New Energy Coalition

Drivers of Change

On the potential of the North Sea region for the future energy supply

12 NOV

LONDON

2024

Energy Trends 2024 Congress

Keynote Marieke Abbink-Pellenbarg
CEO New Energy Coalition

On the potential of the North Sea region for future energy supply

Good morning all, and thank you for being here today. I am Marieke Abbink, CEO of New Energy Coalition from the Netherlands. It is an honor to take you into the future of energy in the North Sea region.

Introduction: Groningen, the Energy Valley of the Future

Many of you undoubtedly know Groningen as a gas province. For decades, this region of the northern Netherlands has been a major energy source for Europe, producing vast quantities of natural gas. With an original reserve of about 2,800 billion cubic meters, the Groningen gas field still ranks high among the world's largest gas fields.For decades, Groningen supplied tens of billions of cubic meters of gas to customers across Europe, annualy.

More than 2,300 billion cubic meters of natural gas have been extracted from the Groningen field.

As many of you are aware, gas production in the Netherlands is nearing its conclusion. While the Groningen gas field still holds approximately 500 billion cubic meters of natural gas, it is nonetheless being phased out.There are still some smaller gas fields in the Netherlands, both onshore and offshore. But the Netherlands can no longer meet its own gas needs.

I was born and raised in Groningen. I still live in this province and feel very connected to the area where, unfortunately, gas extraction has caused serious earthquakes. Those earthquakes have damaged homes, caused financial uncertainty, and more importantly, they have caused the population to lose confidence in their government. Citizens have begun to doubt: Is the government there to protect me and my family? Or is the economy more important than the people?

Many people feel mistreated. After all, is the economy there to bring people prosperity, or are people there just to serve the economy? That seems like a rhetorical question. But the doubt and frustration in Groningen runs deep. Citizens feel they are victims of the economic exploitation of their region. The Netherlands and Europe benefited from the Groningen gas, the local population is left with the damage.

Above all, this produces mixed feelings. On the one hand, many Groningers are proud of their region as a gas province. Groningen has made the Netherlands rich. On the other hand, people are angry because of the damage caused by the earthquakes and the half-hearted and bureaucratic handling of the compensation payments.

For that reason, not everyone in Groningen is ready for the next step. That next step is transforming the Northern Netherlands from a natural gas province into a European hub for renewable energy in general and green hydrogen in particular. But we have to discuss that next step. Because even though it is difficult to start the conversation about energy transition now, we need support for it, because the closure of the Groningen gas field has major consequences for the region. 20,000 jobs are at stake.

Therefore, a new perspective is needed. As a resident of the region and as CEO of New Energy Coalition, I am deeply motivated to help create that new perspective. I want the new generation to be able to build a bright future in the Northern Netherlands as well. It is a beautiful area to live and work. My daughters are 23 and 21 and should be able to settle and develop in Groningen, just as I did.

That new perspective is what I want to talk to you about today. After all, the energy transition offers new opportunities for Groningen, the Northern Netherlands and Europe. At New Energy Coalition, we believe that Groningen is perfectly positioned to become the Energy Valley of the future. The North Sea is key to achieving this.

New Energy Coalition: a new economy for the northern Netherlands

First, let me tell you a little more about New Energy Coalition. New Energy Coalition is a foundation that originated from the idea that Groningen is an energy province and should remain an energy province.

With the knowledge, experience and infrastructure available, the Northern Netherlands region can develop into a renewable energy hotspot.

Once the Northern Netherlands was extracting peat, in recent decades it was natural gas, and in the coming century it will be wind energy, which we will use in many capacities, from electricity to hydrogen, to enable modern society.

At New Energy Coalition we share our knowledge with others so that everyone benefits. We work with companies, governments, research institutes and educational institutions.

In this way, the 60 employees at New Energy Coalition are building a new ecosystem centered around renewable energy. How can we strengthen the Northern Netherlands economically and keep it on the map as an energy region? We believe it's possible to create a position that benefits the region while also serving the Netherlands. After all, every region needs a thriving economy.

As New Energy Coalition, we take local action with a global perspective. We are therefore collaborating with sister organisations around the North Sea because the opportunities are within reach. While countries near the equator are often considered for future imports of sustainable hydrogen — whether in the form of green ammonia, other hydrogen carriers, or direct hydrogen — we recognise the importance of strategic autonomy and energy independence, especially in times of geopolitical shifts and uncertainties. My call to action is to harness the energy potential of the North Sea as well.

Dear people, let us join efforts and together develop our regional European energy economies.

