

Climate Action Plan

June 2024





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Acronyms

Telefónica

ARR: Afforestation, Reforestation, Revegetation **B2B:** Business-to-Business **B2C:** Business-to-Consumer **BVCM:** Beyond Value Chain Mitigation **CapEx:** Capital expenditure **CDP:** Carbon Disclosure Project **CO2:** Carbon dioxide **COP:** Conference of the Parties **CSDDD:** Corporate Sustainability Due Diligence Directive **CSRD:** Corporate Sustainability Reporting Directive DJSI: Dow Jones Sustainability Index **EDF:** Environmental Defense Fund **EGDC:** European Green Digital Coalition **ESG:** Environmental, Social and Governance **ETNO:** European Telecommunication Network Operators Association **FAO:** Food and Agriculture Organization of the United Nations **FSC:** Forest Stewardship Council **GHG:** Greenhouse Gases **GWP:** Global Warming Potential **ICT:** Information and Communication Technologies **ICVCM:** Integrity Council for the Voluntary Carbon Market **IEA:** International Energy Agency

IFRS: International Financial Reporting Standards **IoT:** Internet of Things **IPCC:** Intergovernmental Panel on Climate Change **ITU:** International Telecommunications Union JAC: Joint Alliance for CSR **KPI:** Key Performance Indicator LCA: Life Cycle Analysis **NGFS:** Network for Greening the Financial System **OpEx:** Operational expenditure **PPAs:** Long-term power purchase agreements **PSFs:** Power Saving Features **RCP:** Representative Concentration Pathway **REC:** Renewable Energy Certificates **REDD+:** Reducing Emissions from Deforestation and forest Degradation **SBTi:** Science Based Targets initiative **SDG:** Sustainable Development Goals **SMEs:** Small and medium-sized enterprises **TCFD:** Task Force on Climate-Related Financial Disclosure **TCO:** Total Cost of Ownership **TSVCM:** Taskforce on Scaling Voluntary Carbon Markets **WRI:** World Resources Institute **WWF:** World Wildlife Fund





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Climate change and digitalisation

Our energy and climate change strategy is focused on mitigating our impact, seizing opportunities and adapting by appropriate management of climate risks.

There is no doubt that climate change is one of the major challenges we

face today as a society. The international scientific community warns in the sixth report of the Intergovernmental Panel on Climate Change (IPCC) that the global average temperature increased by 1.09°C between 2011 and 2020 compared to the period of 1850-1900, and presents an even more critical situation: under the five climate scenarios analysed, the temperature increase will exceed 1.5°C by the middle of this century, only remaining below that figure in 2100 in the most optimistic scenario and reaching an increase of 4.4°C in the most pessimistic scenario. In this regard, the report stresses the need to work together and without delay to achieve net zero emissions to limit global warming to 1.5°C and avoid catastrophic and irreversible consequences.

The IPCC defines net zero emissions as the point where anthropogenic emissions of greenhouse gases (GHG)¹ to the atmosphere are balanced by anthropogenic removals over a specified period. Aligned with the IPCC, the Science Based Targets initiative (SBTi)'s Corporate Net-Zero Standard² considers that achieving net zero emissions entails both achieving a scale of GHG emissions reductions consistent with the 1.5°C scenario of the Paris Agreement and neutralising any residual emissions by removing or absorbing CO₂ from the atmosphere and permanently storing it through technological initiatives or nature-based solutions.

Connectivity and digitalisation have become key factors in maintaining a work-life balance and driving business growth through innovation. This has also proven that digital technologies are essential tools for achieving the targets set out in the Sustainable Development Goals (SDGs), the European Green Deal and the Paris Agreement, given that digital solutions drive the transition to a resilient, circular and GHG-neutral economy making it possible, for example, to replace business travel with video conferencing and to optimise the use of resources in infrastructure, cities, agriculture and industry.

Increasing climate change regulation is a further instrument driving climate transition, accountability, and corporate action on climate change. The European Sustainability Reporting Standard on Climate Change (ESRS E1) of the EU Corporate Sustainability Reporting Directive (CSRD) or the recently adopted EU Corporate Sustainability Due Diligence Directive (CSDDD) are clear examples.

1 According to the IPCC glossary, greenhouse gases are gases in the atmosphere that absorb and emit radiation at certain wavelengths, causing an increase in temperature, known popularly as the Greenhouse Effect. The main GHGs are carbon dioxide (CO2), methane (CH₄) and nitrous oxide (N₂O), but there are also other GHGs, such as sulphur hexafluoride (SF₆), hydrofluorocarbons (HFCs). The unit of measurement for emissions of the different GHGs is tCO₂e, which is obtained by multiplying the emissions of the specific GHG by its Global Warming Potential (GWP).

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With the entry into force of these standards, companies must regularly include transparent and reliable information in their management reports to disclose the environmental and social impact they generate. Specifically, they define as mandatory disclosure requirements, among others, the transition plan for climate change mitigation, the management of climate-related risks and opportunities, the impact of adverse weather conditions on financial statements, emission reduction targets or GHG emissions, of Scopes 1, 2 and 3. In this way, the foundations for global climate change reporting standards are beginning to be laid.





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Telefónica contributes as a driver of change in the economy and in society through digitalisation and through big data and Internet of Things (IoT) services, as solutions which help to reduce customer emissions, by positioning itself as a technological partner of reference in the climate transition of its customers.

Climate change and

digitalisation

To reduce both its own CO₂ emissions and those of its value chain as soon as possible, Telefónica increased its climate ambition in 2020 by defining specific energy and climate change targets for 2025, 2030 and 2040, aligned with the 1.5°C scenario of the Paris Agreement and validated by the SBTi initiative.

In 2022, following the publication of SBTi's Net-Zero Standard, Telefónica reinforced its commitment by becoming the **first telecommunications operator in the** world to have its 2040 net zero emissions target validated by the initiative.

Integrated into Telefónica's governance model, the Climate Action Plan includes the quantification of emissions and the setting of reduction targets, the implementation of specific actions to achieve them and climate change adaptation measures. It also contains specific and verifiable indicators, as well as the definition of responsibilities for monitoring and accountability in the organisation.

Furthermore, it not only defines actions in Telefónica's operational model, but also in its commercial and financial strategy and in its commitment to customers, the supply chain and society. All this, with the ultimate goal of enabling Telefónica to maintain its growth model in a world in which the average global temperature does not rise more than 1.5°C above pre-industrial levels and in which the health of natural ecosystems is restored.

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Net zero

emissions

by 2040

Vision

Telefónica's ambition is to achieve net zero emissions by 2040 globally, including its value chain emissions.

To do this, interim targets are set such as a 90% reduction in Scope 1 and 2 emissions from operations in Spain, Germany, and Brazil by 2025 and offsetting/neutralising the residual emissions of these scopes through nature-based solutions.

> -90% Scope1 and 2 emissions 2025

Germa Brazil



networks

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Plan



Strategic plans

Due to the transversal and global nature of **climate change**, it is **integrated into** Telefónica's **management** main aspects, such as corporate governance, strategy, risks, and targets. Telefónica has set ambitious targets and **strategic levers** to be aligned with a 1.5°C pathway and achieve net zero emissions:









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Specific targets

On the road to **net zero** by 2040, Telefónica's decarbonisation plan considers short-, medium- and long-term targets that have been validated by the SBTi initiative³:



3 These are absolute reduction targets compared to the base year, which is 2015 for Scope 1 and 2 emissions, and 2016 for Scope 3 emissions.

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66 In 2022, Telefónica became the first telco with net zero targets validated by SBTi.

Renewable energy	CO ₂ ↓ ↓ ↓ Scope 1 and 2 emissions	Value chain emissions (Scope 3)	Customers' emissions avoided through digitalisation	Offsetting/ Neutralisation
Continue to consume electricity with 100% renewable origin in the main markets	- 90% in main markets compared to 2015	- 39% globally, compared to 2016	Help customers to reduce their CO₂ emissions through connectivity and Eco Smart services ⁴	Offset/Neutralise unaba Scope 1 and 2 emissions in main mark annually (10%)
100% of electricity from renewable sources globally ⁵	- 90% globally compared to 2015	- 56% globally, compared to 2016		
	Reduce total emissio	ns by 90%		Neutralise residual emis annually (10%)

Net zero emissions



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missions



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Monitoring of targets

In 2023, the Scope 1 and 2 emissions by the Telefónica Group decreased by 57% and 86% respectively, compared to 2015 emissions. Combined, operational emissions decreased by 81%, representing 1,474,036 tonnes of CO₂e less emitted to the atmosphere. This maintains the trend of meeting the target set for 2030, which was updated in 2023, increasing the level of ambition.

Emissions from the value chain (Scope 3) decreased by 31% in 2023 compared to 2016, equivalent to a reduction in emission of 884,961 tonnes of CO_2e in 7 years.

The diagram on this page shows Telefónica's performance against the targets set and how the Group is working to achieve them within the established period. Given that the initial target had already been met, in 2023 the global operational emissions reduction target for 2030 was redefined, increasing from 80% to 90%, a level that demonstrates Telefónica's commitment and continuous improvement.



Reduction of total

Reduction of **Scope 1 and 2**

Reduction of Scope 3

Reduction of Scope 1 and 2 (key ı

> Offsetting of residual e from Scope 1 and 2 (key

Renewable electricity in own

Improved energy consumption per un (energy e

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		Perfor	mance		Target		Progress ⁶
		2022	2023	i X			
l emissions	>	51%	51%	>	90% in 2040	>	57%
emissions ⁷	>	80%	81%	>	90% in 2030	>	90%
3 emissions	>	32%	31%	>	56% in 2030	>	55%
2 emissions 7 markets⁸)	>	94%	95%	>	90% in 2025	>	106%
emissions y markets)	>	61%	65%	>	100% in 2025	>	65%
vn facilities	>	82%	84%	>	100% in 2030	>	84%
unit of traffic efficiency)	>	87%	89%	>	90% in 2025	>	99%
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Telefónica annually calculates the carbon footprint of its operations (Scopes 1 and 2) and its value chain (Scope 3) and draws up an emissions inventory following the methodological guidelines of the GHG Protocol, based on the principles of relevance, completeness, consistency, transparency, and accuracy. For further details, please consult **<u>»the annual consolidated management re-</u>** port, available on Telefónica's website.

The information included in Telefónica's inventory of GHGs corresponds to the entire reporting perimeter of the Company's non-financial indicators. The facilities included in the inventory are base stations, fixed and mobile telephone exchanges, data centres, docking stations, points of presence (POPs) and offices, warehouses, etc.

In order to check the completeness of the calculation process and to increase the credibility and transparency of the reported data, the emissions inventory is verified by an independent third party. In addition, avoided emissions from renewable energy consumption and implemented energy efficiency measures are calculated each year.

In **2023**, the Telefónica Group emitted **2.3 million of tonnes of CO₂e**, equivalent to the annual emissions of around 300,000 households.



Scope 1 122,460 tCO₂e

Scope 2 214,659 tCO₂e

Scope 3 1,970,583 tCO2e

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Telefónica's direct emissions represent approximately 5% of total emissions and come from activities that are controlled by the organisation. This includes both emissions from fuel consumption in stationary sources and in the vehicle fleet, as well as fugitive emissions of fluorinated gases, mainly used in air-conditioning equipment.

Indirect emissions from the generation of purchased electricity account for nearly 10% of total emissions⁹. 95% of the energy consumption is electricity consumption, so for Telefónica it is essential to make efficient use of this resource.

85.4% of the Group's total emissions are indirect emissions of Telefónica's value chain, both upstream and downstream of the organisation, which are a consequence of its activity, but occur from sources not owned or controlled by the Company. Given the relevance of Scope 3 for Telefónica's carbon footprint and aiming at improving the quality of the data and the calculation methodology, in 2021 the Company carried of the 15 Scope 3 categories according to the GHG Protocol, identifying as material those categories representing over 5% of the total Scope 3 emissions. The five Scope 3 categories that have proved material for Telefónica represent 91% of this total. The other ten categories are excluded from Telefónica's GHG inventory because they are not applicable, are reported in other scopes, or represent less than 5% of Scope 3 emissions. In total, the exclusions of six categories from the GHG inventory do not exceed 10% of total Scope 3 emissions as defined by the SBTi's Corporate Net-Zero Standard.









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conditioning equipment

Generators fuel consumption

consumption

Taking a closer look at emissions

• Emissions from operations (Scopes 1 and 2)

In 2023, Telefónica emitted a total of **337,119 tonnes of CO₂e** from its direct operations, representing 14.6% of its total carbon footprint. **Electricity consumption** is the main source of emissions (63.7%), followed by fugitive emissions from air conditioning equipment (21.2%). Finally, fuel consumption in generators and vehicles accounts for 15.1%.

The breakdown of **Scope 1 and 2 emissions** in the main Group companies is as follows:

EMISS (tCC		T. Germany	T. Brazil	T. Spain	T. Argentina	T. Chile	T. Colombia	T. Ecuador	T. Mexico	T. Perú	T. Uruguay	T. Venezuela	Telxius Group	Other companies ⁽¹⁾
Scor	pe 1	5,955	25,524	18,947	23,076	9,405	10,141	1,036	4,304	3,564	483	9,240	9,075	1,708
Scop (mar		234	0	0	121,322	0	5,558	5,352	35,240	0	1,458	40,477	63	4,956
Scope (mar		6,190	25,524	18,947	144,398	9,405	15,699	6,387	39,545	3,564	1,941	49,717	9,137	6,664

⁽¹⁾ "Other companies" consolidates the emissions of the following companies: Telefónica, S.A, Telefónica Tech and Telefónica Global Solutions

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Telefónica is working on various initiatives to reduce its own emissions









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Business travel 1.7%

Energy-related

Taking a closer look at emissions

• Value chain emissions (Scope 3)

Emissions of the supply chain (purchase of products and services and capital goods) are the main source of emissions in Telefónica's value chain, accounting for 63.6% of total Scope 3 emissions, followed by **the use of sold products** by customers, which accounts for 29.4%.

