Energy Assessment

NIPPON EXPRESS (NEDERLAND) B.V.

January 01, 2024 until December 31, 2024

Table of contents

1. Introduction

In this document the energy assessment is elaborated with regard to the following points:

- An outline analysis of current and historical energy consumption
- A more detailed analysis to identify the facilities, devices or processes that have a significant impact on energy consumption.
- Identifying, prioritizing and documenting opportunities for improvement is fully included in the measure function. This includes the steering model with regard to the decision-making about whether or not to implement measures.
- The depth of the analysis is such that an organization can trace at least 80% of its energy consumption to concrete energy users.

This document mainly serves to identify the opportunities for further CO_2 reduction and to monitor that the set reduction targets are achieved.

CO_2 emissions are explained as much as possible per emission category. This involves looking at scope 1 and 2 emissions and business traffic from scope 3 of the Green House Gas protocol.

2. Trend analysis

The graphs below show the absolute trend in energy consumption and CO_2 emissions. In addition, performance relative to revenue and the estimated impact of implemented measures are presented.

The absolute trend shows a stabilization in energy consumption compared to 2023, despite the addition of a 20,000 m² warehouse in Roosendaal in February 2024. This warehouse has only been in use for a few years and holds a BREEAM Excellent certificate.

CO_2 emissions, on the other hand, show a strong downward trend. This is the result of a green electricity contract that was signed at the beginning of 2024 (European wind energy). This has led to an additional reduction of approximately 400 tons of CO_2.

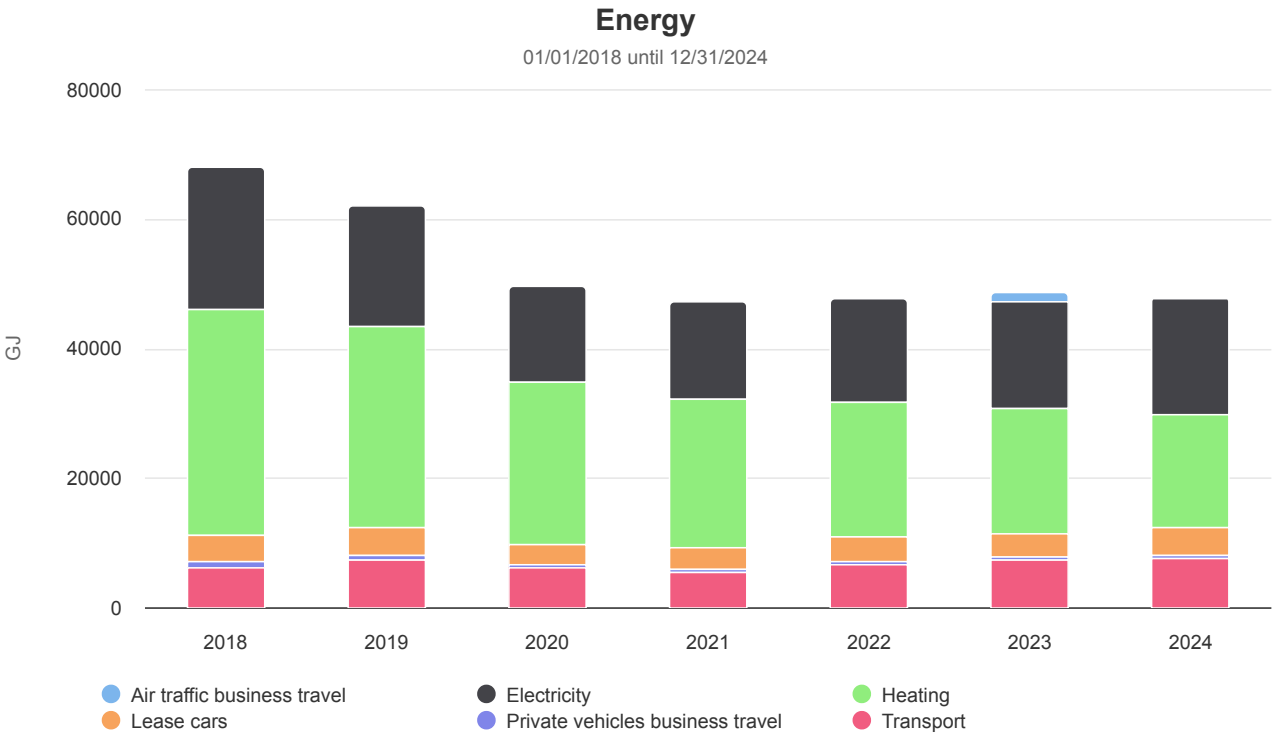
Gas consumption, the primary energy source for heating, shows a decrease of about 10% compared to 2023. This is mainly attributable to a well-functioning ATES (Aquifer Thermal Energy Storage) system at the location Dardanellenstraat 90 on the Maasvlakte, which operated throughout 2024. As a result, the central heating system was used less frequently.