Let me elaborate a bit more on New Energy Coalition. In general terms, we connect parties and work together with our coalition partners on the energy transition. We fulfill this through the following activities:

- Energy research and innovation projects: New Energy Coalition is involved in pioneering renewable energy research and innovative projects, such as offshore energy hubs, making industry more sustainable and developing sustainable energy districts.
- Networking and collaboration: We facilitate knowledge sharing and collaboration among various stakeholders in the energy sector, fostering an environment of collaboration to achieve the energy transition.
- Education and training: New Energy Business School, a collaboration between New Energy Coalition, University of Groningen and Nyenrode Business University, provides educational programs for professionals at all levels, from students to executives.

These activities result in various projects and programs. Let me name a few. For example, we are working to develop a fully functioning hydrogen value chain with our flagship program HEAVENN. And with our program H2 Train & Learnhub, we are training the right energy professionals from secondary vocational school, till university, or as we say in The Netherland, from MBO to MBA. As a result of these developments, the Northern Netherlands has been designated by the European Union as Europe's first Hydrogen Valley region.

The North Sea: A green power plant

As I said before: there is no need to transport huge amounts of energy carriers halfway around the world. Why would we be looking far, when we can get it close by?

Our own North Sea has enormous potential for Europe's future sustainable energy supply. The North Sea can play a crucial role in reducing our dependence on fossil fuels.

Let me mention three things that make the North Sea the perfect location as a sustainable power plant of the future:

- Existing infrastructure: The North Sea already has an extensive network of infrastructure for the oil and gas industry, including platforms, pipelines and depleted reservoirs suitable for CO2 storage. These can be reused to produce renewable electricity and low carbon hydrogen. The CO2 still produced by European industry until the transition is complete can be transported to the North Sea and stored in depleted gas fields. The carbon capture and storage of CO2 - also known as CCS - is an important policy instrument to reduce greenhouse gas emissions in addition to making energy supplies more sustainable. However, according to the IPCC, the United Nations climate agency, this is not enough. In time, negative emissions are also needed to curb climate change in a timely manner. For that, biofuels and direct air capture in combination with CCS are a solution. For this, the infrastructure of the North Sea is also crucial in the long run.
- Offshore wind potential: With favorable wind conditions and relatively shallow water, the North Sea has the potential to generate a significant portion of Europe's future electricity needs with offshore wind farms. Belgium, Denmark, Germany and the Netherlands have set a goal of having as much as 65 gigawatts of wind power installed by 2030. By 2050, that should grow to 150 gigawatts. If we add to that the commitments of France, Germany, Ireland, Norway and the United Kingdom, offshore wind capacity will exceed 300 gigawatts by 2050.
- Proximity to major emission clusters: The North Sea is close to several major industrial clusters in Europe, making it ideal for providing clean energy to industries looking to create low carbon operations.

The need for international cooperation

The North Sea does not belong to the Netherlands alone. Therefore, with all its potential, the North Sea is the ideal domain for international cooperation. The North Sea Energy program is an international research initiative in which New Energy Coalition is involved. The program emphasises the need for a coherent strategy and international cooperation to fully realise the sustainable energy potential of the North Sea. The program emphasises the importance of integrating national visions and targets for offshore wind, hydrogen, natural gas and CCS.

Unfortunately, while the European Union acknowledges the need to import renewable energy, it lacks a comprehensive import strategy. Nonetheless, various countries and cities are collaborating in clusters. A prime example is the North Sea Cluster Collaboration Agreement, which brings together several cluster organisations, including Energy Cluster Denmark, Renewable Energy Hamburg, Energy Transition Norway, and Northern Netherlands Offshore Wind, among others.

With the Esbjerg Declaration in 2022 and the Ostend Declaration in 2023, the North Sea countries are encouraging each other to cooperate on offshore wind energy and green hydrogen production. But in practice, individual countries often develop their own initiatives. They travel individually to North Africa, the Middle East, South America and even Australia to negotiate with renewable energy suppliers to produce green hydrogen and transport it to Europe. This fragmented approach results in inefficiencies, missed opportunities, and unnecessary competition among European countries.

There will be a new energy hub on the North Sea, where provincial and national borders do not exist. The regions and countries surrounding the North Sea must join forces. Although Europe shares a

unified vision, as evidenced by the Ostend Declaration, it lacks harmonised regulations and financial frameworks that provide a level playing field for companies. True European cooperation, particularly in implementation, would enable more effective and efficient renewable energy projects. Cooperation between countries around the North Sea could also benefit from this. Let's seize the opportunities that are there for the taking in our own region.

You are no doubt familiar with Mario Draghi's report, which in September called for European cooperation to close the innovation gap with China and the United States. Our push for regional European cooperation around the North Sea fits perfectly into that vision of creating a competitive and climate-resilient economy while promoting strategic autonomy and energy independence.

For Draghi's vision and the development of regions like Groningen to become a reality, it is essential not only to establish a shared vision but also to align national goals for offshore wind, hydrogen, natural gas, and CCS.

