One Planet plan

Living within the boundaries of the planet

22 June 2023*

* December 2023: Adjustments made to align terms used with the updated Eneco List of Terms

Eneco

Contents

1. About Eneco

We have been active in the energy sector for over 100 years. Eneco's roots go back to the 19th century. At that time, gas and electricity were produced on a 'large' scale for the first time and local energy companies were established. These local energy companies grew larger and merged in the 20th century. After a history of cooperation and mergers between the municipal utility companies of Rotterdam, The Hague and Dordrecht, the current Eneco was created in 1995.

Eneco is a strong, integrated, independent and growing energy company, active in the Netherlands, Belgium, Germany and the United Kingdom. Eneco's head office is located in Rotterdam.

Shareholders Mitsubishi Corporation and Chubu fully support Eneco's sustainability strategy. With their support, we can continue to grow both nationally and internationally.

1.1 Purpose

With the global demand for energy, we are exhausting our planet's capacity. If everyone in the world lived as the average Dutch person does, we would need nearly 3 planets. Eneco is determined to bring the energy requirement and energy consumption within the boundaries of a liveable planet. This is the One Planet concept. We want to lead the way in the energy transition and as a sustainable energy company, together with our suppliers and customers, live within the boundaries of the planet: our One Planet ambition.

Purpose: One Planet – Living within the boundaries of the planet

1.2 Mission

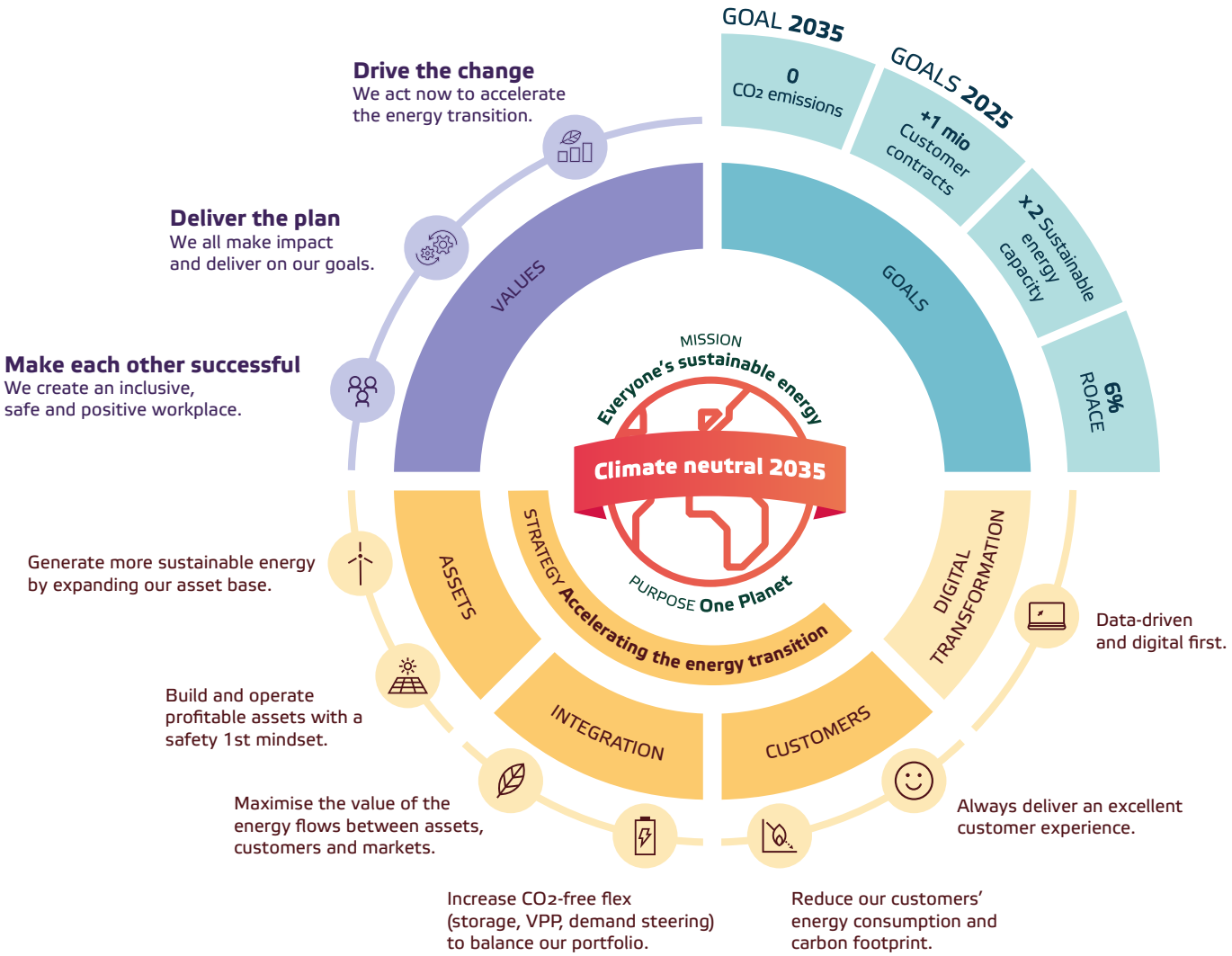
More and more people are realising that we are exhausting our earth and that we need to handle our energy in a much smarter and more sustainable way. With our mission: 'everyone's sustainable energy' we develop products and services and, together with partners, we invest in green electricity to enable our customers to make the switch to more sustainable and smarter energy consumption.