Emissions associated with energy-related activities account for 5.3% of Scope 3 emissions.

Emissions from business travel, although representing only 1.7%, reported because they improve comparability with the sector.

The detail of **Scope 3 emissions** by category and company is shown below:

Total Scope 3	391,940	302,358	529,979	171,831	149,679	83,302	16,290	98,044	111,235	10,308	35,548	8,996	61,074
Cat.11	135,510	50,202	174,449	57,490	68,190	27,907	1,110	17,669	45,148	1,301	0	0	0
Cat.6	2,913	3,142	5,246	3,190	1,442	1,210	569	946	1,169	276	212	2,378	11,590
Cat.3	1,426	6,819	2,063	44,493	1,397	3,465	2,896	9,601	528	1,755	29,194	88	1,500
Cat.2	57,826	55,482	44,707	7,689	13,282	11,704	4,968	1,258	10,926	1,682	4,701	5,460	5,719
Cat.1	194,265	186,712	303,514	58,968	65,368	39,016	6,747	68,571	53,465	5,294	1,441	1,071	42,265
EMISSIONS (tCO ₂ e)	T. Germany	T. Brazil	T. Spain	T. Argentina	T. Chile	T. Colombia	T. Ecuador	T. Mexico	T. Perú	T. Uruguay	T. Venezuela	Telxius Group	Other companies ⁽¹⁾

⁽¹⁾ "Other companies" consolidates the emissions of the following companies: Telefónica,S.A, Telefónica Tech and Telefónica Global Solutions.

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Historical emissions

• Our Scopes 1, 2 and 3 since the base year

Since 2015, the Company has decreased 51% of its total emissions through the implementation of specific Scope 1, 2 and 3 emission reduction actions.

66 Since 2016, Telefónica has been preparing a complete, accurate and transparent GHG emissions inventory, which considers the three scopes and is the basis of our climate strategy.

The GHG emissions evolution can be seen here:

Total	4,666,699	4,184,812	4,064,907	3,876,706	3,586,037	2,821,685	2,608,896	2,283,397	2,307,70
Scope 3	2,855,544(1)	2,855,544	2,803,601(2)	2,751,659 ⁽²⁾	2,699,717	2,146,226	2,072,159	1,930,051	1,970,583
Scope 2	1,524,954	1,047,751	973,792	879,765	657,024	467,587	353,506	221,537	214,659
Scope 1	286,201	281,517	287,514	245,282	229,296	207,872	183,231	131,809	122,460
EVOLUTION EMISSIONS	2015	2016	2017	2018	2019	2020	2021	2022	2023

⁽¹⁾ Telefónica started to calculate its Scope 3 emissions in 2016 financial year. Thus, 2016 value has been assumed for 2015, so that the organisation's total footprint (Scopes 1, 2 and 3) can be calculated for the purposes of its evolution over time.

⁽²⁾ In 2021, Telefónica carried out a new screening of the 15 Scope 3 categories under the GHG Protocol and implemented methodological improvements, which led it to recalculate and verify the emissions of the base year and the most recent years (2019-2021), without recalculating the Scope 3 emissions of the 2017 and 2018 financial years. The values shown are an extrapolation based on recalculated and verified emissions for 2016, 2019, 2020, 2021 and 2022.

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Risks and opportunities Identified risks and opportunities (R&O)

66 The increased frequency and severity of extreme events can have a major impact on those organisations that are not prepared for the threats that climate change brings.

The Intergovernmental Panel on Climate Change (IPCC)'s Sixth Assessment Report¹⁰ states that climate change will cause an increase in temperatures and extreme weather events, affecting ecosystems, public health, and the global economy. According to the report, ocean warming over the last century has been the greatest since the last interglacial period and sea level rise has been the fastest in the last 3,000 years.

The increased frequency and severity of extreme events can have a major impact on various economy sectors and specifically on those organisations that are not prepared for the threats that climate change brings upon their business model, assets, and infrastructure.

Due to the already irreversible effects of climate change, companies are assessing the risks and opportunities that climate change creates for their business. The Task Force on Climate-related Financial Disclosures (TCFD)¹¹ recommendations are currently the most internationally recognised methodology for analysing climate-related risks and opportunities.

Telefónica analyses the risks and opportunities of climate change in accordance with the recommendations of the TCFD. The analysis helps to build climate change into long-term business decisions, seeking to minimise risks and maximise opportunities.

The detailed assessment has focused on the operations in Spain, Germany, and Brazil, due to their strategic relevance and because they represent more than 70%¹² of the volume of revenue.

The fixed and mobile network business lines have been analysed, including more than 100,000 physical assets between telecommunication towers, data centres, switch centres, and programming and broadcasting assets related to television, as they are the most representative of the Company's activity and those where climate change may have the greatest impact. These results have been extrapolated to the rest of the operations to provide an overall quantitative value of the impact of the potential risks and opportunities associated with climate change.

10 The full report, as well as the technical summary and the summary for policymakers are available at: https://www.ipcc.ch/ report/sixth-assessment-report-working-group-ii/

11 The TCFD is a working group created by the Financial Stability Board, which establishes a framework with recommendations for the identification, assessment and reporting of climate-related risks and opportunities, enabling stakeholders, especially shareholders, insurers, and investors, to understand companies' exposure to climate risks and opportunities linked to business strategy and risk management. The report of recommendations on climate-related financial disclosures is available on the TCFD website: https://www.fsb-tcfd.org/ recommendations/

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The physical risks have been assessed taking into consideration projections of climate variables for two different climate prediction or CO₂ concentration scenarios (Representative Concentration Pathway - RCP) defined by the IPCC, for the 2030-, 2040- and 2050-time horizons.

- > RCP2.6 scenario: aligned with the Paris Agreement, where the tempera-ture increase by the end of the century does not exceed 2°C compared to pre-industrial levels.
- > RCP8.5 scenario: business-as-usual scenario, where the temperature (\mathcal{O}) increase at the end of the century is around 4°C.

12 At the end of December 2023, revenues from Spain, Germany and Brazil accounted for 76% of the Telefónica Group's total revenues.











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Identified risks and opportunities (R&O)

Quantitative and qualitative analysis

The quantitative and qualitative analysis of **risks and opportunities** is based on the following information:



Projection of climate variables based on RCP2.6 and RCP8.5 scenarios

such as temperature increase, rainfall, or number of days with extreme temperatures.

Considering the information on which the quantitative and qualitative analysis is based, Telefónica estimates the likelihood of occurrence of each of the identified physical risks, their possible impacts, and their economic valuation. The result is an expected level of exposure for each type of risk in each of the scenarios analysed.

In the RCP2.6 scenario, the risks relate mainly to transitioning to a decarbonised economy, e.g., from higher electricity prices or tighter measures to limit GHG emissions.

In contrast, in the RCP8.5 scenario, the most relevant risks are those associated with changes in climate variables, both acute (increase of extreme weather events such as floods) and chronic (temperature and precipitation variability).





Projection of non-climate variables based on the IEA and **NGFS NZE 2050** scenarios

such as the price of electricity or the price of CO₂ emissions.



Projection of variables not based on scenarios

available at Telefónica or provided by external sources, such as the increase in IoT connections or the future forecast of Telefónica's GHG emissions.



Telefónica's physical assets

with their respective geolocation and economic valuation, which are cross-referenced with scenario-based projections of climate variables.





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Risks and opportunities Identified risks and opportunities (R&O)

66 The identified risks and opportunities, their impacts and their financial assessment are the origin of the climate strategy defined by Telefónica.

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Meanwhile, to assess transition risks and opportunities, we have used the IEA NZE 2050 scenario. This scenario, aligned with the Paris Agreement, describes the efforts needed to reduce GHGs and reach net zero emissions by 2050 globally. This scenario has been complemented with information from the equivalent **NGFS**¹³ scenario in order to provide a more comprehensive analysis of Telefónica's exposure to climate change. The analysis under this scenario considers different variables established in the model, such as the future carbon price and the pricing of electricity.

The result of the analysis shows that the market transition risk is the most significant one due to the high consumption of electricity that the Company needs for its operations, so that an increase in the price of electricity due to higher prices of energy sources would have a major impact on the total expenditure of the Group.

Given the characteristics of Telefónica's business, and its ambitious climate strategy, the scenarios analysed would primarily involve significant opportunities, mainly associated with a growth in digital solutions to help customers decarbonise their activity.

The results of the quantitative analysis show that the economic benefits associated with the climate-related opportunities are almost four times higher than the physical and transition risks.

The identification of the risks and opportunities linked to climate risk has been the starting point for the definition of Telefónica's decarbonisation strategy, which is articulated in models with specific actions for addressing the main risks and opportunities.

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Scenario	Description	Application
RCP 2.6	Aligned with the Paris Agreement , where the temperature increase by the end of the century does not exceed 2°C compared to pre-industrial levels.	Physical risk a
RCP 8.5	Business-as-usual scenario, where the temperature increase at the end of the century is around 4°C .	Physical risk a
IEA NZE 2050	Scenario aligned with the Paris Agreement , which describes the efforts needed to reduce GHGs and reach net zero emissions by 2050 globally.	Transition risl opportunity a







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Risks and opportunities Identified R&O

The main physical and transition risks identified by Telefónica are shown below, along with their financial impact and their management strategy, considered in some of the models of this Climate Action Plan: Risks

Physical risks

Chronic risks:

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Increased electricity consumption in cooling associated with rising global temperatures.

Possible increase in electricity prices during periods of drought, especially in countries dependent on hydro generation.



Acute risks:

Business continuity risk and increased cost of replacement of damaged assets due to increased occurrence of extreme weather events, such as floods, storms, and fires.





Policy and legal risks: Price increases for certain products and services due to direct or indirect CO₂ taxes or charges (energy, transport, etc.).



Market risks: Increase in energy OpEx due to higher CO2 prices.



Reputation risks: Increasing demands from stakeholders (analysts, investors, customers) and increasing costs of CO₂ offsetting.

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The main opportunities for Telefónica

linked to climate change, their financial impact and the way the organisation manages them are detailed below:

Opportunities

Opportunities



Resource efficiency:

Cost optimisation in networks and operations through better energy management.

ECOSMART $\mathbf{4}$

Products and services:

Connectivity and digitalisation solutions are fundamental for decarbonising other sectors of the economy and allowing Telefónica to access new business opportunities.



Energy sources:

Reduced exposure to energy price volatility and savings in energy OpEx, due to the use of renewable energies as opposed to conventional energy.



Sources of sustainable financing :

Access to new sources of financing:

- Capital markets and bank financing.
- Diversification of the instruments used (bonds, hybrids, loans) with criteria linked to sustainability.







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Financial impact of climate-related risks and opportunities





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Risk management and Adaptation Plan

The risks associated with climate change are controlled and coordinated under Telefónica's Global Risk Management Model. In order to mitigate their materialisation, Telefónica has various all-risk insurance international programmes at local and global level, covering material losses, damage to assets and loss of revenue and/or customers.

Telefónica's climate strategy also includes a Climate Change Adaptation **Plan** (hereafter the Adaptation Plan), with several areas of action that intend to limit its exposure to both physical risks and those risks arising from the transition to a low-carbon economy. It also works towards increasing the Company's resilience to climate change, so that it can continue to provide its services in an unfavourable climate context.

The Adaptation Plan considers the climate risks identified in the climate risk analysis, which Telefónica conducts annually based on the TCFD recommendations.

The main measures contained in the Adaptation Plan, which is applicable to 100% of Telefónica's operations, are as follows:

Business Continuity Plans in the event of climate disasters which, according to Telefónica's climate vulnerability study, will occur mainly in certain regions of Latin America (especially Brazil and Peru, followed by Colombia and



Chile), and could affect the Company's infrastructure elements that support fixed and mobile connectivity in these countries.

To protect Telefónica's network assets, the Corporate Risks and Insurance Division conducts modelling for all locations in all countries where it operates, which it cross-checks with historical information on extreme weather events, using the relevant IT systems (RMS, EQCat, Katrisk, etc.). As a result of this process, the probabilities of potential losses under different scenarios and return periods are determined. The analysis of this data helps to define the most efficient structure to determine the limits and retentions of the property damage insurance programme and the loss of benefits.

To manage the climate-related physical risks, Telefónica has a Global Business Continuity Regulation, included in the Adaptation Plan, which prescribes preventive risk management, ensuring the maximum resilience of the Company's operations in the event of any possible interruption. Each country's business continuity plans for the relevant services/processes set out how to restore essential activities that may be disrupted. In addition, the crisis management system which manages high-impact threats, has a Global/Local Crisis Committee, which is activated when necessary and has the support of specialists for each type of incident (e.g., natural disasters).

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The crisis management plan acts in four phases:

• Alert phase: the incident is initially assessed, escalated and the Committee is activated.

- Assessment phase: a diagnosis of the situation is carried out.
- Development phase: the necessary decisions are taken to manage the situation, activating the pertinent plans.
- Completion phase: crisis closure is declared, lessons learned and improvements are identified, and action plans are defined.

Energy Efficiency Plan, which promotes projects to reduce energy consumption. This plan includes activities aimed at reducing refrigeration consumption, such as free cooling, as well as the upgrading of equipment with higher efficiency, the analysis of obsolescence, legacy network shutdowns, infrastructure compacting, implementation of Power Saving Features (PSFs) and the inclusion of technical specifications in the procurement of network equipment so that it can operate at higher temperatures.









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In this way, it will be possible to lower power consumption and reduce the equipment failure rate, which are expected to increase in the future as a result of the average increase in temperatures and the increased likelihood of heat waves. In addition, consolidation and compacting projects are being carried out, as well as projects developed under a new disruptive business model called Energy Savings as a Service (ESaaS), which is based on an agreement with a specialised supplier that, after the energy solution is defined, invests, operates, maintains, and ensures the savings are made. This service, which covers different initiatives such as the replacement of cooling equipment, lighting systems and electricity generation, is paid for by sharing the savings resulting from the measures implemented.