Coordinated development and implementation are critical to success, including knowledge sharing and a unified approach to building cross-border infrastructure.

The opportunities of Scandinavia and the Baltic countries

In our search for renewables, we often overlook the significant potential of the Nordic and Baltic countries. These countries are already leaders in renewable energy production. They have enormous untapped potential for exporting electricity, hydrogen and biofuels. This could benefit continental Europe, which is in great need of them. Cooperation with these regions would not only increase energy security, but also strengthen regional ties and contribute to a more sustainable energy future for Europe.

The existing power lines with Norway and Denmark facilitate cross-border energy trade. The existing natural gas grid can be partially converted to hydrogen. The offshore NGT pipeline network could eventually offer opportunities to import hydrogen. Gasunie's onshore network also offers a potential route for hydrogen transport and distribution.

Creating an integrated European sustainable energy supply is of great strategic importance. Focusing only on cost-effectiveness could lead us to choose energy sources in remote locations. Then we would overlook the advantages of proximity, reliability and energy independence offered by the Nordic and Baltic countries. We must not forget that energy security and independence are crucial in the face of global geopolitical uncertainties. Scandinavian and Baltic countries offer a stable and reliable source of clean energy.

The production cost of green hydrogen in Chile and Australia could soon be lower than in Sweden or Latvia, but transporting hydrogen long distances is expensive and inefficient. Moreover: there are no tankers yet that can transport liquid hydrogen or ammonia. That link in the hydrogen chain must be developed from the ground up, which will take time.

Time that we don't have, as global warming is rumbling on. The urgency of climate action is growing daily. Look at the floods in Pakistan in 2022, the recurring severe weather in southern Europe and the violent hurricanes in the United States. By building a strong energy partnership with the Nordic and Baltic regions, we can achieve faster results by leveraging existing infrastructure and reducing the need for expensive and energy-intensive transportation methods. Of course existing infrastructure and port capacity needs to be expanded, but the foundation is there, we can get started.

A European hydrogen cluster in East Groningen

Let’s focus again on my own region: Groningen. What do we in Groningen want to do with all the renewable energy from the North Sea region? The supply of new energy must match demand. While on the North Sea one wind farm after another is being built, there is still an enormous amount of work

to be done on the demand side of the energy transition, because all of industry's machinery and installations must be converted or adapted to make the transition from fossil to renewable.

In the Eastern part of Groningen, we are working on a compelling example of how the North Sea region can harness its potential to create a thriving hydrogen economy. This region, which as I have told you has been significantly impacted by gas extraction from the Groningen field, has the potential to become Europe's first hydrogen cluster, preserving 10,000 existing jobs while also creating countless new ones.

The East Groningen Industry Cluster is home to several large companies in the food processing, chemical and manufacturing sectors. All companies together currently use about 215 million cubic meters of natural gas per year. That natural gas is becoming increasingly expensive because of rising CO2 prices.

We at the New Energy Coalition wondered what it would take for industry in this region to convert to CO2-free hydrogen by 2030. That is, hydrogen produced sustainably with green electricity - so-called green hydrogen - or hydrogen produced from fossil sources but with CO2 captured and stored or used - blue hydrogen. That is our goal: to make the companies in our region sustainable with CO2-free hydrogen.

Why make it sustainable with hydrogen and not with electricity? Good question. And electrification is a solution for many companies, but will it work everywhere? Given the long waiting times for a connection to the electricity grid in the Netherlands. Companies applying for a new or larger connection to the grid now won't have one before 2030. The problem is so significant that we have coined a term for it: grid congestion. This congestion hampers a swift transition to sustainability in the Netherlands. Our plan envisions making the industrial cluster sustainable before 2030—a goal that cannot be achieved solely through electrification.

So we have no time to lose. This ambitious project involves collaboration between companies, research institutions and government agencies to develop a comprehensive hydrogen infrastructure. The steel industry, ammonia production and the chemical sector are often considered the most promising industries for the use of hydrogen. Rightly so. But in my opinion, the region's existing industrial base - ranging from a cattle feed producer, a brine plant, a potato factory and a brick manufacturer - is also an ideal location for developing a hydrogen ecosystem. These industries can benefit from hydrogen as a clean and versatile energy carrier, reducing their carbon footprint and contributing to a more sustainable future, without having to wait for a new or larger connection to the power grid.

A successful transition of East Groningen to a hydrogen-based economy will require significant investment in infrastructure and technology, as well as ongoing support for businesses in the region. But the potential economic and social benefits of this initiative make it a worthwhile investment.

From Groningen's harbor - the Eemshaven - the pipeline network for transporting hydrogen is being built by Gasunie, the state-owned company now responsible for transporting natural gas. Gasunie will convert large parts of the network to hydrogen. The East Groningen Industry Cluster is thus perfectly positioned to develop as the first hydrogen cluster in Europe.

