EN

Report on the ECA's 2024 carbon footprint

CURIA RATIONUM

COUR DES COMPTES EUROPÉENNE

EMAS
VERIFIED ENVIRONMENTAL MANAGEMENT
LU-000004

ISO14001 CERTIFIED
VINÇOTTE

About this report

The European Union is committed to environmental protection, and this commitment includes environmental policy within its institutions. As an EU institution, the European Court of Auditors (ECA) has a duty to contribute to sustainable development by applying the principles of sound environmental management in its day-to-day work.

As part of its environmental policy and its commitment to EMAS[1], the ECA decided to update its carbon footprint to assess the impact of its activity for 2024, as it does every year.

This carbon footprint provides all relevant stakeholders and other interested parties with information concerning the ECA's CO_2 emissions performance and activities from 1 January to 31 December 2024.

This document has been drafted in accordance with the Bilan Carbone® method, developed by ADEME (the French Agency for Ecological Transition).

This report was drafted for the ECA by 21 Solutions, in partnership with Comase, using data provided by the ECA's EMAS team, which is responsible for this update.

This document is available on the ECA's website.

[1] Eco-management and audit scheme.

Contents

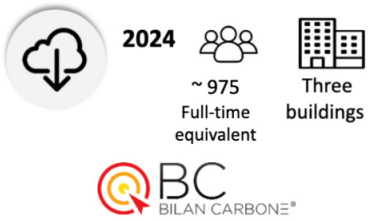
Paragraph

[2] See Glossary.

01 Main messages

01 We have long been committed to international efforts to tackle climate change. We have been calculating our carbon footprint since 2014, as part of the process of assessing the carbon footprint of our activities and implementing strategies to mitigate our greenhouse gas (GHG) emissions.

Figure 1 | General framework



Source: 21 Solutions.

02 As shown in Figure 1 , this evaluation encompasses direct and indirect emissions caused by the activities of ECA staff in 2024, as well as the ECA's three buildings in Luxembourg, and was prepared using the Bilan Carbone® method.

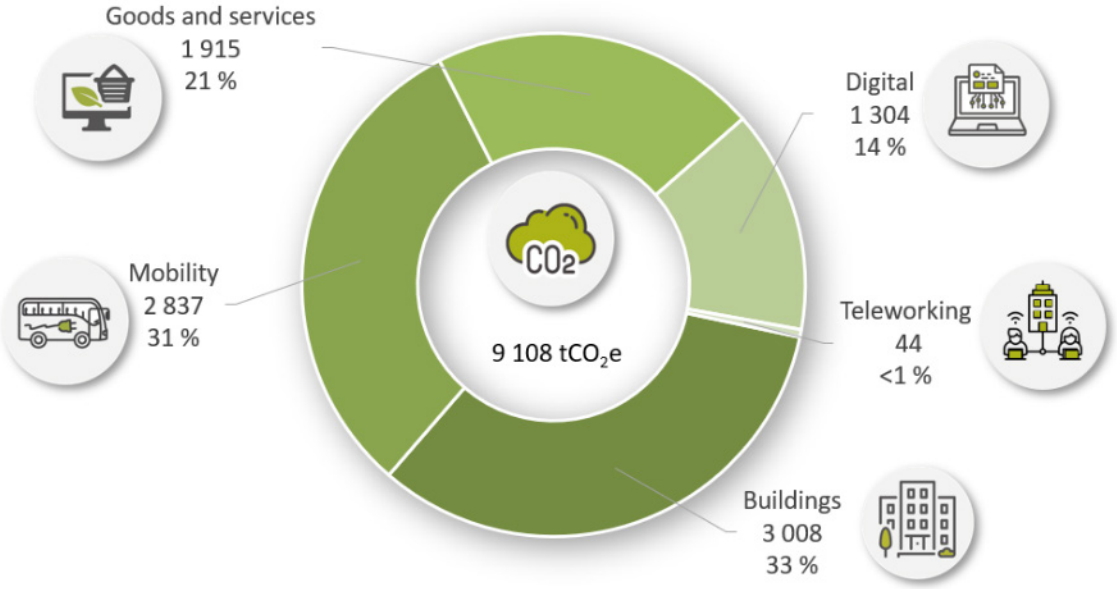
03 Our total GHG emissions for 2024 amounted to 9 108 tCO_2e, with a decrease of 15 % since 2014. With our current staff level of 975 full-time equivalent staff members (FTE), this represents 9.34 tCO_2e per FTE (see Figure 2).

Figure 2 | GHG emissions for 2024

Source: 21 Solutions.

04 Our action plan is directly responsible for 68 % of this decrease, while the other 22 % is related to improvements in the methodology used to calculate visitor-related emissions. If we had used the same assumptions for allocating visitor emissions in 2024, the decrease would have been only 12 %.

Figure 3 | Overall GHG emissions for 2024



Source: 21 Solutions.

05 Figure 3 above shows that the following three main sources represent around 85 % of the carbon footprint:

- **Buildings (33 %)**, including the following emission categories: energy and non-energy in-house, direct waste and sewage disposal, buildings and car parks, building maintenance, and fixed assets.
- **Mobility (31 %)**, including the following emission categories: staff commuting, business travel, visitor travel, hotel nights, meals, and car fleet. Following the new calculation method, mobility emissions are now the second largest item rather than the first.
- **Goods and services (21 %)**, including the following emission categories: purchased services, purchased goods, and transport of goods.

06 The ECA reduced its GHG emissions per FTE by 15 % between 2014 and 2024. This result is all the more notable given that, over the same period, staff numbers (in FTE) increased by 6 %.

02

Context of the study

The ECA

07 Established in 1977 and based in Luxembourg, the ECA is the European Union's external auditor.

08 It was set up to audit the EU's finances. Its audit work covers the EU budget and policies, mainly in areas related to growth and jobs, value added, public finances, environment, and climate action. The ECA audits both budget revenue and expenditure.

09 Through our independent, professional, high-impact audit work, we assess the economy, effectiveness, efficiency, legality and regularity of EU actions in order to improve accountability, transparency and financial management, thereby bolstering citizens' trust in the EU and allowing the current and future challenges that the EU is facing to be addressed more effectively.

10 We want to be at the forefront of public finance auditing and contribute to a more resilient and sustainable European Union, one which is true to its founding values.

11 The ECA operates as a collegiate body of 27 Members, one from each EU member state. The Members are appointed by the Council after consultation with the European Parliament for a renewable term of six years. Members elect one of their number as President for a renewable term of three years. The ECA has five chambers, to which Members and auditors are assigned. Audit tasks are carried out by the ECA's staff under the supervision of the Members assigned to their chamber.

12 The President acts as first among equals. He chairs Court meetings and ensures that Court decisions are implemented, and that the institution and its activities are managed soundly.

13 The Secretary-General is the ECA's most senior member of staff. The holder of the position is appointed by the Court for a renewable period of six years and is responsible for the ECA's administration and staff.

14 Our strategy for 2021-2025 contains three strategic objectives:

- improve accountability, transparency, and auditing across all types of EU action;
- focus our audits on the areas and themes where we can add the most value; and
- provide strong audit assurance in a challenging and changing environment.

15 We carry out our audits in accordance with the international auditing standards and code of ethics, which we apply in the specific EU context. These standards ensure the quality, professionalism and efficiency of our work. We also contribute to the development of standards in the framework of our international cooperation activities.

16 The results of our work are used by the European Commission, the European Parliament, the Council and the member states to oversee and, where necessary, improve the management of the EU budget. Our work is an important basis for the annual discharge, a procedure in which Parliament decides, on the basis of a recommendation from the Council, whether the Commission has implemented the previous year's budget satisfactorily.

17 We publish the results of our audit work in different types of reports depending on the type of audit carried out: annual reports, specific annual reports, and special reports. We also publish opinions and reviews.

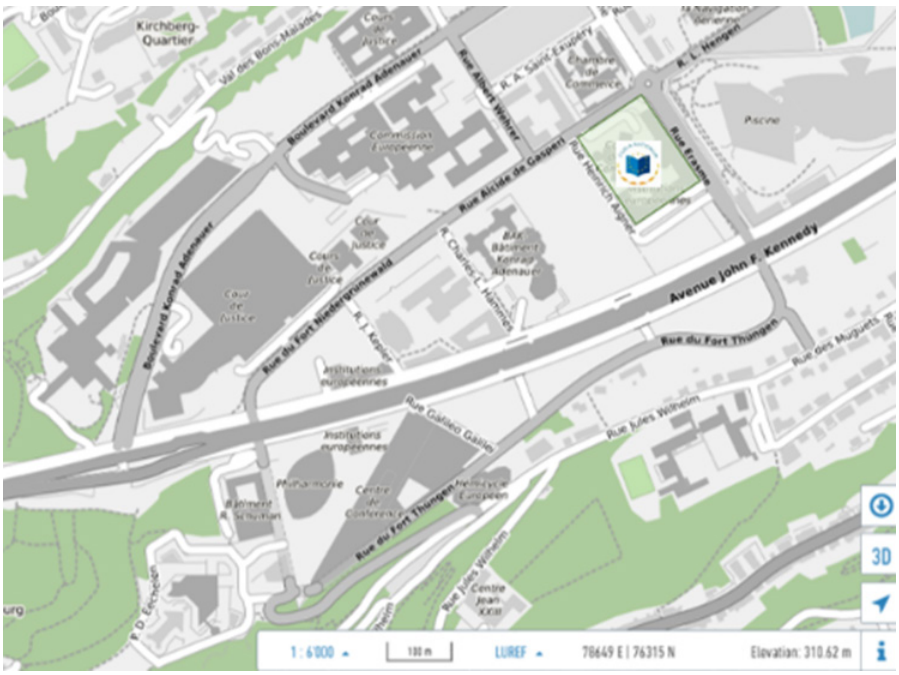
18 The positive environmental impact of our reports is not easily measurable. However, environmental audits and audits related to the Sustainable Development Goals are becoming an ever-greater part of the ECA's work. One of the audit chambers, Chamber I (Sustainable use of natural resources), exclusively audits topics related to the environment and sustainable development:

- climate change and energy;
- environment;
- agriculture and rural development;
- maritime affairs and fisheries; and
- health, food safety and consumers.

The ECA's buildings

19 We employ around 980 members of staff (auditors, translators and administrative staff) from all EU member states. We currently own and occupy three buildings (K1, K2 and K3), located in the heart of the European quarter of Kirchberg in Luxembourg. The total area of the plot of land on which our premises are located is 18 473 m².

Figure 4 | Map of Kirchberg – 1:6 000

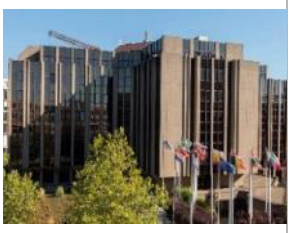
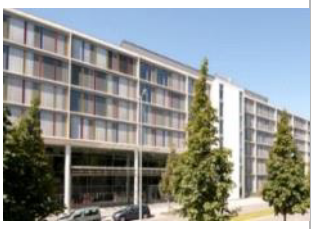
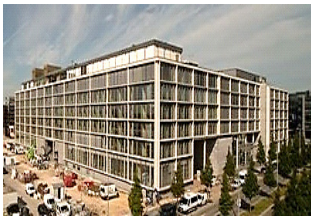


Source: geoportal.lu.

Figure 5 | Aerial view of the buildings in the European quarter

Source: European Court of Auditors.

Table 1 | Detailed information on the ECA's buildings

Building	K1	K2	K3
			
Year of construction	1988	2003	2012
Basement	- Three levels - 225 parking spaces - Archives and workshops - Library	- Two levels - 192 parking spaces - Sports centre	- Two levels - 165 parking spaces - Workshop and printing - Kitchen and archives
Floors	- Ground floor: accreditation pavilion and offices - Six floors of office space including Members' private offices and the Court's meeting room - Seventh floor: equipment rooms	- Ground floor: office space, foyer and conference room with 22 interpreting booths - Five floors of office space - Sixth floor: equipment rooms	- Training centre, cafeteria and canteen - Five floors of office space - Sixth floor: equipment rooms, lounge and reception rooms

Source: European Court of Auditors.

