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Corporate Carbon Footprint 2025

Energy Changes



Table of Contents

1. Executive Summary	3
1.1. Methodology	3
1.2. Results	3
2. General Description of the Organization's Inventory	5
2.1. General Description of the Company	5
2.2. Selection of Base Year	5
2.3. GHG Included	5
3. System Boundaries	5
3.1. Organizational Boundaries	5
3.2. Operational Boundaries	5
4. Quantified GHG Emissions and Removals Inventory	6
4.1. Calculation Principles	6
4.2. Calculation Methodology	6
5. GHG Inventory Results	11
6. General Recommendations	14
7. Addressing our footprint	14

1. Executive Summary

Energy Changes aims to understand its impact and contribution to climate change by measuring its Carbon Footprint for the year 2025.

This report presents the results of the greenhouse gas (GHG) emissions inventory for the year 2025, covering all relevant scopes. The objective is to identify the main GHG emitting activities and based on the results, provide recommendations for emission reduction strategies.

The information used in this report covers the period from January 1, 2025, to December 31, 2025.

1.1. Methodology

The methodological guidelines used for calculating the Corporate Carbon Footprint were developed primarily based on the GHG Protocol Standard and the GHG Protocol Scope 3 Standard.

For the GHG emissions inventory, the organizational boundaries of Energy Changes encompass its only office, located in Vienna, Austria, with no other operational locations.

1.2. Results

The total GHG emissions generated by Energy Changes' activities during 2025 were:



39.53 tonnes of CO₂e

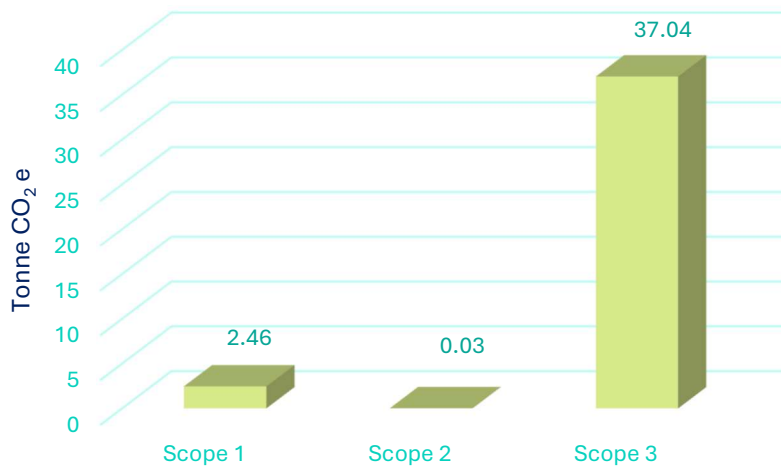


Figure 1: Energy Changes 2025 GHG Emissions by Scope

Where:

- **Scope 1:** Direct GHG emissions and removals, representing 6.23% of total emissions (2.46 tCO₂e).
- **Scope 2:** Indirect GHG emissions from purchased electricity (market-based), accounting for 0.08% (0.03 tCO₂e).
- **Scope 3:** Other indirect GHG emissions, representing the majority with 93.68% (37.00 tCO₂e).

Figure 2 highlights the two main sources of GHG emissions, which together account for over 93% of the total:

- **Primary source:** Business travel primarily due to air travel, contributing 79.10% (31.27 tCO₂e) of total emissions.
- **Second source:** Fuel- and energy-related activities mainly due to upstream emissions from aviation fuel production, contributing 10.93% (4.32 tCO₂e) of the total.

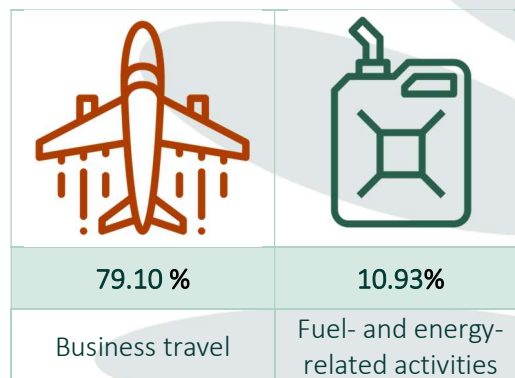


Figure 2: Main Sources of GHG Emissions

2. General Description of the Organization's Inventory

2.1. General Description of the Company

Energy Changes Projektentwicklung GmbH, or Energy Changes, is a climate and sustainability advisory and project development firm based in Vienna, Austria. Since 2006, the company has been focused on identifying, designing, and developing projects that reduce or avoid greenhouse gas emissions while delivering positive sustainable development benefits to local communities.

