



# Greenhouse Gas Report

*2022 Financial year*

Mayo 2023





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# 01. Introduction

# 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 Greenhouse Gas Report.

Iberdrola publishes this report annually, in order to describe the Greenhouse Gas inventory and to transparently inform its stakeholders of the company's emissions during the 2022 financial year, in accordance with the commitments assumed in our environmental policies, which constitute the response to challenges such as climate change and loss of biodiversity, while at the same time contributing to identifying and taking advantage of the opportunities arising from the energy and ecological transition:

- **Sustainable management policy**<sup>1</sup>. Iberdrola strives to ensure that its development meets the needs of the present without compromising the ability of future generations to satisfy their own needs.
- **Environmental policy**<sup>1</sup>. Respect for the environment is the key to Iberdrola's sustainable energy model.
- **Climate action policy**<sup>1</sup>. Iberdrola takes a leading position in the fight against climate change.
- **Biodiversity policy**<sup>1</sup>. Iberdrola promotes the biodiversity of ecosystems and the awareness of its stakeholders.

Iberdrola aims to achieve **carbon neutrality for its direct and indirect emissions from imported energy by 2030**. The ultimate goal is to achieve a **Net Zero emissions balance by 2040**. By 2039, the group's absolute emissions will have been reduced by 90% and residual emissions will be neutralised.

Iberdrola's transformation towards climate neutrality, in full coherence with the achievement of a more efficient, competitive, clean and sustainable economic system, consolidates the company as the largest electricity company in the world without coal production.

This report contains Iberdrola's greenhouse gas (GHG) inventory for 2022, in line with the company's decarbonisation targets.

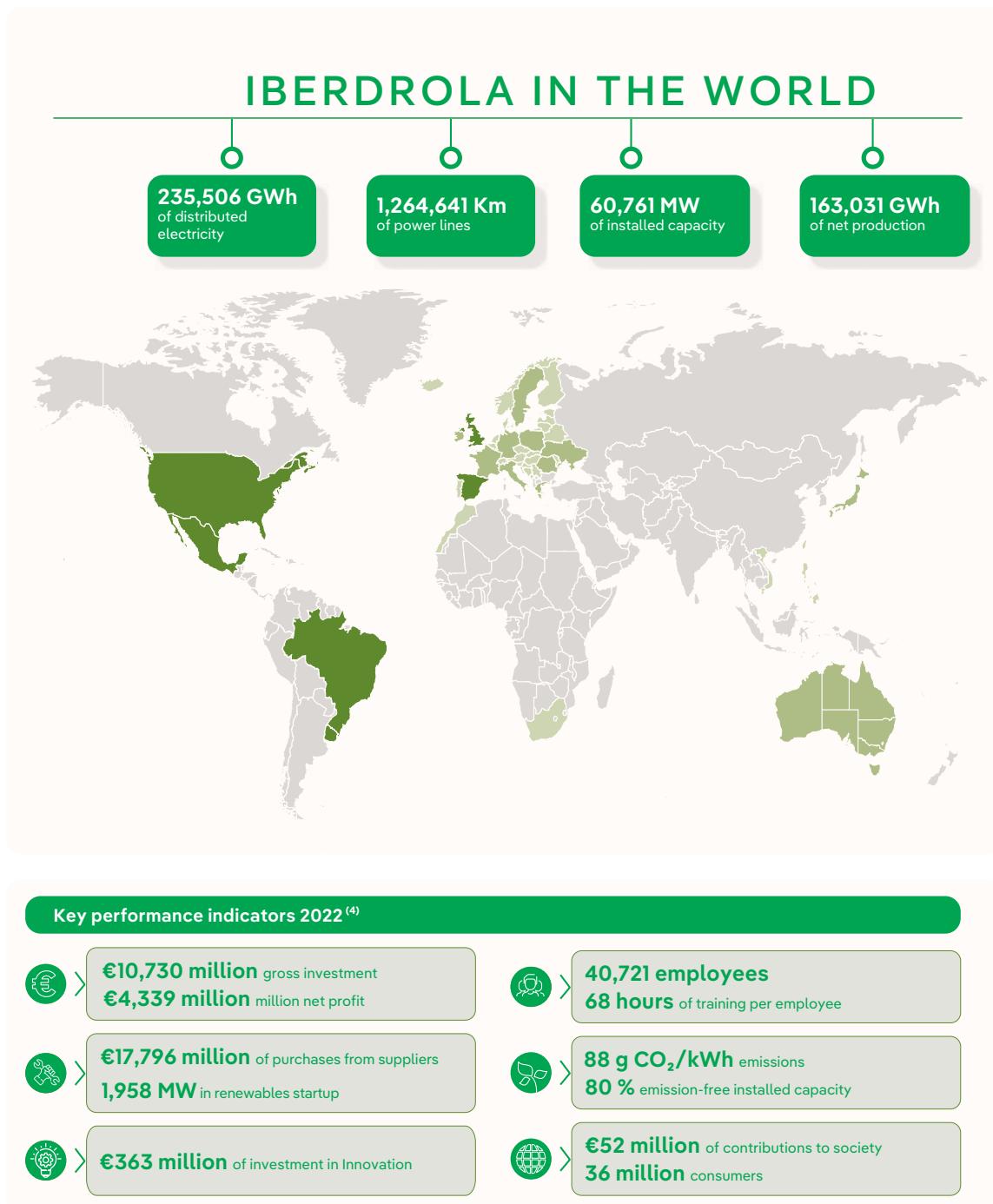
1. <https://www.iberdrola.com/corporate-governance/governance-sustainability-system/environment-climate-change-policies>

02.  
**The energy  
company of  
the future**

## 2. The energy company of the future

With over 170 years of history behind us, 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<sup>2</sup>**. For two decades Iberdrola has advanced work on the energy transition to combat climate change and offer a sustainable and competitive business model that creates value in the territories in which the company operates.

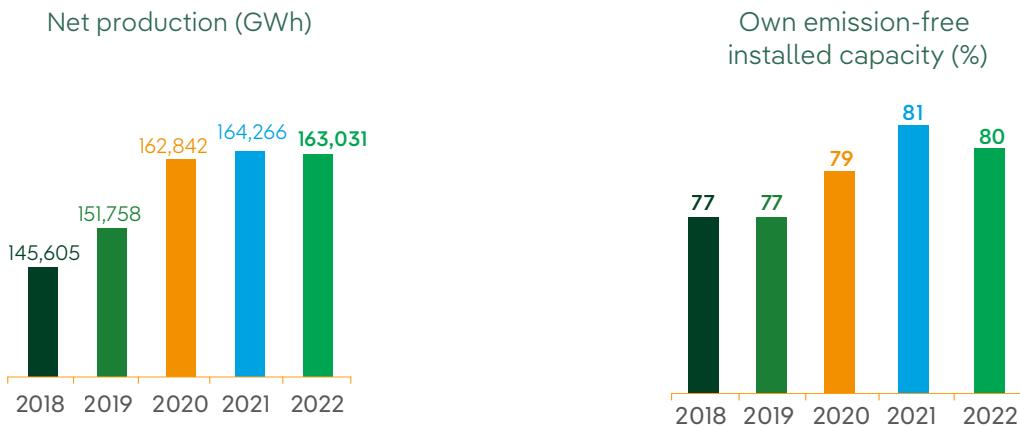
Data published in the Integrated Report (February 2023<sup>3</sup>).



2. As of the closing date of the 2022 financial year, published in the Non-Financial Information Statement (EINF).

3. The verified emissions intensity is the one presented in section 4 of this report.

4. At year-end 2022.



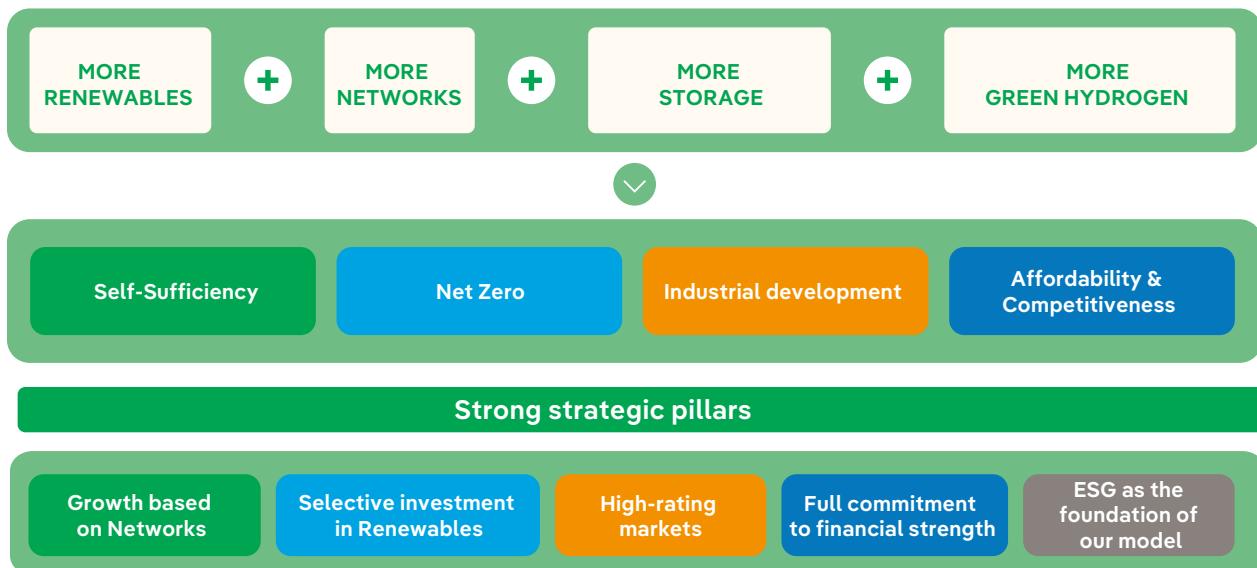
The electricity sector plays a key role in achieving the purpose set by the historic Paris Agreement to limit the rise in the planet's temperature to below 1,5°C and to tackle the climate emergency. The Iberdrola group, a world leader in the fight against climate change -Sustainable Development Goal #13- and an active participant at the different Climate Summits, is fully aligned with this international pact.