Figure 6 | Aerial view of the ECA's buildings

Source: European Court of Auditors.

03 Methodological approach

Overview of the Bilan Carbone® method[3]

20 Our carbon footprint was assessed using the French Bilan Carbone® method. This method was originally developed in 2004 by the French Environment and Energy Management Agency (ADEME) to quantify organisations' GHG emissions. It is coordinated by the *Association pour la transition Bas Carbone*.

21 The Bilan Carbone® method makes it easier to convert data from an activity into GHG emissions (using emission factors) and to express all GHG emissions from that activity in a common unit, known as "CO_2 equivalent" (CO_2e).

22 Because the methodology relies on estimating GHG emissions rather than measuring them directly, the result of the assessment is provided within an order of magnitude. It is now coordinated, updated and distributed by the *Association pour la transition Bas Carbone*. Since 2013, 21 Solutions, the service provider that did the calculations for us, has been officially recognised as a service provider for the Bilan Carbone® method by the *Association pour la transition Bas Carbone* and ADEME.

23 The assessment was carried out using the latest version of Bilan Carbone®, version 9.0. This version has been in use since 1 January 2025. The new version includes significant methodological improvements, such as better assessment of uncertainties, which enhances the reliability of the results. It also requires the "maturity level" ("initial", "standard" or "advanced") of an organisation's approach to environmental issues and its carbon footprint to be selected; the "standard" level was chosen in our case.

[3] See Glossary.

24 The method covers the following gases:

- Kyoto Protocol gases: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulphur hexafluoride (SF_6), nitrogen trifluoride (NF_3), hydrofluorocarbons ($C_nH_mF_p$), perfluorocarbons (C_nF_{2n+2})
- chlorofluorocarbons (CFCs);
- water vapour emitted by aircrafts in the stratosphere.

The "CO_2 equivalent" index

25 GHGs are not all equal, and their contribution to the greenhouse effect and climate change depend on two parameters:

- their residence time in the atmosphere;
- their radiative forcing.

26 Residence time varies greatly from one gas to another. A molecule of methane (CH_4) will remain in the atmosphere for around 100 years before disappearing, while a molecule of SF_6 will take several thousand years to disappear.

27 The radiative forcing of a gas refers to the amount of radiation it intercepts and reflects back towards the ground. For example, the radiative forcing of methane is higher than that of CO_2, meaning that its impact on the greenhouse effect is greater, but its residence time is shorter (100 years, compared to around 1 000 years for CO_2).

28 It was therefore vital to establish a common unit for comparing the climate impact or global warming potential (GWP) of the different GHGs. The unit officially adopted for this purpose by the Bilan Carbone® method is the CO_2 equivalent (CO_2e), which indicates how much more or less the emission of a quantity of a particular GHG contributes to the greenhouse effect over 100 years compared to the same quantity of CO_2.

Emission factors

29 It is technically difficult to measure the GHG emissions of an activity directly. The Bilan Carbone® method therefore relies on a database of emission factors.

30 Emission factors make it possible to convert physical activity data (for example, a vehicle's fuel consumption in litres, or paper consumption in tonnes) into GHG emissions, expressed in CO_2e weight.

Figure 7 | Calculating the GHG emissions of a physical activity

Source: Association pour la transition Bas Carbone.

31 For example, the emission factor for diesel fuel consumption is 3.04 $kgCO_2e$/litre, corresponding to around 30.4 $kgCO_2e$ for a journey consuming 10 litres.

32 Emission factors are defined in different ways, such as through laboratory measurements or sector studies (with manufacturers). They may also be simply proposed by third parties and then checked for quality and transparency by a committee of carbon experts.

33 Lifecycle analysis is generally the preferred approach when defining new emission factors.

34 The database is currently administered directly by ADEME.

Scope

35 The evaluation of the ECA's carbon footprint covers all activities affecting the environment directly or indirectly. The study encompasses direct and indirect emissions caused by the activities of ECA staff in 2023, as well as the ECA's three buildings in Luxembourg. Direct emissions are those that result from sources owned or controlled by the ECA, such as fuel oil burnt by the ECA's emergency power generator or petrol/diesel consumed by the official car fleet. Indirect emissions are those that result from the ECA's activities but occur at sources owned or controlled by another organisation.

Table 2 | Occupation of buildings as at 31 December 2024

Building	Total net surface area (m²)[4]	Occupants[5]
K1	22 404	334
K2	17 979	248
K3	28 240	541
No fixed workplace[6]	/	5
Total	68 623	1 128

Source: European Court of Auditors.

Table 3 | Detail scope of the calculation

Item	Detail
Passenger transport	- Employee commuting - Transport for missions (business travel) - Transport using official cars - Visitor travel
Goods and services purchased	- Purchase of supplies, such as food, paper or furniture - Services provided by third parties (e.g. catering, maintenance, cleaning)
Capital goods	- Buildings and car parks - Industrial machinery and equipment - Vehicles
Energy in-house	- Use of fuel - Electricity (all uses) and heating - Electricity and heating losses
Digital footprint	- Energy consumption of data centres and IT hardware - IT hardware (computers, printers and servers) - IT software and licences - IT services - IT external use (e.g. social media, website)
Non-energy in-house	- Non-energy CO_2 - Other "Kyoto" gases (for example, accidental leaks of cooling liquids)

[4] Total net surface area calculated in accordance with DIN 277.

[5] Occupant: any person working at the ECA (staff or external service provider). The total number of occupants differs from the number of FTEs, as it takes into account the actual number of employees as well as consultants present on-site.

[6] For various administrative reasons, some new staff, service providers and trainees do not have allocated offices.

Item	Detail
Teleworking	- Use of IT equipment - Use of heating - Electrical consumption
Waste	- Treatment of different types of waste - Contamination of sewage
Transport of goods	- Transport of goods delivered by third parties

Source: European Court of Auditors.

36 As part of a continuous improvement process, further details and additional information are added each year. The 2024 calculation includes more items than the 2014 one did, which makes comparisons between breakdowns less relevant in some cases. In 2024, the change in assumptions for the allocation of visitor emissions had a significant impact on the evolution of emissions.

Temporal scope

37 Our Bilan Carbone® assessment was carried out on the basis of activity data for 2024. GHG emissions were estimated over a period of one year.

Baseline years

38 We have taken care to ensure continuity and comparability of results over time, so that the results remain comparable with those of the baseline years chosen.

39 The 2024 results are compared with those of 2014 (the year the first assessment was carried out), 2019 (the last year of “normal” activity before COVID-19) and 2023 (the most recent year available).

Assumptions and boundaries

Goods and services purchased

40 Goods and services purchased have been calculated based on the amounts, in euro, spent by category.

41 Miscellaneous services were assigned an average services emission factor, which was extrapolated from the Bilan Carbone® database.

Meals

42 Data on meals was not available in the same level of detail as in the past. In particular, as was also the case in 2022 and 2023, a breakdown of meat dishes by type of meat was not available in 2024. However, an overall breakdown between meat (76.5 %) and vegetarian/vegan dishes (23.5 %) sold in 2024 was available. Data for meat dishes is estimated by extrapolation, based on the breakdown of meat dishes in 2019 and the breakdown of meat v vegetarian dishes sold in 2024. To estimate 2024 emissions from meals, we therefore further subdivided the meat dishes in proportion to the 2019 breakdown by meat type.

Commuting

43 At the end of 2023, the ECA signed an agreement with the Luxembourg Ministry of Mobility and Public Works to draw up a mobility plan and promote soft mobility. The plan could not be drawn up in 2024. It will be drafted in 2025 on the basis of the replies to the 2025 mobility survey carried out online at the ECA between 25 February and 7 March 2025. Out of the 998 people contacted, 505 replied (a response rate of 51 %). The 20 % increase in the number of replies in 2024 compared to 2023 gave more weight to the calculations and results. Detailed conclusions of the survey are available in Annex III – Extracts from the results of the 2025 mobility survey.

44 The distances calculated exclude teleworking days.

45 The calculation of commuting emissions includes commuting by both staff and external consultants who work on-site every day.

Business travel

46 Business travel emissions are calculated on the basis of figures provided by Human Resources. For cars, the calculation includes the number of kilometres travelled in private, official and rented cars.

Air travel

47 The travel agency provides details of CO_2 emissions for air travel, but these have been recalculated on the basis of mileage for greater precision, taking into account the effects of cirrus clouds caused by aviation. There are still significant scientific uncertainties surrounding the estimation of such emissions. ADEME recommends including contrails in the calculation.

Official cars

48 The calculation for official cars is based on fuel consumption in litres (number of litres converted to kilometres based on average consumption for comparison).

Visitor travel

49 Previously, the calculation used to assume that visitors had come to Luxembourg purely to visit the ECA, and therefore included 100 % of the impact of their journey. As this is not always the case, emissions from visitor travel have probably been overestimated. A survey conducted in March 2024 based on visit requests concluded that 90 % of visitors also planned to visit other sites in Luxembourg. Taking into account that this survey concerns planned visits and not actual visits, and that we do not know how many visits applicants might make elsewhere, we have adopted the conservative assumption of allocating 50 % of visitor emissions to the ECA visit. The calculations make the following assumptions regarding the means of transport used by visitors:

- Travel from Belgium or elsewhere in Luxembourg: car.
- Travel from France: train.
- Travel from the Czech Republic, Germany, Switzerland and the Netherlands: bus.
- Travel from elsewhere in the EU: short-haul flight.
- Travel from elsewhere in the world: long-haul flight.

50 The distance assumptions are based on one-way distance calculations dating from 2016. However, 803 visitors declared their place of origin as “EU” on their registration forms, without providing any further details. An average distance of 1 425 km (one-way) was therefore assumed for flights of EU origin, which is probably not representative of the real distance travelled.

Capital goods

51 Capital goods include the following items:

- **Buildings and car parks**: parking and office space (m^2), renovation work included in building emissions. Depreciation: 40 years.
- **Building assets**: generators, refrigerators, air conditioning units, machinery, etc. (units per building); furniture, equipment and tools (per building by purchase price). Depreciation: eight years.

- **Vehicles**: model of leased and owned vehicles across all three buildings. Depreciation: four years.

Energy

52 Electricity consumption in the ECA's buildings is covered by a green electrical supply contract with guarantees of origin. Green electricity is electricity from renewable sources, such as wind, hydroelectric or photovoltaic energy. Electricity suppliers ensure that the quantity of green electricity purchased by the customers under green energy contracts are fed into the EU electricity grid. The aim is to promote electricity from renewable sources. At EU level, green electricity is recognised through a system of guarantee-of-origin certificates. These certificates are supplied by the electricity generator, who forwards them to the supplier at the time of purchase (see Annex I – Green electricity certificate).

53 However, the purchase of green electricity does not currently ensure additional generation or local investment in renewable energy.

54 As in previous years, it was decided that the calculations would take into account the Luxembourg (location-based) grid-average emission factor (i.e. the emission factor for the electricity actually consumed in the buildings) rather than the emission factor for green electricity. Last year, we used the most recent International Energy Agency (IEA) emission factor (updated in 2022), which was 90 % lower than the emission factor used in 2022. For 2024, we decided to use the emission factor of the *Institut luxembourgeois de régulation* published on the official journal of the Grand Duchy of Luxembourg: 187.14 CO_2e/kWh.

55 Since 2022, electricity consumption has been split into two categories: the electricity consumption of the buildings has been included in the "Energy (in-house)" category, and the electricity consumption of the data centres (both external in Betzdorf and internal) has been included in the "Digital" category (Digital – Internal digital use). This methodological approach provides a better understanding of the impact of the latter category, by subtracting the energy required to run and cool the K3 data centre from the electrical consumption of the buildings.