The company operates a single main office, located in the 1st district of Vienna, which houses a team of 8 permanent employees.

2.2. Selection of Base Year

The base year represents a specific point in time used for comparing GHG emissions across a time series.

Energy Changes began measuring its Corporate Carbon Footprint in 2023. However, due to methodological and calculation changes, it is recommended to update the base year to 2024.

2.3. GHG Included

Three greenhouse gases were identified as contributors to Energy Changes' Carbon Footprint:

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)

3. System Boundaries

3.1. Organizational Boundaries

The organizational boundaries for Energy Changes' GHG emissions inventory include its main office located in Vienna's First District, Austria.

The consolidation method applied is the **operational control approach**, meaning that 100% of the emissions associated with the headquarters are included in this inventory, as this facility is fully operated and managed by Energy Changes.

3.2. Operational Boundaries

Energy Changes is accounting for its GHG emissions across Scope 1 (direct), Scope 2 (indirect from energy), and the entirety of Scope 3 (other indirect). The following classification reflects the relevant operational activities included in the calculation:

- Scope 1: Direct emission from office facilities (heating) and purchased fuel for vehicles.¹
- Scope 2: Indirect emissions from purchased electricity for office facilities.
- Scope 3: Other indirect emissions from:
 - Category 1: Purchased goods and services
 - Category 2: Capital goods
 - Category 3: Fuel- and energy-related activities
 - Category 4: Upstream transportation and distribution
 - Category 5: Waste generated in operations
 - Category 6: Business travel
 - Category 7: Employee commuting

4. Quantified GHG Emissions and Removals Inventory

4.1. Calculation Principles

In alignment with the GHG Protocol Standard and the GHG Protocol Scope 3 Standard, this report has been developed in accordance with the following principles, ensuring that the GHG information presented is true, fair, and reliable:

Relevance: All GHG emission sources necessary to meet the needs of the intended users have been identified, quantified, and reported.

Completeness: The inventory includes all relevant direct emissions (Scope 1) as well as indirect emissions (Scopes 2 and 3).

Consistency: To ensure that the inventory results are comparable over time, with each other and with the base year, the report clearly documents the inventory scope, calculation methodologies, exclusions, limitations, and any other factors relevant to the time series.

Transparency: The information presented is clear, neutral, and easy to understand. It is based on robust documentation and auditable data, with sources, references, and methodologies fully disclosed.

Accuracy: The calculations are performed with sufficient precision to support informed decision-making with a reasonable level of confidence. Additionally, the report includes an uncertainty assessment.

4.2. Calculation Methodology

The Carbon Footprint inventory has been developed in accordance with the guidelines set by the GHG Protocol Standard and the GHG Protocol Scope 3 Standard.

GHG emissions were calculated by multiplying the activity data that quantifies each emission source (see **Table 1**) by the corresponding emission factor (see **Table 2**).

¹ Cooling equipment was identified but excluded from the calculation, as there were no refills in 2025.

The individual emissions of each GHG from the sources in Scope 1 and Scope 2 were then multiplied by the Global Warming Potential (GWP) of each gas (see **Table 3**) in the subsequent step to convert them into CO₂ equivalents (CO₂e).

4.2.1. Activity Data

Table 1 presents the activity data used in the calculation of Energy Changes' inventory. The required activity data was provided by Energy Changes to quantify each activity contributing to emission sources, including direct data for Scope 1, Scope 2, and Scope 3 emissions.

Scope	Emission source	Activity data	Unit	Additional information	Data source
1	Fuel consumption in owned or controlled vehicles	Fuel consumption	Liters	Fuel type	Provided by Energy Changes
	Fuel consumption in owned or controlled stationary equipment	Fuel consumption	Kilowatt-hours (kWh)	Fuel type	Provided by Energy Changes
2	Purchased electricity	Quantity of kilowatt-hours consumed	Kilowatt-hours (kWh)	Electricity source	Provided by Energy Changes
3	Purchased goods and services	Quantity of materials consumed	Kilograms (Kg)	Material type	Provided by Energy Changes
	Capital goods	Quantity of purchased goods	Pieces (P)	Type of purchased good	Provided by Energy Changes
	Fuel- and energy-related activities	Fuel consumption	Liters; Kilowatt-hours (kWh); kilometre (Km); Passenger kilometre (pkm)	Fuel type	Provided by Energy Changes
	Upstream transportation and distribution	Transportation of good and materials from the production site to the point of consumption /use	Kilograms (Kg)	Type of vehicle, transport distance, load weight	Provided by Energy Changes
	Waste generated in operations	Quantity of waste generated	Kilograms (Kg)	Type of waste	Provided by Energy Changes