As reflected in its Climate Action Plan, Iberdrola seeks to make its growth in renewable energy and networks compatible with the goal of achieving neutrality of its emissions in the direct and indirect scopes (GHG emissions from imported energy) in 2030 and reaching zero net emissions in all scopes before 2040.

Iberdrola's corporate purpose, aligned with the Sustainable Development Goals of the United Nations 2030 Agenda, responds to the major economic, social and environmental challenges, reflecting the expectations of stakeholders and defining Iberdrola's role as an agent of social change and transformation in the energy sector. Its formulation is as follows:

## **“To continue to collaborate each day to build a more electric, healthy and accessible energy model”**

The Iberdrola group's commitment to an energy transition based on the decarbonisation and electrification of the energy sector and the economy as a whole contributes to the Sustainable Development Goals (SDGs), particularly with regard to the fight against climate change.



Iberdrola is a world leader in energy transition and the fight against climate change in the energy sector. The Climate Action Plan defined by the company establishes the levers, actions and associated metrics that contribute to the decarbonisation of the economy as a whole.



# 03. Greenhouse Gas Report

## 3. Greenhouse Gas Report

This report contains Iberdrola's Greenhouse Gas Inventory, hereinafter GHG, for 2022 with the following considerations:

- It includes emissions from the activities of the entire Iberdrola group: Iberdrola España, ScottishPower, Avangrid, Neoenergia, Iberdrola México and Iberdrola Energía Internacional.
- 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. (NF<sub>3</sub> is not considered, it is not used in Iberdrola).
- In the reporting criteria for its generation assets, Iberdrola differentiates between "own" production and installed capacity and production and installed capacity for "third parties".

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

The report has been prepared in accordance with the requirements established in Standard UNE-EN-ISO 14064-1:2018: "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.

### 3.1 Significant changes to the Emissions inventory

During 2022, the following relevant changes have taken place that affect the development of this report, in line with previous reports.

Modification of the methodology to calculate emissions:

- In the indirect GHG emissions by imported energy section, the emission factor of the overall mix has been replaced as follows:
  - For electricity consumed in buildings, the country's emission factor (local based) has been taken into account instead of the corresponding marketer's own (market based).
  - At Avangrid, for indirect emissions associated with network losses, the emission factor per state is applied.
  - At Scottish Power, for indirect emissions associated with electricity consumption at its facilities, the local emission factor required by the regulator is used.
- In Avangrid, in the indirect GHG emissions section associated with the use of the organization's products, gas and electricity, it is adjusted to the energy sold to the end customer.

None of these changes represents a variation greater than 5% compared to the previous year, so it is not necessary to recalculate the base year.

### 3.2 Limits of the organisation

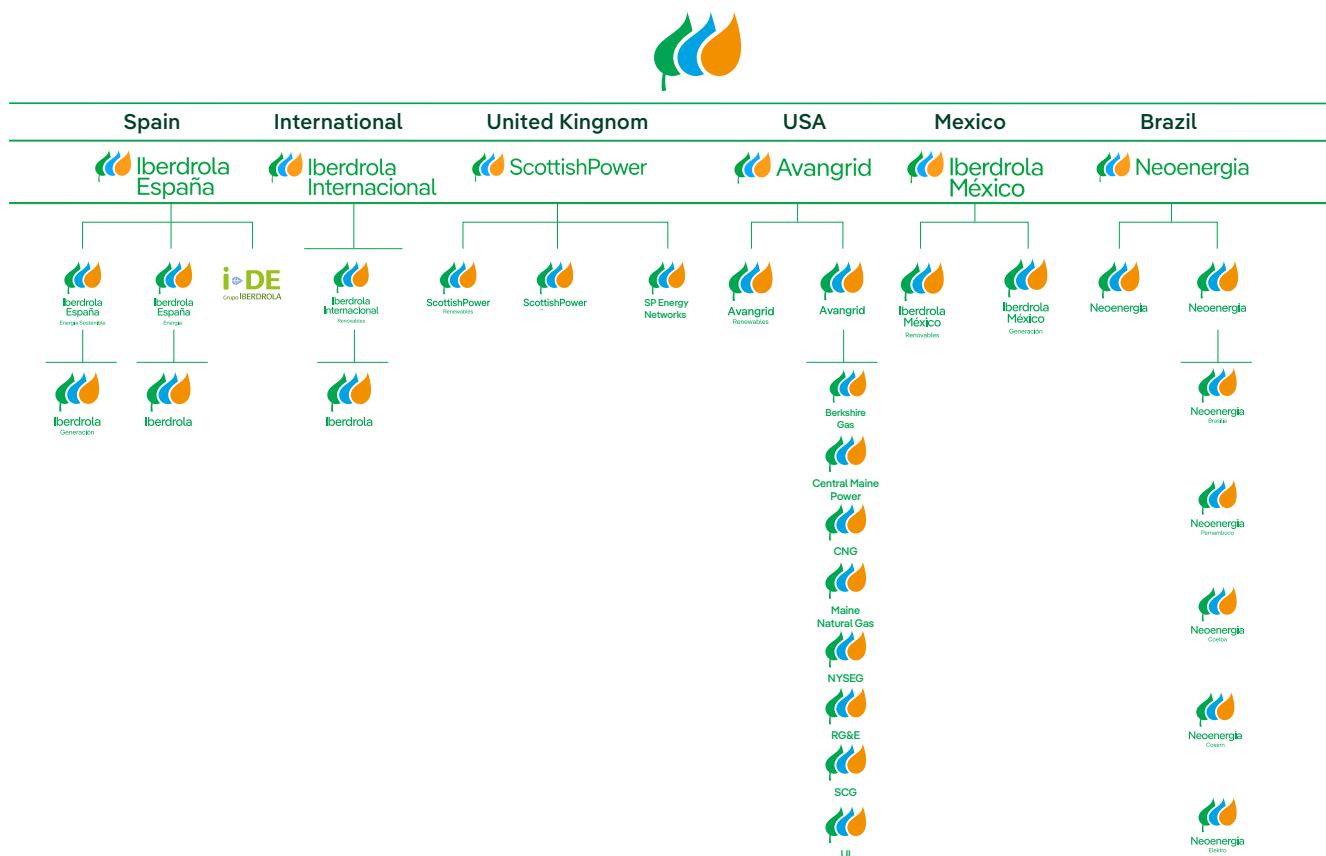
Iberdrola has sought to identify and adapt to the needs of each of the countries in which it operates. The company has used the experiences of each market to reinforce its brand values and, beyond the location of the business, has created a brand culture based on a global-local balance.

The consolidation of GHG emissions at Iberdrola is tackled from an operational control approach<sup>5</sup>.

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.

The GHG inventory presented at subholding company level:

- Iberdrola España (Spain)
- Scottish Power (United Kingdom)
- Avangrid (United States of America)
- Neoenergía (Brazil)
- Iberdrola México (Mexico)
- Iberdrola Energia Internacional (carrying out the inventory for the countries: Portugal, France, Italy, Germany, Greece, Australia, Romania and Hungary)<sup>6</sup>.



5. With the exception of nuclear power plants, cogeneration companies in Spain and hydraulic power plants in Brazil, which are accounted for under a participation quota, in line with the Non-Financial Information Statement (EINF).

6. The remaining IEI countries are not currently considered in this inventory due to their low relevance.

### 3.3 Operating limits

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 as t CO<sub>2</sub>e)
- CH<sub>4</sub> (Fugitive emissions and those associated with fuel consumption expressed as t CO<sub>2</sub>e)
- N<sub>2</sub>O (Emissions associated with fuel consumption expressed as t CO<sub>2</sub>e)
- CFC's (Fugitive emissions of refrigerant gases expressed in t CO<sub>2</sub>e)
- NF<sub>3</sub> gas is not considered, as it is not part of Iberdrola's processes.

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 14064:2018-1.

#### DIRECT GHG EMISSIONS (CATEGORY 1)

Direct GHG emissions from GHG sources owned or controlled by the company.

