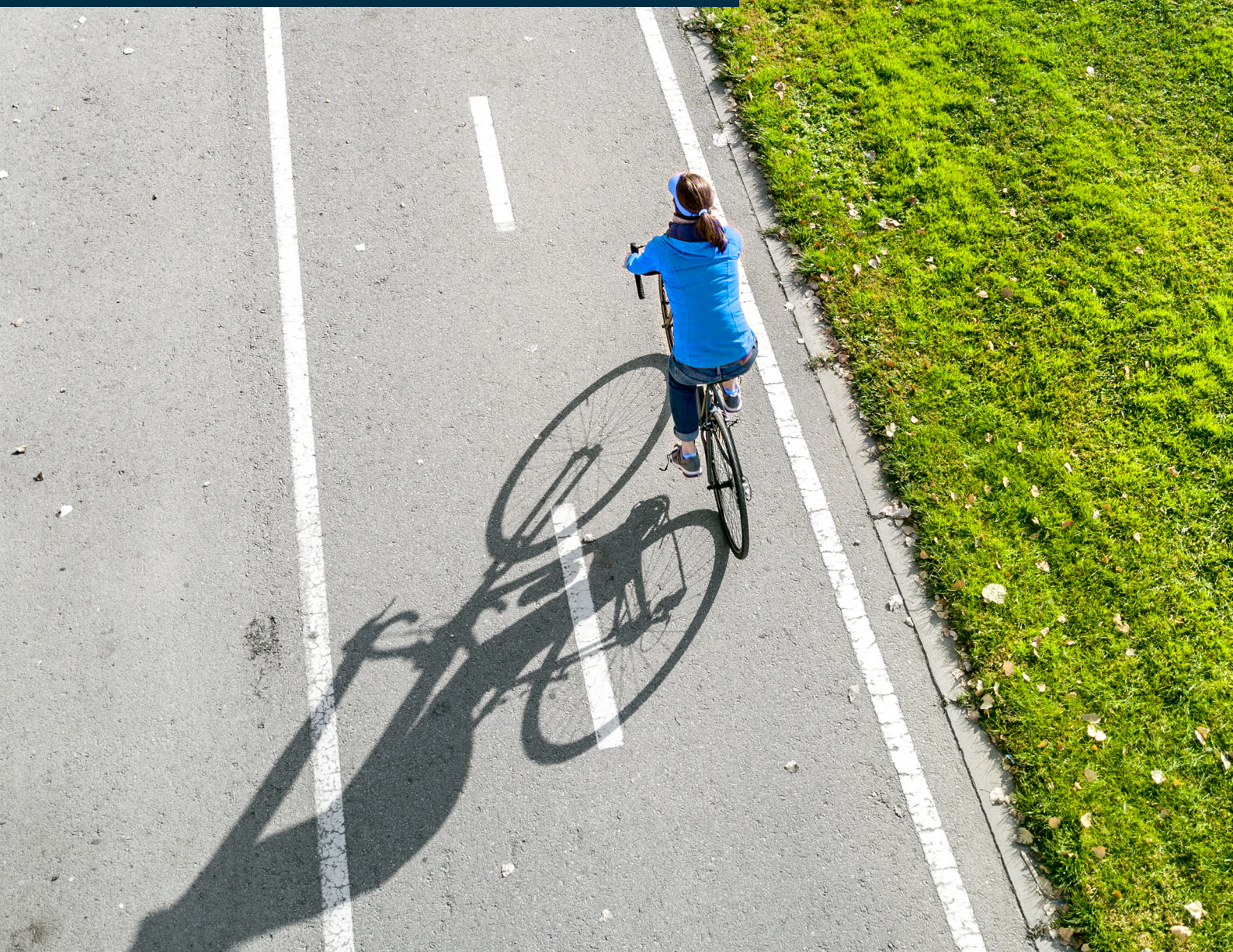
Telefónica

Green Financing

2020

January 2021



Introduction

Telefónica is a company that is aware of the new challenges posed by today's society. This is why we offer the most sustainable means and with the safest and cutting-edge technology, to facilitate communication between people.

