



2023 Report

# Telefónica's Sustainable Senior Bond

Issue date: May 2022

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## 1. Introduction

Telefónica offers digital solutions that connect people through the deployment of telecommunications networks that are environmentally and sustainably efficient.

Telefónica is a telecommunications company with over 1.2 million shareholders and is listed on the world's leading stock exchanges. The Company currently operates in 12 countries and employs over 103,000 people, serving more than 383 million customers. At the end of 2022, revenues amounted to €39,993 million.

In 2018, the Company published its first SDG framework, [which was subsequently updated in January 2021](#), and endorsed on both occasions [by Sustainalytics](#). The framework is linked to the United Nations Sustainable Development Goals and is aligned with the International Capital Markets Association (ICMA) Green Bond and Social Bond Principles as well as its Sustainability Bond Guidelines.

Telefónica is a pioneer in sustainable financing and stands out for the volume and diversification of its financial instruments. In 2019, it was the first company in the telco sector to issue a green bond for an amount of €1 billion. Also, in 2020 the company issued the first green hybrid amounted to €500 million and in 2021 it launched the sector's first sustainable hybrid, amounting to €1 billion.

The proceed of these issuances are mainly used for financing and/or refinancing:

- Green eligible projects**

Energy efficiency associated with the transformation and improvement of the telecommunications fixed and mobile network. Specifically, the replacement of the fixed copper network with fibre optics and the deployment of high speed mobile networks like 5G.

- Social eligible projects**

Inclusive connectivity through the deployment of broadband in unconnected or underserved rural areas and support for job creation and entrepreneurship.



12 countries



103,000+ employees



€39,993 million  
Revenues 2022



First telco to issue a green bond



Telefónica sustainable financing is up to €17bn

## Telefónica: Pioneers in sustainable financing

In 2022, Telefónica Group's sustainable financing<sup>1</sup> activity exceeded 27% of the Company's total financing, positioning Telefónica as the market leader in the global telecommunications sector in terms of the volume of bond and hybrid instrument issuances. In January 2023, a **new 1 billion euros green hybrid has been issued and has set a new target for financing linked to sustainability to represent 30-35%** of total financing by 2024.



\*Exchange rate at end-June 2023

This allocation and impact report relates to the €1,000 million sustainable senior bond issued in May 2022.

<sup>1</sup> Sustainable financing includes balance sheet debt (accounted under current and non-current financial liabilities items), hybrids (accounted under current and non-current financial liabilities items), and undrawn committed credit lines. Sustainable criteria are defined on Telefónica's sustainable financing frameworks according to ICMA, LMA, APLMA, LSTA principles, or other recognised standards, as well as ESG criteria applied to other financing instruments. Not necessarily aligned with the requirements of the EU Taxonomy Regulation.



