STRONG NORTHERN NETHERLANDS
POWERED BY SNN

A Clean Industrial Deal supporting Regions

Northern Netherlands contributes as the Hydrogen Valley and Regional Innovation Valley on Circular Economy

We welcome a Clean Industrial Deal

As the Northern Netherlands Region we welcome the development of the Clean Industrial Deal. With the Clean Industrial Deal, the European Commission will outline a comprehensive strategy to advance Europe's industrial sector towards sustainability and competitiveness[1]. We welcome a Clean Industrial Deal that emphasizes the necessity of channeling investments in industry, for energy intensive sectors, circular economy clusters and strengthens Europe's geopolitical position.

We as Northern Netherlands region are ready to assist Europe to become more competitive and greener given our expertise and strengths in Hydrogen and Circular Economy.

Allow us to contribute to sustainable competitiveness

With our Regional Innovation Strategy, we leverage European funding to become a sustainable, innovative, and circular region where regional governments work closely with academic institutions and private enterprises. This approach has led, among other achievements, to Northern Netherlands being recognized by the European Commission as Europe's first Hydrogen Valley, HEAVENN[2]. Furthermore, our region has been selected as the first European Regional Innovation Valley in the field of Circular Economy, ECIV[3]. We are recognized to be frontrunner in the fields of Circular Economy[4], and Hydrogen well-positioned to provide strategic advice that will help make Europe both competitive and sustainable.

In line with the report of Mario Draghi on the future of European Competitiveness we agree that a stronger focus is needed by both the EU, national and regional governments to provide the right incentive for competitiveness and transition. According to Draghi, regions are the engine of the European economy, in specific Hydrogen Valleys and Circular Economy Clusters.

Our region will assist to decarbonization goals so that European regions can become leaders in a low-carbon economy. The Northern Netherlands with its with existing industrial clusters and expertise will use its infrastructure, workforce, to transition into future-ready hubs, limiting social and economic disruption and boosting competition.

---

1. Political Guidelines for the Next European Commission 2024-2029
2. https://heavenn.org/
3. https://www.acrplus.org/en/groupe/european-circular-innovation-valley-162/page/presentation
4. https://economy-finance.ec.europa.eu/document/download/c3a6d1e0-8289-4fb9-91ab-3f3fb1ba6dee_en?filename=SWD_2024_619_1_EN_Netherlands.pdf

What can the European Commission do?

We ask the European Commission to include the regional perspective into upcoming legislation, and mainly focus on the following points:

Part I

Circular Economy & Regional Resilience

1. Regional Approach to Circular Economy – Recognize the role of regions (e.g., Northern Netherlands) in implementing CE, scaling innovations, and fostering EU competitiveness.
2. Harmonize EU Regulation & Funding for Circular Plastics & Green Chemistry
3. Design consistent standards & blending requirements across Europe.
4. Strengthen import controls to prevent low-quality, non-sustainable materials.
5. Increase EU investments in CE to bridge the €27B/year CE funding gap.
6. SME support & flexibility in subsidy eligibility.
7. End-of-waste regulations to accelerate recycling & reuse.
8. Increase AI & clean tech R&D funding to optimize CE.
9. Establish EU wide Circular Economy Campuses & Hubs – Establish regional CE innovation campuses, similar to Hydrogen Valley Campus Europe.
10. Water & Circularity – Invest in water reuse, pollution reduction, and circular water systems.
11. Strengthen European Textile Autonomy – Develop regional textile hubs, support local supply chains, and promote circular materials.
12. Sustainable Construction – Incentivize bio-based and circular materials, industrialized prefabrication, and link agriculture to building materials.

Part II

The Clean Industrial Deal & Hydrogen Valleys

1. Hydrogen should be linked to the part of the broader ambitions of the EU regarding Circular Economy.
2. Dedicate part of the Innovation Fund for Hydrogen Valleys – Allocate funding across the hydrogen value chain, including SMEs, tailored regional applications, and local industries.
3. Flexible Certification for Green Hydrogen – Allow temporary alternative energy use to support green hydrogen certification.
4. Postpone RED3 to 2030 – Delay Renewable Energy Directive III due to grid congestion and hydrogen backbone delays.
5. Increased Subsidies for Decentralized Hydrogen Production – Support local hydrogen generation to reduce dependency on major networks.
6. EU Hydrogen Market Mechanisms – Create a level playing field and address high green hydrogen prices, learning from Germany's H2Global.
7. Standardized Hydrogen Specifications – Develop EU-wide classifications for green, blue, and other hydrogen types.
8. Address Grid Congestion – Invest in infrastructure, cross-border links, permitting reform, sector coupling, and innovation.
9. Accelerate Permitting for Sustainable Energy Projects – Expedite approvals for local hydrogen electrolysers and renewable projects.
10. Renewed EU Hydrogen Strategy – Align with updated climate goals, address bottlenecks, ensure SME funding, and integrate hydrogen into industry, energy, and transport.

