

REN 

# GREEN BOND REPORT

2021



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**REN - Redes Energéticas Nacionais ("REN")** has as its mission guaranteeing the uninterrupted supply of energy to the entire country, while maintaining its commitment to the development of communities and improving citizens' quality of life.

This is its mission, which it fulfils by aligning itself with the Sustainable Development Goals (SDGs), namely SDG 4 (Quality Education), 5 (Gender Equality), 7 (Renewable and Affordable Energy), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation, and Infrastructure), 11 (Sustainable Cities and Communities), 13 (Climate Action), 15 (Protect Earth Life), and 17 (Partnerships for the Implementation of the Goals).

It is from this perspective that REN created its **"Green Finance Framework"**, mainly for the purpose of aligning its financing strategy with its mission, strategy

and sustainability objectives. Under its "Green Finance Framework", REN selects and controls a set of projects eligible for green financing, while strictly observing the principles of the ICMA – International Capital Markets Association and of the LMA – Loan Markets Association, with regard to green financing (the so-called "ICMA Green Bond Principles" and "LMA Green Loan Principles"). REN believes that green financing instruments are an effective tool for channelling investment into projects that demonstrate significant benefits with regard to climate action and, therefore, make a valuable contribution to the Sustainable Development Goals.



CATEGORY:

**Renewable Energy**

**ELIGIBLE GREEN PROJECTS:**

- Electricity grid assets built for the sole purpose of connecting renewable energy sources to the grid
- Electricity grid assets aimed at integrating and enhancing the transmission capacity for renewable energy in the Portuguese electricity grid



CATEGORY:

**Green Buildings**

**ELIGIBLE GREEN PROJECTS:**

- New, existing, or refurbished office buildings (with environmental performance certification)
- Refurbished buildings where the remodelling leads to energy savings of at least 30%



CATEGORY:

**Energy Efficiency**

**ELIGIBLE GREEN PROJECTS:**

- Fibre optic cable and network assets



CATEGORY:

**Clean transportation**

**ELIGIBLE GREEN PROJECTS:**

- Low-carbon transportation vehicles: fully electrified vehicles within REN's own fleet

Among the categories listed above, and which are listed in its “Green Finance Framework”, REN, for now, has only considered eligible assets under the “Renewable Energy” category.

Following the publication (in February 2021) of its “Green Finance Framework”, in April 2021, REN launched its first green bond issue, for an amount of €300 million, with a coupon of 0.50% p.a. and a maturity of eight years.

REN’s Green Finance Framework was subject to a **Second Party Opinion** by the Institutional Shareholder

Services (ISS-ESG), thus joining the certifications verified by external entities already incorporated in REN’s Sustainability Report, namely standard ISAE 3000 (International Standard on Assurance Engagements 3000), with reference to GRI and standard AA1000AP (Accountability Principles – 2018).

This document enables REN to materialise its commitment to annually provide information on the allocation of the green financing made to the eligible assets under consideration and on their associated environmental impacts.

## ALLOCATION REPORT

Portfolio Date: 31 December 2021\*

### Portfolio of eligible assets

Renewable energy	Value of eligible investments (€M)
Electricity grid assets developed to interconnect renewable energy sources with the grid	183.4
Electricity grid assets aimed at integrating and improving the transmission capacity of energy from renewable sources in the Portuguese electricity grid	2,317.3
<b>Total eligible assets</b>	<b>2,500.7</b>

### Green Financing

Instrument (ISIN)	Issue date	Maturity	Amount (€M)
XS2332186001	14/04/2021	14/04/2029	300.0
<b>Total green financing</b>			<b>300.0</b>

% of the Portfolio of eligible assets allocated to Green Financing	12%
% of Green Financing allocated to the Portfolio of eligible assets	100%
% of the Portfolio of eligible assets not allocated	88%
New assets in the Renewable Energy Portfolio since 30 September 2020 (€M)	83.0

\* The cut-off date for the definition of the set of eligible assets was 30-09-2020. As of 31-12-2021 the set of eligible assets was updated to reflect the new assets in portfolio since the initial cut-off date until 31-12-2021. The table above shows the gross book value of the set of eligible assets as of 31-12-2021, deducted from associated subsidies and EIB funding.

