

SUBJECT

Measures Energy & Emission Policy Plan 2024 - 2026

DATE

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FROM

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TO

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COPY TO

Steering Committee

This memo is an addendum to the Energy & Emission Policy Plan 2024-2026. In this memo, all proposed measures are briefly described in terms of what they entail and how the expected emission reduction is calculated. Based on the final emission numbers for 2023, Arcadis Netherlands B.V. (hereinafter: ANL) emission equaled **2.964** ton CO₂ (-34% compared to 2019 & -67% compared to 2010). With the measures described below ANL aims to achieve **-33%** (-964 ton) CO₂ emission reduction compared to 2023 (-56% compared to 2019 & -79% compared to 2010), resulting in 2.000 ton CO₂ emission at the end of this EEPP period in 2026 and the end goal of achieving Net Zero in 2030. Our ambition to achieve Net Zero by 2030 does not imply that we will have zero emissions by that year. Instead, our objective is to minimize emissions as extensively as possible and offset the remaining unavoidable emissions through various compensatory measures.

In accordance with the GHG protocol, the CO₂ emissions are categorized in three scopes (scope 1, 2 and 3). These scopes differ by the amount of influence an organization has on these emissions:

- **Scope 1** covers emissions from sources that an organization owns or controls directly – a.o. from burning fuel in our fleet of vehicles (if they're not electrically-powered). Example: ANL has direct influence over the purchasing of company cars (lease cars). Therefore, fossil-fueled lease cars are part of Scope 1 emissions.
- **Scope 2** are emissions that a company causes indirectly and come from where the energy it purchases and uses is produced. Example: Although ANL has direct influence over the type of lease cars provided, whether colleagues charge their vehicles with green or grey electricity is beyond our control. Therefore, electricity consumption of lease cars is part of Scope 2 emissions.
- **Scope 3** encompasses emissions that are not produced by the company itself and are not the result of activities from assets owned or controlled by them, but by those that it's indirectly responsible for up and down its value chain. Example: ANL has no (real) influence when it comes to which cars our employees purchase privately. Therefore, the energy consumption of private cars are part of our Scope 3 emissions.

The figure below is a graphical representation of these scopes.

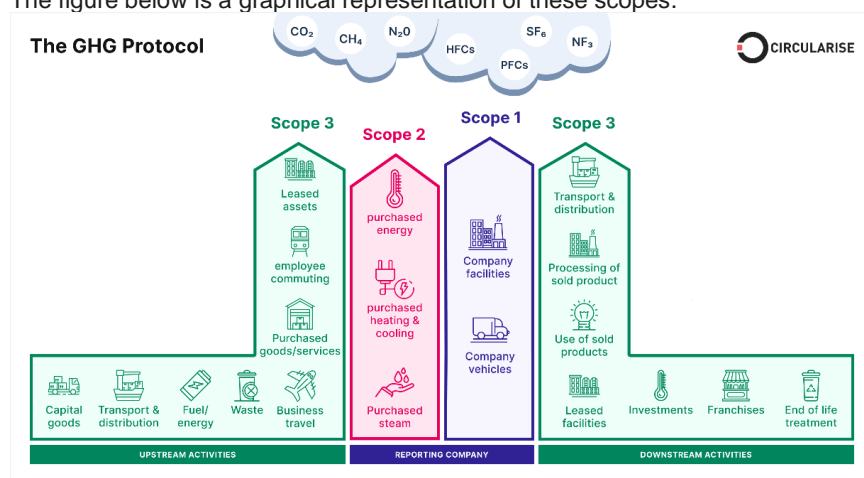


Figure 1: Scope 1, 2 and 3 according to the Greenhouse Gas Protocol.¹

¹ Image source: <https://www.circularise.com/blogs/scope-1-2-3-emissions-explained>