In Annex I we provide a detailed explanation explaining our key asks and strengthening them with regional examples in Annex II.

ANNEX I – KEY ASKS EXPLAINED

We ask the European Commission to design a Clean Industrial Deal in line with the following building-blocks on both Circular Economy part (I) and Hydrogen (part II):

Part I

Circular Economy

The European Union should learn from Regions that are Circular Hubs to increase its resilience and competitiveness by:

Allowing a regional approach to Circular Economy in upcoming policy

The EU stands at the critical juncture as it seeks to enhance competitiveness and achieving climate neutrality, whilst remaining competitive on the global stage. Central to this is the CE, by minimizing waste and fostering more sustainable us of raw and recycled materials. CE principles and practices that are kickstarted in Europe's regions should be the cornerstone of EU's strategy for a sustainability and competitiveness.

As much as 80% of Circular Economy (CE) initiatives are implemented at the regional level, regions are crucial to driving the circular transition. Regions are closest to stakeholders, ecosystems, businesses, and their industries. This is particularly true for the Northern Netherlands, where regional collaboration and innovation are central. Regions play a key role in implementing national and European legislation on the circular economy. Therefore the EU should embrace the regional CE approach to reduce its environmental footprint, enhance resilience, foster innovation and transition towards a new model of production and consumption in order to position the EU as global leader in sustainability.

Why should regions as the Northern Netherlands contribute?

The Northern Netherlands translates EU-wide goals into concrete, actionable initiatives. Our region serves as innovation hub, where new business models, materials, or processes are tested and can subsequently be scaled across borders or to other European regions. Across the entire Northern Netherlands, approximately 17,500 people work in the circular economy, and this number continues to steeply grow annually.

We as Northern Netherlands region take pride in the strong role our region plays in this transition. As a frontrunner in circular and green chemistry, we are working intensively to accelerate the transition towards circular plastics and circular public procurement. We are, inter alia, the first EU Regional Innovation Valley on Circular Economy, ECIV. Together with 19 organizations from 19 countries and a €27.2 million budget ECIV will co-create Europe's largest circular economy innovation ecosystem.

Key objectives are fostering sustainable development and collaboration across regions. In the course of 5 years ECIV will contribute massively to Europe's Circular Economy Development. It will focus on the creation of new materials, energy-efficient technologies and innovative resource management processes. We believe that this regional initiative will help The EU as global leader in competitive circular solutions. To this end, European structural funds are essential for laying the foundation at the regional level to address European challenges.

Through JTF and ERDF, we already make significant investments and contribute to green and circular skills and applications via regional structures and we believe it is essential to continue this under the next European programming. Thanks to the robust industrial and knowledge base in our region, and our strategic collaboration between businesses, knowledge institutions, and governments, we are well-positioned to make a significant contribution to the objectives of the Circular Economy Act and Clean Industrial Deal. More on our regional strengths see Annex I.

What are our regional CE practices and prerequisites that should be included in the Clean Industrial Deal?

PLASTICS AND GREEN CHEMISTRY

The EU needs to allow a level playing field and unified regulation across Europe as well as funding

A level playing field with consistent regulation across Europe is critical for collaboration and scaling innovations. Current challenges in circular plastics require regulations that acknowledge the diversity of product applications—"one size fits all" solutions will not suffice. Key needs include:

A **Consistent Standards:** Regulation must offer nuance and flexibility to address different types of plastics and their applications. We are deeply concerned about the sharp decline in recycled plastics production in Europe, which is already having severe consequences for the circular economy and the sustainable transition. Europe holds a strategic position in plastics recycling and bioplastics production, yet this sector is under growing pressure from a flood of cheaper imports from Asia and the United States—imports that often fail to meet the EU's high sustainability standards. This is no longer just a risk but a harsh reality, already driving European companies out of business and threatening the region's industrial competitiveness. To effectively support Europe's circular ambitions and safeguard our industry's future, we urgently need clear and consistent legislation that ensures fair competition between recycled, biobased, and virgin plastics.