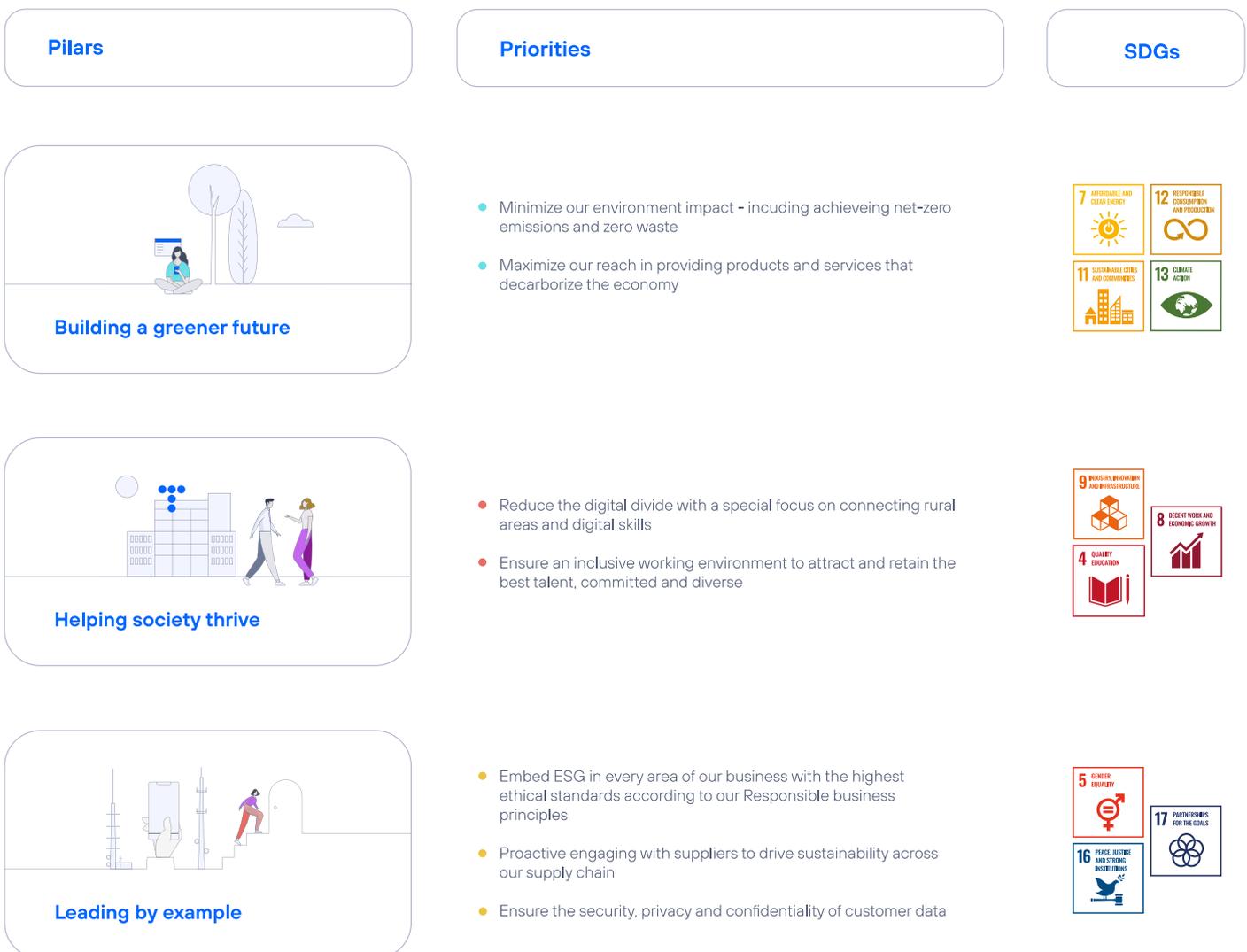
## 2. Telefónica's ESG strategy

Telefónica's strategy has its mission as its starting point and the [Responsible Business Principles](#) as a fundamental pillar to encourage the transition to a more digital, environmentally friendly and sustainable economy that is committed to all stakeholders.

The Company takes into account the impacts of its activities, as well as long-term targets and aspirations, both internally and externally.

The **Responsible Business Principles** are integrated into Telefónica's Strategic Plan and are supported by policies and standards that govern the way the Company acts: with integrity, commitment, and transparency. The targets are linked to the variable remuneration of all Telefónica employees, including members of the Executive Committee.

The main lines of our ESG strategy are organised into three pillars:



## 2.1. Telefónica's commitment to addressing climate change

### Strategy

Telefónica's Energy and Climate Change Strategy focuses on climate risk management to mitigate the impact and adapt to the adverse effects of global warming.

The strategy is in line with the business and is based on two main commitments with **the goal of achieving net-zero emissions by 2040<sup>2</sup>**: to reduce its carbon footprint and to shape an offer of solutions that contributes to reducing greenhouse gas emissions by its customers.

Telefónica adopts the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) for the analysis of the risks and opportunities associated with climate change, promoting transparency, and meeting the demands of its main stakeholders.



Net-zero  
emissions in 2040

We increase the  
ambition of our  
goals



SCIENCE  
BASED  
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

**SBTi validation**

**1.5°C**



**OUR ONLY  
FUTURE**



<sup>2</sup> Net zero emissions in Telefónica's main Markets for Scopes 1 and 2, by 2025

## Energy and Climate Change Targets

On the road to Net Zero by 2040, Telefónica's decarbonisation plan includes short, medium and long-term targets that have been validated by the SBTi (Science Based Targets Initiative).

|   | <br><b>Energy efficiency</b> | <br><b>Renewable energy</b> | <br><b>Scope 1 and 2 emissions</b> | <br><b>Value chain emissions (Scope 3)</b> | <br><b>Customers' emissions avoided through digitalisation</b> | <br><b>Neutralisation</b> |
|---|---|--|---|---|---|--|
| <b>Short-term</b><br><b>2025</b>                  | Improve energy consumption per unit of traffic by <b>90%</b> , compared to 2015                               | Continue to consume electricity with <b>100%</b> of renewable origin in the main markets                     | <b>- 90%</b> in main markets compared to 2015   | <b>- 39%</b> globally, compared to 2016   | Helping customers to <b>reduce their CO<sub>2</sub> emissions</b> , through connectivity and Eco Smart services.                                  | Neutralise unabated <b>Scope 1 and Scope 2</b> emissions in main markets annually ( <b>10%</b> )             |
| <b>Medium-term</b><br><b>2030</b>                 |   | <b>100%</b> of electricity from renewable sources globally   | <b>- 80%</b> globally compared to 2015  | <b>- 56%</b> globally, compared to 2016   |   |  |
| <b>Long-term</b><br><b>2040</b>                   |   |  | Reduce total emissions by <b>90%</b>  |   |   | Neutralise residual emissions annually ( <b>10%</b> )  |
| <i>Net zero emissions (including value chain)</i> |   |  |   |   |   |  |

These targets help the Company to leverage decarbonisation opportunities, to be more competitive and to offer its customers services based on a clean, efficient network. Achieving these targets has formed part of the variable remuneration of all Telefónica's employees since 2018.

## Outstanding projects: enabling high speed networks connectivity

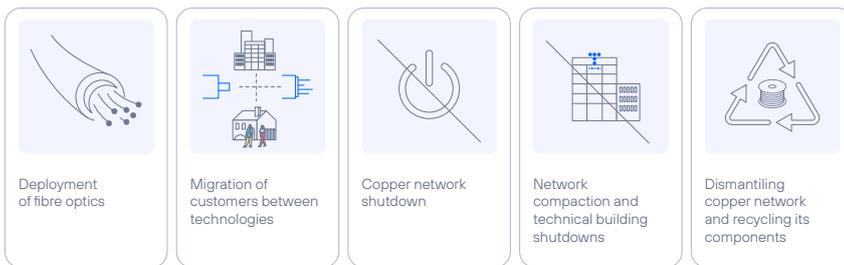
### 1. Transforming the fixed network from copper to fibre

**Fibre optics are 85% more efficient than copper in terms of energy efficiency.**

Part of the proceeds of this sustainable bond were used to continue the transformation of Telefónica Spain's fixed telecommunications network in Spain from copper to fibre to the home (FTTH).