Clearly, we encounter a range of challenges. Starting with the primary process of the companies themselves. After all, bricks take on a different color when hydrogen is used as a fuel, and bread takes on a different taste, I have been told. Companies need to experiment and find the best way to make their production processes more sustainable.

Then, of course, there is the price of sustainable hydrogen. What is an acceptable cost level to become more sustainable without losing your competitive edge? Energy companies like Equinor, Engie and RWE are committed to getting first blue and then increasingly more green hydrogen to the region. Some of that green hydrogen can be produced locally, using the North Sea as an energy source. In any case, continuing to produce with fossil fuels is not an option in the longer run. CO2 emission rights are becoming increasingly scarce and, as a result, more expensive. By 2040, these rights will no longer be issued to companies in the industrial sectors included in the European Emissions Trading System, and the range of sectors subject to this trading system continues to expand.

Government support is essential to make the transition financially viable for companies. Negotiating this support can be challenging, particularly due to the fact that many headquarters of production sites in East Groningen are located abroad. However, companies must adapt to the future, regardless of these challenges, as the rising CO2 prices demand proactive orientation and action.

The East Groningen industrial cluster is taking the initiative itself to become future-proof. By 2030, this cluster can switch to hydrogen and have sustainable operations. This requires a one-time investment of approximately 100 million euros. On the one hand, that money is needed to distribute hydrogen from the main grid to the factories, and on the other hand, funds are needed to convert the plants. And then there is an uneconomical margin of about 30 million per year. At least at the current state of the energy and CO2 price, which naturally adjust over time in favor of renewable energy carriers.

However, the costs must be incurred before the benefits can be realised. While the investment is substantial, it is essential to make the industry sustainable, as it forms the foundation of our economy.

The ministry has shown interest, and we are currently engaged in discussions, which gives me hope. As I mentioned earlier, the Groningen region needs an alternative economy and deserves a fresh perspective. Furthermore, the Northern Netherlands has the potential to become a shining example of the transformative power of renewable energy and international cooperation.

Address societal concerns and ensure a just transition

The energy transition requires community involvement. A just transition takes into account the concerns of all stakeholders. We must recognise the historical context and impact of the gas industry on the region and ensure that the transition to renewable energy benefits everyone.

Open and transparent communication is essential for fostering trust and mutual understanding. We must clearly articulate the benefits of renewable energy, address potential concerns about its impacts whenever possible, and actively involve communities in the decision-making process. A just transition also entails providing workers in the fossil fuel industry with opportunities for retraining, enabling them to secure new jobs in the renewable energy sector.

We must also confront the growing "own people first" sentiment that is emerging across Europe. While international cooperation is essential, we must ensure that the benefits of the energy transition are shared equitably, so local communities are not overlooked or left behind.

Governments, businesses, and educational institutions have the opportunity to rebuild the trust of citizens and provide the region with a renewed economic perspective. To achieve social success, the region needs a strong economic foundation. I firmly believe that without this social base, true economic development is unattainable. The economy exists to serve society, not the other way around.

Conclusion: A shared vision for a sustainable future

The energy transition is a global challenge, but it also offers an extraordinary opportunity to create a more sustainable and equitable future. The North Sea region, with its abundant renewable energy resources and established infrastructure, is uniquely positioned to take a leading role in this transformative journey.

By working together, we can create a vibrant and interconnected energy system that benefits everyone. A system that is:

1. Secure and reliable, reducing our dependence on volatile global energy markets.
2. Clean and sustainable, mitigating climate change and protecting our environment.
3. Affordable and accessible, giving everyone access to clean and affordable energy.

New Energy Coalition is dedicated to realising this vision by sharing knowledge, forging strategic partnerships, and establishing research and development initiatives. We also offer training programs to cultivate expertise in renewable energy and its integration into both existing and emerging economic frameworks.)

However, we cannot accomplish this alone. I believe it is essential for all public and private parties to collaborate and make concerted efforts to:

- Develop a clear European hydrogen import strategy: Aligning national efforts and regulatory frameworks to facilitate cross-border hydrogen trade.
- Provide financial support to early adopters: Offering subsidies and other incentives to bridge the cost gap between hydrogen and traditional fuels, especially in the early stages of the transition.
- Invest in research and development: Supporting the development of hydrogen technologies, focusing on both production, storage, transportation and hydrogen deployment.
- Stakeholder collaboration: Ensuring transparency and inclusiveness in the decision-making process and addressing concerns related to safety, equity and environmental impacts.

It’s a significant task and a tremendous challenge. But I am excited about it. I'm doing it for my daughters, I'm doing it for Groningen, I'm doing it for Europe, and I'm doing it for everyone affected by climate change. We need to take action.