B **Protection at EU Borders:** Stronger controls on the quality of imported products and materials are vital. Unified EU policies can ensure fair competition, particularly for sustainable and circular plastics, which are often more expensive to produce.

C **Blending Requirements for Plastics:** In the Netherlands, the upcoming National Circular Plastic Standard (NCPN) will mandate that plastic processors use a minimum percentage of recycled or bio-based plastics by 2027. However, Europe has yet to finalize its policy on blending requirements. While the Dutch policy promotes sustainability, it risks disadvantaging Dutch producers competing within the EU unless Europe adopts similar sustainability standards. Accelerating EU-wide decisions on blending requirements is essential to avoid market imbalances and ensure competitiveness at EU level. Strengthening demand for secondary materials through measures such as digital product passports to facilitate minimum content requirements and, under a larger perspective, points to circular economy principles as a lever for Europe's strategic autonomy.

D **Adress the investment gap:** EU-level Funding Instruments and Investments to support the development of Circular Economy.
Studies have shown that there is an annual investment gap of €27 billion needed to transition to a circular economy. While regional funds such as ERDF and Interreg provide crucial support for startups and pilot projects—often covering up to 50% of costs—scaling up to full industrial production requires significantly larger investments, often in the tens of millions. Most regions lack the financial capacity to support such large-scale projects, making access to EU-level funding essential and creating an urgent need for a more attractive environment for venture capital.To bridge this gap, we call for more place-based investments in infrastructure, technology, and innovative entrepreneurship to accelerate the circular transition. European funds must flow directly to regions rather than being funneled through national allocations, ensuring more efficient and targeted spending. A key example of a necessary funding instrument is the Horizon Europe call on Hubs for Circularity, which should be expanded to provide long-term support. Moreover the Just Transition Fund, Intereg and Horizon Europe need to be amended to address this gap and invest in CE at regional level. These funds need to be fit for purpose to address a competitive Circular Economy.

Additionally, Europe must urgently reform the "Companies in Financial Difficulty" (OIM) classification, which is a major barrier for innovative circular businesses. Many companies investing in new production facilities—such as those in Groningen—temporarily have limited equity, causing them to be classified as OIM and disqualified from crucial EU funding. We call for a tailored assessment for innovative companies, recognizing that high upfront investments are inherent to scaling up breakthrough technologies. EU funding programs, including Horizon Europe and the Innovation Fund, should introduce specific exemptions or adjusted criteria for circular economy pioneers, ensuring that promising companies are not excluded at a critical stage of their development.

E

SME Support is needed at EU level:
Innovative SMEs are the backbone of the circular economy, especially in the plastics sector. Large corporations alone cannot drive this transition, often due to shareholder priorities that may limit innovation. Regions like Northern Netherlands are ideally positioned to support SMEs because they understand their needs and challenges.

Regional Examples of ground breaking SMEs in the CE sector:

- **CuRe** (chemical recycling of plastics and textiles)
- **Paques** Biomaterials (biodegradable polymers)
- **BioBTX** (renewable chemical intermediates)
- **Avantium** (biobased polymers)

F

Addressing end-of- waste challenges at EU level: The end-of-waste classification delays are a major bottleneck preventing circular business models from scaling up. To fully unlock the potential of waste as a valuable resource, the EU must accelerate and harmonize end-of-waste regulations across all member states, with a particular focus on key sectors such as plastic recycling and biobased materials.
Product design, which can mitigate up to 80% of environmental impacts (as noted by Draghi), requires significant investments in infrastructure to support reuse and recycling. However, these efforts are undermined by inconsistent and slow regulatory processes that hinder industrial scaling. Current issues include:
Regulatory delays in reclassifying waste as raw material, such as in the case of specific plastics or medical waste. These delays block the supply of high-quality secondary raw materials, disrupting business models and investment certainty.
Slow decision-making on critical approvals, such as the Novel Technology Number from EFSA for food-safe applications, which prevents innovative companies from entering the market in a timely manner.
The consequences of these delays are already visible—leading recycling companies in the Netherlands have gone bankrupt due to uncertainty and regulatory inaction. To avoid further economic and environmental setbacks, we call for an EU-wide harmonization of end-of-waste criteria and fast-track approval processes. This will not only strengthen the circular economy but also serve as a lever for Europe's strategic autonomy, reducing dependence on virgin materials and external suppliers.

