

LESSONS FROM THE NETHERLANDS*

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This brief draws on research conducted by master's students associated with the CLIFF project: Blom (2024); Bruijn (2024); Donker (2023); Siouw (2023); van Beek (2024); van Buren (2023), van der Erf (2024).

KEY MESSAGES

1. Politics has delayed decision-making creating uncertainty
2. Politics has emphasized market mechanisms, energy security and competitiveness
3. Politics subsidizes fossil fuel, while subsidies for RES mostly go to the rich
4. Large actors such as ports and airports are not proactive
5. Emissions are going down slowly, and are affected by military and AI emissions

INTRODUCTION

In examining the Netherlands, this policy brief draws on the diverse case studies undertaken within CLIFF, as well as a wider assessment of political shifts and climate commitments.

POLITICS HAS DELAYED TARGETS AND CREATED UNCERTAINTY

Although the Netherlands was a leader pre-1990 pushing for global targets, within the country there have been challenges. Table 1 shows the targets of successive governments. What is clear is that between 1990 and 2008 targets were either not achieved or not planned. Until 2007, targets could be achieved with market mechanisms. Since then, the targets have been strengthened, and the current targets look ambitious, but are unlikely to be achieved (PBL, 2025). Across the board, there is regulatory uncertainty. Dutch utilities appear to be stuck between old regulations and new expectations. The three most recent coal plants that were put into service in 2015 are now being threatened with shut down and at risk of becoming stranded assets (Wynn, 2016). Companies are unsure of which way the government will go. Municipalities are waiting for guidance from the Hague. Individuals who benefit from the subsidies are upset by changing rules with respect to returning electricity to the grid, which, itself, is in gridlock (see Figure 1).

Table 1. Targets of the Netherlands government

Lubbers III, 1989-1994	Stabilize 1994-5/1990; -3% in 2000/1990
Kok I, 1994-1998	Stabilize 2020/1990; Emission trading system implemented in 2005, Energy for Transport Registry system introduced in 2015
Kok II, 1998-2002	-6% (2008-2012)/1990
Balkende I, II, III, 2002-2007	Achieve Kyoto target (-6% between 2008-2012/1990)
Balkenende IV, 2007-2010	-30% in 2020/1990
Rutte I, 2010-2012	-20% in 2020/1990
Rutte II, 2012-2017	-40% in 2030; 80-95% by 2050/1990
Rutte III, 2017-2022	-49% in 2030/1990
Rutte IV, 2022-2024	-55% in 2030/1990; 100% by 2050
Schoof	-55% in 2030/1990; -90% by 2040/1990; 100% by 2050, PBL expects - 45 to 53 by 2030

Figure 1. Grid congestion in the Netherlands



Source: Ministry of Infrastructure and Water Management

POLITICS HAS EMPHASIZED MARKET MECHANISMS

The Netherlands continues to subsidize fossil fuel, with the exact number remaining unclear for a long time. A report in 2023 (SOMO, 2023) showed that this might have been €37.5 billion annually in 2020-22 and includes direct subsidies and tax breaks. Although the government aims to address this, it is unclear how and when.

SUBSIDIES FOR RENEWABLES MOSTLY GO TO THE RICH; POORER PEOPLE AND SMES STAY STUCK

The Dutch government provides subsidies under the Energy Investment Allowance (EIA) and the Sustainable Energy Production and Climate Transition (SDE++) scheme. However, many of the subsidies for renewable energy (solar panels, heat pumps, electric cars) go to the wealthier since they can afford the capital costs needed for such investments (Dröes & Van der Straten, 2024). This helps to make the wealthy wealthier as their energy costs decline; but for those who are less wealthy, participating in the energy transition becomes even more difficult. Small and Medium-Sized Enterprises emit 70% of global emissions, represent 99.8% of EU enterprises and 51.8% of its economy (Hillary, 2004; Revell et al., 2010; Di Bella et al., 2023). However, many of these enterprises are ignored in terms of their role in LFFU in comparison to larger companies that are regulated including by the Dutch Climate Agreement, the EU Green Deal and the Corporate Sustainability Reporting Directive (CSRD) of the EU. Non-listed (i.e., not publicly traded on a stock exchange) SMEs have no direct targets, only voluntary commitments under CSRD, and are often financially precarious and have few employees. This hinders their ability to participate in the energy transition (Blom, 2024).

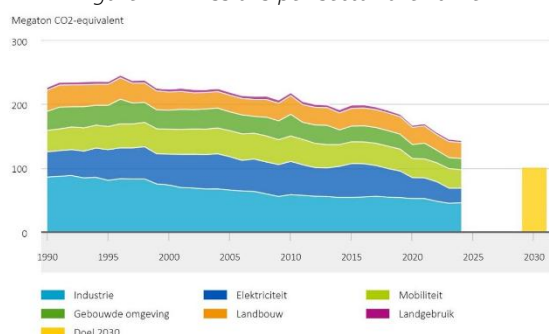
LARGE ACTORS SUCH AS PORTS AND AIRPORTS ARE NOT PROACTIVE

As a transport country, the Netherlands has a formidable air and ship industry. Schiphol has many strategic reports

(Schiphol aims to be carbon neutral by 2050) but although discussion is underway, a major transition away from fossil fuel has not started with interviewees mentioning external (e.g., grid congestion, non-binding law) and internal challenges (lack of incentives) (van der Erf, 2024). The aviation sector emits 2% of GHGs but is not covered by the Paris Agreement, while airports fall under national targets (Aamaas et al., 2025). Fear of losing competitiveness affects scope 1-3 emissions. Ships and the shipping industry emit also about 3% which is expected to increase by 130% by 2050 (IMO, 2021). Research on the Port of Amsterdam reveals that despite policies, technical (lack of infrastructure), financial (high price of fossil fuels, dependency on fossil fuel income), socio-political (e.g., weak policy framework), legal (long term contracts with fossil fuel companies, nitrogen crisis), and spatial (scarcity) challenges hamper the motivation to address external challenges, while the Port Authority's underutilization of its full potential to support the transition currently hampers internal motivation to improve conditions; there is also a desire to wait for the central government to lead (Bruijn, 2024).