Proposed measures 2024 - 2026

Table 1: Mobility-related measures EEPP 24-26

ID #	Subject	Scope	Measure	Type of measure	Expected total reduction (24-26)
1	Lease cars	1, 2	Continue towards 100% EV fleet	Implementable	- 552,1 ton CO2
2	Lease cars	1, 2	Purchasing 100% green electricity for fleet	Implementable	- 177,6 ton CO2
3	Lease cars	1, 2	Minimize amount of lease cars	Research	Not quantifiable
4	Lease cars	1, 2	Obligatory monitoring (commuting)	Research	Not quantifiable
5	Lease cars	1, 2	(Re)introducing interchangeable fleet	Research	Not quantifiable
6	Lease cars	1, 2	Investigate options for lease car sharing	Research	Not quantifiable
7	Private cars	2, 3	Stimulate sustainable private car travel	Research	Not quantifiable
8	Private cars	2, 3	(Re)introducing interchangeable fleet	Research	Not quantifiable
9	Plane travel	3	Enforce sustainable flight rules more strictly	Implementable	- 18,6 ton CO2
10	Plane travel	3	Purchase Sustainable Aviation Fuel (SAF)	Implementable	- 237,0 ton CO2
11	Plane Travel	3	Purchase SAF for other carriers	Research	Not quantifiable
12	Other	1, 2 & 3	Increase awareness of personal footprint	Implementable	Not quantifiable
13	Other	1, 2 & 3	Stimulate sustainable travel in cities	Research	Not quantifiable
Total reduction					- 985,3 ton CO2

Table 2: Building-related measures EEPP 24-26

ID #	Subject	Scope	Measure	Type of measure	Expected total reduction (24-26)
1	Energy efficiency	1, 2	Perform energy efficiency analysis and building portfolio of all offices	Implementable	Not quantifiable
2	Green energy	1, 2	Replacing natural gas with non-fossil options	Implementable	- 117,1 ton CO2
3	Energy efficiency	1, 2	Improve efficiency of HVAC systems	Research	Not quantifiable
4	Monitoring and efficiency	1, 2	Install smart meters in all offices (where possible)	Research	Not quantifiable
Total reduction					- 117,1 ton CO2

Table 3: Value-chain related measures EEPP 24-26

ID #	Subject	Scope	Measure	Type of measure	Expected total reduction (24-26)
1	Working from Home	1, 2 & 3	Stimulate Working from Home (WFH)	Implementable	- 119,0 ton CO2
2	Working from Home	1, 2 & 3	Monitoring and reporting WFH emissions	Research	Not quantifiable
3	Data management	3	Minimize emissions from data storage	Research	Not quantifiable
4	Procurement	3	Improve sustainable procurement	Research	Not quantifiable
5	Waste	3	Minimize generated waste	Research	Not quantifiable
6	Biodiversity	3	Improve biodiversity (home/offices)	Research	Not quantifiable
Total reduction					- 119,0 ton CO2

MOBILITY-RELATED MEASURES

Lease cars

ANL's lease cars are responsible for more than half of our company's total CO₂ emissions². Therefore, our lease fleet remains the most important focus area for emission reduction in this prevailing Energy and Emission Policy Plan (EEPP) 2024-2026.

Implementable measures:

1. Continue towards 100% EV fleet

Arcadis Netherlands B.V., in line with Arcadis Global, is transitioning to a fully electric fleet. Since the new mobility policy was implemented in October 2022, all new lease cars that our employees can choose from are electric vehicles. In 2023, 50% of ANL's lease cars already consisted of electric vehicles. In 2023, ANL's lease car fossil fleet emitted 1.142,3 ton CO₂. Based on the duration of current lease contacts, 80% of the remaining fossil fleet will be further electrified between 2024 and 2026. It should be noted that this will result in an increase of Scope 2 emissions. Based on 2023 data as a baseline and the assumption that this additional purchased electricity is grey (not green), this increase in Scope 2 will equal 133,2 ton CO₂³.

In an ideal scenario this measure will result in 80% emission reduction, equaling -913,8 ton CO₂. This can be translated to a more realistic/safe target of 60% emission reduction (in case we will experience delays in ordering EV and/or M&A's take place whereas there still might be fossil fleet present), resulting in a reduction of -685,4 ton CO₂ at the end of the EEPP period in Scope 1. Taking into consideration the previously mentioned increase in Scope 2 (133,2 ton CO₂), this measure will result in an expected **-552,1 ton CO₂ reduction** at the end of this EEPP period. This measure will not result in primary energy reduction.

