Summary

To choose or to lose

The transition towards an industry fit for a future-proof Netherlands

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The necessary transition towards sustainability in energy-intensive industries – which are responsible for nearly a quarter of total greenhouse gas emissions in the Netherlands – is under current policies not taking off at the speed that is required to be climate neutral by 2050. Energy-intensive industry includes oil refineries, basic metal industry, basic chemical industry, and the fertilizer industry. They use large amounts of oil, coal, and gas as raw materials and energy sources. Making these sectors more sustainable is an important step in the pursuit of climate neutrality by 2050 and broader societal well-being beyond GDP for the Netherlands. However, several recent developments are slowing down the pace of the transition.

The Netherlands has a large energy-intensive industry. It consists of a number of large complexes concentrated in a limited number of clusters with companies that are oftentimes part of foreign multinationals. The direct contribution to the Dutch economy amounts to only 1.1% of gross domestic product (GDP) and 0.8% of the total number of hours worked. The energy-intensive industry supplies basic materials to many other companies and is well connected to the energy-intensive industry in Belgium and the German Ruhr area.

Over the past fifteen years, greenhouse gas emissions from energy-intensive industry have hardly decreased. Total greenhouse gas emissions from industry now amount to 33 megatons of CO_2-equivalents. That is 23.1% of the total emissions in the Netherlands. The likelihood of industry achieving its reduction targets for 2030 with current policy is very small. Reasons for the lack of sustainability investments include uncertainty among companies about future policy, incomplete pricing of climate costs, and the lack of a business case for sustainable products and production processes.

At the same time, the competitive position of Dutch industry is deteriorating and ambitious climate policy is under pressure nationally as well as internationally. Recently, a number of companies have scaled back or ceased production in the Netherlands and investments in sustainable production have been cancelled. This is partly due to high (energy) costs in the Netherlands, partly due to uncertainty about policy, and partly due to overproduction and sharply increased competition, particularly from Asia. Concerns about further losses in production and employment are putting pressure on climate policy, but sometimes lack the necessary substantiation.

Dutch citizens feel that industry should do more to combat climate change. People also feel that companies are capable of doing so. The industrial transition is a broad societal challenge involving many stakeholders, several of whom currently have a limited voice. Examples include employees and local residents.

The government must make choices regarding green industrial policy. The energy-intensive industry in its current form and scope is not compatible with a climate-neutral, climate-resilient, safe, and competitive Netherlands. Sustainability requires too many scarce resources, environmental and physical space, and electricity grid capacity. The idea that there can be a sustainable future for all existing companies in the Netherlands is untenable. It is necessary to choose those sectors that are future-proof. The Netherlands Scientific Climate Council notes that these choices are currently not being made. There is also not enough political and societal debate on the subject.

When making these choices, the government must take into account the fact that location factors change as a result of the climate transition. Some important advantages for industry that have characterized the Netherlands over the past fifty years are changing, such as the availability of cheap energy. This applies to the energy-intensive stages of production chains in particular. The Netherlands has a good logistical position for fossil fuels, but many renewable sources are less easy to transport. The accessibility of Dutch seaports and waterways may also be jeopardized by the effects of climate change. What remains is the proximity to other clusters and a well-educated workforce. New positive location factors may include the potential for offshore wind energy generation and geological storage of CO_2.

The transition to a future-proof industry requires a fundamental redesign of our industrial production and consumption. Industry cannot take radical measures as long as there is no adequate business model for green production. Current climate policy for industry is mainly focused on improving efficiency and reducing emissions from current energy-intensive production units in the shorter term. The industrial transition requires not only different processes and technologies, but drastic change of the entire system.

A future-proof industrial sector requires profound changes in industry and the system surrounding it. This includes, for example, new energy infrastructure, value chains and market structures, as well as different regulations and business models. The necessary restructuring also requires broad changes in society, which must adopt a different relationship with industry and the use of products.

The Netherlands Scientific Climate Council has formulated the following principles for designing green industrial policies:

- **Green industrial policy starts with choices for a future-proof industry and is consistent over time.** Society and business need clarity. They must be able to rely on the direction of industrial transformation. Policy must therefore be consistent and provide a clear direction for sustainable production.
- **Green industrial policies create green business cases for energy-intensive industry.** Sustainable raw materials are not yet able to compete

effectively with fossil-based raw materials. Their cost price is higher and the additional costs cannot be passed on to consumers due to low profit margins and fierce price competition. Green industrial policy should ensure sufficient profit margins to make the transition to sustainable materials and processes attractive.