This project contributes to shaping the network of the future: a more efficient and sustainable network that will also be the enable for many digital services with a positive effect on society.

#### Fixed Network transformation process:



The project is divided into three phases:

**Fibre deployment:** construction of the fibre optic FTTH network between Telefónica's technical building and the CTO (point of deployment closest to the customer's home, whether a residential or a business customer).

**Transport:** construction of the transport network necessary to manage the data of customers with a fibre connection. This has been covered in a very limited way when allocating funds, as transport is a common element of several technologies.

**Customer migration:** migration of existing customers with copper technology to provide them with access to fibre optic technology. It includes the operations between the CTO and the customer's home.

In line with Telefónica's global targets, this transformation project seeks to achieve the utmost business and environmental efficiency in the deployment and maintenance of the network.



81.7 million tonnes of CO<sub>2</sub> avoided by our customers in 2022



Transformation of our fixed network from copper to fibre, 85% more efficient



## 2. Transforming mobile network through deployments based in energy efficiency and interoperability

**From a Life-cycle Analysis perspective 4G/5G environmental impact per access and per PB is more than 7 times lower than legacy mobile technologies<sup>3</sup>.**

The deployment of Next Generation Mobile Networks is key to enable ultra-high-speed networks and the ability to support new services with more demanding requirements over the time. 4G and 5G traffic demand is continuously increasing, therefore we must deploy the required infrastructure to guarantee the needed network capacity and coverage and therefore increase the energy efficiency per traffic unit. Investing in new and multi-technology equipment allows networks to reduce energy consumption per data traffic and run multiple technologies deploying a minimum amount of hardware units.

Although the new mobile infrastructure may lead punctually to an overall increase in energy demand, the efficiency gained is expected to result in a net reduction in energy consumption per unit of data transmitted. This will be achieved by enabling energy-efficient transmission as well as operational efficiencies in industries and activities downstream of the financed network.

As an example, energy efficiency related 5G network deployment increases significantly due to its higher spectrum capacity. In 2020, Telefónica carried out a case study based on energy consumption measurements at its 5G sites deployed in Germany and Brazil. The study showed that the technology was up to 90% more efficient than 4G in terms of energy consumption per unit of traffic (W/Mbps).

### How can the transformation of the mobile telecommunications network help society to move forward?

Technologies like 5G have the potential to connect more than 7 billion people and 7 trillion devices, enabling an extensive catalogue of solutions and services and expanding new technologies such as Big Data, the Internet of Things (IoT), Artificial Intelligence (AI), and Cloud Computing, which will help to accelerate the twin transition (digital and environmental transformation). The latest generation of mobile networks enables the delivery of digital services aimed at improving people's quality of life in a sustainable and secure way. So far, 5G allows for optimised real-time monitoring and management of services for sustainable mobility or smart cities, among others.

### Telefónica boosts the energy efficiency of the mobile networks with specific actions and enhancements

- Mobile sites modernisation: decommissioning of legacy technologies and replacement with more efficient multi-band and multi-technology equipment.
- Activation of power saving features, such as: switching off bands/carriers, downgrade MIMO, shutdown electronics.
- Implementation of AI/ML platform on top of power saving features (PSFs) to continuously monitor and manage the network capacity and shut down useless resources on air



## What are the benefits offered by network transformation?

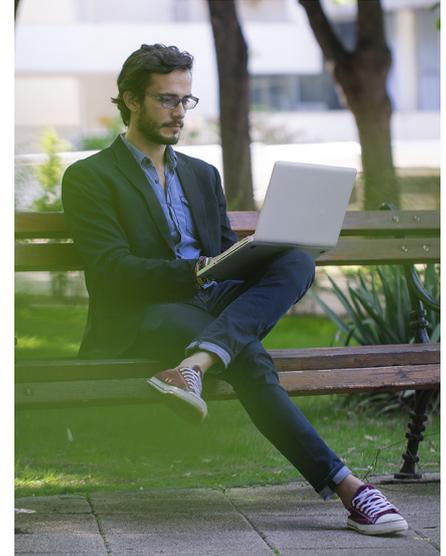
a) Greater simplification and environmental efficiency in the operation of our business:

- **Energy efficiency:** Access using the latest generation of telecommunications networks is more efficient in terms of energy consumption, specifically fibre is 85% more efficient than copper and 5G is 90% more efficient than 4G.
- **Shutting down technical buildings:** fibre optic connections have four times more range than copper connections, which allows us to shut down technical buildings.
- **Circular economy:** the closure of the copper network enables the recycling of equipment and cables to obtain raw materials: metals, rare-earth elements, etc.
- **Space saving:** fibre takes up 10 times less space and has 100 times more capacity, and the compactness of mobile equipment allows for lower energy consumption and space savings.
- **Network quality and reduced maintenance and support resources:** Reduction in the number of failures and the need for spare parts as a result of the migration from copper to fibre, and new functionalities in the mobile network enabling continuous remote monitoring.