G

Research funding in Artificial Intelligence for Circular Economy is needed:
Artificial intelligence (AI) offers immense potential to accelerate the transition to a circular economy. For instance, AI could play a critical role in optimizing life cycle assessments of circular plastics by precisely mapping each phase of the product life: from design and production to usage and disposal. This can significantly enhance the efficiency of circular processes while reducing the complexity of data collection and analysis. Furthermore, AI could contribute to implementing certification schemes and improving transparency in circular value chains, as well as supporting a strategy on critical raw materials in the industry. Creating a level playing field for circular plastics will be essential in this process. We believe that such technologies, combined with targeted legislation, hold the key to achieving a fully competitive circular economy. However, further fundamental and applied research is still required.

H **Focus on Clean Tech industry for CE:** Not just greening existing industries (implementing existing environmental technologies), but also creating work and business by innovating and developing new green technologies, towards a sustainable society. Develop business models centered around sustainability and ecological value rather than profit maximization. Also, focus on societal value and contributions to broad prosperity for the inhabitants of the European Union.
Regional examples of groundbreaking SMEs in the clean tech industry:
BioBTX (renewable chemical intermediates); BioBTX is leader in renewable and biobased aromatics, making circular chemistry possible. At BioBTX we develop technology for a circular world. We produce BTX from biomass and plastics. BioBTX makes the production of high value chemicals out of waste utilization possible.

I **Develop Circular Economy Campuses in European Regions:**
Develop campuses based on the triple helix model; invest in knowledge and innovation, startups and scaleups, and future-proof businesses; for example, the HVCE initiative, Hydrogen Valley Campus Europe but then for Circular Economy. Funds such as the Horizon Europe Hubs for Circularity could be tailored to this.

J **Adress Water and Circularity altogether:** Water availability at the right quality, time, and place will become increasingly challenging due to drought, flooding, and (micro)pollutants. Growing demand from population increase, cooling (e.g., data centers), and green hydrogen production will further intensify pressure on water resources. To address these challenges, European water infrastructure must focus on resource recovery—such as sludge, phosphorus, and fertilizers—ensuring long-term sustainability. Regional differences require tailored approaches: expanding wastewater treatment in Eastern Europe and enhancing water re-use and desalination in Mediterranean countries. By 2050, a truly circular water system must prioritize alternative water sources, large-scale water reuse, and full utilization of energy, minerals, and water itself. European policies should drive innovation, investment, and regulatory frameworks that support this transition. The groundbreaking and unique research and projects of Wetsus and Watercampus in Friesland could play a crucial role in shaping EU-wide policies as they focus on innovations to reduce polluted water discharges and reuse recovered materials.

K **Combatting Low-Quality Imports:** Low-quality imports (e.g., from Temu and SHEIN) present another challenge. These materials are unsuitable for recycling and contaminate recycling streams. To protect European industry and ensure competitiveness, the EU must Introduce stricter quality requirements for imports. Implement significant tariffs on low-quality or non-circular products. By doing so, Europe can combat the dumping of low-grade materials that undermine the circular economy and stifle innovation within its borders.

L **Strengthening autonomy and competitiveness in sustainable textiles through regional textile hubs:** The Northern Netherlands has a long-standing textile heritage, ranging from linen production in Friesland to synthetic fiber innovation in Drenthe. Today, this expertise is being revitalized through circular textile initiatives such as the Textile Hub in Groningen, which promotes material reuse, education, and social employment. This expertise can accelerate Europe's transition to a resilient, circular textile economy, reinforcing both sustainability and competitiveness and autonomy.
To enhance autonomy and competitiveness in sustainable textiles, European policy should:

- Support Regional Textile Hubs – Facilitate funding and knowledge-sharing to scale up circular textile innovation across Europe.
- Invest in Local Supply Chains – Strengthen regional production and material reuse to reduce reliance on global supply chains.
- Encourage Workforce Development – Integrate circular textile training programs into education and social employment initiatives.
- Promote CO_2 Reduction Strategies – Incentivize closed-loop textile systems to minimize resource use and emissions.

What are our regional CE practices and prerequisites that should be included in the Clean Industrial Deal?

CIRCULAR CONSTRUCTION

As many challenges converge in the construction sector, it holds a great potential to accelerate the green and circular transition. From emissions and pollution to water and energy usage, as well as circular sanitation and biodiversity. By (further) developing local biobased value-chains, in NNL we provide tangible solutions to reach strategically independent, regenerative, and competitive business models. Especially the symbiotic connection between farmers and builders promotes regional cohesion and sustainable agricultural models that address environmental issues (nitrogen excess and biodiversity loss).