The lease car fleet grew by approximately 25% in 2024. This has led to an increase in petrol consumption, but also in electricity consumption—from 50,000 kWh to 70,000 kWh. It should be noted that the electricity used for charging cars at the Cessnalaan, Contour Avenue, and Nieuwesluisweg locations is not included in this consumption figure, as it cannot be recorded separately. Currently, 66% of the lease fleet consists of cars with an A or B energy label.

Compared to the reference year 2018, CO_2 emissions in 2024 are nearly 68% lower.

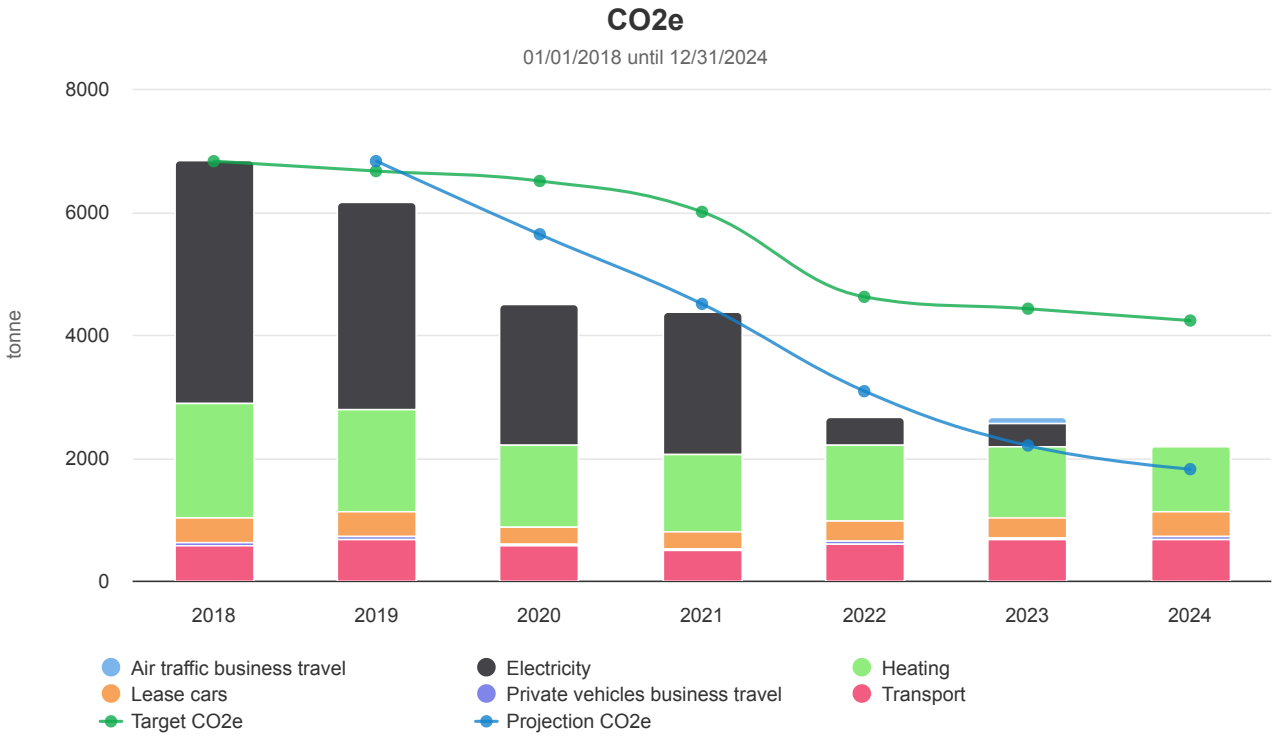
2.1. Energy usage

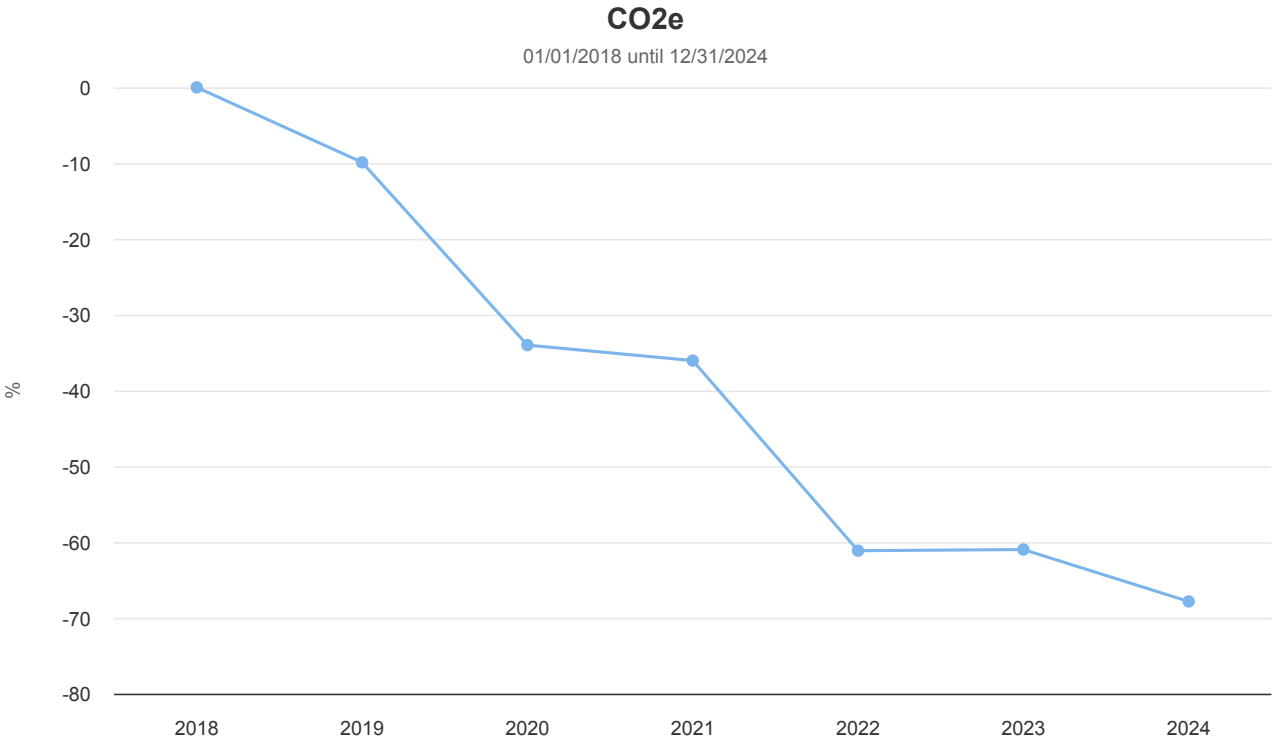
The graphs below show the energy consumption and CO_2 emissions from Scope 1 and 2, as well as business travel.