2. Purchasing renewable energy for charging EV fleet

An important step in reducing our company's emissions is to make the electricity that the electric fleet is charged with green electricity. Currently, we can only guarantee charging with 100% renewable energy at our office locations where electricity used for charging falls under our energy contract because ANL purchases 100% green electricity for all our leased assets. Regarding charging electric vehicles at home and on the road, it is currently not possible to guarantee that the electricity is 100% green. Therefore, in this EEPP period of 2024 – 2026, we want to change this by exploring opportunities to purchase 100% green energy for all charging transactions. This can be done through the purchasing of Guarantees of Origin (Dutch: GvO's).

Based on the previously mentioned assumption that 60% of the current fossil fleet will be transitioned to electric vehicles, if all (100%) electricity purchased for ANL's EV fleet is replaced with green electricity, this would result in a reduction of 355,3 ton CO₂⁴. More realistically, purchasing 50% renewable electricity for our lease cars results in of **-177,6 ton CO₂ reduction**. This measure will not result in primary energy reduction.

Research measures:

3. Minimize amount of lease cars

An important step in minimizing greenhouse gas emissions related to lease car travel besides transitioning to a fully electric fleet, is minimizing the amount of lease cars available to ANL employees. Therefore, we aim to apply stricter rules to whether or not someone is eligible for getting a lease car (e.g. not enough access to public transport, physical limitations, etc.). For all new lease contracts, we aim to make them not part of the employees' labor agreement. Because, as soon as a lease car is incorporated into employees' labor agreement as condition, ANL is bound to the duration of this contract to supply the employee with this car. In this EEPP period we will investigate options to reduce the amount of lease contracts and actively stimulate our people to get out of their lease car.

² Based on ANL's emission inventory, lease cars were responsible for 51% in the first half year of 2023; for the full year 2022 they were responsible for 55%.

³ In 2023, 222,1 ton CO₂ was emitted by Arcadis' EV's. Replacing the 60% fossil cars with EV's will therefore result in an extra $222,1 * 0,6 = 133,2$ ton CO₂ emission in Scope 2.

⁴ Similar to Footnote 4, $222,1 + 133,2 = 355,3$ ton CO₂ (grey electricity). Purchasing 100% green results in 0 emission.

Since this is a research measure, the expected emission & primary energy reduction **cannot be quantified** yet.

4. Obligatory monitoring (commuting travel)

This measure is related to the new legislation WPM (Wet werkgebonden personenmobiliteit) which requires organizations to report on their commuting travel for all modes of transportation. ANL already has insight in most commuting travel, with the exception of commuting travel with lease cars. This is currently calculated based on an assumption of private driven km (8.900 km per year) and assuming that of all business-related travel, 40% is client-oriented and 60% is commuting. In the coming EEPP period, we want to investigate the possibilities for reporting on commuting lease travel as accurately as possible. In this regard, a survey will be sent out to all ANL employees to gather insight in commuting behavior and, accordingly, ways for ANL to influence this behavior towards a more sustainable way of travelling. Besides this survey, other ways to accurately monitor commuting and business travel will be researched in this period.

Since this is a research measure, the expected emission reduction **cannot be quantified** yet. This measure will not lead to a primary energy reduction.

5. Research (re)introducing interchangeable fleet

An alternative to granting ANL employees access to lease cars which they can take home and do with as they please, would be to (re)introduce an interchangeable lease car fleet consisting of merely sustainable and efficient Arcadis EV's (e.g. Tesla model 3). By allowing ANL employees to make a reservation for these cars and allowing them to 'rent' these cars, also for an extended period of time (as long as it can be indicated that it is necessary work-related travel), this could be a significant contributing factor in reducing the amount of ANL lease cars. Because ANL's lease fleet is already transitioning to a 100% electric fleet, the amount of emission reduction may be limited, however, it may be an important factor in reducing the amount of lease cars which people tend to take to work more often than strictly necessary once they own one.