- Stationary combustion emissions:
  - CO<sub>2</sub> emissions, from electric power generation facilities (by combustion of any type of fuels).
  - Methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) emissions associated with the combustion of any type of fuel.
  - CO<sub>2</sub> emissions from the combustion of fuels in buildings or facilities, from heating equipment or generators.
  - CO<sub>2</sub> emissions from the combustion of fuels in gas storage facilities.
- Direct fugitive emissions in anthropogenic systems:
  - From methane (CH<sub>4</sub>) (natural gas storage and transport).
  - From sulphur hexafluoride (SF<sub>6</sub>) (distribution networks, generation substations, etc.).
  - From refrigerant gases (CFCs) from air-conditioning equipment.
- Emissions from mobile combustion, associated with fuel consumption in transport equipment, we take into account fleet vehicles and ships for transporting personnel in this section.
- Emissions from land use (Brasil).

#### INDIRECT GHG EMISSIONS

These emissions are a consequence of the organisation's activities, but which are generated in sources that are owned or controlled by the organisation.

#### INDIRECT GHG EMISSIONS DUE TO IMPORTED ENERGY (CATEGORY 2)

Indirect GHG emissions are those from electricity, heat or steam consumed by the organisation and provided by third parties. Other indirect emissions associated with electricity generation are also included in this section.

- Emissions associated with electricity consumption during outages at thermal, renewable and nuclear power plants.
- Emissions associated with the consumption of electricity by pumps at hydroelectric power stations.

- Emissions associated with electricity consumption in the group's buildings.
- Emissions associated with network losses in the transport or distribution of electricity, for the activity of transport and distribution of electricity, emissions are calculated considering electricity losses as imported energy.

A balance is made between own generated energy and total distributed energy to avoid double accounting.

### INDIRECT GHG EMISSIONS DUE TO TRANSPORT (CATEGORY 3)

These are mobile sources and their emissions are due mainly to fuel burned in transport equipment.

- Emissions associated with employee business travel.
- Emissions associated with commuting (transport of employees from their place of work to their residence).
- Emissions from other life cycle processes used in upstream electricity generation, such as extraction, transport and processing of fuel to produce electricity (*Well to Tank*, WTT).

### INDIRECT GHG EMISSIONS CAUSED BY PRODUCTS USED BY THE ORGANIZATION (CATEGORY 4)

Emissions associated with all goods purchased by the organisation.

- Emissions associated with the supply chain.

### INDIRECT GHG EMISSIONS ASSOCIATED WITH THE USE OF THE ORGANISATION'S PRODUCTS (CATEGORY 5)

Emissions associated with the use of the organisation's products that come from energy products traded by the organisation.

- Emissions associated with electricity purchased from third parties for sale to end customers.  
In order to reduce these indirect emissions, Iberdrola offers its customers products that contribute to avoiding emissions, such as: photovoltaic self-consumption, green hydrogen production, recharging points and aero thermal energy. Whose avoided emissions contribute to reducing the value of emissions associated with electricity purchased from third parties.
- Emissions associated with gas supplied to customers.
- Emissions from power generation facilities producing electricity for third parties, PIE plants in Mexico.

## 3.4 Exclusions

We exclude from this inventory those emissions that have a low representativeness, (<2%) with respect to the total de emissions. In this group are:

- Emissions from mobile sources in generation facilities.
- Emissions associated with the energy consumption in commercial buildings occupied by Iberdrola Energia Internacional, managed by third parties.
- Emissions associated with the life cycle of imported energy.

### 3.5 Year base

The base year for Iberdrola's GHG verification is maintained as 2020, with the data calculated in the GHG verification report for 2021.

We consider that the changes that have occurred in the calculation of the 2022 emissions inventory, section 3.1 of this chapter, do not entail a recalculation of base year emissions, given the difficulty of being able to apply said changes to the calculation of emissions for that year.

### 3.6 Uncertainty assessment

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.

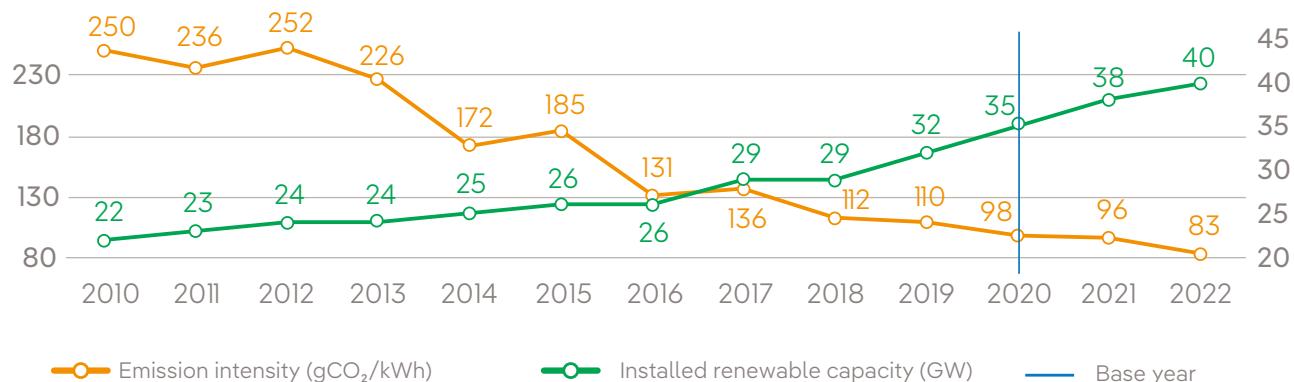
The uncertainty of the activity data used for creating the Iberdrola GHG Inventory is assured by the local regulations of countries participating in the EU ETS (Emission Trading System). For countries not participating in the EU ETS, it is assured by calibrating metering equipment according to the technical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

A maximum relative importance level of 5% of total emissions has been set, except for those facilities that are subject to regulatory verification, in which case it will be 2%.

# 04. 2022 GHG Emissions Inventory

## 4. 2022 GHG Emissions Inventory

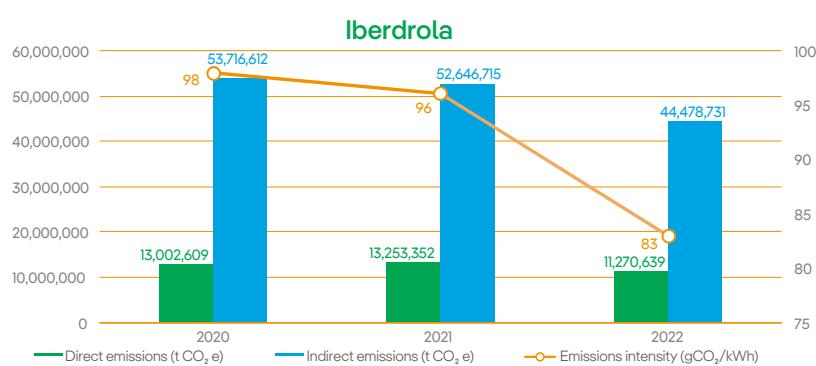
Iberdrola has demonstrated a strong track record of decarbonisation in recent years, reducing its emissions intensity significantly while increasing renewable energy production capacity.



The decarbonisation of the company's activities is associated with the start-up and operation of emission-free electricity generation facilities, together with other complementary initiatives that have contributed to the reduction of direct emissions.

In the case of indirect emissions, these are materialised through Iberdrola's commitment to the supply of green energy, products, and services to customers and the progressive decarbonisation of its supply chain.

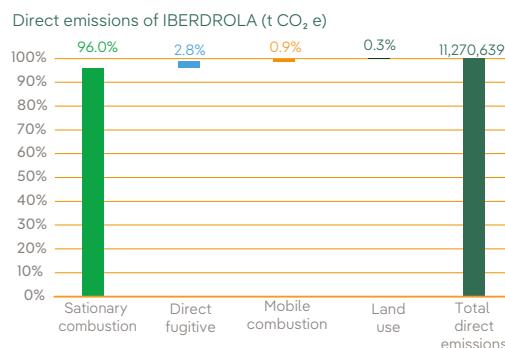
The result of these initiatives can be seen in the graph below, which shows the reduction of both direct and indirect emissions since the base year (2020).



In 2022, **direct emissions** amounted to **11,270,639 t CO<sub>2</sub> e**, 15% less than the previous year, in line with its commitment to clean energy and a sustainable, efficient and safe energy model.

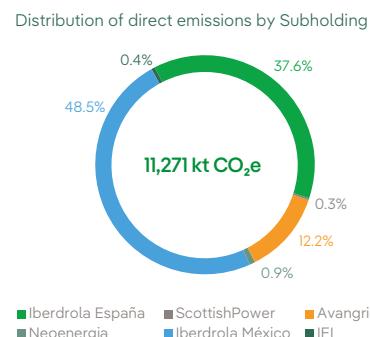
The **direct emissions intensity** is **83 Kg CO<sub>2</sub>/MWh** which maintains the downward trend marked by the company's commitment to climate change.