Therefore, we welcome announced EU policies, such as Level(s), the Construction Product Regulation (CPR), EPBD-IV, and CSRD reporting requirements as they aim to advance sustainability in construction. However, there is a risk for misalignment with regional ambitions, and national-level restrictions (e.g., proposed standardization under STOER) as these may stifle regional innovation and preparation for these EU regulations, especially for SMEs.

Moreover, misconceptions about the costs of biobased and circular construction limit broader adoption. NNL's innovative work on prefabrication, nature-based carbon capture in buildings, re-use, energy-saving, biocomposite alternatives for concrete, healthy materials, and water-saving technologies provides scalable solutions for climate-resilient construction. We offer an integrated understanding of legal, technical, social, environmental, and economic challenges across the value chain, positioning ourselves as an independent leader in sustainable construction. Therefore we contribute with the following prerequsites:

A **The EU needs to promote biobased and circular constructions:**

- Mandate the use of bio-based materials in EU public procurement: Establish clear minimum requirements for bio-based and circular materials in EU-funded infrastructure and construction projects. Public procurement should prioritize low-carbon, circular, and renewable materials, creating a stable demand for sustainable alternatives.
- Introduce CO_2 reduction incentives for construction materials: Implement carbon-based criteria in building regulations, ensuring that materials with lower embodied carbon, such as bio-based alternatives, receive financial incentives or tax benefits.
- Support regional bio-based construction value chains: Provide targeted EU funding (e.g., Horizon Europe, JTF, Interreg) to develop regional production hubs for bio-based materials, ensuring that rural areas supplying these materials benefit economically. This includes investing in processing facilities, R&D, and infrastructure to strengthen local supply chains.
- Promote industrialized construction with bio-based materials: Support the scaling of modular and prefabricated bio-based construction methods, which can reduce costs, enhance efficiency, and improve affordability. EU programs should facilitate pilot projects and create best-practice models for mass timber, hempcrete, and mycelium-based building materials.
- Strengthen cross-sector synergies for climate and economic goals: The "from farmland to building" model, as developed by NNL, should be replicated and expanded across EU regions. Integrating agriculture and construction supply chains will create new revenue streams for farmers, reduce carbon emissions, and contribute to rural economic development.

These measures will ensure that bio-based and circular materials become the default choice in European construction, reducing the sector's environmental footprint while boosting regional economies and EU strategic autonomy.

B **Leverage on regional expertise with building:**

- Invest in regions like Northern Netherlands that have unique expertise in integrated approaches to circular economy initiatives, including bio composites, water conservation, and prefabricated construction.
- Promote industrialized construction approaches using bio-based materials, which can accelerate scalability, strategic resource independence and affordability in the long term.
- Promote, and invest in regional biobased value chains, including knowledge building on (sustainably matching) soil, crops, and fully cascade the high-value applications of crops.
- Highlight the co-benefits for agriculture, construction, and climate goals, particularly for rural regions that can supply bio-based raw materials. NNL's "land to building" approach integrates agricultural outputs into construction, creating economic opportunities for farmers and builders while advancing sustainability goals.

Part II

Hydrogen Valleys

The Clean Industrial Deal needs fully functional Hydrogen Valleys.

Hydrogen is part of the broader ambition of the Northern Netherlands regarding Circular Economy.

Hydrogen should play a role within the broader ambition to establish a circular economy, where a diverse and sustainable energy mix supports the transition to a clean and resource-efficient production.

Part of the Innovation Fund Budget needs to be earmarked for Hydrogen Valleys

Hydrogen should play a role within the broader ambition to establish a circular economy, where a diverse and sustainable energy mix supports the transition to a clean and resource-efficient production.

A **Investments along the entire value chain**

Currently, co-financing is available for specific parts of the hydrogen value chain, such as substantial subsidies for production. However, the hydrogen chain can only function effectively if all parts of the chain in a region operate cohesively. The valleys are well-positioned to stimulate projects that may not fall directly under a European priority but are crucial for the regional hydrogen chain or as part of a European chain.

B **Not only large-scale but tailored solutions instead**

European co-financing is accessible for major stakeholders. However, smaller actors, such as innovators or SMEs transitioning to hydrogen, often find funding from initiatives like the Hydrogen Bank or Horizon programs out of reach. Valleys can act as an intermediary layer between EU policies and financing, enabling these smaller entities to innovate and adopt sustainable practices.