56 Electricity consumption by official vehicles and staff members' hybrid and electric cars was also excluded from our electricity consumption to avoid double counting emissions. Such emissions are already included in the "Commuting and business travel" category.

57 The energy mix of the district heating network changed between 2023 and 2024, with increased use of biomass pellets instead of gas. In 2024, the new mix comprised 61.8 % renewables from biomass cogeneration, 25.7 % from wood-dust boiler, and 12.5 % from

fossil fuels (see Annex II – Heating energy mix certificate). The fossil fuels were assumed to be gas only, as no distinction was made by type and fuel oil is not used.

Digital

58 In 2024, there was a reduction in IT supplies, but an increase in IT services, with some items formerly classified as supplies being reclassified as services. This transition reflects a growing trend to outsource certain IT functions, and the desire to further refine the methodology. IT equipment, on the other hand, has decreased compared to 2023. This is because equipment continues to depreciate.

59 Finally, the category of equipment and supplies related to radio, television, communications and telecommunications saw a significant decline. This is because most of the major investments in these areas were made in 2023, which explains the significant difference between the two consecutive years.

Teleworking

60 In 2025, a new survey has been launched. Previously, the figures were based on assumptions dating back to 2020. The quality of data has improved.

61 The following assumptions were used for the calculation:

- eight hours per working day;
- in the northern hemisphere, heating is used for six months per year (October to March inclusive)[7];
- heating data is only taken into account if employees do not usually leave their heating on when they leave for work. If they turn their heating down, half of their heating emissions are taken into account;
- green energy is now taken into account.

62 When the source of energy used for heating was specified as “other”, it was counted as gas heating.

Emission factors

63 The 9.0 version of Bilan Carbone® allows the use of the most recent emission factors. Some variations will be explained by greater accuracy in the emission factors rather than

[7] See “Homeworking emissions – Whitepaper”, EcoAct.

by changes in the activity data concerned. For certain monetary factors that were not available in the new version, the 2023 ratios have been used.

Staff members

64 The ECA's workforce (in FTE) has increased by 6 % since 2014 and stood at 975 FTE in 2024.

Waste

65 The calculations take the following into account:

- Non-hazardous waste: food and household waste, plastics, paper, cardboard and glass packaging.
- Hazardous waste: wastewater and sewage, light bulbs and fluorescent tubes, packaging waste containing harmful products, scrap metal, batteries, accumulators and electronic waste.
- Water use (sewage), based on water consumption, allocated to buildings based on occupancy.

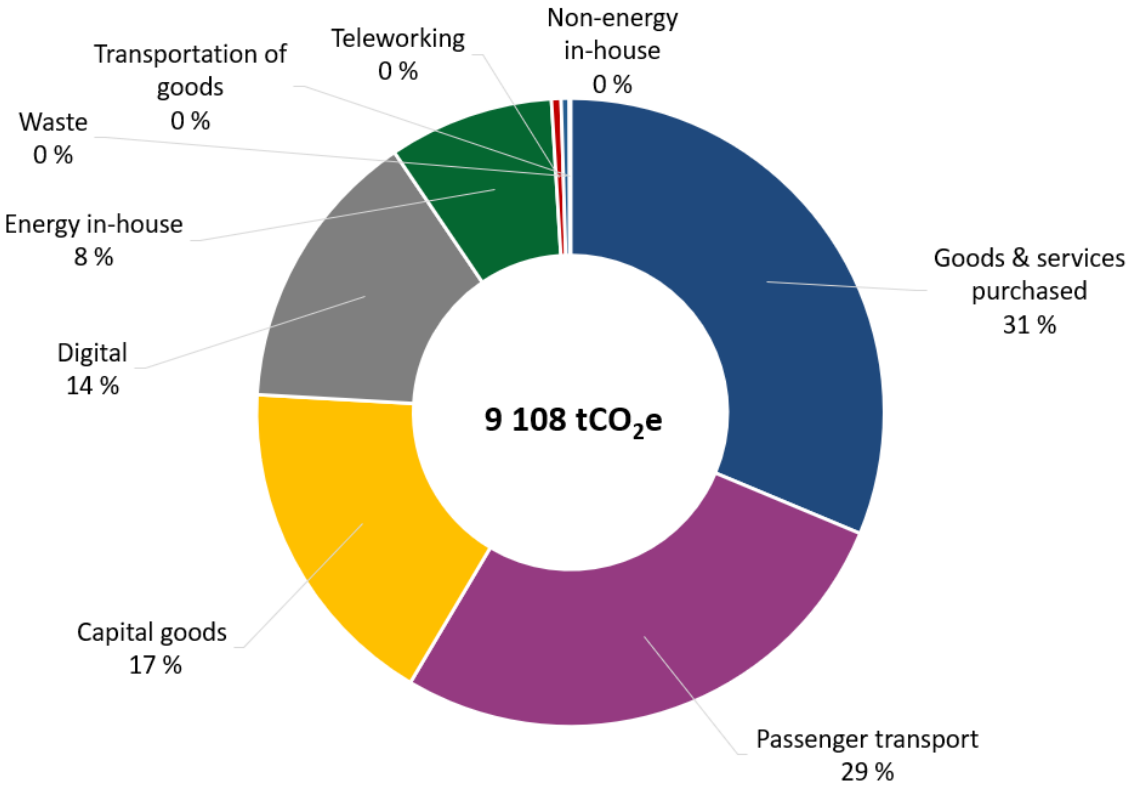
66 In 2024, the data collection was less precise, with incoherences on the end of life of certain types of waste.

04 Results and analysis

67 We have decided, throughout the report, to focus on identifying whether any changes observed are linked to changes in habits, emission factors or to more structural changes. This approach provides a better understanding of the impact of the implementation of our action plans up until the end of 2024.

68 The ECA's overall carbon footprint for 2024 was **9 108 tCO_2e** (see Figure 3).

Figure 8 | Bilan Carbone® results



Source: 21 Solutions.

Uncertainties

69 Like all "physical" approaches, the values resulting from the Bilan Carbone® method are subject to a degree of uncertainty.

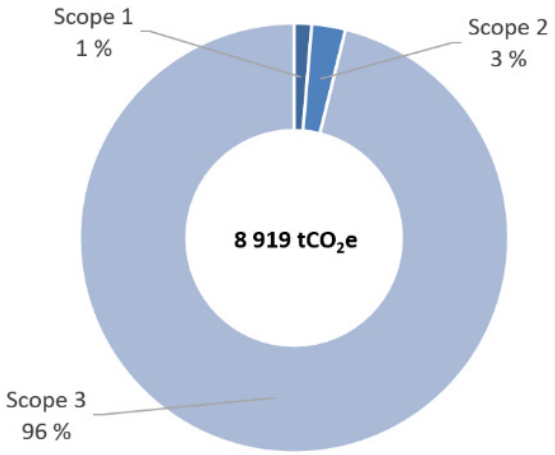
70 Uncertainties account for 11 % of the total 2024 carbon footprint, with 1 005 tCO_2e.

Detailed results by scope

71 The Greenhouse Gas Protocol categorises GHG emissions into three groups or "scopes". Applied to the ECA's emissions, these are:

- **scope 1** – direct emissions;
- **scope 2** – indirect emissions from the ECA's consumption of electricity or heat generated at another facility (power station or urban heating system);
- **scope 3** – all indirect emissions other than those covered by scope 2 including, in particular, the transportation of purchased supplies, commuting, business travel, meals and IT.

Figure 9 | 2024 GHG emissions by scope



Source: 21 Solutions.

72 Indirect emissions accounted for 96 % of the ECA's GHG emissions and thus the vast majority of our carbon footprint in 2024.

Table 4 | Scope 3 – Comparison with previous years

2014	2019	2023	2024
95 %	84 %	96 %	96 %

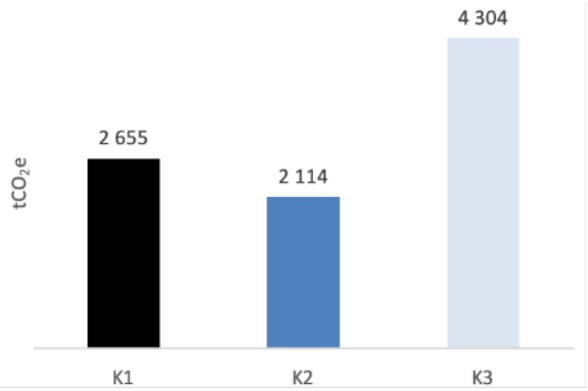
Source: European Court of Auditors.

73 The ECA's carbon footprint since 2014 has been calculated on the assumption that district heating did not emit CO_2 because it operated as a cogeneration system. As GHG emissions linked to scope 2 were very low, scope 3 represented 96 % of the total 2024 GHG emissions.

Emissions by building

74 The ECA buildings' GHG emissions comprise emissions from our three buildings. Emissions were highest from K3, as has been the case every year. The building houses both the largest number of staff and the highest concentration of energy-consuming facilities such as the kitchen, canteen and data centre.

Figure 10 | Total emissions in 2024 by building



Source: 21 Solutions.

Table 5 | 2024 GHG emissions per FTE by building

Building	tCO_2e/FTE
K1	9.2
K2	9.9
K3	9.1
Average	9.34

Source: 21 Solutions.

75 As Table 5 shows, K3's emissions per FTE remain lower than those of the other two buildings, as it is the most recent and therefore the most energy-efficient building.

Detailed results by scope

Goods and services purchased

76 This category encompasses emissions from all materials and services purchased by the ECA. The 2024 data is more accurate, and the "Miscellaneous" section has been divided into several categories that are more relevant.

77 These emissions amounted to 2 792 tCO_2e in 2024. The largest source of emissions in this category was services provided by third parties (74 %), followed by purchased goods (19 %) and meals (5 %).

Table 6 | 2024 GHG emissions from goods and services purchased

Type of good or service	tCO_2e
Services purchased	2 053
Goods purchased	543
Meals	136
Paper	14
Hotel nights during business trips	35
Meals during business trips	6.5
Gifts	2.5
Purchased water	<1
TOTAL	2 792

Source: 21 Solutions.

Focus on purchased services

78 These services ranged from equipment rentals to training (e.g. language classes) and document destruction.

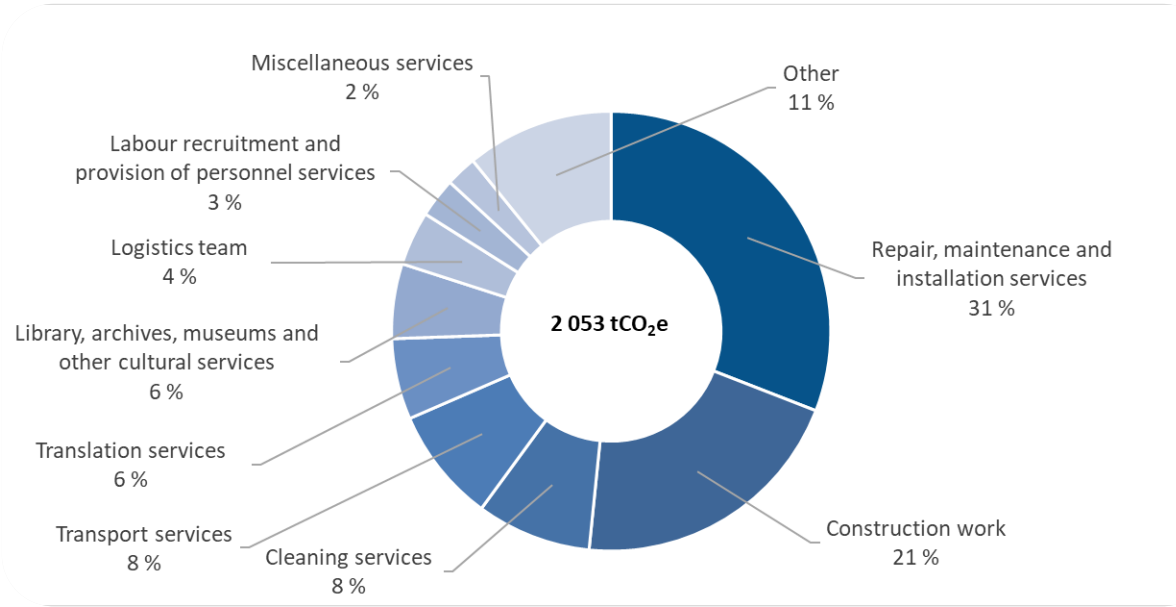
79 The "Other" category includes: real estate services; testing, inspection, analysis, monitoring and control services; news-agency services; insurance and pension services; health and social work services; and legal, accounting, auditing, business and management services.

