



GOBIERNO  
DE ESPAÑA

# GREEN BOND PROGRAM OF THE KINGDOM OF SPAIN

## ALLOCATION OF THE FUNDS ISSUED IN 2021

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## 1. EXECUTIVE SUMMARY

The main purpose of this **allocation report**, complemented by the accompanying impact report, is to respond to the commitments reflected in the Green Bond Framework of the Kingdom of Spain, regarding **transparency and information for investors**. Thus, given that **5 billion euros** of a new bond maturing in July 2042 were issued in 2021, This report analyses the allocation of the 5 billion euros of a new bond maturing in July 2042 that were issued in 2021 among the programs that make up the eligible expenditure, published in July last year, and updated in February 2022. Similarly, the impact report analyses the expected environmental impact of the programs included in the allocation.

Out of the **13.75 billion euros identified as eligible expenditure for emissions for the 2021 fiscal year**, 5 billion euros are allocated to the **clean transport category**, which contributes to the **objectives of climate change mitigation and pollution prevention and control**. Specifically, it has been decided to allocate these amounts to State transfers to the infrastructure managers and administrators (ADIF and ADIF AV) and the operator (Renfe Viajeros, Sociedad Mercantil Estatal, S.A., hereinafter RENFE) of services classified as Public Service Obligation by the competent authorities and provided on the Spanish railway network.

The **focus on the rail transport sector** is consistent with the weight of transport in the composition of the eligible expenditure (close to 70% of the total) and entails a series of advantages with the potential to offer great **value to investors**. These include the leading role of the transport sector in the long-term decarbonization strategy of the Spanish economy, the sector's extensive track record in measuring environmental impacts, or the greater ease of aggregating impacts, both at the bond level and at the portfolio level, in the case of investors who will then have to report on their own metrics.

Specifically, 1,615,300,000 euros are allocated to the rail operator to finance the **Public Service Obligations** provided by RENFE, whose operating deficit is compensated via the General State Budget and essentially affects the commuter and conventional medium distance network. The rest of the allocation is completed with 1,933,800,000 euros to **ADIF** and 1,450,900,000 euros to **ADIF AV**, both of which refer to transfers aimed at the **development and sustainability of rail infrastructure to promote modal transfer**. Of these amounts, 25.4% correspond to programs included in the General State Budget for 2021 and the remaining 74.6% to the 2018-2020 period.

This report is also accompanied by a **favourable report from the independent verifier EQA**, which certifies the alignment with the provisions of the Green Bond Framework of the Kingdom of Spain, so the expenditure falls within the categories defined by this document and contribute to the objectives of the program.

## 2. THE GREEN BOND PROGRAM OF THE KINGDOM OF SPAIN

### 2.1. FIRST STEPS: PROGRAM IMPLEMENTATION

Under the **Paris Agreement** of 2015, Spain undertook the commitment to contribute to "*making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development*". In this sense, the promotion of **sustainable financing**, understood as financing programs and projects aligned with inclusive economic growth and in line with the needs of the ecological transition, will be crucial during the next decade.

Therefore, the development of the sustainable financing market has become one of the priorities of Spanish financial policy, as is reflected in the **Declaration of Climate and Environmental Emergency in Spain**, agreed by the Council of Ministers in January 2020. In line with these objectives, the **Strategy of the Public Treasury for 2021** envisaged the issuance of the Kingdom of Spain's first sovereign green bond, with the aim of establishing a green bond issuance program as a structural element of the Treasury's financing policy, aimed at financing sustainable items of the General State Budget, as well as boosting sustainable finance markets in Spain.

Given the **horizontal nature of the environmental policy** in the Spanish authorities' policy kit and the relevance of a solid green bond program, both for economic and financial policy and for environmental and climate policy, it was deemed necessary to establish a coordinated group, to facilitate the provision of information and support to the Public Treasury by the ministerial departments of the Administration and the units managing the execution of the specific programs. Thus, on March 5, 2021, Government's Commission for Economic Affairs created the **Working Group for the Structuring of the Sovereign Green Bond Issues of the Kingdom of Spain and the Promotion of Sustainable Finance**, with two main objectives:

- Promote the necessary work for the **issuance of sovereign green bonds**, through the implementation of a stable coordination framework that ensures the achievement of the objectives and the proper performance of the sovereign green bonds of the Kingdom of Spain, as part of the strategy to mobilize sustainable investments assumed at a national and supranational level.
- Coordinate the development of the **National Sustainable Finance Plan** that includes, among others, the regulatory development derived from the draft of the Climate Change and Energy Transition Law, as well as the adaptation of all economic agents to the new regulatory framework for sustainable finance of the European Union.

This working group is chaired and vice-chaired, respectively, by the **Director General of the Treasury and Financial Policy** and the **Director General of the Spanish Climate Change Office**, and brings together representatives, at a Director General level, of the ministries with spending programs that have the potential to be included in the green bond issuance of the Kingdom of Spain<sup>1</sup>. Regarding the green bond program, it was decided that it would be structured around **three important objectives**:

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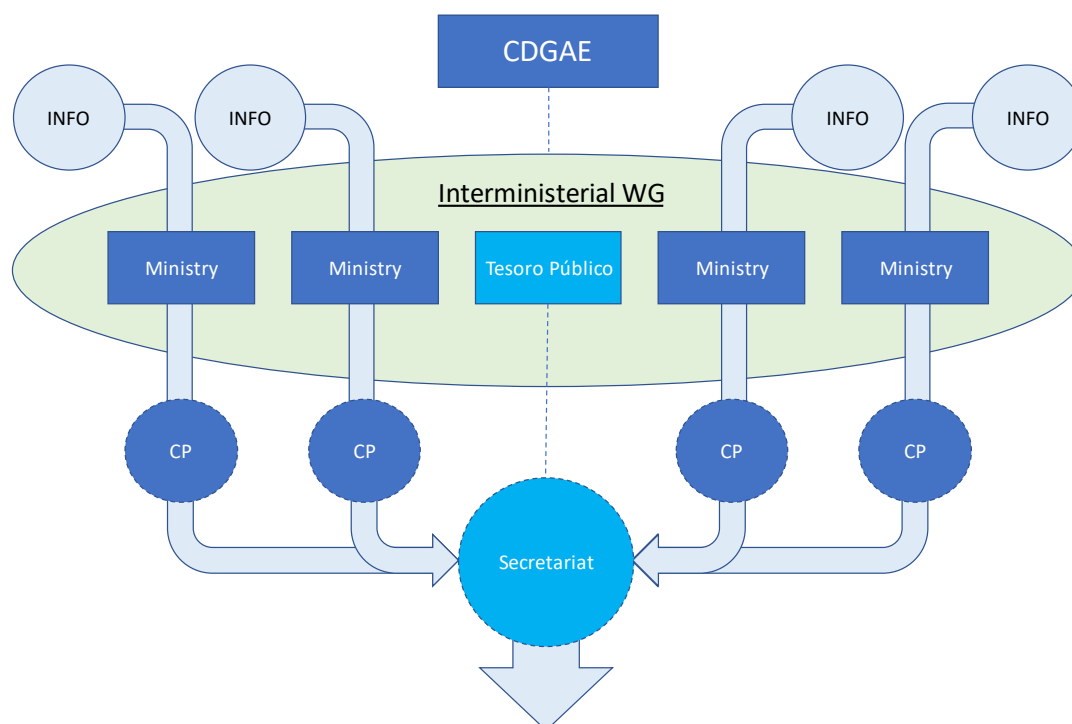
<sup>1</sup> It should be noted that the composition of this group is flexible. Despite the existence of ex-officio members, due to the natural importance that certain ministries have in the ecological transition process, it is envisaged that the Working Group may expand to other ministries depending on their potential contribution to the program.