## IMPACT REPORT

Portfolio Date: 31 December 2021

	Renewable Energy
Eligible Investments (€M)	2,500.7
% of the Portfolio	12%
Evolution of RES Power/Total NES Power <sup>1</sup>	18 pp <sup>4</sup>
Installed Renewable Capacity (MW) <sup>1</sup>	3,897 <sup>5</sup>
Evolution of Renewable Generation/Total Generation <sup>1</sup>	21 pp <sup>6</sup>
Additional Renewable Generation (GWh/year) <sup>1</sup>	11,209 <sup>7</sup>
Estimated avoided emissions of the portfolio of eligible assets (tCO <sub>2</sub> /year) <sup>2</sup>	10,329,405
Estimated avoided emissions of the green financing allocated to the portfolio of eligible assets (tCO <sub>2</sub> /year) <sup>3</sup>	1,239,182
Contribution to the SDGs	SDGs 7 and 13

Tackling climate change places decarbonisation at the centre of public policies, thus generating significant changes on the energy sector. From an energy transition perspective, therefore, adapting the power grid's infrastructure is critical to meeting Portuguese and European energy policy goals. With regard to the electricity sector infrastructures, the growth targets for Renewable Energy Sources (RES), combined with the end of thermal power plant generation, especially coal power plants, in the current Portuguese National Electricity System (NES), determine that there is a permanent need to adapt and develop

transmission network infrastructures in order to guarantee security of supply. The investments carried out by REN, as the concession holder of the electricity transmission activity through the Portuguese National Electricity Transmission Grid (RNT), in the construction of new infrastructure needed to receive and integrate new renewable generation and the necessary adaptation to guarantee the quality, security of supply, and management of the system have been crucial to enable the goals of energy transition, namely the progressive reduction of Greenhouse Gas (GHG) emissions in the energy sector.

<sup>1</sup> Source: REN, Evolution 2012 to 2021

<sup>2</sup> Source: REN, Emissions avoided in 2021 with reference to 2012

Estimated avoided emissions (tCO<sub>2</sub>) = [National Electricity Emission Factor 2021 (tCO<sub>2</sub>/GWh) – National Electricity Emission Factor 2012 (tCO<sub>2</sub>/GWh)] \* [Total Portuguese Electricity Production 2021 (GWh)]

Note: baseline is considered all of the Portuguese Electricity Production 2021 but using the National Electricity Emission Factor 2012.

<sup>3</sup> Source: REN, Emissions avoided in 2021 with reference to 2012

Pro rata considers the percentage of investments compared to the total amount of investments and the correspondent contribution to avoided emissions

<sup>4</sup> Evolution from 55% in 2012 to 73% in 2021 (represents the difference between the ratio of the installed renewable capacity and total installed capacity in 2012 and the same ratio in 2021)

<sup>5</sup> Represents the additional capacity of renewable energy generation connected to our transmission and distribution systems, between 2012 and 2021

<sup>6</sup> Evolution from 44% in 2012 to 65% in 2021 (represents the difference between the ratio of the renewable electricity generation and the total electricity generation in 2012 and the same ratio in 2021)

<sup>7</sup> Represents the additional renewable energy generation between 2012 and 2021