2.2. CO_2 emissions

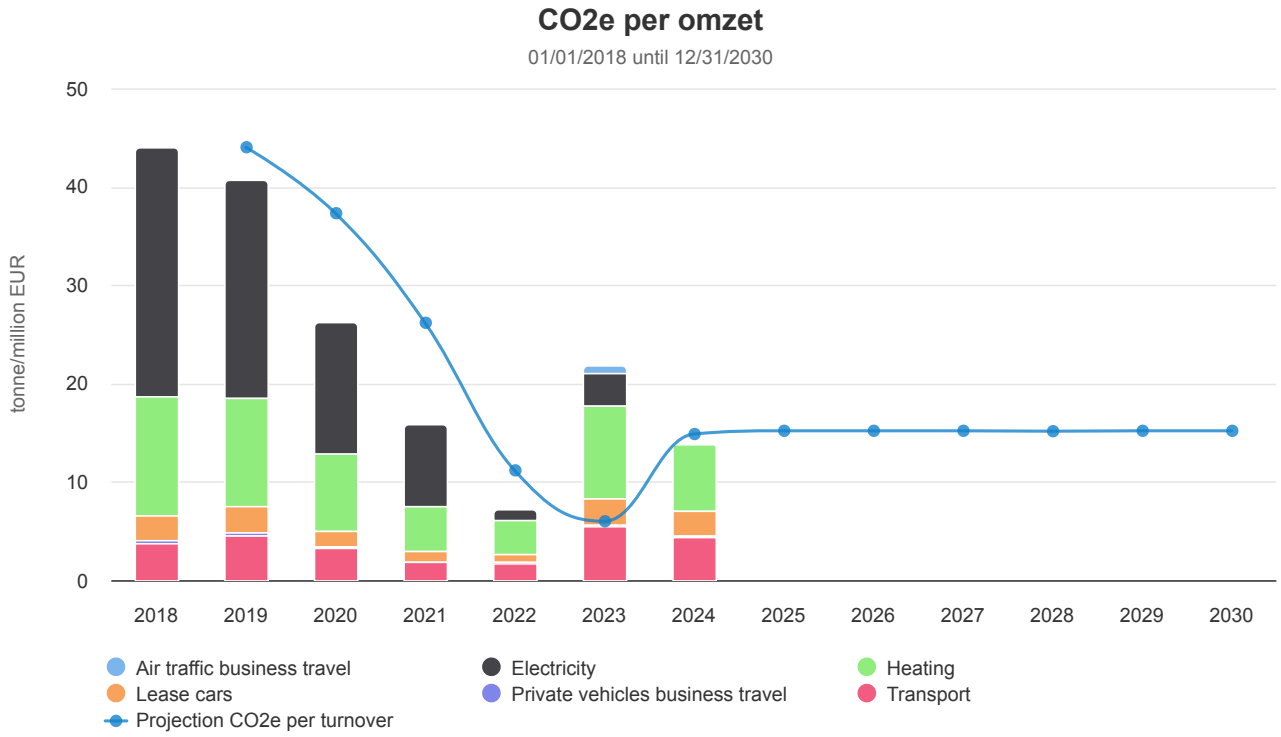
Please note: Scope 1 and 2 emissions include business travel.



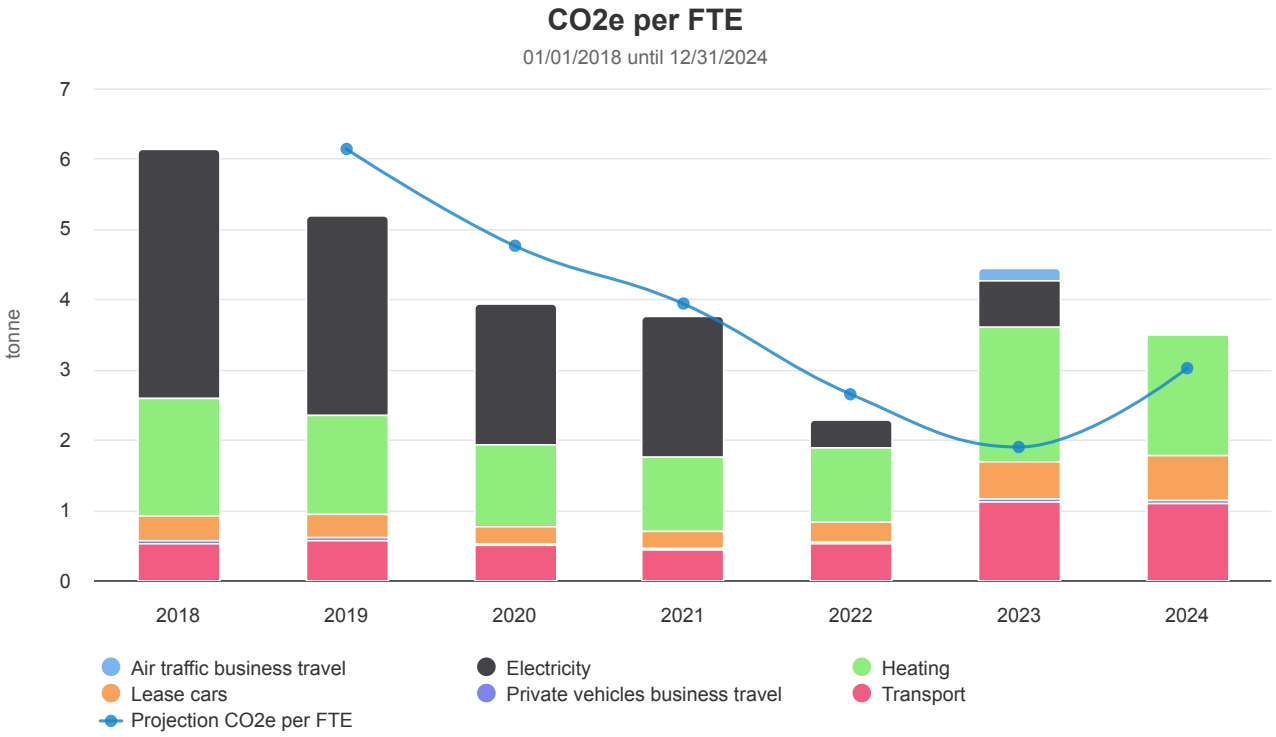


CO2e (%)	2018	2019	2020	2021	2022	2023	2024
CO2e	0.00	-9.89	-34.01	-36.05	-61.13	-60.98	-67.83