C **Local Value Chains and tailored Hydrogen Applications**

Valleys are home to specific value chains that need to be made more sustainable, spanning industry, food, mobility, and agriculture. Valleys have the clearest insight into which chains and links require stimulation and how support can be best applied. Hydrogen can be used in various ways, depending on the spatial context and the valley's role in European value chains. Applications vary between valleys.

Flexible Certification for Green Hydrogen Production

Due to delays in green electricity supply, we advocate for a flexible approach in certifying hydrogen as "green." Temporary use of alternative energy sources should be permitted, provided they contribute to the transition toward fully green energy.

Postponing the start date of RED3 (Renewable Energy Directive III) to 2030

Given delays caused by grid congestion, it is essential to extend the implementation deadline for RED3. This would give regions time to enhance their grid infrastructure and ensure a reliable supply of green electricity to electrolysers. Moreover it will also give the Netherlands time to develop our Hydrogen backbone infrastructure that is now delayed till 2027-2030.

Increased Subsidies for Decentralized Hydrogen Production

To make locally produced hydrogen economically viable and reduce dependency on major networks, we call for additional subsidies for decentralized production. This is especially important for areas generating hydrogen from sources like wind energy. Enhanced financial support will accelerate the transition to a more sustainable energy system.

Hydrogen level playing field at EU level

Create a clear and consistent hydrogen 'level playing field' at European level. Develop and implement market mechanisms to connect supply and demand, and tackle the currently high price of green hydrogen. Compare with H2Global in Germany.

Develop implement specification for Hydrogen

Develop and implement specifications for hydrogen (green, blue, etc.) at European level in the short term. Standards and specifications should be consistently applied across Europe. Currently, they are developed and implemented on a country-by-country basis, while hydrogen is cross-border.

Grid Congestion

Three quarters of the sustainability projects of large industrial companies in the region cannot be realized before 2030. This concerns around 400 companies in the Netherlands at large that consume a relatively large amount of energy. Many of these companies have presented ready-made sustainability projects but cannot obtain a new or more powerful electricity connection due to grid congestion. Moreover, they often must wait for years to obtain a permit to implement the plans. The Clean Industrial Deal should encourage the electricity grid infrastructure investment for expansion and modernization as well as interconnecting projects, strengthening cross border links, balancing supply and demand across regions. The Commission should collaborate with Member States and regions to streamline and harmonize permitting processes for grid infrastructure projects to reduce delays. Also promoting sector coupling, hydrogen infrastructure development and support research and innovation to develop advanced grid technologies and predictive modeling tools for congestion management.

Accelerating Permit Procedures for Sustainable Energy Projects

To minimize delays in developing local electrolysers, we request simplified and expedited permitting processes. This is vital to meet the planned operational timelines, despite the challenges posed by grid congestion.

The need for a renewed Hydrogen Strategy

To address evolving challenges and opportunities in the energy transition, Europe needs a renewed Hydrogen Strategy. A new strategy needs to align with updated climate goals, tackle bottlenecks such as grid congestion and permitting delays, enhance regional hydrogen ecosystems and as well ensure a fair access to funding for SMEs. This strategy must strengthen cross-border infrastructure and furthermore support the scaling of green hydrogen technologies. To conclude, a new strategy would more effectively integrate hydrogen into Europe’s energy, industrial, and transportation systems to at the same time boost resilience and competitiveness.

ANNEX II – Context on the Northern Netherlands Hydrogen Valley and Northern Netherlands Circular Innovation Valley

For regions and cities with strong industrial clusters in hydrogen and the circular economy, the Clean Industrial Deal represents an opportunity to lead in the green industrial revolution, ensuring economic growth, sustainability, and alignment with EU decarbonization targets. It transforms challenges into opportunities, ensuring long-term regional development and resilience.

Part I

Northern Netherlands Hydrogen Valley

Knowledge Development and Employment Opportunities: Over the years, a wealth of expertise in natural gas has been built up in the region through gas extraction and the establishment of several major companies specializing in this field in Northern Netherlands. Multiple initiatives are underway to further develop this knowledge in the region, including the Hydrogen Valley Campus Europe, ensuring the region maintains its leading role in molecules during the energy transition.