- **Green industrial policy is based on broader societal inclusive and sustainable well-being beyond GDP, and is cautious with generic support.** The transformation to the industry of the future is a process of creative destruction, in which a smaller polluting industry creates space for new sustainable production. Supporting a sector with public funds, for example by compensating for high energy prices, is not always wise from the perspective of broader societal well-being. Innovative sustainable production processes are an important driver for building a green industry.
- **The European Union is the starting point for safeguarding strategic autonomy and preventing carbon leakage.** The extent to which Dutch companies contribute to strategic autonomy depends heavily on the product in question. The EU can draw up regulations on imports to safeguard strategic autonomy and prevent carbon leakage. One example is the expansion and anchoring of the Carbon Border Adjustment Mechanism (CBAM).
- **The infrastructure for energy and raw materials must be in order.** Uncertainty about the structure and size of the industry creates uncertainty about the necessary infrastructure for energy and raw materials infrastructure. In an uncertain world, the government will have to make choices to remove as much uncertainty as possible for current and future companies about the future availability of energy and raw materials.

Based on these principles, the Netherlands Scientific Climate Council has made eight recommendations.

Recommendation 1

Determine as soon as possible which industrial sectors are compatible with a climate-neutral, climate-resilient, safe, and competitive Netherlands and implement a consistent policy accordingly. Sustainability requires a lot of scarce resources, (environmental) space, and electricity grid capacity. Identify the industrial sectors that are suitable in the short term and implement consistent policies for them. A choice is necessary because it is not feasible to make the entire Dutch industry sustainable. There are limited raw materials, societal support, energy infrastructure, human resources, and public resources. Companies that do not fit within the vision must operate in the existing market, although generic sustainability policies remain available to them. An example of a sector with a promising future that might be eligible for targeted support is the sustainable chemical sector.

Recommendation 2

Consider the transformation to a sustainable industry as a broad societal challenge. A just transition takes broader societal well-being as its starting point and requires attention to distributive, procedural, and restorative justice. Justice must be given a structural place in the transition by involving all relevant groups in the process and testing policy measures for fairness. The implementation capacity to ensure procedural justice must be in place.

Recommendation 3

Shape the industrial transformation in area visions for new and existing sustainable industrial clusters, and make these visions the guiding principle for decisions about new infrastructure. Strategic regional plans must fit within a vision of a future-proof industry as part of a broader climate vision. Existing structures such as the National Energy System Plan (NPE) and the Multi-Year Infrastructure, Energy and Climate Program (MIEK) can be used for this purpose.

Recommendation 4

Cover the risks associated with investments in infrastructure for energy and materials publicly. This will prevent delays in the development of sustainable infrastructure as a result of uncertainty about future demand, the risk of cost increases, and legal proceedings.

Recommendation 5

Commit to maintaining at least the current ETS reduction path to zero new emission allowances after 2040 and earmark the proceeds for decarbonising the sector through a sustainable industry fund. The European Emissions Trading System is essential for decarbonising industry. Sticking to the reduction path provides clarity and credibility regarding the pricing of CO_2 linked to the agreed target. It thus offers an efficient incentive for decarbonisation.

Recommendation 6

Design the tax base for energy-intensive industry in such a way that climate costs are priced in. Green business models must become more attractive than fossil ones. Adjusting the tax base from energy to CO_2 makes it possible to price in climate costs.

Recommendation 7

Stimulate demand creation for CO_2-neutral materials through regulation by introducing a blending obligation and setting product requirements. Regulation creates a clear market, which can help develop a sustainable business model. For plastics in particular, the ETS does not offer sufficient certainty for companies, and regulation could offer a solution. Regulation can be introduced at various points in the supply chain, both at the material and product level. It is important to develop regulation at the EU level.

Recommendation 8

Create a sustainable industry fund that helps new companies and the transformative conversion of existing companies with subsidies, loans, or participation. Direct the fund towards industries on industry that fit into a broader vision for a sustainable Netherlands. Such a fund stimulates industrial activities that fit within a broader vision of a climate-neutral and climate-proof Netherlands. These can be both energy-intensive industry and manufacturing industry.

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