Table 7 | 2024 GHG emissions from services purchased

Type of service	tCO_2e
Repair, maintenance and installation services	621
Construction work	417
Cleaning services	170
Transport services	170
Translation services	120
Library, archives, museums and other cultural services.	111
Logistics team	80
Labour recruitment and provision of personnel services	59
Miscellaneous services.	46
Travel agencies	43
Other	218
TOTAL	2053

Source: 21 Solutions.

Figure 11 | 2024 GHG emissions from services purchased

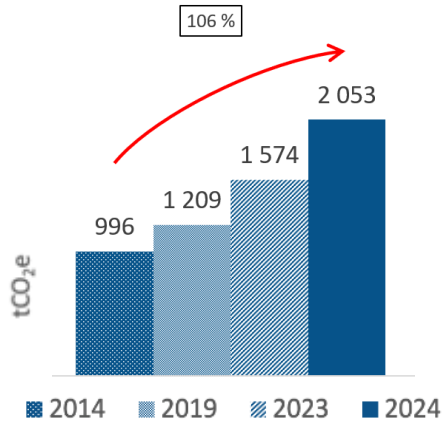


Source: 21 Solutions.

80 Repair, maintenance and installation services are the largest source of emissions from services purchased. The figure is higher than last year because the calculation method is based on extrapolating emissions from financial costs, which have also been affected by inflation and the outsourcing of additional services. This item is followed by construction work, which has increased significantly, given that technical equipment renovation projects have begun.

81 The collection of 2024 data has been more accurate, and part of the "Miscellaneous" section has been further defined.

Figure 12 | Services purchased – Comparison with previous years



Source: 21 Solutions.

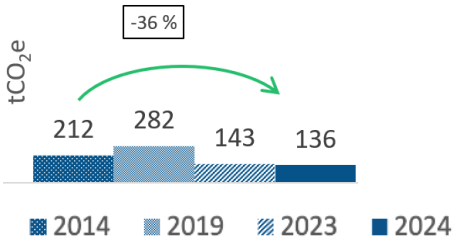
Focus on catering

82 Meals accounted for 136 tCO_2e in 2024. Despite the new supplier's contractual obligation, the data collected is not enough to allow for a detailed analysis of this item.

83 However, it should be noted that the proportion of vegetarian meals rose to 23.5 % in 2024, representing more than one meal per week per person.

84 The potential to reduce emissions by switching to low-emission meat, or even vegetarian/vegan meat, remains significant.

Figure 13 | Emissions from meals – Comparison with previous years



Source: 21 Solutions.

85 The reduction in emissions can be explained not only by changes in habits, but also by the reduction of meals prepared at the ECA. With 65 038 meals served in 2024, this represents a 5 % decrease in meals eaten on-site compared to 2023, well below the pre-COVID level of over 100 199 meals in 2019. This is due to staff eating at home when teleworking, but also to the rise of new catering facilities near the ECA in the last few years (the new Infinity shopping centre in particular, but also food trucks that stop near the ECA each day).

Passenger transport

86 This item includes:

- staff commuting (the ECA's employees, Members and all people working on-site on a regular basis) and use of official cars for non-business travel;
- business travel (including "Use of official cars");
- 50 % of the emissions from visitors' travel between their places of origin and the ECA, instead of 100 % as previously allocated. In 2024, a survey showed that 90 % of visitors who request a visit also plan to visit other sites.

87 Emissions from passenger transport amounted to 2 660 tCO_2e in 2024.

88 Passenger transport was the largest source of emissions in 2014, 2019 and 2023. This year, it is the second one. The main difference in 2024 is linked to the new assumption allocating 50 % of visitor emissions to visits to the ECA, instead of 100 %.

Table 8 | 2024 passenger transport – Emissions by type of travel

Type of travel	tCO_2e
Business travel	773
Staff commuting	1 340
Visitor travel	547
TOTAL	2 660

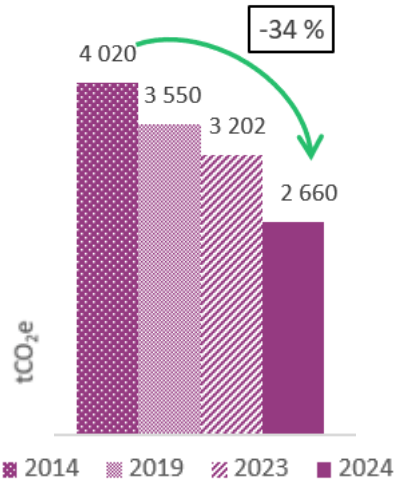
Source: 21 Solutions.

Table 9 | 2024 passenger transport – Comparison with previous years

tCO_2e	2014	2019	2023	2024	Change 2014-2024	Change 2019-2024	Change 2023-2024
Total transport	4 020	3 550	3 202	2 660	-34 %	-25 %	-17 %

Source: 21 Solutions.

Figure 14 | Passenger transport – Comparison with previous years by type of travel

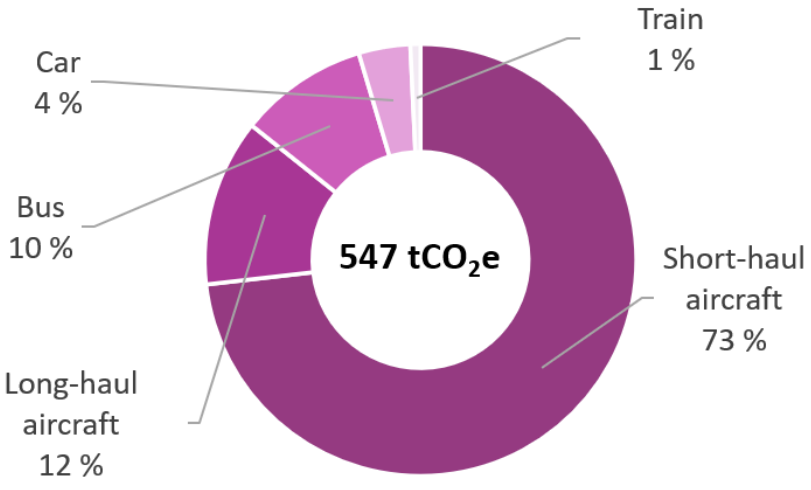


Source: 21 Solutions.

Passenger transport – Visitor travel

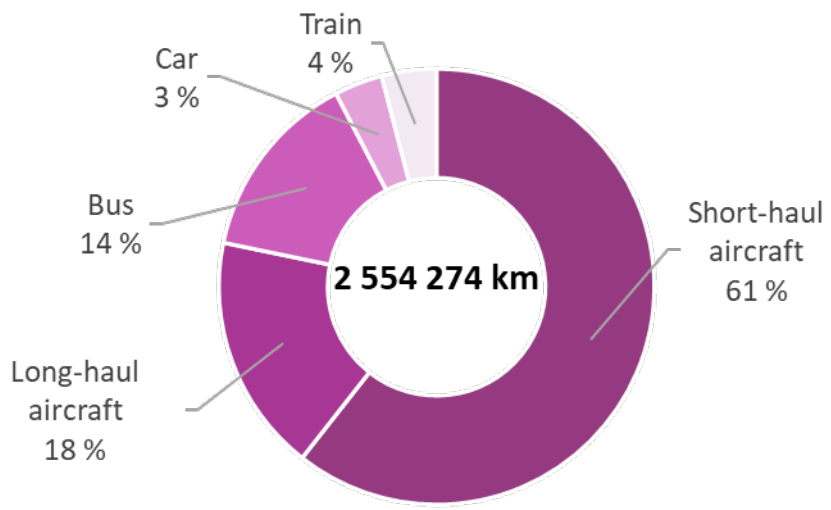
89 In 2024, the ECA received 175 visits from a total of 2 965 visitors, corresponding to 547 tCO_2e in total.

Figure 15 | Passenger transport – Sources of 2024 GHG emissions from visitor transport



Source: 21 Solutions.

Figure 16 | Passenger transport – Distance (km) travelled by visitors in 2024



Source: 21 Solutions.

90 Official visitors to the ECA in Luxembourg are responsible for 547 tCO_2e, with short-haul and long-haul flights accounting for 85 % of the total emissions, which equals to 79 % of the distance (km) travelled according to assumptions made.

91 Emissions related to visitor travel fell by 74 % between 2023 and 2024, mainly due to the new calculation assumption, which now only accounts for half of the emissions from such travel. This year there is once more a lack of information regarding the origin of about half of the visitors – in the absence of more precise information, an average distance (1 425 km) was assigned to all flights referred to as "EU origin".

92 If the calculation had been made based on the same assumptions as in previous years, there would have been a 21 % increase in emissions related to visitor travel between 2014 and 2021, rather than a 40 % decrease.

93 Further improvements could be achieved by being more precise when specifying the origin of European visitors. As explained above, the calculation of emissions used an average of 1 425 km for all flights considered to have departed from within the EU, which does not give a sufficiently accurate picture of the distance travelled.

Passenger transport – Staff commuting

94 The distance travelled increased by 27 % between 2019 and 2024. The average outward journey per respondent was 25.2 km in 2024, compared to only 17.9 km in 2019, which is a significant increase of 40 %. Rents in Luxembourg City have increased considerably. As a result, new employees live further away from the ECA. The further away from Luxembourg City, the fewer opportunities to use active modes of transport, and it also becomes more

difficult to benefit from the well-connected and efficient public transport network in the city centre.

Table 10 | Passenger transport – 2024 extrapolated emissions from staff commuting

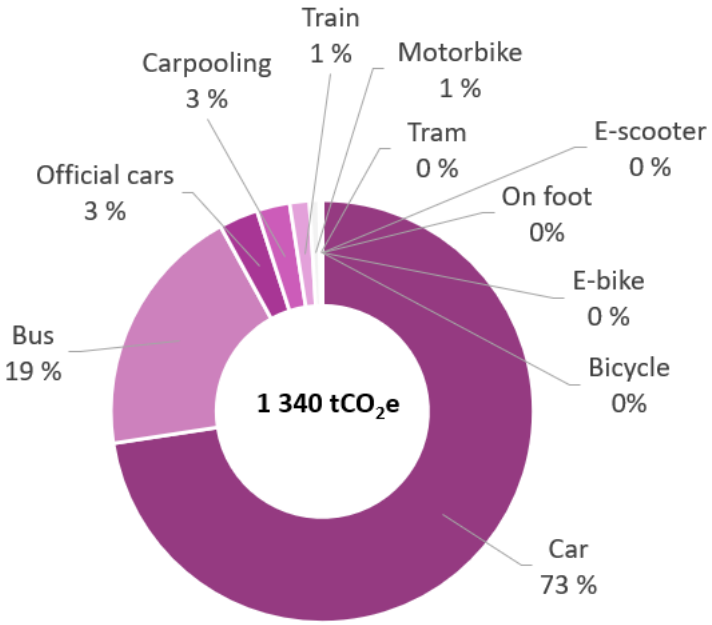
Staff commuting	tCO_2e	km
Car	972	4 824 636*
Bus	260	1 284 949
Official cars	41	199 594
Carpooling	34	146 422
Train	20	507 192
Motorbike	10	52 138
Tram	3	548 289
E-bike	0	24 530
E-scooter	0	0
Bicycle	0	203 042
On foot	0	183 772
TOTAL	1 340	7 974 564

* Electric cars: 555 748 (12 %).