- Promote the **transparency in Spain's environmental objectives and policy**, to promote and give visibility to the country's environmental agenda, seeking to attract investment beyond what can be directed to the acquisition of the green bonds to be issued.
- To promote the **development of the sustainable financing market in Spain**, fostering responsible and efficient financing to meet Spain's environmental challenges, in line with the country's strategic priorities.
- Respond to the **demands of the domestic and international investment community** in what refers to the issuance of sustainable assets, seeking to broaden and diversify the Treasury's investor base.

## 2.2. TOWARDS THE INAUGURAL ISSUANCE: THE GREEN BOND FRAMEWORK

During 2021, the Working Group met five times with the aim of executing the **inaugural issuance in the third quarter of the year** and establishing the elements that would allow the program to become a structural element of the Treasury's financing policy. In this regard, great importance was attached to the **governance elements** from the outset, defining responsibilities and contact points within each ministry. These **contact points** (CP), responsible for structuring the flow of information necessary for decision-making and the provision of eligible expenditure amounts and indicators, have been configured as a key element (see diagram 1) in the program's functioning.

**Diagram 1: Governance of the green bond program of the Kingdom of Spain**



One of the main challenges inherent to the implementation of a green bond program is the processing of **information**. Traditionally, the departments in charge of public debt management lack specialized energy and climate staff trained to handle all the information. It is therefore

necessary to rely on a wide **network of sectoral specialists** to provide the necessary technical support in the many areas concerned. In this regard, it is worth highlighting the role played by the Ministry for Ecological Transition and the Demographic Challenge, as the coordinator of environmental policy in Spain, that provides a cross-cutting vision of this process of economic transformation.

Once the main elements of this **governance** were defined and adapted to meet the needs of the program, the two major tasks required to issue under a green bond program were initiated: the drafting of a green bond framework, aligned with international best market practices, and the determination of eligible expenditure, both of which are closely linked.

Thus, on 26 July 2021, the **Kingdom of Spain's Green Bond Framework** was presented to the public, along with an eligible expenditure, determined as set out in the framework, in excess of 13 billion euros for the period 2018-2021. This framework is aligned with the **Green Bond Principles of the** International Capital Markets Association (ICMA), published in June 2021, as well as with the achievement of the **United Nations Sustainable Development Goals**. Specifically, in the definition of its objectives, alignment has been sought with the main sustainability objectives defined at the European level, in particular the objectives of the **European Union's Taxonomy of Sustainable Finance**:

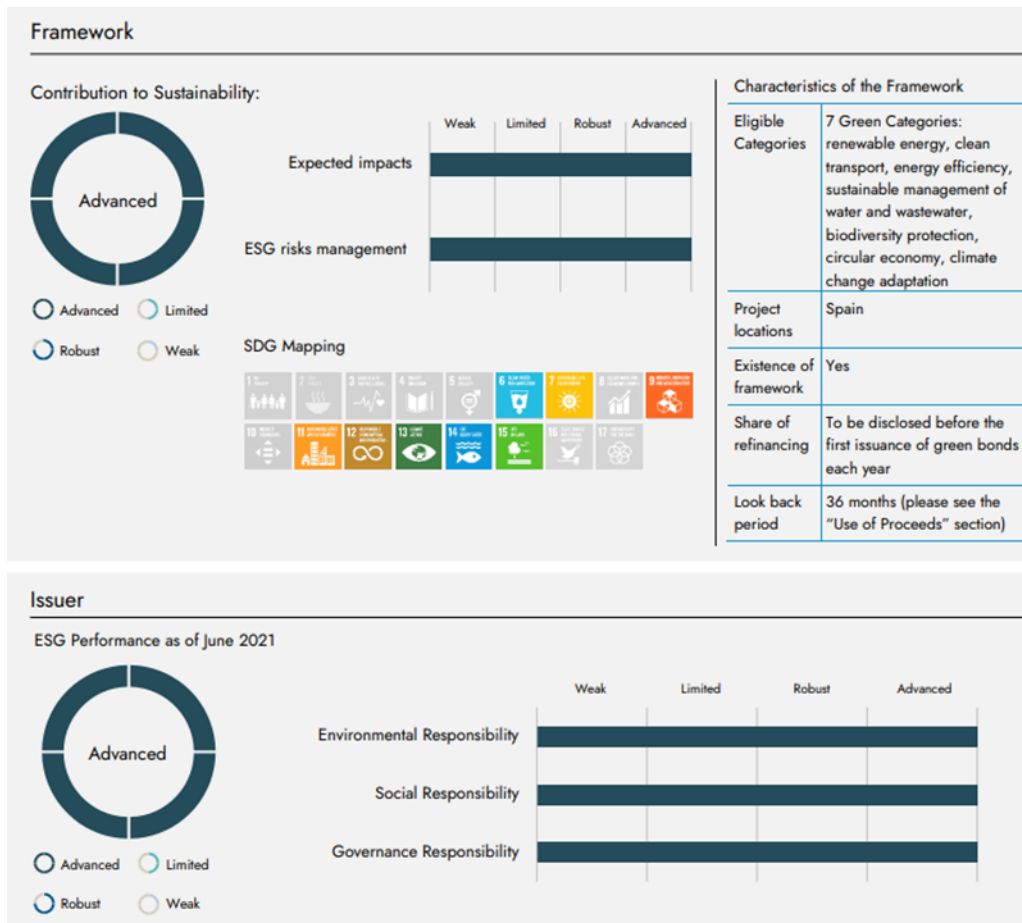
1. Climate change **mitigation**.
2. Climate change **daptation**.
3. Sustainable use and protection of **water and maritime resources**.
4. Transition to a **circular economy**.
5. **Pollution** prevention and control.
6. Protection and restoration of **biodiversity and ecosystems**.

Thus, the categories defined in the Green Bond Framework consider the thresholds of the **technical requirements established by the delegated acts of the Taxonomy**, whose content was public at the date of publication of the framework. Thus, the Treasury's objective is that all allocated amounts respect these thresholds, contributing to the objectives of the Taxonomy, as is the case for this first allocation. In any case, demonstrating full alignment with the Taxonomy, including the "do no significant harm" principle, implies a degree of detail that currently does not occur in national expenditure budgeting. Progress is being made both at the European level and, above all, at the national level, to design a **green budgeting framework** that facilitates the classification and identification of expenditure items aligned with the Sustainable Development Goals and the European Union's Taxonomy of Sustainable Finance.

On the other hand, the framework defines the main elements of sovereign green bond issuance in Spain, including the **nature of the programs** to which the funds will be allocated, the **process of evaluation and selection** of eligible items, the mechanism for **managing the proceeds** and the **reporting obligations** to investors and the public, which is the subject of this report. In short, it is a comprehensive framework that addresses all these areas in accordance with international best practices.