An innovative and attentive spirit with an immense technological potential that multiplies the choice of its more than **344 million** customers. Telefónica operates in **14 countries** and is present in **24** others, with an average of **113,819 employees.**

Net sales figure (revenue) was **€48,422 million in 2019**, with more than **344 million accesses**.

Telefónica is a private company with more than **1.3 million shareholders**, traded in several of the most important stock markets around the world.

In November 2018, it published its sustainable financing framework, (with an **independent second-party opinion from Sustainalytics**) linked to the **United Nations Sustainable Development Goals** and **aligned with** the **ICMA 2018** (International Capital Markets Association) **Green Bond Principles**.

In this context, Telefónica already has several green bond issuances, pioneering within the telco sector. It issued both the first green bond in January 2019 (€1 billion, fully allocated in May 2019) and the first hybrid green bond in January 2020 (€500 million, fully allocated in August 2020). The funds obtained will serve to finance or refinance projects aimed at increasing the company's energy efficiency thanks to the transformation of the copper network to optical fibre in Spain.

With this issuance, **Telefónica takes a further step towards integrating sustainability into its business strategy** and thus demonstrates its commitment to the investment community and to society as a whole, contributing to social welfare while generating value for its shareholders.

January 2020
First hybrid green bond issuance

500
Mill€

2

Telefónica's commitment to climate change

Telefónica has an Energy and Climate Change strategy, aligned with the business, approved annually by the Board of Directors. We are committed to reducing our own carbon footprint and offer solutions to reduce our customers' emissions.

We implemented the recommendations of the **Task Force on Climate Related Financial Disclosures** (TCFD), to respond to the demands of our main stakeholders and the transparency required in this area.

2020
We increased the ambition of our objectives

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

SBTi validation

1.5°C

OUR ONLY FUTURE

Energy and Climate Change goals

After meeting our 2020 targets two years ahead of scheduled, we are increasing our ambition and aiming to go beyond the Paris Agreement, reducing our emissions faster than required by the 1.5°C scenario and validating our targets again by the **Science Based Targets Initiative.**

These goals help us to take advantage of the opportunities of decarbonisation, to be more competitive and to offer our clients services based on a clean and efficient network.

Absolute emission reduction of 70% by 2025 (90% in our four main markets) and reaching net-zero emissions by 2040* at the latest, including the entire value chain.

Achieving 85% of renewable electricity consumption by 2025 and 100% by 2030.

Improve energy efficiency (consumption vs. data traffic) by 90% by 2025.

* 2025: net-zero emissions for our own operations in the 4 main markets (Spain, Brazil, UK and Germany)

2

Digitalisation

Our commitment to the environment goes beyond our own goals, it extends to the entire economy. The company is increasing its range of digital solutions, based on IoT, Cloud, Security, Big Data and Artificial Intelligence to help our customers, and society in general, to improve waste management, reduce air pollution, save water, prevent fires, etc.

In 2019, Telefónica succeeded in reducing emissions by its customers in the amount of 3.2 million tonnes of CO_2, thanks to its digital solutions. Telefónica's global goal is to avoid 5 million tCO2 in 2025 in our four main markets, thanks to connectivity and digital solutions.

In addition, Telefónica is already working with its suppliers to reduce CO_2 emissions in its value chain by 39% by 2025 compared to 2016, as they are the key allies in reducing the carbon footprint and boosting circular economy.

In four years, Telefónica has reduced emissions in its value chain by 18.5%

We decarbonize the entire economy

3.2

Million tCO_2 avoided

For 1 tCO_2 we emit, we save 3.3 on our customers

3

Telefónica's sustainable financing framework [1]

In 2018, Telefónica published its **sustainable financing framework**, which will enable it to issue green, social and sustainable bonds and use the funds to finance and refinance, in whole or in part, existing and future projects that promote energy efficiency and the reduction of GHG emissions within its own operations and those of its clients and/or deliver positive social outcomes.

It received **Sustainalytics'** independent second-party opinion, which has considered our SDG Framework is credible and impactful, and aligns with the four core components of the Green, Social and **Sustainability** Bond Principles.

This framework defines eligibility criteria in the following areas:

- Energy efficiency of Telefónica network infrastructure.
- Renewable energy.
- Energy efficiency: Digital solutions for the environment.
- Digital inclusion: access for all through an affordable infrastructure.
- Employment generation and economic growth.