Renewable Energy Plan, focused on progressively increasing the signing of long-term power purchase agreements (PPAs) and self-generation, aimed at reaching the target of using 100% renewable electricity by 2030. This will help to reduce progressively the purchase of renewable energy certificates (REC) and to increase savings in electricity OpEx, as well as making the assets more resilient, as they are less dependent on conventional energy. The Plan reduces the risk associated with growing energy costs from fossil fuels by increasing self-generated electricity projects. In addition, the signing of PPAs will ensure a supply of renewable energy at stable prices, not affected by market volatility.

Pillar of the Adaptation Plan	Related physical risk	Main measures implemented	Associated assets
Business Continuity Plan	• Extreme weather events	 Inventory of assets and business processes to determine the probabilities of possible losses in different scenarios and payback periods. Business continuity plans by country, with definition of the process for restoring essential functions in the event of interruption. Crisis management. Implementation of smart metering systems. Automatic systems, allowing geographical identification of assets. Services to monitor the operation of equipment/assets, optimising maintenance, avoiding breakdowns. Maintenance of the current network infrastructure (fixed and mobile), transmission and switching elements. Network of Incident Response Centres (CSIRT) at global level. 	
Energy Efficiency	 Variability of the temperature 	 Set points for maximum and minimum temperatures. Modernisation and optimisation of lighting systems. Liquid cooling, free cooling. Automatic shutdown and monitoring systems. Hot air conversion. 	
Plan	Heat waveCold snap/frost	 Hot and cold corridors. Boiler control. Infrastructure modernisation. 	
		 More efficient planning of base stations. PSFs implementation in the access network. Legacy network shutdowns. Infrastructure compacting. Base station sharing. Heat-resistant batteries. 	
Renewable Energy Plan	DroughtVariation in rainfall	 Implementation of photovoltaic generation systems. Efficient use of water in cooling systems. Contracting renewable energy with PPAs. 	

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The Adaptation Plan proposes the following adaptation measures for each of the assets analysed:













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Circular economy Towards Zero Waste

The implementation of circularity criteria in business models promotes both the manufacture of products with eco-design criteria and their reuse and recycling at their end-of-life stage. It also contributes to reducing the resources depletion risk, gives continuity to the supply chain (components, critical raw materials, etc.) and helps to reduce GHG emissions.

According to the World Resources Institute (WRI) and the Circularity Gap **Report¹⁴**, nearly half the emissions that cause climate change come from the production and use of everyday items. Hence, the circular economy is seen as a crucial complement to energy efficiency actions, to painting a complete picture of a resilient, net zero world which achieves the Paris Agreement targets.

Every year, more than 100 billion tonnes of resources are consumed and only 7.2%¹⁵ are recycled or given a second life, a figure which reached 9.1% in 2018. Doubling this value is estimated to have the potential to reduce global GHG emissions by 39% and reduce resource use by 28%.

The circular economy represents great opportunities, based on the reduction of impacts from design, the extension of the useful life of products, the recovery of raw materials or the dematerialisation of the economy thanks to digitalisation. Specifically, **Circularity Gap Report**¹⁴, estimates that the telecommunication sector has the potential to reduce the emission of around 0.19 gigatonnes of CO₂e globally and the use of 0.33 gigatonnes of virgin materials through digitalisation, cloud and IoT devices, and the designing of smaller and lighter devices.

In order to facilitate the return of resources and ensure that its waste is not incinerated nor ends up in landfill but is reused or transformed into raw materials that are then reintroduced into the value chain, Telefónica, as part of its circular economy strategy, has defined the following targets to become a Zero Waste company by 2030.

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Total waste generated

(Cables, WEEE, batteries, among others)







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Circular economy Towards Zero Waste

Telefónica integrates its **circular economy strategy** on three levels:

In its own operations, associated with the reuse and recycling of resources.

In its value chain model > involving its main suppliers.

In its **commercial model >**, with the buyback and sale of refurbished phones, among other initiatives.

Circular economy targets

Moving towards becoming a Zero Waste company:

Rethink









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Neutralising and offsetting residual emissions







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Neutralising and offsetting residual emissions

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66 Telefónica will neutralise its residual emissions by purchasing carbon credits or developing its own emission capture or absorption projects.

According to the SBTi's Corporate Net-Zero Standard, achieving 'net-zero emissions' is a balance between the emissions a company produces and the emissions it removes or eliminates from the atmosphere. The commitment to achieve net zero according to SBTi includes two premises:



> **Reduce GHG emissions** to a level that is consistent with the 1.5°C scenario of the Paris Agreement.

> Neutralise residual emissions by permanently removing an equivalent amount of CO₂ from the atmosphere, through carbon credits or developing nature-based solutions.

The Taskforce on Scaling Voluntary Carbon Markets (TSVCM) estimates that, to be able to meet private sector decarbonisation commitments, the current voluntary carbon offset market needs to grow at least 15-fold by 2030 and 120fold by 2050.

The Integrity Council for the Voluntary Carbon Market (ICVCM¹⁶), states that high integrity carbon credits can unlock the required financing to ensure a transition to a low carbon economy. It also expresses that we need all available tools for the global average temperature to rise no more than 1.5°C above pre-industrial levels.

Telefónica's commitment is to achieve net zero emissions from its operations and value chain globally by 2040. Telefónica has also defined for its operations in Spain, Germany, and Brazil, as from 2025, the interim target of supporting activities that mitigate climate change in an amount equivalent to its Scope 1 and 2 emissions.

Telefónica will neutralise its residual emissions only when it has reached its reduction target (at least 90%) by 2040, through the purchase of carbon credits or the development of emission removal or sequestration projects. Before that date, Telefónica will invest in projects to deliver Beyond Value Chain Mitigation

16 In 2023, the ICVCM published 10 Core Carbon Principles that set out the key principles of high-integrity carbon credits. More information at: https://icvcm.org/core-carbon-principles/

17 GHG emission reductions or removals are additional if they would not have occurred in the absence of the incentive created by the revenue from the carbon credits generated by the project.

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(BVCM), both in projects that generate GHG emission reduction credits and in projects that remove carbon dioxide from the atmosphere.

Removal projects must meet the following internally established criteria:

> Carbon sequestration projects, preferably using nature-based solutions, such as reforestation, afforestation, or ecosystem restoration (forests, wetlands, grasslands, oceans) with native species or soil carbon enhancement on agricultural land.



> Demonstration of **additionality**¹⁷.



> Demonstration of long-term impact¹⁸.

18 If there is a risk of non-permanence, the ICVCM recommends taking measures to address this risk and offset carbon reversals.









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REDD+ project financing mitigates climate change, prevents biodiversity loss and boosts the development of disadvantaged communities, contributing to a fair transition.

> Projects with environmental and social co-benefits, which contribute as far as possible to the achievement of the Sustainable Development Goals (SDGs)¹⁹ and which respect the rights of local communities and indigenous peoples.

> Projects certified with nationally or internationally recognised accreditation schemes²⁰ and verified by an independent accredited third party. These programmes must have a registry to uniquely identify, record and track the carbon credits issued.

> Preferably located in the geographies in which Telefónica is present.

Telefónica is also inspired by the "Oxford Offset Principles"²¹ to define its emissions offsetting strategy, so that it is initially committed to reducing its emissions and using high-quality credits to exclusively neutralise residual emissions. In the same way, Telefónica will periodically review the offsetting strategy as best practice progresses, to evolve the portfolio from emission reduction credits to carbon removal credits and to progressively promote long term storage methodologies.

To design the portfolio before 2040, Telefónica, in line with the four principles promoted by SBTi²², is committed to activities that provide the maximum mitigation impact in the short term, help avoid climate tipping points, have co-benefits for biodiversity and are located in regions with relatively low per capita emissions but with greater vulnerability to the effects of climate change. In this regard, Telefónica believes that, in addition to carbon removal credits from carbon sequestration projects, it should continue to use carbon credits from projects to reduce emissions from deforestation and degradation, which also contribute to slowing deforestation in certain regions where Telefónica has operations.

19 The Sustainable Development Goals (SDGs), defined in the United Nations 2030 Agenda, are the strategic framework that guides Telefónica's commitments to society and environmental protection, as well as its contribution to socio-economic development.

20 It is important that these projects follow a robust methodology validated by international accreditation programmes with effective governance to ensure transparency, accountability, continuous improvement and overall quality of carbon credits. Some of these accreditation programmes could be Gold Standard, Verified Carbon Standard (VCS), American Carbon Registry (ACR), Climate Action Reserve (CAR). National schemes, mainly from European countries, could include the Spanish Climate Change Office registry as well as the Peatland Code or the Woodland Carbon Code (WCC), the latter of which are both from the UK.

21 https://www.smithschool.ox.ac.uk/sites/default/files/2024-02/ Oxford-Principles-for-Net-Zero-Aligned-Carbon-Offsettingrevised-2024.pdf

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This criterion follows the recommendations of SBTi's Corporate Net-Zero Standard and the Draft Consensus Statement on High Quality Tropical Forest Carbon Credits²³, drawn up by organisations such as WRI, WWF, EDF or IPAM Amazonia.

In any case, such emission reduction credits must meet the following criteria:



> **Be high-quality credits,** supporting the conservation of existing forest carbon stocks and sustainable forest management.



> Be located in countries with a high rate of deforestation²⁴, as, in these cases, the projects that generate this type of credit near-term incentives to maintain remaining intact forests and support indigenous peoples and local communities.

22 More information in the report "Above and Beyond: an SBTI report on the design and implementation of beyond value chain mitigation (BVCM), available at https://sciencebasedtargets.org/resources/files/Aboveand-Beyond-Report-on-BVCM.pdf

23 Draft version available at: https://merid.org/ draft-forest-credit-statement-espanol/

24 As in the case of Brazil, Peru or Colombia, according to Global Forest Watch and the World Resources Institute (https://research. wri.org/es/gfr/latest-analysis-deforestationtrends).







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> Comply with the previously defined criteria: demonstrate additionality and long-term impact, include environmental and social co-benefits as far as possible, be certified to recognised standards and verified by an accredited third party.

As such, funding these projects not only contributes to mitigating climate change and preventing biodiversity loss, but also drives sustainable development of more disadvantaged communities and supports their economic diversification, which are key to a just transition to enable a low-carbon economy.

Support for such projects that generate emission reduction credits by preventing deforestation also contributes to the first major agreement at the COP26 climate summit, whereby the countries with the largest forest masses (which are also the biggest deforesters) committed to stop massive logging in their states and end deforestation by 2030.

The open letter Global South Voices in Support of REDD+, signed by groups and organisations working to support indigenous peoples²⁵, makes clear that in order to halt deforestation and keep global warming to 1.5°C, climate finance should be scaled up and channelled to indigenous-led conservation efforts, and that REDD+ projects are one of the few proven ways for them to access needed financial resources.

25 These groups include the FSC Indigenous Foundation, the Peoples' Forest Alliance (PFP) and the Mesoamerican Alliance of Peoples and Forests (AMPB). More information at https://www.peoplesforestspartnership.org/post/open-letter-global-south-voices-in-support-of-redd

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Milestones and targets

On the path towards global net zero emissions, Telefónica has defined interim targets for the short (2025) and medium term (2030), with the aim of continuing to cut emissions in all three scopes, while offsetting residual emissions to complement its strategy, and moving from offsets that represent avoided or reduced emissions (compensation or mitigation) to offsets that represent carbon removals (neutralisation), in order to have a **net impact on climate**.



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Since 2015, the Company has reduced 51% of its total emissions thanks to the implementation of specific actions to reduce emissions in Scopes 1, 2 and 3.







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The road to net zero Milestones and targets

66 Telefónica's climate strategy has led to a significant reduction in GHG emissions in its three scopes, compared to the base years.



The implementation of actions defined in Telefónica's climate strategy has led to a considerable reduction in GHG emissions in its three scopes, compared to the base years. The main results derived from projects such as the efficient transformation of the communications network, the use of renewable energies, the incorporation of circularity criteria or engagement actions with suppliers are shown below:

Milestones achieved

57% reduction in Scope 1 emissions from a 2015 base year, which entails **163,741** tonnes of CO₂e less in eight years.

86% reduction in Scope 2 emissions from a 2015 base year, equivalent to 1,310,295 tonnes of CO₂e.

As a result, Telefónica's operational emissions reduction is **81%** from base year.



Decrease in value chain emissions (Scope 3) by 31%, from a 2016 base year, meaning 884,961 tonnes of CO_2e less in seven years.

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Improved energy efficiency, achieving a ratio of energy consumption per unit of traffic of 89% in 2023 compared to 2015. In this period, energy consumption decreased by 8.6% and data traffic increased by 8.6.

Improvement of the PUE (Power Usage Effectiveness) of our main data centres, which reached a value of **1.69** in 2023.

Implementation of 1,574 energy efficiency projects since 2010, which have generated savings of more than €2.2 billion and 13,846 GWh and avoided 4.03 MtCO₂e emissions to the atmosphere.

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100% renewable electricity consumption in European markets, Brazil, Peru, and Chile. Globally 84% (3,851,889.44 MWh).

Thanks to the Renewable Energy Plan, 82% of the energy consumed comes from renewable **sources** (4,921,777.53 MWh out of 6,011,860.84 MWh).

74% of the electricity consumed (373,363 MWh) in the **data centres** we operate (both our own and those of third parties) comes from renewable sources.

Distributed generation in Brazil and signing of long-term power purchase agreements in Spain and Germany to guarantee electricity supply from renewable sources for more than ten years.



Offset 65% of 2023 operational emissions from Germany, Brazil, and Spain, through the purchase of more than 33,000 high-quality carbon credits.



€18.8 billion in sustainable financing²⁶ at year-end 2023, which has helped the deployment of more efficient networks.









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Key components of the Climate Action Plan

Telefónica's Climate Action Plan is made up of **five key models** to achieve the short-, medium- and long-term targets.

The **operational model** seeks to optimise Telefónica's internal processes to reduce Scope 1 and 2 emissions and neutralise residual emissions.