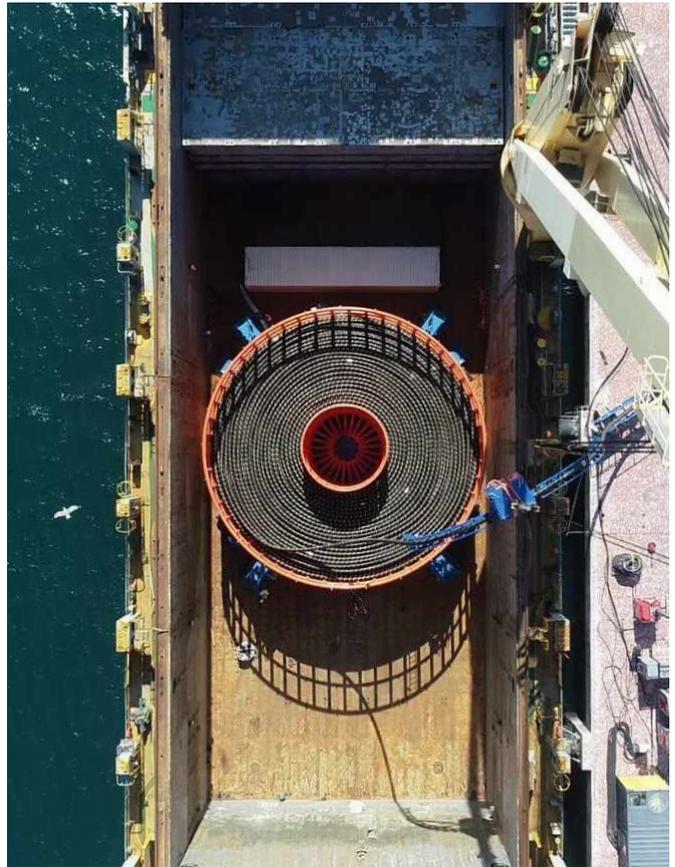


The development and investment plans for the transmission grid include multiple kinds of projects to achieve the decarbonisation goals in the electricity sector. In 2021, the following examples stand out:

- (i) Continuation of the construction of the infrastructure that enables the integration of the hydroelectric plants of the Tâmega basin (1158 MW), whose first phase has been completed with the entry in operation of the Ribeira de Pena substation through its connection to the Vieira do Minho substation. The overhead line (OHL) is a double circuit 400 kV transmission line with ca. 27 km, whilst Ribeira de Pena substation operates, at this stage, as a 400 kV switching station in a breaker-and-half scheme.
- (ii) Completion of the Ponte de Lima – Vila Nova de Famalicão line, thus linking this substation to that of Pedralva. This OHL is a 400 kV double circuit, with ca. 45 km, equipped with only one circuit.
- (iii) Completion of the Falagueira – Fundão axis and the corresponding entry into service of the Fundão substation. This axis comprises a double circuit 400 kV OHL, with ca. 55 km (north section of the Falagueira – Fundão circuit) and equipped with only one circuit, the new Fundão substation, operating with one 450 MVA autotransformer, at 400 kV, in a breaker-and-half scheme, and at 220 kV, in a double bus, single breaker scheme, and also a set of 220 kV OHL modifications in the vicinity of Fundão substation.
- (iv) Completion of the Falagueira – Estremoz – Divor – Pegões axis, with the entry into service of the Divor and Pegões substations. This axis integrates the new single circuit 400 kV Divor – Pegões OHL, with ca. 69 km, the new Pegões substation, operating, at this stage, as a 400 kV switching station in a breaker-and-half scheme, the new Divor substation with one 170 MVA transformer, at 400 kV, in a breaker-and-half scheme, and at 60 kV, in a double bus, single breaker scheme, and also two existing 400 kV OHL that have been operated at different voltage levels prior to the conclusion of the above mentioned Divor – Pegões link; for the operation of the entire axis at 400 kV, a set of modification at Estremoz and Falagueira substations had also to be made, namely the installation and commissioning of one 400 kV / 60 kV transformer with 170 MVA rated power at Estremoz substation.
- (v) Connection of new solar photovoltaic and wind parks, through a set of very high voltage bays at several voltage levels in existing substations.
- (vi) Completion of the construction of the Viana do Castelo switching station which, with the submarine cable in service since 2019, enables the conditions for the reception of renewable energy from an oceanic source or a location off the city's coast.
- (vii) Network reinforcement and modernisation projects that will enable the progressive decarbonisation of the NES and increase the resilience of its operation.