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

c) A positive social and economic impact on people, companies and territories. Facilitating digital education, entrepreneurship, new business and relationship models, greater ability to balance family life and work, better access to health services and population retention in rural areas.

d) Environmental benefits for our customers in the shape of CO2 emissions avoided thanks to digital services that need the capacity and data transmission speed offered by fibre optics.



### Benefits of the network transformation process



**ENVIRONMENT**

- Energy savings (and associated CO<sub>2</sub> emissions) thanks to the building and equipments shut down and the fixed network compactness and mobile network transformation



**BUSINESS**

- Telefonica has one of the most extensive fiber to the home (FTTH) networks of the world.



**SOCIETY**

- The digitalisation of society has the potential to reduce up to 15% of CO<sub>2</sub> emissions globally by 2030<sup>4</sup>.

## 2.2. Telefónica's commitment to society

### Strategy

**Telefónica's digital solutions are aimed to improve people's quality of life and well-being, supporting economic development and the achievement of the United Nations Sustainable Development Goals.**

The Company is committed to human-centred digitalisation to address unequal opportunities by improving access to technology as the basis of its strategy.

To this end, Telefónica deploys and maintains a telecommunications infrastructure with a focus on continuous improvement of the network, which enables it to be faster and have a greater capacity. It also aims to bring coverage to more remote areas, mainly in rural and other hard-to-reach areas and develop products and services for customers with an inclusive perspective. Telefónica is also committed to helping SMEs in their transformation process, extending its range of communication services with specific IT solutions adapted to their needs.

### Targets

**Telefónica promotes inclusive connectivity that brings digitalisation to all people and boosts the social and economic development of the communities in which we are present.**

Digital solutions have shown that they can contribute to positively transforming communities and productive and economic models. The deployment of broadband networks, together with measures to boost digitalisation, have a direct impact on the socio-economic development of entire regions and on the lives of many people who gain access to services and opportunities that were previously unavailable to them.



Connectivity is one of the drivers of social and economic development



Target: 90-97% mobile broadband coverage in rural areas of our main markets by 2024



### RURAL DEPLOYMENT TARGET TO 2024

- Achieve broadband coverage of 90-97% of the population in the main markets, strengthening Telefónica's commitment to the development of rural areas.



## Outstanding projects: deployment of rural mobile broadband and fostering entrepreneurship and job creation

### 1. Mobile broadband deployment in rural areas

Broadband and digital services are connecting society, which means that anyone with access to Internet has greater access to information, to educational content, to job opportunities, to business development opportunities and even to financial and medical services. Digital inclusion and the opportunity to prosper through the digital world means having access to quality connectivity and having the necessary skills to take advantage of digital tools. Furthermore, in a business environment, SMEs need to access the fibre optic infrastructure, cloud connectivity and other digital services in order to survive and compete in the digital world, and many employees need to learn new skills so they are not left behind in the digital transformation.

Telefónica thus actively takes care of the needs of those who have been left out of the digital world, by rolling out, improving and/or optimising its networks in unconnected and/or poorly connected areas, principally in rural areas. Rural areas are deemed to be those areas classified as such according to the regulations and/or official institutions of each country.

### Benefits of rural deployment



## SOCIETY

Social and economic development in rural areas depends, among other things, on access to mobile broadband and the digital services based on that technology. Connectivity is an essential part of the transition process towards a digital society to achieve genuine social inclusion in all regions and at all levels.

Broadband networks have significant positive effects on various social and economic factors, such as fostering the creation of new businesses and increasing household income. A number of studies have shown that these networks have a positive impact on GDP. Specifically, the International Telecommunication Union (ITU) found that a **1% increase in mobile broadband penetration rates generates an increase of 0.15% in GDP** (that is to say, an increase of 10% in the mobile broadband penetration rate results in an average increase of 1.5% in GDP)<sup>5</sup>.



1,000+

startups receiving investment through Telefónica Open Innovation

More than  
€190 million  
invested in startups

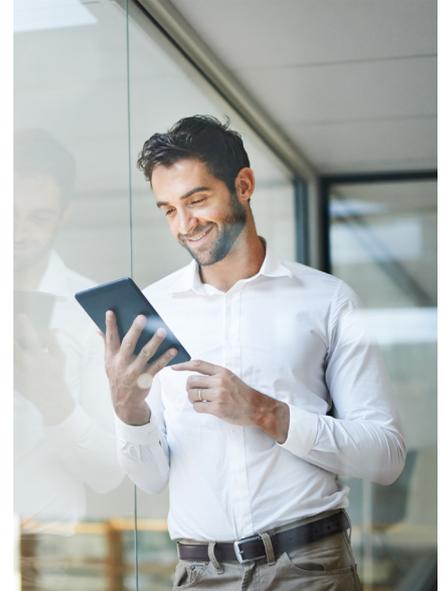
**W** wayra  
Telefónica Innovation

## 2. Fostering entrepreneurship and job creation

The socio-economic development arising out of the creation of new businesses through entrepreneurship programmes results in a positive impact through the increase in productivity, improved employment and the development of technology and innovation in the communities where these new business are set up.