Scope	Emission source	Activity data	Unit	Additional information	Data source
	Business travel	Land, air transportation, and overnight stays for work purposes.	kilometre (Km); Passenger kilometre (pkm); days	Transportation type, Hotel country and ranking;	Provided by Energy Changes
	Employee commuting	Daily commute of employees from home to work and vice versa. Home office time.	kilometre (Km); Passenger kilometre (pkm); Home office hours	Transportation type	Provided by Energy Changes

Table 1: Description of activity data used, along with their units and sources.

4.2.2. Emission Factors

Emission factors are numerical values that link activity levels with the amount of a specific chemical compound emitted by a source. The emission factors used in this calculation are shown in **Table 2**.

Scope	Emission Source	Description	Value	Unit	Source
1	Fuel consumption in owned or controlled vehicles	Diesel ²	2,4463	kg CO2/L	Umweltbundesamt ³
		Diesel ²	8,24E-05	kg CH4/L	
		Diesel ²	1,19E-04	kg N2O/L	
		Biodiesel ⁴	0,1453	kg CO2/L	
		Biodiesel ⁴	4,56E-06	kg CH4/L	
		Biodiesel ⁴	9,12E-06	kg N2O/L	
	Fuel consumption in owned or controlled stationary equipment	Natural gas	0,201	kg CO2e/kWh	Umweltbundesamt ³ ; IPCC 2006 ⁵
2	Purchased electricity	Electric power generation, accounting for transmission and distribution losses	0.01	t CO2e/MWh	Umweltbundesamt ³
	Purchased goods and services	Copy Paper	1050	kgCO2e/tonnes	DEFRA 2025 ⁶
		High quality paper	0	kgCO2e/tonnes	
	Capital goods	Laptop	172	kgCO2e/item	Ecoinvent 3.8, SimaPro 9.4.0.1
		Cell phone	37.7	kgCO2e/item	

