

CO<sub>2</sub>

# Green House Gas Report Year 2020

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June 2021



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# 1. INTRODUCTION

Since 2010, when Iberdrola prepared its first Greenhouse Gas (GHG) Report the company has continuously consolidated its position as a global benchmark for its commitment to transparency and its defence of a sustainable and environmentally friendly growth model. To give continuity to this commitment, Iberdrola now presents its 2020 Greenhouse Gas Report.

Iberdrola is publishing this report in order to verify its Greenhouse Gas inventory and transparently inform its Stakeholders regarding the Company's emissions in accordance with the commitments assumed in the Corporate Environmental Policies (Environmental Policy, Sustainable Management, Biodiversity and Climate Action, of 04/19/2021).

This report contains the company's 2020 inventory of greenhouse gases (GHG), with the following considerations:

- Collects emissions from Iberdrola's activities in the following subholdings: Iberdrola España (Spain), ScottishPower (United Kingdom), Avangrid (United States), Neoenergia (Brazil), Iberdrola México (Mexico), Iberdrola Energia International (Portugal, France, Italy, Germany, Greece, Australia, Hungary and Romania).
- The greenhouse gases considered are: CO<sub>2</sub>, SF<sub>6</sub>, CH<sub>4</sub>, N<sub>2</sub>O and CFC's.
- The consolidation of the GHG emissions is considered from an operational control standpoint<sup>1</sup>.
- In the reporting criteria for its generation assets, Iberdrola distinguishes between **"own" production and installed capacity and production and installed capacity for "third parties"**. The latter reflects the particular operating conditions of some of our plants in Mexico, which Iberdrola operates under the direction of the Federal Electricity Commission (CFE) as an Independent Power Producer (IPP).
- Under these conditions, IPP plants do not comply with the GHG protocol requirement of *"...full authority to introduce and implement their operational policies at the operation"* and therefore cannot be included in Scope 1, so that their emissions are reported in Scope 3 of this report.

The Corporate Environmental Department within the Iberdrola S.A. Innovation, Sustainability and Quality Division is the body responsible for drafting this report.

The report was drawn up in accordance with the requirements established in UNE-EN-ISO 14064-1:2012: *"Greenhouse gases. Part 1: Specification with guidance at the organisation level for quantification and reporting of greenhouse gas emissions and removals"*. The Greenhouse Gas inventory was verified using a **limited assurance** engagement.

1. With the exception of the nuclear power stations and partly controlled cogeneration stations in Spain and hydropower stations in Brazil, which are accounted for on a share basis in keeping with the Sustainability Report.





## 2. IBERDROLA - THE ENERGY COMPANY OF THE FUTURE

With over 170 years of history behind it, Iberdrola is now a global energy leader, the number one producer of wind power, and one of the world's biggest electricity utilities in terms of market capitalisation.

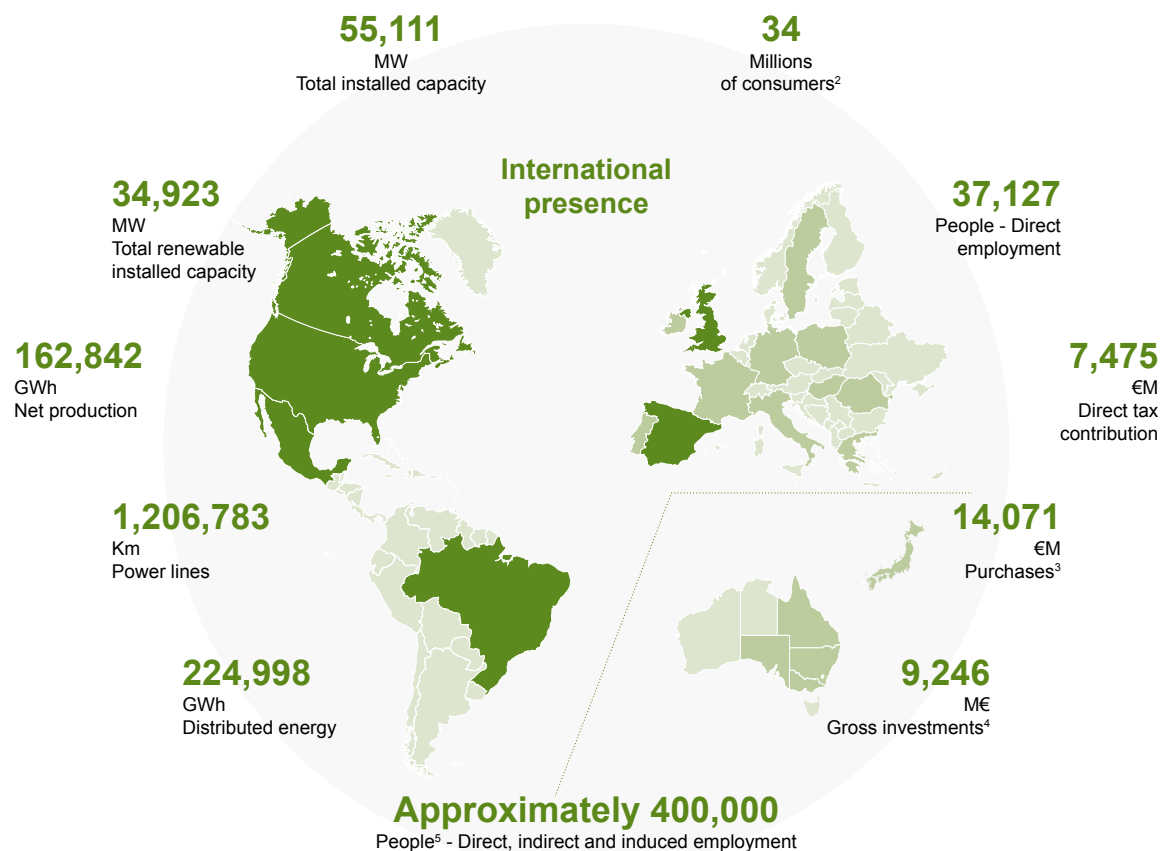
The group supplies energy to almost 100 million people in dozens of countries and has more than 600,000 shareholders, a workforce comprising more than 37,000 employees, and assets worth more than €122 billion.

We are leading the energy transition towards a sustainable model through investments in renewable energy, smart grids, large-scale energy storage and digital transformation, to offer the most advanced products and services to our customers.

— Ignacio Galán, Iberdrola group chairman —

“ *In this decade, we plan to invest €150 billion to triple our renewable capacity and double our network assets* ”

## Key figures of the group<sup>1</sup>



(1) At year-end 2020.

(2) Consumers: for electric power, total number of customers is used where there are areas of electricity distribution and retailing, supply points are used for the other areas. For gas: total number of gas customers is used, except for the United States, where total number of supply points is used.

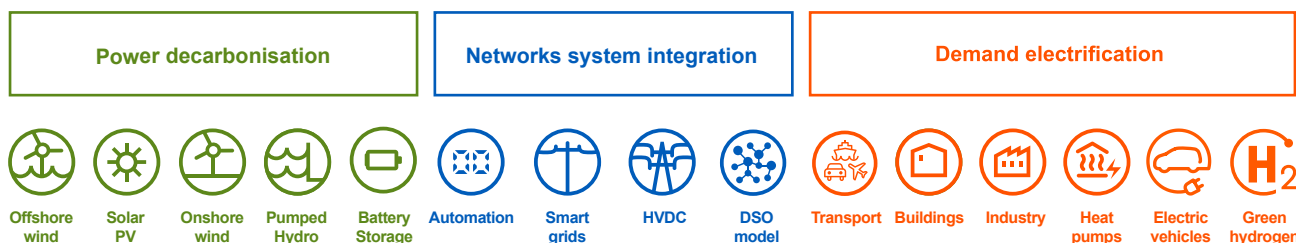
(3) Volume awarded during the year. Amount invoiced in 2020: €8,494 million.

(4) Net total investments for financial year 2020 were €8,436 million.

(5) Data from a Study of Iberdrola's Impact, prepared by PwC, for financial year 2019.