DIRECT EMISSIONS (tCO <sub>2</sub> e)		2022
<b>Sationary combustion</b>		<b>10,817,784</b>
CO <sub>2</sub> from electricity generation		10,714,798
CH <sub>4</sub> from electricity generation		5,975
N <sub>2</sub> O from electricity generation		39,400
Gas storage		6,547
In facilities and buildings		51,064
<b>Direct fugitive</b>		<b>320,061</b>
CH <sub>4</sub> fugitive		237,645
SF <sub>6</sub> fugitive		76,726
CFC's Fugitive		5,689
<b>Mobile combustion</b>		<b>102,187</b>
<b>Land use</b>		<b>30,608</b>
<b>Total</b>		<b>11,270,639</b>



In 2022, direct emissions have been reduced by 15% compared to the previous year mainly due to:

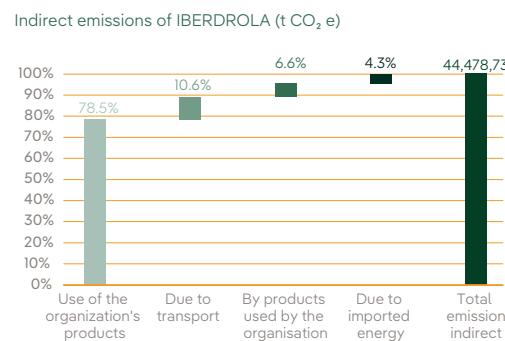
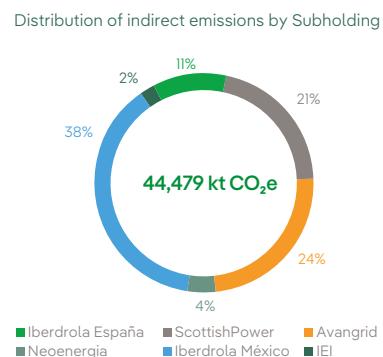
- A lower thermal generation in Brazil, CC Termopernambuco has not come into operation in that period.
- A lower production of the plants in Mexico for Iberdrola's own generation.



INDIRECT EMISSIONS (tCO <sub>2</sub> e)		2022
<b>Due to imported energy</b>		<b>1,893,116</b>
Auxiliary energy during shutdown and pumping		713,668
Electricity consumption in buildings		38,852
Network losses		1,140,596
<b>Due to transport</b>		<b>4,727,981</b>
Employee business travel		12,471
Commuting		51,800
Upstream life cycle of fuels		4,663,710
<b>By products used by the organisation</b>		<b>2,944,448</b>
Supply chain		2,944,448
<b>Use of the organization's products</b>		<b>34,913,187</b>
For energy purchased from third parties		8,182,410
For gas supplied to customers		13,641,153
PIE production		13,089,623
<b>Total</b>		<b>44,478,731</b>
<b>Total Market based</b>		<b>44,463,398</b>

Indirect emissions in 2022 are 15% lower than in the previous year mainly due to:

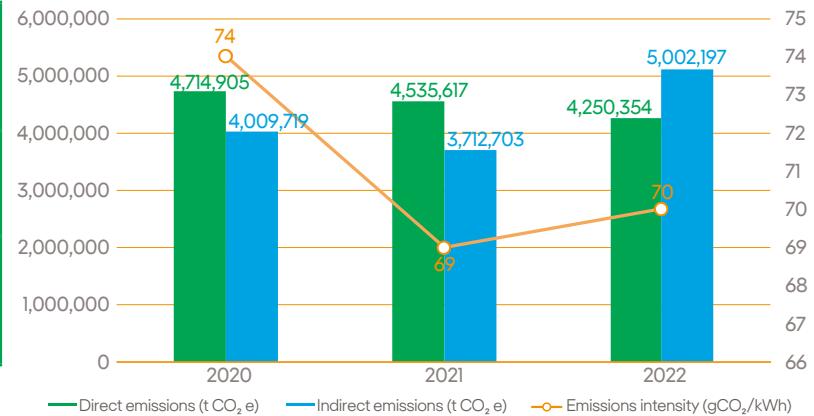
- **Avangrid**: by adjusting the emission factors, replacing the US mix with that of the states where we operate and the adjustment of the electricity and gas sold to the end customer.
- **Neoenergia**, the reduction is due to the fact that the country's mix has been much lower than the previous year.



## 4.1 Iberdrola España

Key figures 2022, evolution and emissions intensity since base year:

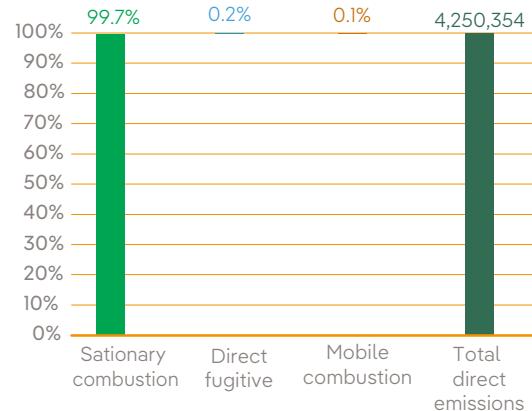
<b>29,013 MW</b> Installed capacity	<b>19,796 MW</b> Renewable capacity installed
<b>56,698 GWh</b> Net output	<b>270,991 Km</b> Power lines
<b>89,622 GWh</b> Electricity distributed	<b>11.6</b> Million consumers



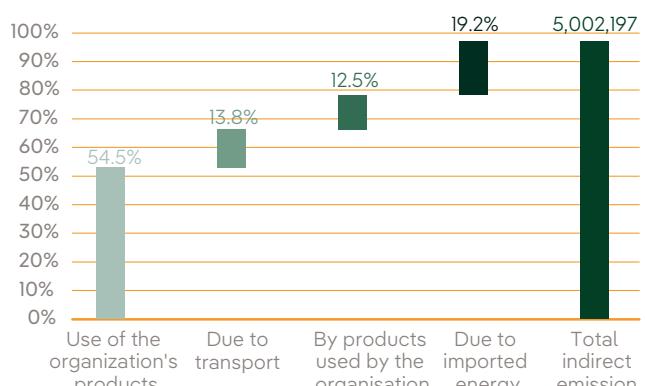
The 37% increase in indirect emissions is mainly due to the purchase of electricity from third parties for sale to final customers, as our production does not cover all the energy demanded and, to a lesser extent, to the increased consumption of pumped electricity.

Detail of direct and indirect emissions:

DIRECT EMISSIONS (tCO <sub>2</sub> e)		2022
<b>Sationary combustion</b>		<b>4,236,692</b>
CO <sub>2</sub> from electricity generation		4,157,707
CH <sub>4</sub> from electricity generation		2,269
N <sub>2</sub> O from electricity generation		35,800
In facilities and buildings		40,916
<b>Direct fugitive</b>		<b>8,612</b>
SF <sub>6</sub> fugitive		6,949
CFC's Fugitive		1,664
<b>Mobile combustion</b>		<b>5,051</b>
<b>Total</b>		<b>4,250,354</b>



INDIRECT EMISSIONS (tCO <sub>2</sub> e)		2022
<b>Due to imported energy</b>		<b>960,357</b>
Auxiliary energy during shutdown and pumping		655,240
Electricity consumption in buildings		8,913
Network losses		296,203
<b>Due to transport</b>		<b>691,160</b>
Employee business travel		4,490
Commuting		10,213
Upstream life cycle of fuels		676,457
<b>By products used by the organisation</b>		<b>626,125</b>
Supply chain		626,125
<b>Use of the organization's products</b>		<b>2,724,555</b>
For energy purchased from third parties		1,228,467
For gas supplied to customers		1,496,088
<b>Total</b>		<b>5,002,197</b>
<b>Total Market based</b>		<b>4,993,989</b>

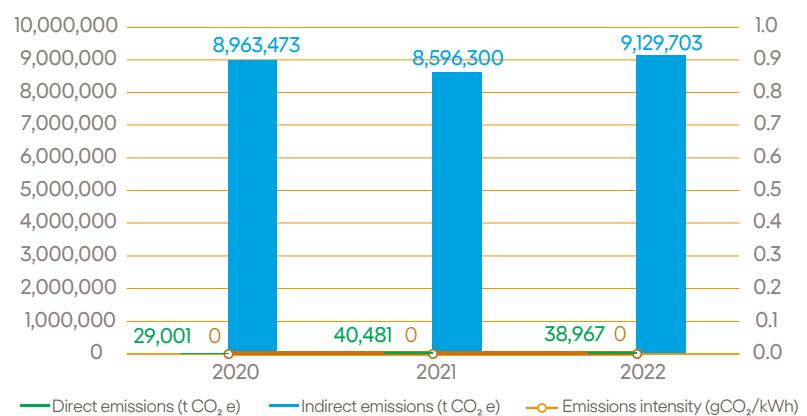


The emissions avoided by green products sold to end customers have been calculated, resulting in 0,1 Mt CO<sub>2</sub>.