Discover more about our mission

1.3 Strategy

Eneco wants to accelerate the energy transition. This is desperately needed, because global warming is happening faster than everyone thought. We feel a strong responsibility to take the lead in this transition. Our three strategic pillars – customers, sustainable assets and integration – are aimed at realising that acceleration.

Read more about our strategy



2. Sustainable operations

2.1 Corporate social responsibility

Corporate social responsibility, or CSR, means that we take into account the social impact of all our activities. Being transparent about our impact on people, the environment and society is important to us. We consider the impact of new products or projects, also when this impact occurs further down the chain. Within our sphere of influence, we then aim to reduce any negative consequences of our actions.

‘Based on our One Planet ambition, sustainability, environment, safety, integrity and corporate social responsibility form the basis of our actions’

Internationally recognised human rights treaties and CSR guidelines

Eneco respects international treaties and guidelines. We also respect the culture and customs of all the countries in which we operate – insofar as they do not conflict with our own standards and values.

We comply with internationally recognised conventions and guidelines, including:

- The Universal Declaration of Human Rights.
- The OECD guidelines[1].
- The (tripartite) ILO Declaration[2] on Fundamental Principles and Rights at Work.
- The ISO 20400 and 26000 guidelines on embedding CSR in an organisation.
- The recommendations of the Task Force on Climate-related Financial Disclosures.

We are also a member of the Global Compact, a major network of companies and stakeholders that support the ten Universal Principles as proclaimed by the United Nations.

[1] Organisation for Economic Cooperation and Development (OECD), is an intergovernmental economic organisation with 38 member countries committed to establishing evidence-based international standards and finding solutions to a range of social, economic and environmental challenges.
[2] International Labour Organization (ILO), is a United Nations agency whose mandate is to advance social and economic justice through setting international labour standards.

2.2 Political involvement

Based on our mission ‘everyone’s sustainable energy’, we help people to make the next sustainable step in the energy transition. Political and policy decisions at European Union, national and the local level affect our business and the relationship with our customers. We strengthen our role as a frontrunner in the energy transition by having direct and personal relationships with policy makers and legislators. Furthermore, we are a member of relevant trade associations and interest groups. We are transparent about our way of working.

More information about our policy

View our memberships

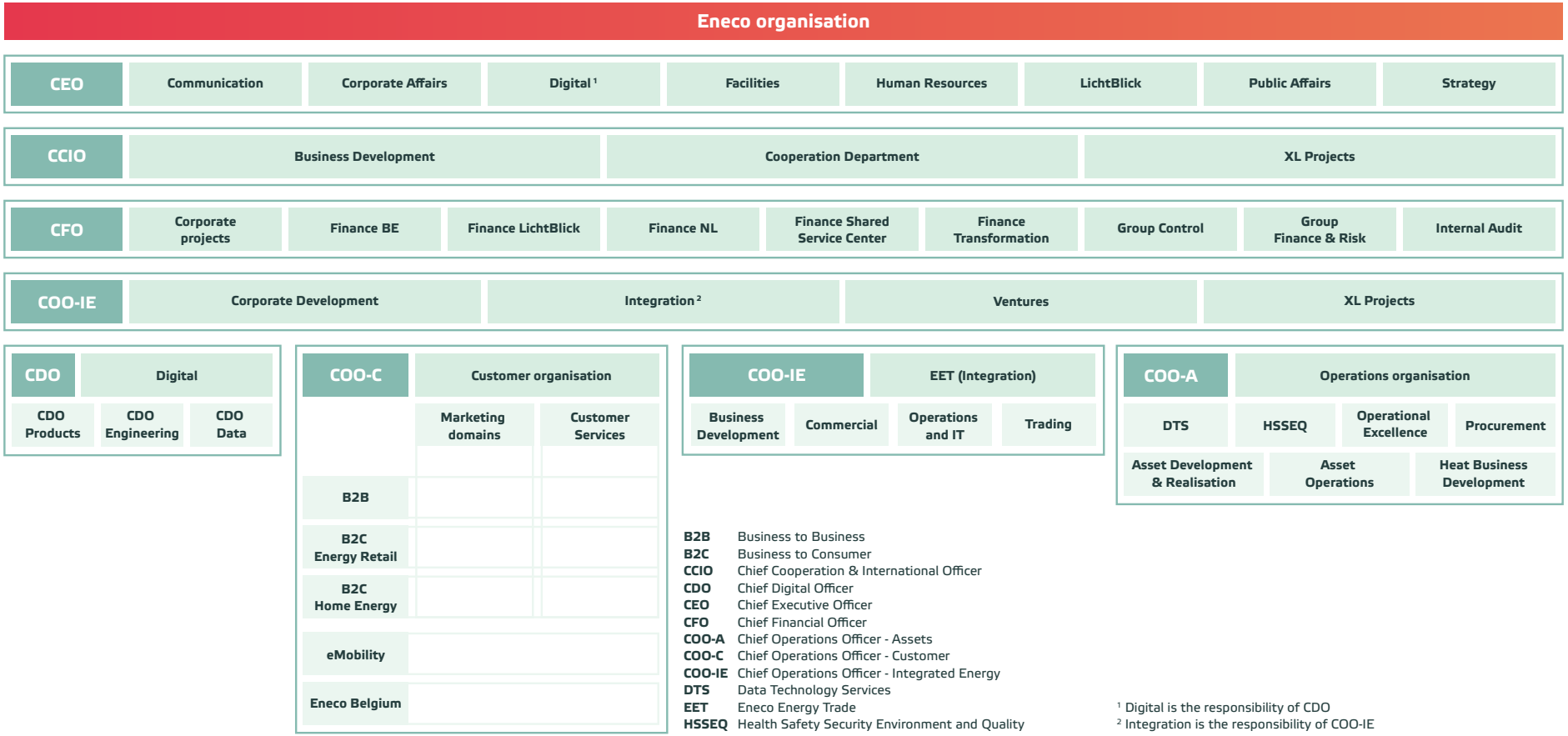
3. Governance

3.1 Preparation

The One Planet plan was drafted in close cooperation with internal and external stakeholders. The plan was submitted to external stakeholders after internal work sessions with employees and management team members. A number of NGOs and commercial customers gave their feedback and the plan was amended accordingly. Our supervisory board officially adopted the One Planet plan on 27 May 2021.