Source: 21 Solutions and European Court of Auditors.

95 According to the 2025 staff commuting survey (see Annex III – Extracts from the results of the 2025 mobility survey), private cars are the preferred mode of transport for commuting. Most respondents (75 %) use their car for all or part of their commute, with 65 % of the total distance travelled by car. It also happens to be the mode of transport that generates the highest emissions. Cars accounted for 73 % of GHG emissions from staff commuting in 2024.

Figure 17 | Passenger transport – 2024 GHG emissions from commuting



Source: 21 Solutions.

96 The share of public transport has increased since last year, most likely due to the extension of the tram line in July 2024. This was at the expense of cycling and walking.

97 Almost half of respondents (47 %) use at least two modes of transport, with an average of 1.7 modes of transport per respondent. Soft mobility accounts for 56 % of the declared modes of transport, compared to 40 % in 2024. This is the highest level since 2019.

98 Private motor vehicles were still the most common means of commuting in 2024, accounting for 62.7 % of the commute distance travelled (petrol/diesel cars accounted for 61 % of the distance). The use of private cars has decreased, unlike the number of kilometres travelled, as staff members who have the option of using other means of transport generally live closer to the ECA.

99 The abundance of parking space at the ECA is undoubtedly one of the reasons why staff choose to commute by car. The availability of parking spaces encourages the use of individual cars, which are the means of transport with the highest emission factor per kilometre travelled.

100 In 2025, carpooling reached its highest level (2 %) since the end of the pandemic.

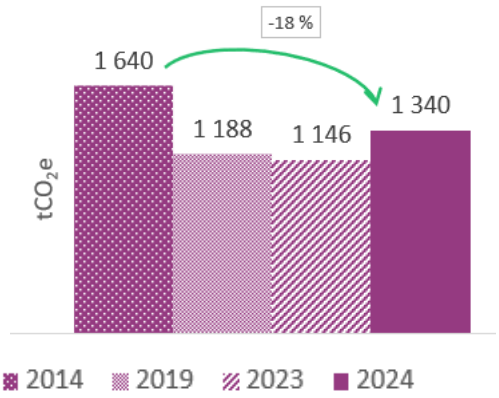
101 Sustainable commuting has not yet reached its full potential among staff, despite teleworking and strong incentives from the Luxembourg government and the ECA (free

public transport in Luxembourg, free yearly bike subscription, and subsidised season tickets for cross-border public transport).

102 The large number of staff members residing in Luxembourg City and its suburbs suggests there is great potential for cycling, especially given the improvements to the ECA's bicycle parking infrastructure in 2023. Subsidising subscriptions to the *vel'OH!* shared bike service remains a very effective way to encourage active mobility.

103 Fully electric vehicles accounted for 492 788 km – 12 % of the total distance travelled by car and 7 % of survey respondents' commutes. The electrification of vehicles is accelerating in 2025 (see Annex III – Extracts from the results of the 2025 mobility survey). It should be noted that the calculation does not take into account the higher impact over their lifecycle, as they are privately owned vehicles. Although the impact of their use is lower than that of petrol/diesel cars, fully electric vehicles alone cannot be considered a decarbonisation solution.

Figure 18 | Passenger transport – Commuting – Comparison with previous years



Source: 21 Solutions.

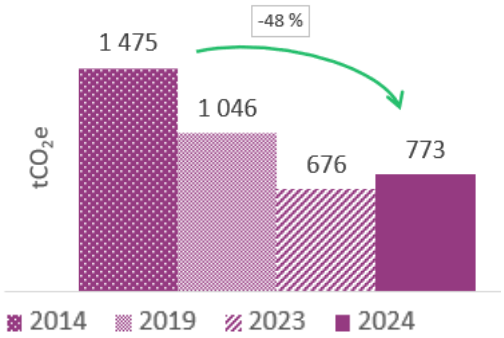
104 Thanks to teleworking and the increased use of soft mobility, as well as the electrification of the fleet, emissions linked to commuting have been reduced by 18 % between 2019 and 2024.

105 Emissions from commuting have fallen at a much slower rate than those linked to business travel, which means that they are now the first source of emissions for passenger transport. Between 2023 and 2024, emissions increased by 17 %, and the distance travelled for commuting increased by 27 %, which is substantial. A future challenge will therefore be to change staff's commuting habits.

Passenger transport – Business travel

106 GHG emissions from business travel amounted to 773 tCO_2e in 2024. Air travel is still the main source of emissions.

Figure 19 | Passenger transport – Business travel – Comparison with previous years



Source: 21 Solutions.

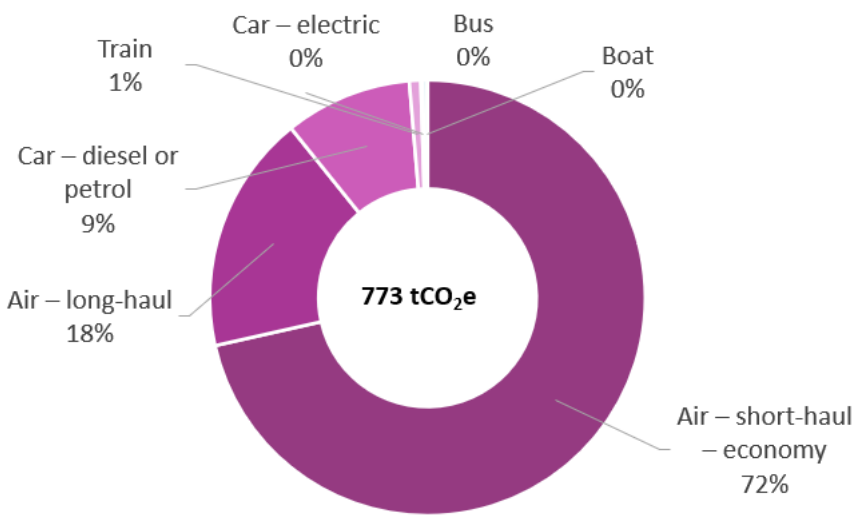
107 As shown in Figure 22, emissions have fallen sharply since 2019, although there was a 14 % increase between 2023 and 2024, linked to a return to normal activity, the very nature of which involves travel. The increase remains under control. The rules set out in the ECA's travel policy to limit the carbon footprint of travel are being properly applied.

Table 11 | Passenger transport – 2024 GHG emissions from business travel

Business travel	tCO_2e	km
Air – short-haul – economy	552	2 136 491
Air – long-haul	137	902 157
Car – diesel or petrol	73	136 723
Train	7	164 138
Bus	3	18 573
Car – electric	1	5 990
Boat	0	0
TOTAL	**773**	**3 364 072**

Source: 21 Solutions and European Court of Auditors

Figure 20 | Passenger transport – 2024 GHG emissions from business travel



Source: 21 Solutions.

Table 12 | Passenger transport – Number of flights per distance

Distance	Number of flights	Percentage
Flights < 500 km	37	11 %
Flights > 501 km and < 1 000 km	150	44 %
Flights > 1 001 km	151	45 %
TOTAL	338	100 %

Source: European Court of Auditors.

108 The distance travelled for business has increased by 13 %, and air travel now represents 90 % of the distance travelled and 89 % of total emissions.

109 Many measures have been implemented over the years to reduce the impact of business travel. The extensive use of videoconferencing and collaborative tools since 2020 also means that some meetings now systematically take place remotely. Holding press conferences online rather than face-to-face has also helped to reduce the number of trips, with a positive impact on emissions.

110 The "*navette*" shuttle bus was launched in 2017 and extended in 2019. The ECA operates three shuttle buses, one of which has a hybrid engine. The next purchase will take place in 2026, providing an opportunity to include criteria that contribute to reducing emissions, which is particularly important given the long distances travelled.

111 Luxembourg is poorly served by rail, and the partial unavailability of the rail network due to more engineering works this year means that the potential for a modal shift is currently negligible.

Capital goods

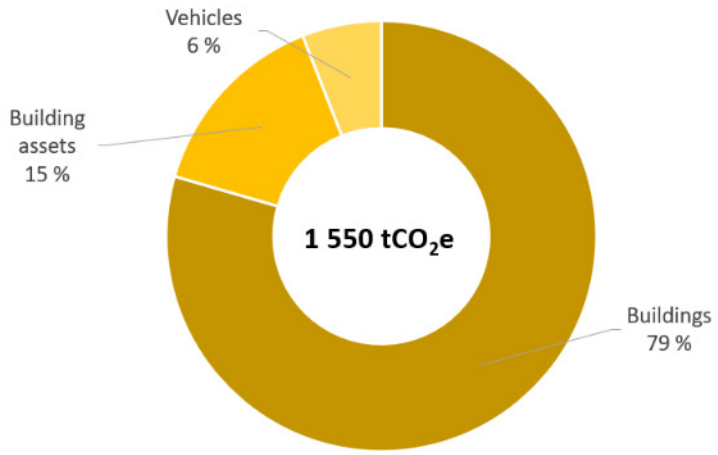
112 This category covers GHG emissions generated during the manufacture or construction of consumer durables. Under the Bilan Carbone® method, GHG emissions are depreciated over a certain amount of time. They are divided over this period using a system comparable to the financial concept of amortisation, so that different years' carbon footprint results can be compared.

Table 13 | 2024 GHG emissions from capital goods

Type of capital goods	tCO_2e
Buildings	1 232
Buildings assets	226
Vehicles	92
TOTAL	**1 550**

Source: 21 Solutions.

Figure 21 | 2024 GHG emissions from capital goods

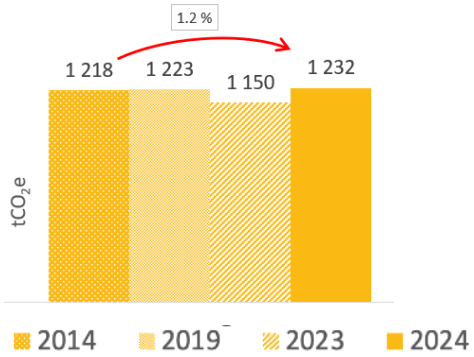


Source: 21 Solutions.

113 Capital goods were responsible for the emission of 1 550 tCO_2e in 2024. Of these emissions, 79 % come from the ECA's three buildings.

114 Emissions from capital goods have fallen every year since 2014, with an overall decrease of 17 % from 2014 to 2024. Barring the acquisition of a new forklift truck, the various items decreased in 2024.

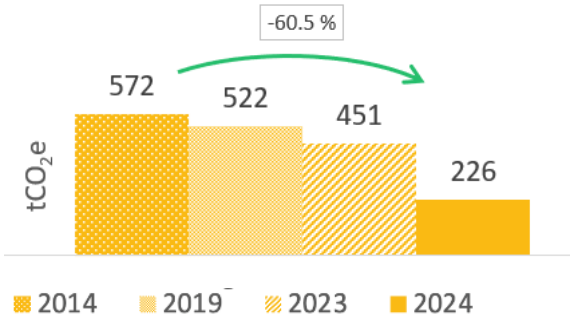
Figure 22 | GHG emissions from buildings – Comparison with previous years



Source: 21 Solutions.

115 The slight increase is due to building development, since there are renovated office spaces to take into account as K2 renovation works are now completed.

Figure 23 | Buildings assets – Comparison with previous years



Source: 21 Solutions.

116 Emissions decreased by 50 % between 2023 and 2024, after a notable increase in 2023 due to renovation works in the K2 building and to the purchase of equipment and supplies for all buildings. Emissions have therefore returned to a stable level. The overall decrease since 2014 has been 60.5 %.