I invite each of you to join New Energy Coalition on this transformative journey. Together, let’s share our knowledge, expertise, and resources to collaboratively create a brighter energy future for the North Sea region and beyond.

Thank you!

On the potential of the North Sea region for future energy supply

Good morning all, and thank you for being here today. I am Marieke Abbink, CEO of New Energy Coalition from the Netherlands. It is an honor to take you into the future of energy in the North Sea region.

Introduction: Groningen, the Energy Valley of the Future

Many of you undoubtedly know Groningen as a gas province. For decades, this region of the northern Netherlands has been a major energy source for Europe, producing vast quantities of natural gas. With an original reserve of about 2,800 billion cubic meters, the Groningen gas field still ranks high among the world's largest gas fields.For decades, Groningen supplied tens of billions of cubic meters of gas to customers across Europe, annualy.

More than 2,300 billion cubic meters of natural gas have been extracted from the Groningen field.

As many of you are aware, gas production in the Netherlands is nearing its conclusion. While the Groningen gas field still holds approximately 500 billion cubic meters of natural gas, it is nonetheless being phased out.There are still some smaller gas fields in the Netherlands, both onshore and offshore. But the Netherlands can no longer meet its own gas needs.

I was born and raised in Groningen. I still live in this province and feel very connected to the area where, unfortunately, gas extraction has caused serious earthquakes. Those earthquakes have damaged homes, caused financial uncertainty, and more importantly, they have caused the population to lose confidence in their government. Citizens have begun to doubt: Is the government there to protect me and my family? Or is the economy more important than the people?

Many people feel mistreated. After all, is the economy there to bring people prosperity, or are people there just to serve the economy? That seems like a rhetorical question. But the doubt and frustration in Groningen runs deep. Citizens feel they are victims of the economic exploitation of their region. The Netherlands and Europe benefited from the Groningen gas, the local population is left with the damage.

Above all, this produces mixed feelings. On the one hand, many Groningers are proud of their region as a gas province. Groningen has made the Netherlands rich. On the other hand, people are angry because of the damage caused by the earthquakes and the half-hearted and bureaucratic handling of the compensation payments.

For that reason, not everyone in Groningen is ready for the next step. That next step is transforming the Northern Netherlands from a natural gas province into a European hub for renewable energy in general and green hydrogen in particular. But we have to discuss that next step. Because even though it is difficult to start the conversation about energy transition now, we need support for it, because the closure of the Groningen gas field has major consequences for the region. 20,000 jobs are at stake.

Therefore, a new perspective is needed. As a resident of the region and as CEO of New Energy Coalition, I am deeply motivated to help create that new perspective. I want the new generation to be able to build a bright future in the Northern Netherlands as well. It is a beautiful area to live and work. My daughters are 23 and 21 and should be able to settle and develop in Groningen, just as I did.

That new perspective is what I want to talk to you about today. After all, the energy transition offers new opportunities for Groningen, the Northern Netherlands and Europe. At New Energy Coalition, we believe that Groningen is perfectly positioned to become the Energy Valley of the future. The North Sea is key to achieving this.

New Energy Coalition: a new economy for the northern Netherlands

First, let me tell you a little more about New Energy Coalition. New Energy Coalition is a foundation that originated from the idea that Groningen is an energy province and should remain an energy province.

With the knowledge, experience and infrastructure available, the Northern Netherlands region can develop into a renewable energy hotspot.

Once the Northern Netherlands was extracting peat, in recent decades it was natural gas, and in the coming century it will be wind energy, which we will use in many capacities, from electricity to hydrogen, to enable modern society.

At New Energy Coalition we share our knowledge with others so that everyone benefits. We work with companies, governments, research institutes and educational institutions.

In this way, the 60 employees at New Energy Coalition are building a new ecosystem centered around renewable energy. How can we strengthen the Northern Netherlands economically and keep it on the map as an energy region? We believe it's possible to create a position that benefits the region while also serving the Netherlands. After all, every region needs a thriving economy.

As New Energy Coalition, we take local action with a global perspective. We are therefore collaborating with sister organisations around the North Sea because the opportunities are within reach. While countries near the equator are often considered for future imports of sustainable hydrogen — whether in the form of green ammonia, other hydrogen carriers, or direct hydrogen — we recognise the importance of strategic autonomy and energy independence, especially in times of geopolitical shifts and uncertainties. My call to action is to harness the energy potential of the North Sea as well.

Dear people, let us join efforts and together develop our regional European energy economies.

Let me elaborate a bit more on New Energy Coalition. In general terms, we connect parties and work together with our coalition partners on the energy transition. We fulfill this through the following activities:

- Energy research and innovation projects: New Energy Coalition is involved in pioneering renewable energy research and innovative projects, such as offshore energy hubs, making industry more sustainable and developing sustainable energy districts.
- Networking and collaboration: We facilitate knowledge sharing and collaboration among various stakeholders in the energy sector, fostering an environment of collaboration to achieve the energy transition.
- Education and training: New Energy Business School, a collaboration between New Energy Coalition, University of Groningen and Nyenrode Business University, provides educational programs for professionals at all levels, from students to executives.