The **value chain model** aims to reduce Scope 3 emissions, through cooperative action undertaken with suppliers and manufacturers, and to implement environmental criteria in product design and circular economy criteria in purchasing processes.

With the **commercial model**, Telefónica helps to reduce the emissions of its B2B and B2C customers through connectivity and digital solutions and drives awareness-raising initiatives aimed at getting customers to incorporate environmental issues into their purchasing decisions.

Finally, the **economic model** comprises the sustainable finance model and internal carbon pricing as decision-support drivers.



These four models are included within Telefónica's **governance model**, which seeks to communicate its strategy transparently, engage all levels of the organisation to achieving climate change targets and influence society by establishing partnerships with the most significant stakeholders for the Company.



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Governance and advocacy model	 Assignment responsibilities and climate change governance mechanisms. Variable remuneration aligned with the achievement of climate change targets. Environmental and climate change internal regulations. Internal engagement actions related to sustainability. Transparent reporting, avoiding greenwashing. Participation in sector working groups, strategic partnerships and membership of internatic climate change initiatives.
ت کرکرک Operational model	 Network transformation. Replacement of generator sets. Fuel substitution. Installation of lithium batteries. Fleet replacement and reduction of travelling. Cooling equipment, preventive maintenance, leakage control and replacement of refrigeration. Energy efficiency projects. Shift towards renewable energies: PPA, self-generation. Offsetting/neutralisation.
Value chain model	 Requirement to set emission reduction targets (SBTi) for strategic suppliers. Supplier Engagement Programme. Carbon Redcution Programme. Joint Alliance for CSR. 1.5 Supply Chain Leaders / SME Climate Hub. Extension of the use of materials and equipment. Design with environmental criteria. Procurement with circular criteria. Eco Rating.
Commercial model	 Eco Smart services. Emissions avoided. Eco Rating. Buyback and sale of refurbished mobile phones. Commitment to transparency.
Economic model	 Financial analysis of climate change. Sustainable financing strategy. European taxonomy of sustainable activities. Sustainable financing. Carbon pricing.







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· Operational model >

- · Value chain model >
- Commercial model >
- · Economic model >
- · Governance and advocacy model >









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Operational model

66 Telefónica's ratio of energy consumption per unit of traffic has improved by 89%, compared to 2015, and has led to savings of more than €500 million through the implementation of energy efficiency and management projects.

Targets



90% reduction

of Scope 1 and 2 emissions in key markets by **2025**, from a 2015 base year.



90% reduction of Scope 1 and 2 emissions globally by **2030**, from a 2015 base year.

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Improve energy consumption per unit of traffic (MWh/PB) by 90% in 2025, compared to 2015.



100% renewable electricity in own facilities by **2030**, in all Group operations. The telecommunications sector plays a significant role in tackling climate change, as it is continuously working on the development of products and services that enable the transformation of business models, boosting the optimisation of resources through innovation and digitalisation. However, energy consumption for network operation and for data usage and processing must be considered for this digital transformation, as it is the main input for the telecommunications sector.

The transition to a decarbonised economic model requires companies to focus on improving operational efficiency, using resource efficiency, renewable energy, and production efficiency as levers for change. A strategic vision of decarbonisation in the operational model decouples business growth from GHG emissions and leads to improved financial performance, positioning and competitiveness of the Company.

One of Telefónica's priorities within its climate change strategy is to reduce its operational emissions, decoupling GHG emissions from business growth. Keeping electricity consumption stable despite the increase in the digitalisation of society and data traffic on networks is one of Telefónica's greatest challenges. The Company has been addressing this successfully thanks to its Energy Efficiency and Renewable Energy Plans, which include numerous actions to minimi-

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se energy consumption, ranging from self-generation to power plants and air conditioning equipment renovation projects.

In fact, thanks to the implementation of energy efficiency projects, Telefónica has reduced energy consumption by 8.6% compared to 2015, despite the fact that the traffic managed by its networks has increased 8.6-fold.










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The Renewable Energy Plan, which aims to reach 100% by 2030, through the signing of long-term power purchase agreements (PPAs) and the progressive increase in self-generation, is another major decarbonisation lever in Telefónica's roadmap. This will allow us to gradually reduce the purchase of renewable certificates of origin, in turn generating significant savings in electricity operating costs (OpEx).

As part of the Autonomous Network Journey programme, which defines how to build the network of the coming years, in 2022, Telefónica launched the Sustainable Platform Design project. This project, which prioritises both the deployment of new, more efficient technologies and legacy shutdowns and promotes circular economy, aims at making the network sustainable by design, i.e., energy efficient and low carbon. In this way, the Company will be able to deal with the increase in traffic expected in future years without increasing the associated GHG emissions.

of net zero emissions.



Renewable energy consumption by type

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Within Telefónica's Sustainable Platform Design project, there are five workstreams aimed at improving our energy efficiency, optimising energy costs, and making progress towards achieving our goal

Works	streams	Scope
Şç	P6.SPD.WS1. Technology	Deploy our networks with sustainable criteria integrated from the design phase, such as: PSFs smart site design, cloud, UNICA.
	P6.SPD.WS2. Legacy switch-off	Accelerate the switch-off of legacy networks (fixe mobile), reducing their electricity consumption.
	P6.SPD.WS3. Operations	Operate our networks optimising equipment per to achieve enhanced energy efficiency.
(((0)))	P6.SPD.WS4. Infrastructure innovation	Implement infrastructure technology innovations efficient and agile way, such as liquid cooling, fib or 5G deployment.
	P6.SPD.WS5. Energy purchase	Purchase energy to obtain the best market prices use renewable energies (PPAs, iRECs, smart met platforms)







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Telefónica also aims for more efficient telecoms networks to reach 90-97% mobile broadband coverage of the rural population in its core markets by 2024, strengthening its commitment to the development of rural areas and local economies, as well as the just transition.

In 2023, 170 energy efficiency and management initiatives were rolled out in Telefónica's networks and offices, saving 281 GWh, thereby avoiding the emission of more than 45,300 tonnes of CO2e into the atmosphere. The implementation of these projects since 2010 has contributed to avoiding the emission of more than 4 million tonnes of CO_2e into the atmosphere, in addition to a financial saving of more than \in 2.2 billion for the Company.

The key actions taken and planned for the future, as well as their estimated quantitative contributions to achieving our operational GHG emission reduction targets, are presented below.



* The planned emissions reduction has been calculated with the AR5 GWPs, to compare the expected reduction with 2023 verified emissions. From the 2024 inventory onwards, the AR6 GWPs will be used. With these new emission factors, despite a decrease in activity data, we expect fugitive emissions of fluorinated gases to increase by around 4,000 tonnes of CO_2e by 2030.

Key actions to achieve our operational emissions reduction targets by 2030







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Key actions

• Combustion in stationary sources

How?

Saving, from 2024 to 2030, 10% per year in fuel consumption in the Company's operations, by applying the following measures:

> Installation of hybrid self-generation systems: hybrid PV self-generation systems avoid the use of fossil-fuelled generators at isolated base stations. By the end of 2023, there are 484 mobile network base stations running on renewable energy.

> Replacement of heating fuels: replacing diesel with natural gas or propane in boilers reduces the emissions associated with heating the premises, as they generate fewer emissions for the same heat production.

> Replacement of fuels for generators: the substitution of fuels such as diesel by other less polluting fuels, such as hydrogen or methanol, reduces the emissions associated with the generation of electricity using generator sets. In 2023, Telefónica conducted two analyses which confirmed that optimising the use of gensets led to emission reductions. The study carried out at mobile off-grid sites showed theoretically that metahnol fuel cells as a complement to the solar panels and batteries already in use would allow to eliminate the use of generators at these sites at a reasonable cost. Another analysis was performed at Switching Offices, where generators have always to be used as they ensure continuity of service; at these sites, diesel was replaced by less polluting fuels such as HVO, a biofuel of renewable origin.

> Reduction of fuel consumption: the extension of battery autonomy, the implementation of BaaS (Battery as a Service) services, demand-driven capacity adjustment and the replacement of generator sets reduce diesel consumption and maintenance costs. In early October 2023, the last 24/7 generator site in Ecuador was transferred to on-grid systems, enabling average savings of 984 litres of fuel per month, which translates to almost 12,000 litres and 32 tonnes of CO₂ per year.

> Installation of lithium batteries: the implementation of emergency genera-

tor start-up delay logics at sites with frequent power outages using high cycling (lithium) batteries reduces generator operation and saves fuel. In Colombia, ten sites were implemented under the ESaaS model and eight sites with the Li-Ion battery cycling project, with an annual fuel reduction of 125,582 litres, thus disappearing 100% of the sites that operated 365 days a year with a generator.







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• Refrigerant gases

How?

Reducing, from 2024 to 2030, the recharging of refrigerant gases (in kg) by 8%, through the following actions:

> New air-conditioning solutions: measures have been implemented such as the increase in temperature set points, the implementation of free cooling for air-conditioning technical rooms with external air and technological innovations such as liquid cooling by immersion, a disruptive model for cooling servers by immersion in an electrically non-conductive, non-toxic, and biodegradable liquid. Additionally, in 2023, a proof of concept based on the use of chillers with magnetic levitation compressors was deployed in Spain. The use of this technology will improve the efficiency of the equipment at partial loads by up to 35%, as well as reducing emissions due to refrigerant leaks, as the technology works with refrigerant gases with a GWP (Global Warming Potential) value of 1 (much lower than the typical values of refrigerants, which range between 200 and 2,000).

> Equipment shutdown: thanks to the network transformation process, a shutdown of plants and compaction of technical rooms is being carried out. This allows air-conditioning equipment to be shut down and dismantled, or used for less time, thereby reducing the risk of refrigerant gas leakage.

> Leakage control: the use of digitalisation for the process of managing fuel consumption data from operations and recharging refrigerant gases optimises the control of gas and refrigerant leakage. In Brazil, the digitalisation of the management process has increased the reliability of the data by continuous monitoring, which has led to a 15% reduction in refrigerant gas recharges of 2023. This also makes it possible to implement new projects to reduce Scope 1 emissions.

> Gas replacement: when purchasing new air conditioning equipment, as well as when replacing the refrigerant gases in existing equipment, the GWP is considered, aiming for refrigerants with lower values. Telefónica Spain is continuing the "Apagado Milles" project, which consists of adapting the cooling equipment to the real load and shutting down around 1,000 pieces of equipment. This action achieved savings of 20 GWh in 2023.

> **Preventive maintenance:** improved preventive maintenance of air-conditioning equipment reduces refrigerant gas leakage.









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• Combustion in the vehicle fleet



How?

Saving, from 2024 to 2030, 5% in fuel consumption in the vehicle fleet by implementing these actions:

> Vehicle replacement: the replacement of fossil fuel vehicles by electric or biofuel vehicles (such as ethanol) in Telefónica's fleet reduces Scope 1 emissions.

> Reduction of travelling: the migration of the network from copper to fibre optic reduces the number of trips by maintenance staff to address technical problems in the networks.

> Gradual reduction of the vehicle fleet.







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• Energy Efficiency Plan

How?

With the following actions, defined in our Energy Efficiency Plan, which reduce electricity consumption:

> Network transformation: projects related to the shutdown of legacy networks, such as 2G and 3G, equipment compaction, network reconfiguration and replacement of the copper network with fibre optics, 85% more efficient in customer access. In 2020 Telefónica presented the results of a real-world-measurement-study showing that 5G technology is up to 90% more efficient than 4G in terms of energy consumption per unit of traffic²⁷. In 2023 it was concluded, after several benchmarking exercises, that energy efficiency in virtualised environments is up to 27% more efficient compared to legacy environments. In line with the copper closure plan for 2024, Telefónica Spain has shut down 4,272 switching sites from 2014 to the first quarter of 2024. Likewise, operations in Latin America are moving forward with multi-layer switch-off; for example, Telefónica Uruguay had shut down 100% of the 2G mobile network (including controllers) by January 2024.

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> Modernisation of obsolete equipment: replacement with more efficient equipment, incorporating technological innovations in both electrical infrastructure elements (rectifiers/power plants/external cabinets, UPS) and air conditioning infrastructure elements (chillers and air treatment units).

> Compacting and consolidation: the increase in the level of occupancy of technical spaces (IT rooms), reaching levels close to 80%, will allow Telefónica to achieve the optimum performance of its facilities in terms of efficiency. In addition, Telefónica will carry out a study of its existing infrastructure elements in order to categorise sites according to their reliability and efficiency. This will allow the Company to carry out consolidation projects and move loads from less efficient buildings to more efficient buildings. Telefónica Germany has launched a project to consolidate its data centres and core switching sites, which will not only strengthen its network but also reduce electricity consumption.

> Power Saving Features (PSFs): implementation of energy consumption op-

timisation systems at off-peak times demonstrates a reduction in energy consumption of up to 30% at off-peak times, without compromising network quality. In FY2023, Telefónica implemented six new PSFs functionalities between

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Thanks to the implementation of energy efficiency projects, we have succeeded in reducing energy consumption by 8.6% compared to 2015, even though the traffic handled by our networks has increased 8.6 times.



operations in Germany, Brazil, and Spain.

> Artificial intelligence and machine learning tools: as a result of the use of artificial intelligence tools and machine learning algorithms that act during a certain period of time, known as the learning phase, it is possible to predict future traffic behaviour and thus enable the activation of cell shutdowns 24 hours a day. In 2023, AI/ML platforms were deployed in Germany with savings (additional to the savings from the 4G/5G PSFs already active in the network) of up to 5%.

> Other energy efficiency actions: replacement of fluorescent lighting with LED technology, power factor correction, installation of presence sensors and smart meters, among others.







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00% 210,000 tCO₂e 2030

How?