3.2 Organisation chart

The organisational structure is characterised by an integrated customer-focussed Customer Organisation and Operations Organisation with the objective to increase efficiency, financial performance and digitalisation, to thus create more room for sustainable growth.



B2B Business to Business
B2C Business to Consumer
CCIO Chief Cooperation & International Officer
CDO Chief Digital Officer
CEO Chief Executive Officer
CFO Chief Financial Officer
COO-A Chief Operations Officer - Assets
COO-C Chief Operations Officer - Customer
COO-IE Chief Operations Officer - Integrated Energy
DTS Data Technology Services
EET Eneco Energy Trade
HSSEQ Health Safety Security Environment and Quality

[1] Digital is the responsibility of CDO
[2] Integration is the responsibility of COO-IE

3.3 Management board

The management board is in charge of day-to-day management and is ultimately responsible for the performance of the group and its companies. The management board is appointed by the supervisory board and is accountable to the supervisory board and the General Meeting of Shareholders (GMS). Eneco's management board consists of six members:

- CEO: Drs. A.C. (As) Tempelman
- CFO: Drs. J.M.J. (Jeanine) Tijhaar RC
- COO-IE: Ir. C.J. (Kees Jan) Rameau, MBA
- CCIO: H. (Hiroshi) Sakuma, BS
- COO-C: S. (Selina) Thurer

Further information about the management board and the supervisory board

3.4 Responsibility One Planet plan

The One Planet plan is included in the portfolio of the Chief Executive Officer (CEO), who is the chairman of the management board of Eneco. The Sustainability Manager is responsible for the daily coordination of the One Planet plan. The Sustainability Manager function is positioned within the Energy Transition & Public Affairs department. The Energy Transition & Public Affairs Director is accountable for the One Planet plan. The Energy Transition & Public Affairs Director reports to the CEO and is part of the Strategic Leadership Team (SLT).

As the One Planet plan is very diverse and broadly oriented, the responsibility and accountability per section are embedded in the relevant operational and staff departments of which the daily activities are most closely related to the section in question.

3.5 Responsibility procurement

The Chief Procurement Officer (CPO) is responsible for procurement. Part of this responsibility is making our supplier portfolio more sustainable. The CPO reports to the Chief Operating Officer (COO), who is a member of the management board.

Procurement processes with a potential expenditure of more than € 50,000 over the whole contracting period must be assessed by the Procurement Board. Matters such as taxes, traded goods and services, deliveries within an existing agreement of which the conditions have already been laid down are excepted from assessment by the Procurement Board. The members of the Procurement Board each have a formal vote. The Procurement Board consists of:

- Mandated representative of the Business Unit from whose unit the request comes.
- Finance; not being business controller.
- Procurement; CPO or delegated Head of Procurement.

Socially Responsible Procurement

Eneco prefers to do business with suppliers who share our passion for sustainability. Through Socially Responsible Procurement (SRP), we shift the emphasis in the regular procurement process and also pay attention to social and ecological criteria in the selection of suppliers.

One of the procurement process topics concerns the sustainability conditions in the sourcing strategy. Our sustainable strategy is a focal point in all procurement projects and must be translated into criteria for the selection of an external supplier. Choices are not only based on price and quality, but also on social and ecological criteria. This is why Eneco adopted the ISO20400 Sustainable Procurement guideline when it was introduced in May 2017. Sustainable procurement stands for acting ethically, social engagement, reducing the ecological footprint and incorporating circular principles.

Read more about SRP

3.6 Reporting cycle

The Sustainability Manager discusses the progress of the One Planet plan with the Public Affairs Director biweekly. The progress report is shared with the management board once every quarter. Remedial measures are taken in the event of deviations from the plan or in connection with new developments and insights.

4. One Planet plan

Living within the natural boundaries of the planet is what Eneco believes in and strives for. But unfortunately, as mankind, we are exhausting the Earth. Ecosystems have no time to recover, biodiversity is threatened and more nature is lost than created. We are facing climate change, because more carbon is added to the atmosphere than nature can absorb. If we want to pass the Earth on in a livable way to our children and the generations that follow, there is no time to lose.

Since 2015, we have laid down our sustainability objectives in our One Planet plan. The plan contains measurable objectives in the field of climate, biodiversity, circularity and society.

Read more about the One Planet plan

4.1 Climate

If we want to keep the planet livable for future generations, we have an important task: not to let the earth heat up more than 1,5 ºC. The challenge we face as a society is urgent and its scale much greater than many realise.

According to the Intergovernmental Panel on Climate Change (IPCC, 2018), at the current rate of global warming we will reach 1.5 ºC by 2040. With further warming, serious effects on ecosystems, plants, animals and people can no longer be avoided.

Current efforts by the energy sector to reduce greenhouse gas emissions to zero by 2050 are no longer sufficient. The International Energy Agency (IEA) recently announced that the electricity sector in developed countries needs to achieve 'net zero' emissions as early as 2035 in order to limit global warming to 1.5 ºC.