These activities result in various projects and programs. Let me name a few. For example, we are working to develop a fully functioning hydrogen value chain with our flagship program HEAVENN. And with our program H2 Train & Learnhub, we are training the right energy professionals from secondary vocational school, till university, or as we say in The Netherland, from MBO to MBA. As a result of these developments, the Northern Netherlands has been designated by the European Union as Europe's first Hydrogen Valley region.

The North Sea: A green power plant

As I said before: there is no need to transport huge amounts of energy carriers halfway around the world. Why would we be looking far, when we can get it close by?

Our own North Sea has enormous potential for Europe's future sustainable energy supply. The North Sea can play a crucial role in reducing our dependence on fossil fuels.

Let me mention three things that make the North Sea the perfect location as a sustainable power plant of the future:

- Existing infrastructure: The North Sea already has an extensive network of infrastructure for the oil and gas industry, including platforms, pipelines and depleted reservoirs suitable for CO2 storage. These can be reused to produce renewable electricity and low carbon hydrogen. The CO2 still produced by European industry until the transition is complete can be transported to the North Sea and stored in depleted gas fields. The carbon capture and storage of CO2 - also known as CCS - is an important policy instrument to reduce greenhouse gas emissions in addition to making energy supplies more sustainable. However, according to the IPCC, the United Nations climate agency, this is not enough. In time, negative emissions

are also needed to curb climate change in a timely manner. For that, biofuels and direct air capture in combination with CCS are a solution. For this, the infrastructure of the North Sea is also crucial in the long run.

- Offshore wind potential: With favorable wind conditions and relatively shallow water, the North Sea has the potential to generate a significant portion of Europe's future electricity needs with offshore wind farms. Belgium, Denmark, Germany and the Netherlands have set a goal of having as much as 65 gigawatts of wind power installed by 2030. By 2050, that should grow to 150 gigawatts. If we add to that the commitments of France, Germany, Ireland, Norway and the United Kingdom, offshore wind capacity will exceed 300 gigawatts by 2050.
- Proximity to major emission clusters: The North Sea is close to several major industrial clusters in Europe, making it ideal for providing clean energy to industries looking to create low carbon operations.

The need for international cooperation

The North Sea does not belong to the Netherlands alone. Therefore, with all its potential, the North Sea is the ideal domain for international cooperation. The North Sea Energy program is an international research initiative in which New Energy Coalition is involved. The program emphasises the need for a coherent strategy and international cooperation to fully realize the sustainable energy potential of the North Sea. The program emphasises the importance of integrating national visions and targets for offshore wind, hydrogen, natural gas and CCS.

Unfortunately, while the European Union acknowledges the need to import renewable energy, it lacks a comprehensive import strategy. Nonetheless, various countries and cities are collaborating in clusters. A prime example is the North Sea Cluster Collaboration Agreement, which brings together several cluster organisations, including Energy Cluster Denmark, Renewable Energy Hamburg, Energy Transition Norway, and Northern Netherlands Offshore Wind, among others.

With the Esbjerg Declaration in 2022 and the Ostend Declaration in 2023, the North Sea countries are encouraging each other to cooperate on offshore wind energy and green hydrogen production. But in practice, individual countries often develop their own initiatives. They travel individually to North Africa, the Middle East, South America and even Australia to negotiate with renewable energy suppliers to produce green hydrogen and transport it to Europe. This fragmented approach results in inefficiencies, missed opportunities, and unnecessary competition among European countries.

There will be a new energy hub on the North Sea, where provincial and national borders do not exist. The regions and countries surrounding the North Sea must join forces. Although Europe shares a unified vision, as evidenced by the Ostend Declaration, it lacks harmonised regulations and financial frameworks that provide a level playing field for companies. True European cooperation, particularly in implementation, would enable more effective and efficient renewable energy projects. Cooperation between countries around the North Sea could also benefit from this. Let's seize the opportunities that are there for the taking in our own region.

You are no doubt familiar with Mario Draghi's report, which in September called for European cooperation to close the innovation gap with China and the United States. Our push for regional European cooperation around the North Sea fits perfectly into that vision of creating a competitive and climate-resilient economy while promoting strategic autonomy and energy independence.

For Draghi's vision and the development of regions like Groningen to become a reality, it is essential not only to establish a shared vision but also to align national goals for offshore wind, hydrogen, natural gas, and CCS.

Coordinated development and implementation are critical to success, including knowledge sharing and a unified approach to building cross-border infrastructure.