² 94.3% of diesel considered

³ <https://www.umweltbundesamt.at/fileadmin/site/publikationen/rep0948.pdf>

⁴ 6.6% of biodiesel considered

⁵ IPCC 2006. Vol 2 -Stationary Combustion

⁶ <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2025>

Fuel- and energy-related activities	WTT (Well-to-Tank) natural gas	0.049	kgCO ₂ e/kWh	Umweltbundesamt ³
	WTT Diesel	0.071	kgCO ₂ e/kWh	
	WWT electricity Austria	0.029	kgCO ₂ e/kWh	
	WTT Air travel economy	0.017	kgCO ₂ e/p.km	DEFRA 2025 ⁶
	WTT Air travel premium	0.026	kgCO ₂ e/p.km	DEFRA 2025 ⁶
	WTT EC - Car (diesel)	0.041	kgCO ₂ e/km	
	WWT EC- tram	0.007	kgCO ₂ e/p.km	
	WWT EC - Metro	0.007	kgCO ₂ e/p.km	
	WWT EC - Bus	0.026	kgCO ₂ e/p.km	
	WWT EC - Train	0.009	kgCO ₂ e/p.km	
WTT EC - Car (diesel)	0.041	kgCO ₂ e/kWh		
Upstream transportation and distribution	Van transport	0.631 0.000 0.004	kg CO ₂ / t.km kg CH ₄ / t.km kg N ₂ O/ t.km	DEFRA 2025 ⁶
Waste generated in operations	Plastic and glass-landfilled	8.983	kgCO ₂ e/tonnes	DEFRA 2025 ⁶
	Waste recycled	4.686	kgCO ₂ e/tonnes	
	Paper- landfilled	1164.489	kgCO ₂ e/tonnes	
	General waste-landfilled	497.242	kgCO ₂ e/tonnes	
Business travel	Air- Economy	0.135 0.000 0.001	kg CO ₂ / p.km kg CH ₄ / p.km kg N ₂ O/ p.km	DEFRA 2025 ⁶
	Air- Premium economy	0.215 0.000 0.001	kg CO ₂ / p.km kg CH ₄ / p.km kg N ₂ O/ p.km	
	Hotel stay- Germany	13.200	kgCO ₂ e/per night	
	Hotel stay- Italy	14.300	kgCO ₂ e/per night	
	Hotel stay- Switzerland	6.600	kgCO ₂ e/per night	
	Hotel stay- Thailand	43.400	kgCO ₂ e/per night	
	Hotel stay- Turkey	32.100	kgCO ₂ e/per night	
	Hotel stay- US	16.100	kgCO ₂ e/per night	
	Hotel stay- Azerbaijan	45.000	kgCO ₂ e/per night	
	Hotel stay- Tunisia	34.900	kgCO ₂ e/per night	
	Hotel stay- Serbia	41.200	kgCO ₂ e/per night	
	Hotel stay- Uzbekistan	46.200	kgCO ₂ e/per night	
	Hotel stay- Romania	16.800	kgCO ₂ e/per night	
	Hotel stay- Malaysia	61.500	kgCO ₂ e/per night	
	Hotel stay- Spain	7.000	kgCO ₂ e/per night	
	Hotel stay- Botswana	46.240	kgCO ₂ e/per night	
	Hotel stay- Nigeria	22.700	kgCO ₂ e/per night	
	Hotel stay- Abu Dhabi	62.000	kgCO ₂ e/per night	
	Hotel stay- Baku	23.200	kgCO ₂ e/per night	
	Hotel stay- Portugal	19.000	kgCO ₂ e/per night	
Hotel stay- France	6.700	kgCO ₂ e/per night		
Employee commuting	Home office	0.031	kgCO ₂ e/working hour	DEFRA 2025 ⁶
	Employee commuting - Car (diesel)	0.168 4.64E-06 1.67E-03	kg CO ₂ / pkm kg CH ₄ / pkm kg N ₂ O/ pkm	
	Employee commuting - tram	0.028 1.20E-04 1.60E-04	kg CO ₂ / pkm kg CH ₄ / pkm kg N ₂ O/ pkm	
	Employee commuting - Metro	0.035 1.10E-04 1.60E-04	kg CO ₂ / pkm kg CH ₄ / pkm kg N ₂ O/ pkm	
	Employee commuting - Bus	0.108 1.00E-05	kg CO ₂ / pkm kg CH ₄ / pkm	

			7.30E-04	kg N2O/ pkm	
		Employee commuting - Train	0.035 8.00E-05 2.80E-04	kg CO2/ pkm kg CH4/ pkm kg N2O/ pkm	

Table 2: Description of emission factors used

4.2.3. GWP Values

To convert GHG emissions to CO₂e, the Global Warming Potentials (GWPs) from the IPCC AR6⁷ were used for a 100-year time horizon, as shown in **Table 3**.

GHG	Global Warming Potential (100 years)
CO2	1
CH4 - fossil	29.8
CH4 - biogenic	27
N2O	273

Table 3: Global warming potentials used

4.2.4. Exclusions

Refrigerant leaks from Scope 1 were excluded, as no refills occurred in 2025. Aside from this, all relevant emission sources from Scope 1, Scope 2, and Scope 3 were included.

4.2.5. Limitations

The following limitations were identified:

- For emissions associated with employee commuting, 47 weeks of work were considered.
- The quantities of waste generated by type are estimates, based on 2 kg of plastic per week, 5 kg of paper per week, 10 kg of general waste per week, and 2 kg of glass per week. A total of 52 weeks was considered, with 2% of the waste sent to a landfill, while the rest is incinerated or recycled⁸.
- Purchased goods and services values were assumed to be the same as in 2024.
- For employee commuting and business travel, diesel cars were considered.
- For the upstream transportation and distribution emission source, a Van travel distance of 10 km (from the point of purchase to the office) was assumed for purchased goods and capital goods.

⁷ [IPCC Global Warming Potential Values](#)

⁸ [Austria's profile on municipal and packaging waste management - 2025 | Country profiles on municipal and packaging waste management - 2025 | European Environment Agency \(EEA\)](#)

4.2.6. Uncertainty

In accordance with the principle of accuracy in the estimation of GHG emissions reported in this report, a qualitative uncertainty assessment was conducted.

The following table presents the specification of activity levels, along with the qualitative assessment of uncertainty, the latter is accounted for in the 10% buffer applied when addressing the total corporate carbon footprint.