Proof of this is the **second opinion report prepared by the independent evaluator Vigeo Eiris** and published together with the Green Bond Framework (see diagram 2), which highlights the high environmental credentials of the framework. The Spanish framework received the **best rating awarded to a European sovereign issuer to date by that agency**, including relevant players such as France, Italy, the United Kingdom, and the European Commission itself.

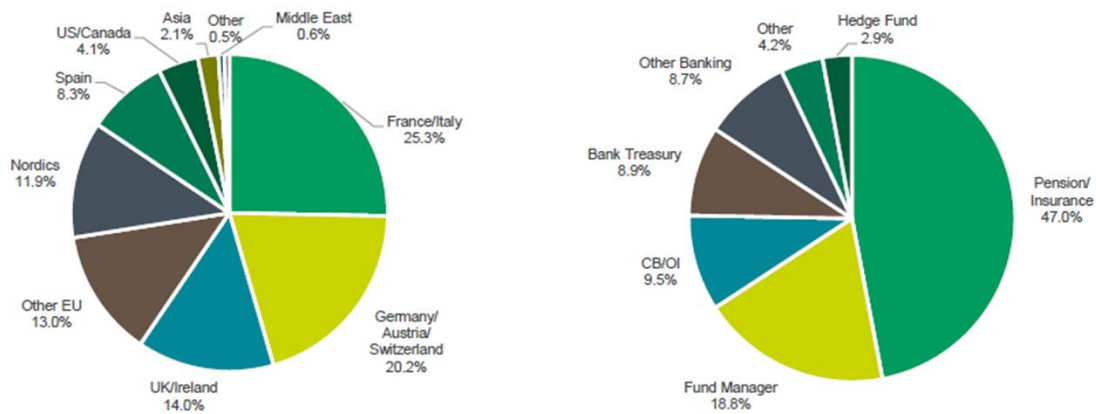
**Diagram 2: Summary of Vigeo Eiris' SPO assessment of the Kingdom of Spain's Green Bond Framework**



### 2.3. INAUGURAL ISSUANCE: RESULTS AND MARKET PERFORMANCE

Based on the Green Bond Framework and the published eligible expenditure, the Treasury executed the first issuance of the program on the 7 September 2021, with the syndication of a **new bond, maturing in July 2042**, for an amount of **5 billion euros**. The **high quality of the demand**, which exceeded **60 billion euros**, and its good geographic diversification (see diagram 3), made it possible to allocate this amount among high quality accounts.

**Diagram 3: Statistics of the inaugural issuance in September 2021**



It is worth mentioning that **two thirds** of the issuance was allocated to **investors categorized as green**, which shows the **trust of the international investment community in Spain's environmental agenda**. In addition, the quality of the demand was noteworthy, with a large participation from pension funds and insurance companies, which traditionally behave as long-term investors. All these elements show how the program has already made a substantial contribution to the objective of diversifying the Treasury's investor base.

The yield on the issuance, at 1.034%, also reflected this confidence and enabled **savings** to be achieved in the **cost of financing**, thanks to the green nature of the issuance ("greenium"). According to the calculations of the banking syndicate that assisted the Treasury in the placement of the new bond, the resulting price was two basis points lower than that which would have corresponded to a conventional bond with the same maturity, which represents significant savings over the life of the asset and contributes to the reduction of the average cost of the portfolio, minimizing the burden on the taxpayer.

The bond has also had an excellent performance in the **secondary market**, evidencing the trust that investors maintain in the program. In this regard, it is key to point out the importance of continuing to provide liquidity to the market through the issuance of sovereign green bonds in 2022, thus contributing to the development of the sustainable finance market, as well as to the good performance of the program.

As stated in the **Strategy of the Public Treasury for 2022**, the objective is to reopen the bond issued in September 2021, through regular Treasury auctions. This strategy will be followed until the bond reaches an outstanding volume in line with other Treasury benchmarks.

## 2.4. THE ALLOCATION MECHANISM OF THE GREEN BOND PROGRAM

In accordance with the provisions of the **Green Bond Framework**, the Treasury will allocate an amount equivalent to the funds obtained through the issuance of green bonds to expenditure aligned with the **environmental objectives** and **eligibility criteria** defined in this document. Eligible expenditure is included in the Laws of the General State Budget and exclude the expenditure financed by other administrations, as in the case of funds coming from the European Union, as well as those financed by finalist revenues that are specifically earmarked for this purpose.

In addition, the **time horizon** considered will depend on the nature of the issuance. Thus, in the case of **new benchmarks**, as in 2021, eligible expenditure can be obtained from the current year's budget or those of the previous three years. However, when **reopening an existing**



**benchmark**, the time horizon considered for the allocation will only look back up to the two previous fiscal years.

In this way, the eligible expenditure of fiscal years outside of the time horizon defined for each issuance will not be available for allocation. Therefore, eligible expenditure that has already been allocated to a previous issuance **will not be available for allocation** of future issuance. The same applies for spending in fiscal years that fall outside of the time horizon defined for each issuance. In this regard, it should be noted that the Treasury's intention is to **leave a significant portion of eligible expenditure unallocated**, so that reallocations can be made if deemed necessary. This responds to the commitment assumed in the Green Bond Framework and seeks to ensure the quality of the eligible expenditure associated with the program in the event of unforeseen contingencies.

The Working Group **monitors eligible items** to ensure that they always comply with the eligibility criteria prevailing at the time of issuance. If, for any reason, such items cease to contribute to the objectives reflected in this framework or to meet the established eligibility criteria, new items will be selected, in accordance with the **eligibility criteria prevailing at the time of issuance** of the green bond to which these items were linked.

The Working Group will also consider **possible disputes related to environmental, social or governance aspects** that could call into question the quality of the allocated expenditure, if they come to light. For example, legal proceedings brought up due to non-compliance with public procurement regulations. If such controversies are detected, the same procedure described in the previous paragraph will be followed, selecting new eligible items, that are applicable to the part of the expenditure that was the object of the controversy.

In the event of a reallocation, the allocation report for the fiscal year in which it takes place will include a **section dedicated to reporting on the reallocations**, explaining the reason for the changes, the items to be eliminated and those to be added, the impact of the reallocation on the distribution of funds by eligible categories and type of expenditure, as well as any other relevant information. In the present report, this section is not included as it is the first allocation ever made and there are therefore no reallocations. However, it will be included whenever necessary.

Finally, as on this occasion, all allocation reports will be accompanied by **verification by a specialized independent third party**, as reflected in the Green Bond Framework. In addition, with each allocation, the Treasury will seek to publish an **impact report referring to the amounts allocated**, although information relating to more recent years may not be available at the time the report is published. In these cases, the additional information will be updated in the next edition of the report, providing all the information available at each moment.