In addition, a project selection and evaluation process is established, which is led by a Committee made up of senior management from the departments of Finance, Management Control and the Global Corporate Ethics and Sustainability, among others.

Telefónica hereby reports on its annual performance, both in terms of the allocation of funds and the positive impact achieved.

[1] Telefónica SDG Framework. November 2018. https://www.telefonica.com/en/web/shareholders-investors/debt-ratings/sdg-framework

4

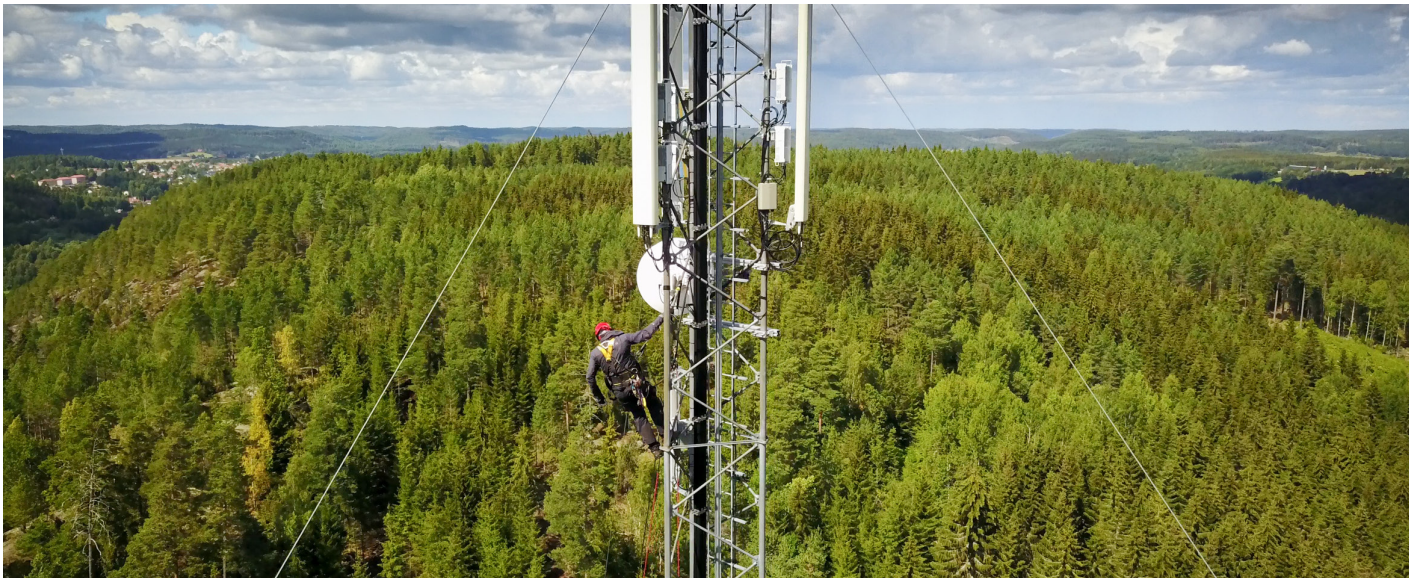
Transformation of the landline network in Spain: from copper to fibre optic

The entire green hybrid bond issued in 2020 is allocated to the transformation of Telefónica's landline communications network in Spain from copper to fibre to the home (FTTH). This project will create the network of the future, more efficient and cleaner, which will also be the enabler of many digital services with a positive effect on society.

Network transformation process

Optical fibre deployment	Migration of clients between technologies	Copper network shutdown.	Network compaction and technical buildings shutdowns.	Dismantling copper network and recycling its components.

Thanks to fibre optics, Telefónica has a network that is better prepared for the future, adapted to the demands of 5G, virtualisation and services such as Cloud, Edge Computing, Big Data and Analytics.



4

Our Goals

This transformation project seeks to achieve maximum business and environmental efficiency in the deployment and maintenance of our network. To this end, we have set the following challenges:

- 100% of retail customers on fibre by 2025.

- Reduce energy consumption through:

shutdown of the copper network and the systems that support it: We have already managed to shut down 765 technical buildings and will close more than 8,000 in 2025

efficiency in the management and transmission of large volumes of data..