Implementing the following actions, defined in the Renewable Energy Plan, which are committed to increase the percentage of renewable energies compared to fossil fuels:

> Power Purchase Agreements (PPAs): long-term renewable electricity supply agreements not only guarantee emission-free electricity, but also offer opportunities for OpEx savings. Telefónica has several such contracts. For example, in Spain, the four PPAs signed for the period 2022-2031 have already come into operation, which, together with the one signed in 2020, represent 582 GWh/year, cover 50% of the consumption of the operator's technical buildings and avoid some 87,300 tonnes of CO₂/year. Telefónica Germany has also signed two PPA agreements for the period 2025-2040, equivalent to 550 GWh per year, which will cover 87% of the total consumption of Telefónica's operations in Germany.

66 We want to go beyond 100% renewable, helping to increase the renewable mix in the countries in which we operate through self-generation and the promotion of new farms through PPAs.

On the other hand, Telefónica Brazil has several "Distributed Generation" (DG) agreements that will supply more than 700 GWh/year (avoiding almost 95,000 tonnes of CO₂/year) and will cover almost half of the electricity consumption of its networks in the country, also reducing dependence on renewable energy certificates (iRECs). The DG produces renewable electricity in many small generation plants, rather than concentrating it in large facilities. This has additional benefits to the generation of energy, as it minimises environmental impacts, favours access to small generators and promotes employment throughout the territory, often in disadvantaged rural environments. This helps to ensure that the progressive change from the current economic model to a low-carbon model is socially just, leaving no one behind.

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> Guarantees of origin: the programme for the purchase of renewable electricity with a guarantee of origin covers up to 100% of electricity consumption in countries such as Spain, Germany, Brazil, Peru, and Chile, and has also been extended to other countries. In 2023, Argentina, Ecuador and Colombia continued to increase their renewable electricity consumption to 10%, 41% and 89% respectively. In Latin America, the first multi-country and multi-year purchase (2024-2026) for certificates of origin (IRECs) was awarded for a volume of 451 GWh in 2024 and 981 GWh in 2026.

> Self-generation: the implementation of photovoltaic generation systems in isolated base stations, technical buildings and offices represents the production of more than 6,000 MWh per year, which translates into around 1,000 tonnes of CO₂ of avoided emissions. This will increase progressively, especially in countries such as Spain. A notable example of this initiative has been the implementation of 11 self-generation projects in Ecuador, with an estimated annual production of 34,000 kWh.







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How?

by an accredited third party.

• Offsetting / neutralisation of emissions



To mitigate the climate impact of its residual emissions, Telefónica, in

compliance with the criteria defined b > internally, will resort to the

voluntary market to purchase carbon credits in the most efficient way

possible or will develop its own carbon removal projects, always verified

Telefónica has been funding actions to mitigate emissions that occur beyond its value chain since 2019 through the purchase of high-quality carbon credits. In 2023, 69.5% of the cancelled carbon credits came from emission reduction projects (REDD+), with the remaining being carbon removal projects (ARR) from biogenic sinks.

KPI

Cancelled carbon credits (tCO₂e

% Removal projects (ARR)

% Reduction projects (REDD+)

% Verra Standard (VCS)

% Spanish Climate Change Office

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	2022	2023
e)	35,537	33,711
	25.0%	30.5%
	75.0%	69.5%
	99.7%	98.3%
ce (OECC)	0.3%	1.7%

2023 Telefónica's carbon credit portfolio









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Currently, Telefónica has already started to offset part of its emissions through the following projects:

In 2020, Telefónica Spain launched Bosque Telefónica (meaning "Telefónica Forest")²⁸, in Palencia (Spain). Planting over 12,500 trees of native species will help to restore a degraded agricultural area, transforming it for forestry use, involving rural communities and boosting the local economy by generating employment for young people and disadvantaged people. "Bosque Telefónica" is expected to absorb 3,000 tonnes of CO₂ over its life cycle. Part of the tonnes absorbed has been used by the Spanish operator to offset its operational emissions in 2021, 2022 and 2023.

In 2023, Telefónica Spain retired credits from the Galicia Rexenera 2021: A Pedra Torta (Caldas de Reis)²⁹ project, which has restored an area of almost 30 hectares of local communally-owned woodland in Pontevedra (Spain), previously affected by a forest fire. The actions carried out consisted of reforestation and natural regeneration work involving native hardwoods, such as oak, birch, ash, and hazel, and with improved planting of native pine trees.



28 The "Bosque Telefónica" absorption project is included in the Spanish Climate Change Office registry. Further information can be found at https://www.miteco.gob.es/ content/dam/miteco/es/cambio-climatico/temas/registrohuella/informes/2021-b212.pdf

29 The project is registered in Section B of the Registry of carbon footprint, offsetting and carbon dioxide absorption projects of the Spanish Ministry for Ecological Transition and the Demographic Challenge. More details can be found at https://www.miteco.gob.es/ content/dam/miteco/es/cambio-climatico/temas/registro-huella/informes/2021-b097.pdf

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In 2021, Telefónica Germany neutralised 22% of its operational emissions (Scope 1 and 2) through the Gold Standard certified CO₂OL Tropical Mix project³⁰. The initiative aims to restore more than 13,000 hectares of land which was used in the past for extensive cattle ranching and convert it into mixed forests by planting 20 different native tree species and protecting more than 30 other species. In addition, it contributes to biodiversity conservation and provides sustainable timber and cocoa production, which also improves the economic and social situation of local communities.

In addition, in 2022 and 2023, Telefónica Germany has also used the credits generated by the project for the **restoration of degraded areas and refores**tation in Cáceres and Cravo Norte³¹, in Colombia, to neutralise 40% and 60% of its operational emissions respectively. The project proposes to carry out reforestation, with 25 native tree species, 1,230 ha in the Cáceres/Antioquia area and 9,640 ha in the Cravo Norte/Arauca area, areas which had previously been degraded by extensive livestock farming activities. It also promotes the sustainable management of forest resources to encourage natural regeneration.

30 The sustainable production of wood and cocoa is certified by the Forest Stewardship Council (FSC) and UTZ (sustainable agriculture programme and label). More information on the project is available at: https://registry.goldstandard.org/projects/details/1796

31 Details of the "Cáceres y Cravo Norte" project, which has additional CCB certification from VCS, are available at: https://registry.verra.org/app/ projectDetail/VCS/576







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From 2019, Telefónica Brazil has been offsetting 100% of its operational emissions mainly through projects that support local ecosystem conservation initiatives. For example, Cikel Brazilian Amazon REDD+32, verified with the international VCS standard, is located in the state of Pará and will avoid the deforestation of 27,400 hectares of rainforest. It also enhances biodiversity within the framework of FSC certification and promotes community development and local job creation. With this project, part of Telefónica Brazil's operational emissions in 2020 and 2021 have been offset.

Another project to reduce emissions from deforestation and degradation in which

Telefónica Brazil has invested is the JARI AMAPA REDD+³³ project, located in

the Brazilian Amazonian state of Amapá, which, having additional CCB (Climate,

Community & Biodiversity) certification, in addition to reducing GHG emissions

through proper forest management, trains local farmers in sustainable manage-

ment techniques and promotes the socio-economic development.

From 2022, Telefónica Brazil has also been investing in reforestation projects. Specifically, the MATO GROSSO³⁴ project is a reforestation project with 50 native species, which aims to restore an area of 8,000 hectares that had been deforested by cattle ranching activities. In addition to the positive environmental impact, the project also develops educational activities, generates income for the local populations and ensures the preservation of biodiversity by using native species from the Amazon rainforest. 2023 investment in this project has increased the share of carbon removal projects of Telefónica's Brazil portfolio up to 20%.



33 The VCS registry contains additional information on the Jari Amapa project: https://registry.verra.org/app/ projectDetail/VCS/1115

32 More information on the Cikel Brazilian Amazon project can be found in the VCS registry: https://registry.verra.org/app/ projectDetail/VCS/832

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In 2023, Telefónica S.A. has offset 68% of the impact of its Scope 1 and 2 emissions from its corporate buildings through the absorption of an equivalent amount of CO₂ from the atmosphere, which has taken place in the project for the restoration of degraded areas and reforestation in Cáceres and Cravo Norte, in Colombia, and in the project Galicia Rexenera: Castiñeiro da Auga (Salceda de Caselas)³⁵ involving the regeneration of a burnt area of local communally-owned woodland with chestnut, oak and pine trees in Pontevedra, Spain.

34 More information on the Mato Grosso reforestation project can be found at: https://registry.verra.org/app/ projectDetail/VCS/665



35 For further information on the project, please see Section B of the Carbon Footprint, Offsetting and Carbon Dioxide Absorption Project Register of the Spanish Ministry for Ecological Transition and the Demographic Challenge at: https:// www.miteco.gob.es/content/dam/miteco/es/cambio-climatico/temas/registro-huella/informes/2022-b112.pdf











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Targets



39% reduction of CO₂e emissions in the value chain (Scope 3) by **2025** and **56%** by **2030**, from a 2016 base year.



100% of our strategic suppliers with emissions reduction targets aligned with the Science Based Targets (SBTi) initiative by 2026.



Introduce environmental criteria in 100% of new home connectivity equipment designed by Telefónica by 2025.



Refurbish and reuse 90% of fixed equipment (routers and set-top boxes) collected from customers by 2024.



Reuse and recycle 100% of network equipment by 2025.



Reuse and recycle 100% of mobile phones by 2030. Collect at least 20% of distributed phones by 2030

66 equipment.

According to the SBTi initiative, Scope 3 emissions represent a major challenge for most companies because, being outside the boundaries of direct control, the process of collecting activity data is more complex and the allocation of responsibilities is more diffuse.

In addition, although Scope 3 has decreased by 32% since the base year, it represents 85.4% of the Telefónica Group's total emissions and is gaining more and more weight in Telefónica's footprint (in 2016, it represented 68%), due to the significant work carried out in the decarbonisation of the Company's operational model and the consequent reduction of Scope 1 and 2 emissions.

Some of the trends and best practices proposed by the SBTi initiative include the implementation of green procurement policies that include sustainability and climate change criteria, engagement with suppliers to encourage them to reduce their own emissions, innovation in business models to extend the useful life of products and the design of more efficient products that integrate circular economy principles.

At Telefónica, the procurement of products and services is currently the main source of emissions, accounting for almost 2/3 of its Scope 3 emissions. However, the Company has identified opportunities to meet its emissions reduction targets and maximise the sustainability benefits associated with digitalisation, through collaborative projects with its suppliers and other companies in the telecommunications sector that share the same challenges.

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The circular economy allows us to grow using fewer resources and avoid indirect carbon emissions by reusing



Telefónica also actively participates in working groups and cooperates with its suppliers to integrate environmental criteria in the design and supply of equipment. The reuse of equipment is also key to reducing Scope 3 emissions, since, by avoiding the purchase of new equipment, it reduces the consumption of raw materials, energy and emissions associated with manufacturing. Through this initiative, Telefónica had avoided emitting more than 360,000 tonnes of CO₂ by 2023.



Weight of **Scope 3** in Telefónica's carbon footprint



2023





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• Supplier Engagement Programme

To achieve the goal of reducing Scope 3 emissions, Telefónica has been working since 2019 with its most carbon-intensive suppliers in a programme called Supplier Engagement Programme. Suppliers participating in this programme were selected based on the following criteria:

- > Percentage of its emissions (contribution to Telefónica's Scope 3).
- > Degree of maturity in its climate change management.
- > Strategic importance for Telefónica.

From 2021, Telefónica invites the most relevant suppliers in terms of emissions to participate in the CDP Supply Chain programme. This aims to gather information from suppliers to understand the level of maturity of their climate strategies and help them set more ambitious emissions reduction targets through specific webinars and recognition of their progress. Using a tool familiar to suppliers with CDP Supply Chain enables Telefónica to cover a higher percentage of suppliers. In 2023, in particular, Telefónica invited 178 suppliers, representing 85% of supply chain emissions.

66 decarbonisation.

Having primary information, not only allows Telefónica to improve the accuracy of the calculation of the Scope 3 portion of its carbon footprint but, is also the basis for drawing up a carbon maturity curve, which classifies suppliers into five levels of climate maturity. Telefónica subsequently identifies different areas for improvement, depending on the level of maturity, so that the supplier's commitment is adapted to its actual management. Thus, the measures that a supplier undertakes to apply in order to reduce its climate impact vary depending on its commitment, ranging from purchasing renewable energy to switching to low-emission vehicles or implementing energy efficiency projects, among others.

• Climate change requirement for strategic suppliers

Telefónica is aware that working with suppliers that have defined an ambitious decarbonisation strategy has a positive impact on reducing the emissions associated with its purchases of goods and services.

Therefore, in 2022, the Company incorporated a new climate change requirement into the procurement process, asking its strategic suppliers³⁶ to establish, in the short term, emissions reduction targets aligned with the SBTi initiative.

and are among those that account for 90% of category 1 and 2 emissions in the 2023 financial year.

Climate Action Plan

Understanding the climate maturity level of our suppliers is key to help them accelerate their



Specifically, they are required to commit to defining science-based reduction targets within six months and subsequently complete the validation of these with SBTi.

2023

CDP Supply Chain (Telefónica)





emissions of the supply chain

Engagement project with local suppliers (Telefónica Brazil)















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• Carbon Reduction Programme

In 2023, Telefónica took a more ambitious stance by participating in a **joint** initiative in conjunction with other companies in the sector. In this programme, each operator collaborates individually with some of its most strategic suppliers to promote a reduction in emissions at the product level. Then, working together, they identify the most carbon-intensive common products and use life cycle analysis (LCA) to define the stages with the greatest potential to reduce emissions. The aim of the initiative is for suppliers to prioritise their actions at the more carbon-intensive stages, thereby reducing emissions associated with the products with the greatest impact in the procurement processes of the participating operators.

Collaboration with other telcos in the Joint Alliance for CSR

JAC (Joint Alliance for CSR) is an association of telecommunications operators whose objective is to verify, evaluate and develop the implementation of Corporate Social Responsibility (CSR), at the manufacturing sites of multinational suppliers in the Information and Communication Techonologies (ICT) sector. JAC members have been cooperating since 2010 to apply sustainability principles effectively throughout the industry.