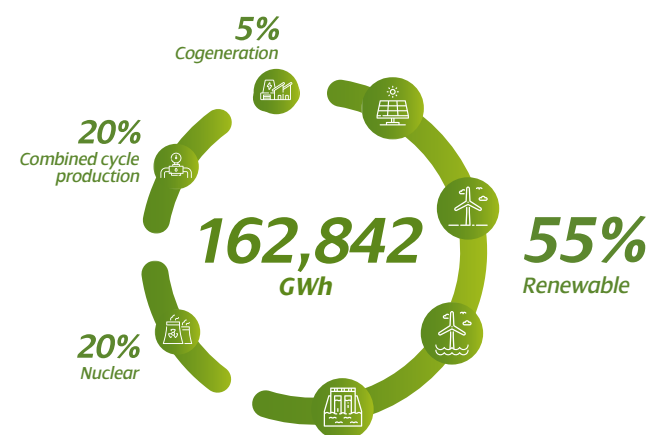
Iberdrola strongly believes that **the transition to a carbon neutral economy by 2050 is technologically possible, economically viable and socially necessary**. The decarbonisation of the economy is a great opportunity to create wealth, generate employment and improve the state of the planet and the health of people. The group is, therefore, committed to leading the energy transition, a journey it first embarked on twenty years ago. Since then, it has invested 120 billion euros, to which it will add another 75 by 2025. This commitment will be achieved by encouraging:



*The Iberdrola group has undertaken to reduce its emission intensity to 50 gCO<sub>2</sub>/kWh globally by 2030, thus achieving an 86% reduction in three decades, in addition to being carbon neutral globally by 2050.*

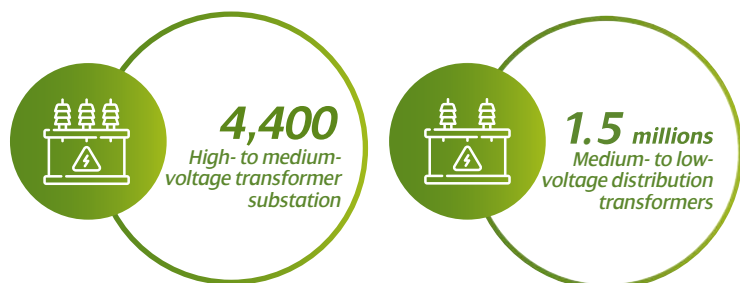
Iberdrola is now positioned as a leader in renewable energies and smart networks, activities that form the backbone of the decarbonisation of the electricity sector.

### Electricity production<sup>1</sup>



(1) of 2020 net output

### Electric networks<sup>2</sup>



(2) At 31 December 2020



#### Overhead lines:

**17,871 km**  
of transmission lines

**994,971 km**  
of distribution lines



#### Underground lines

**1,234 km**  
of transmission lines

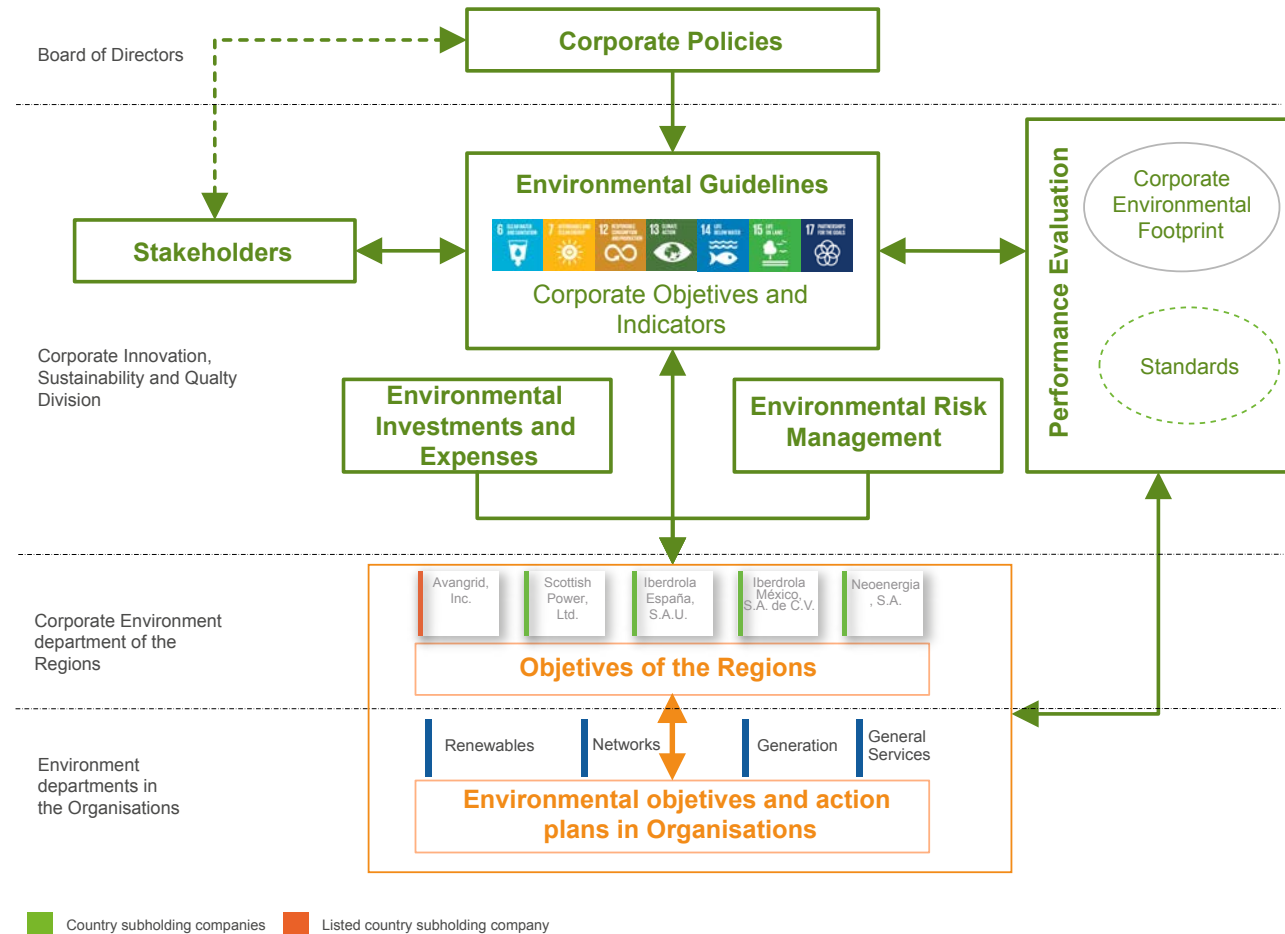
**192,707 km**  
of distribution lines

Verification of its GHG inventory is part of the company's environmental management model, the ultimate purpose of which is to bring the environmental dimension into line with the company's sustainability model by integrating universality of service, safety, energy efficiency and reduction of the Company's environmental impact.

The group's environmental management model is underpinned by the integration of ISO standards: 14001, 14064, 14072, 14024, 50001, EMAS etc.

The group benefits from creating an inventory of the GHG emissions at Iberdrola, as follows:

- It brings transparency, consistency and credibility to environmental management.
- It identifies opportunities to reduce GHGs.
- It provides an impetus for innovation and continuous improvement in business to achieve proper environmental management.
- It recognises the company's efforts to combat climate change.





### 3. SIGNIFICANT CHANGES AND LIMITS OF THE ORGANISATION

#### Significant changes to the Emissions Inventory

The following significant changes affecting the development of this report took place in 2020:

- Integration of the inventory for Iberdrola Energia Internacional, which includes the renewable and commercial generation activity in Portugal, Italy, France, Germany, Greece, Australia, Romania and Hungary.