Optic Fibre

85%

more efficient than copper network

Why it is important

Fibre is much more efficient than copper, playing a key role in sustainable connectivity, as it involves:

a) Greater simplification and environmental efficiency:

- Energy efficiency: Fibre access per user consumes between 7 and 20 times less energy (>85% efficiency) than copper access.

- Technical buildings shutdowns: The fibre optic connection has 4 times more range than copper connections, which allows us to shut down more service centres each time.

- Circular economy: all this process facilitates the recycling of equipment and cables to obtain secondary raw materials.

- Space savings: Fibre takes up 10 times less space and has 100 times more capacity.

- Network quality and reduced maintenance resources: half the number of breakdowns in fibre than in copper, reducing the number of

4

b) A new relationship model between customers and services based on self-installation/self-provision, flexibility and immediacy.

c) Social and economic effect on people, companies and territories. Facilitating digital education, entrepreneurship, new business and relationship models, greater ability to reconcile family and work, better access to health services or the establishment of population in rural areas.

d) A benefit for the environment because of the CO_2 emissions saved thanks to digital services that need the capacity and data transmission speed offered by optical fibre.

Energy savings
of 50 GWh, equivalent to the consumption of more than

+14,000
homes in Spain

What we already achieved (May 2019 - August 2020)

Environment: 50 GWh of energy saved and 10,075 tCO_2 avoided, equivalent to the carbon captured by more than 165,000 trees. Thanks to the shutdown of hundreds of thousands of elements and the closure of hundreds of copper technical buildings.

Business: Spain has the largest fibre-to-the-home network in Europe, with 4.8 million connected customers and 22.8 million connected premises.

Society: Society: Different studies relate economic development to broadband. According to an analysis we carried out, the deployment of fibre, mainly in rural areas, can reduce the unemployment rate by 0.8%, increase average income by 3.9% or boost business creation, when it is accompanied by new digital services[2].

[2] Source: Measuring the socio-economic impact of high-speed broadband deployment in rural areas of Spain. Telefónica. 2020

5

Basic data on Telefónica's inaugural hybrid green bond

Issuer	Telefónica Europe BV
Guarantor	Telefónica S.A.
Guarantor rating	Baa3/BBB-/BBB (Moody's/S&Ps/Fitch)
Type of debt	Direct, unsecured and subordinated obligations, senior only to share capital, pari passu with outstanding hybrids
Nominal amount (EUR)	500,000,000
Redemption date	5 february 2020
Due date	Perpetual (amortizable since May 5, 2027)
Coupon	2.502%
Use of the funds	Eligible green investments for energy efficiency, mainly the transformation of the copper network into optical fibre in Spain
Second opinion	Sustainalytics
Admission to securities trading	Irish Stock Exchange regulated continuous market
ISIN code	XS2109819859

6

Fund allocation

After the total allocation of the funds of the **green bond issued in 2019**, this bond continues the financing of the transformation of the fixed network with copper technology by fiber optic

This project is divided in three phases:

Fibre deployment: Construction of the fibre optic network in FTTH (Fibre To The Home) mode between the technical building and the CTO (point of deployment closest to the customer's home, whether a residential or business customer). The CTO is usually placed in the building where the client's home is located.

Transportation: Construction of the transport network necessary to manage the data of customers with a fibre connection. This issue has been dealt with in a very restrictive way when allocating funds, as transport is a common element of several technologies. For this bond, only the part of transport associated with agreements with different public or private entities in which it is specified that the access technology must be optical fibre has been selected.

Customer migration and connection: Connecting both new and existing customers with copper technology access to FTTH fiber optic technology access. It collects the operations between the CTO and the customer's home.

All the concepts include direct investment (costs with third parties) and its corresponding part of "TREI" (Spanish acronym for "investment work carried out by own resource") with the following distribution:

Funds

510.20

Mill€


Fibre deployment


Transport


Customer migration and connection

Fund allocation	Mill€
FTTH Deployment	123.56
TREI FTTH Deployment	79.56
FTTH Connect (registrations + migrations)	307.65
TREI FTTH Connect migrations	0.02
Transport	-0.21
TREI Transport	-0.38
TOTAL	510.20

7

Impact indicators and calculation methodology

In order to measure the positive impact, several monitoring indicators have been established in line with the provisions of the sustainable financing framework.