Because of this, Telefónica has been encouraging the development of entrepreneurship and technological-digital talent in the countries where we are present to help local ecosystems prosper and to incorporate innovation into our organisation. The Open Future, Wayra and Telefónica Venture programmes have been our key pillars for funding innovation and fostering entrepreneurship. As a result, hundreds of new startups have flourished, contributing new economic and employment opportunities and preventing the relocation of entrepreneurship and the migration of young entrepreneurs to other, more prosperous regions.

### Benefits of supporting entrepreneurship



## SOCIETY

Support for entrepreneurship and startups creates jobs, fosters talent and contributes to economic and social development in the regions in question. In addition, due to the widespread nature of Telefónica's Open Innovation entrepreneurial network, the associated development of innovation and talent can occur in the regions of origin themselves. This is of great importance for boosting economic growth locally and encouraging the sustainability of every region. This is especially the case in those with high unemployment, where entrepreneurship may be a viable option for the future.



### 3. Telefónica's sustainable financing framework

Under Telefónica's SDG Framework (last updated in January 2021), the Company can issue green, social and sustainable bonds. The use of funds raised may be used to finance or refinance, in whole or in part, existing or future projects in the following eligible categories:

**Green projects:**

- Energy efficiency of Telefónica's network infrastructure.
- Renewable energy.
- Digital solutions with a positive impact on the environment.

**Social projects:**

- Mobile and fixed broadband: boosting network deployment in unconnected or poorly connected areas.
- Job creation and economic growth.

The framework received the independent second-party opinion of Sustainalytics and is aligned with the key elements listed in the Green Bond Principles, Social Bond Principles and Sustainability Bonds Guidelines: use of proceeds, process for project evaluation and selection, management of proceeds and reporting.

The Bond Committee is the body responsible for selecting and evaluating the projects to be financed. It is made up of senior management from Finance, Management Control and the Global Sustainability Office, among others.

Each and every one of the areas mentioned above helps to contribute to the Sustainable Development Goals: in particular, SDG 9 (industry, innovation and infrastructure), SDG 8 (decent work and economic growth), SDG 7 (affordable and clean energy) and SDG 13 (climate action).

In addition, and in accordance with the SDG Framework, Telefónica reports to its stakeholders annually, in terms of both the allocation of funds and the impact achieved, which is measured through specific indicators such as energy saved in GWh and tonnes of CO2 emissions avoided (in both fixed and mobile networks), number of municipalities, number of companies and number of users benefiting from the network deployment and the number of jobs created through investment from Telefonica Open Innovation.





## 4. Basic data on Telefónica's sustainable senior bond

|  |  |
|--|--|
| <b>Issuer</b>                          | Telefónica Emisiones S.A.U.  |
| <b>Guarantor</b>                       | Telefónica S.A.  |
| <b>Guarantor rating</b>                | Baa3/BBB-/BBB (Moody's/ S&P/Fitch)   |
| <b>Type of debt</b>                    | Senior Unsecured   |
| <b>Nominal amount (EUR)</b>            | 1,000,000,000  |
| <b>Disbursement date</b>               | 25 May 2022  |
| <b>Maturity date</b>                   | 25 May 2031  |
| <b>Coupon</b>                          | 2.592%   |
| <b>Use of the funds</b>                | Eligible investments related to energy efficiency, connectivity, economic growth, and job creation |
| <b>Second opinion</b>                  | Sustainalytics   |
| <b>Admission to securities trading</b> | The Irish Stock Exchange plc regulated market  |
| <b>ISIN code</b>                       | XS2484587048   |



## 5. Fund allocation and impacts

## The total funds allocated amounted to €1,006 billion

The proceeds of this issuance have been earmarked for the financing of the following projects: transformation of the fixed and mobile network via replacement of the copper fixed network with FTTH and mobile network update to improve energy efficiency (green projects), and mobile broadband deployment in rural areas and fostering entrepreneurship and job creation (social projects).

### Allocation of funds and aggregate impacts<sup>6</sup>

| Eligible project                    | Indicator                               | Units     | OB    | Impact |             |            | SDG      |
|-------------------------------------|---|-----------|-------|--------|-------------|------------|----------|
|                                     |   |           |       | 2021   | 2022        | Q1 2023    |          |
| <b>Fixed network transformation</b> | <b>Funds allocation</b>                 | <b>M€</b> |       |        | <b>293</b>  | <b>31</b>  | <br><br> |
|                                     | Electricity total consumption           | (kWh)     |       | -      | 868,557,923 | 48,312,388 |          |
|                                     | Network traffic                         | PB        |       | -      | 17,751      | 1,653      |          |
|                                     | Electricity consumption/network traffic | (kWh/PB)  |       | -      | 48,930      | 29,231     |          |
|                                     | Electricity savings                     | (kWh)     |       | -      | 39,816,024  | 1,505,784  |          |
| Avoided CO2 emissions               | (tCO <sub>2</sub> )                     | -         | 6,731 | 241    |             |            |          |

Note: For 2023 fixed network transformation only January is considered.