The energy sector has an important pioneering role in the energy transition. Especially now that we know that climate objectives and actions must be much more ambitious in order to still achieve the 1.5 ºC objective. Eneco is taking responsibility for this and is accelerating its existing ambition to be climate neutral by 2035.

Read more

'We have the ambition to be climate neutral as early as 2035. Not only in our own activities, but also in the energy we supply to our customers'

4.2 Biodiversity

Biodiversity is the term used to describe the variety of life on earth. This diversity is of great importance for a resilient nature and a liveable planet. Unfortunately, biodiversity is under great pressure worldwide. Restoration of forests, soils and wetlands and more green spaces in cities are essential to reduce the effects of climate change.

To reverse the loss of biodiversity, Eneco wants to be a leader in the energy sector. Our aim is that all our new sustainable sources such as wind farms and solar parks have a net positive effect on biodiversity by 2025 at the latest. This means that we will increase biodiversity more than we burden it. We achieve this by minimising the negative effects on biodiversity when developing and operating new projects and by investing in nature restoration and development.

Read more

‘Our goal: net positive impact on biodiversity for all our new sustainable resources as of 2025’

4.3 Circularity

Circularity is one of the pillars of Eneco's One Planet plan. A circular economy plays an important role in reducing CO_2 emissions and thus climate change. Based on the principle of 'waste no more', natural resources are no longer exhausted in a circular economy. We achieve this by producing in a different way. As little use of raw materials as possible and reuse of materials. Circularity is an unmistakable factor in the fulfilment of our One Planet purpose: living within the natural boundaries of the planet.

Managing for circularity also means taking responsibility for respecting human rights. Because practice shows that where raw materials are scarce, there is pressure on the environment and human rights are at risk.

Read more

'Eneco wants to be a circular company by 2050'

4.4 Society

The social and societal components of energy transition are part of the pillar ‘Society & communities’ within our One Planet plan.

Energy transition is a major social challenge. Renewable energy is often closer to our living environment than the large-scale production of fossil energy. This affects citizens, companies and other stakeholders in how they live, work and recreate because of the changes in their immediate environment. Therefore, we focus on building sustainable relationships where the energy transition takes place. Together, we will realise the energy transition. Governments, citizens and the business community are increasingly willing to do something about the climate problem. But there are also concerns and uncertainties. About the costs of energy transition and how to fit wind and solar projects into scarce space. About the health and environmental effects of sustainable energy sources. The implementation of our strategy is heavily dependent on public support. Eneco will take concerns or resistance of customers and local residents seriously and proactively involve them and let them participate in our sustainable energy projects. Our strategy must be in tune with the wellbeing of society.

One of the pillars of Eneco’s One Planet plan is ‘Society & communities’. This is the social domain of the plan, which includes the strategic themes that are important to us: community engagement, transparency, integrity and diversity & inclusiveness.

Read more

4.5 Benchmarks

Environmental, Social & Governance (ESG) rating represents the environmental, social and governance assessment. It implies that factors such as energy consumption, climate, availability of raw materials, health, safety and good corporate governance are taken into account in company decisions. ESG ratings are intended to measure a company's resilience to long-term, material risks.

Eneco focuses on three complementary ESG rating agencies:

- Carbon Disclosure Project (CDP)
- Ecovadis
- Sustainalytics

Read more

5. Carbon footprint

5.1 Method

Eneco reports its emissions in accordance with the Corporate Value Chain (scope 3) Standard. This standard has been prepared by the World Business Council of Sustainable Development (WBCSD) and the World Resource Institute (WRI). The standard makes it possible to report on the entire chain, including the emissions of our own operations, the related emissions of our suppliers and those of our customers.

The emissions are calculated by multiplying the relevant volumes by the corresponding emission factor. The emission factors used are described below. Adding up these emissions results in Eneco's lifecycle footprint. The annual outcome is compared to the target set in Eneco's Climate Plan: Climate neutral in 2035. Not only in our own operations, but also in energy that we deliver to our customers.

The volumes used in scope 1 consist of the consumption of natural gas and in the long run green gas and/or green hydrogen for electricity production, heating of premises and fuels and electricity for our vehicle fleet.

The volumes used in scope 2 consist of the electricity and heat consumed by the organisation and the volumes of heat transported in our district heating network.

The volumes used in scope 3 consist of:

- The quantities of gas, electricity and heat supplied.
- The fuel and electricity consumed by our vehicle fleet for the calculation of upstream emissions.
- Our spend on purchased goods and services.
- The commuting kilometres of our employees (exclusively relating to the vehicle fleet) categorised according to our modal split (average way in which our employees get to and from work, or work from home), which was determined by means of a representative survey among employees. The number of commuting kilometres is calculated on the basis of the distance between home and place of employment and the number of working days per week. Multiplying this distance by 2 determines the return distance per week. This return distance is then multiplied by the average number of working days of an FTE (max. working days per year: 260 minus average leave days: 38 minus number of public holidays: 7 results in the average number of working days per FTE: 215 per year)
- The fuels and electricity used for business travel. The quantities for business car travel are calculated on the basis of the costs claimed and the compensation per claimed kilometre (0.25 €/km). The distribution according to fuel is based on the fuel distribution from the mobility survey. The quantities for business travel by public transport are calculated on the basis of the claimed costs and the average costs per kilometre (0.15 €/km: average of 0.19 €/km for peak hours and 0.11 €/km for off-peak hours, source: NS).