The opportunities of Scandinavia and the Baltic countries

In our search for renewables, we often overlook the significant potential of the Nordic and Baltic countries. These countries are already leaders in renewable energy production. They have enormous untapped potential for exporting electricity, hydrogen and biofuels. This could benefit continental Europe, which is in great need of them. Cooperation with these regions would not only increase energy security, but also strengthen regional ties and contribute to a more sustainable energy future for Europe.

The existing power lines with Norway and Denmark facilitate cross-border energy trade. The existing natural gas grid can be partially converted to hydrogen. The offshore NGT pipeline network could eventually offer opportunities to import hydrogen. Gasunie's onshore network also offers a potential route for hydrogen transport and distribution.

Creating an integrated European sustainable energy supply is of great strategic importance. Focusing only on cost-effectiveness could lead us to choose energy sources in remote locations. Then we would overlook the advantages of proximity, reliability and energy independence offered by the Nordic and Baltic countries. We must not forget that energy security and independence are crucial in the face of global geopolitical uncertainties. Scandinavian and Baltic countries offer a stable and reliable source of clean energy.

The production cost of green hydrogen in Chile and Australia could soon be lower than in Sweden or Latvia, but transporting hydrogen long distances is expensive and inefficient. Moreover: there are no tankers yet that can transport liquid hydrogen or ammonia. That link in the hydrogen chain must be developed from the ground up, which will take time.

Time that we don't have, as global warming is rumbling on. The urgency of climate action is growing daily. Look at the floods in Pakistan in 2022, the recurring severe weather in southern Europe and the violent hurricanes in the United States. By building a strong energy partnership with the Nordic and Baltic regions, we can achieve faster results by leveraging existing infrastructure and reducing the need for expensive and energy-intensive transportation methods. Of course existing infrastructure and port capacity needs to be expanded, but the foundation is there, we can get started.

A European hydrogen cluster in East Groningen

Let’s focus again on my own region: Groningen. What do we in Groningen want to do with all the renewable energy from the North Sea region? The supply of new energy must match demand. While on the North Sea one wind farm after another is being built, there is still an enormous amount of work to be done on the demand side of the energy transition, because all of industry's machinery and installations must be converted or adapted to make the transition from fossil to renewable.

In the Eastern part of Groningen, we are working on a compelling example of how the North Sea region can harness its potential to create a thriving hydrogen economy. This region, which as I have told you has been significantly impacted by gas extraction from the Groningen field, has the potential to become Europe's first hydrogen cluster, preserving 10,000 existing jobs while also creating countless new ones.

The East Groningen Industry Cluster is home to several large companies in the food processing, chemical and manufacturing sectors. All companies together currently use about 215 million cubic meters of natural gas per year. That natural gas is becoming increasingly expensive because of rising CO2 prices.

We at the New Energy Coalition wondered what it would take for industry in this region to convert to CO2-free hydrogen by 2030. That is, hydrogen produced sustainably with green electricity - so-called green hydrogen - or hydrogen produced from fossil sources but with CO2 captured and stored or used

- blue hydrogen. That is our goal: to make the companies in our region sustainable with CO2-free hydrogen.

Why make it sustainable with hydrogen and not with electricity? Good question. And electrification is a solution for many companies, but will it work everywhere? Given the long waiting times for a connection to the electricity grid in the Netherlands. Companies applying for a new or larger connection to the grid now won't have one before 2030. The problem is so significant that we have coined a term for it: grid congestion. This congestion hampers a swift transition to sustainability in the Netherlands. Our plan envisions making the industrial cluster sustainable before 2030—a goal that cannot be achieved solely through electrification.

So we have no time to lose. This ambitious project involves collaboration between companies, research institutions and government agencies to develop a comprehensive hydrogen infrastructure. The steel industry, ammonia production and the chemical sector are often considered the most promising industries for the use of hydrogen. Rightly so. But in my opinion, the region's existing industrial base - ranging from a cattle feed producer, a brine plant, a potato factory and a brick manufacturer - is also an ideal location for developing a hydrogen ecosystem. These industries can benefit from hydrogen as a clean and versatile energy carrier, reducing their carbon footprint and contributing to a more sustainable future, without having to wait for a new or larger connection to the power grid.

A successful transition of East Groningen to a hydrogen-based economy will require significant investment in infrastructure and technology, as well as ongoing support for businesses in the region. But the potential economic and social benefits of this initiative make it a worthwhile investment.

From Groningen's harbor - the Eemshaven - the pipeline network for transporting hydrogen is being built by Gasunie, the state-owned company now responsible for transporting natural gas. Gasunie will convert large parts of the network to hydrogen. The East Groningen Industry Cluster is thus perfectly positioned to develop as the first hydrogen cluster in Europe.