### 3. ANALYSIS OF THE ALLOCATION IN 2021

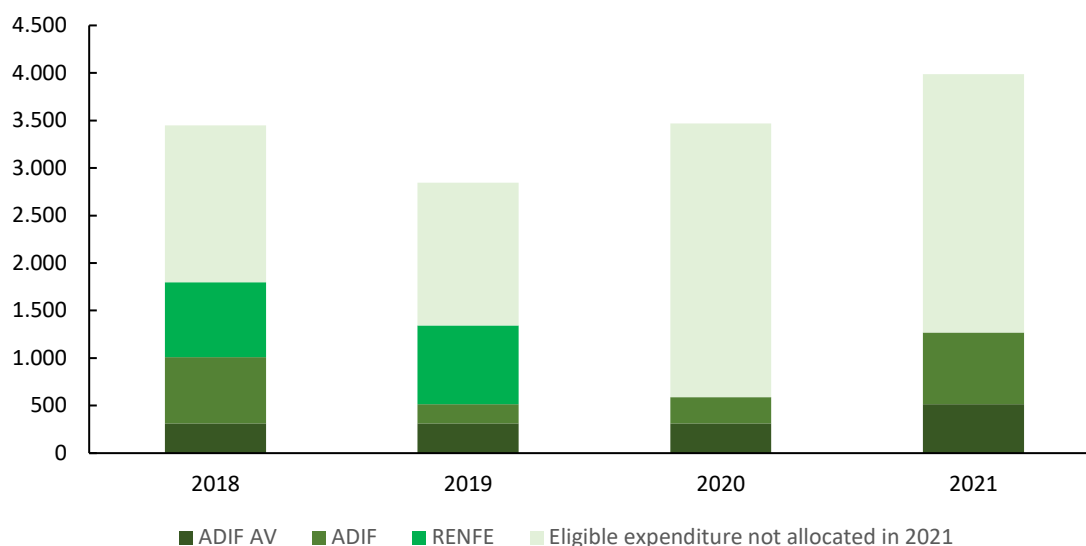
#### 3.1. MOTIVATION OF THE PROPOSAL: FOCUS ON SUSTAINABLE TRANSPORTATION

Concerning the allocation of the funds corresponding to the **2021 emissions**, it was decided to allocate all the funds to the programs of the Ministry of Transport, Mobility and Urban Agenda and, specifically, to two large groups of transfers to entities associated with this ministry (see diagram 4). The transfers relate to the **promotion of rail as a mode of transport**, supporting

both the deployment and the sustainability of rail infrastructure (ADIF and ADIF AV) and the rail transport activity itself (RENFE)<sup>2</sup>.

All the programs included fall under the category of clean transportation, as defined in the Green Bond Framework of the Kingdom of Spain, as well as in the Green Bond Principles of the International Capital Market Association (ICMA). In addition, these programs contribute to the objectives of climate change mitigation and pollution prevention and control, as reflected in the impact report published together with this allocation report.

**Diagram 4: Allocation of eligible expenditure for 2021 emissions (millions of euros)**



	2018	2019	2020	2021	Total
RENFE	786.73	828.57	0.00	0.00	1,615.30
ADIF	699.86	204.55	276.87	752.54	1,933.81
ADIF AV	311.57	311.57	311.57	516.17	1,450.90
Expenditure allocated in 2021	1,798.16	1,344.69	588.44	1,268.71	5,000.00
Expenditure not allocated in 2021	1,649.66	1,501.49	2,881.48	2,718.26	8,750.89
<b>Eligible expenditure</b>	<b>3,447.82</b>	<b>2,846.18</b>	<b>3,469.92</b>	<b>3,986.97</b>	<b>13,750.89</b>

This answers to the composition of the eligible expenditure for the 2018-2021 period, but also to the desire to **offer the maximum possible value to investors through** clear and simple reports. In this regard, focusing on a sector such as rail transport has **important** virtues **from a technical point of view**. Particularly:

- Transport is a **key sector for the decarbonization of the economy** and plays a central role in the Spanish strategy<sup>3</sup>. In addition to the essential contribution expected from

<sup>2</sup> It should be noted that the unallocated eligible expenditure in 2020 and 2021 also includes contributions to RENFE, which have not been included in this allocation. These amounts, as well as those corresponding to other ADIF and ADIF AV programs that are not the subject of this allocation, will continue to be available for issuance in subsequent years, provided they respect the requirements established in the Framework.

<sup>3</sup> In this regard, the Ministry of Transport has approved the Safe, Sustainable and Connected Mobility Strategy, including sustainable mobility as one of its core principles, with the aim of prioritizing energy efficiency and the fight against climate change by promoting clean modes of transport that minimize the carbon footprint of the transport sector.

road transportation, rail is one of the most efficient means for the electrification of transport, taking advantage of the high share of renewable energies in the Spanish electricity mix, which will reach 74% by 2030. Additionally, in a country like Spain, characterized by its complicated orography and the scarcity of navigable rivers, the railroad is deemed to be essential from the perspective of **modal transfer** to less polluting means of transportation.

- The Green Bond Framework states the will to adapt the green bond program to the **new EU sustainable finance framework**, once it is completed. Despite this, in the drafting of the Framework, it was sought to align the definition of the objectives with those of the Taxonomy<sup>4</sup>, so that the thresholds and the selection criteria consider what was known of the Taxonomy's **implementation acts** at the date of publication. However, this only affects climate change mitigation and adaptation objectives. In this sense, the allocated allocations respect the **zero direct emissions** threshold, being aligned with what was established to contribute to the first of the Taxonomy's objectives.
- **Aggregation of information** is one of the main difficulties faced by those who must deal with the information included in the reports associated with the bonds in their green bond portfolio, especially regarding the impact of these assets. Thus, the concentration on the transport sector facilitates the preparation of a report providing information at the most aggregated level.
- The rail transport sector has an important track record in terms of contributions to sustainability and impact measurement. Therefore, it is a sector that has **methodologies and indicators commonly accepted both nationally and internationally**, which facilitates comparison and, ultimately, the work of users of the published information.
- In line with the above, in Spain, the Ministry of Transport, Mobility and Urban Agenda, as well as its affiliated entities, have **extensive experience in measuring environmental impacts and providing indicators**. Specifically, ADIF AV has its **own green bond program**<sup>5</sup> and is a consolidated issuer in this market, which allows it to take advantage of this experience to lay the foundations for the Treasury's investor reporting exercise.
- Focusing the reporting on a single sector that has the aforementioned qualities, allows the **development of capabilities and know-how** with the objective of carrying out more complex exercises in the future. Thus, it will be necessary to report impacts in multiple sectors while maintaining, as far as possible, virtues such as the ability to aggregate impacts, alignment with recognized standards and the existence of homogeneous and easily comparable methodologies. These are important challenges, but the present exercise paves the way to be able to meet the demands of the investment community in this regard.

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<sup>4</sup> Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on establishing a framework to facilitate sustainable investments and amending Regulation (EU) 2019/2088.

<sup>5</sup> A great deal of work has been done to avoid any double-counting problems. Thus, neither ADIF AV can use expenses financed by State transfers, nor can the State use spending that is not financed through these transfers.