2.3. CO_2 per turnover



2.4. CO_2 per FTE



CO2e per FTE (tonne)	2018	2019	2020	2021	2022	2023	2024
Air traffic business travel	0.00	0.00	0.00	0.00	0.00	0.17	0.04
Electricity	3.54	2.85	2.01	1.99	0.39	0.65	0.00
Heating	1.68	1.41	1.17	1.06	1.06	1.91	1.70
Lease cars	0.35	0.33	0.25	0.25	0.28	0.55	0.65
Private vehicles business travel	0.05	0.04	0.02	0.02	0.03	0.04	0.05
Transport	0.51	0.57	0.49	0.42	0.52	1.11	1.08
Total	6.14	5.19	3.94	3.75	2.29	4.43	3.52
Projection CO2e per FTE		6.14	4.76	3.94	2.65	1.89	3.02

2.5. Mitigating measures

No reduction measures were implemented in 2024.

3. Improvement opportunities

In this chapter, we look at how the CO_2 emissions can be further reduced per function group.

3.1. Buildings

This paragraph outlines the ongoing initiatives for 2024:

General:
No initiatives.

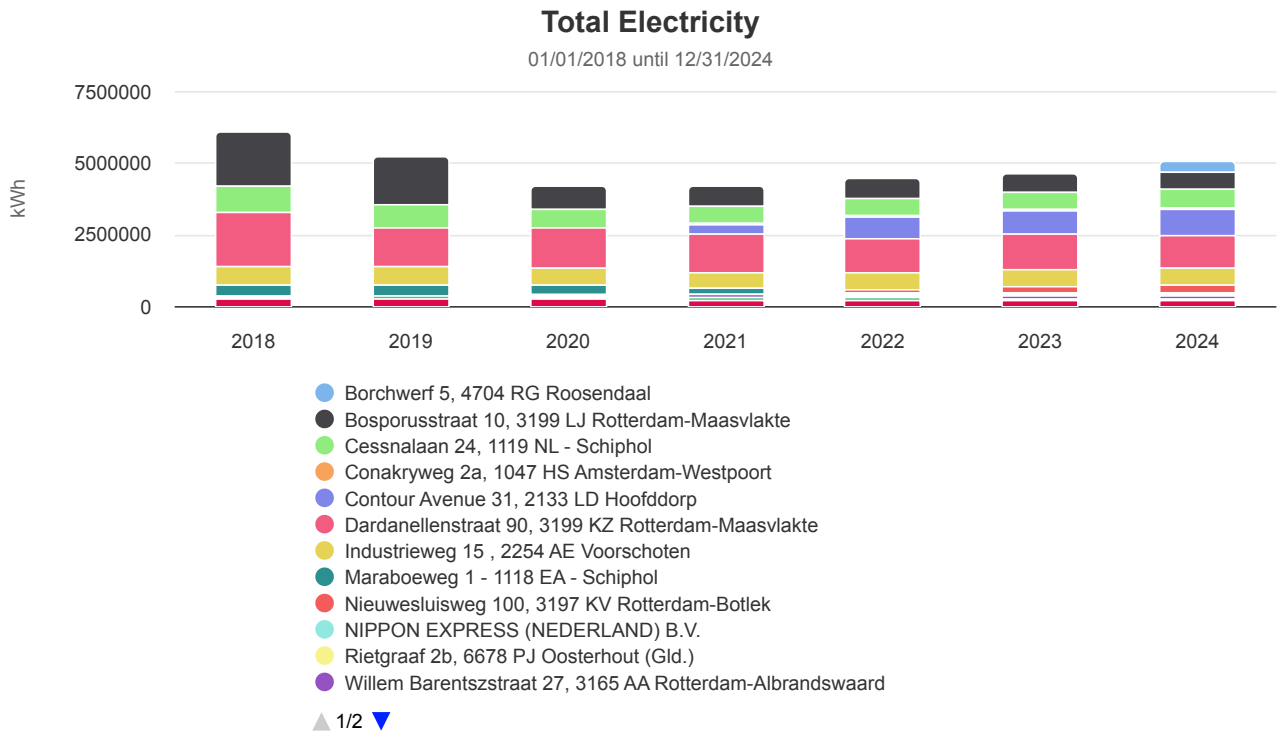
Location-specific:

Dardanellenstraat 90, Maasvlakte:
An analysis was planned to assess whether applying AI software to the Building Management System (BMS) would be feasible, and if so, what level of energy savings could be achieved. Reported potential savings range between 10% and 20%. However, the company conducting the analysis has indicated that it will shift its focus to office buildings, where higher energy efficiency gains can be realized.

