

TOWARDS A NEW sustainable energy system



**A transition to renewable energy
in the built environment**

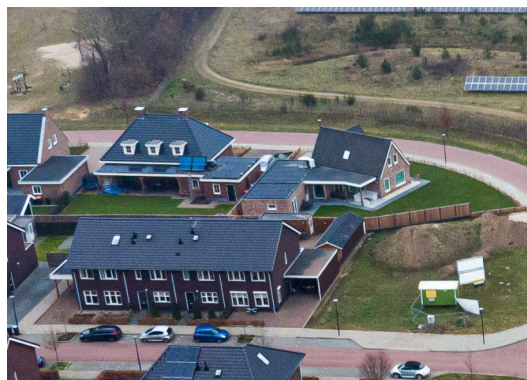
**OVER
MORGEN**

an Arcadis Company

A TRANSITION TO renewable energy

The creation of a sustainable living environment and the transition to renewable energy is high on the agenda at national, European, and global level. The CO₂ currently emitted through the usage of fossil power causes natural disasters such as heat stress, flooding, and storms. Moreover, this energy source will eventually be depleted. If we want to keep our planet resilient and liveable, we need to switch to renewable energy.

The Netherlands is one of the most densely populated countries in the world, and there is very little space to roll out the energy transition. This is why we put so much effort into it: we have to look for sustainable alternatives in the right places, with respect for the environment and as agreed upon with our citizens. Over Morgen has accompanied this process from its infancy and is considered one of the most innovative consultancies in the field.



At Over Morgen, we assist governments and municipalities in implementing the transition. It is an intricate process which goes far beyond the technical aspects; it is a societal task, which requires a comprehensive approach. With our citizens and the main stakeholders (such as the government and businesses), we identify and apply the best solutions for the energy transition. But that's not all: we take this opportunity to identify other potential local challenges and transform them into chances to create added value for people, animals, and nature.

Solutions for the next generation

At Over Morgen, we are committed to doing our part. We bring extensive technical know-how and experience in spatial planning and participation, combined with hands-on knowledge of the field and of administrative processes. We play a significant role in the development of policies, visions, strategies, and programmes that provide frameworks and express ambitions with the goal of making the living



environment more sustainable. We translate all this into successful projects with tangible results.

Over Morgen has in-depth knowledge of the energy transition, at the technical, policy and process level:

- Local, regional, and national visions and strategies
- Visions and strategies for participation
- Stakeholder management
- Process management
- Insight into technical and practical feasibility
- Data-driven consultancy
- Translating visions and strategies into implementation programmes
- Finely tuned political and administrative anten

We love to inspire you

We want to share the lessons that we learned, and we hope that our approach can be an inspiration to other countries. Many processes and policy decisions can easily be adapted to local situations

beyond our borders. If this is not possible, our knowledge and expertise will help your local stakeholders to make the right choices.

Our projects

At Over Morgen, we accompany projects throughout their lifecycle: from awareness to ideas and implementation. This brochure gives examples of our work in replacing existing fossil infrastructure and switching to renewable energy in different areas. To start implementing projects, a clear vision, ambition, and policy are fundamental; we help governmental institutions to set up these tools. This way, we make sure that the project execution is embedded in the right policy and programme framework. These projects are examples of how citizens and governments can cooperate in a comprehensive approach, creating ultimately a better quality of life.

Together, we work for a sustainable future.

NATIONAL planning

The Dutch corner: from climate agreement to local policymaking

Climate Agreement 2013

The climate agreement is the result of a process involving more than 100 different parties. In various round tables, such as industry, mobility, and built environment, they translated ambitions into concrete goals. In Dutch, we call this process ‘polderen’. The first Dutch polders were created in the 11th century, when pieces of land enclosed by dikes were reclaimed from the sea by pumping out the water. The term ‘polder model’ describes the collaborative process that was needed to keep the water out of the new land; it means identifying the best solution in collaboration with others. A lengthy process perhaps – but one that makes sure every voice is heard.

Dutch Climate Agreement 2019

The most important goal of the climate agreement is the reduction of CO₂-emissions by 49% in 2030, as compared to 1990. By 2050, the greenhouse gas emissions must be reduced by 95%. This is necessary to limit the global temperature increase to 1,5 °C. To implement the climate agreement, the Netherlands has signed its own climate and energy document, which will allow the country to work on the energy transition locally and make its mobility and industry more sustainable.

The Dutch Climate Agreement is implemented through different programmes at various levels: regionally, with the Regional Energy Strategy, locally with the Roadmap for Sustainable Heating, and at neighbourhood level with the Implementation Plans. Over Morgen is involved in all these programmes at all levels; now, we want to share our experiences with others.