Digital

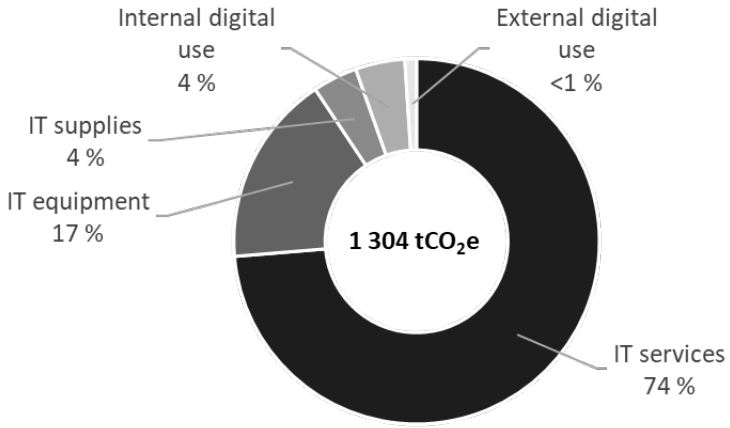
117 Emissions from digital use amounted to 1 304 tCO_2e in 2024, 14 % of the ECA's total carbon footprint.

Table 14 | 2024 GHG emissions related to digital

IT services	tCO_2e
IT services	961
IT equipment	221
IT supplies	52
External digital use	13
Internal digital use	57
TOTAL	1 304

Source : 21 Solutions.

Figure 24 | 2024 digital GHG emissions



Source: 21 Solutions.

Table 15 | Digital – Comparison with previous years

tCO_2e	2014	2019	2023	2024	Change 2014-2024	Change 2019-2024	Change 2023-2024
Total digital	1 245	478	1 327	1 304	+5 %	+172 %	-2 %

Source: 21 Solutions.

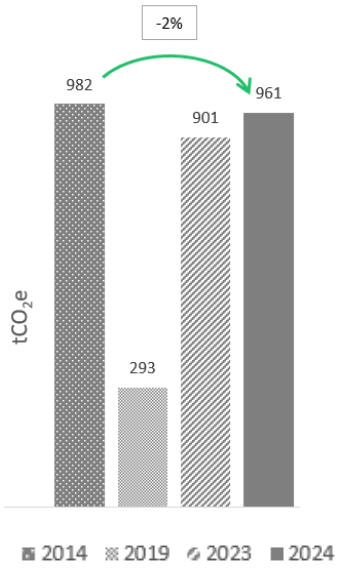
Digital – IT services

118 IT services are the largest item in the category, accounting for 74 % of digital emissions.

119 Emissions from IT services are calculated on the basis of expenditure on these services. In 2024, the cost of licences increased substantially, even though the number of licences

remained stable. As the emission factor did not change, this GHG emission has increased despite the context remaining fairly similar.

Figure 25 | IT services – Comparison with previous years

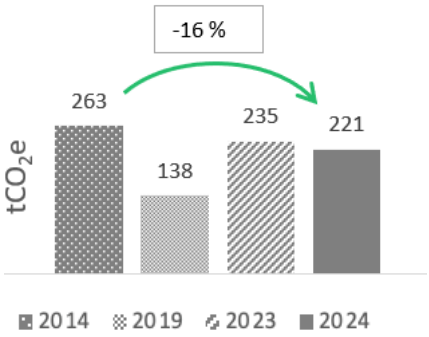


Source: 21 Solutions.

Digital – IT equipment

120 IT equipment includes computer equipment, computer services, software subscriptions and laptops. Telecommunication services and equipment accounted for less than 5 % of emissions from IT equipment in 2024.

Figure 26 | IT equipment – Comparison with previous years



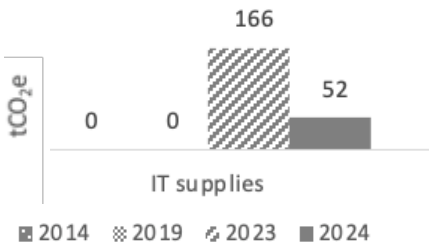
Source: 21 Solutions.

121 The total figure decreased between 2023 and 2024. This was because, on the one hand, the number of members of staff slightly fell between these two years (from 982 to 975 FTE) and, on the other hand, a lot of IT equipment does not need to be amortised or replaced.

IT supplies

122 IT supplies includes radio, television, telecommunications, printer and computer supplies. Emissions related to IT supplies significantly decreased in 2024. In fact, these emissions had particularly risen in 2023, due to budgetary availability (encouraging investments) and the need to replace end-of-life servers. Therefore, the drop in emissions related to IT supplies in 2024 can be explained by fewer purchases in this area.

Figure 27 | IT supplies – Comparison with previous years



Source: 21 Solutions.

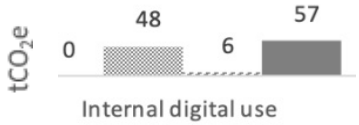
123 This item was not specifically calculated in 2014 or 2019.

Digital – Internal digital use

124 This item has been calculated since 2020, with a retroactive estimate for 2019 to take account of the impact of digital audits.

125 Internal digital use refers to emissions from the data centres in K3 and Betzdorf (electricity consumed by server hardware and cooling systems). The Betzdorf data centres' electricity consumption is counted separately from that of the buildings, to avoid double counting.

Figure 28 | Internal digital use – Comparison with previous years



Source: 21 Solutions.

126 Emissions started to rise again between 2023 and 2024, as Luxembourg's electricity mix emission factor has been corrected. It should be noted that this item was not taken into account in 2014.

Digital – External digital use

127 External digital use refers to emissions linked to customers' visits to the ECA's website (including viewing of reports and online videos), Facebook, LinkedIn and X (formerly

Twitter) pages, and email communication with the ECA. It was first included in the calculation in 2020.

Figure 29 | External digital use – Comparison with previous years

Source: 21 Solutions.

128 This item accounts for less than 1 % of total digital emissions. Visibility is limited to a target audience.

Energy (in-house)

129 This item includes all energy consumed in the ECA's buildings and for ECA activities. Energy consumption was counted separately for each building.

130 It covers:

- the consumption of heat provided by Kirchberg's heating plant, which is the district heating network for the three buildings;
- electricity purchased from the ECA's supplier[8];
- fuel for the emergency power generator.

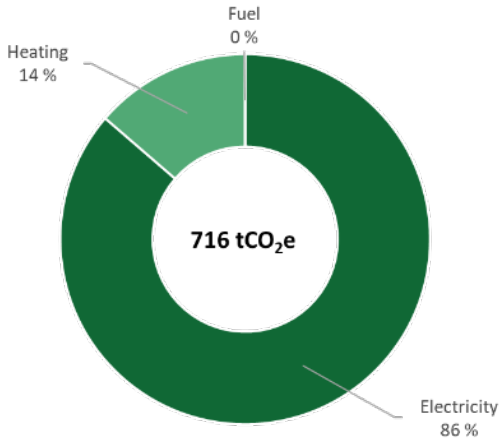
Table 16 | 2024 GHG emissions from energy

Type of energy source	tCO_2e
Heating	104
Electricity	612
Fuel	0
TOTAL	716

Source: 21 Solutions.

[8] The charging of the ECA's and staff's electric vehicles is excluded to avoid double counting,.

Figure 30 | 2024 GHG emissions from energy



Source: 21 Solutions.

131 Electricity represents the largest emission source (86 %), followed by heating (14 %). In 2024, the generator was not refuelled.

Table 17 | Energy – Comparison with previous years

tCO_2e	2014	2019	2023	2024	Change 2014-2024	Change 2019-2024	Change 2023-2024
Total energy	1 840	1 789	323	716	-61 %	-60 %	+122 %

Source: 21 Solutions.

132 There is a significant emission increase between 2023 and 2024 (+122 %). The main cause is the update of the emission factor used.

133 The works in the K1 building will help to improve energy efficiency (lifts, ventilation, heating exchangers).

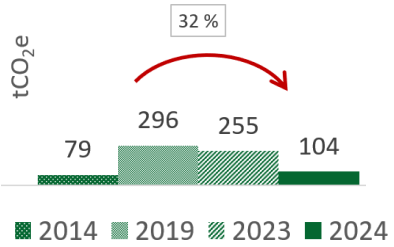
Heating

134 The ECA is connected to the Kirchberg heating plant, which was initially gas-powered but switched to biomass in 2015[9]. Heating-related emissions decreased by 59 % between 2023 and 2024. This is partly due to the district heating network's change to a lower-emission energy mix comprising a greater proportion of green biomass pellets instead of gas (see paragraph 57 and Annex II – Heating energy mix certificate). More precisely, 87.5 % of heating is currently biomass-based.

[9] It should be noted that the pellets are produced locally, meaning they represent a particularly efficient option in climate terms.

135 Between 2014 and 2018, the emissions calculated for heating were low because the method underestimated the carbon impact of using the district heating network. In 2019, the method changed, and the emission factor is now precisely calculated on the basis of the district heating network's energy mix.

Figure 31 | Heating – Comparison with previous years



Source: 21 Solutions.

Electricity

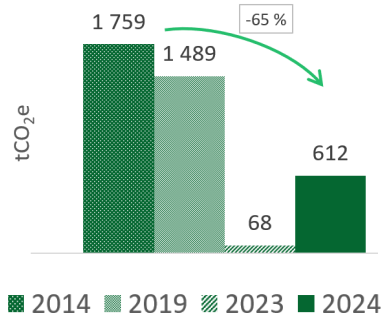
136 The calculation of emissions from electricity is based on a location-based emission factor and does not take into account the purchase of green electricity.

Extrapolation: estimation of emissions avoided by guarantees of origin

137 The electricity consumption of the ECA's three buildings is covered by a green electricity certificate, with improved traceability in 2024. The certificate (see Annex I – Green electricity certificate) for the green electricity consumed in the three buildings shows that the electricity was generated via geothermal energy in Iceland, amounting to 3 260 MWh.

138 The closest emission factor in Bilan Carbone® (version 9.0) for these activities is "Geothermal" from renewable electricity production, with an emission factor of 0.045 $kgCO_2e/kWh$. If we apply these emission factors to the ECA's entire electricity consumption, emissions come to 104 tCO_2e. The emissions calculated using the green certificates are 78 % lower than the emissions calculated using the location-based emission factor.

Figure 32 | Electricity – Comparison with previous years



Source: 21 Solutions.

139 The change in the emission factor leads to an 800 % increase in emissions linked to electricity consumption compared to 2023. Emissions from electricity have fallen by 65 % since 2014.

140 The electricity consumption has dropped by 36 % since 2014. The reduction is due to the success of the plan for reducing the ECA's energy consumption – in particular by renovating K2, modernising the lighting in the car park and choosing energy-efficient appliances. Despite this overall trend, electricity consumption (kWh consumed) did rise by 5 % in 2024 compared to 2023.

Fuel oil

141 There was no fuel oil consumption in 2024. Fuel is taken into consideration only when one of the emergency power generator's tanks needs to be refilled. There was a major power cut in December 2024, which required the use of the generator, but it was only refilled in January 2025. Emissions linked to fuel oil are therefore calculated on the basis of invoices rather than actual consumption.

Teleworking

142 The ECA's teleworking rate and resulting emissions were calculated using the number of staff on-site days based on information declared by staff.

Table 18 | 2024 teleworking GHG emissions

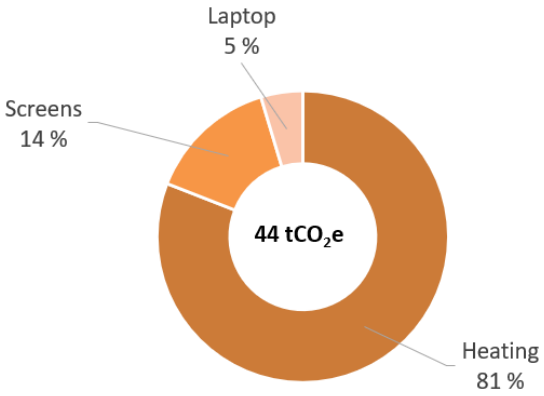
GHG emissions (tCO_2e)	2022	2023	2024
Heating	64	59	36
Screens	3	0.3	6.35
Laptop	2	0.2	2.04
TOTAL	69	60	44

Source: 21 Solutions.