| Eligible project                     | Indicator                               | Units       | OB          | Impact      |             |         | SDG      |
|--------------------------------------|---|-------------|-------------|-------------|-------------|---------|----------|
|                                      |   |             |             | 2021        | 2022        | Q1 2023 |          |
| <b>Mobile network transformation</b> | <b>Funds allocation</b>                 | <b>M€</b>   |             | <b>106</b>  | <b>206</b>  |         | <br><br> |
|                                      | Electricity total consumption           | (kWh)       |             | 582,785,247 | 599,887,657 | -       |          |
|                                      |   | % YoY       |             | 5.47%       | 2.93%       | -       |          |
|                                      | Network traffic                         | PB          |             | 1,825       | 2,450       | -       |          |
|                                      |   | % YoY       |             | 24.9%       | 34.2%       | -       |          |
|                                      | Electricity consumption/network traffic | (kWh/PB)    |             | 319,279     | 244,840     | -       |          |
| Electricity savings                  | (kWh)                                   | -15.6%      | -23.3%      | -           |             |         |          |
| Avoided CO2 emissions                | (tCO <sub>2</sub> )                     | 107,567,911 | 182,384,222 | -           |             |         |          |
|                                      |   | 21,514      | 29,181      | -           |             |         |          |

| Eligible project              | Indicator   | Units           | OB                               | Impact   |            |            | SDG |
|-------------------------------|---|-----------------|----------------------------------|----------|------------|------------|-----|
|                               |   |                 |                                  | 2021     | 2022       | Q1 2023    |     |
| <b>Rural mobile broadband</b> | <b>Funds allocation</b>   | <b>M€</b>       | <br><br><br><br><br><br><br><br> | <b>-</b> | <b>289</b> | <b>59</b>  |     |
|                               | Population benefiting from investment in deployment or improvement of mobile broadband connectivity in rural areas            | People          |                                  | -        | 7,968,582  | -          |     |
|                               |   |                 |                                  | -        | 10,627,395 | -          |     |
|                               |   |                 |                                  | -        | 25,995,419 | 25,995,419 |     |
|                               | Users benefiting from investment in deployment or improvement of mobile broadband connectivity in rural areas                 | People          |                                  | -        | 1,926,794  | -          |     |
|                               |   |                 |                                  | -        | 4,486,196  | -          |     |
|                               |   |                 |                                  | -        | 10,771,687 | 3,833,198  |     |
|                               | Number of rural areas benefiting from investment in deployment or improvement of mobile broadband connectivity in rural areas | Number of areas |                                  | -        | 5,019      | -          |     |
|                               |   |                 |                                  | -        | 693        | -          |     |
|                               |   |                 | 193                              | 193      |            |            |     |

Note: 2022 data for Spain and Brazil correspond exclusively to 2H of the year. Q1 2023 includes only the allocation and impact indicator related to Germany.

| Eligible project       | Indicator   | Units     | OB | Impact   |           |          | SDG |
|------------------------|---|-----------|----|----------|-----------|----------|-----|
|                        |   |           |    | 2021     | 2022      | Q1 2023  |     |
| <b>Open Innovation</b> | <b>Funds allocation</b>   | <b>M€</b> |    | <b>-</b> | <b>21</b> | <b>1</b> |     |
|                        | Number of companies   | Number    |    | -        | 41        | 5        |     |
|                        | Number of jobs created through investment from Telefónica Open Innovation | People    | -  | 410      | 50        |          |     |

Note: The impact indicators relate to countries where the impact on employment is significant, and therefore only those countries in which we have presence and where the unemployment rate is higher than the OECD average rate (over the period of this bond's allocation) have been considered: España, Argentina, Brasil, Chile, Colombia y Perú.

|                              |           |              |
|------------------------------|-----------|--------------|
| <b>Total funds allocated</b> | <b>M€</b> | <b>1,006</b> |
|------------------------------|-----------|--------------|

<sup>6</sup> The funds allocated to this bond are integrated in the €1.006 million identified by Telefónica. The impact attributable to the bond is proportional to the funds allocated (€1,000 M) compared to those identified (€1,006 M)

# Impact indicators calculation methodology

## Fixed and mobile network transformation and modernisation

- **Fixed network electricity consumption (kWh)**

Electricity consumed by the Telefónica buildings needed to provide fixed-line network communications services. It includes buildings that are already 100% fibre and those that still have copper network equipment. It excludes those buildings considered to be "unique" because they provide other types of services as well as consumption by other operators in our buildings to provide their own services.

- **Mobile network electricity consumption (kWh)**

Electricity consumed in the base stations where Telefonica has equipments. It includes both, the base stations consumption owned by Telefonica and the consumption in sites that Telefonica rents to other operators. Both of them are needed to provide mobile network communications services. It includes both IT devices and supporting devices consumption.

- **Fixed and mobile network electricity consumption between data traffic managed by said network (kWh/PB)**

This energy intensity indicator is calculated by using the electricity consumption of each network (as described in each indicator) and the data traffic managed by that network, expressed in petabytes (PB).

- **Fixed network electricity savings (kWh)**

It is the electricity saved by disconnecting elements from the copper network and subsequent total shutdowns of technical buildings. The copper network is made up of a number of legacy technologies.

The number of elements that are shut down and their type are reported monthly. This, alongside the consumption data for each type of element (either through the element's technical specifications or through the direct measurement), allows the amount of energy saved each month by these projects to be calculated. A small fraction is added to this consumption, corresponding to the savings in air conditioning thanks to the reduced heat dissipation of the communication equipment.