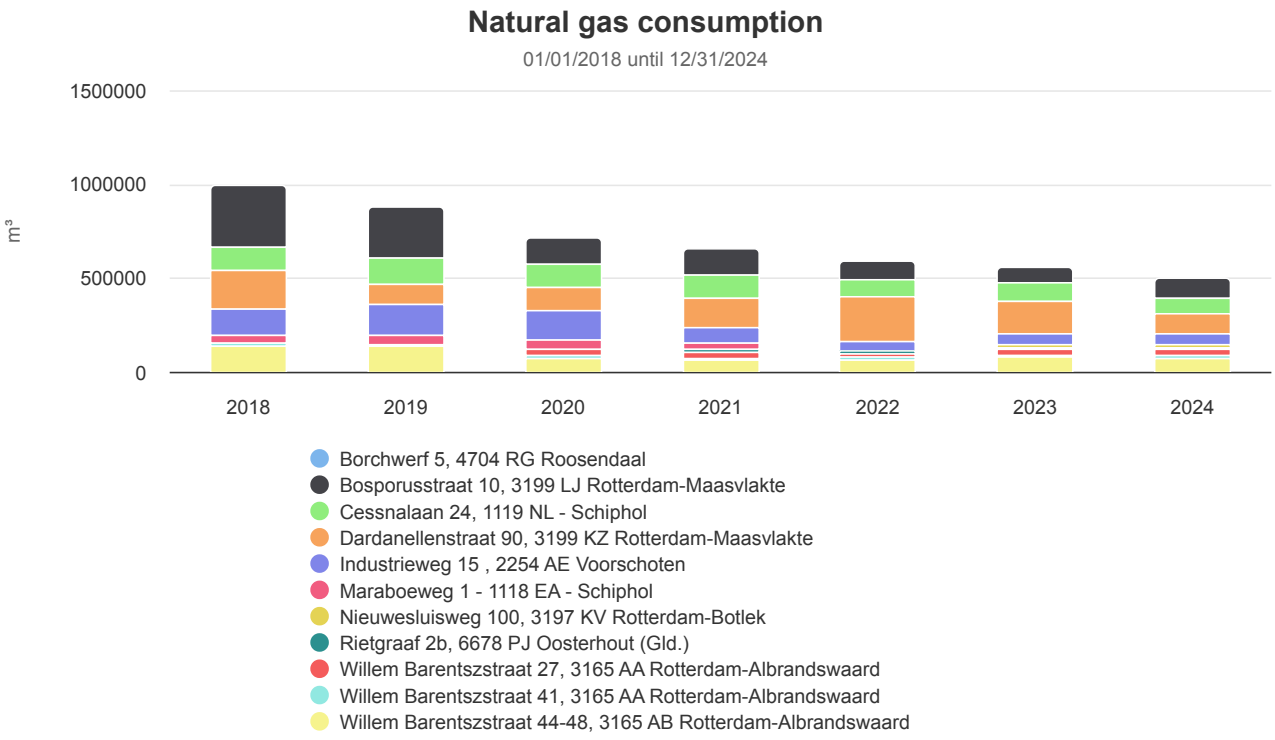
Industrieweg 15, Voorschoten:
This is a rental property, where part of the central heating system has been replaced with new, smaller high-efficiency (HR) boilers. It is expected that by 2025 it will become clear whether this has led to a reduction in gas consumption.

Contour Avenue 31, Hoofddorp:
A study was launched to explore the possibility of expanding the solar PV installation at Contour Avenue in Hoofddorp, after Liander's website indicated that feed-in capacity was available. However, this turned out to be an error.

3.1.1. Electricity consumption



3.1.2. Natural gas consumption



3.2. Fuel consumption mobility and machines

This concerns the lease cars and the company-owned trucks.

CO_2 emissions from the lease car fleet have increased due to fleet growth of approximately 25%.