Clearly, we encounter a range of challenges. Starting with the primary process of the companies themselves. After all, bricks take on a different color when hydrogen is used as a fuel, and bread takes on a different taste, I have been told. Companies need to experiment and find the best way to make their production processes more sustainable.

Then, of course, there is the price of sustainable hydrogen. What is an acceptable cost level to become more sustainable without losing your competitive edge? Energy companies like Equinor, Engie and RWE are committed to getting first blue and then increasingly more green hydrogen to the region. Some of that green hydrogen can be produced locally, using the North Sea as an energy source. In any case, continuing to produce with fossil fuels is not an option in the longer run. CO2 emission rights are becoming increasingly scarce and, as a result, more expensive. By 2040, these rights will no longer be issued to companies in the industrial sectors included in the European Emissions Trading System, and the range of sectors subject to this trading system continues to expand.

Government support is essential to make the transition financially viable for companies. Negotiating this support can be challenging, particularly due to the fact that many headquarters of production sites in East Groningen are located abroad. However, companies must adapt to the future, regardless of these challenges, as the rising CO2 prices demand proactive orientation and action.

The East Groningen industrial cluster is taking the initiative itself to become future-proof. By 2030, this cluster can switch to hydrogen and have sustainable operations. This requires a one-time investment

of approximately 100 million euros. On the one hand, that money is needed to distribute hydrogen from the main grid to the factories, and on the other hand, funds are needed to convert the plants. And then there is an uneconomical margin of about 30 million per year. At least at the current state of the energy and CO2 price, which naturally adjust over time in favor of renewable energy carriers.

However, the costs must be incurred before the benefits can be realised. While the investment is substantial, it is essential to make the industry sustainable, as it forms the foundation of our economy.

The ministry has shown interest, and we are currently engaged in discussions, which gives me hope. As I mentioned earlier, the Groningen region needs an alternative economy and deserves a fresh perspective. Furthermore, the Northern Netherlands has the potential to become a shining example of the transformative power of renewable energy and international cooperation.

Address societal concerns and ensure a just transition

The energy transition requires community involvement. A just transition takes into account the concerns of all stakeholders. We must recognise the historical context and impact of the gas industry on the region and ensure that the transition to renewable energy benefits everyone.

Open and transparent communication is essential for fostering trust and mutual understanding. We must clearly articulate the benefits of renewable energy, address potential concerns about its impacts whenever possible, and actively involve communities in the decision-making process. A just transition also entails providing workers in the fossil fuel industry with opportunities for retraining, enabling them to secure new jobs in the renewable energy sector.

We must also confront the growing "own people first" sentiment that is emerging across Europe. While international cooperation is essential, we must ensure that the benefits of the energy transition are shared equitably, so local communities are not overlooked or left behind.

Governments, businesses, and educational institutions have the opportunity to rebuild the trust of citizens and provide the region with a renewed economic perspective. To achieve social success, the region needs a strong economic foundation. I firmly believe that without this social base, true economic development is unattainable. The economy exists to serve society, not the other way around.

Conclusion: A shared vision for a sustainable future

The energy transition is a global challenge, but it also offers an extraordinary opportunity to create a more sustainable and equitable future. The North Sea region, with its abundant renewable energy resources and established infrastructure, is uniquely positioned to take a leading role in this transformative journey.

By working together, we can create a vibrant and interconnected energy system that benefits everyone. A system that is:

4. Secure and reliable, reducing our dependence on volatile global energy markets.
5. Clean and sustainable, mitigating climate change and protecting our environment.
6. Affordable and accessible, giving everyone access to clean and affordable energy.

New Energy Coalition is dedicated to realising this vision by sharing knowledge, forging strategic partnerships, and establishing research and development initiatives. We also offer training programs to cultivate expertise in renewable energy and its integration into both existing and emerging economic frameworks.)

However, we cannot accomplish this alone. I believe it is essential for all public and private parties to collaborate and make concerted efforts to:

- Develop a clear European hydrogen import strategy: Aligning national efforts and regulatory frameworks to facilitate cross-border hydrogen trade.
- Provide financial support to early adopters: Offering subsidies and other incentives to bridge the cost gap between hydrogen and traditional fuels, especially in the early stages of the transition.
- Invest in research and development: Supporting the development of hydrogen technologies, focusing on both production, storage, transportation and hydrogen deployment.
- Stakeholder collaboration: Ensuring transparency and inclusiveness in the decision-making process and addressing concerns related to safety, equity and environmental impacts.

It's a significant task and a tremendous challenge. But I am excited about it. I'm doing it for my daughters, I'm doing it for Groningen, I'm doing it for Europe, and I'm doing it for everyone affected by climate change. We need to take action.

I invite each of you to join New Energy Coalition on this transformative journey. Together, let's share our knowledge, expertise, and resources to collaboratively create a brighter energy future for the North Sea region and beyond.

Thank you!