## 4.2 ScottishPower

Key figures 2022, evolution and emissions intensity since base year:

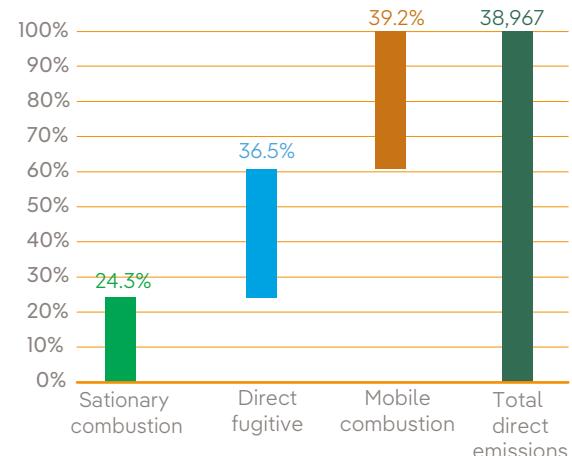
3,008 MW Installed capacity	3,008 MW Renewable capacity installed
7,823 GWh Net output	111,075 Km Power lines
31,020 GWh Electricity distributed	4.7 Million consumers



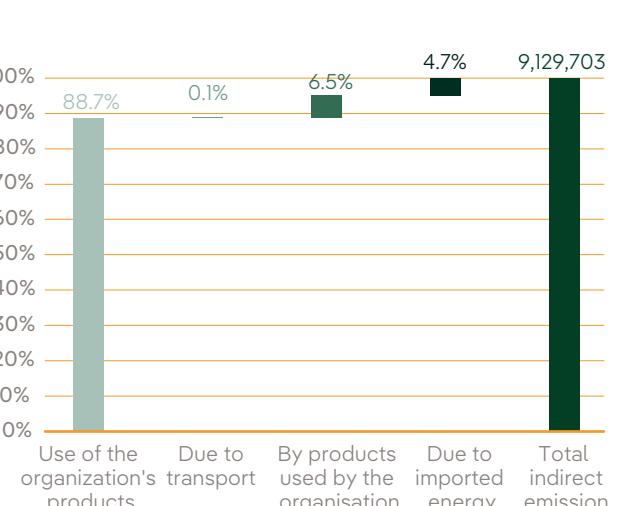
The increase in indirect emissions is due to the increase in electricity demand compared to the previous year.

Detail of direct and indirect emissions:

DIRECT EMISSIONS (tCO <sub>2</sub> e)		2022
<b>Sationary combustion</b>		<b>9,462</b>
Gas storage		6,547
In facilities and buildings		2,914
<b>Direct fugitive</b>		<b>14,236</b>
CH <sub>4</sub> fugitive		20
SF <sub>6</sub> fugitive		13,640
CFC's Fugitive		576
<b>Mobile combustion</b>		<b>15,270</b>
<b>Total</b>		<b>38,967</b>



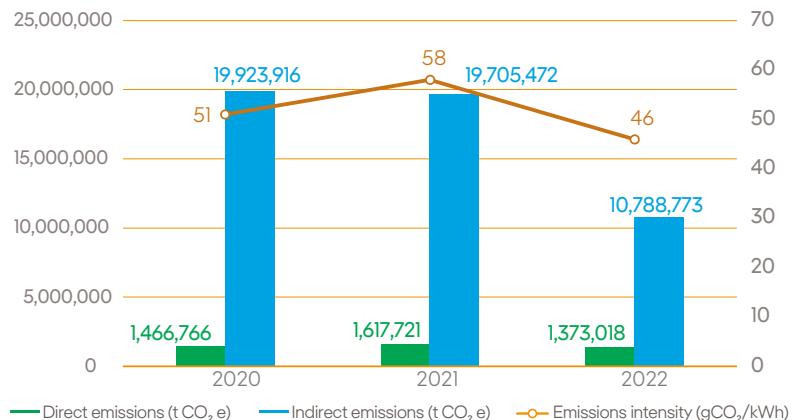
INDIRECT EMISSIONS (tCO <sub>2</sub> e)		2022
<b>Due to imported energy</b>		<b>433,077</b>
Auxiliary energy during shutdown and pumping		3,138
Electricity consumption in buildings		5,805
Network losses		424,134
<b>Due to transport</b>		<b>10,290</b>
Employee business travel		2,372
Commuting		6,745
Upstream life cycle of fuels		1,173
<b>By products used by the organisation</b>		<b>589,004</b>
Supply chain		589,004
<b>Use of the organization's products</b>		<b>8,097,332</b>
For energy purchased from third parties		3,826,335
For gas supplied to customers		4,270,996
<b>Total</b>		<b>9,129,703</b>
<b>Total Market based</b>		<b>9,123,920</b>



## 4.3 Avangrid

Key figures 2022, evolution and emissions intensity since base year:

<b>9,542 MW</b> Installed capacity	<b>8,702 MW</b> Renewable capacity installed
<b>22,711 GWh</b> Net output	<b>171,464 Km</b> Power lines
<b>38,757 GWh</b> Electricity distributed	<b>3.3</b> Million consumers

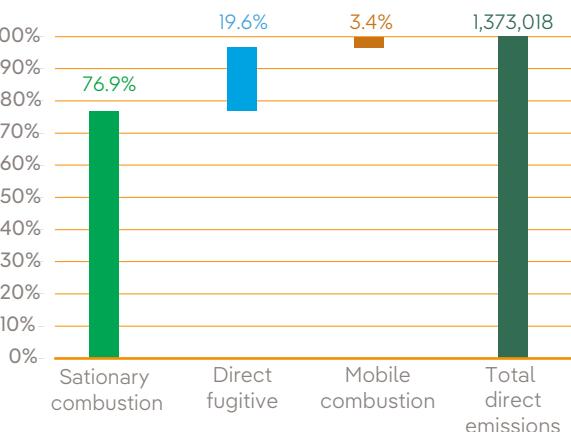


The decrease in indirect emissions is due to:

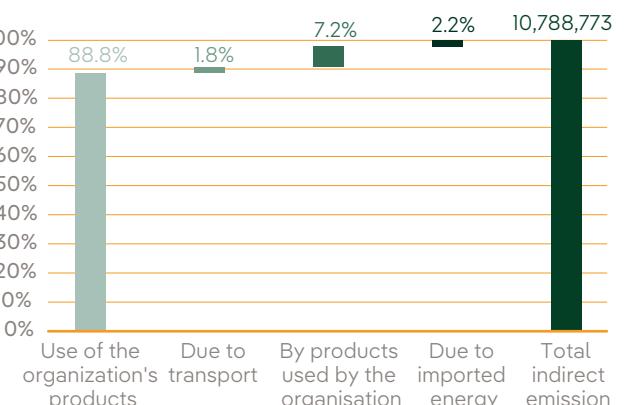
- The reformulation of the calculation of electricity sold to final customers has been adapted to the characteristics of each state.
- New accounting for gas sold to end customers.

Detail of direct and indirect emissions:

DIRECT EMISSIONS (tCO <sub>2</sub> e)		2022
<b>Sationary combustion</b>		<b>1,056,446</b>
CO <sub>2</sub> from electricity generation		1,050,346
CH <sub>4</sub> from electricity generation		526
N <sub>2</sub> O from electricity generation		495
In facilities and buildings		5,080
<b>Direct fugitive</b>		<b>269,763</b>
CH <sub>4</sub> fugitive		237,626
SF <sub>6</sub> fugitive		32,137
CFC's Fugitive		0
<b>Mobile combustion</b>		<b>46,809</b>
<b>Total</b>		<b>1,373,018</b>



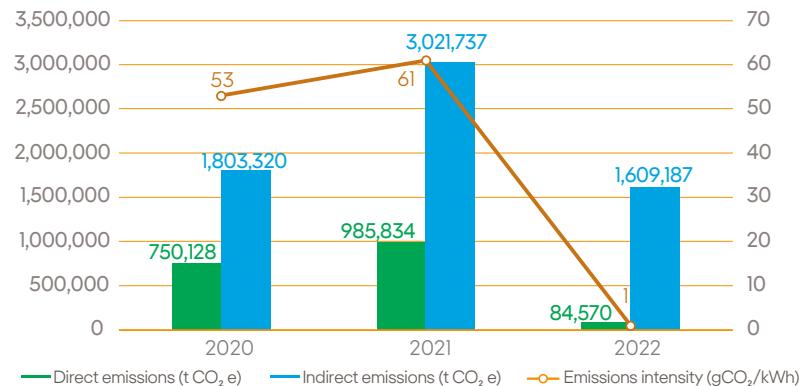
INDIRECT EMISSIONS (tCO <sub>2</sub> e)		2022
<b>Due to imported energy</b>		<b>235,736</b>
Auxiliary energy during shutdown and pumping		28,149
Electricity consumption in buildings		22,868
Network losses		184,720
<b>Due to transport</b>		<b>199,448</b>
Employee business travel		3,087
Commuting		12,667
Upstream life cycle of fuels		183,694
<b>By products used by the organisation</b>		<b>775,952</b>
Supply chain		775,952
<b>Use of the organization's products</b>		<b>9,577,637</b>
For energy purchased from third parties		2,012,357
For gas supplied to customers		7,565,280
<b>Total</b>		<b>10,788,773</b>
<b>Total Market based</b>		<b>10,787,521</b>



## 4.4 Neoenergia<sup>7</sup>

Key figures 2022, evolution and emissions intensity since base year:

<b>5,100 MW</b> Installed capacity	<b>4,568 MW</b> Renewable capacity installed
<b>14,751 GWh</b> Net output	<b>711,111 Km</b> Power lines
<b>76,107 GWh</b> Electricity distributed	<b>16.0</b> Million consumers

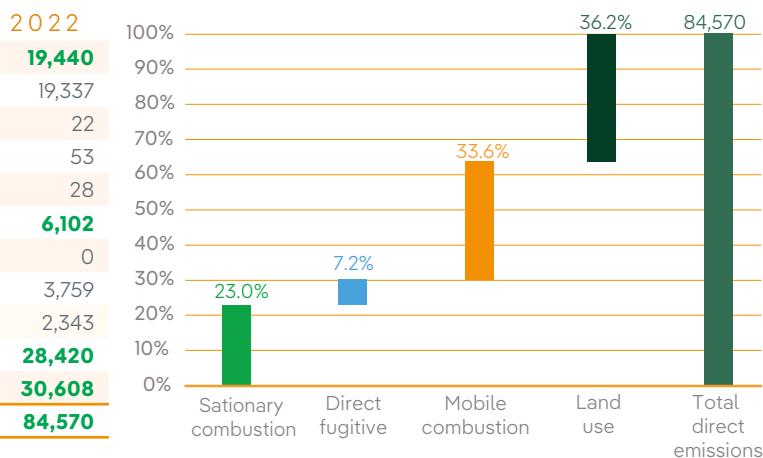


The decrease in Neoenergia's direct emissions, indirect emissions and emissions intensity was due to the fact that the Termopernambuco combined cycle plant did not come into operation for the whole of 2022 and the lowering of Brazil's overall mix factor.