## 3.2. ALLOCATION OF FUNDS ASSOCIATED WITH THE 2021 EMISSIONS

The following is a detail of the amounts allocated to the budgetary programs covered by this report, the execution of which has been certified by the General State Administration Auditor's Office:

**Diagram 5: Allocation distribution by budgetary programs**

Designation	Type of expenditure	Budgetary Program	Amount (€)	Allocation in 2021 (€)
<b>PGE 2018</b>				<b>1,798,159,849.00 €</b>
Renfe Viajeros, S.M.E., S.A. to compensate Public Service Obligations	Current expenditure	441M	786,729,045.06 €	786,729,045.06 €
To ADIF for investments in conventional network	Investment	451N	365,069,353.61 €	281,856,853.94 €
Financial contribution to ADIF	Investment	451N	418,000,000.00 €	418,000,000.00 €
Financial contribution to ADIF AV	Investment	451N	311,573,950.00 €	311,573,950.00 €
<b>PGE 2019</b>				<b>1,344,690,976.00 €</b>
Renfe Viajeros, S.M.E., S.A. to compensate Public Service Obligations	Current expenditure	441M	828,567,026.00 €	828,567,026.00 €
To ADIF for investments in conventional network	Investment	451N	204,550,000.00 €	204,550,000.00 €
Financial contribution to ADIF AV	Investment	451N	311,573,950.00 €	311,573,950.00 €
<b>PGE 2020</b>				<b>588,439,225.00 €</b>
Financial contribution to ADIF	Investment	451N	445,300,000.00 €	276,865,275.00 €
Financial contribution to ADIF AV	Investment	451N	311,573,950.00 €	311,573,950.00 €
<b>PGE 2021</b>				<b>1,268,709,950.00 €</b>
Financial contribution to ADIF	Investment	453A	752,536,000.00 €	752,536,000.00 €
Financial contribution to ADIF AV	Investment	453A	466,173,950.00 €	466,173,950.00 €
To ADIF AV for network administration	Current expenditure	453A	50,000,000.00 €	50,000,000.00 €

## 3.3. ANALYSIS BY EXPENDITURE PROGRAMS

### 3.3.1. THE RAIL INFRASTRUCTURE MANAGER: ADIF AND ADIF AV

#### 3.3.1.1. PRESENTATION OF THE ENTITIES

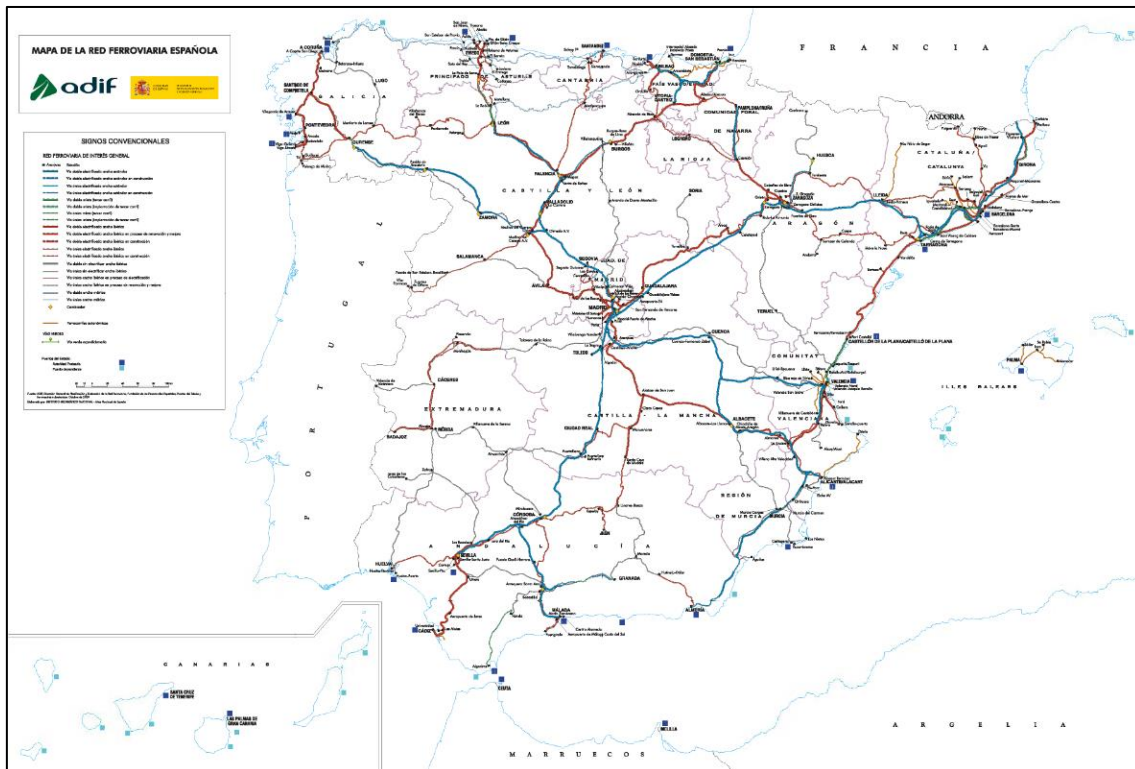
In 2005,<sup>6</sup> the **Administrator of Railway Infrastructure (ADIF)** was created in Spain, assuming the competences of the public entity **Red Nacional de los Ferrocarriles Españoles (RENFE)** regarding the administration of railway infrastructure. The separation between both entities was

<sup>6</sup> According to Law 39/2003, of November 17, 2003, of the Railway Sector.

established and RENFE, under the name of **RENFE-Operadora**, began to only manage the operation of the tracks, an activity that has been progressively opened to competition.

Later, in 2013<sup>7</sup>, the public entity **Adif Alta Velocidad (ADIF AV)** was created, through the spin-off of the branch of **construction and administration of high-speed railway infrastructures** and others attributed to it<sup>8</sup>. From then on, ADIF AV assumed the competences for the construction and administration of high-speed railway infrastructures, as well as other functions such as the management of the high-speed station business or ADIF's telecommunications and energy activities.

**Diagram 6: Map of the Spanish rail network (2020)**



In figures, **ADIF AV** manages non-current assets exceeding **47 billion euros** (2022), which include a high-speed network of more than **3,762 kilometres** and **46 stations**. **ADIF** manages non-current assets exceeding **16 billion euros** (2022), including a network of over **11,870 kilometres**, **1,450 passenger stations** and **38 main freight terminals**. In addition, ADIF manages Spain's participation in two European Rail Freight Corridors, the Atlantic<sup>9</sup> and the Mediterranean<sup>10</sup>, as well as participating in Rail Net Europe (RNE) and other international cooperation initiatives.

Both entities have a **Strategic Plan 2030 (SP 2030)**, aligned both with the Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda, and with the national policies and strategies that set the path to be followed in the coming years, such as the **Recovery**,

<sup>7</sup> Royal Decree 1044/2013, of 27 December, approving the Statute of the Public Entity ADIF-Alta Velocidad.

<sup>8</sup> The part of the network managed by each of these entities can be consulted in the Network Statements prepared annually.

<sup>9</sup> Adif, together with 7 other partners from 5 countries, is part of this corridor, which connects Madrid, Algeciras and the main ports of the Spanish East coast with Europe through France, with more than 7,000 km of tracks along the European Mediterranean coast up to Mannheim (Germany).

<sup>10</sup> Adif and the Infrastructure Managers of Portugal (IP), France (SNCF Réseau) and Germany (DB Netz) make up this corridor, which totals more than 6,200 km of track along the Mediterranean coast.

**Transformation and Resilience Plan** of Spain or the **Safe, Sustainable and Connected Mobility Strategy** of the Ministry of Transport, Mobility and Urban Agenda.

ADIF and ADIF AV's SP 2030 establishes the **strategic guidelines** to respond to the major environmental, social, operational, and business challenges that these entities must overcome to become a benchmark in the management of resilient, sustainable, safe and intelligent infrastructures, contributing to the new model of ecological transition. The SP 2030 is based on four pillars and three levers, with people as the driving force. Sustainability is one of these pillars, evaluated in a comprehensive manner: social, economic, environmental, and good governance. ADIF and ADIF AV's commitment to sustainability is embodied in several **strategic objectives**:

- Becoming a **reference** in contributing to the energy transition.
- Fighting climate change (reaching **net zero emissions** by 2050).
- Recovering **nature** and **biodiversity**.
- Promoting the culture of **awareness of climate change**.
- Generating a positive social impact in favor of **social cohesion and inclusion**.
- Reaching new revenue streams through energy transition opportunities - contribute to the **development of sustainable finance**.