OUR STRENGTHS

At Over Morgen, we spot all the latest trends and developments and translate them into policy.

Policies are based on cooperation: all stakeholders are involved.

In a country as small as a postage stamp, we have mastered the art of making smart, multiple use of the available space; coming up with daring, innovative solutions with different key players is a Dutch tradition.

The transition at different levels

The energy transition in the Netherlands takes place at various levels. Not only the national government designs policies, but also smaller, local authorities. We have extensive experience in regional and urban planning for the energy transition and we want to share this experience with others. We are capable to assist you at three levels:

- **National:** formulating ambitions and setting up policies and frameworks.
- **Regional:** translating national ambitions, policies, and frameworks into a regional strategy.
- **Local:** translating national ambitions, policies, frameworks and regional strategies into local policies, frameworks, and implementation programmes.

A vertical photograph of a city street scene. In the foreground, the lower legs and feet of several pedestrians are visible as they walk on a paved sidewalk. In the background, there are multi-story buildings with various architectural details, including windows and balconies. A street lamp is visible on the left side of the frame.

Participation: the real challenge

The technical and financial side of the transition plays a considerable role, but establishing cooperation and getting stakeholders and society involved is the real challenge.

Over Morgen believes deeply in participation as an integral part of the process: it is a fundamental part of our work. Whether we set up visions or carry out projects, participation is the key element to make sure the end result has the approval of all parties. Transitions such as this must take many different interests into consideration. In broad terms, we distinguish between three types of stakeholders:

- Business parties, such as landowners, large real-estate owners and investors, governments and parties directly involved in urban development, such as network operators, energy suppliers and utility companies.
- Lobbies or interest groups, such as energy cooperatives, environmental organisations, or social real estate agencies.
- Users of the area, such as residents, visitors, tourists, and entrepreneurs.

Participation in the energy transition implies that the users of a specific area must be involved in its development right from the start. There must be balance and a good relationship between government and society. We make sure that the interests, concerns and wishes of stakeholders and society are included in the process towards the final goal. For us, participation is not a goal in itself; it is a tool to achieve better results. This is why our participation approach is different every time. If we work together, we can create a pleasant, healthy environment to live in and thrive; today, and for our future.

Our participation approach:

1

PARTICIPATION AS A MEANS TO ACHIEVE BETTER SOLUTIONS

By making abstract ideas tangible for citizens, offering clear explanations for intricate matters, and incorporating fresh perspectives in the planning, the quality of the final product increases.

2

PARTICIPATION IS ALWAYS CUSTOMISED

We prepare an approach that fits the specific goal, issue, and target group. On one occasion we may just keep residents informed, another time we may start a dialogue, or involve citizens in the development process.

3

GET TO KNOW THE CITIZENS

We always get a clear overview of the target group when planning our participation process. We find out what is already known from data analysis (quantitative data) and make the picture complete by visiting residents and asking them to share their thoughts (qualitative data). We know what is going on in the community.

4

EVERY DAY IS A NEW DAY

Planning a participation approach is a task in itself, but being flexible enough to set the plan aside when necessary is what makes the difference. With the insights gained on the field, we constantly improve our participation trajectory and increase the chances of success.

5

BE HONEST AND OPEN

By being transparent – also about what cannot be done – we promote trust, understanding and acceptance. We provide clarity on the steps that we take based on the input we receive. At Over Morgen, we keep our promises.

REGIONAL PLANNING / energy zones

Many countries in the world now stand before the great energy transition challenge. If we truly want a society fuelled by renewable energy, the most reasonable approach is to tackle the challenge at regional level. The solutions to these tasks tend to have an impact on larger areas, like the environmental impact of wind turbines, for example. This cannot be managed in isolation; cooperation with other governments, businesses, interest groups and residents is paramount.

We at Over Morgen have extensive experience in planning the energy transition at the regional level. These are the key pillars of our approach:

A comprehensive view

We work with a systematic approach (supply, demand, infrastructure, and storage), with respect for the quality of the environment and the local needs.



Strong combination of product and process

Our analyses, calculations, data-handling, and maps provide the insights we need to set up a thorough, joint process with all relevant stakeholders.

Focus on joint implementation

A joint implementation of all plans is our main goal. We establish a long-term cooperation between regional and local parties with a strong focus on decision-making, organisation, participation, and process. We bring the energy transition from the meeting room to the living room.