Detail of direct and indirect emissions:

### DIRECT EMISSIONS (tCO<sub>2</sub>e)

#### Sationary combustion



### INDIRECT EMISSIONS (tCO<sub>2</sub>e)

#### Due to imported energy

Auxiliary energy during shutdown and pumping	583
Electricity consumption in buildings	802
Network losses	235,539

#### Due to transport

Employee business travel	1,411
Commuting	19,482
Upstream life cycle of fuels	6,455

#### By products used by the organisation

Supply chain	494,854
<b>Total</b>	<b>494,854</b>

#### Use of the organization's products

For energy purchased from third parties	850,060
<b>Total</b>	<b>850,060</b>

#### Total Market based

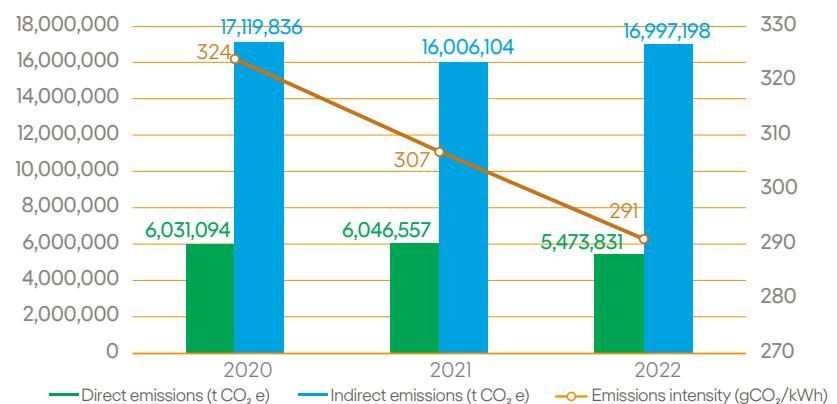
<b>Total</b>	<b>1,609,187</b>
<b>Total Market based</b>	<b>1,609,186</b>

7. Neoenergia's data is independently verified by ABNT, the only difference being, due to requirements of the Brazilian market, the network losses that consider non-technical losses (94,726 t CO<sub>2</sub> e), not considered for the calculation of losses in this report.

## 4.5 Iberdrola México

Key figures 2022, evolution and emissions intensity since base year:

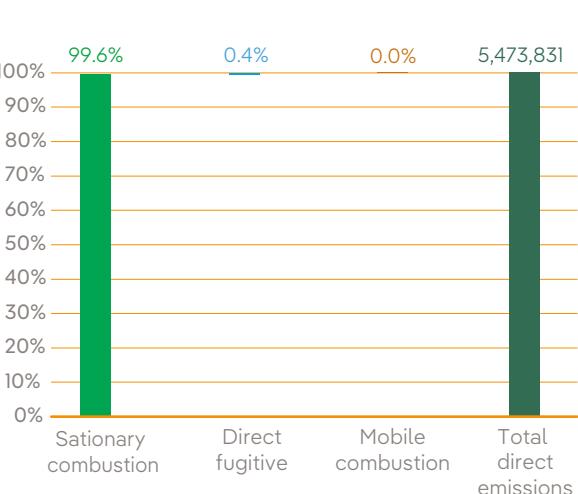
2,900 MW Installed capacity	2,657 MW Renewable capacity installed
18,447 GWh Net output	7,146 Km Installed capacity for third parties
103 GWh Renewable installed capacity for third parties	37,491 GWh Net output for third parties



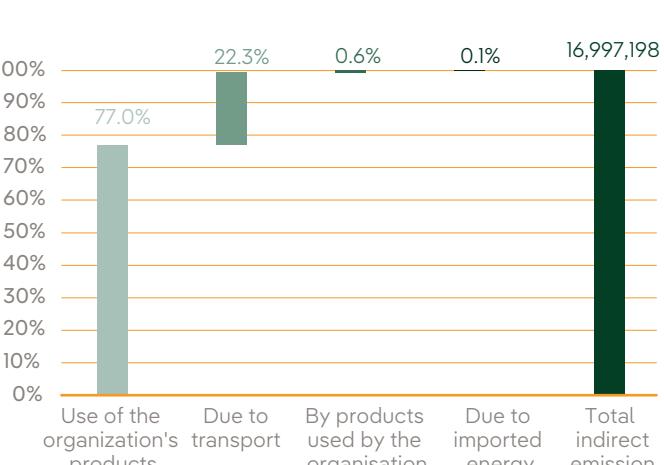
The reduction in direct emissions has been a consequence of lower production and the increase in indirect emissions has been due to higher demand from CFE.

Detail of direct and indirect emissions:

DIRECT EMISSIONS (tCO <sub>2</sub> e)		2022
<b>Sationary combustion</b>		<b>5,451,568</b>
CO <sub>2</sub> from electricity generation		5,445,325
CH <sub>4</sub> from electricity generation		3,159
N <sub>2</sub> O from electricity generation		3,052
In facilities and buildings		32
<b>Direct fugitive</b>		<b>21,293</b>
CH <sub>4</sub> fugitive		0
SF <sub>6</sub> fugitive		20,187
CFC's Fugitive		1,107
<b>Mobile combustion</b>		<b>970</b>
<b>Total</b>		<b>5,473,831</b>



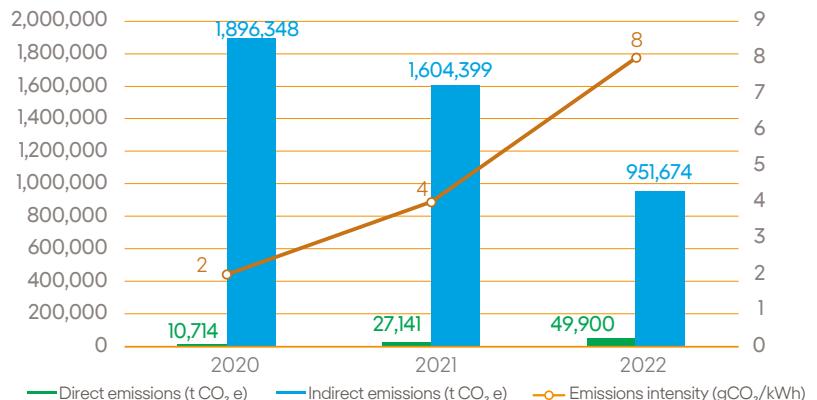
INDIRECT EMISSIONS (tCO <sub>2</sub> e)		2022
<b>Due to imported energy</b>		<b>15,606</b>
Auxiliary energy during shutdown and pumping		15,214
Electricity consumption in buildings		392
<b>Due to transport</b>		<b>3,790,508</b>
Employee business travel		536
Commuting		1,396
Upstream life cycle of fuels		3,788,575
<b>By products used by the organisation</b>		<b>101,461</b>
Supply chain		101,461
<b>Use of the organization's products</b>		<b>13,089,623</b>
PIE production		13,089,623
<b>Total</b>		<b>16,997,198</b>
<b>Total Market based</b>		<b>16,997,179</b>



## 4.6 Iberdrola Energía Internacional<sup>8</sup>

Key figures 2022, evolution and emissions intensity since base year:

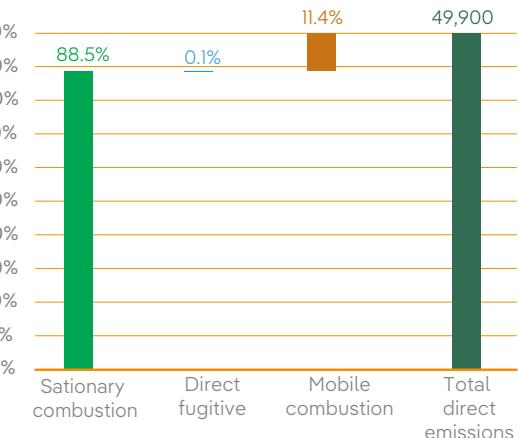
<b>4,051 MW</b> Installed capacity	<b>1,232 MW</b> Renewable capacity installed
<b>5,053 GWh</b> Net output	<b>5,111 GWh</b> Net output
<b>0.6</b> Million consumers	



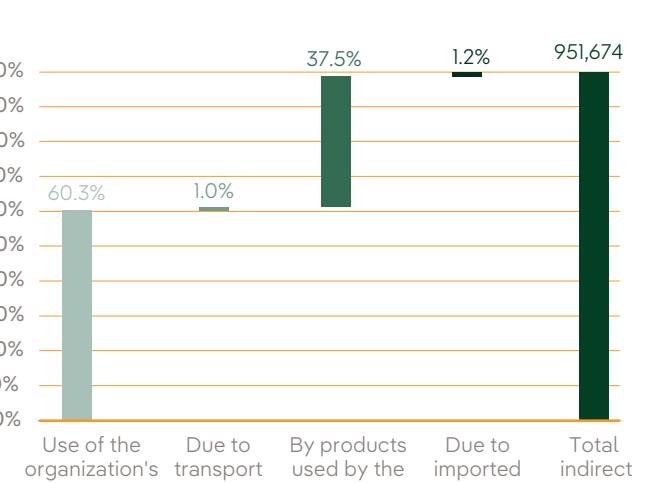
During the 2022 period there is an increase in direct emissions due to the annual consolidation of the Australian assets. On the other hand, the adjustment of the emission factors of the country mix compared to global mix leads to a decrease in the indirect scope.