#### Limits of the organisation

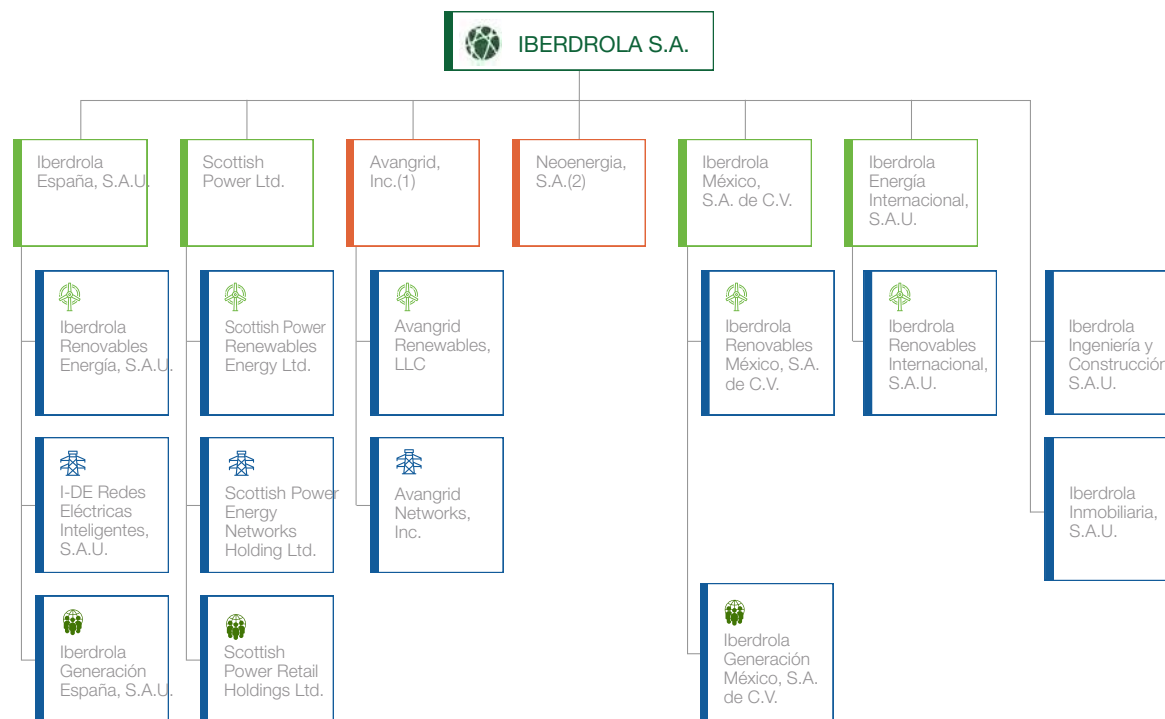
The consolidation of GHG emissions is considered from an operational control standpoint, as stated in the considerations in the introduction to this report.

The share percentages are specified in the Consolidated Annual Financial Statements Report and Consolidated Management Report corresponding to the fiscal year ending 31 December 2020.

Iberdrola has sought to identify and adapt to the needs of each of the countries in which it operates. The company has used the experiences of each market to reinforce its brand values and, beyond the location of the business, has created a brand culture based on a global-local balance.

The information included within the scope of the GHG inventory corresponds to the company structure of the group, which comprises the company, subholdings, parent Companies of the business units and investee Companies.





■ Holding company
 ■ Country subholding companies
 ■ Head of business companies
 ■ Listed country subholding company

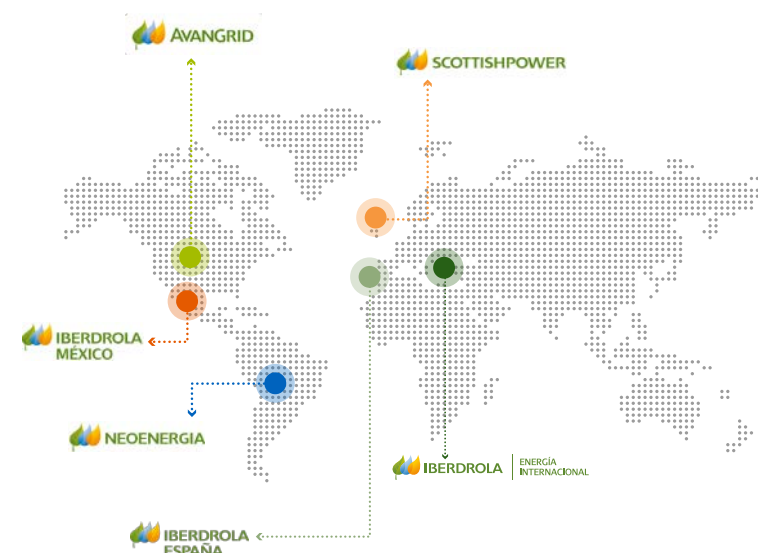
<sup>1</sup> Avangrid, Inc. is 81.50% owned by Iberdrola, S.A.

<sup>2</sup> Neoenergia, S.A. is 50% + 1 share indirectly owned by Iberdrola, S.A.

Wholesale and Retail
 Networks
 Renewables

The GHG inventory presented at subholding company level:

- Iberdrola España (Spain).
- ScottishPower (United Kingdom).
- Avangrid (United States of America)
- Neoenergia (Brazil).
- Iberdrola México (Mexico).
- Iberdrola Energía Internacional (Portugal, France, Italy, Germany, Greece, Australia, Romania and Hungary).





## 4. OPERATING LIMITS AND EXCLUSIONS

In this report the greenhouse gases considered are:

- CO<sub>2</sub> (Emissions from fixed and mobile combustion).
- SF<sub>6</sub> (Fugitive emissions expressed in T de CO<sub>2</sub> eq).
- CH<sub>4</sub> (Fugitive emissions and those associated with fuel consumption expressed as T de CO<sub>2</sub> eq).
- N<sub>2</sub>O (Emissions associated with fuel consumption expressed in T de CO<sub>2</sub> eq).
- CFC's (Fugitive emissions of refrigerant gases expressed in T de CO<sub>2</sub> eq).

Iberdrola defines the scope of its direct and indirect emissions for operations undertaken within the limits of the organisation, with the GHGs classified in accordance with Standard UNE-EN-ISO 14064:2012.

### Scope 1 – Direct GHG emissions

Direct GHG emissions from GHG sources owned or controlled by the Company. These include:

- Emissions from own electricity generation facilities<sup>2</sup> (fuel consumption).
- Emissions of methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) associated with fuel consumption.
- Fugitive methane (CH<sub>4</sub>) emissions (natural gas distribution and transmission).

2. It does not include the emissions generated by plants considered as independent power producers (IPP) in Mexico.

- Fugitive emissions of sulphur hexafluoride (SF<sub>6</sub>) (distribution networks, generation substations, etc.).
- Emissions from facilities that provide services to buildings (fuel consumption, diesel, natural gas and liquid petroleum gas).
- Emissions from mobile combustion sources associated with transporting employees by road for work purposes using fleet vehicles.
- Non-generation emissions:
  - Gas storage.
  - Emissions associated with land-use change: by volume of vegetation generated.
- Fugitive emissions from refrigeration gases (CFCs).

## Scope 2 – Indirect GHG emissions

Indirect GHG emissions are those that come from electricity, heat or steam generation of external origin consumed by the organisation. These emissions are:

- Emissions associated with the consumption of electrical energy in the power plants when shutdown and emissions associated with the electricity used for pumping in hydraulic plants.
- Emissions associated with electricity consumption in the group's buildings.
- Emissions associated with grid losses during the distribution of third-party power.

## Scope 3 – Other indirect emissions

All other indirect emissions that result from the company's activities but occur in sources that are not owned or controlled by the company. These other emissions are:

- Emissions from electricity generation facilities (due to fuel consumption) producing power for third parties<sup>3</sup>.
- Emissions associated with transporting employees for work purposes (rental and private vehicles, aeroplanes and trains).
- Emissions associated with the supply chain.
- Emissions associated with the transport of employees *in itinere* from their residence to their place of work.
- Emissions associated with electricity purchased from third parties for sale to end users.
- Emissions associated with gas supplied to the final customer (combustion).
- Emissions from the life cycle of fuels consumed (Well to Tank (WTT)).