In 2020, a new industry working group was created within the JAC initiative, led by Telefónica, to drive climate action in the supply chain as a telco sector.

In this project, several work streams have been initiated for key suppliers of the 27 companies that are part of the conglomerate (representing 60% of the industry's revenues) to increase their level of ambition and establish science-based emission reduction targets, in addition to providing training in collaboration with CDP and GSMA³⁷ to the largest companies. At the end of 2023, the rest of the companies in the association were invited to participate in some of the ongoing initiatives, in order to standardise the message and the requirements being conveyed to the common suppliers in the sector and therefore successfully increasing the suppliers' level of commitment.

• 1.5° Supply Chain Leaders / SME Climate Hub

The '1.5°C Supply Chain Leaders' initiative advocates the reduction of emissions in the global supply chain. It also supports small and medium-sized enterprises on their route to decarbonisation through the SME Climate Hub, the launch of which in Spain and the United Kingdom has been supported by Telefónica. This programme, which invites SMEs to sign up to a climate commitment and shares specialised tools and best practices, enables Telefónica to strengthen its role as a driving force with its supply chain and accelerate the decarbonisation of the global economy by 2050.

Climate Action Plan

We are working in collaboration with other companies in the industry to address the challenge of decarbonising our supply chain.



In 2023, the Company invited some of its suppliers to participate in an event entitled "Decarbonisation of SMEs. Promotion of the SME Climate Hub in Spain".

Value chain model











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Thanks to reuse, 4.5 million pieces of equipment per year have been given a new life while the generation of more than 7,000 tonnes of waste and more than 360,000 tonnes of CO₂e emissions have been avoided.

• Extension of the use of materials and equipment

Telefónica promotes the reuse and recycling of valuable equipment and materials rather than their disposal, so that they can be reincorporated into the production cycle as resources. This also avoids the emissions associated with the extraction and processing of new natural resources, which would be necessary if these valuable materials were not reused or recycled.

> Network equipment: during the transformation of the network, many pieces of equipment are reused within Telefónica, thus promoting the circular economy in the decommissioning processes. To promote this reuse, the Company has the MAIA marketplace, which allows each Group operator to view the equipment available for internal reuse and connect with other operators and technology partners to promote the sale of second-hand equipment, thus extending its useful life. In 2023, Telefónica reused 313,805 pieces of network equipment, an increase of 36% over the previous year. In total, the Company has reused, resold, and recycled 99.7% of its network equipment waste, making progress towards the goal of sending zero network equipment to landfill by 2025.

> Fixed customer home equipment: through initiatives such as VICKY and APO-LO, Telefónica reused 3.7 million pieces of equipment in 2023, equivalent to 88% of all routers and TV set-top boxes delivered for refurbishment. VICKY uses blockchain technology to obtain greater traceability throughout the value chain, which significantly improves recovery rates, refurbishment processes and the useful life of the equipment. Meanwhile, APOLO improves efficiency in reverse logistics processes with the use of big data & analytics to optimise collection routes for uninstalled or inactive equipment, both at the customer's facilities and at other collection points.

> Mobile phones: through several different projects, Telefónica has collected 102 tonnes of mobile phones, which accounts for 11% of the total number of devices distributed, coming closer to the target of collecting at least 20% by 2030. Out of the devices collected, 99.8% have been reused and recycled. Through of its promotion of initiatives such as MARA³⁸, which encourages the handset buyback programme, the refurbishment of in-house devices, the sale of refurbished handsets or its repair services. Telefónica reused 491,422 mobile phones in 2023, an increase of 27% over the previous year.

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When reuse is not possible, **electronic equipment is recycled**, as it contains precious metals such as gold, copper, or nickel, which can be used as resources in a new product. In this way, Telefónica has reused 46% of the total electronic equipment collected and recycled the remaining 54%. Out of the total waste produced, 71% is cable waste, given that most of the waste generated comes from the network transformation process when migrating

from copper to fibre optic cable. As a result, the Company recycles 97% of its total waste.







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• Design with environmental criteria

Introducing environmental criteria in the design of home connectivity equipment helps us to improve the quality and efficiency of products by considering concepts such as repairability and recyclability. This allows us to have more durable equipment by reducing the consumption of raw materials, energy and emissions associated with both the production processes and the use phase of the products. An example of this is that, thanks to reuse, the purchase of more than three million new pieces of equipment is avoided every year. The main projects that were launched during 2023 are as follows:

> FTTR (Fiber to the Room) device: advanced connectivity solution launched in Spain, which offers maximum speed and coverage throughout the home, whose equipment has been designed with 70% recycled plastic in its casings. In addition, it also features packaging improvements such as a reduction in the plastic materials, the use of paper for cable ties and the reduction of commercial documents accompanying the device.

> Router HomeSpot 5G: launched in Germany, it has a LCA study based on ISO 14040 and ISO 14044 standards and in collaboration with the Basque Government's public environmental management company (IHOBE).

66

We work with our suppliers to integrate environmental criteria into the design of home connectivity equipment, from the concept and development phase to reduce its impact on the planet throughout its lifecycle.

In addition, a repairability and recyclability study was carried out in accordance with UNE-EN 45554 and UNE-EN 45555 standards to further integrate the circular economy right from the design stage. This study concluded that the HomeSpot 5G router is 63% repairable and 89% recyclable and recoverable.

> HGU Smart WiFi 6 (2nd generation): this new router model, launched in Spain, reduces its energy consumption in the use phase by 27% compared to the HGU WiFi 5 model and by 56% compared to the HGU Smart WiFi 6 (1st generation).

In addition, through its Half SIM Card format, the Company halves the plastic used in SIM cards, avoiding the consumption of 185 tonnes of plastic by 2023, saving emissions and optimising the logistics process. Currently, the format has been implemented in nine of Telefónica's operations, consolidating its position as the Group's main format

• Circular purchasing criteria

Within the framework of the Global Policy on Sustainability in the Supply Chain, Telefónica has incorporated environmental and circular economy criteria, such as the commitment to establish eco-efficiency measures in the development

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of its activities or the reduction of single-use plastics, both in the supply of products and services to Telefónica, as well as in its operations. Telefónica has a Corporate Instruction for low-carbon purchases, which establishes the criteria for acquiring equipment with high energy consumption and fluorinated gas content. This includes the calculation of the Total Cost of Ownership (TCO), incorporating the lifetime energy and carbon cost of the equipment in the procurement process. This provides sufficient information to select the best option economically and in terms of energy consumption and GHG emissions.

In addition, Telefónica continues to progressively integrate the circular economy into its acquisition of electronic equipment, taking as a reference the criteria established in the ITU-T L1023 recommendation on circularity assessment. This evaluation allows the technical areas to know the degree of circular design of the equipment offered, considering aspects such as repairability or recyclability, so that it constitutes an additional criterion to be evaluated in the equipment procurement process. The objective is for 100% of the electronic equipment purchasing processes of B2B/B2C customers throughout the Group to take these criteria into account from 2025 onwards.







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66 operators³⁹.

• Eco Rating

Eco Rating is a system that assesses the environmental impact of mobile phones throughout their life cycle through a methodology that assigns a score (between 1 and 100) to each device. The closer the score is to 100, the better the sustainability performance of the device. It is an initiative developed in partnership with four major European telecommunications companies. The main objectives include helping customers to incorporate sustainability criteria into their purchasing decisions and encouraging manufacturers to reduce the environmental impact of their devices.

Working with mobile device manufacturers is particularly important for Telefónica, as the emissions associated with the manufacture, transport and use of mobile devices account for more than 25% of the Company's Scope 3 emissions.

During 2023, the initiative was expanded to involve 11 telecommunications companies and more than 20 mobile device manufacturers.

Since the update and implementation of the new Eco Rating labelling system in 2021 (and up to the end of 2023), Telefónica has evaluated more than 200 models of mobile phones.



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Within the Telefónica Group, the Eco Rating system has been implemented in all









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Telefónica helps its customers to decarbonise their activity through digital transformation and connectivity as key levers.

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Help customers reduce their CO₂ emissions, through the development of green digital and connectivity solutions.

Increase the **buyback and sale of refurbished** mobile phones.

A study by the Exponential Roadmap⁴⁰ initiative indicates that while the telecommunications sector is responsible for just 1.4%⁴¹ of global emissions, the development of digital technologies can contribute significantly to cutting emissions across other sectors. According to the study, the implementation of digital solutions in sectors such as energy, industry, agriculture, building, and transport has the potential to reduce fuel-related emissions by 15% by 2030, and by a further 35% indirectly through its ability to transform people's habits.

The study states that the digital revolution and the evolution of information technologies are key enablers for the transformation towards disruptive business models that integrate sustainability, resource efficiency, circular economy, and climate targets into their operating models.

Telefónica helps its customers decarbonise their business through digital transformation and connectivity as key levers to use resources efficiently and drive sustainability.

In 2023, thanks to the efficiencies generated by Eco Smart and connectivity services, Telefónica's customers avoided the emission of 86.142 million tonnes of CO_2 .

40 Exponential Roadmap (2019), Scaling 36 solutions to halve emissions by 2030. Available at: https://exponentialroadmap.org/wp-content/uploads/2019/09/ExponentialRoadmap_1.5_20190919_Single-Pages.pdf

2015 data.

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Key actions



41 In the latest version of the report, the lifecycle carbon footprint of the information and communications technology (ICT) sector was estimated at 730 MtCO₂e (1.4% of the global total, and use of 3.6% of global electricity for its operations), based on 42 Of the total figure, 84.9 million tonnes are from services where Telefónica only provides broadband and mobile connectivity for the B2C segment and 1.2 million are from IoT, cloud, big data and health services where Telefónica provides connectivity, IoT devices, platforms, servers and/or software. This data includes emissions generated by the connectivity and network infrastructure that are part of these services.







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Eco Smart Services

Telefónica's Eco Smart solutions for B2B customers, which are developed through services based on connectivity, Internet of Things (IoT), cloud, big data or 5G, favour the digital transformation of customers and generate relevant environmental benefits in their activities or production processes, such as optimising the use of resources, accelerating the transition to circular economy models, and reducing their emissions. This allows them to develop their business in a more efficient and sustainable way. To this end, the Eco Smart seal was developed, a mark verified by AENOR that identifies the environmental benefits of Telefónica's digital products and solutions. Thus, Telefónica helps its customers to identify how digitalisation can make their organisation more efficient and sustainable.

The seal has four icons that represent the different environmental benefits generated by products and services (energy savings, reduction of water consumption, reduction of CO_2 emissions and promotion of the circular economy). In the seal for a specific service, only the icons of the environmental benefits provided by that service are highlighted.

At year-end 2023, the solutions catalogue of Telefónica Tech, Telefónica Spain, Telefónica Brazil, Telefónica Germany, Telefónica Tech UK&I, and Telefónica Chile, Telefónica Colombia, Telefónica Mexico, Telefónica Peru and Telefónica Global Solutions (TGS) had been evaluated. It has been verified that 52% of the services that these companies offer for B2B customers generate environmental benefits and contribute to mitigating the environmental impact of their customers. The remaining companies will be assessed by the end of 2025, according to the Group's Strategic Plan.

ECOSMART



Telefónica Tech is one of the Telefónica Group units responsible for driving the development of B2B services to integrate digital solutions that help customers in their evolution towards low carbon models.

Examples of **Telefónica's products and services** for each of the environmental benefits are listed below:

mental benefit	Examples
	 Smart Energy: services that allow the customer to control and manage the energy of installations and/or equipment, reducing their electricity an or fuel consumption.
Energy savings	o Fleet management services that enable fuel savings.
• Use of drones for inspections of critical and remote assets, saving the fuel that would	o Use of drones for inspections of critical and remote assets, saving the fuel that would be needed for employee travel.
	o Cloud services: reduce the customer's energy consumption by means of platforms or servers hosted in highly efficient data centres.
	 Smart water meters in facilities or buildings or applied to services such as irrigation management in cities or agriculture, which reduce wat consumption.
	 Smart Agro solutions enable digitalisation in the agricultural sector and improve decision-making based on crop data and environmental paramete to optimise the use of resources, mainly irrigation water, but also fertilisers, phytosanitary products, and pesticides.
	 Smart Industry services that achieve efficiencies in water use in sectors with a high dependence on this resource, such as food, beverage cosmetics, and water companies.
	 Digital Workplace solutions, which enable remote and flexible working and reduce employee commuting to the workplace and air conditioning offices.
Reduction of CO ₂	o E-Health solutions facilitating remote health care, avoiding patient travel and associated emissions.
emissions	 Solutions for the transport sector, which optimise the planning of transport infrastructure and systems through greater knowledge of passenge timetables, and routes, minimising their environmental impact.
	 Air quality measurement sensors and use of big data on the data obtained (air pollution and traffic) to predict pollution levels and implement action measures to improve air quality and reduce CO₂ emissions.
	 Services that allow monitoring of equipment/assets and provide information on their state of operation, optimising maintenance, avoiding breakdowns and, therefore, extending their useful life.
Circular economy	o Products and services that optimise production processes, reducing the consumption of raw materials or minimising waste.
	 The inclusion of blockchain technology capabilities in many of the above examples provides them with improvements in traceability, transparent and security, enabling faster and more efficient ways of doing things, thus boosting the circular economy.

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Smart manageme

of the water cycle



Telefónica, through the Eco Rating system, helps its customers to incorporate sustainability criteria in the purchase of mobile phones. It also offers buyback and sale options for refurbished mobile phones.

Avoided emissions

Since 2017 and with the support of Carbon Trust, Telefónica has developed and applied a calculation methodology that transforms the efficiencies (energy, operational or material consumption) generated by the services implemented for customers into avoided carbon emissions. The methodology is continually updated, both to include new digital services and technological developments of solutions and customers, and to apply the sector's methodological guidelines or recommendations.

In 2022 and 2023, Telefónica increased the scope of the calculation. New IoT services were incorporated for water cycle management, and it was also included the way mobile connectivity and B2C broadband services enable the use of digital applications, that allow for more sustainable lifestyles such as teleworking, distance learning and car sharing.