Detail of direct and indirect emissions:

DIRECT EMISSIONS (tCO <sub>2</sub> e)		2022
<b>Sationary combustion</b>		<b>44,178</b>
CO <sub>2</sub> from electricity generation		42,083
CH <sub>4</sub> from electricity generation		0
N <sub>2</sub> O from electricity generation		0
In facilities and buildings		2,095
<b>Direct fugitive</b>		<b>54</b>
SF <sub>6</sub> fugitive		54
CFC's Fugitive		0
<b>Mobile combustion</b>		<b>5,667</b>
<b>Total</b>		<b>49,900</b>



INDIRECT EMISSIONS (tCO <sub>2</sub> e)		2022
<b>Due to imported energy</b>		<b>11,414</b>
Auxiliary energy during shutdown and pumping		11,343
Electricity consumption in buildings		72
<b>Due to transport</b>		<b>9,228</b>
Employee business travel		575
Commuting		1,296
Upstream life cycle of fuels		7,357
<b>By products used by the organisation</b>		<b>357,052</b>
Supply chain		357,052
<b>Use of the organization's products</b>		<b>573,980</b>
For energy purchased from third parties		265,190
For gas supplied to customers		308,789
<b>Total</b>		<b>951,674</b>
<b>Total Market based</b>		<b>951,602</b>



8. It represents the activity of the group in the Rest of the World (with respect to all of the above), which is carried out fundamentally by Sociedad Iberdrola Energía Internacional (IEI).

# 05. Actions towards net zero emissions

## 5. Actions towards net zero emissions

The aspiration to accelerate the decarbonisation of the economy must start by reducing the direct emissions of each economic actor as much as possible, and as quickly as possible. Iberdrola advocates immediate action in the main climate forums: the planet cannot wait. Iberdrola will therefore use its best efforts to achieve emission reductions.

Iberdrola focuses its efforts towards climate neutrality on driving key areas for the transformation of the energy sector:

- Decarbonisation of electricity generation through the massive introduction of renewable energies.
- System integration through smart grids and digitisation.
- Electrification of demand. This area also promotes new uses of electricity, such as the production of green hydrogen, for sectors that are difficult to decarbonise, such as high-temperature industrial processes or heavy transport.
- On the other hand, Iberdrola's 2020-2030 Trees Program stands out, which aims to plant 20 million trees by 2030, and which is estimated to contribute to capturing up to 6 Mt CO<sub>2</sub> in 30 years.

### Internal initiatives to reduce emissions

Over the years, Iberdrola has implemented various internal initiatives aimed at saving emissions:

- Energy efficiency in Iberdrola's buildings and offices. Including the supply of green energy in all our facilities.
- Fleet management, with a target of 100% electric by 2030.
- Electric mobility plan for employees.
- Smart plans for employees, (change of boilers, photovoltaic installations,...).

### Avoided emissions

Actions and initiatives carried out by Iberdrola during 2022, as reflected in the Sustainability report:

- Iberdrola S.A.'s global renewable generation has avoided the emission of 16.5 Mt CO<sub>2</sub>.
- Steam production and energy efficiency have avoided emissions of 0.55 Mt CO<sub>2</sub>.

# 06. Quantification methods

## 6. Quantification methods

Taking into account the diversity of the organisation's activities and the geographic dispersion of its facilities, Iberdrola has selected the following method as an approach for quantifying GHG emissions: product of the activity data (obtained internally or provided by a supplier) by its corresponding Emission Factor (direct fuel analysis or emission factors from internationally recognised official sources).

The formulas used for the calculation of emissions, depending on the type of data, are as follows:

$$t\text{ CO}_2e = DA^9 (\text{GJ}) \times FE^{10} \left( \frac{t\text{CO}_2}{\text{GJ}} \right)$$

$$t\text{ CO}_2e = DA (t) \times PCG^{11} \left( \frac{t\text{CO}_2}{t\text{CH}_4} \right)$$

Sources used to obtain the emission factors (EF) are:

- **MITERD** (Spain).
- **DEFRA** (UK and Internacional).
- **EPA** (US and Mexico).
- **Ferramenta** (Brazil).
- **IPCC** (AR5) For global emission factors.
- **EEA** (Europa).
- **EIA** (USA).
- **DCCEEW** (Australia)

### 6.1. Direct GHG emissions

#### I Stationary combustion emissions:

- **CO<sub>2</sub> emissions, from electric power generation facilities (due to the combustion of any type of fuels).**

We measure carbon dioxide (CO<sub>2</sub>) emissions from the fixed combustion of fossil fuels in gas turbines, boilers and other thermal generation facilities.

The calculation of emissions is based on activity data on fuel consumption and the emission factors calculated or obtained from official sources.

- **Methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) emissions associated with the combustion of any type of fuel.**

We calculate the CH<sub>4</sub> y N<sub>2</sub>O emissions associated with fuel consumption for generation.

- **Emissions from combustion of fuels in buildings**

These are emissions from the consumption of fuels used for other services such as heating, hot water, emergency power generators, in buildings, offices, etc. The most commonly used fuels are: diesel, natural gas and LPG (Liquefied Petroleum Gas).

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9. Activity data: It is the quantitative measure of the activity that produces an emission. It is based on fuel consumption in terms of energy content expressed in GJ.

10. Emission Factor: The emission factors can be calculated directly according to the type of fuel or use the generic factors provided by the IPCC, the MITERD, ... for each type of fuel. It is expressed in tCO<sub>2</sub>/GJ.

11. PCG: Global warming potential of gas (IPCC AR5).

- **CO<sub>2</sub> emissions from the combustion of fuels in gas storage facilities.**

This refers to carbon dioxide (CO<sub>2</sub>) emissions produced by the gas storage facility at Hatfield Moore (United Kingdom), due to combustion and CH<sub>4</sub> losses from venting.

#### I Direct fugitive emissions in anthropogenic systems:

- **From methane (CH<sub>4</sub>).**

These are emissions due to methane (CH<sub>4</sub>) leaks that occur in gas transport lines and storage.

CH<sub>4</sub> leakage is calculated as the difference between the volume of gas delivered for distribution and the gas finally sold to the end customer.

- **From sulphur hexafluoride (SF<sub>6</sub>)**

Emissions from SF<sub>6</sub> leakage from medium and high voltage equipment containing this gas as dielectric and refrigerant.

Leakage gas is generally measured by weight difference in the reloading of equipment.

- **From refrigerant gases (CFCs) from air-conditioning equipment.**

Emissions due to refrigerant gas leaks (Chlorofluorocarbon CFC gases) from air-conditioning equipment. The gases considered are: R-407C, R-404A, R-410, R-422A, R-438A, R-134A, R-32, R-134 and R-141.

#### I Emissions from mobile consumption

These are emissions resulting from the consumption of fuel in transport equipment, motor vehicles, vessels, and trucks. In the case of Iberdrola, we refer to fleet cars and vessels used to transport staff at offshore wind farms. The fuel types taken into account are: petrol, diesel, ethanol, LPG (Liquefied Petroleum Gas) and marine diesel-fuel.

#### I Emissions from land use

The calculation of emissions associated with land use change is calculated by the volume of vegetation generated, using a conservative approach based on IPCC studies.

It was assumed that from the volume generated in the activities, 47% of the mass is carbon. The ratio of 44/12 was used for the conversion of Carbon (C) to CO<sub>2</sub>, following IPCC guidelines.

## 6.2. Indirect GHG emissions

These emissions are a consequence of the organisation's activities, but which are generated in sources that are owned or controlled by the organisation.

#### I Indirect GHG emissions due to Imported Energy (category 2)

Indirect GHG emissions are those from electricity, heat or steam consumed by the organisation and provided by third parties. Other indirect emissions associated with electricity generation are also included in this section. Corresponds to Scope 2 of the GHG Protocol.

- Emissions associated with the consumption of electrical energy during shutdown at generation facilities (renewable and non-renewable).

Emissions derived from the use of electrical energy for the operation of auxiliary systems of plants in outages (no production).

The calculation is made according to the GHG Protocol recommendation "Location base" (the calculation of the auxiliary consumption is made by total energy balance).

- Emissions associated with the consumption of electricity by pumps at hydroelectric power stations.

Emissions from the use of electrical energy used for pumping in hydroelectric power stations. Applicable only in Iberdrola España.

- Emissions associated with electricity consumption in the group's buildings.