## Exclusions

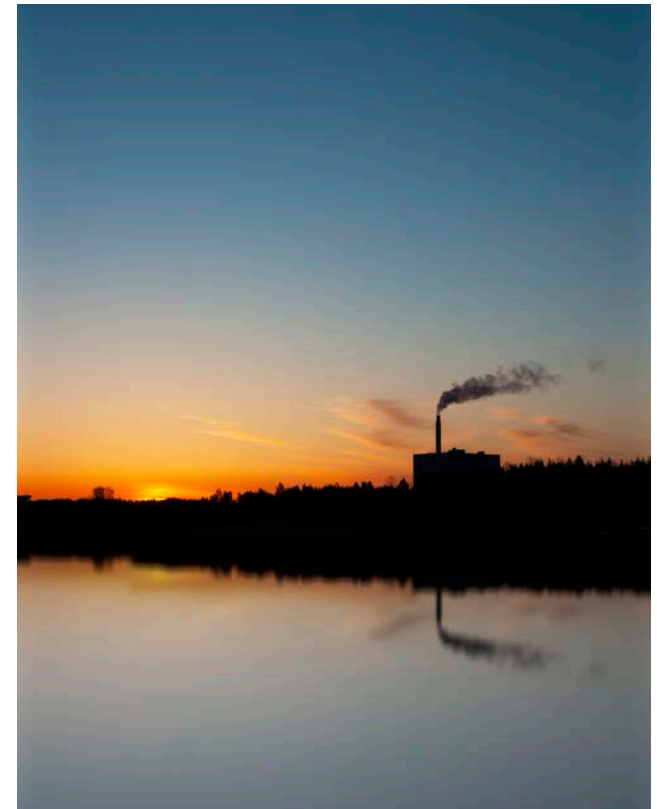
This section describes the exclusions made by Iberdrola in the GHG Inventory.

Emissions that do not figure highly (< 5%) in relation to total emissions. This group includes:

- Emissions from mobile sources in the generation facilities (Scope 1).

3. IPP plants operating in Mexico, includes N<sub>2</sub>O and CH<sub>4</sub> combustion.

- Emissions associated with energy consumption in commercial buildings occupied by Iberdrola Energia Internacional, managed by third parties (Scope 2).
- The emissions from employees' own vehicles on work-related journeys (Scope 3).







## 5. QUANTIFICATION OF EMISSIONS 2020

### Emissions 2020 (t CO<sub>2</sub> eq)

	Iberdrola España	Scottish Power	Avangrid	Neoenergía*	Iberdrola México	IEI**	Total
<b>Scope 1</b>	4,714,905	29,001	1,466,766	750,128	6,031,094	10,714	<b>13,002,609</b>
<b>Scope 2</b>	637,431	429,696	316,157	490,242	8,080	1,048	<b>1,882,654</b>
<b>Scope 3</b>	4,283,032	9,109,308	23,728,195	1,313,031	17,111,756	2,306,559	<b>57,851,882</b>

### Scope 1. Direct Emissions (t CO<sub>2</sub> eq)

	Iberdrola España	Scottish Power	Avangrid	Neoenergía*	Iberdrola México	IEI**	Total
Emissions from energy generation (Fuel Consumption)	4,667,569	-	1,173,419	699,722	5,968,099	10,056	<b>12,518,865</b>
Other emissions due to combustion (CH <sub>4</sub> and N <sub>2</sub> O)	6,367	-	1,158	47	60,351	-	<b>67,922</b>
Non-generation emissions (gas storage, logging and pruning)	-	5,404	-	17,876	-	-	<b>23,280</b>
Fugitive emissions (CH <sub>4</sub> ) (Gas storage and transmission)	-	16	218,010	-	-	-	<b>218,026</b>
Fugitive emissions (SF <sub>6</sub> )	4,003	15,185	31,776	7,444	1,776	109	<b>60,293</b>
Fugitive emissions refrigerant gases	2,063	287	2	857	689	506	<b>4,404</b>
Emissions in other facilities, buildings, offices, etc.(due to fuel consumption)	28,520	1,470	5,523	65	131	-	<b>35,708</b>
Emissions from mobile combustion (fleet cars)	6,383	6,639	36,879	24,117	49	43	<b>74,110</b>
<b>Total</b>	<b>4,714,905</b>	<b>29,001</b>	<b>1,466,766</b>	<b>750,128</b>	<b>6,031,094</b>	<b>-</b>	<b>13,002,609</b>

(\*) (Neoenergía performs independent verification of its greenhouse gases (GHGs), the results of this verification are those included in this table).

(\*\*) Iberdrola Energía Internacional

## Scope 2. Indirect emissions (t CO<sub>2</sub> eq)

	Iberdrola España	Scottish Power	Avangrid	Neoenergía*	Iberdrola México	IEI**	Total
Electricity consumption for auxiliary systems during stoppages and pumping.	407.352	4,744	30,163	1,327	7,038	1,048	<b>451,671</b>
Electricity consumption in buildings (Market Base) ***	1.135	20	19,603	1,339	1,042	-	<b>23,138</b>
Due to grid losses	228.945	424,932	266,392	487,576	-	-	<b>1,407,845</b>
<b>Total</b>	<b>637.431</b>	<b>429,696</b>	<b>316,157</b>	<b>490,242</b>	<b>8,080</b>	<b>1,048</b>	<b>1,882,654</b>

## Scope 3. Other indirect emissions (t CO<sub>2</sub> eq)

	Iberdrola España	Scottish Power	Avangrid	Neoenergía*	Iberdrola México	IEI**	Total
Employee business trips	2,849	1,853	1,680	1,015	349	193	<b>7,940</b>
Associated with the transport of employees from their residence to their place of work	13,126	3,002	3,236	6,516	1,206	825	<b>27,910</b>
Associated with the supplier chain	1,336,339	957,800	1,800,855	828,434	327,524	232,238	<b>5,483,189</b>
Associated with electricity purchased for sale to end users	788,989	3,100,941	10,442,226	354,926	-	1,808,436	<b>16,495,518</b>
Associated with the sale of gas to end customer (combustion)	1,556,030	5,045,010	11,325,730	-	-	263,640	<b>18,190,409</b>
Well To Tank (WTT) emissions of the fuels consumed	585,699	703	154,468	122,140	3,034,337	1,228	<b>3,898,575</b>
Emissions associated with power generated for third parties	-	-	-	-	13,748,340	-	<b>13,748,340</b>
<b>Total</b>	<b>4,283,032</b>	<b>9,109,308</b>	<b>23,728,195</b>	<b>1,313,031</b>	<b>17,111,756</b>	<b>2,306,559</b>	<b>57,851,882</b>

(\*) (Neoenergía performs independent verification of its greenhouse gases (GHGs), the results of this verification are those included in this table).

(\*\*) Iberdrola Energía Internacional

(\*\*\*) Emissions from electricity consumption in buildings have been calculated taking into account the GHG Protocol "market-based" criterion. If the GHG protocol's "location-based" criterion was used, the emissions would be: **30.940 t CO<sub>2</sub> e.**

## 6. BASE YEAR

Taking 2019 as the base year<sup>4</sup>

### Emissions 2019 (t CO<sub>2</sub> eq)

	Iberdrola España	Scottish Power	Avangrid	Neoenergía	Iberdrola México	IEI*	Total
<b>Scope 1</b>	5,800,704	46,974	1,855,716	1,024,141	4,699,572	-	<b>13,427,107</b>
<b>Scope 2</b>	773,019	490,450	225,217	538,802	54,255	-	<b>2,081,744</b>
<b>Scope 3</b>	4,215,201	9,515,931	20,041,276	4,141,152	16,364,640	-	<b>54,278,200</b>

### Scope 1. Direct emissions (t CO<sub>2</sub> eq)

	Iberdrola España	Scottish Power	Avangrid	Neoenergía	Iberdrola México	IEI*	Total
Emissions from energy generation (Fuel Consumption)	5,782,303	-	1,541,422	988,661	4,648,209	-	<b>12,960,596</b>
Other emissions due to combustion (CH <sub>4</sub> and N <sub>2</sub> O)	7,750	5	1,561	54	44,521	-	<b>53,891</b>
Emissions from gas storage (due to fuel consumption)	-	26,233	-	-	-	-	<b>26,233</b>
Fugitive emissions (CH <sub>4</sub> ) (Gas storage and transmission)	-	5	221,602	-	-	-	<b>221,607</b>
Fugitive emissions (SF <sub>6</sub> )	4,619	13,577	75,520	11,430	6,842	-	<b>111,987</b>
Fugitive emissions refrigerant gases (CFCs)	-	-	-	-	-	-	<b>-</b>
Emissions in buildings (Fuel consumption)	991	674	8,422	-	-	-	<b>10,088</b>
Emissions from mobile combustion (fleet cars)	5,041	6,479	7,189	23,996	-	-	<b>42,705</b>
<b>Total</b>	<b>5,800,704</b>	<b>46,974</b>	<b>1,855,716</b>	<b>1,024,141</b>	<b>4,699,572</b>	<b>-</b>	<b>13,427,107</b>

4. The base year is not recalculated, because the inclusion of IEI in the footprint perimeter represents a change of less than 5%.