Scope 1 emissions mainly originate from the combustion of natural gas associated with the production of electricity and heat in our gas-fired power plants, both CCGT (Combined Cycle Power Plant) and CHP (Combined Heat and Power). This self-produced electricity and heat is supplied to our customers and therefore also falls under scope 3 (category 3).

Eneco's emissions from electricity & heat supplied to customers (scope 3, category 3d) are currently higher than those of scope 1, because we partly obtain our energy from third parties. To correct for double counting, the emissions for energy production from scope 1 are therefore deducted from the emissions associated with the supply of electricity and heat in scope 3, category 3d.

A similar situation exists for the CHPs owned by AgroEnergy customers. Emissions are released during the combustion of natural gas. The CHP processes this natural gas to generate heat and electricity. The emissions can therefore be attributed to heat and electricity. The heat is used by customers. The electricity is partly used for cultivation lighting and partly returned to Eneco. By purchasing the Certificates of Origin (CoOs), this electricity ends up in our supply volume. The emissions of the delivery volume are calculated based on Guarantees of Origin (GoOs) and CoOs. In this situation, emissions are allocated to the supply of natural gas to customers of AgroEnergy with a CHP and to the purchased CoOs generated by the same CHP. To avoid this double counting, a correction is made by deducting the emissions of the supplied electricity from the emissions of the supplied natural gas (scope, category 11).

In accordance with the GHG protocol, regarding the supply of energy, only emissions associated with the generation of purchased electricity that is sold to end users are accounted for. Emissions related to resale to non-end users (e.g. retailers) are not included, but are reported separately as 'optional information'. The following categories are reported separately as 'optional information':

- Eneco purchases e-flexibility and electricity volume from the CHP plant 'Pergen' from Air Liquide. The purchased electricity volume and the CoOs are sold on the electricity market, are therefore not included in the Value Chain Carbon Footprint and are reported separately.
- Eneco also supplies LNG (Liquid Natural Gas) to retailers for the purpose of making heavy transport more sustainable, among other things. These emissions are also reported separately as optional information.
- Furthermore, Eneco sells electricity and gas to other suppliers who are not responsible parties themselves, but who then supply it to their B2C and B2B customers. Eneco does not supply to the end-users and Eneco is not the supplier according to the Energy Act. Therefore, these emissions are also reported under optional information.
- In addition, Eneco trades daily in so-called 'sleeve deals' whereby Eneco sleeves baseload volume to other party responsible parties. This is part of our daily business and the total emissions associated with these energy volumes cannot be accurately determined. Therefore, for the sake of transparency, we report under optional information that trading in sleeve deals is part of our everyday business.

5.2 Emission factors

We use two different sources for the emission factors for natural gas. For natural gas supplied in the Netherlands we use https://www.co2emissiefactoren.nl.

For natural gas deliveries in Belgium and Germany, we use the emission factors of the International Institute for Sustainability Analysis and Strategy (IINAS). IINAS is the host of GEMIS (Global Emissions Model for integrated Systems). The emission factors include direct and upstream emissions and emissions from grid losses and are country specific.

The emissions for electricity supply are based on the emission factors of the various sources and the number of GoOs and CoOs. The number of GoOs and CoOs is based on the certificates exchanged at the relevant bodies (including CertiQ) and an estimate of the certificates still to be exchanged for the relevant reporting year per customer segment and per country. This in relation to the total electricity supplied by us to customers for the year under review. Each GoO (solar, wind, biomass, hydropower) and CoO (natural gas) corresponds to 1MWh of electricity supplied. Within our core countries, the origin of fossil electricity is only determined on the basis of CoOs for the Netherlands. In Belgium, partly fossil electricity is (still) supplied to business customers.

In Belgium, however, no CoO system applies and the emissions of the remaining fossil electricity are calculated on the basis of the national electricity mix used (source: IEA). For Germany and the United Kingdom, our supply is fully renewable. GoOs and CoOs have a certain emission factor depending on the source. The Netherlands Authority for Consumers and Markets (ACM) is the source of direct emissions. The upstream emissions for fuels related to electricity generation are based on the LCA (life cycle analysis) methodology and mainly come from an external source: www.co2emissiefactoren.nl.

The emission factors for network losses come from the International Energy Agency (IEA) and, specifically for the Netherlands, are further derived from the GoOs purchased by the network operators and stated in their annual reports. The calculation method used for direct emissions for the production, distribution and supply of heat via district heating and decentralised collective heating systems is in accordance with the method described in the 'Warmtewet', as used in our annual sustainability report to ACM. This method is based on the NTA8800. The CO_2 emissions are determined by the CO_2 emissions from the energy input (electricity, gas, biomass, waste, residual heat), the energy performance of the individual heat sources, the share of the various heat sources, heat losses that occur during transport and the necessary auxiliary energy in the system. The emission factors related to the energy input and used in our calculations are reported annually by the Netherlands Enterprise Agency (RVO). The upstream emission factor for heat is taken from www.co2emissiefactoren.nl.

For purchases of capital goods, office supplies, etc., we use Defra's expense-based conversion factors. When determining the emissions caused by the mobility of our employees and the energy consumption in the office buildings we use, a number of aspects are included in the calculation:

- For company cars, we use current data from January 1 to November 30. The data for December is extrapolated by the system, while the leasing companies can only provide a full December report at the beginning of February.
- All emission factors for company cars, commuting and business trips are based on www.co2emissiefactoren.nl.
- For some office buildings, we do not purchase the energy ourselves, but it is included in the services charged by the landlord. In those cases, we estimate the annual energy consumption based on the rented square meters and an average consumption of square meters where we have an overview of the energy consumption. We purchase GoOs for this estimated consumption, as it is not always known whether the landlord purchases renewable energy.