To understand how Telefónica's customers use these applications, the Company surveyed over 4,400 customers in Spain, Brazil, and Germany in 2022 and 2023.



43 Of the total figure, 84.9 million tonnes are from services where Telefónica only provides broadband and mobile connectivity for the B2C segment and 1.2 million are from IoT, cloud, big data, and health services where Telefónica provides connectivity, IoT devices, platforms, servers and/or software. This data includes the emissions generated by the connectivity and network infrastructure that are part of these services.

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As a result of the methodological update and the services sold, in 2023, Telefónica customers avoided the emission of 86.143 million tonnes of CO₂, which proves the capacity of new technologies to accelerate the economy's transformation towards a low carbon model.

Eco Rating

Telefónica supports and raises awareness among its residential customers by offering them various initiatives to help them make informed decisions and reduce their impact.

One of these initiatives is Eco Rating, a system that measures the environmental impact of mobile phones throughout its entire lifecycle (from the material extraction stage, production, transport and use stage to disposal or recycling of the devices). Sixteen environmental indicators, such as GHG emissions, resource use or energy consumption, as well as six material efficiency criteria (such as recycled material content or repairability) were assessed, resulting in a single score for each device.











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The label supports customers of any operator company from Telefónica⁴⁴ to make informed decisions by helping them to incorporate sustainability criteria when choosing mobile devices, thus driving more sustainable practices in the industry. In addition, this initiative encourages manufacturers to reduce the environmental impact of their devices and aligns the telecommunications industry in improving transparency.

The Eco Rating label indicates the environmental impact of the handsets simply and clearly, through a score on a scale from 1 to 100 that evaluates how sustainable the handset is; the higher the score, the more environmentally friendly the handset. The label also displays additional information on durability, repairability, recyclability, climate efficiency and resource efficiency.

• Buyback and sale of refurbished mobile phones

The reuse of used mobile phones reduces the consumption of energy and resources since it avoids the manufacture of new equipment. Thus, Telefónica offers its customers options to buyback and sell refurbished mobile phones. Under these programmes, in 2023, a total of 266,058 mobile phones were bought back and sold.

Commitment to transparency

Therefore, in 2021 it joined the Planet Pledge initiative launched by the World Federation of Advertisers and committed to increasing the capacity of its marketing and communications teams to spearhead climate action and to strengthen a trustworthy marketing environment where sustainability claims can be substantiated, avoiding greenwashing. By the end of 2023, Telefónica had provided training on these aspects to around 450 marketing, communication, events, and sponsorship employees.

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Telefónica is aware that it must harness the power of its communication to encourage more sustainable consumer behaviour.









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Targets

Reach around 40% of total sustainability-linked financing by 2026.

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Gradually improve the reporting of climate change

impacts in the Company's financial statements, completing the exercise by 2025.

66 Telefónica is taking action to take advantage of the financial opportunities offered by the transition to a decarbonised economy.

year.

The transition offers opportunities for those companies that are working to transform their business activities but require further investment to do so, as long as their plans and targets are science-based and backed by information that ensures integrity, transparency, and accountability.

The Recommendation on Facilitating Finance for the Transition to a Sustainable Economy⁴⁵, published in June 2023 by the European Commission, invites investors and banks to assess transition and investment plans together with companies' extensive non-financial reporting when financing this transition through the capital market (bonds and other instruments) and green or sustainability-linked loans.

According to the "2021 Institutional Investor Survey"⁴⁶ conducted by the proxy solicitors Morrow Sodali, 97% of investors consider climate risk as very or somewhat important in their investment decisions and 61% expect more transparency from companies.

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In 2020, the EU agreed to reduce GHG emissions by 55% by 2030, which is expected to require an additional investment of approximately €700 billion per

Financial model













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Main activities 50 Eligible turnover € Eligible CapEx €

Key actions

• Financial analysis of climate change

Climate change has a twofold impact on a company's financial management. On the one hand, companies must be aware of the investment they need to make and secure access to the necessary finance to ensure business continuity in a GHG neutral economy, mitigate climate change risks and take advantage of market opportunities.

On the other hand, companies will have to be aware of how climate change will impact their financial statements, knowing the linked cost and the benefits and/or savings obtained with a correct management. While there is currently no accounting requirement for companies to report the impact of climate change in their financial statements, the new CSRD requirements will require disclosure in this regard in future years. Therefore, material issues should be included in the annual accounts.

Given the growing interest of investors in climate issues, Telefónica is working to identify the potential costs, benefits and savings of its activities linked to climate change.

In addition, it has committed to include these issues in the financial statements by 2025, in order to provide transparent information to its stakeholders. In 2023, Telefónica continued to work on complying with the recommendations of regulators and anticipating future regulatory changes. To this end, for the second time it has included in the financial statements information on the actions and commitments acquired by the organisation that are associated with climate change, such as long-term power purchase agreements (PPAs), energy efficiency projects and carbon credits purchases, among others.

• European taxonomy for sustainable activities

In 2023, Telefónica prepared its third report on its activities in the context of the European Taxonomy Regulation⁴⁷. In addition to the eligibility and alignment of climate change mitigation related activities⁴⁸, the Company has reported for the first time new eligible activities related to the objective of transition to a circular economy, as set out in the latest Delegated Regulation⁴⁹ published by the European Commission and detailing the technical criteria associated with the remaining four environmental objectives. The initiation of the reporting process for the alignment of these activities will be carried out from next year onwards.

47 Regulation (EU) 2020/852 requires companies to report financial KPIs based on activity-specific environmental criteria.

48 According to Regulation (EU) 2021/2139, which details the technical selection criteria for determining the conditions under which an economic activity is deemed to make a substantial contribution to climate change mitigation or adaptation, and for determining whether that economic activity does not cause significant harm to any of the other environmental objectives.

49 According to Delegated Regulation (EU) 2023/2486, which details the technical criteria associated with the sustainable use and protection of water and marine resources; the transition to a circular economy; the prevention and control of pollution; and the protection and restoration of biodiversity and ecosystems.

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Telefónica has assessed and identified the main climate change mitigation and circular economy activities that are eligible under the Regulation. Additionally, other secondary activities related mainly to energy efficiency and sustainable mobility have been identified.

The application of the taxonomy regulatory framework has generated uncertainty and doubts of interpretation in the market. This, despite the efforts of the European Commission to provide greater clarity on the application through complementary notices to the Taxonomy Regulation.

Telefónica has been adapting its report in accordance with the evolution in interpretation. In the ICT sector, the fundamental debate has focused around Activity 8.2 and whether or not telecommunications networks should be considered within its scope. Telefónica is working together with the industry in this regard. ETNO and GSMA have proposed a new activity taxonomy for telecoms networks using the Stakeholder Request Mechanism created by the Platform on Sustainable Finance.

50 For more detailed information, please refer to Chapter 1.8. European taxonomy for sustainable activities in Telefónica's consolidated management report at: https://www.telefonica.com/en/shareholders-investors/

51 Not applicable to circular economy activities until the 2024 financial year.













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• Climate transition financing strategy



Telefónica's main finance commitment centres on mitigating the impact of our operations and therefore contributing to the green and digital transition in all sectors. Connectivity and digitalisation are essential to making progress towards this climate transition.

Financing is a key element for the transformation of Telefónica's business model, as it allows the financing of projects with a positive environmental and/or social impact.

Telefónica was a pioneer in the capital market in terms of sustainable finance and stands out for the volume and diversification of its financial instruments. These operations are supported by the Sustainable Finance Framework⁵², last updated in July 2023 to keep in line with best market practice and investor expectations. The framework is aligned with benchmark standards such as the Green Bond Principles promoted by ICMA⁵³, among others. It has also been validated, by second independent opinion of Sustainalytics.

In addition, Telefónica uses other financing tools linked to sustainability objectives, such as loans and credits, or the issuance of local bonds.

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History of sustainable

debt issuances







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In 2022 the Group's main syndicated loan was refinanced at a corporate level, of which the interest applied is linked to compliance with two sustainability targets: the commitment to reduce absolute GHG emissions (1 and 2) in line with corporate targets to 2040; and the increase in the number of women in executive positions by 2027. With regard to the first target, in 2023 and after having achieved the intermediate target of 80% reduction in Scope 1 and 2 emissions, the Company decided to increase its ambition and raise the reduction target to 90% by 2030. The indicator linked to the loan has also been updated accordingly.

These instruments - bonds, hybrids, and bank financing - are becoming increasingly important in the articulation of the Group's financing and are voluntary tools recognised in the financial markets to foster the transition towards a more sustainable economy.

By the end of 2023, the sustainable financing activity⁵⁴ of the Group's financing reached 33.6% of the Company's total financing. As this figure is within the range of the 30-35% target set for 2024, the Company has announced an updated target of around 40% of the financing activity to meet sustainable criteria by 2026.

In January 2024, Telefónica launched a green issue for an amount of €1.75 billion, structured in two senior tranches of 8 and 12 years. This is the Company's largest placement since 2020. Also in March, the Company issued a new green hybrid for an amount of €1.1 billion.

The environmental projects that will benefit from this funding framework are those focused on reinforcing Telefónica's commitment to climate change and the achievement of its decarbonisation goals, and its net-zero target. Telefónica has decided to focus on following key initiatives to tackle climate change: energy efficiency of network infrastructure, shift to renewable energy models and digital solutions for the benefit of the environment.

More information about the specific projects to which each issuance will be dedicated and the impact of these projects, once audited, is publicly available at Telefónica's Sustainable Finance web page.











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The internal carbon price will help the organisation to make better investment and equipment purchasing decisions, as well as to achieve its emission reduction targets.

• Carbon pricing

Internal carbon pricing is one of the most effective tools for companies to manage the risks and opportunities associated with their carbon footprint and thus internalise the costs of GHG emissions, enabling efficient financing of their transition to a low-carbon economy.

Setting an internal price on carbon means internalising the cost of GHG emissions by assigning a monetary value to each tonne emitted, so that companies can identify the cost of GHG emissions.

In this context, Telefónica is working to evaluate different financing tools within the Group to establish an internal carbon price as a strategic lever to achieve net zero emissions.

On the one hand, Telefónica implements a shadow price in purchasing decisions for equipment with electricity and/or fuel consumption, as well as equipment containing refrigerant gases.

Telefónica's Corporate Instruction on low-carbon purchasing includes the calculation of the Total Cost of Ownership (TCO) of this equipment, allowing procurement processes to be guided towards more efficient technologies and equipment, with a lower carbon footprint.

On the other hand, Telefónica is working on developing an internal carbon fee on GHG emissions that will generate revenues for Telefónica to cover the payment of carbon credits or finance its own carbon removal projects.

The internal carbon price will help the organisation to make better investment and equipment purchasing decisions, as well as to achieve its emission reduction targets.









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66 Directors.

Governance mechanisms

Environment and climate change are cross-cutting issues throughout the company, involving operational and management areas, as well as business and innovation areas.

Oversight and accountability

The energy and climate change strategy is part of the Company's Responsible Business Plan, which is approved by the Board of Directors. The Sustainability and Regulation Committee, as well as the Audit and Control Committee and the Nominating, Compensation and Corporate Governance Committee, in accordance with the responsibilities set out in their respective operating regulations, oversee both its implementation and risks and monitor targets.

Since 2008, the Global Energy and Climate Change Office, comprising areas such as Operations, Environment and Procurement, has been responsible for implementing this strategy. In addition, the Global Energy Centre, created in 2015, is responsible for accelerating the achievement of targets, with the responsibility for driving energy efficiency and renewable energy projects in each of the countries.

Transparency and integrity of corporate climate action are among the principles that are becoming increasingly important in the disclosure of climate commitments, thereby facilitating decision-making by investors and other financial market participants.

In accordance with TCFD recommendations, it is essential for companies to have defined their governance mechanisms to assign responsibilities to the different executive bodies and to ensure the achievement of the targets defined in the Climate Action Plan.

Telefónica integrates climate- and sustainability-related aspects as a robust part of its organisational culture through various action programmes: assigning responsibilities in its governance structure, developing policies aligned with its energy and climate change ambition and targets, internal engagement actions, transparent reporting, and communication of its strategy and, finally, strategic partnerships and advocacy.

Furthermore, it is important to emphasise that transition plans adapted to the specific context of each country can be developed at local level.

Climate Action Plan

Climate change strategy is one of the priorities of the Board of



In order to ensure that the strategy is integrated into all the organisation's operations, Telefónica incorporates climate-related aspects at all governance levels, in strategic indicators and in the Company's key objectives.

This Climate Action Plan is annually approved by the Board of Directors, after an analysis by the Sustainability and Regulation Committee. In addition, the Energy and Climate Change Office together with the different areas of Telefónica involved in the development of actions aimed at achieving the emission reduction targets of the Plan, will keep the Plan updated and will inform the Sustainability and Regulation Committee and/or the Board of Directors in the event of substantial modification of the Plan.

Telefónica offers its various stakeholders a **feedback mechanism for the** Climate Action Plan, which enables to place value on their comments and points of view. Telefónica discloses its climate strategy to the market and informs its shareholders, institutional investors, and other stakeholders of its climate strategy through the non-financial information sent to the Spanish Stock Exchange Commission (CNMV by its Spanish acronym) and other official international bodies, as well as through the corporate website, in the Shareholders & Investors section.













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Board of Direct
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Sustainability and Regulatic Committee
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Corporate Affairs a Sustainability Offic
Global Sustain (ESG) Office

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Approval

The **Board of Directors** is responsible for approving the climate change strategy, the Climate Action Plan and environmental policies, as well as establishing the risk management model, including climate-related risks whose supervision is delegated to the Audit and Control Committee.

Oversight

- The Sustainability and Regulation Committee is responsible for overseeing the implementation of environmental and climate-related initiatives on a regularly basis, and for monitoring the progress of both climate-related targets and all other targets of Telefónica's Responsible Business Plan.
- The Nominating, Compensation and Corporate Governance Committee is responsible for overseeing the sustainability targets considered in the variable compensation system, including the reduction of GHG emissions.
- The Audit and Control Committee is responsible for overseeing the climate-related risk management model, the effectiveness of the Company's internal control and the integrity of the information related to climate change.