Indicators


kWh
Fixed network consumption


kWh/PB
Consumption / data


kWh
Savings


tCO_2
Emissions

Fixed network electricity consumption (kWh)

This is the sum of all the electricity consumed by Telefónica's buildings necessary to provide landline network communications services. It includes both buildings that are already 100% fibre and those that still have copper network equipment.

The electricity consumption is calculated from the bills of the electricity suppliers at the different consumption points (buildings). Those buildings considered "unique" because they do not provide direct service to the landline communications network, such as DPCs (data processing centres) or office buildings, are not considered.

In addition, given Telefónica's status as the incumbent operator in Spain, we host other operators' equipment in our buildings. The electricity they consume in our buildings is subtracted from the one in the bills, in order to have the real consumption of the Telefónica network.

Electricity consumption of the landline network between data traffic managed by said network (kWh/PB)

This energy intensity indicator is calculated using the electricity consumption of the landline network and the data traffic managed by the landline network, expressed in Petabytes (PB).

Electricity savings (kWh)

This is the amount of electricity saved by disconnecting elements from the copper network and subsequent total technical buildings shutdowns.

To develop the project of total shutdown of the copper network, specific shutdown sub-projects have been defined by technology. Each technology has its own elements and based on the consumption that these had when they were in use, the amount of electricity saved is calculated.

7

The consumption of the different elements is calculated either through the technical specifications of the element or through direct measurements of its consumption, when the age of the equipment makes it impossible to have such specifications. A small fraction is added to this consumption, corresponding to the savings in air conditioning thanks to the lower heat dissipation of the communication equipment.

Monthly, the number of elements that are turned off and their typology are reported. This, together with the consumption data for each type of element, allows the amount of energy saved to be calculated.

Since the exact day on which each element is switched off is not known, it is assumed that, for the current month, only the savings corresponding to 15 days are allocated, as if all the equipment had been switched off on the 15_{th} of each month. From the following month onwards, the amount of electricity saved over 30 days is already considered.

Avoided CO_2 calculation

from the energy savings involved in switching off the copper network

Carbon emissions avoided through electricity savings (tCO_2)

Based on the amount of electricity saved by switching off the copper network, the carbon emissions avoided are calculated using the emission factor of the Spanish electricity mix, corresponding to each year being calculated (2019-2020).

The emission factors used are taken from the annual reports on guarantees and electricity labelling published by the CNMC[3](Spanish National Commission for Markets and Competition). The emission factors used are:

Carbon emissions avoided	2019	2020
Emission factor ($KgCO_2/kWh$)	0.20	0.20

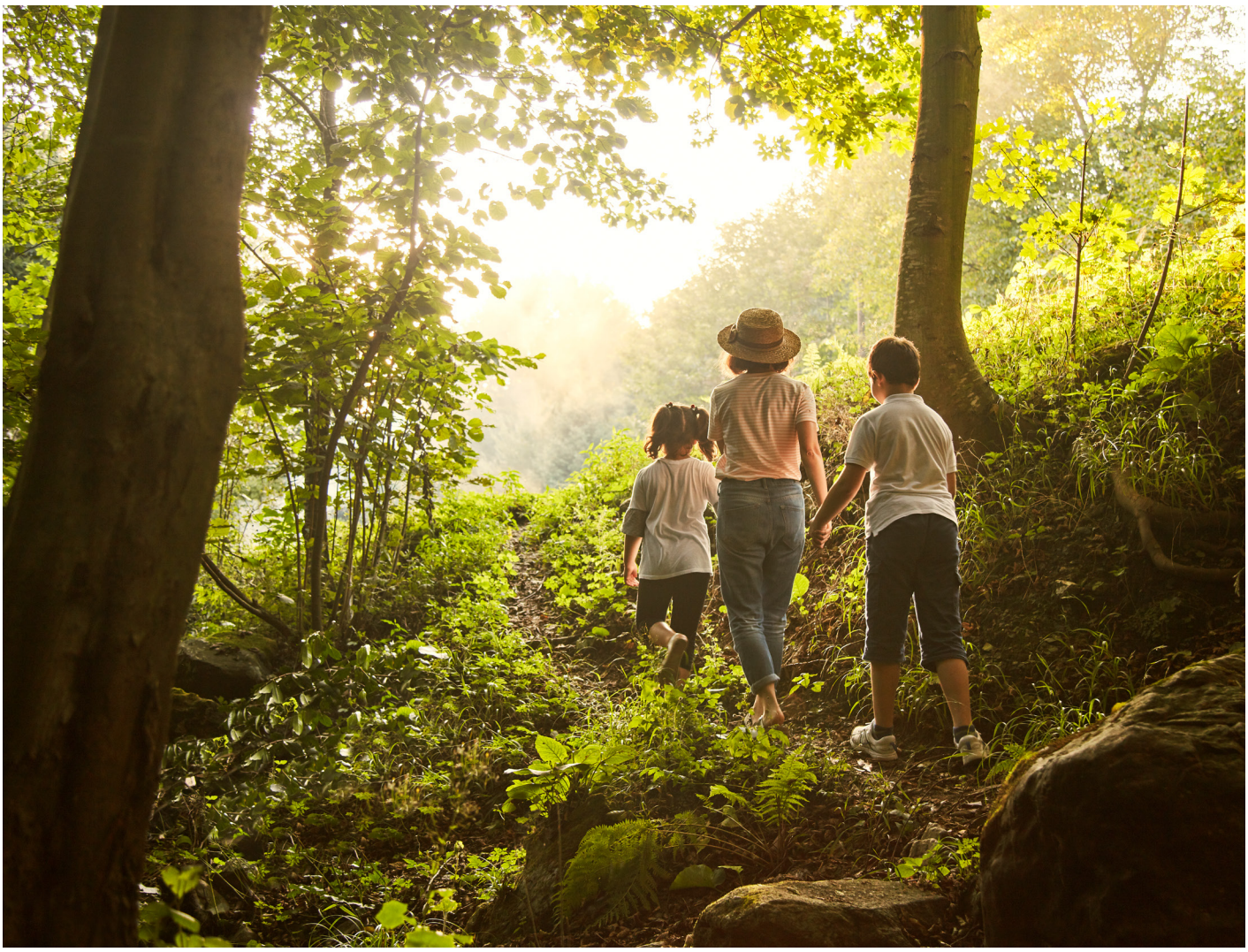
For 2020, the same value is used as for 2019, as the emission factor is not published until 2021.

[3] https://gdo.cnmc.es/CNE/resumenGdo.do?informe=garantias_etiquetado_electricidad

7

Green Hybrid Bond 2020 monitoring indicators

	Indicadores	2019	2020
kWh	Landline network electricity consumption	892,656,536	883,881,699
kWh/PB	Landline network electricity consumption / data traffic	82,761.42	59,899.13
kWh	Saving electricity by shutdown/ transformation of the network	10,086,255	40,291,085
tCO_2	Emissions prevented by saving electricity	2,017.25	8,058.22



8

Limited Assurance Report

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Telefónica, S.A.

Independent Limited Assurance Report on the information related to "Transformation of the landline network in Spain: from copper to fibre optic" (re)financed by the Green Bond (ISIN XS2109819859), executed during the years 2019 and 2020

This version of our report is a free translation of the original, which was prepared in Spanish. All possible care has been taken to ensure that the translation is an accurate representation of the original. However, in all matters of interpretation of information, views or opinions, the original language version of our report takes precedence over this translation.

Independent Limited Assurance Report

To the Management of Telefónica, S.A.:

We have carried out our work to provide a limited assurance on the information related to "Transformation of the landline network in Spain: from copper to fibre optic" (re)financed by the Green Bond (ISIN XS2109819859), executed during the years 2019 and 2020 issued by Telefónica Europe B.V. (hereinafter, "the Bond"), contained in the report "Green Financing. 2020" of Telefónica S.A. (hereinafter, "Telefónica") for the year ended 31 December 2020, and prepared in accordance with the sustainable financing framework "Telefónica SDG Framework, november 18", available in the web page

https://www.telefonica.com/en/web/shareholders-investors/debt-ratings/sdg-framework (hereinafter, "the Framework").