5.3 Scope

Eneco reports its emissions in accordance with the scoping methodology of the Corporate Value Chain (scope 3) Standard. When reporting Greenhouse Gas (GHG) emissions in scope 1, Eneco uses the ‘operational control’ approach from the GHG protocol. Under the control approach, a company accounts for 100 percent of the GHG emissions from operations over which it has control. It does not account for GHG emissions from operations in which it owns an interest but has no control. Eneco has operational control over an asset if it has the full authority to introduce and implement its operating policies at the operation. Operational decisions are whether to put an asset into use, but maintenance and safety decisions can also be included.

In addition to CO_2, CH_4 (methane) and N_2O (dinitrogen (mono)oxide) are in scope. These greenhouse gases are converted to CO_2 equivalents based on their GWP. The metric unit of the emissions is therefore expressed in CO_{2eq}.

5.4 Results

Below is our carbon footprint for 2022, 2021 and 2019 in accordance with the 'Corporate Value Chain (scope 3) Accounting and Reporting Standard' of the GHG Protocol. [3] [4]

Scope	Activity Category	Details	2022	2021[5]	2019[6]
Scope 1	Emissions from combustion of primary and motor fuels in/at own plants & vehicles	Natural gas consumption office buildings	0	0	0
		Natural gas consumption for the production of electricity and heat (with operational control)	1,291	1,476	1,738
		Fuel for vehicle fleet (company cars and personal lease)	1	1	3
Scope 1	**Direct emissions**		**1,293***	**1,478***	**1,741**
Scope 2 market-based	Emissions from the generation of electricity consumed by the organisation	Electricity consumption office buildings	0	0	0
		Own consumption of electricity related to electricity production from natural gas	28**	0	0
	Emissions from the generation of heat consumed by the organisation	Heat consumption office buildings	0	0	0
	Emissions from the generation of purchased electricity that is consumed during transmission and distribution	Transport emissions district heating	60	69	0
Scope 2	**Indirect emissions**		**89***	**69**	**0**
Scope 2 location-based	Emissions from the generation of electricity consumed by the organisation	Electricity consumption office buildings	1	1	1
		Own consumption of electricity related to electricity production from natural gas	28**	0	0
	Emissions from the generation of heat consumed by the organisation	Heat consumption office buildings	0	0	0
	Emissions from the generation of purchased electricity that is consumed during transmission and distribution	Transport emissions district heating	60	69	73
Scope 2	**Indirect emissions**		**89**	**70**	**74**
Scope 3 Category 1 and 2	Purchased goods & services Capital goods	Based on expenditure. Expenditure partly relates to Capital Goods	254	217	149
Categorie 3a	Fuel and energy-related lifecycle emissions not in scope 1	Gas consumption office buildings	0	0	0
		Gas consumption power plants	215	213	96
		Fuel for vehicle fleet	0	0	0
Categorie 3b	Fuel and energy-related lifecycle emissions not in scope 2	Electricity consumption office buildings		0	0
		Heat consumption office buildings			
Categorie 3c	Transmission and distribution (T&D) losses	Generation grid losses on energy supplied	156	131	629
Categorie 3d	Lifecycle emissions from the generation of purchased electricity and heat	Generation of supplied electricity	662	1,356	3,426
		Generation of supplied heat	154	258	299
Categorie 4	Upstream transport and distribution	N/A	-	-	-
Categorie 5	Waste generated in business operations	N/A	-	-	-
Categorie 6	Business travel	Combustion and lifecycle emissions from business travel	0	0	0
Categorie 7	Commuting	Combustion and lifecycle emissions from commuting	1	1	2
Categorie 8	Upstream leased assets	N/A	-	-	-
Categorie 9	Downstream transport and distribution	N/A	-	-	-
Categorie 10	Processing of products sold	N/A	-	-	-
Categorie 11	Use of products sold	Combustion and lifecycle emissions from natural gas consumption of customers	7,161	9,516	10,069
Categorie 12	End-of-life life processing of products sold	N/A	-	-	-
Categorie 13	Downstream leased assets	N/A	-	-	-
Categorie 14	Franchises	N/A	-	-	-
Categorie 15	Investments	N/A	-	-	-
Scope 3	**Indirect emissions**	**Upstream & Downstream**	**8,604***	**11,692**	**14,670***
Carbon Footprint[7]	**Total Emissions**	**(kton CO_{2eq})**	**9,985***	**13,241***	**16,485***

[3] Biogenic emissions in kton $CO_{2eq.}$: 556 (2022), 507 (2021), 439 (2019)
[4] Optional information on emissions from energy not supplied to end users in kton $CO_{2eq.}$: 477 (2022), 489 (2021), 413 (2019)
[5] Verified by Deloitte on the basis of limited assurance: 13,241 kton CO_{2eq}. Adjustment in 'category 3d', 'Generation of supplied heat': Transport emissions relocated to scope 2: 'Transport emissions district heating'.
[6] Verified by Deloitte on the basis of limited assurance: 15,267 kton $CO_{2eq.}$ Adjustments:
1) Emission factor for natural gas through connection with www.co2emissiefactoren.nl.
2) Recalculation regarding the acquisition of a customer portfolio in Germany.
3) Relocation of transport emissions in 'category 3d', 'Generation of supplied heat' to scope 2, 'Transport emissions district heating'.
[7] Carbon Footprint is calculated on the basis of Scope 2 market-based emissions
* Due to roundings, the total sum differs from the sum of the individual values
** Newly added category this year

6. Air, water & waste

6.1 Emissions to air

Eneco is committed to improving air quality. As a minimum, Eneco ensures that the current air quality is maintained and improves where possible. To maintain clean air, Eneco purifies the flue gases from its activities in accordance with the best available and proven techniques.