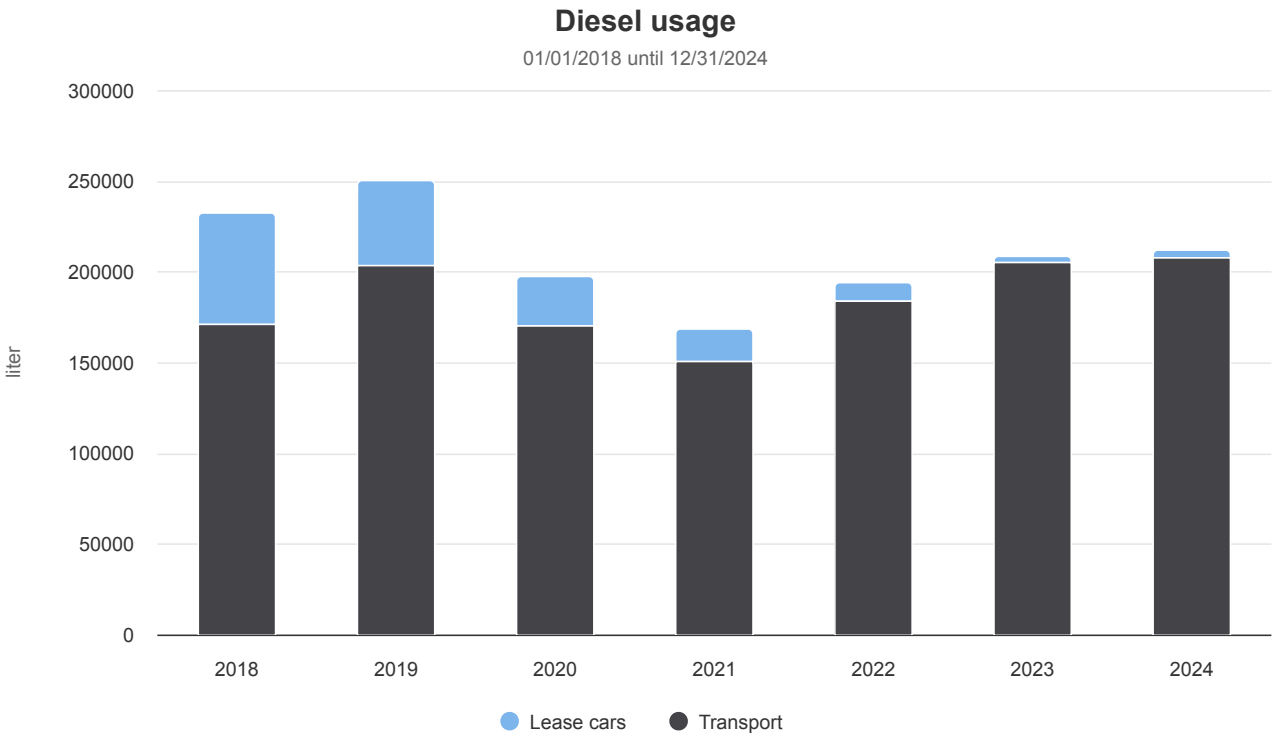
The trucks in NXEC's fleet are equipped with Euro VI engines and are technically capable of running on HVO100. This biofuel can reduce CO_2 emissions by about 90% compared to fossil diesel. However, research conducted within the construction sector has shown that HVO100 does not contribute to overall CO_2 reduction. Therefore, using HVO100 in NXEC trucks is not considered effective. Below is part of the statement issued by the Municipality of Amsterdam regarding the use of HVO:

"The sector is actively working on the transition to zero-emission construction and the deployment of zero-emission machinery and transportation. HVO is often mentioned as a transitional fuel. However, the sustainability benefits of HVO do not outweigh its drawbacks. Several other municipalities, including Utrecht, Rotterdam, and The Hague, share this view and do not wish to promote the use of HVO.