Implementation

The **Energy and Climate Change Office** is responsible for the operational implementation of the Climate Change Strategy, KPIs assessment, performance monitoring against targets, review of climate-related regulatory aspects and compliance with stakeholders' expectations. It comprises the following areas:

- **The Operations area,** led by the Chief Operating Officer, is responsible for monitoring climate-related issues and the achievement of energy efficiency targets.
- **The Environment area,** led by the Chief Sustainability Officer, is responsible for preparing and updating the Climate Action Plan and for monitoring compliance with climate-related targets from an emissions reduction perspective. It also reviews and reports on energy and climate-related KPIs.





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Telefónica has a contact point, the » Queries Channel, available to all its stakeholders, so they may inquire about, request, inform, suggest and react to any aspect related to the Responsible Business Principles, including the organisation's climate strategy.

Likewise, supported by the General Secretariat, Investor Relations, People and Sustainability areas, the Company maintains permanent contact and dialogue with shareholders, institutional investors, and proxy advisors, responding to their queries related to the Climate Action Plan and providing them with the clarifications they request.

Through the **» Shareholder Office**, Telefónica ensures transparent, agile and fluid communication with its shareholders. The Company has a channel for dealing with shareholder requests and shares information with them on relevant issues, including the Climate Action Plan, through e-mails, a monthly newsletter and the "Acción Telefónica" magazine.

Currently, 20% of the Short-Term Variable Compensation is linked with sustainability objectives (ESG) aligned with the Corporate Plan. One of these objectives is the GHG emissions reduction, which accounts for 5% of this compensation. This variable compensation and its targets are approved by Telefónica's Board of Directors at the beginning of each financial year.

In addition, a percentage of the Long-Term Incentive for Executive Directors and other senior Directors, which is allocated and paid in the form of shares, is linked to the offsetting/neutralisation of operational CO₂ emissions to meet Telefónica's interim target in 2025, establishing a minimum compliance threshold of 90%. As an example, in the 2024-2028 Plan, the carbon offset/neutralisation target is 5%.

Linking variable compensation to the achievement of emission reduction and offsetting targets is intended to reward and retain key employees who can pull the strategic levers defined in the Climate Action Plan and contribute to achieving Telefónica's long-term climate-related targets.

Policies

The organisation has several internal regulations that serve as a common reference framework for all the companies of the Group. These policies guide the Company in improving its environmental and energy performance, as well as in achieving its climate change targets in the short, medium and long term.

These policies are applied through both the environmental (ISO 14001) and the energy (ISO 50001) management systems that Telefónica implements in its operations. These systems not only guarantee legal compliance but are also associated with annual environmental and energy audits for monitoring and for identifying opportunities for continuously improving environmental and energy performance.

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View policy>

Global Environmental Policy

Commits all Telefónica Group companies to protect the environment, improve internal eco-efficiency and drive the transition to a decarbonised Company, by improving adaptation to climate change and considering physical and transition risks into Company management.



View policy>

Energy Management Policy

Envisages continuous improvement of energy efficiency, progress in the use of renewable energy sources, internalisation of carbon pricing, and active suppliers' engagement to reduce Scope 3 emissions, especially in the supply chain and customer premise equipment.



Supply Chain Sustainability Policy

Sets out the minimum standards for responsible business, containing environmental criteria such as climate change, with the aim of promoting the emissions reduction in the supply chain.

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Internal engagement actions and training

Building an organisational culture in the field of sustainability and climate action requires appropriate employee training. For this reason, Telefónica constantly delivers strategic training programmes, in line with its purpose and its Responsible Business Principles. These activities go hand in hand with internal communication campaigns and awareness-raising events on strategic issues for the Company, such as the inclusion of environmental and climate-related criteria in the responsible design of products and services. Telefónica's ultimate aim with these actions is to promote understanding and adoption of sustainable practices related to climate change.

"Sharing experiences": Telefónica periodically organises internal virtual workshops, to share best practices of operators located in different countries related to issues such as energy efficiency and climate change. The aim of these events is to publicise best practices and to raise awareness about reducing energy consumption and associated emissions, so that these actions can be replicated throughout the Group.



> Global Energy and Climate Change Workshop: Telefónica's Wor-

kshop, which has been held since 2010, is the annual meeting event for the Company's energy transformation leaders and the main partner companies in the field. During the event, which each year brings together more than 250 people from all the countries in which Telefónica operates, the latest initiatives in energy efficiency and renewable energies are presented and shared, and new challenges related to climate change are established jointly between the different areas of the Company.

> Climate-related training for the Board of Directors: Telefónica ငိုင် holds ongoing training sessions for the Board of Directors on sustainability matters. Specifically, in 2023, Board members attended a specific training on climate change management, consisting of scientific evidence, relevant regulation, interest from investors and ESG ratings, the implications for organisations' business models, carbon markets and how these topics are considered within Telefónica's climate strategy.

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 \sim > Energy and Climate Change Awards: these awards recognise the annual work of Telefónica teams to achieve the targets related to carbon footprint reduction and environmentally responsible digitalisation leadership.

Telefónica is aware that the transition to a low-carbon economy and its associated regulatory requirements may affect the organisation's employees since technical profiles with knowledge of climate change will be the most in-demand sustainability careers.

Telefónica continues to update the ESG Academy, a global space with training programmes related to the three sustainability dimensions that, in addition to addressing the just transition, guarantees the reskilling of its employees. This enables them to broaden their knowledge of energy management and climate change and to promote a culture of sustainability within the Company, thus acquiring the necessary skills to adapt to new technologies and market demands.







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Transparent communication and reporting are some of the principles of Telefónica's work. As a result, it is recognised by Carbon Disclosure Project (CDP) and other sustainability indices as a global leader fighting the climate crisis. In addition, it follows reporting standards that include environmental information and are the most widely accepted for the industry, such as TCFD, SASB, GRI and GSMA.





ND RA	ATINGS ⁵⁶	REPORTING FRAME	EWORKS
	Included in the Climate Change A list for the tenth year in a row.	TCFD TASK FORCE IN CLIMATE RELATED FINANCIAL DISCLOSURES	Telefónica follows the TCFD recommendations for the ar and reporting of climate-related risks and opportunities.
	Included in the Supplier Engagement Leaderboard for the fifth consecutive year , for including its value chain in its climate targets.		Telefónica reports its performance in energy and climate ch under the GSMA's ESG Metrics for Mobile , a sector repor framework for mobile operators.
lices	Member of DJSI Europe. 2022 score: 86/100		
vard	Telefónica Group and Telefónica Brazil, distinguished in the Top 10% of telecommunications operators for their commitment to sustainability on a global scale (only 20 telcos included). Included in the Sustainability Yearbook.	Now part of IFRIS Foundation	Telefónica follows the Sustainable Accounting Standards B (SASB) reporting framework. SASB standards identify finar material ESG information to assess how an organisation of business value.
d	Score: 4.6 / 5 Recognition as the best-performing Company in the telecommunications sector, leading the sector on all environmental issues.	GR	Telefónica prepares its sustainability report in accordance w standards, which provide information on the economic, environmental and social impacts of an organisation.
2 is, a eserved.	Score: 15.9 (low risk) 5th Position(11/263) in the telecommunications sector.		





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Knowing that collective work can help align all companies with the Paris Agreement's goals, Telefónica shares best practices and actively collaborates with other associations in the telecommunications sector such as ETNO, GSMA and JAC in joint initiatives to define the GHG emissions quantification, establish ambitious reduction targets and drive climate action in the supply chain. In all of them, Telefónica maintains an active participation and a constructive voice and works to promote digitalisation as a key ally of the green transition.

Advocacy and strategic partnerships

One of the pillars of the climate strategy is advocacy as part of Telefónica's commitment to society, working together with other companies in the telecommunications sector to take advantage of the role of ICT in mitigating and adapting to climate change and advocating for the adoption of ambitious climate policies aligned with the Paris Agreement. Working to place digitalisation at the top of the climate change and environmental sustainability policy agenda is Telefónica's main objective in its advocacy strategy.

Telefónica advocates, together with the telecommunications sector, and other stakeholders, to highlight the fundamental role of telecommunications networks in the decarbonisation process of the global economy, within the current EU Sustainable Financing Framework. It has therefore actively participated, together with industry associations, in various initiatives such as sectoral position papers, public consultations, surveys, workshops and other proposals, aimed at ensuring that the deployment and operations of the networks can be considered among the Taxonomy activities in the next delegated act.

Advocacy actions include participation in industry working groups and professional associations, investment and collaboration in research and active participation in ICT and climate change standardisation activities, aligned with the 1.5°C emissions reduction pathway (Paris Agreement).







Participation in sectoral working groups on climate change





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Other initiatives and partnerships

Aware of its responsibility to promote a global movement for tackling climate change and recognising the need for collective action to accelerate the transition to a sustainable economy, Telefónica is also participating in the following initiatives:







EXPONENTIAL ROADMAP INTERIO



Climate Action Plan

Telefónica is a founding member of the EGDC, an **initiative of** the European Commission and leading European ICT companies committed to supporting the green digital transformation as a solution to climate change through three strategic areas:

- Development of digital solutions with a net positive impact on energy efficiency and material use.
- Development of methods and tools to measure the impact of digital solutions.
- Creation of guidelines and recommendations for green digital transformation.

The initiative is an urgent call to action for companies to set science-based emissions reductions targets in line with a 1.5°C future.

A global initiative that brings together the world's most influential companies advocating for 100% renewable electricity.

Cross-sectoral community of companies and organisations, working to address the climate crisis and decarbonisation challenges.

Initiative, which aims to halve GHG emissions before 2030 and accelerate exponential climate action and solutions through ground-breaking projects.

Initiative that aims to support the supply chain, especially SMEs through the SME Climate Hub, to halve their emissions by 2030 and achieve net zero emissions by 2050.



A pioneering international initiative that aims to engage and promote the climate change challenge among small and medium-sized enterprises, providing access to a range of resources to understand and mitigate their environmental impact, including action guides, tools and a powerful network. Small and medium-sized enterprises that join commit to halve their greenhouse gas emissions by 2030, achieve net zero emissions by 2050 or even earlier and report their progress each year.



"Race to Zero" is a **global UN campaign** that brings together the world's largest coalition of non-state actors committed to implement rigorous and immediate action to halve global emissions by 2030 and achieve a healthier and fairer world with net-zero emissions.



Coalition catalysing political and business action to **halve global** emissions by 2030, in line with the 1.5°C pathway.





accelerate nature-based solutions. Telefónica has committed to conserve and plant 1.5 million trees by 2030 to restore and conserve forest ecosystems.

An initiative of the World Federation of Advertisers (WFA). It aims to help companies' marketing and communications teams to be part of the solution to climate change.







Metrics and targets

Risks and opportunities

Circular economy

Carbon offsetting

The road to net zero

Models of the Plan

Our Plan, at a glance

Our Plan, at a glance







 \mathbf{L} <u> 20</u> Our plan, at a glance Introduction Wew Our journey to emis neut Metrics and (unab Net Zero targets We w emiss Risks and opportunities 1 2017 2018 2020 2021 2023 2019 2022 2024 2015 2016 2025 20 How are we going to do it? Circular economy • Improve Carbon 🗸 Netwo offsetting Optimising our internal 🗸 Powe 🗸 Comp processes 🗸 Moder 🗸 Al and 🗸 Efficier The road to net zero • Refurbish and reuse 9 Engaging with suppliers 🔶 100% Cust and promoting circular C) Models of the economy Plan 🖕 100% net\ Our Plan, at a glance 0 ✓ Help customers reduce their CO₂ emissions through the Helping our customers to ____ development of digital and connectivity solutions. decarbonise its businesses ✓ Promote the sale of Eco Smart products and solutions \square Aligning environmental and financial sustainability Improve change ✓ Defined climate change governance mechanisms ✓ Environmental



Being transparent and involving everyone

- and responsibilities
- ✓ Variable remuneration aligned with the achievement of climate targets

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 2025 We will reduce 90% of our scope 1 and 2 emissions in our main markets and we will neutralise/offset the remaining 10% (unabated emissions) We will reduce 39% of our scope 3 emissions 	 2030 We will reduce 90% of our scope 1 and 2 emissions We will reduce 56% of our scope 3 emissions 	Net zero en Reducing 90% Neutralising 100%	of our emissions $ullet$
• Improve 90% of energy consumption per unit of traffic	 ● 100% renewable electricity 	035 2036 2037 203	8 2039 2040
 Network transformation and legacy shutdown Power Saving Features (PSF) Compacting and consolidation Modernisation of power and cooling equipment Al and machine learning Efficient lighting 	 Guarantees of Origin Long-term Power Purchase Agreements (PPA) Self-generation Veh 	acement of fuels allation of hybrid self-generation systems allation of lithium batteries cle replacement and reduction of travelling ling equipment: leakage control, equipment down and refrigerant replacement.	7 Operational model
 sh and reuse 90% of fixed customer equipment 100% Customer Premise Equipment with environmental cr 100% of strategic suppliers with emission reduction targets aligned with SBTi 100% network equipment reused and recycled 	teria V Supp V Carb V Joint	nen supply chain engagement olier Engagement Programme oon Reduction Programme Alliance for CSR Supply Chain Leaders / SME Climate Hub Rating	2 Value chain model
 Help customers to make informed decision Transparent communication to drive customers 		of refurbished phones	3 Commercial model
 40% financing linked to sustainability criteria Improve the reporting on the impact of climate change in financial statements 	 Map debt issuance against the EU taxonomy Apply internal carbon pricing in procurement decision 	IS	4 Economic model
ternal regulations verifiable KP Iternal engagement actions verifiable kr	 ting on our progress with Continued leadership in transpare CDP and DJSI ks and opportunities in line Climate advocacy actions: industre partnerships and professional ass 	y groups, strategic	5 Governance model