Eneco's long-term objective is to:
- Be a company that is aware of air quality and minimises its use of greenhouse gases.
- Return flue gases to the air in a cleaned state.
- Use innovative solutions based on collaboration with knowledge institutions and governments.

The table below shows the emissions to air from our energy production units for the years 2020, 2019 and 2018.

Substance	2022 [kg]	2021 [kg]	2020 [kg]	2019 [kg]
Acrolein (Acrylaldehyde)	-	180	373	367
Ammonia (NH_3)	10,597	10,072	8,374	7,793
Volatile organic compounds other than methane (NMVOC)	30,367	59,958	84,460	87,438
Benzene	759	1,284	1,678	1,745
Benzo(a)pyrene	1	4,800	1	0
Benzo(b)fluoranthene	-	0	1	0
Benzo(k)fluoranthene	-	0	0	0
Indeno(1,2,3-cd)pyrene	-	0	0	0
Chlorine and its inorganic compounds (as HCl)	8,471	6,245	8,744	8,834
Nitrous oxide (N_2O)	12,820	15,590	20,240	19,370
Ethene	7,592	15,136	21,456	22,049
Fine particulates (PM10; <10 micrometres)	1,602	1,967	2,442	2,439
Fluorine and its inorganic compounds (as HF)	31	126	275	114
Fluoranthene	0,13	0	0	0
Formaldehyde (Methanal)	-	980	1,903	1,871
Carbon monoxide (CO)	167,357	168,187	120,767	90,976
Hydrocarbons (total VOC)	117,808	141,826	183,819	179,045
Methane (CH_4)	45,550	77,018	100,598	103,977
Nitrogen oxides (NOx / NO_2)	598,019	737,643	884,778	837,847
Toluene	1,518	2,567	3,353	3,490
Total particulates	2,318	3,378	8,113	2,941
Sulphur oxides (SOx / SO_2)	22,673	20,691	22,505	20,295

6.2 Emissions to water

Eneco is committed to minimising the use of water in our energy production facilities and office buildings. In addition, Eneco strives for optimum protection and efficient purification of cooling and waste water. Water is an important resource for our installations and buildings, and Eneco uses it responsibly.

Eneco is committed to the long term:

- Awareness of water safety and reduction of its use of water.
- Return of cooling and waste water cleanly to the aquatic system.
- Use of innovative solutions based on collaboration with knowledge institutions and governments.

The table below shows the emissions to water from our energy production units for the years 2020, 2019 and 2018.

Substance	2022 [kg]	2021 [kg]	2020 [kg]	2019 [kg]
Mineral oils	0	0	0	0
Airborne dust	913,9	1,151	873	566
Chromium and its compounds (as Cr)	0,435	1	1	0
Copper and its compounds (as Cu)	0,4	1	0	0
Lead and its compounds (as Pb)	2,3	2	2	1
Nickel and its compounds (as Ni)	0,535	1	1	0
Zinc and its compounds (as Zn)	10,455	20	24	17
Phosphorus (total P)	19,4	55	23	29
N-kjeldahl (Total nitrogen)	792,06	5,331	797	440
Arsenic and its compounds (as As)	0,1	0	0	0
Cadmium and its compounds (as Cd)	0	0	0	0
Total organic carbon (TOC) (as total C or COD/3)	1107,8	5,732	1,318	1,199
Iron sulphate	0,036	0	1,600	2,600

6.3 Water intake and discharge

The following table shows the water intake and discharge for the years 2010, 2029 and 2019.

Water intake	2022 [m³]	2021 [m³]	2020 [m³]	2019 [m³]
Water intake Surface water (national waters)	590,607,744	594,951,378	583,131,121	594,079,652
Mains water	254,542	347,394	334,069	316,041
Total water intake	**590,862,286**	**595,298,772**	**583,465,190**	**562,011,752**

Water discharge	2022 [m³]	2021 [m³]	2020 [m³]	2019 [m³]
Water discharge Discharge to surface water (national waters)	590,862,450	595,240,336	583,410,171	601,334,494
Water discharge Discharge to surface water (inland water)	0	0	0	0
Water discharge Discharge to sewer	11,067	11,885	50,457	7,842
Infiltration (into groundwater), including soil remediation	0	0	0	0
Water in (by)product, including water in sewage sludge	0	99,834	87,850	75,717
Total water discharge	**590,873,517**	**595,352,055**	**583,548,478**	**601,418,053**

6.4 Waste

Eneco's vision is to minimise the creation of waste and to strive for optimal environmental protection in a sustainable and cost-effective manner. Eneco makes confident choices, takes responsibility and seeks alignment.

Eneco's long-term objective is to:

- Reduce the percentage of residual waste at the sites to as close to 0% as possible.
- Have a maximum of 5% residual waste by 2025.
- Use other waste streams as renewable raw materials.
- Have the unavoidable minimum residual flow processed by a certified waste processor.
- Have our suppliers reuse packaging materials as much as possible.
- Consider in advance how raw materials can be reused when constructing new assets and purchasing materials.

The table below shows the inventory of our waste streams for the year 2021 and 2020[7].

