Loper' (The Green Carpet), which we developed in collaboration with knowledge institutions and entrepreneurs, makes it clear that we need to adapt impeding statutory and regulatory requirements imposed on promising initiatives in the area of sustainable energy generation and biobased production. We are going to start working on this in experimental zones and innovation parks in the city and region.

The sustainable city: broadening and connecting

A more sustainable city in a more sustainable world is the underlying goal of our energy programme. We want a better focus on this goal and flesh it out more. 'Sustainability is a basic assumption in everything we do,' as we wrote in our coalition agreement. Therefore, sustainability has a prominent place in all regular policy programmes. In the next few years, we will formulate this ambition in concrete terms. We continue with a preliminary outline of the sustainable city, which we use to give you an idea of what our intentions are. For an initial elaboration into concrete policy objectives, please refer to the *Work plan Groningen Energizes 2015-2018*.

A sustainable city means the following to us:

A city where residents feel at home and visitors want to stay. In other words:

- A healthy and pleasant living environment, because it has good air quality and limited noise nuisance;
- Quality of the soil and city water is in the correct proportion to how it is used;
- Good quality of urban natural green areas close by. Urban natural green areas also provide shelter in the future, when the weather will be hotter more often.

A city that is set up sustainably and that continues to develop quality further by/with:

- Staying compact, with manageable distances for cyclists and good bicycle facilities;
- Room for slow traffic and public transportation;
- A properly incorporated integrated traffic infrastructure with minimum nuisance and barrier effect;
- An inner city centre that is primarily laid out for pedestrians and cyclists;
- Creating and maintaining an ecological infrastructure;
- Water management resistant to intense precipitation and that provides shelter to prevent heat stress;
- Innovation of the sewer system;
- New energy infrastructures such as heating networks, smart grids, and options for storing heat and other types of energy;
- Infrastructure for separate presentation and collection of waste flows;
- Setting up 'energy landscapes' (utilisation of areas in the city to generate energy from the sun and wind, and to grow biomass);

A city that wants to share responsibility for the long-term effects as well as effects which manifest themselves elsewhere (a sustainable city). A city that

- Makes a proportional contribution to the fight against climate change;
- Carefully deals with ever scarcer raw materials and stimulates their recovery of them;
- Counters the reduction in biodiversity, including on the local level;
- Also applies corporate social responsibility (CSR) to municipal operational management, among other ways by stimulating Fair Trade;
- Participates in more, safer types of food production, among other things by limiting 'food kilometres.'

A city in which government, citizens, companies, and knowledge institutions take joint responsibility for 'sustainable development' of and in the city. Where city residents (and companies)

- Can influence and share the responsibility for their living environment;
- Limit their energy costs by generating energy themselves;
- Grow their own food or procure it nearby;
- Organise their own healthcare;
- Work together with the government on mutual awareness and increasing the support of the necessary changes.

A city with an innovative economy that responds to sustainable opportunities and provides work for people from lower as well as higher levels of education. A city that

- Translates the value of Groningen knowledge of sustainable energy into valuable local products and services;
- Utilises Groningen's favourable position for the 'biobased economy';
- Takes steps towards a circular economy;
- Has a construction sector benefiting from energy programmes for the existing housing stock.

Correlation between goals and effects of the 'sustainable city'





6

Communication

In the first implementation programme, the main focus was on setting activities in motion. In the next few years, we are going to focus more on reaching out to the city residents.

Information on saving energy

The energy savings component in particular demands a more active approach to reaching out to the residents. Our own studies have shown that there are still many people who lack adequate knowledge on the advantages of energy saving measures. For example, less than 20% of the city residents know that cavity wall insulation pays for itself within four years. This emphasises the need to continue spreading information about energy-saving measures for residents of the city. Companies can also play an important role in this. Therefore, we will increase our efforts to bring the Groningen energy savings service (“Groningen Lives Smart”) under the attention of a large general public. We will do this in collaboration with Grunneger Power.

City panel

The city panel survey taken by 3,500 city residents in early 2015 was the start of a dialogue with the city. We want to continue this dialogue over the next few years. In a world where developments succeed each other at breakneck speed, it is important to know what is going on in the city. Where can the Groningen Municipality fit in? And what initiative is worth investing energy in? In order to make the right choices, it's necessary to keep the dialogue with the city open. We want to improve the quality and the results of this conversation. It is an important instrument for city residents and the municipality to work together on achieving an energy neutral living environment in 2035.

Project communication

The scheduling and implementation of communication on specific projects is handled by the project managers.





Organisation, finance, reporting

Organisation

In the past few years, the *Groningen Energizes* programme has functioned as a concern programme with an intense focus on energy. This got us going at the right pace. The question we now face is to what extent the programme management can be transferred to the regular staff. This will allow all components to become more involved in the sustainability effort. However, we do not want to do this just yet, because in this phase we still believe that the various components and how they contribute to the central objective should be monitored as part of an integrated programme (agency). We will need an expert and specific team to boost innovation and developments as the known ambassadors of the projects for some time. This means that we are maintaining the current programme team.

Finance

In the coalition agreement, a structural amount of 2 million Euros per year has been made available. How this money is spent, is accounted for in the adjacent table.

Reporting

We will keep you informed of the progress and the results of our energy and sustainability programme via our annual Budget and Accounts. In addition, we will annually report on the monitoring results to the municipal council.

Begroting Groningen geeft energie 2014-2017

Costs	2014	2015	2016	2017	Total
General	€ 885,933	€ 978,000	€ 678,000	€ 653,000	€ 3,194,933
Geothermal heat	€ 939,833	€ 593,375	€ 426,813	€ 375,563	€ 2,335,583
Economy	€ 275,480	€ 150,000	€ 150,000	€ 150,000	€ 725,480
Energy savings	€ 295,502	€ 428,502	€ 418,750	€ 403,750	€ 1,546,504
Sun, Wind, City residents	€ 84,467	€ 120,734	€ 119,784	€ 119,734	€ 444,717
Fair trade and food	€ -	€ 157,500	€ 157,500	€ 157,500	€ 472,500
Total costs	€ 2,481,215	€ 2,428,111	€ 1,950,846	€ 1,859,546	€ 8,719,718
Coverage	2014	2015	2016	2017	Total
Budget 2014	€ 2,582,000				€ 2,582,000
Budget 2015		€ 2,000,000			€ 2,000,000
Budget 2016			€ 2,000,000		€ 2,000,000
Budget 2017				€ 2,000,000	€ 2,000,000
Miscellaneous (revolving)				€ 240,000	€ 240,000
Total proceeds	€ 2,582,000	€ 2,000,000	€ 2,000,000	€ 2,240,000	€ 8,822,000



Contact

Groningen municipality
Gedempte Zuiderdiep 98
NL-9711 HL Groningen

Telephone +050 (0)88 367 81 11