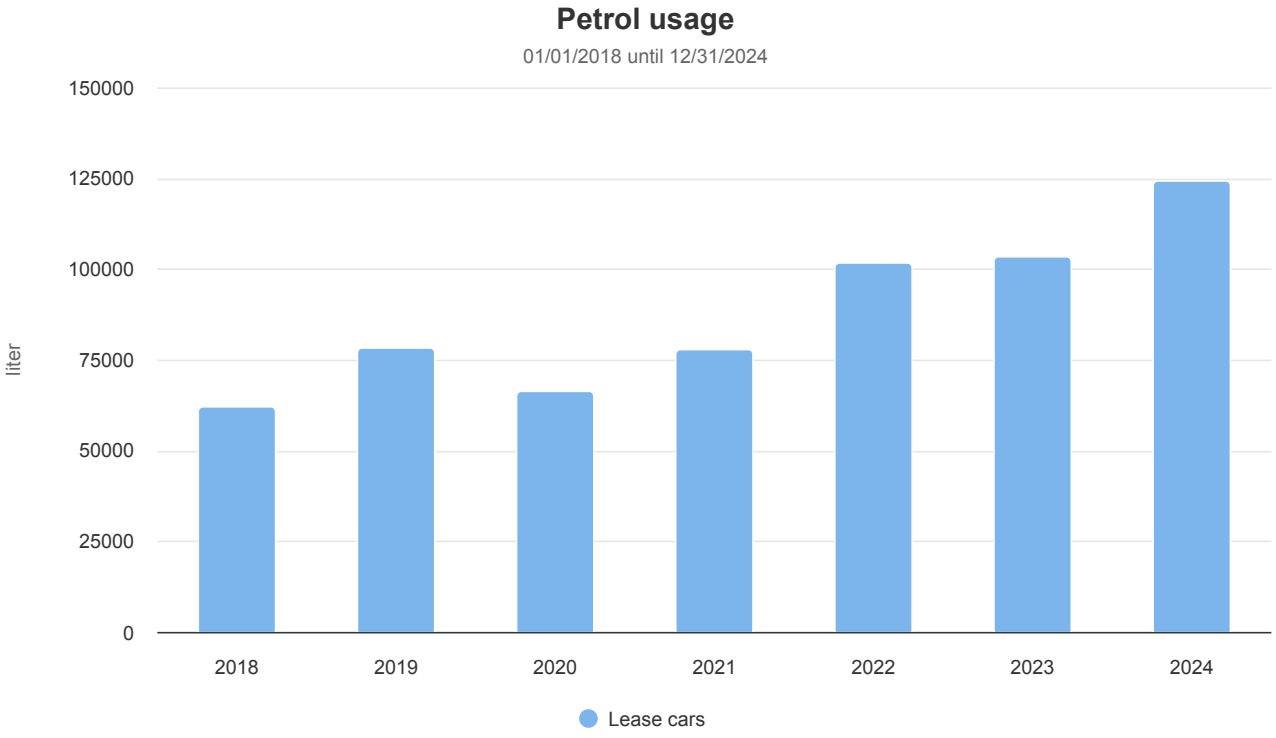
Summary of considerations
HVO reduces particulate matter and nitrogen oxide emissions in older engines, but has no impact on modern engines such as Euro VI and Stage V. While HVO made from organic waste does result in approximately 90% lower CO_2 emissions, the total supply of such HVO is limited and already utilized by fuel producers to meet annual mandates. Increased use of HVO does not lead to additional CO_2 reductions but instead shifts demand to other feedstocks, often sourced from other parts of the world, resulting in higher emissions. Promoting HVO as a 'green' solution distracts from fully zero-emission technologies and delays the transition to genuinely clean alternatives. A practical consideration is that it is difficult to verify actual HVO100 use in vehicles.**

Key conclusion:
Because HVO provides only limited air quality benefits, does not increase total CO_2 reduction as usage scales, and further disrupts the global feedstock market, we do not wish to encourage the use of HVO—though we also do not intend to prohibit it."

3.2.1. Diesel usage



3.2.2. Petrol usage



4. Recommendations

Organisational:

- Energy savings can also be achieved by consistently turning off equipment in offices and warehouses at the end of the workday. Encouraging such a "turn-off" culture should be one of the key action points.
- In almost all locations, LED monitors are installed in canteens and warehouses. By equipping the remaining sites with screens and connecting all displays to the network, it becomes possible to share information centrally with everyone present. This also creates an opportunity to communicate CO_2-related information through a single, unified channel.

Technical:

- It is recommended to investigate the feasibility of installing a PV system with energy storage at the company-owned buildings in Schiphol-Rijk and Rotterdam. This would allow for emission-free electricity generation and storage for on-site use, while also reducing dependency on fluctuating energy prices.
- Based on the 2023 version of the Energy Efficiency Measures List (EML), an assessment should be carried out to determine which energy-saving measures can or must still be implemented.
- If the decision is made in 2025 to extend the lease for the Voorschoten site beyond 2026, it will be important to install LED lighting with motion sensors. This could result in a significant reduction in electricity consumption.