(\*) Iberdrola Energía Internacional



**Scope 2. Indirect emissions (t CO<sub>2</sub> eq)**

	Iberdrola España	Scottish Power	Avangrid	Neoenergía	Iberdrola México	IEI*	Total
Electricity consumption for auxiliary systems during stoppages and pumping.	385,033	3,557	29,745	1,109	54,255	-	<b>473,698</b>
Electricity consumption in buildings	3,533	3,080	28,624	4,506	-	-	<b>39,743</b>
Due to grid losses	384,454	483,814	166,848	533,188	-	-	<b>1,568,303</b>
<b>Total</b>	<b>773,019</b>	<b>490,450</b>	<b>225,217</b>	<b>538,802</b>	<b>54,255</b>	-	<b>2,081,744</b>

**Scope 3. Other emissions (t CO<sub>2</sub> eq)**

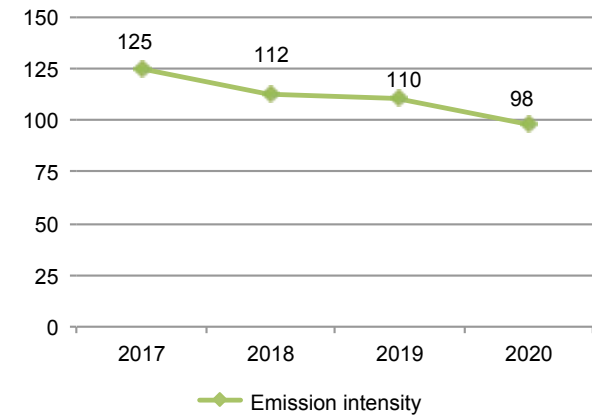
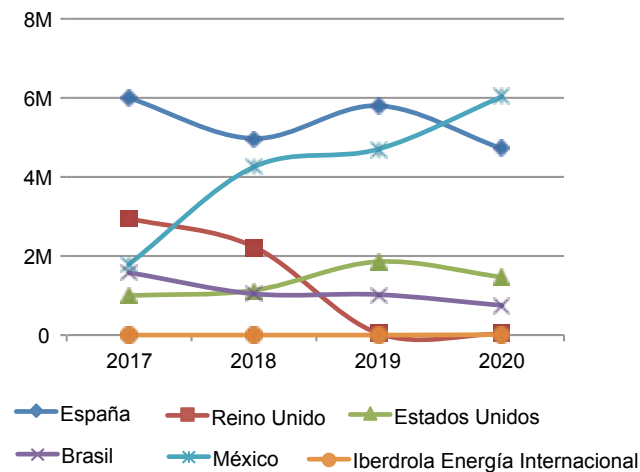
	Iberdrola España	Scottish Power	Avangrid	Neoenergía	Iberdrola México	IEI*	Total
Employee business trips	8,532	2,466	3,326	5,174	-	-	<b>19,498</b>
Associated with the supplier chain	1,041,568	670,017	32,324	3,227	137,636	-	<b>1,884,772</b>
Associated with the transport of employees from their residence to their place of work	14,698	7,764	15,225	12,795	1,986	-	<b>52,468</b>
Associated with electricity purchased for sale to end users	285,918	3,557,439	7,418,473	3,947,022	-	-	<b>15,208,852</b>
Well To Tank (WTT) emissions of the fuels consumed	749,834	671	196,442	172,934	2,670,367	-	<b>3,790,248</b>
Associated with the sale of gas to end customer (combustion)	2,114,651	5,277,574	12,375,486	-	-	-	<b>19,767,711</b>
Emissions associated with power generated for third parties	-	-	-	-	13,554,651	-	<b>13,554,651</b>
<b>Total</b>	<b>4,215,201</b>	<b>9,515,931</b>	<b>20,041,276</b>	<b>4,141,152</b>	<b>16,364,640</b>	-	<b>54,278,200</b>

(\*) Iberdrola Energía Internacional

## 7. CONCLUSIONS

The main greenhouse gas generated by the company's activities is CO<sub>2</sub>, which is emitted by combustion during thermal generation.

Change in Iberdrola's global emission intensity per thermal kWh produced:



Iberdrola's low emission intensity is justified by the production mix with an emission-free production of 75 % in 2020<sup>5</sup>.

Thus, Iberdrola assumes its public commitment to remaining among the large European companies with the lowest CO<sub>2</sub> emissions per kWh produced.

5. 55 % of generation was 100 % renewable in 2020



## 8. UNCERTAINTY AND MAXIMUM RELATIVE IMPORTANCE

The estimated uncertainty of the emissions is a combination of the uncertainties in the emission factors and in the corresponding activity data.

The emission factors used to create the Iberdrola GHG Inventory are extracted from official sources and are specific to each category of source. The selection of these emission factors is intended to minimise uncertainty as much as possible. Unless clear evidence to the contrary is available, it is assumed that probability density functions are normal.

The uncertainty of the activity data used for creating the Iberdrola GHG Inventory is assured by the local regulations of countries participating in the EU ETS (Emission Trading System). For countries not participating in the EU ETS, it is assured by calibrating metering equipment according to the technical specifications or specific procedures of each facility.

A maximum relative importance level of 5% has been set with respect to total emissions.



## 9. QUANTIFICATION METHODS

### Direct emissions - Scope 1

- **Emissions from electricity generation facilities (fuel consumption).**

The direct emissions at thermal energy generation facilities from own generation are the emissions of carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O) and methane (CH<sub>4</sub>) resulting from burning fossil fuels and, where applicable, from gas desulphurisation (process emissions) at the different power generation facilities:

- Combined cycles.
- Cogeneration.
- Oil combustion in nuclear plants.
- Other generation facilities not considered among the above.

As has already been pointed out, the quantification methodology used for calculating the direct emissions is based on the activity (fuel consumption) data and the emission factors calculated by and obtained from official sources and the global warming potential (GWP) values published by the IPCC for a horizon of 100 years (Values taken from AR4).

- **Non-generation emissions.**

- Carbon dioxide (CO<sub>2</sub>) emissions produced at the Hatfield gas storage plant (UK).



The quantification methodology used for calculating the direct emissions is based on the activity (fuel consumption) data and the emission factors calculated by or obtained from official sources and the global warming potential (GWP) values published by the IPCC for a horizon of 100 years (Values taken from AR4).

- Carbon dioxide (CO<sub>2</sub>) emissions produced in plant pruning in Brazil.

The quantification methodology used is that published by the IPCC for a 100-year horizon (values taken from AR4).

- **Fugitive methane (CH<sub>4</sub>) emissions (natural gas distribution and transmission).**

To obtain the emissions due to CH<sub>4</sub> leaks produced during the transmission and storage of natural gas in CO<sub>2</sub> eq, these leaks are determined in tonnes of CH<sub>4</sub> and multiplied by a Global Warming Potential factor (GWP) published by the Intergovernmental Panel on Climate Change (IPCC) for a 100 year horizon (Values taken from AR4).

- **Fugitive hexafluoride (SF<sub>6</sub>) emissions.**

In the quantifying methodology for the amount of CO<sub>2</sub> eq in hexafluoride (SF<sub>6</sub>) escapes, these escapes are given in tonnes and multiplied by the (GWP) value published by the IPCC for a 100 year horizon (Values taken from AR4).

- **Emissions from the facilities that provide services to buildings (fuel consumption, diesel, natural gas and liquid petroleum gas).**

The quantification methodology employed for calculating direct emissions is based on activity

data (consumption of different fuels, oil, natural gas, LPG in the company's buildings) and the emission factors obtained from the specific official sources for these fuels.

- **Emissions associated with road transport involving employees driving company vehicles, (mobile source fuel combustion).**

The quantification methodology employed for calculating direct emissions is based on activity data (consumption of fuel or kilometres driven) with the emission factor obtained from specific official sources.