The aspects of the information subject of our review are the following:

- The application of the eligibility criteria in the project (re)financed by the Bond described in the Framework, as well as the (re)financed project itself.
- The allocation of the funds obtained through the Bond to the project (re)financed by it and that the capital invested in the project (re)financed is attributable to the Bond.
- The verification that the impact indicators (consumption of landline network electricity, electricity consumption of the landline network between data traffic managed by the network, electricity savings and carbon emissions avoided through electricity savings) are prepared in accordance with their calculation methodology, defined in the mentioned report "Green Financing. 2020".

Responsibility of Management

Management of Telefónica is responsible for the preparation, content and presentation of the report "Green Financing. 2020", in accordance with the requirements included in the Framework in which the eligibility criteria of the projects, the allocation of funds, the impact indicators. In particular, this responsibility includes establishing, implementing and maintaining the internal control required to ensure that the information included in the report "Green Financing. 2020" is free from any material misstatement due to fraud or error.

Management of Telefónica is also responsible for defining, implementing, adapting and maintaining the management systems from which the information required to prepare the mentioned report, is obtained.

R. M. Madrid, hoja 87.250-1, folio 75, tomo 9.267, libro 8.054, sección 3ª
Inscrita en el R.O.A.C. con el número S0242 - CIF: B-79 031290

Our independence and quality control

We have fulfilled our work in accordance with the independence requirements and other ethical requirements of the Code of Ethics for Professional Accountants of the International Ethics Standard Board for Accountants (IESBA), which are based on basic principles of integrity, objectivity, professional competence and diligence, confidentiality and professional conduct.

Our firm applies the International Standard on Quality Control 1 (ISQC 1) and thus employs an exhaustive quality control system which includes documented policies and procedures on the compliance of ethical requirements, professional standards, statutory laws and applicable regulations.

Our responsibility

Our responsibility is to issue a limited assurance report based on the procedures that we have carried out and the evidence obtained. Our limited assurance engagement was done in accordance with the International Standard on Assurance Engagements 3000 (Reviewed) "Assurance Engagements other than Audits or Reviews of Historical Financial Information", issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC).

The scope of a limited assurance engagement is substantially less extensive than the scope of a reasonable assurance engagement and thus, less security is provided.

The procedures that we have carried out are based on our professional judgment and have included consultations, observation of processes, document inspection, analytical procedures and sampling test. The general procedures employed are described below:

- Meetings with Telefonica's personnel from various departments who have been involved in the preparation of the report "Green Financing. 2020" in order to know the characteristics of the project (re)financed by the Bond, the internal management procedures and systems in place, the data collection process and the environment control.

- Verification of the application of the eligibility criteria, described in the Framework, for the selection of project (re)financed by the Bond.

- Analysis of the procedures used for gathering and validating the information and data presented in the impact indicators included in the report "Green Financing. 2020".

- Verification of the traceability of the funds obtained through the Bond to (re)finance the project and verification that the investments undertaken by Telefonica in the project refinanced have been made in accordance with the Framework criteria.

- Verification through sampling tests revisions and substantive tests of the information related to impact indicators. We have also verified whether they have been appropriately compiled from the data provided by Telefónica´s sources of information.

- Obtainment of a management representation letter from the Directors.

Conclusion

As a result of the procedures carried out and the evidence obtained, no matters have come to our attention which may lead us to believe that:

- The project financed by the Bond included in the report "Green Financing. 2020" does not comply, in all its significant aspects, with the eligibility criteria described in the Framework.
- The funds obtained through the Bond have not been assigned to the project (re)financed by it and that the capital invested in the (re)financed project is not attributable to the Bond.
- The impact indicators contain significant errors or have not been prepared, in all their significant aspects, in accordance with what is indicated in the Framework and as indicated in the report "Green Financing. 2020" in relation to its calculation.

Use and distribution

Our report is only issued to the Management of Telefónica in accordance with the terms and conditions of our engagement letter. We do not assume any liability to third parties other than Telefónica's Management.

PricewaterhouseCoopers Auditores, S.L.

Original in Spanish signed by
Pablo Bascones

20 January 2021