143 Teleworking accounts for less than 1 % of the ECA's emissions, with 44 tCO_2e.

144 Teleworking has decreased slightly (64.2 days teleworked on average, or 27 % of working time).

Figure 33 | 2024 teleworking GHG emissions by source



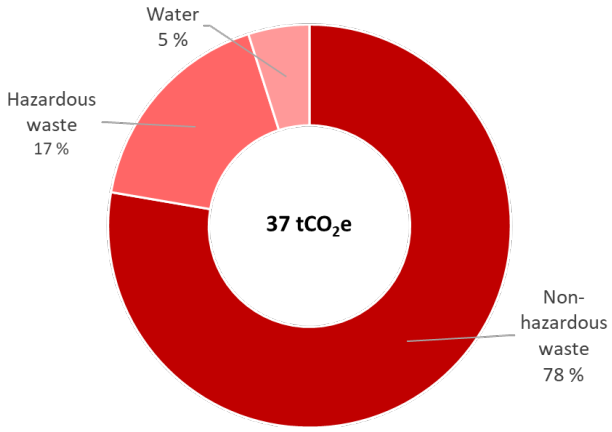
Source: 21 Solutions.

145 The most significant source of emissions from teleworking is heating (81 %).

Waste

146 Waste accounts for less than 1 % of total GHG emissions.

Figure 34 | 2024 GHG emissions from waste



Source: 21 Solutions.

147 Non-hazardous waste accounts for 78 % of waste emissions, followed by hazardous waste (17 %) and water (5 %). In 2024, 85 tonnes of waste out of 137 tonnes were recycled.

Table 19 | Waste – Results and comparisons with previous years

GHG emissions (tCO_2e)	2014	2019	2023	2024	Change 2014-2024	Change 2019-2024	Change 2023-2024
Total waste	34	25	87	37	+10 %	+51 %	-57 %

Source: 21 Solutions.

Table 20 | Waste volumes over time

Year	Non-hazardous waste	Hazardous waste
2014	133.75 tonnes	18.46 tonnes
2019	115.18 tonnes	63.83 tonnes
2023	127.60 tonnes	61.03 tonnes
2024	115 tonnes	64 tonnes

Source: European Court of Auditors.

148 Since 2020, data reported on waste has included waste from service providers.

149 The accuracy of data on end-of-life waste has been improved since 2021, but there are shortcomings for 2024.

150 The amount of waste significantly decreased between 2023 and 2024. This reduction is due to several factors. Firstly, the data reported was less precise than in 2023. Additionally, there were several projects to sort through inventory and construction sites in 2023, which did contribute to increasing the figures for 2024.

Non-energy in-house: refrigerant gases

151 Cooling equipment was refilled with refrigerant gases in 2024 (R452A).

Table 21 | Refrigerant gases – Results and comparison with previous years

GHG emissions (tCO_2e)	2014	2019	2023	2024	Change 2014-2024	Change 2019-2024	Change 2023-2024
R134A	64	46	38	0	-100 %	-100 %	-100 %
R404A	0	1	2	0	/	-100 %	-100 %
R407C	18	0	0	0	-100 %	/	/
R452A	0	0	0	5	/	/	/
R410A	0	0	2	0	/	/	-100 %
R1234ze	/	/	0.01	0	/	/	-100 %

Source: 21 Solutions.

152 Refrigerant gases have a huge impact:

- R134a: 1 tonne = 1 300 tCO_2e

- R404c: 1 tonne = 1 620 tCO_2e
- R407a: 1 tonne = 3 940 tCO_2e
- R452a: 1 tonne = 2 140 tCO_2e
- R410a: 1 tonne = 1 920 tCO_2e
- R1234ze[10]: 1 tonne = 1.37 tCO_2e

153 Refills were treated as leaks.

154 The data is probably incomplete for 2024, as only one machine was reported to have experienced leaks.

Transport of goods

Table 22 | 2024 GHG emissions from transport of goods

Transport of goods	Tonnes/km	tCO_2e
TOTAL	769	0.123

Source: 21 Solutions.

155 This category accounts for less than 1 % of the ECA's total carbon footprint, with a 27 % decrease in total tonnes per kilometre in 2024 compared to 2023.

[10] This refrigerant gas is mainly used to cool water. It could be an alternative to R134a in some equipment.

05 Conclusion

156 Analysis of the ECA's 2024 carbon footprint shows that emissions reached a total of 9 108 tCO_2e, which means that they are slightly increasing (+2 % compared to 2023). The number of members of staff since 2014 has also increased, so it is remarkable that our emissions have stayed limited and our overall carbon footprint is 15 % lower than in 2014. Slowly but surely, the efforts of the EMAS team and all ECA staff are bearing fruit, driving progress towards positive environmental outcomes.

157 The evolution of the ECA's emissions is the result of its action plan. The main drivers of change in 2024 in this regard were:

- the new assumption for visitor emissions;
- the new source for the emission factor for electricity;
- reducing consumption, particularly through energy-efficient renovations and changing habits;
- having planned renovation works and building improvements so that they would have an impact on emissions.

158 To maintain the same pace and try to reach the targets set in the European Green Deal, the priorities for the coming years are the following:

- **Commuting**: a mobility plan will be developed, based on the 2024 mobility survey, with the aim of reducing the modal share of individual cars for commuting. Attention must be paid to both emissions and distance travelled.
- **Visitor travel**: visitor data will be refined to take into account the country of origin and specify the exact distance, in order to strengthen the credibility of the calculations.

- **Meals**: data should also be more precise in the future, as its collection is part of the new catering contract. The potential to reduce emissions by switching to low-emission meat, or even vegetarian/vegan meat, remains significant.

159 The team has developed valuable skills and methods leading to positive results. To continue to reduce the remaining emissions, the upcoming EMAS programme for 2026-2028 should include awareness-raising initiatives to promote change in individual behaviour, such as which mode of transport we use for commuting or what meals we choose.

Annexes

Annex I – Green electricity certificate

Cancellation Statement

This document certifies that the specified Guarantees of Origin have been cancelled for the benefit of the specified receiver and for the period and purpose specified herein. The environmental qualities of the associated energy have been consumed and this Cancellation Statement and these certificates may not be transferred to any party other than the energy supplier or end-consumer specified below. Onward sale of this Cancellation Statement is prohibited. Cancelled Guarantees of Origin cannot be transferred to other account holders.

ILR
INSTITUT LUXEMBOURGEOIS DE RÉGULATION

EECS EUROPEAN ENERGY CERTIFICATE SYSTEM

Transaction details

Transaction type **Cancellation**	Status **Completed**
Transaction number **20250306000000056**	Volume **3260 MWh**
Transaction start time **06/03/2025, 9.06**	Transaction completion time **07/03/2025, 14.31**
Transaction requested **06/03/2025, 9.06**	
Public Statement **No**	Standard **EECS electricity**

From account

Organization name **LEO (Luxembourg Energy Office) S.A.**	Organization ID **36XZ65DW0Q**
Business ID **LU19597485**	
Domain **Luxembourg**	Domain code **LU**
Account number **643002406600042438**	
Street **9, bvd Roosevelt**	ZIP code **2450**
City **Luxembourg**	Country **Luxembourg**

Beneficiary

Name of Beneficiary **Cour des comptes européenne (CdC)**	Country of consumption **Luxembourg**
Location of beneficiary **Luxembourg**	Consumption period **01/01/2024 - 31/12/2024**
Usage type **Disclosure**	Cancellation purpose **Tender, 100% Biomass, 2024, Commission Européenne**
Type of beneficiary **End consumer**	

Certificate Number (From-To)	Volume	Unit	Production period	Issuing date	Issuing country	Issuing body	Trading schemes	Earmark	Plant name and GSRN	Operational date	Energy source code and name	Technology code and name
5699000136939037100000336333993 - 5699000136939037100000336366652	3260	MWh	01/03/2024 - 31/03/2024	08/04/2024	IS	Landsnet	EECS_ELECTRICITY_GO	No support	Heillisheiðarvirkjun G1G2 - 643002406656020251	01/10/2006	F01040200 - Renewable/Heat/Geothermal	T050302 - Thermal/Steam turbine with condensation turbine (closed cycle)/CHP

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Annex II – Heating energy mix certificate

LUX ENERGIE

ATTESTATION

Nous certifions, en tant qu'exploitant de la centrale énergétique située au 23, Avenue John F. Kennedy L-1855 Luxembourg que le réseau de la centrale d'énergie « Kirchberg » a été alimenté en 2024 à hauteur de 61,8% d'énergies renouvelables issues de la cogénération biomasse, de 25,7% d'énergies provenant des chaudières à poussière de bois et de 12,5 % de la combustion d'énergies fossiles.

Fait à Luxembourg, le 23 janvier 2025

Frank CHALVE
Chef de service

Paul WEIS
Administrateur délégué

Annex III – Extracts from the results of the 2025 mobility survey

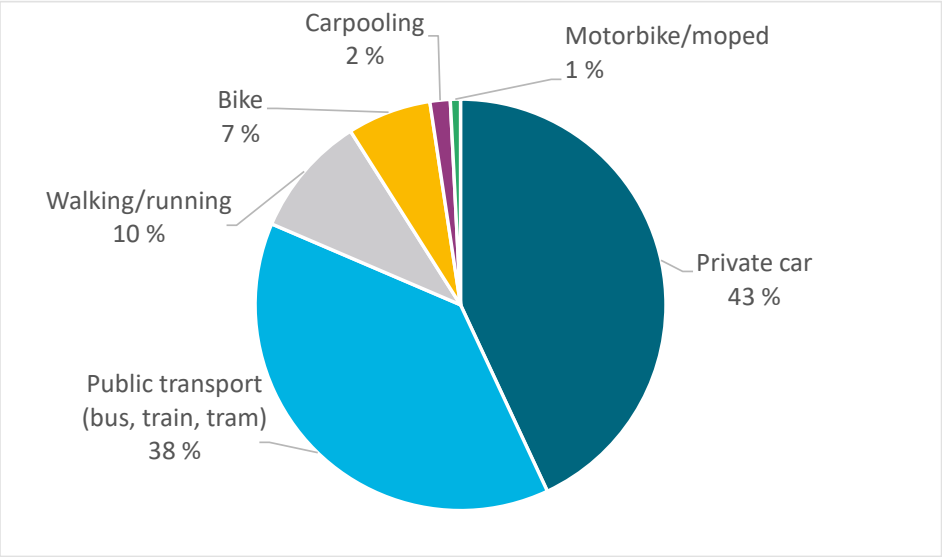
160 At the end of 2023, the ECA signed an agreement with the Luxembourg Ministry of Mobility and Public Works to draw up a mobility plan and promote soft mobility. The plan could not be drawn up in 2024. It will be drafted in 2025 on the basis of the replies to the 2025 mobility survey carried out online at the ECA between 25 February and 7 March 2025.

161 Out of the 998 people contacted, 505 replied, which is a response rate of 51 %.

162 Over the years, commuting has become more diverse and complex, and both the type and number of means of transport used have evolved (see ***Figure 35***):

- 47 % of respondents use at least two modes of transport;
- private cars remain the most used mode of transport – 75 % of respondents use their car for all or part of their journey;
- the share of public transport has increased since last year, at the expense of cycling and walking;
- soft mobility accounts for 56 % of the declared modes of transport, compared to 40 % in 2024. This is the highest level since EMAS was launched.