## Indirect emissions - Scope 2

- **Emissions associated with the consumption of electricity during outages at thermal, renewable and nuclear power plants and the suspension of pumping operations at hydroelectric power plants.**

It calculates the emissions associated with the power used during outages or the suspension of pumping operations at facilities by applying the emissions factor for the energy mix of the corresponding country.

- **Emissions associated with the consumption of electricity in buildings.**

It calculates the CO<sub>2</sub> eq emissions associated with the consumption of electricity in the buildings and offices owned by the company. The calculation is performed with the "Market Base" format.

- **Emissions associated with grid losses in transmission.**

Third-party grid losses are those obtained by subtracting own generation from the power distributed by our own grid. The emission factor of the corresponding country's generation mix is applied to these losses.

## Other indirect emissions - Scope 3

- **Emissions from electricity generation facilities (fuel consumption) from production for third parties.**

These are the emissions in thermal energy generation facilities, from generation for third parties, of carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O) and methane (CH<sub>4</sub>) produced in the combustion of fossil fuels.

The quantification methodology used for calculating emissions is based on the activity (fuel consumption) data and the emission factors calculated by and obtained from official sources and the global warming potential (GWP) values published by the IPCC for a horizon of 100 years (Values taken from AR4).

- **Emissions associated with the transport of employees to and from work.**

The emissions associated with the business trips made by employees using different means of transport (car, aircraft, train, etc.), for which the distances travelled are multiplied by the specific emission factors for the means of transport obtained from:

- MITERD for Spain.
- DEFRA United Kingdom, IEI.
- EPA for the United States and Mexico.
- FERRAMENTA for Brazil.
- **Emissions associated with the supplier chain**  
Estimated emissions data on the emission factor per euro invoiced obtained in 2018 using a supplier survey.
- **Emissions associated with the transport of employees from their residence to their place of work**  
The company conducted a supplier greenhouse gas awareness and measurement campaign in 2020 on employee travel to and from the workplace using an emissions calculator sent to employees. The data collected was extrapolated to all Iberdrola Group employees for the calculation of emissions.
- **Emissions associated with electricity purchased for sale to end users.**  
Emissions for electricity sold to end customers from third-party generation.  
The green energy supplied and our own non-renewable generation (already counted in Scope 1) will be subtracted from the electricity supplied to the market, the difference will give us the electricity purchased from third parties for sale to end customers.  
The total CO<sub>2</sub> eq will come out of applying the emission factor to the country's generation mix.
- **Emissions associated with the life cycle of the fuels consumed.**  
These are the CO<sub>2</sub> eq emissions for the life cycle of the fuels used in generation before combustion (WTT). (Emission factor provided by DEFRA).
- **Emissions associated with gas supplied to customers (combustion).**  
These are the expected CO<sub>2</sub> eq emissions for the combustion of the gas supplied to the final customer, taking into account the emission factor for each country.

*Report completion date 14 May 2021*



# 10. AENOR VERIFICATION DECLARATION



## AENOR Verification Statement for IBERDROLA, S.A. of the Inventory of greenhouse gas emissions corresponding to the year 2020

Project identification: 1995/0014/GEN/04

### Introduction

IBERDROLA, S.A. (hereinafter the company) has commissioned to Asociación Española de Normalización y Certificación (AENOR) to carry out a limited review of the Inventory of greenhouse gas (GHG) emissions for the year 2020 of its activities included in the GHG report dated May 2021, which is part of this Statement.

AENOR is accredited by the Entidad Mexicana de Acreditación, with code OVVGEI 004/14 (effective as of 10/31/2014; update date 11/27/2018), in accordance with ISO 14065: 2013, for the verification of greenhouse gas emissions in accordance with the requirements established in ISO 14064-3: 2006 for the energy sector and waste.

Inventory of GHG emissions issued by the Organization: IBERDROLA, S.A. with registered office at C / Tomás Redondo 1. 28033 Madrid (Spain)

Representative of the Organization: Mr. Bernardo LLANEZA FOLGUERAS, member of the Innovation, Sustainability and Quality Department.

IBERDROLA, S.A. was responsible for reporting its GHG emissions considered (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, SF<sub>6</sub> y CFCs) according to the reference standard ISO 14064-1:2006.

### Purpose

The purpose of the verification is to provide interested parties with professional and independent judgment regarding the information and data contained in the GHG Report of IBERDROLA, S.A. mentioned.

### Scope of the Verification

The scope of the verification is established for the activities provided by the companies of the company in the sub-holdings of Spain, the United Kingdom, the United States, Mexico, Brazil and Iberdrola Energía Internacional. The list of companies whose activities are subject to the verified inventory is attached to this Statement.

The company, in the emissions report, has considered to understand by installation a sub-holding, which is a basic grouping of companies according to geographical scope. Once the boundaries of the organization have been defined, it should be noted that the GHG inventory is presented at the sub-holding level.

The sub-holdings considered are the following:

- Spain
- United Kingdom
- USA
- Mexico
- Brazil
- Iberdrola Energía Internacional (Portugal, France, Italy, Germany, Greece, Australia, Romania, Hungary)



It has been considered as greenhouse gases: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, SF<sub>6</sub> y CFCs

During the verification, the information was analyzed according to the *operational control* approach established by ISO 14064-1:2006, with the exception of nuclear power plants and cogeneration plants in Spain, which is accounted for under the *participation* quota established by the ISO standard ISO 14064-1:2006, in line with the Sustainability Report.

In addition, for one of the power production plants in Mexico, the Independent Energy Production Plants (PIE), in which CFE decides its mode of operation, its emissions have been reported in Scope 3 and it is indicated that Iberdrola does not have full control of the operation.

Neoenergia has issued its own GHG emissions inventory for Brazil, verified by an external entity accredited for GHG Protocol in Brazil, its data are included in the report applying the operational control approach.

### The direct, indirect and exclusion activities of the verification

In terms of the scope of the company's activities, these are classified as direct and indirect, following the guidelines of the standard ISO 14064-1:2006, in this report they are:

#### Scope 1- Direct GHG emissions

Direct emissions occur from sources that are the property of or are controlled by the Company. These include:

- Emissions from electric power owned<sup>1</sup> generation facilities (fuel consumption).
- Emissions of methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) associated with fuel consumption in generation.
- Fugitive emissions of methane (CH<sub>4</sub>) (storage and transportation of natural gas).
- Fugitive emissions of hexafluoride (SF<sub>6</sub>) in distribution networks.
- Emissions from facilities that provide services to buildings (fuel consumption).
- Emissions associated with road transport of employees in fleet vehicles (combustion of mobile sources).
- Emissions associated with changes in land use due to pruning (in Brazil)
- Fugitive emissions of refrigeration gases (CFC's)

#### Scope 2 – Indirect GHG emissions

Indirect emissions are those derived from the activity but generated by other entities, including the emissions of the generation of electricity acquired and consumed by the company. These emissions are:

- Emissions associated with the consumption of auxiliary energy during stops in thermal, renewable and nuclear plants and pumping operations in hydro plants
- Emissions associated with the consumption of electricity in buildings
- Emissions associated with grid losses due to third-party electricity distribution (the distribution loss factor, calculated by each system operator, is 2019, which is the last year for which the full year is available)

Scope 3: Other indirect GHG emissions, The following sources of GHG emissions are included in this category according to the GHG Protocol "Corporate Value Chain (Scope 3) Accounting and Reporting Standard":

- Emissions from generation power plants producing for third parties<sup>2</sup> (by fuel consumption).

<sup>1</sup> Does not include the generation of the plants considered as Independent Energy Producers (PIE) of Mexico

<sup>2</sup> PIE plants operating in Mexico, includes N<sub>2</sub>O and CH<sub>4</sub> emissions by combustion.





- Emissions from mobile sources related to business trips in rental cars, plane and train
- Emissions associated to supply chain
- Emissions associated to employee commuting
- Emissions associated to purchased electrical energy provided to customers
- Emissions for final usage of natural gas provided to customers (burning)
- Emissions Well To Tank (WTT) from consumed fuels in plants

#### Exclusions

Emissions with low representativeness (< 5% in total) in relation to total emissions. This group includes:

- Emissions from mobile sources of generation facilities (Scope 1).
- Emissions associated with the auxiliary energy consumption of wind farms belonging to Iberdrola Energía Internacional SLU (Scope 2).
- Emissions from mobile sources related to business trips in owned cars (Scope 3).