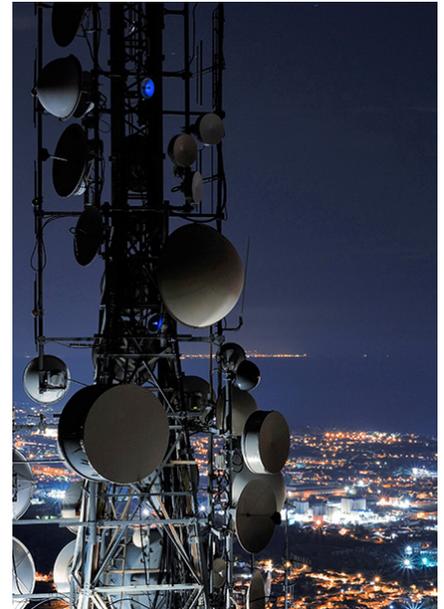
Since the exact day on which each element is shut down is not known, only the savings over 15 days are allocated for the current month. From the following month onwards, the amount of electricity saved over 30 days is taken into account.

- **Mobile network electricity savings (kWh)**

Electricity savings are calculated annually through real data; paid invoices, and estimated data (using data from prior years as proxies for unpaid invoices) when calculations are made. These savings are the result of analyzing how much the annual consumption of the network would have been with respect to the previous year if the network transformation had not taken place. It takes into account both the evolution in electricity consumption and the evolution in the data traffic that had to be managed in the same period of time.

- **Fixed and mobile avoided carbon emissions from electricity savings (tCO<sub>2</sub>)<sup>7</sup>**

The calculation of avoided carbon emissions is based on the electricity savings generated by the network transformation, both fixed and mobile (according to the description in the indicator), using the emission factors of the electricity mix in the country where the projects are developed. For Telefonica Spain avoided emissions have been calculated using GHG Protocol location method.



<sup>7</sup>In Spain, the emission factors used are from the annual reports on electricity guarantees and labelling published by the CNMC (Spanish National Commission for Markets and Competition).

## Impact of the project to deploy mobile broadband in rural areas

Description of impact KPIs:

- **Population benefiting from investment in deployment or improvement of mobile broadband connectivity in rural areas**

This takes into account those people located in rural areas who have benefited from the deployment, extension and/or optimisation of the mobile broadband services (HSPA+, 4G, LTE, 5G) and which, as a consequence of this investment, have become better connected. This population reside in locations that can be considered connected areas<sup>8</sup>.

It is calculated taking into account the population census of all the municipalities in which there has been an investment made by Telefónica for the task stated in the previous paragraph.

- **Number of users benefiting from investment in deployment or improvement of mobile broadband connectivity in rural areas**

This takes into account all end users (private individuals/B2C and companies /B2B) that benefited from the deployment, extension and/or optimisation of the mobile broadband services (HSPA+, 4G, LTE, 5G).

It is calculated taking into account the number of lines of private individuals or companies in the rural municipalities in which investment has been made.

- **Number of rural areas benefiting from investment in deployment or improvement of mobile broadband connectivity in rural areas**

This takes into account rural areas, the locations where investment has been made for the deployment, extension and/or optimisation of the mobile broadband services (HSPA+, 4G, LTE, 5G). This is to say, this is the number of localities in which Telefónica has invested and which have benefited from it.

Those geographical areas which fulfil the official and national definition of "rural area" have been deemed rural areas. For the case of Spain, the official data is obtained from the Instituto Nacional de Estadística and meet the criteria set in article 3 of Law 45/2007 (Rural Sustainable Development Act). For the case of Brazil, the information comes from the Instituto Brasileiro de Geografia e Estatística, which is a federal agency linked to the Ministry of Economy. And for the case of Germany, the definition has been provided by the Bundesinstitut für Bau-, Stadt, und Raumforschung, which is a public agency of the Federal Government.



<sup>8</sup> These areas that are not: i) unconnected areas: with on service (fixed or mobile) from any other operator; ii) Poorly connected areas: communities with at least one mobile service from an operator without broadband capacity. Those where the backhaul or access capacity of the given site do not allow for a quality internet experience. To avoid any doubt, in accordance with the new definition (2018) of the FCC (Federal Communications Commission), the definition of broadband Internet is a minimum download speed of 2 Mbps and upload speed of 3 Mbps. This would include, among others, HSPA+, 4G, and 5G mobile broadband technologies. This usually (but not necessarily) involves scattered populations and rural municipalities)

## Impact of the project to foster entrepreneurship and job creation

Description of impact KPIs:

- **Number of companies receiving investment through Telefónica Open Innovation**

Number of companies which have received investment through one of the three investment vehicles of Telefónica Open Innovation (Wayra, Telefónica Venture and Innovation Funds).

- **Number of jobs created through investment from Telefónica Open Innovation**

Number of people directly employed by the company which has received investment through one of the three investment vehicles of Telefónica Open Innovation, estimating an average of 10 employees per company<sup>9</sup>.



<sup>9</sup> The median and average of currently active companies is > 10 employees.