Geographical Location and Geological Conditions of the Region: The North stands out as a region where the entire hydrogen value chain can be projected. This unique position is supported by the presence of the North Sea and deep-sea ports, salt layers suitable for seasonal storage in caverns, and a broad range of consumers offering opportunities for CO2 reductions. Groningen is home to several energy-intensive industries exploring the transition to hydrogen. For Groningen/Eemshaven, accelerating cross-border hydrogen connections is also crucial. Eemshaven Port has the potential to serve as an import hub with a production site (Equinor) and electrolyzers in Oostpolder. In Germany, large consumers are located in the Ruhr area, while Northwestern offers opportunities for large-scale storage in caverns.

Regional examples of groundbreaking SMEs in the hydrogen sector:

- **Resato Assen:** Resato Hydrogen Technology specializes in high-pressure technology. With more than 55 public and private hydrogen refueling stations across Europe, Resato is the Dutch market leader in sustainable hydrogen infrastructure. This encourages emission-free driving.
- **Holthausen Hoogezand:** Holthausen Clean Technology has over 12 years of experience in the hydrogen drive line business. They specialize in the development of hydrogen electric projects and support in the development, prototyping and making the product production ready. Holthausen Clean Technology delivers multiple hydrogen electric vehicles from trucks, vans to sweepers.
- **Qbuzz in collaboration with OV-bureau Groningen/Drenthe:** Operates the largest zero-emission bus depot in the Netherlands, where only sustainable energy carriers are used: green electricity, green hydrogen, and – to a limited extent – renewable biodiesel (HVO). It holds a leading position in Europe in the transition to quiet, clean, and sustainable bus transportation, contributing to zero-emission city centers. Currently, more than 30 (!) hydrogen and electric buses are in operation in public transport in Groningen/Drenthe.

As an early pioneer in hydrogen innovation, our region is now in the implementation phase of establishing a hydrogen economy. Our current priorities and challenges include:

- Addressing the financial challenges of green (and blue) hydrogen production, particularly the unprofitable margins and including SMEs early in this transition, for they make up the majority of our companies in the region.
- Mitigating delays in the landing of offshore wind energy to accelerate its contribution to the hydrogen supply chain.
- Ensuring strong societal support for emerging energy developments, with a special focus on hydrogen storage solutions and the use of ammonia as a hydrogen carrier.

We believe that by sharing our region's experiences with hydrogen deployment and learning from others, we can collectively pave the way for a low-carbon future and a greener, more competitive European industry. Also our approach to combating energy poverty in housing can be an added value at the EU level. The innovation that takes place in our region would not have been possible without the EU's support through the EU's Cohesion investment Policy and Horizon missions approach.

Part II

Northern Netherlands is a Circular Hub

The Clean Industrial Deal needs fully functional Hydrogen Valleys.

Northern Netherlands is at the forefront of the shift to a circular economy. Circular entrepreneurship—making more efficient and prolonged use of raw materials—reduces the need for land and energy in production, offering a sustainable solution. The region promotes this transition in the following ways:

- Encouraging the production of resource-efficient goods
- Promoting energy-neutral and circular construction
- Closing the loop for circular plastics
- Investing in industrial collaboration within the chemical and plastics sectors

The Northern Netherlands excels in driving a circular economy through a systemic approach that integrates governance, feedstock development, innovation, and local value chains. As a region of hands-on problem solvers, we prioritize piloting initiatives to identify needs, generate insights, and scale solutions. This approach allows us to serve as a model for fostering circular economy that is replicable across regions.

Key elements of our strategy include: **Governance**, where we leverage public procurement, adapt regulations, and act as orchestrators to unite education, industry, and policy for greater awareness and pilot projects. **Feedstock development** focuses on biobased materials, creating opportunities for farmers and advancing recycling processes to turn waste into valuable resources. **Innovation** drives new supply chains and product designs, such as biocomposites, recycled yarns, and modular products that extend lifecycles. Finally, by building **local value chains**, we secure supply reliability, identify gaps, and develop business models centered on sustainability and ecological value rather than profit maximization. This comprehensive system approach uniquely positions our region to lead Europe's transition to a sustainable and circular future.

he North stands out as a region where the entire hydrogen value chain can be projected. This unique position is supported by the presence of the North Sea and deep-sea ports, salt layers suitable for seasonal storage in caverns, and a broad range of consumers offering opportunities for CO2 reductions. Groningen is home to several energy-intensive industries exploring the transition to hydrogen. For Groningen/Eemshaven, accelerating cross-border hydrogen connections is also crucial. Eemshaven Port has the potential to serve as an import hub with a production site (Equinor) and electrolyzers in Oostpolder. In Germany, large consumers are located in the Ruhr area, while Northwestern offers opportunities for large-scale storage in caverns.

