

To choose or not to choose: towards a sustainable energy intensive sector in the Netherlands

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Summary

The Dutch energy intensive industry is confronted with the need for a fundamental transformation in view of the climate goals to which the Netherlands has committed itself. A structural transformation is required to meet the ambition to be climate neutral by 2050. This transition is hampered by relatively high electricity prices, severe competition from countries outside Europe and changing comparative advantages. The need to fundamentally reflect on the position of the Dutch energy intensive industry is further strengthened by the geopolitical tensions and the ambitions of Europe to enhance strategic autonomy to which Dutch industry can potentially make a contribution. This paper presents evidence on the evolution of comparative advantages of the Dutch energy intensive industry and continues to reflect on the implications for a Dutch industrial policy that can strike a balance between economic, social and sustainable goals of Dutch policy.

Extended abstract

The required sustainability transition of the Dutch energy-intensive industry — which is responsible for nearly a quarter of total greenhouse gas emissions in the Netherlands — is not getting off the ground sufficiently under current policy. The energy-intensive industry consists of oil refineries, the basic metals industry, basic chemicals, and the fertilizer industry, and uses large amounts of oil, coal, and gas as both raw materials and energy sources. Making these sectors more sustainable is an important step towards achieving climate neutrality by 2050 and ensuring broad prosperity for the Netherlands. However, several recent developments are slowing the pace of this transition.

The Netherlands has a sizable energy-intensive industry. It consists of several large complexes concentrated in a limited number of spatially concentrated clusters. Its direct contribution to the Dutch economy amounts to 1.1% of gross domestic product (GDP) and 0.8% of total hours worked. The energy-intensive industry supplies basic materials to many other companies and is closely connected to the energy-intensive industry in Belgium and Germany's Ruhr region.

Over the past fifteen years, greenhouse gas emissions from the energy-intensive industry have barely declined. Total industrial greenhouse gas emissions now amount to 33 megatons of CO₂ equivalents, representing 23.1% of total emissions in the Netherlands. The likelihood that the industry will meet its 2030 reduction targets under 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 absence of a viable business model for sustainable products.

At the same time, the competitive position of Dutch industry is deteriorating, and ambitious climate policy is under pressure. Recently, several companies have scaled back or ceased production in the Netherlands, and investments in sustainable production have been canceled. This is partly due to high (energy) costs in the Netherlands, partly to policy uncertainty, and also

to overproduction and sharply increased competition, particularly from Asia. Concerns about further loss of production and employment are putting pressure on climate policy, although these concerns sometimes lack sufficient substantiation.

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

For a green industrial policy, the Dutch government must make some fundamental choices. The energy-intensive industry in its current form and scale does not fit within a climate-neutral, climate-resilient, safe, and competitive Netherlands. Sustainability efforts require too many scarce resources, environmental space, and 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. Such choices are currently not being made, nor is a proper debate about them taking place.

In making these choices, the government must take into account changing locational factors as a result of the climate transition. Some important advantages that have benefited Dutch industry over the past fifty years — such as the availability of cheap energy — are changing. This applies in particular to the energy-intensive stages of production chains. The Netherlands has a strong logistical position for fossil resources, but many renewable resources are less easy to transport. Moreover, the accessibility of Dutch seaports and waterways may be threatened by the effects of climate change. What remains are the proximity to other industrial clusters and a well-educated workforce. Potential new positive location factors include the large potential for offshore wind energy generation and geological CO₂ storage.

For the transition to a future-proof industry, a fundamental restructuring of industrial production and consumption is required. Industry cannot take far-reaching 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 existing energy-intensive production units in the short term. However, the industrial transition requires not only different processes and technologies, but also systemic change.

A future-proof industrial sector requires profound changes within industry and in the surrounding system. This includes, for example, new energy infrastructure, value chains, and market structures, as well as different regulations and business models. The required restructuring also demands broad changes in society, which will need to redefine its relationship with industry and the use of products.