Regarding to sustainability, **environmental protection has always been a priority for ADIF and ADIF AV**, representing a very relevant part of the technical and economic effort they are making and will make in the future, by adapting their management and railway services to new needs and demands that consider environmental quality and excellence. Along these lines, in March 2019, the entities approved the **ADIF and ADIF AV 2018-2030 Plan to Combat Climate Change**, aiming to increase the contribution of railroads to face this major environmental challenge, developing actions in the field of mitigation, reducing energy consumption and greenhouse gas emissions by improving energy efficiency, promoting a modal shift and boosting decarbonization and the use of renewable energies. The Plan also establishes actions in adaptation, aiming to improve the resilience of the infrastructures, as well as promoting culture and awareness of our main stakeholders.

With this Plan, ADIF and ADIF AV align themselves with the main existing international commitments in the fight against climate change, such as SDG No. 9 (Industry, Innovation and Infrastructure), SDG No. 11 (Smart Cities and Communities) and SDG No. 13 (Climate Action), as well as with the objectives set out in the Paris Agreement. It is also in line with existing European and national policies aiming to achieve climate neutrality by 2050, as set out in the European Commission's Green Deal, the National Energy and Climate Plan and Climate Change and the Energy Transition Law.

To reflect this commitment, ADIF AV also launched its own **green bond program**<sup>11</sup> in 2017, has issued **3 billion euros** since then. In addition, ADIF AV has conducted allocation and impact reports in five fiscal years and is a major player in the sustainable finance market in Spain, both for its track record and for the quality of the eligible expenditure allocated to this program.

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<sup>11</sup> ADIF AV has a green bond framework certified by CICERO (Center for International Climate Research), as well as an ESG rating awarded by Sustainalytics.

ADIF is currently responsible for managing a significant share of railway infrastructure investments and administering the **General Interest Railway Network of the State**<sup>12</sup>. Thus, ADIF plays a major role as the driving force behind the railway sector, facilitating access to the infrastructure on equal terms. Its objective is to promote Spanish rail transportation through the development and management of a safe, efficient, and environmentally sustainable infrastructure system with high quality standards.

### 3.3.1.2. ANALYSIS OF THE PROGRAMS ALLOCATED TO THE SOVEREIGN GREEN BOND

Within the Green Bond Framework, the Ministry of Transport, Mobility and Urban Agenda (MITMA) has considered as eligible expenditure the **transfers to the infrastructure managers ADIF and ADIF AV**, included in the rail transport infrastructure budget program. The budget of this program is mostly used to finance current and capital transfers, as well as the equity contributions that are necessary for the economic sustainability of the railway infrastructures that conform its networks.

These transfers from the State are covered within the framework of EU and Spanish legislation, specifically **Law 38/2015 of 29 September 2015, on the Railway Sector**, which establishes that railway infrastructure managers may receive financial contributions from the State that are aligned with the sustainable exercise of their functions, in particular for the construction, maintenance, conservation, replacement or improvement of the infrastructure.

The length of the rail network exceeds **15,632 km** (more than 11,870 km of conventional network and 3,762 km of high-speed network) and is a clear example of the extensive ability of the network to enable the mobility of the population, as well as its potential as a support for the transport of merchandise.

However, the existence of an extensive network is not sufficient to achieve the objective of having an adequate supply for the social and environmental purposes pursued by the Spanish Administration. To maintain the technical characteristics within the standards required by increasingly globalized transportation, the network must be subject to **continuous maintenance and improvement** that allow it to adapt to the needs of the changing economic environment in which it is immersed, avoiding a deterioration of the infrastructure which could lead to a loss of competitiveness compared to other modes of transportation, which are less efficient and have a greater carbon footprint. In short, adequate maintenance and improvement of the rail network, will facilitate the development of new rail traffic opportunities, promoting the desired modal shift towards less polluting modes of transport, such as the railroad.

Considering the above, these contributions from MITMA to the infrastructure managers ensure a **stable financial framework for ADIF and ADIF AV**, so that they can carry out the construction, maintenance, improvement, and administration of their rail network with the required guarantees of quality and safety in the provision of their services.

Rail transport, as established in the European Green Deal, is the mode of public transport with the lowest emissions per passenger and, therefore, plays a decisive role in the fight against

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<sup>12</sup> The General Interest Railway Network is made up of the railway infrastructures that are essential to guarantee a common railway transport system throughout the national territory or whose joint administration is necessary for the correct operation of such common transport system, such as those linked to international traffic routes, those linking the different autonomous communities and their connections and accesses to the main population and transport centres or to essential facilities for the economy or national defence.

climate change. The **promotion of railroads as the backbone of Spanish sustainable mobility policies** will make it possible to achieve the environmental objectives set by the European Union and the international community. More specifically, in relation to the Sustainable Development Goals (SDGs) of the United Nations, the construction and maintenance of railway lines, and the actions aiming to improve the energy efficiency of the railway system and promoting its sustainability have a positive impact on SDG No. 9 (Industry, innovation and infrastructure), SDG No. 11 (smart cities and communities) and SDG No. 13 (climate action).

### 3.3.2. THE RAILROAD OPERATOR: RENFE

#### 3.3.2.1. PRESENTATION OF THE ENTITY

The history of the **Red Nacional de los Ferrocarriles Españoles** has been marked by the project to liberalize rail transport, both in the national and in the EU Single Market contexts, and the current RENFE was born from the split of the former entity into two companies with distinct competences. Thus, RENFE became the **operator**, providing passenger and freight transport services, while ADIF, and later ADIF and ADIF AV, have been responsible for managing the railway infrastructure.

In 2012, to prepare the entity to compete in a liberalized market, a reorganization took place and **Renfe-Operadora** was constituted as the head of a **group of four companies created**, by Royal Decree<sup>13</sup>, to continue in the process of liberalization of the railway market and its opening to competition. Thus, in 2014 the four companies<sup>14</sup> that make up the group were created. Their equity belongs entirely to Renfe-Operadora, which maintains the legal nature of a public business entity. Today, the corporate scheme of the entity (see diagram 7) is completed with "**Renfe of America**", the subsidiary for the United States created in 2019.

#### Diagram 7: Current corporate structure of RENFE-Operadora

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<sup>13</sup> Royal Decree-Law 22/2012, of July 20, 2012, adopting measures regarding railway infrastructures and services.

<sup>14</sup> Renfe Viajeros, Renfe Mercancías, Renfe Fabricación y Mantenimiento and Renfe Alquiler de Material.





Currently, the RENFE Group manages assets worth close to **9 billion euros**, around **5,000 trains per day** in Spain, more than **500 million passengers per year** and close to **15,000 employees**, with the most outstanding **punctuality, quality, and satisfaction** indexes. The intense work that has been carried out since the beginning of the liberalization process has enabled its transformation into a leading entity in the sector, which is committed to **technological and digital transformation** as pillars of its strategy to establish the RENFE Group as a global operator of reference, beyond just the railway market.