Since this is a research measure, the expected emission & primary energy reduction **cannot be quantified** yet.

6. Investigate options for lease car sharing

Additionally to (re)introducing the interchangeable fleet of cars, the coming EEPP period will investigate the options for lease car sharing (e.g. through the development of an application or platform). By stimulating ANL employees to temporarily grant other colleagues access to their lease car when needed or desired (and/or by stimulating carpooling), a decline in the amount of necessary lease cars can be expected and therefore also a reduction in our lease car emissions.

Since this is a research measure, the expected emission reduction **cannot be quantified** yet. This measure will not lead to a primary energy reduction.

Private Cars

Besides lease cars, private cars are second in line when it comes to being responsible for most of our company's emissions (approximately 15%). Therefore, they are an important focus area as well. However, private cars are more difficult to influence than lease cars (directly company owned assets). Therefore, all measures described below are research measures that will be looked into in the coming EEPP period.

Research measures:

7. Stimulate sustainable and efficient private car travel

To limit emissions associated with private car travel, we want to stimulate private car travelers to limit the total driven distance with their private car and travel as sustainably as possible. This can be done by providing a higher allowance for EV's compared to fossil cars, although this is a sensitive topic. We also plan to make it easier for EV's to park close to the office and provide facilities further away for fossil cars. Additionally, we stimulate the private lease or purchasing of bicycles and propose a higher allowance for walking and biking to work. Moreover, we continue to stimulate the use of public transport.

Since this is a research measure, the expected emission & primary energy reduction **cannot be quantified** yet.

8. Research (re)introducing interchangeable fleet

An alternative to granting ANL employees access to lease cars which they can take home and do with as they please, would be to (re)introduce an interchangeable lease car fleet consisting of merely sustainable and efficient Arcadis EV's (e.g. Tesla model 3). By allowing ANL employees to make a reservation for these cars and allowing them to 'rent' these cars, also for an extended period of time (as long as it can be indicated that it is necessary work-related travel), this could be a significant contributing factor in employees using their less sustainable private cars for business travel.

Since this is a research measure, the expected emission & primary energy reduction **cannot be quantified** yet.

Plane travel

Implementable measures:

9. Plane travel: enforce sustainable travel rules more strictly

ANL has already successfully implemented the measure to opt for the international train as standard transportation mode in stead of short-haul flights (≤ 700 km). Short flights have a much higher emission (234 g/km) compared to the international train (17 g/km). This measure (international train ≤ 700 km) already resulted in a decrease of -87% total distance travelled with short haul flights and an equal amount of emission reduction when comparing H1 2019 with H1 2023. By enforcing this rule even more strictly, it is expected that ANL can further reduce the total travel distance with short-haul flights by an additional 5% at the end of this EEPP period. Hence, we would like to implement a strict monitoring policy for exceptions granted.

Additionally and in a similar fashion, by enforcing sustainable plane travel rules more strictly - only allowing absolutely necessary business travel - it is expected that travel distance with medium (700-2.500 km) and long (> 2.500 km) flights can both be reduced by 10% in the coming EEPP period. Amongst other options, this can be realized by encouraging extended stays over traveling more often (duration vs frequency).

Together, this will result in an expected **-18,6 ton CO2 reduction** and **-233,8 GJ primary energy reduction**⁵.

10. Purchase Sustainable Aviation Fuel (SAF) for KLM-Air France operated flights

The purchasing of Sustainable Aviation Fuel (SAF) results in 75% reduction of all flight emissions operated by KLM and Air France⁶. This is a continued rather than a new measure. Based on the amount of emissions saved in 2022 (79 ton CO2 reduction), which is conservative due to the relatively low plane travel distance because of COVID-19, at the end of this EEPP period this will result in **-237,0 ton CO2 emission reduction**.

This measure will not result in primary energy reduction.