Scope	Emission source	Activity level	Uncertainty
1	Fuel consumption in owned or controlled vehicles	Primary data	Reasonable
	Fuel consumption in owned or controlled stationary equipment	Primary data	Reasonable
2	Purchased electricity	Primary data	Reasonable
3	Purchased goods and services	Secondary data	Limited
	Capital goods	Primary data	Reasonable
	Fuel- and energy-related activities	Primary data	Reasonable
	Upstream transportation and distribution	Secondary data	Limited
	Waste generated in operations	Secondary data	Limited
	Business travel	Primary data	Reasonable
	Employee commuting	Primary data	Reasonable

Table 4: Description of Data Quality

5. GHG Inventory Results

The Carbon Footprint has been calculated based on the information requested and provided for each GHG emission source, applying the relevant emission factors. The GHG emissions generated by Energy Changes' activities in 2025 were:

39.53 tonnes of CO₂e

Table 5 presents the GHG emissions by scope and source type, along with the percentage contribution of each source to the total Carbon Footprint. This breakdown reveals that air travel accounted for nearly 70% of total emissions, followed by hotel stays at nearly 10% and upstream emissions from fuel production for air travel at 8.52%.

Source of GHG emissions	TOTAL	Carbon Dioxide (CO ₂)	Metane (CH ₄)	Nitrous Oxide(N ₂ O)	Contribution (%)
	(tonnes CO ₂ e/year)				
Total Corporate Carbon Footprint- Energy Changes (market based)	39,53				
Scope 1- Direct GHG emissions	2,4647				
Fuel consumption in owned or controlled vehicles					
<i>Fossil emissions</i>	0,7444	0,7339	0,0007	0,0097	1,88%
<i>Biogenic emissions</i>	0,0008		0,0000	0,0007	0,00%
Fuel consumption in owned or controlled stationary equipment					
<i>Fossil emissions</i>	1,7196	1,7196	0,0000	0,0000	4,35%
Scope 2 - Indirect electricity GHG emissions (Location based)	0,5494				
Purchased electricity- location based	0,5494	0,5416	0,0051	0,0027	
Scope 2 - Indirect electricity GHG emissions (Market based)	0,0329				
Purchased electricity- market based	0,0329	0,0329			0,08%
Scope 3 - Other indirect GHG emissions	37,0361				
Category 1: Purchased goods and services	0,0315	0,0315			0,08%
Category 2: Capital goods	0,3817	0,3817			0,97%
Category 3: Fuel- and energy-related activities					
<i>Scope 1 Upstream fuel</i>	0,6280	0,6280			1,59%
<i>Upstream electricity</i>	0,0954	0,0954			0,24%
<i>Upstream air travel</i>	3,3708	3,3708			8,53%
<i>Upstream commute</i>	0,2273	0,2273			0,58%
Category 4: Upstream transportation and distribution	0,0002	0,0002	0,0000	0,0000	0,00%
Category 5: Waste generated in operations	0,0148	0,0148			0,04%
Category 6: Business travel					
<i>Air travel</i>	27,4080	27,2696	0,0020	0,1364	69,33%
<i>Land travel</i>	0,0170	0,0168	0,0000	0,0002	0,04%
<i>Overnight stays</i>	3,8458	3,8458			9,73%
Category 7: Employee commuting					
<i>Office commute- Tram</i>	0,1223	0,1211	0,0005	0,0007	0,31%
<i>Office commute- Train</i>	0,2667	0,2640	0,0006	0,0021	0,67%
<i>Office commute- Car</i>	0,2395	0,2371	0,0000	0,0024	0,61%
<i>Office commute- Metro</i>	0,1699	0,1682	0,0007	0,0010	0,43%
<i>Office commute- Bus</i>	0,1020	0,1013	0,0000	0,0007	0,26%
<i>Home office</i>	0,1153	0,1153			0,29%
Informative emissions					
Direct biogenic CO ₂ emissions from biodiesel	0,0436				

Table 5: Energy Changes Greenhouse Gas Inventory, 2025

Figure 3 illustrates the contribution of each identified emission source to Energy Changes’ Corporate Carbon Footprint.