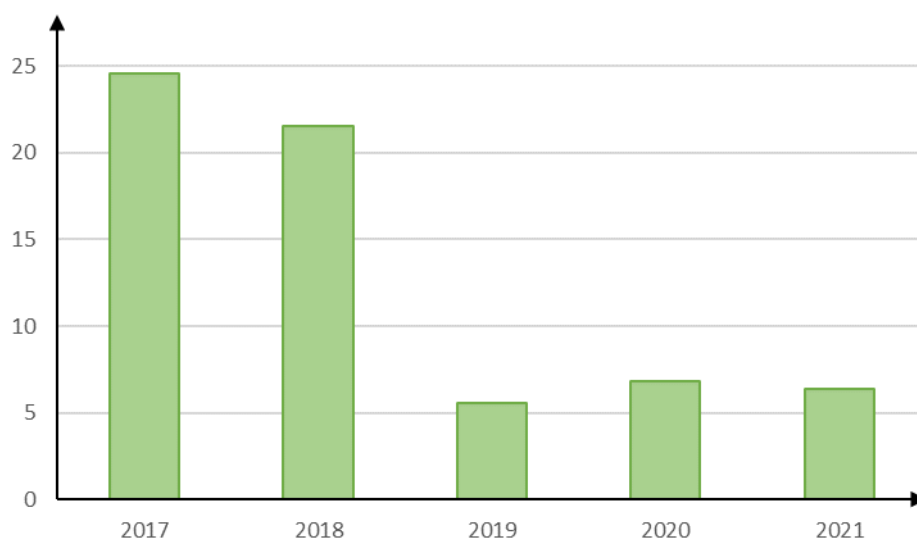
Therefore, the RENFE Group is actively and responsibly committed to environmental conservation. This includes respecting legal requirements, following the recommendations and procedures established to reduce the environmental impact of its activity, in accordance with best practices, and contributing to improve the **sustainability objectives** assumed by the Group. The passage of time has proven the success of this strategy.

For example, in 2021, the Financial Times published the European Climate Leaders 2021 list that includes the 300 European companies that have demonstrated the greatest reduction in their emissions intensity between 2014 and 2019. The reduction in emissions intensity was calculated based on baseline greenhouse gas emissions as a proportion of revenue (tons of CO emissions<sub>2</sub> per million euros of revenue). RENFE stands out in the list, with a 69.8% reduction in its GHG emissions between 2014 and 2019.

Thus, RENFE is the **leading** company in **clean transportation in Spain**. In 2019, the entity acquired 2.5 TWh of electric energy with a renewable origin guarantee certificate<sup>15</sup> for the traction of its electric vehicles, covering 80% of the traffic. This has made RENFE the **first end consumer of renewable energy in Spain**, with more than **2.6% of the total** electric renewable energy consumed in the country.

<sup>15</sup> Guarantees of origin are electronic certifications issued by the National Commission for Markets and Competition (CNMC) that certify the production of a given amount of electricity through renewable energy or cogeneration. Their purpose is to provide detailed information on the origin of the energy you receive and the environmental impact of its production, so that you can make your electricity purchasing decisions wisely and responsibly.

**Diagram 8: evolution of the carbon footprint (gCO<sub>2</sub>/unit of transport)**



**Energy efficiency** is also an important pillar of RENFE's activity in terms of sustainability. Particularly, **efficient driving** is a maxim in the daily activity of its **5,200 train drivers**, with consumption savings of up to 30%. On the other hand, the use of regenerative braking, a technology that generates energy by the engine in the braking process, allows some trains to return to the network between 6 and 10% of the energy in high speed and up to 40% in suburban trains.

The **renewal of the fleet** has been planned to maximize performance with minimum energy consumption and the trains incorporate **efficient driving systems** integrated in automatic driving modes. In addition, the trains to be incorporated through the new **Train Purchase Plan** will feature:

- Renewable energy sources as an alternative to diesel, for routes that are not yet electrified.
- Intelligent management systems for the renewal of air flows, reducing the energy consumption of these systems by half.
- Use of newly designed cooling fluids with lower GWP "global warning potential", suitable for railway use, and environmentally friendly<sup>16</sup>.
- Windows with specific treatments and solar control films that minimize the impact of heat waves inside the train.
- White cover with anti-heat treatment, reducing heat transmission to the interior to minimum values.
- Dimmable and intelligent LED interior lighting with energy savings forecasts of more than 75% in these systems.

In terms of **circular economy**, RENFE's railway vehicles are characterized by an extended useful life (up to 40 years) and by reaching **98% of reusable materials** used in their construction. In addition, the manufacturing process, as well as its maintenance, is carried out in the most

<sup>16</sup> This means bringing forward compliance with Regulation (EU) No. 517/2014 of the European Parliament and of the Council of April 16, 2014 on Fluorinated Greenhouse Gases.

sustainable way possible, seeking the lowest possible energy input and use of materials, both in the production processes and throughout the extensive life cycle of the vehicles themselves. All of this allows RENFE to have many durable and easily repairable vehicles.

The **first business and environmental objective of RENFE** is to grow and increase its market share. It aims to add more travellers to sustainable mobility and logistics by rail transportation through a management, innovation and digitalization effort that will **reduce the carbon footprint and the environmental impact of travellers**, as well as increase the sustainability of their travels and their business without harming the environment, even protecting it.

Finally, the RENFE Group has joined forces with ADIF and ADIF AV to promote the **Executive Plan to Fight Climate Change**. This Plan is structured along 4 strategic lines: energy management, energy efficiency, decarbonization and culture.

### 3.3.2.2. ANALYSIS OF THE PROGRAMS ASSOCIATED WITH THE SOVEREIGN GREEN BOND

Within the framework of sovereign green bonds, transfers to RENFE for the compensation of the so-called **Public Service Obligations** have been considered as an eligible expenditure from the Ministry of Transport, Mobility and Urban Agenda (MITMA). These are defined by European regulations as the requirement defined or determined by a competent authority to guarantee **public passenger transport services of general interest** that an operator, if it were considering exclusively its own commercial interest, would not assume to the same extent or under the same conditions without retribution.

By establishing Public Service Obligations, the authorities aim to ensure that passengers have access to **safe, efficient, attractive, and quality public transport services**, as well as, in this case, to promote the **transition towards the decarbonization of the economy**. Currently, in Spain, there are four types of Public Service Obligations for passenger rail transport, which are the responsibility of the General State Administration, provided on the general interest rail network:

- Commuter services provided on conventional gauge, around large population centers and short distances.
- Conventional gauge medium distance services provided by trains that do not exceed 150 km/h, distributed throughout the territory, covering routes of around 200 km.
- Commuter and medium distance services provided on metric gauge.
- Medium distance services on the high performance network, consisting of trains covering distances of around 200 km, using the high speed network. They are also provided through the reservation of seats on long-distance trains to cover medium distances (Avant).

These services are provided by the General State Administration through a **contract with RENFE**, which imposes a frequency and a price that would not be compatible with commercial profitability. Therefore, RENFE incurs an **operating deficit** for the provision of these rail services, which MITMA compensates through the **contributions included in the General State Budget**. The economic compensation is established in the contract signed between MITMA and RENFE, and reflects the maximum annual limit paid by the State, the obligations and the rights of the parties, as well as the **quality and efficiency indicators** of the service to be provided by RENFE. The General Intervention of the State Administration audits the settlement in each fiscal year,

and the **Monitoring Committee** of the contract approves the final settlement of the compensation.