Research measures:

11. Purchase Sustainable Aviation Fuel (SAF) for other carriers than KLM-Air France

Momentarily, it is only possible to purchase Sustainable Aviation Fuel (SAF) from KLM-Air France operated flights. In the coming EEPP period, we want to investigate the options for purchasing SAFs from other carriers. This might result in significant CO2 reduction.

Since this is a research measure, the expected emission & primary energy reduction **cannot be quantified** yet.

⁵ Based on H1 2023 data. Calculating 5% of the flight distance for short haul flights (= 688 km) and 10% for medium (=13.470 km) and long (= 102.557 km) haul flights, and subsequently multiplying this with the emission factors of flights (short = 234 g CO2/km; medium = 172 g CO2/km; long = 157 g CO2/km) results in the expected emission reduction. For short-haul flights, this reduction needs to take into consideration that the 688 km are replaced by international train emissions (17 g CO2/km). A similar calculation is made based on the GJp emission factors for short, medium and long-haul flights.

⁶ <https://www.klm.nl/en/information/sustainability/sustainable-aviation-fuel>

Other travel

Implementable measures:

12. Increase awareness of personal travel footprint

Through the implementation of ThrustCarbon, employees will be made aware of their personal travel footprint. They will receive an e-mail with their carbon footprint related to travel in a certain period of time, which can be compared to the average footprint of the average Arcadian. This is meant to inform our employees on their personal impact, increasing awareness and thereby stimulate sustainable behavior.

This measure **cannot be quantified**.

Research measures:

13. Stimulate sustainable travel in cities

There are various options for sustainable travel around town, especially in the bigger cities. Examples are OV bikes (public transport bikes) which our employees can access through their NS business card, electric scooters, segways and electric motorized vehicles such as shared EV cars services (GreenWheels) and Felyx scooters. This measure is intended to help our employees get around town, to clients or to our own offices, as sustainable and efficiently as possible.

Because this is a research measure, the expected emission reduction **cannot be quantified** yet.

BUILDING-RELATED MEASURES

Implementable measures

1. Perform energy efficiency analysis and building portfolio of all offices

Arcadis has committed to the ambition of Paris Proof buildings in 2040. In order to make sense of this ambition for building-related energy reduction (<50 kWh/m²), Arcadis offices are screened for energy and CO₂ saving measures in the designated years. A building portfolio is drawn up for each office together with the building owner to gain insight into the efficiency of the buildings in question and the possibilities for improving it. We will bring one or more building experts on board to facilitate us in this process.

From 2024 to 2026, we will carry out an energy scan for all ANL office buildings, with a priority on the top 3 energy consumers per m² where we have the most influence (single tenant or building owner). At the end of this EEPP period, we want to have a full overview of all our offices with conclusions on how to achieve our Paris Proof commitment before 2040. In addition, natural moments such as office changes, renovations or maintenance moments are inventoried to make a comprehensive planning for implementing sustainability measures. Moreover, regarding new and existing leases, sustainability performance of our buildings is a top priority.

Since this is a research measure, the expected emission & primary energy reduction **cannot be quantified** yet. This measure would result in improved efficiency and therefore reduction/savings in Scope 1 (natural gas) and Scope 2 (electricity).

2. Replacing natural gas with non-fossil options

If we would replace natural gas consumption in all our offices that consume natural gas with green (Verto)gas, this would lead to **88 ton CO₂ reduction**⁷. This measure will not result in primary energy reduction. Compared to our total 2022 footprint of 2.916 ton CO₂ this is only 3% of our total carbon footprint, so the impact is not that high. However, because we have already taken so many measures to reduce our footprint, it would be a relatively easy and effective measure to contribute to our net-zero goal.

Additionally, our Arnhem office (Beaulieustraat 22) will be replaced by a more sustainable building on district heating. Arnhem gas free (2023 data) = 67,1 ton CO₂ reduction (32.290 m³ in 2023) * 2,5 = 167,8 ton CO₂ reduction. Based on estimated consumption of the new office building, part of these emissions will be replaced by district heating emissions (20,3 in 2022 * 2,5 = 50,75 ton CO₂). Therefore, a total of **-117,1 emission reduction** (167,8 - 50,75) is expected in this EEPP period.