## 6. Independent Review Report



## **Telefónica, S.A.**

### **Independent Limited Assurance Report**

Projects: “Fixed network transformation (Spain)”, “Mobile network transformation (Spain)” and “Fostering entrepreneurship and job creation (Spain and Brazil)”, “Rural mobile broadband (Spain, Brazil and Germany)” and “Open Innovation (Spain)” (re)financed by the Sustainable Senior Bond (ISIN XS2484587048), considering the annual period from 25 May 2022, the date of issue of the bond, to 24 May 2023, as well as the two years prior to the date of issue of the bond



## Independent limited assurance report

To the directors of Telefónica, S.A.

We have carried out our work to provide limited assurance in respect of the information related to the projects “Fixed network transformation (Spain)”, “Mobile network transformation (Spain)” and “Fostering entrepreneurship and job creation (Spain and Brazil)”, “Rural mobile broadband (Spain, Brazil and Germany)” and “Open Innovation (Spain)” (re)financed by the sustainable senior bond (ISIN XS2484587048), issued by Telefónica Emisiones, S.A.U., (hereinafter, “the Bond”), contained in the “2023 Report Telefónica’s Sustainable Senior Bond Issue date: May 2022” report of Telefónica S.A. (hereinafter, “Telefónica”), considering the annual period from 25 May 2022, the date of issue of the bond, to 24 May 2023, as well as the two years prior to the date of issue of the bond, as indicated in the sustainable financing framework and prepared in accordance with the sustainable financing framework “Telefónica SDG Framework, January 2021”, (hereinafter, “the Framework”), available in the web page:

<https://www.telefonica.com/en/shareholders-investors/rating/sdg-framework/>

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

- The application of the eligibility criteria in the projects (re)financed by the Bond described in the Framework, as well as the (re)financed projects themselves.
- The allocation of the funds obtained through the Bond to the (re)financed projects and that the capital invested in the projects (re)financed is attributable to the Bond (“Funds allocation” included in table “Allocation of funds and aggregate impacts”).
- The verification that the impact indicators (Fixed network transformation: Electricity consumption/network traffic (kWh/PB), electricity savings (kWh), avoided CO<sub>2</sub> emissions (tCO<sub>2</sub>); Mobile network transformation: Electricity consumption/network traffic (kWh/PB), electricity savings (kWh), avoided CO<sub>2</sub> emissions (tCO<sub>2</sub>); Rural mobiles broadband: population benefiting from investment in deployment or improvement of mobile broadband connectivity in rural areas, users benefiting from investment in deployment or improvement of mobile broadband connectivity in rural areas, number of rural areas benefiting from investment in deployment or improvement of mobile broadband connectivity in rural areas; Open Innovation: number of companies, as well as number of jobs created through investment from Telefónica Open Innovation) are prepared in accordance with their calculation methodology, defined in the mentioned report “2023 Report Telefónica’s Sustainable Senior Bond Issue date: May 2022”.

### Responsibility of directors

The directors of Telefónica are responsible for the preparation, content and presentation of the “2023 Report Telefónica’s Sustainable Senior Bond Issue date: May 2022” report, in accordance with the criteria included in the Framework in which the eligibility criteria of the projects, the allocation of funds and the impact indicators are described. Directors’ responsibility includes establishing, implementing and maintaining the internal control required to ensure that the information included in “2023 Report Telefónica’s Sustainable Senior Bond Issue date: May 2022” report is free from any material misstatement due to fraud or error.

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

### 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 random sampling tests. The general procedures employed are described below:

- Meetings with Telefónica’s personnel from various departments who have been involved in the preparation of the “2023 Report Telefónica’s Sustainable Senior Bond Issue date: May 2022” report to understand the characteristics of the projects (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 projects (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 “2023 Report Telefónica’s Sustainable Senior Bond Issue date: May 2022”.
- Verification of the traceability of the funds obtained through the Bond to (re)finance the projects and verification that the investments undertaken by Telefonica in the projects (re)financed have been made in accordance with the Framework criteria.
- Verification through sampling tests and substantive tests of the information related to impact indicators. We have also verified whether the impact indicators have been appropriately compiled from the data provided by Telefónica’s sources of information.
- Obtainment of a management representation letter from the directors of Telefónica.

### Our Independence and quality management

We have complied with the independence and other ethical requirements of the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants (IESBA Code), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies International Standard on Quality Management 1, which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.



#### Limited assurance conclusion

As a result of the procedures carried out and the evidence obtained, nothing has come to our attention that causes us to believe that:

- The projects (re)financed by the Bond included in the “2023 Report Telefónica’s Sustainable Senior Bond Issue date: May 2022” report do not comply, in all its significant matters, with the eligibility criteria described in the Framework.
- The funds obtained through the Bond have not been assigned to the (re)financed projects and that the capital invested in the (re)financed projects is not attributable to the Bond.
- The impact indicators contain significant errors or have not been prepared, in all their significant matters, in accordance with what is indicated in the Framework and as indicated in the “2023 Report Telefónica’s Sustainable Senior Bond Issue date: May 2022” report in relation to its calculation.

#### Use and distribution

Our report is only issued to the directors 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 directors.

PricewaterhouseCoopers Auditores, S.L.

A handwritten signature in blue ink, appearing to read 'Pablo Bascones Ilundain', with a stylized flourish at the end.

Pablo Bascones Ilundain

26 July 2023