Rail transportation services provided through Public Service Obligations make up a policy with a **strong social component**, which guarantee the territorial structuring and social cohesion of the country. In addition, this policy has a key **environmental component**, in line with the Sustainable Development Goals (SDGs) of the United Nations, and more specifically with goals no. 11 (sustainable cities and communities) and no. 13 (climate action).

Particularly, SDG no. 11, which is genuinely urban, aims to make cities and human settlements inclusive, safe, resilient, and sustainable. Precisely, an important part of the railway Public Service Obligations are developed in the suburban network of cities and their metropolitan areas, where it is necessary to fight against climate change and against the health problems generated by oil-dependent modes of transport. In this context, **railroads are a decisive element in the fight against climate change**.

Considering all the above, it can be stated that MITMA's financial commitment to RENFE makes a decisive contribution to sustainability, fostering sustainable development and mobility, respecting the environment, favouring the rebalancing between modes of transportation, and improving the integration of the territory.

### 3.4. ANALYSIS OF ELIGIBLE EXPENDITURE AND ITS EVOLUTION

In accordance with the provisions of the Green Bond Framework, the Treasury assumed the commitment to publish the eligible expenditure for the current year's issuance prior to the first issuance of the year. Therefore, on February 24, 2022, the Treasury updated the presentation of the green bond program, available to the public on its website, to reflect the new data, which came from the **approval of the General State Budget for 2022** and the conclusions on the **execution of the General State Budget for 2021**.

However, the allocation had not taken place by this update, so the eligible expenditure figures were expressed in gross terms and could not consider the **amounts allocated to 2021 issuance**, which are the subject of this report. Therefore, if we consider the amounts allocated to 2021 green bond issuance, **588.4 million euros** from the 2020 fiscal year and **1,268,700,000 euros** from the 2021 fiscal year, we must update the eligible expenditure for issuance in 2022, which is now **9,755,290,000 euros** (see diagram 9).

**Diagram 9: Net eligible expenditure available for 2022 issuance**

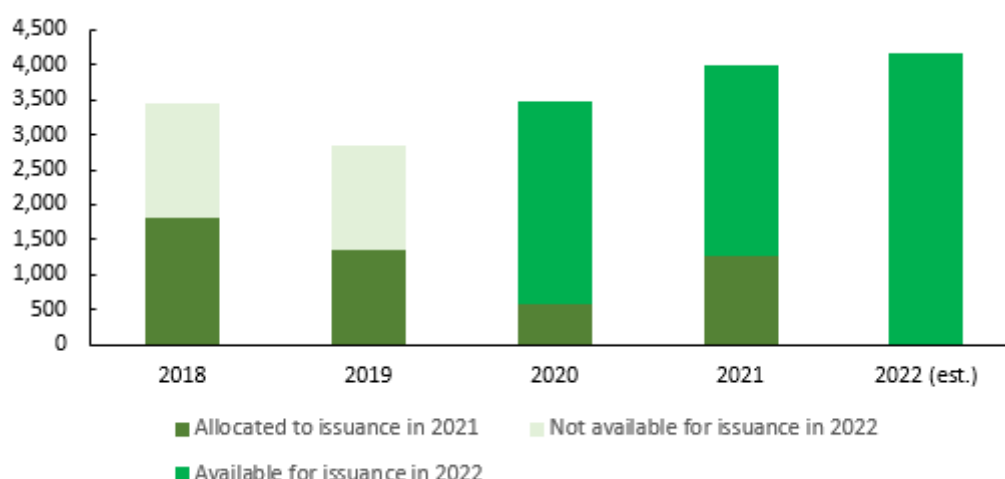
	2020	2021	2022	TOTAL
Ministry for Ecological Transition and the Demographic Challenge	597.81	586.42	916.72	2,100.95
Ministry for Economic Affairs and Digital Transformation	43.32	24.00	90.71	158.03
Ministry of Transport, Mobility and Urban Agenda	1,740.80	1,632.85	2,608.61	5,982.27
Ministry of Science and Innovation	260.32	239.44	298.48	798.25
Ministry of Trade, Industry and Tourism	0.12	0.12	0.12	0.35
Ministry of Agriculture, Fisheries and Food	239.11	235.43	240.92	715.45
<b>Total</b>	<b>2,881.48</b>	<b>2,718.26</b>	<b>4,155.56</b>	<b>9,755.29</b>

It is worth mentioning that, according to the Green Bond Framework, **the "look-back period"<sup>17</sup> for 2022 is limited to the two years prior to the current fiscal year (T-2)**, unlike the three year look-back period for 2021 green bond issuance. This is explained by the commitment to limit the eligible expenditure time horizon when the issuance is not for a new benchmarks. Therefore, from 2022 onwards, the look-back period will remain the same (T-2), until a new green bond is issued in the future.

It should also be added that the amounts included in the **General State Budget for 2022** will have to be adjusted according to the **budget execution**, which will not be known until **the beginning of 2023**. This is the same that happened to the 2021 budget, which was updated in 2022. In any case, the impact of this update should be small, because it only affects one of the three years that make up the eligible expenditure and falls within the normal functioning of the budgeting process.

For future exercises, and considering the **amount issued in 2021**, which reached **5 billion euros**, as well as the new information regarding the evolution of the eligible expenditure for the sovereign green bond program in 2022 and the restrictions defined in the Framework, **the eligible expenditure available for issuance in 2022 is expected to be 9,755 million euros**. This assumes that, in 2022, green bond issuance will be limited to re-openings of the benchmark maturing in July 2042, so that eligible expenditure will cover the **period 2020-2022<sup>18</sup>** (see diagram 10).

**Diagram 10: Impact of the allocation on eligible expenditure (millions of euros)**



	2018	2019	2020	2021	2022 (est.)	Total
Available for issuance in 2022	0.00	0.00	2,881.48	2,718.26	4,155.56	9,755.29
Allocated to issuance in 2021	1,798.16	1,344.69	588.44	1,268.71	0.00	5,000.00
Not available for issuance in 2022	1,649.66	1,501.49	0.00	0.00	0.00	3,151.15
<b>Eligible expenditure</b>	<b>3,447.82</b>	<b>2,846.18</b>	<b>3,469.92</b>	<b>3,986.97</b>	<b>4,155.56</b>	<b>17,906.45</b>

Finally, it is important to take into account that **3,151,000,000 euros** of eligible expenditure will no longer be available for issuance in 2022. This is because this eligible expenditure corresponds

<sup>17</sup> This expression refers to the number of years, in addition to the current fiscal year, considered for the eligible expenditure that may be associated with a given issue. Thus, in 2022, a "look-back period" of two years implies that the horizon considered for allocation should be 2020-2022.

<sup>18</sup> In the hypothetical case that a new reference would be issued, the eligible expenditure would cover the period 2019-2021 and would amount to 11,146 million euros.

to fiscal years 2018 and 2019 and cannot be allocated to green bond issuance in 2022 or f future years. These amounts will become part of the **"security reserve"** that will make it possible to ensure the quality of the eligible expenditure allocated to the program, in the event of unforeseen contingencies. In relative terms, this means a reserve amounting to 47.8% of the eligible expenditure in 2018 and 52.8% of the eligible expenditure in 2019.