CONCLUSION: EMISSIONS DECREASING SLOWLY, AFFECTED BY MILITARY AND AI EMISSIONS

Figure 2. Emissions per sector over time

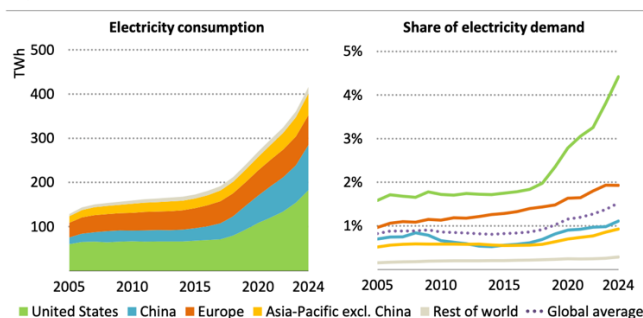


Source: RIVM (2025)

Although emissions are slowly going down (see Figure 2), they are not going down fast enough for the 1.5°C target which we are likely to cross by 2030. The rise in military emissions because of the new NATO norm (see PB 11) will likely accelerate as the military increasingly adopts AI technologies. Beyond defence, the rapid expansion of artificial intelligence is creating an energy crisis of its own, with data centre electricity consumption surging globally (Figure 3).

Figure 3: Data centre electricity consumption

Figure 2.6 Electricity consumption of data centres by region, 2005-2024



Source: IEA (2025)

REFERENCES

- Aamaas, B., Lund, M. T., Fuglestedt, J. S., Totterdill, A., Owen, B., Skowron, A., & Lee, D. S. (2025). Continued global warming from aviation even under high-ambition mitigation scenarios. *One Earth*, 8(10), 101451. <https://doi.org/10.1016/j.oneear.2025.101451>
- Blom, M. (2024). SMEs in the energy transition: The impact of the CSRD on Dutch SMEs, [Master's thesis, University of Amsterdam]
- Bruijn, J. (2024). Navigating towards sustainability: Unravelling conditions for port authorities to reduce emissions and for phasing out fossil fuels: A case study of the Port of Amsterdam, [Master's thesis, University of Amsterdam]
- Di, B. L., Katsinis, A., Laguera, G. J., Odenthal, L., Hell, M., & Lozar, B. (2023). Annual Report on European SMEs 2022/2023. JRC Publications Repository. <https://doi.org/10.2760/028705>
- Dijks, G. (2022). Unlocking the carbon lock-in in the Netherlands: A case study on the challenges and conditions for phasing out fossil fuels, [Master's thesis, University of Amsterdam]
- Donker, B. (2023). Mediators stuck between regulations: The role of Dutch utility companies in phasing out fossil fuels, [Master's thesis, University of Amsterdam]
- Dröes, M., & Van der Straten, Y. (2024). Home Improvement, Wealth Inequality, and the Energy-Efficiency Paradox (SSRN Scholarly Paper No. 4805017). Social Science Research Network. <https://doi.org/10.2139/ssrn.4805017>
- Hillary, R. (2004). Environmental management systems and the smaller enterprise. *Journal of Cleaner Production*, 12(6), 561-569. <https://doi.org/10.1016/j.jclepro.2003.08.006>
- IEA. (2025). Energy and AI [World Energy Outlook Special Report]. International Energy Agency.
- IMO. (2021). Fourth IMO GHG Study 2020. International Maritime Organization (IMO).
- PBL. (2025). Klimaat- en Energieverkenning 2025. Planbureau Voor de Leefomgeving (PBL).
- Revell, A., Stokes, D., & Chen, H. (2010). Small businesses and the environment: Turning over a new leaf? *Business Strategy and the Environment*, 19(5), 273-288. <https://doi.org/10.1002/bse.628>
- RIVM. (2025, March 12). Decrease in greenhouse gas emissions levels off in 2024. National Institute for Public Health and the Environment. <https://www.rivm.nl/en/news/decrease-in-greenhouse-gas-emissions-levels-off-in-2024>
- Siouw, L. (2023). Phasing out fossil fuels with hydrogen fuel: Energy transition in the Netherlands, [Master's thesis, University of Amsterdam]
- SOMO. (2023, August). Phasing-out fossil fuel subsidies in the Netherlands. Stichting Onderzoek Multinationale Ondernemingen (SOMO).
- van Beek, S. (2024). Natural gas: A bridge to nowhere? An analysis of the role of natural gas in Dutch climate policy, examining its potential as a bridge fuel for an inclusive transition away from fossil fuels while addressing the risks of carbon lock-in, [Master's thesis, University of Amsterdam]
- van Buren, F. (2023). Climate action commitments communicated: A comparison of Unilever's corporate climate policies and public messaging in the Global North and the Global South. [Master's thesis, University of Amsterdam]
- van der Erf, S. (2024). Flying forward: Unraveling conditions for airports to reduce emissions and to phase out fossil fuels, [Master's thesis, University of Amsterdam]
- VRM. (2005, December). The Netherlands' Report on demonstrable progress under Article 3.2 of the Kyoto Protocol. The Netherlands Ministry of Housing, Spatial Planning and the Environment (VRM).
- Wynn, G. (2016, November). The Dutch Coal Mistake: How Three Brand-New Power Plants in the Netherlands Are at Risk Already of Becoming Stranded Assets. Institute for Energy Economics and Financial Analysis.