Triple Helix

The region leverages its unique 'triple helix' approach—a collaboration between businesses, knowledge institutions, and governments—to elevate circular knowledge to new heights. A shining example of this approach is the Circular Friesland Association, founded by local SMEs. Here, SMEs collaborate with knowledge institutions and governments to drive the circular transition from the ground up. Another recent example is the Greenwise Campus, which brings together local and regional governments, universities, SMEs, and industries to advance circular plastics innovation.

Example Projects Industry

Northern Netherlands is at the forefront of the shift to a circular economy. Circular entrepreneurship—making more efficient and prolonged use of raw materials—reduces the need for land and energy in production, offering a sustainable solution. The region promotes this transition in the following ways:

- **Chemport Europe** exemplifies the region's ambition in action, aiming to become the first chemical cluster in Europe with zero negative environmental impact by using renewable energy and raw materials.
- **The WaterCampus** focuses on innovations to reduce polluted water discharges and reuse recovered materials.
- **Greenwise Circular Plastics** addresses environmental challenges associated with plastics and aspires to become Europe's leading circular plastics cluster. Greenwise Circular Plastics supports the idea that the circular economy should play a pivotal role in Europe's strategic autonomy, industry, and resource (waste) management. In competing with the US and Asia—particularly China—Europe can differentiate itself and secure a more future-proof position through its circular economy efforts. Greenwise Circular Plastics distinguishes itself as a key player in the circular plastics ecosystem. While the region boasts many innovative companies, such as **CuRe**, **Paques**, **Avantium**, **BioBTX**, and **Senbis**, what sets Greenwise apart is its pivotal role within Chemport Europe's ecosystem. Greenwise connects businesses, knowledge institutions, and governments, it initiates and facilitates innovative projects, such as Plastic Ready and Care2Change. Greenwise serves as a key stakeholder representing Northern Netherlands in policymaking discussions about circular plastics.
- Through Circular Procurement & Tendering, governments create a level playing field by challenging companies to offer circular products and services.
- Some cities also have ambitious circular economy goals. For instance, Groningen is making strides in circular textiles, while Leeuwarden leads with its Spoordok project, the first 100% circular-built neighborhood and Emmen has the Circular Crafts Center and is by exchanging raw materials (and reducing waste), but also sharing knowledge about circular entrepreneurship and making a social impact.

Our above mentioned industrial can help the implementation of the Clean Industrial Deal by:

- **Technological Innovation:** With world-class facilities such as the National Test Center Circular Plastics (NTCP), Greenwise Campus Circular Plastics, and cutting-edge innovative entrepreneurs, we contribute to the development of sustainable value chains and support the scaling up of circular plastics production and recycling. We would be delighted to work with you to accelerate the market introduction of these technologies.
- **Identifying Barriers:** We recognize that legislation and creating a level playing field between recycled plastics, bioplastics, and virgin plastics are crucial. We can support you by identifying legal and policy barriers in the transition and collaborating to find solutions.
- **Collaboration:** Northern Netherlands boasts a dynamic ecosystem of innovation and cooperation among businesses, knowledge institutions, and governments. The ecosystems surrounding Chemport Europe and Greenwise Circular Plastics work closely on the development and scaling up of circular plastics, emphasizing recycled plastics, bioplastics, and biocomposites.

Civil Society

Organizations like Circulair Friesland, Circulair Groningen and Drenthe work on circular economy challenges in collaboration with the public sector, businesses, knowledge institutions, and most importantly, the residents of Northern Netherlands. Their approach is unique: these organizations empower young people to contribute to circular projects. By innovating, experimenting, and discovering, they bring new knowledge to drive the transition to a circular economy.

What Northern Netherlands Offers in Circular Economy

Northern Netherlands is at the forefront of the shift to a circular economy. Circular entrepreneurship—making more efficient and prolonged use of raw materials—reduces the need for land and energy in production, offering a sustainable solution. The region promotes this transition in the following ways.

Partners across the entire circular value chain within a cohesive ecosystem

A shared ambition among all stakeholders in the circular economy

Regional government support and a reliable, ambitious public sector

Collaboration with nearby knowledge institutions

Access to green resources and energy

A strong civil society actively participating in the circular transition

STRONG NORTHERN NETHERLANDS
POWERED BY SNN

Let's discuss how we can work together to make this vision a reality!

You can reach us via email: Publicaffairs@snn.nl