Research measures

3. Improve efficiency of HVAC systems

Since the HVAC systems of Arcadis offices consume approximately half (47.2%) of the total building-related energy consumption, the greatest savings appear to be achieved in this area for Arcadis' offices. However, it is difficult to achieve significant savings in this area as HVAC systems cannot simply be adjusted given the building-related nature and long-term (rental) contracts. In addition, direct influence can only be exerted on single tenant offices. However, by better monitoring energy consumption related to HVAC systems, abnormalities can be responded to earlier. In coordination with Housing Global (Arcadis Global real estate department, part of Arcadis), a monitoring system for the energy performance of our buildings is being sought. In addition to the possibility of making timely adjustments, the enhanced insight also leads to the formulation of stricter energy saving measures.

Since this is a research measure, the expected savings **cannot be quantified** yet.

⁷ Our consumption of natural gas in 2022 (most recent completed report) = 64.923 m³ natural gas. Natural gas has an emission factor of 2,079 kg CO₂/m³. Green gas has a much lower emission factor of 0,723 kg CO₂/m³.

- 64.923 * 2,079 = 134.974 kg CO₂ (regular natural gas)
- 64.923 * 0,723 = 46.939 kg CO₂ (VertoGas certified green gas)

The difference = 88.035 kg CO₂ = 88 ton CO₂ = reduction potential.

4. Install smart meters in all offices (where possible)

Currently, smart meters are installed in our single tenant offices. This grants us nearly real-time insight into our energy performance. Since this is a research measure, the expected emission & primary energy reduction **cannot be quantified** yet. This measure would result in improved efficiency and therefore reduction/savings in Scope 1 (natural gas) and Scope 2 (electricity).

OTHER MEASURES

This paragraph will describe measures that do not directly fall within the mobility or building category. These emissions are Scope 3 emissions and relate most directly to the (value) chain of ANL.

Implementable

1. Stimulate working from home (WFH)

Support for (more) working from home has increased due to the influence of COVID-19. Stimulating working from home is a strong mitigation measure that reduces CO₂ emissions and energy consumption, mainly because transport is immediately avoided. Since employees also use energy at home for work purposes and there is not enough insight into this consumption or the origin of energy, the exact savings are difficult to quantify. However, based on a survey from 2023, 60% of all Dutch Arcadians purchase green electricity at home. All Arcadians can get 3 euros for working from home. Similar to the past EEP period (21-23), we assume Arcadians work an average of 2 days from home, resulting in 30% less distance travelled across all transportation modes.

Based on the calculations used in the previous EPP period, this will result in **-119,0 ton CO₂ reduction** and **-1.280,9 GJ primary energy reduction**.

Research measures

2. Monitoring & reporting WFH emissions

In this EEPP period we will continue to investigate ways to (more) accurately calculate the emissions associated with working from home, and report accordingly. A survey seems to be the most apparent option to do so. Since this is a research measure, the expected savings **cannot be quantified** yet.

3. Minimize emissions from data storage

Our work is associated with the creation, sharing and storage of a lot of (large) documents. All this data storage consumes energy (electricity) and therefore in this EEPP period we will look into ways to actively steer towards encouraging employees to clear out their inbox, draft policy on how to share and store documentation (e.g. on SharePoint, share links), etc. Since this is a research measure, the expected savings **cannot be quantified** yet.

4. Improve sustainable procurement

In this EEPP period we will continue to look into ways to further enhance sustainability across our procurement processes. Since this is a research measure, the expected savings **cannot be quantified** yet.

5. Minimize generated waste

In this EEPP period we will continue to look into ways to further enhance sustainability when it comes to the generation and processing of waste. This regards both more efficient waste separation as well as minimizing the amount of waste generated. Since this is a research measure, the expected savings **cannot be quantified** yet.

6. Improve biodiversity (home/offices)

Lastly, in this period we will look into ways to make our offices and related sites more friendly towards the living environment (e.g. office gardens specifically targeting pollinators and other insects vital to the ecosystems). Since this is a research measure, the expected savings **cannot be quantified** yet.