Figure 35 | Modes of transport used for commuting

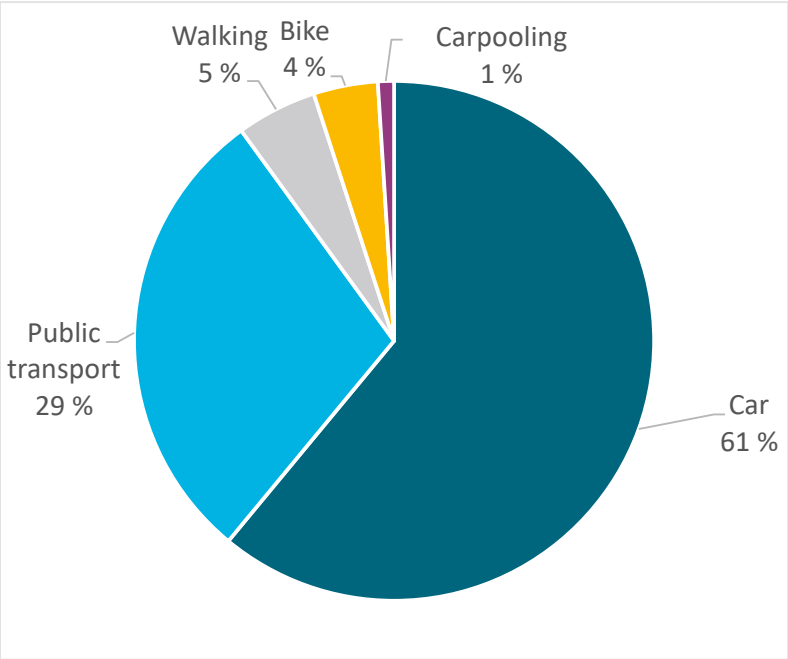


Main mode of transport

163 As regards the main mode of transport, 61 % of respondents (see Figure 35 | Modes of transport used for commuting) still use their own car, with 43 % using it exclusively. These

proportions are very similar to those in the previous survey, and remain below the statistics for Luxembourg, where 67 % of workers use their car as the main mode of transport (as a driver) to get to work.

Figure 36 | Main mode of transport for commuting



Distances travelled

164 In terms of distance travelled (see Figure 37 | Share of kilometres per mode of transport), the total number of kilometres increased by 27 % between 2024 and 2025. The average outward journey per respondent was 25.2 km, compared to only 17.9 km in 2019.

165 By contrast, the percentage of kilometres travelled using private vehicles[1] fell to 63 % (compared to 69.5 % in 2024). The distance travelled by electric car, although on the rise again, accounts for only 7 % of the total kilometres travelled.

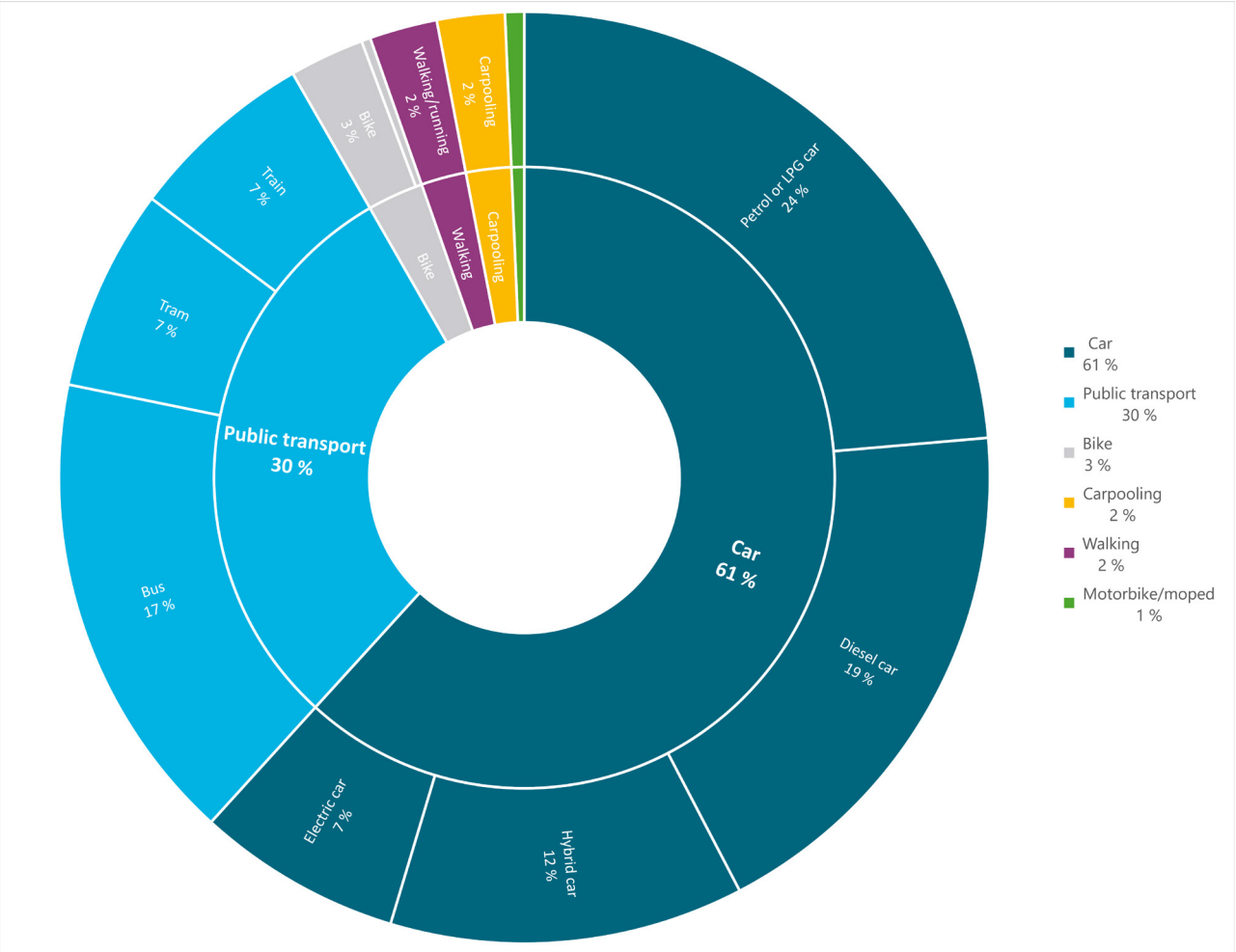
166 The distance travelled by public transport increased from 21 % in 2024 to 30 % in 2025. The tram has seen the biggest increase in distance travelled when compared to 2024: it now accounts for 7 % of the distance travelled, most likely due to the extension of the line in July 2024.

167 In 2025, carpooling reached its highest level (2 %) since the end of the pandemic.

[1] The term “private vehicle” refers to combustion, hybrid and electric cars, as well as combustion motorbikes and mopeds.

168 Similarly, the share of soft mobility is at its highest level since this type of survey was first conducted, accounting for 37 % of the distance travelled.

Figure 37 | Share of kilometres per mode of transport



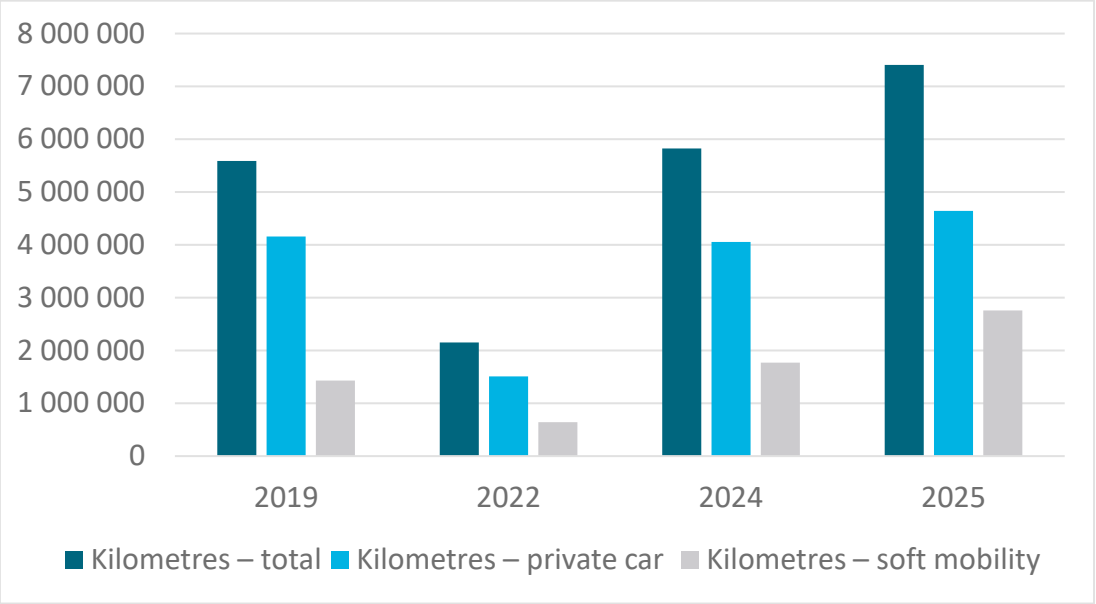
Conclusion

169 The ECA has been making every effort to encourage its staff to use public transport and soft mobility for many years now, in particular since the introduction of EMAS in 2014. Over time, habits have started to change: the share of soft mobility and public transport is now at its highest-ever level (see ***Figure 38***).

170 The use of private cars has fallen proportionally, but not the distance travelled, as staff who have the option to use a different mode of transport usually live closer to the ECA.

171 As 48 % of ECA staff live in Luxembourg City, subsidising subscriptions to the *vel'OH!* shared bike service remains a very effective way to encourage active mobility.

Figure 38 | Changes in distance travelled over the years (private car v soft mobility)



172 The fact that many members of staff live close to each other also shows there is great potential for carpooling. A tailor-made version of the Luxembourg Ministry of Mobility's internet platform will soon become available and will certainly be a step in the right direction, as it will enable staff to team up and commute together.

173 The start of the construction work on the second tramline on Boulevard Adenauer in April 2025 and, in the medium term, the completion of the Commission's Jean Monnet 2 building at the end of 2026 will further increase road traffic near the ECA. As a result, it will be more difficult to use private vehicles, and active or soft mobility options will become even more attractive.

Glossary

Acronym	Definition
ADEME	French Agency for Ecological Transition
Bilan Carbone®	Method originally developed in 2004 by ADEME to quantify organisations' GHG emissions. It is coordinated by the *Association pour la transition Bas Carbone*. The Bilan Carbone® method makes it easier to convert data from an activity into GHG emissions (using emission factors) and to express all the GHG emissions from that activity in a common unit known as "CO_2 equivalent" (CO_2e).
Eco-Management and Audit Scheme (EMAS)	Voluntary EU instrument that recognises organisations that continuously improve their environmental performance. EMAS-registered organisations comply with regulations, implement an environmental management system and report on their environmental performance by publishing an independently verified environmental statement.
Emission factor	Weighting used to convert activity data into greenhouse gas emissions. Represents the average emission rate of a given source, relative to units of activity or process/processes.
Energy mix	Group of different primary energy sources from which secondary energy for direct use – such as electricity or heating – is produced.
Global warming potential (GWP)	Measure of how much infrared thermal radiation a greenhouse gas added to the atmosphere would absorb over a given time frame, as a multiple of the radiation that would be absorbed by the same mass of added carbon dioxide (CO_2). CO_2 has a GWP of 1. For other gases, the GWP depends on how strongly the gas absorbs infrared thermal radiation, how quickly the gas leaves the atmosphere, and the time frame being considered. The carbon dioxide equivalent (CO_2e or CO_2eq or CO_2-e) is calculated from GWP. For any gas, it is the mass of CO_2 that would warm the earth as much as the mass of that gas. Thus, it provides a common scale for measuring the climate effects of different gases. It is calculated by multiplying the GWP by the mass of the other gas.
Hazardous waste	All waste identified as potentially hazardous to the environment, health or safety, all or part of which can be recycled, such as electronic equipment, toner cartridges or packaging soiled with hazardous products.
Household and similar waste	Non-hazardous unsorted waste from households or from industrial enterprises, skilled trades, shops, schools, public services, hospitals and tertiary services, when collected under the same conditions as household waste. This includes towels and packaging soiled with food leftovers. In Luxembourg, this type of waste is incinerated with added fuel due to its high moisture content.
ILR	*Institut luxembourgeois de régulation*
Primary energy	Energy present in nature that can be used directly without transformation.

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COUR DES COMPTES EUROPÉENNE

Next carbon footprint update: **June 2026**

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