Keeping citizens motivated

Gaining support for the energy transition is crucial. After all, the transition takes



place on the streets. It touches the whole of society: residents, entrepreneurs, governments, and interest groups. The success of the energy transition depends on everyone being informed, consulted, and involved in the task and in the approach. How to do it? With a thorough analysis of the situation, concrete plans, and open discussions, we can inform our citizens of the task at hand, the best options, and how to conduct the transition in the most suitable way.

Combining the energy transition with other tasks

We always involve residents and professional stakeholders in the energy transition; they are active players in the area and have profound knowledge of its

current state and needs. This allows us to combine the energy transition with other tasks: citizens and stakeholders know which areas require more attention, which areas suffer from excessive heat in summer, or which are subject to flooding. They know what is happening at societal level. Therefore, we can address these issues simultaneously with the transition.

We do not look only at government agencies for solutions; we connect citizens and professional stakeholders all throughout the process. Cooperation is always the best way to find the most suitable answers to local challenges.

Data-driven work: energy modelling and monitoring

Like you, many of our clients are busy working on the energy transition, setting goals for the future, or writing concrete policies and measures. But there are many different policy fields, actors, and technologies within an energy system. How do you keep a clear overview of the current situation and developments, and how do you make the right choices to take a step forward?

We know how it's done

With energy modelling, we are able to illustrate the energy transition in detail to local, regional, and national governments. How many wind turbines and solar fields are needed to be climate-neutral in 2050? How are we going to store energy when the sun

is not shining? How does the energy transition work? How many houses must get rid of gas to achieve the energy targets?

Energy modelling provides the insights that administrators need to make the right choices for our future, such as for drafting a regional energy strategy, or for creating sustainability programmes. What are your goals, and how can you achieve them? Our Energy Transition Model (ETM) will help you find concrete answers to all these questions.

Once the task has been defined, we offer tailor-made solutions for monitoring progress; with Microsoft Power BI, we can map the effectiveness of the policy measures.

Taking steps to achieve results

1. A flying start: introducing the Energy Transition Model (ETM) and the goal of the assignment.

2. Analysis: we collect the right information to gain insight into the current situation and future scenarios.

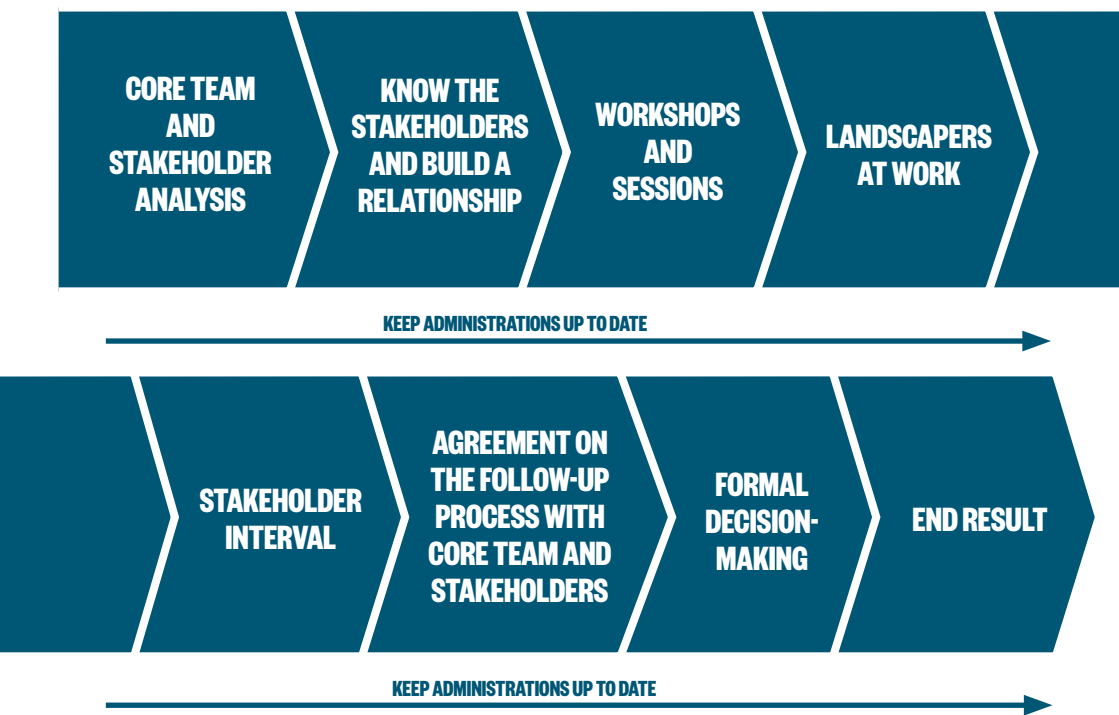
3. In depth: validating and supplementing the results with local knowledge.