#### Directed actions and base year

The company has not included in the 2020 inventory any activity aimed at reducing greenhouse gases that could be verified according to the ISO 14064-1:2006 standard

Following changes in operating limits, the organization has established 2019 as its base year.

#### Materiality

For the verification it was agreed to consider material discrepancies those omissions, distortions or errors that can be quantified and result in a difference greater than 5% with respect to the total declared emissions.

#### Criteria

Standard ISO 14064-1:2006 is established as a verification criterion and additionally, for the sites subject to regulatory verification, Decision 2007/589/EC as well as the corresponding authorisations and Monitoring Plans in force. In general, the verification criteria were the following:

- 1) Standard ISO 14064-1:2006: Specification with guidance at the organisation level for quantification and reporting of greenhouse gas emissions and removals.
- 2) Standard ISO 14064-3:2006: Specification with guidance for the validation and verification of greenhouse gas assertions.
- 3) IBERDROLA SA procedure "Information Management of the Greenhouse Gas Inventory" (in the corresponding version)

Finally, the "Greenhouse Gas Emissions Report 2020 - Iberdrola", of May 2021, was subject to verification.

AENOR expressly disclaims any responsibility for decisions, investment or otherwise, based on this statement.



#### Assurance opinion

Based on the above and according to the limited assurance level,

In our opinion *there is no evidence to suggest that the information on emissions reported in the 2020 Greenhouse Gases Report of IBERDROLA, S.A. dated May 2021 was not a true reflection of the emissions from its activities*

#### Summary to sub-holding level of the GHG emissions declared by IBERDROLA, S.A. for the year 2020 which have been verified

#### TOTAL EMISSIONS BY SCOPE AND SUB-HOLDING

EMISSIONS 2020 (t CO <sub>2</sub> e)	Spain	United Kingdom	U.S.A.	Brazil	Mexico	Iberdrola Energía Internacional	TOTAL
Scope 1: Direct Emissions	4.714.905	29.001	1.466.766	750.128	6.031.094	10.714	13.002.609
Scope 2: Indirect Emissions	637.431	429.696	316.157	490.242	8.080	1.048	1.882.654
Scope 3: Other Indirect Emissions	4.283.032	9.109.308	23.728.195	1.313.031	17.111.756	2.306.559	57.851.882

Lead Vericator: Juan HERNÁN DÍEZ

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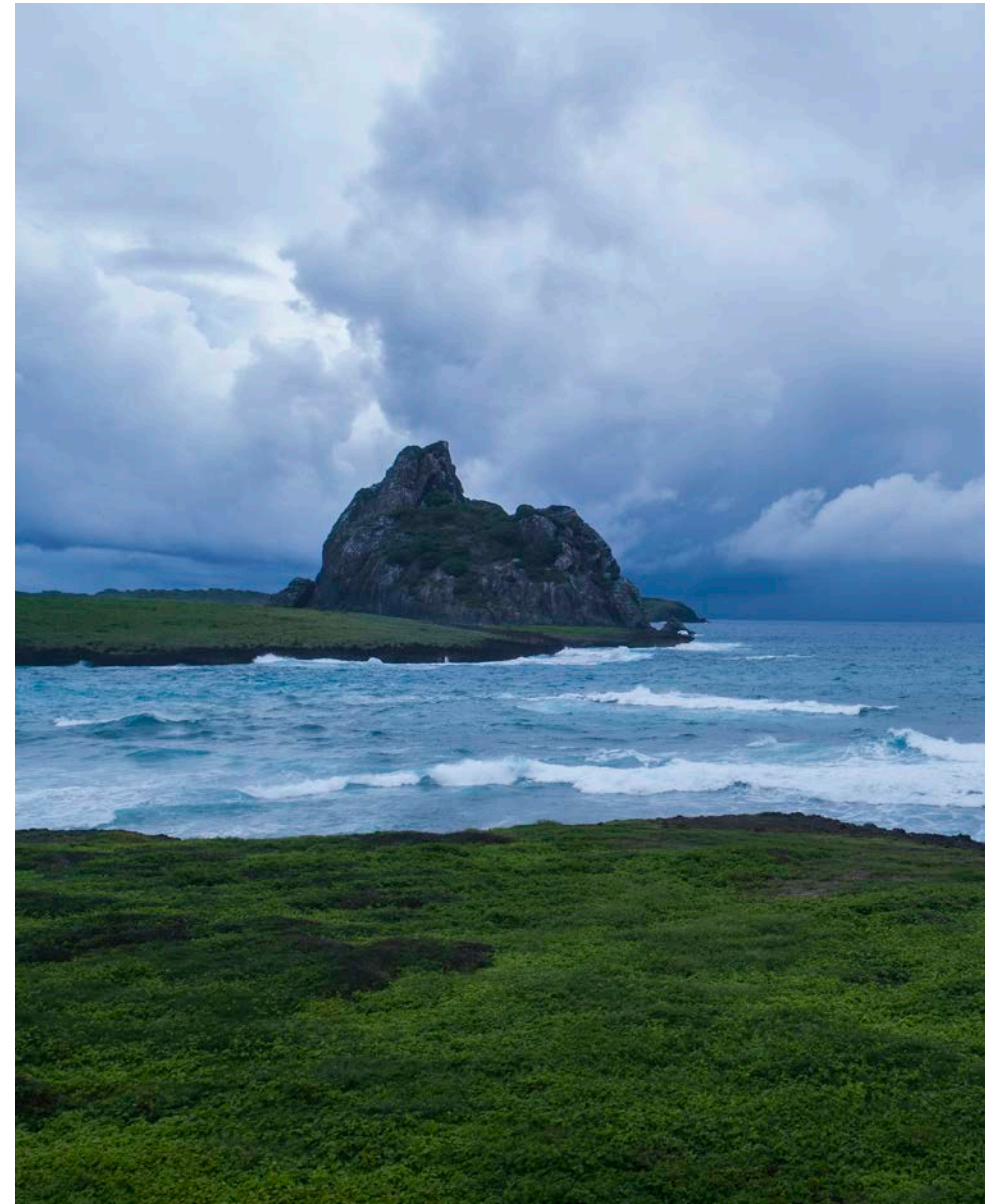
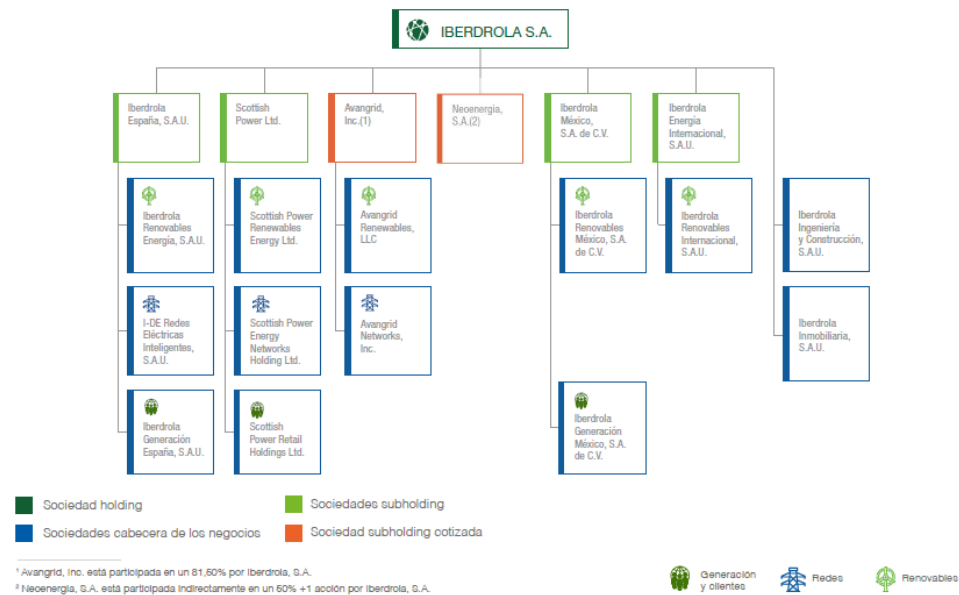
Technical Review: Fernando SEGARRA ORERO

Madrid, on May 14<sup>th</sup> 2021



## ANNEX I

List of companies included in the 2020 inventory of IBERDROLA, S.A. which has been verified:



# 11. ABNT VERIFICATION STATEMENT FOR NEOENERGIA (BRAZIL)



## DECLARAÇÃO DE CONFORMIDADE Conformity Declaration

### DECLARAÇÃO DE VERIFICAÇÃO

**Nº 367.012/21**

Esta **Declaração de Verificação** documenta que a ABNT realizou atividades de verificação de acordo com a norma ABNT NBR ISO 14064-3:2007 e as *Especificações de Verificação do Programa Brasileiro GHG Protocol*.