Waste streams		2022 (ton)	2021 [ton]	2020 [ton]
Hazardous waste	Fly ash containing hazardous substances	8,825	9,005	8,568
	Miscellaneous waste containing hazardous substances	134	194	285
	Subtotal	**8,959**	**9,199**	**8,854**
Non-hazardous waste	Bottom ash, slag and boiler dust	37,465	37,996	24,127
	Construction and demolition waste	160	124	293
	Mixed municipal waste	508	545	421
	Wood	61	306	88
	Plastics	36	2	9
	Metal	1,590	1,930	1,681
	Other (glass, organic waste, etc.)	31	21	8
	Paper and cardboard	458	1,804	370
	Fly ash from peat or untreated wood	726	662	327
	Liquid aqueous waste	5	50	17
	Subtotal	**41,039**	**43,441**	**27,342**
Total waste	**Total**	**49,998**	**52,640**	**36,195**

[7] Eneco carried out a new inventory on the waste streams in 2021, as a result data from previous years cannot be compared.

7. List of terms

- **Biogas:** Biogas is produced from so-called 'renewable' sources, i.e. manure or organic waste. Biogas is a combination of carbon dioxide and methane gas. Biogas must first be processed before it can be fed into the gas grid or used as transport fuel (source: https://groengas.nl/groen-gas/wat-is-groen-gas/).
- **Biomass:** Biomass is the biodegradable part of products, wastes and residues from natural products. Natural products include agriculture, horticulture, forests, the sea or industrial and municipal waste. And 'biodegradable' implies that something can be decomposed naturally by mould and bacteria. Eneco uses these biodegradable substances to produce electricity for industry and heat for our heat networks. Eneco applies the rule of thumb that biomass is only used if there are insufficient other sustainable alternatives available. The biomass we process, trade and/or use meets international sustainability criteria and chain management requirements. These are guaranteed by certificates approved by the European and Dutch governments. An example of such a certificate is Better Biomass.
- **Climate neutral:** Climate neutral, also referred to as net-zero. These terms indicate that greenhouse gas emissions do not contribute to climate change along the entire chain (scope 1, 2 and 3 in accordance with the GHG Protocol). This is done by reducing emissions (e.g. through saving energy, generating and supplying sustainable energy) at least according to a 1.5ºC reduction pathway and by neutralising remaining emissions through the permanent removal of CO_{2eq} from the atmosphere (in accordance with SBTi Corporate Net-Zero Standard).
- **Eneco cold:** Eneco cold is the way in which we use cold water to cool buildings. The cooling of the water comes from various sources, including groundwater or river water. The sources used depend on the location.
- **Eneco heat:** Eneco heat is water that has been heated by heat released from various sources. Via the heat network, this heated water is used to provide buildings with hot water or for space heating. The sources used depend on the location.
- **Environmentally friendly cooling:** Cooling a building with Eneco cold means using cold water that is already available, e.g. from surface or groundwater. It is usually a more sustainable solution than cooling with existing air conditioning units, for example.
- **ESG ratings:** How to map out in which way and to what extent a company takes its employees, customers and the environment into account when it comes to management and activities? The 'Environmental Social & Governance (ESG) ratings' is a method to measure and track this. The score shows how Eneco takes factors such as energy consumption, climate, availability of raw materials, health and safety into account in company decisions. The ESG ratings measure whether a company is prepared for possible long-term material risks, i.e. significant changes to these (environmental) factors, to be able to pursue its chosen path.
- **Green gas supply:** Green gas is a gas mixture based on biogenic waste streams, and is therefore classified as 'biomass'. Green gas is produced from renewable sources. Green gas is made by upgrading biogas so it has the same quality as natural gas. Like green electricity, green gas is supplied certified with Guarantees of Origin (GoO). These guarantees are established in accordance with the European Directive On the Promotion of the Use of Energy from Renewable Sources.
- **Internal operations:** By internal operations we mean the work-related mobility of our employees and the energy used for our premises.
- **Renewable energy sources:** These are sources that are replenished by nature. These include wind energy, solar energy (solar thermal and photovoltaic), geothermal energy, ambient energy, tidal energy, wave energy and other ocean energy, hydropower, and energy from biomass, landfill gas, sewage treatment plant gas and biogas (source: European Directive 'On the Promotion of the Use of Energy from Renewable Sources').
- **Residual heat:** This is heat generated as a by-product in industrial or commercial processes. This residual heat is produced anyway and, without connection to a heat network, would end up unused in the air or water (source: draft Dutch Collective Heat Supply Act, Article 1).
- **Scoping:** Scoping, i.e. determining the scope – in the case of Eneco, determining the scope of the CO_2 emissions – is done on the basis of the standards of the Greenhouse Gas Protocol (source: ghg-protocol-revised.pdf (ghgprotocol.org) en Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf (ghgprotocol.org). There are three types of scopes for three types of emissions.
  - ↳ Scope 1 emissions: direct emissions from sources wholly controlled by us, i.e. full authority to set and implement operational policies. Operational decisions are decisions about whether to put a facility into operation, but may also include decisions about maintenance and safety. Emissions from sources with shared ownership and control are allocated based on ownership.
  - ↳ Scope 2 emissions: purchased electricity, steam, heating or cooling and consumed by us.
  - ↳ Scope 3 emissions: all indirect emissions (as far as not included in scope 2) that occur in the value chain of the reporting company.

  In other words: a company reports the emissions of self-generated energy (scope 1), the emissions of self-purchased and self-consumed energy (scope 2) or emissions that occurred earlier in the chain and emissions that occur later in the chain, by using the delivered products (scope 3), for example.
- **Sustainable heat source:** A renewable heat source is a renewable energy source or a heat source from which we use the residual heat generated during an industrial or commercial process (source: draft Dutch Collective Heat Supply Act in Dutch).

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For more information: visit our website www.eneco.com