4. Story: communicating insights and results through storytelling.



TOWARDS RENEWABLE ENERGY step by step

If we want to build a sustainable living environment with renewable energy, we must follow these steps:



Core team and stakeholder analysis

We start by putting together a core team, composed of representatives of the municipalities within the region. With this core team, we identify the professional stakeholders and establish how we will shape and regulate the process. It is important that the region has sufficient jurisdiction; administrative agreements are needed to take further steps and to create a solid basis with an organisational structure, sound financing, appropriate management, and monitoring.



Therefore, it is important to discuss such agreements at an early stage. Then, we form teams to tackle the specific topics, such as heat, energy saving, large-scale generation, etc. With this approach, the topics can be easily divided, and municipalities can disregard the themes that are less relevant to them.

The core team prepares a stakeholder analysis; they look at which professional parties must join for the success of the energy region. These parties have an interest in the outcome of the process and are also influential in its execution. This allows us to know which parties we need to keep satisfied and informed, which parties may require monitoring, and which parties will cooperate.

Get to know the stakeholders and build a relationship

Taking the time to get to know the stakeholders can bring several advantages; we always make sure everybody understands the process and the goal behind it. Having a cup of coffee together is an effective way to build a relationship: you can discuss the other parties involved, and stakeholders can propose new partners or give useful tips. Having players such as energy cooperatives, environmental and nature organisations and other sustainable local projects on your side is a real asset: they can act as ambassadors, provide explanations on the energy region locally and motivate the citizens.

Workshops and sessions

Once the stakeholders are up to speed and a relationship has been established, it is time to work on the content. In the course of different sessions, we work together on the substance of the energy region, and on the best process to implement it.

Together with the stakeholders, we make agreements on the division of roles, the planning, workshops and sessions, and moments of feedback. We also look at what other issues might be at play: we look beyond the energy transition, for example at landscape, societal tasks, or climate adaptation. It is important to establish a dialogue with different experts, but also with users of the area, to identify the main concerns. Then, we prepare a checklist and define which players and organizations should cooperate.



We also organise several workshops and sessions for residents, the actual users of the area. Our task consists in identifying the most suitable locations for wind turbines and solar farms. We start with a thorough analysis of the landscape and a clear task in energy terms. Afterwards, we look at the area with the professional stakeholders and the residents. Which are the recurring issues, and where is it possible to generate renewable energy on a large scale?

Landscapers at work

After every workshop with residents, the landscape architect works out the results. Through this process we are finally able to identify the energy region. We present the results to the core team and discuss the possible course of action, as well as the possible steps to determine the definitive energy region and the relative search zones.

During the entire process, we keep administrators up to date by sharing the results of the workshops and the subsequent measures that have been identified.

Stakeholder interval

This phase is always followed by a stakeholder intermezzo. This is a good opportunity to follow up on specific aspects of the process: whether the stakeholders identify with the input provided by residents, if the core team has elaborated their input satisfactorily, and if there is an agreement on the next steps.

Keep administrations up to date

Shaping an energy region is a creative process which requires room for drawing, development, and reflection. Towards the end of this dynamic process, we start working on the conclusions. Administrators become important players in this phase: they need to understand the conclusions thoroughly. This is why it is extremely important to accompany them step by step. We keep administrators informed of the process, of (provisional) conclusions, and of the input from residents and professional stakeholders.



Agreement on the follow-up process with core team and stakeholders

After consultations with the administrators, we address the core team once again to define the course of action with the stakeholders. This process is repeated several times until we achieve a concrete project for an energy region approved by everyone.

Formal decision-making

The follow-up process is complete and there is now a project for the energy region. The final step is the formal decision-making process. This step will be different for each area and requires a customised approach.

End result

With our approach, together with the region, we have reached consensus on the spatial integration of the energy transition into the landscape. With our joint design process, we were able to obtain support from society and set the basis for a long-term cooperation between the professional parties for the realisation of the project.

The extent to which a region can, wants or must contribute to the national energy transition efforts depends on political choices and decisions; the result of our design process is a good basis for administrators to make realistic proposals to the national government.