<b>NEOENERGIA S/A</b>
Responsável pelo Inventário: <b>Lucas Cavicchioli</b>
E-mail: <b>lucas.cavicchioli@neoenergia.com</b>

<b>Associação Brasileira de Normas Técnicas – ABNT</b>
Verificador Líder: <b>Mariana Fellows Garcia</b>
E-mail: <b>mfellows1@gmail.com</b>

As emissões de gases de efeito estufa (GEE) informadas pela **NEOENERGIA S/A** em seu inventário de emissões, de 1º de janeiro até 31 de dezembro de **2020**, são verificáveis e cumprem os requisitos da norma ABNT NBR ISO 14064-1:2007 e do Programa Brasileiro GHG Protocol, detalhados nas *Especificações do Programa Brasileiro GHG Protocol de Contabilização, Quantificação e Publicação de Inventários Corporativos de Emissões de Gases de Efeito Estufa (EPB)*.

#### Nível de Confiança

A ABNT atribuiu o seguinte nível de confiança ao processo de verificação:

☒ Verificação com nível de **confiança limitado**.  
“Não há indícios de que o inventário de gases de efeito estufa da **NEOENERGIA S/A** para o ano de **2020** não esteja materialmente correto, não seja uma representação justa dos dados e informações de GEE e não tenha sido preparado de acordo com as EPB.”

Os limites do processo de verificação foram:  
O número mínimo de visitas às instalações não foi atingido, pois a verificação foi feita de forma remota, como permitido pela equipe do PBGHGP para o Ciclo 2021 por causa da pandemia do covid-19.

ABNT Associação Brasileira de Normas Técnicas

Av. Treze de Maio, 13 – 28º Andar – Centro – Rio de Janeiro – RJ – CEP 20031-901  
Rua Conselheiro Nebras, 1.131 – Campos Eliseos – São Paulo – SP – CEP 01203-002



## DECLARAÇÃO DE CONFORMIDADE Conformity Declaration

### Descrição do Escopo da Verificação

O inventário do ano de **2020** da **NEOENERGIA S/A** foi verificado dentro do seguinte escopo:

Limites Organizacionais	Limites operacionais
<input checked="" type="checkbox"/> Controle Operacional	<input checked="" type="checkbox"/> Escopo 1
<input checked="" type="checkbox"/> Participação Societária	<input checked="" type="checkbox"/> Escopo 2 – Abordagem em localização
	<input type="checkbox"/> Escopo 2 – Abordagem Baseada em escolha de compra
	<input checked="" type="checkbox"/> Escopo 3

☐ Foram excluídas da Verificação: N/A

### Instalações visitadas

Lista das instalações visitadas durante o processo de verificação:

A verificação ocorreu nos dias 07 a 09 e 21 de abril de 2021 de forma remota.

### Total de emissões verificadas em toda a organização (Controle Operacional)

GEE	Toneladas Métricas de CO <sub>2</sub> equivalente (tCO <sub>2</sub> e)			
	Escopo 1	Escopo 2 Abordagem baseada na localização	Escopo 2 Abordagem baseada em escolha de compra	Escopo 3 (se aplicável)
CO <sub>2</sub>	-	-	-	-
CH <sub>4</sub>	-	-	-	-
N <sub>2</sub> O	-	-	-	-
HFCs	-	-	-	-
PFCs	-	-	-	-
SF <sub>6</sub>	-	-	-	-
NF <sub>3</sub>	-	-	-	-
TOTAL	750.184,640	490.255,063	-	1.313.038,1
CO <sub>2</sub> Biogênico	7.512,99	-	-	-

ABNT Associação Brasileira de Normas Técnicas

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## DECLARAÇÃO DE CONFORMIDADE

### Conformity Declaration

Total de emissões verificadas em toda a organização  
(Participação Societária)

GEE	Toneladas Métricas de CO <sub>2</sub> equivalente (tCO <sub>2</sub> e)			
	Escopo 1	Escopo 2 Abordagem baseada na localização	Escopo 2 Abordagem baseada em escolha de compra	Escopo 3 (se aplicável)
CO <sub>2</sub>	-	-	-	-
CH <sub>4</sub>	-	-	-	-
N <sub>2</sub> O	-	-	-	-
HFCs	-	-	-	-
PFCs	-	-	-	-
SF <sub>6</sub>	-	-	-	-
NF <sub>3</sub>	-	-	-	-
TOTAL	750.128,00	490.242,090	-	1.313.031,0
CO <sub>2</sub> Biogênico	7.512,99	-	-	-

#### Comentários Adicionais

A organização elaborou um sistema de gestão de dados de GEE, o Sygris, que não informa os dados de emissões para os seis gases/família de gases de GEE separadamente em toneladas métricas de CO<sub>2</sub> equivalente.

Foi adotado o procedimento de verificação remota através da utilização da plataforma Microsoft Teams para garantir um nível de confiança limitado ao processo de verificação.

Para as emissões por % participação societária não houve alteração do CO<sub>2</sub> biogênico uma vez que as participadas variam apenas em carbono fóssil.

#### Conflitos de Interesse (CDI)

Eu, **Mariana Fellows Garcia**, certifico que nenhum conflito de interesse existe entre **NEOENERGIA S/A** e a **ABNT**, ou qualquer dos indivíduos membros da equipe de verificação envolvidos na verificação do inventário, conforme definido no capítulo 3.2.1 das *Especificações de Verificação do Programa Brasileiro GHG Protocol*.

**Mariana Fellows Garcia**  
(Verificador Líder)

19/05/2021  
Data

☒ Reconhecimento de assinatura digital<sup>1</sup>

ABNT Associação Brasileira de Normas Técnicas

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## DECLARAÇÃO DE CONFORMIDADE

### Conformity Declaration

Conclusão do Verificador sobre o Inventário de Emissões de GEE

Como responsáveis pelas atividades de verificação do inventário de GEE da **NEOENERGIA S/A**, atestamos que as informações contidas neste documento são verdadeiras.

**Mariana Fellows Garcia**  
(Verificador Líder)

19/05/2021  
Data

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**Camila Torres**  
(Revisor Independente)

19/05/2021  
Data

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#### Autorização

Eu, **Lucas Cavicchioli**, aceito os resultados desta declaração de verificação.

**Lucas Cavicchioli**

Data

☐ Reconhecimento de assinatura digital<sup>1</sup>

Rio de Janeiro, 19 maio de 2021.



**Guy Ladvocat**  
Gerente de Certificação de Sistemas

<sup>1</sup> Ao marcar a caixa "Reconhecimento de assinatura digital", concordo que esta declaração de verificação seja considerada "feita por escrito" e "assinada" para todos os fins e que quaisquer registros eletrônicos serão considerados "feitos por escrito". Renuncio expressamente a todo e qualquer direito de negar a obrigatoriedade jurídica, a validade ou a executoriedade desta declaração de verificação e de quaisquer documentos a ela relacionados com base em que tenham sido elaborados e concluídos eletronicamente. Esta declaração de verificação é suportada por contrato de atendimento à norma e procedimentos da ABNT é válido somente em original e com o timbre da ABNT em alto-relevo seco, assinado pelo Gerente de Certificação de Sistemas. Sua validade pode ser confirmada no site [www.abnt.org.br](http://www.abnt.org.br) (CNPJ: 33.402.892/0001-06 – Tel.: (21) 3974-2300).

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