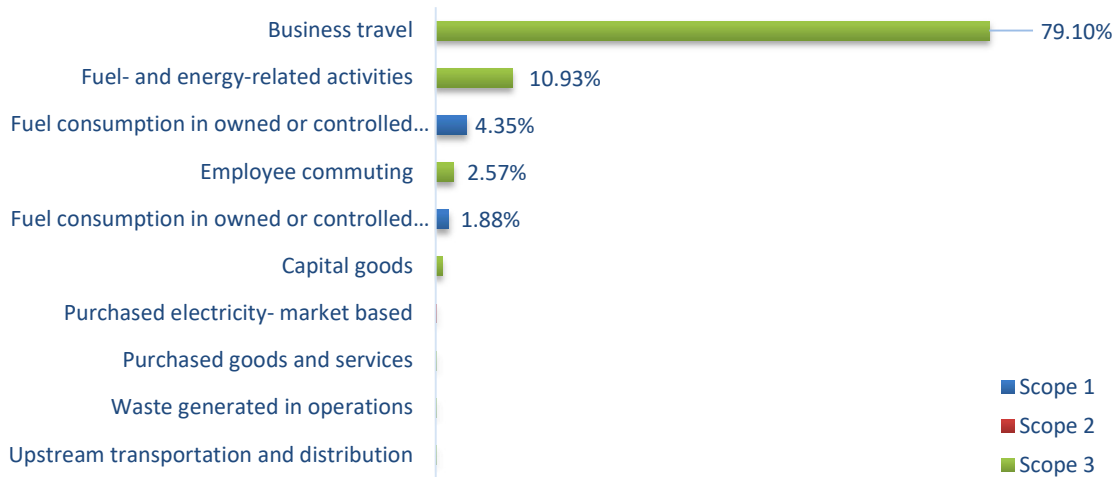


Figure 3: Share by emission source type, Energy Changes 2025

In terms of contribution to total GHG emissions in 2025:

Scope 1 accounted for **6.23%**, **Scope 2** for **0.08%**, and **Scope 3** for **93.68%** of the total Carbon Footprint assessment.

Scope 1:

Within Scope 1 emissions, 69.82% resulted from the combustion of natural gas in heaters, while the remaining 30.18% came from diesel combustion in vehicles.

Scope 2 and 3:

Within Scope 2 and Scope 3 emissions, 84.35% originated from business travel. Of this, 73.93% was attributed to air travel, followed by hotel overnight stays, which contributed just over 10.38% of total indirect emissions.

Summary of findings:

Overall, as seen in **Figure 3**, the business travel category is the main driver of emissions (with air travel being the largest contributor) accounting for 79.10% of total emissions. This is followed by fuel- and energy-related activities, primarily from the upstream production of aviation fuel, which accounts for nearly 11% of overall emissions.

6. General Recommendations

Based on Energy Changes' 2025 Corporate Carbon Footprint results, the following initiatives and actions are recommended to reduce emissions and improve overall environmental performance:

Scope 1:

- Optimize the use of heating, especially during office hours, and assess whether retrofitting through thermal renovation is a viable option for the building.
- Reduce fuel consumption for vehicles and opt for more sustainable transportation alternatives, such as public transport.

Scope 2:

- Analyze energy-efficient measures, such as replacing office lighting with LED bulbs.

Scope 3:

- For business travel, encourage employees to travel only when absolutely necessary. When travel is required, prioritize ground transportation, such as train travel. If air travel is unavoidable, opt for economy class over premium economy or business class. Additionally, prefer direct flights to those with multiple layovers.

7. Addressing our footprint

At Energy Changes, we identify, design, implement, register, and manage carbon projects that generate high-integrity verified units representing emissions avoidance or removals around the world.

As part of our climate strategy, we measure and monitor our corporate greenhouse gas emissions across Scope 1, 2, and 3 categories and continuously identify opportunities to reduce our environmental impact. Our focus is on implementing effective emission reduction measures within our own operations and value chain, with particular attention to reducing emissions from business travel, especially flights, which represent the largest share of our corporate carbon footprint. At the same time, we support the development of credible climate solutions globally.

List of figures

Figure 1: Energy Changes 2025 GHG Emissions by Scope.....	4
Figure 2: Main Sources of GHG Emissions	4
Figure 3: Share by emission source type, Energy Changes 2025.....	13

List of tables

Table 1: Description of activity data used, along with their units and sources.....	8
Table 2: Description of emission factors used.....	10
Table 3: Global warming potentials used	10
Table 4: Description of Data Quality	11
Table 5: Energy Changes Greenhouse Gas Inventory, 2025	12