## VIANA DO CASTELO SWITCHING STATION CASE STUDY

The Viana do Castelo switching station establishes the connection between the RNT's submarine cable with a maximum rated power of 200 MVA, when operated at 150 kV, and the onshore public service power grid infrastructure. The switching station, installed at the port of Viana do Castelo, consists of a transition bay that enables monitoring and operating all the marine infrastructures of the Transmission Grid. This submarine cable, currently operated at 60 kV, runs along a strip of sea about 17 km long to the area with renewable energy conversion potential defined in the Portuguese maritime spatial planning, with a surface area of approximately 60 km<sup>2</sup>, where a world pioneering wind farm using floating technology adapted to deep waters is currently in operation and connected to the RNT's cable.



**The switching station, installed at the port of Viana do Castelo, consists of a transition bay that enables monitoring and operating all the marine infrastructures of the Transmission Grid.**



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## Independent Limited Assurance Report on the Green Bond Report

To the Board of Directors of  
REN – Redes Energéticas Nacionais, SGPS, S.A.

### Introduction

1. We have been engaged by the Board of Directors of REN – Redes Energéticas Nacionais, SGPS, S.A. to proceed with the independent review of the Green Bond Report 2021 (“Green Bond Report”) for the year ended 31 December 2021, prepared in accordance with the REN Green Finance Framework (“Green Finance Framework”).

### Responsibilities

2. The Board of Directors is responsible for preparing the content included in the Green Bond Report in accordance with the Green Finance Framework in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the Green Bond Report, such that it is free from material misstatement, whether due to fraud or error.
3. It is our responsibility to issue a limited assurance report, professional and independent, based on the procedures performed and described in the “Scope” section below.

### Scope

4. Our review procedures have been planned and executed in accordance with the International Standard on Assurance Engagements (ISAE 3000, Revised) – “Assurance engagements other than Audits and Reviews of Historical Financial Information”, issued by the International Auditing and Assurance Standard Board, for a limited level of assurance.
5. Procedures performed in a limited assurance engagement vary in timing and nature from, and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our independent review procedures comprised the following:
  - ▶ Conducting interviews with Management and other personnel involved in the preparation of the Green Bond Report, in order to understand the characteristics of the (re)financed projects and how the information system is structured;
  - ▶ Review of the processes, criteria and systems adopted to collect, consolidate, report and validate the data for the year 2021;
  - ▶ Confirmation that Green Bond net proceeds allocation in the project portfolio have been made in accordance with the criteria of the Green Finance Framework;
  - ▶ Analytical review of the data calculated by Management, including information related to indicators disclosed in the report;
  - ▶ Review of the conformity of the information included in the Green Bond Report with the results of our work and the reporting requirements established in the Green Finance Framework.

## Quality and independence

6. Our firm applies International Standard on Quality Control 1 (ISQC 1), and consequently maintains a global quality control system which includes documented policies and procedures relating to compliance with ethical requirements, professional standards, and the legal and regulatory provisions applicable and we comply with the independence and ethical requirements of the International Ethics Standards Board for Accountants (IESBA) Code of Ethics and the Code of Ethics of the Order of Chartered Accountants (OROC).

## Conclusion

7. Based on our work and evidence obtained, nothing has come to our attention that causes us to believe that the Green Bond Report, for the year ended 31 December 2021, is not free from relevant material misstatements. Additionally, nothing has come to our attention that causes us to believe that the Green Bond Report has not been prepared, in all material respects, in accordance with the Green Finance Framework.

Lisbon, 27 April 2022

Ernst & Young Audit & Associados – SROC, S.A.  
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