THE DUTCH CORNER: Regional Energy Strategy (RES)

Over Morgen has a proven track record in working on the energy transition. In 2017, we were part of the RES (Regional Energy Strategy) pilot in West Brabant and the North Veluwe. There, we have acquired considerable experience in regional cooperation. At the moment, we support almost half of the 30 Regional Energy Strategy (RES) regions in the Netherlands, in differing degrees. Our approach is thorough and gives special attention to the administrative process. We provide a clear picture of the task at hand and ensure support for the process among stakeholders and public administrations. We involve governments, entrepreneurs, residents, and educational institutions because we believe that cooperation delivers sound strategies that have the potential to turn into reality.

Regional Energy Strategy for the North Veluwe Region

In 2016, the North Veluwe region has developed a roadmap for becoming climate neutral. The spearheads of their approach were the integration of sustainable energy solutions in the region and measures to boost the regional energy production. It was clear from the start that

a large-scale energy production would yield excellent results in a relatively short term. The region has asked us to undertake an intensive consultation process with the stakeholders to develop a set of viable projects. In cooperation with the municipalities of Elburg, Ermelo, Nunspeet, Olderbroek and Putten, we have engaged in a broad process that resulted in the delivery of detailed reports per municipality. The underlying wish was to be able to raise societal support directly.

Our solution

By considering a mix of different energy sources for 2050, we have been able to provide better insight into what the energy transition entails. Our research has also shown how many wind turbines, solar farms, and how much biomass will be needed in the future. Our Energy Transition Atlas displays the potential of the area based on current regulations and legislation. These analyses offer considerable input for the negotiation process with the stakeholders.

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In the course of two workshops on energy and landscape, we discussed with the stakeholders how much energy would be needed and how much potential there was in the region. Under the guidance of H+N+S Landscape Architects, the stakeholders have evaluated different options for a large-scale sustainable energy production. The local identity and the landscape capacity were always at the centre. This allowed for combined developments, such as the construction of solar farms by landowners for maintenance of their own land or fostering the growth of new vegetation in solar fields.

Our results

Being a pioneer for the Regional Energy Strategy (RES), the North Veluwe region has gained a portfolio of promising projects, including detailed advice on their implementation and organisation. The executive board of the municipality and the city council were also involved in the initial and final phases through a series of work sessions. They were aware of the urgency of the task and prepared to take action based on our research. Societal support for the project increased as a large group of stakeholders and many visitors attended the evening information sessions for residents. With our comprehensive approach, we have successfully set a steady framework for the execution of these projects.



LOCAL PLANNING / comprehensive sustainability approach

Do you want to make your living environment more sustainable?

A realistic, comprehensive vision of sustainability that leads the way to concrete measures and a sustainable concept for future-proof urban development: we offer a clear, inspiring sustainability approach.

Why?

The current developments around climate change, biodiversity, air quality and health require action. Governments, the environment, and end users are placing increasingly higher demands. This can be traced back in legislation, policy, strategies, selection guidelines for tenders and requirements for urban development. At the same time, the means are scarce, and affordability is at stake. This stacking of ambitions threatens to curb development.



We have the know-how

Over Morgen's advisors can help you set your goals, develop your vision, and choose the right measures. Together, we adapt your choices to the context of the area, the end users, the financial feasibility, and organisation. We have extensive experience in combining urban development and sustainability. We apply our comprehensive approach locally and at area level, in pre-existing locations as well as in areas designated for redevelopment and expansion.



Together, we choose the most sustainable and feasible objectives and measures that fit your area and the end users.

A comprehensive sustainability approach

With our comprehensive sustainability approach, we look at the issues and goals for the coming years. We find out which matters can be combined with the renewable energy goals: climate adaptation, sustainable mobility, circularity, as well as social issues, such as lack of housing, lack of work and ageing. First, we identify the projects that are legally required due to national or local policy.

After that substantive step, we proceed with the sustainability approach.

We map the intermediate steps for the first four years and obtain a list of programmes and plans from the government and other organisations. We must work programmatically: with a group of stakeholders and the government, we start addressing the individual steps and plans listed in the implementation programme.

To achieve satisfactory results, it is necessary to have an entity that promotes sustainability among the stakeholders and makes sure all matters affecting the area are well integrated. We can also include the residents in the development of the implementation programme. They are the real users of the area and know which issues will become relevant in the coming years.

How is the process structured?

The process for a sustainable area development project is composed of eight steps. Steps 1-3 help you identify your vision. In step 4, the vision is further defined through decision-making and/or by translating it into a series of requirements to be used in a tender. Steps 5-7 address the selection of measures and the creation of a concept. In step 8, we elaborate on the tasks and prepare for the actual implementation.





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We can help you make the right choices for a fossil free future”

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