Emissions from electricity consumption in buildings, offices and network facilities (substations and radio base stations).

All energy consumed is registered (renewable and non-renewable), accounting those which have a certificate of origin as renewable energy.

Electrical energy consumption in buildings shall be accounted for according to the recommendations of ISO 14064-1.

- Emissions associated with losses in the electricity transmission or distribution networks.

The transmission and distribution of electricity leads to losses in the grid, so that in order to satisfy a given final consumption, a somewhat higher generation is required.

The calculation of emissions is conducted by balancing own generation and transported or distributed energy to avoid double counting of emissions that we already consider in the direct scope.

## I Indirect GHG emissions due to transport (category 3)

Emissions from mobile sources located outside the limits of the organisation. Emissions are mainly due to fuel burned in transport equipment.

- Emissions associated with employee business travel.

These are the emissions derived from employees' work trips by different means of transport (plane, car, train, ...), with emissions calculated according to the kilometres travelled by each means of transport.

- Emissions associated with commuting.

These are emissions from employees' commuting to and from work (commuting in company fleet cars is not included).

The information is obtained through employee surveys.

- Emissions from other life-cycle processes used in electricity generation, upstream.

We will account for emissions from the upstream life cycle of the fuels used to produce electricity (extraction, transport and processing). The factors used will be those of DEFRA in the WTT (Well to Tank) section.

I Indirect GHG emissions caused by products used by the organization (category 4)

GHG emissions from sources outside the limits of the organisation associated with all goods purchased by the organisation.

- **Emissions associated with the supply chain.**

The calculation is performed at global level by Iberdrola S.A., with the emissions information provided by suppliers through the corporate purchasing tool. An overall ratio of kgCO<sub>2</sub> / € invoiced is calculated, which makes it possible to determine the emissions associated with each sub-holding according to its turnover.

I Indirect GHG emissions associated with the use of the organisation's products (category 5)

Emissions associated with the use of the organisation's products that come from energy products traded by the organisation.

- **Emissions associated with electricity purchased from third parties for sale to end customers.**

Emissions from electricity purchased from third parties for sale to the final customer where direct emissions are not accounted for.

Renewable energy is deducted from the energy sold to final customers, and direct emissions are deducted from the resulting emissions.

- **Emissions associated with gas supplied to customers.**

These are the CO<sub>2</sub> emissions from the combustion of the gas sold to the end customer.

- **Emissions from power generation facilities (due to fuel consumption) for third party production, IPP<sup>12</sup> plants in Mexico.**

These are the emissions produced in combined cycle plants operating under the Independent Power Producer (IPP) modality.

The calculation of emissions is based on activity data on fuel consumption and the emission factors calculated or obtained from official sources.

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12. It only applies to Mexico plants.

# A. Annexes

# A. Annexes

## A.1. AENOR VERIFICATION STATEMENT



### Declaración de Verificación de AENOR para IBERDROLA del Inventario de emisiones de gases de efecto invernadero correspondientes al año 2022

EXPEDIENTE: 1995/0014/HCO/01

#### Introducción

IBERDROLA S.A. ha encargado a AENOR INTERNACIONAL, S.A.U. (AENOR) llevar a cabo una revisión limitada del Inventario de emisiones de gases de efecto invernadero (GEI) para el año 2022 de sus actividades incluidas en el informe de GEI de mayo de 2023, el cual es parte de esta Declaración.

AENOR se encuentra acreditada por la Entidad Mexicana de Acreditación, con número OVVGEI 004/14 (vigente a partir del 31/10/2014; fecha de actualización 19/04/2023), conforme a la norma ISO 14065:2020, para la realización de verificación de emisiones de gases de efecto invernadero conforme a los requisitos establecidos en la norma ISO 14064-3:2019 para los sectores de la energía y desechos.

El inventario de emisiones de GEI de mayo de 2023 ha sido emitido por la Organización: IBERDROLA, S.A. con domicilio social en C/ Tomás Redondo 1. 28033 Madrid (España).

Representante de la Organización: D. Bernardo LLANEZA FOLGUERAS perteneciente a la Dirección de Innovación, Sostenibilidad y Calidad.

IBERDROLA, S.A. tuvo la responsabilidad de reportar sus emisiones de GEI de acuerdo a la Norma de referencia ISO 14064-1:2018.

#### Objetivo

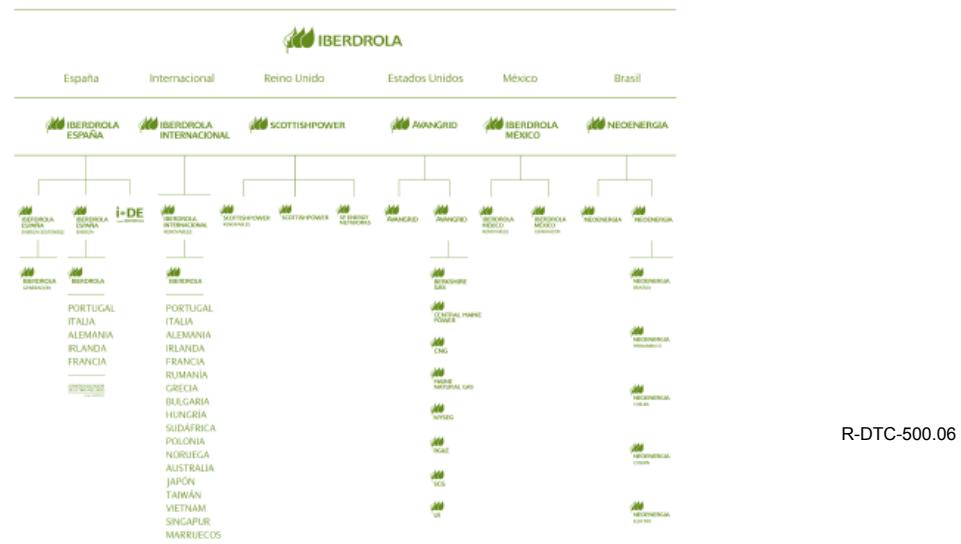
El objetivo de la verificación es facilitar a las partes interesadas un juicio profesional e independiente acerca de la información y datos contenidos en el Informe de GEI de IBERDROLA mencionado.

#### Alcance de la Verificación

El alcance de la verificación se establece para las actividades que presta la organización:

- Generación eléctrica renovable, térmica y nuclear
- Distribución de electricidad.
- Comercialización de gas natural y electricidad

Grupo Iberdrola se presenta "a nivel SubHolding", entendiéndose por "SubHolding" una agrupación de empresas según el ámbito geográfico:



# AENOR

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Se han considerado los gases de efecto invernadero: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, SF<sub>6</sub> y CFCs

Durante la verificación se analizó la información atendiendo al enfoque de control operacional que establece la ISO 14064-1:2018, es decir, la organización notifica todas las emisiones y/o absorciones de GEIs atribuibles a las operaciones sobre las que ejerce control en las respectivas instalaciones, a excepción de las centrales nucleares y de las cogeneraciones participadas de España, que se contabiliza bajo cuota de participación, según establece la norma ISO 14064-1:2018, alineándose con el Informe de Sostenibilidad.

Además, para alguna de las centrales de producción de energía en México, las Plantas Productoras Independientes de Energía (PIE), en las que el gestor del sistema, Comisión Federal de Electricidad, decide su modo de operación, sus emisiones se han reportado como emisiones indirectas al ser instalaciones de producción con capacidad instalada "para terceros", y se indica que Iberdrola no tiene pleno control de la operación.

En mayo de 2023 Neoenergia (Brasil) ha emitido su propio inventario de emisiones de GEI del año 2022, verificado por una entidad externa acreditada para GHG Protocol en Brasil, sus datos se incluyen en el informe aplicando el enfoque de control operacional.

## Las actividades directas, indirectas y exclusiones de la verificación

Las actividades objeto de la verificación se establecen en seis categorías (siguiendo las directrices de la Norma ISO 14064-1:2018 que son:

- Categoría 1: Emisiones y remociones directas de GEI
  - o Emisiones de combustión estacionaria:
    - Emisiones de CO<sub>2</sub>, de las instalaciones de generación de energía eléctrica (por combustión de cualquier tipo de combustibles).
    - Emisiones de metano (CH<sub>4</sub>) y óxido nitroso (N<sub>2</sub>O) asociadas a la combustión de cualquier tipo de combustibles (mayoritariamente en la generación de electricidad).
    - Emisiones de CO<sub>2</sub> por la combustión de combustibles en edificios o instalaciones, provenientes de los equipos de calefacción o grupos electrógenos.
    - Emisiones de CO<sub>2</sub> por la combustión de combustibles en instalaciones de almacenamiento de gas.
  - o Emisiones fugitivas directas en sistemas antropogénicos:
    - De metano (CH<sub>4</sub>) (almacenamiento y transporte de gas natural).
    - De hexafluoruro de azufre (SF<sub>6</sub>) (redes de distribución, subestaciones generación).
    - De gases de refrigeración (CFC's) de equipos de climatización.
  - o Emisiones por combustión móvil, asociadas al consumo de combustible en equipos de transporte, consideramos en este apartado los vehículos de flota y barcos para transporte de personal.
  - o Emisiones por el uso del suelo: asociadas con el cambio de uso del suelo calculándose por el volumen de vegetación generada (Brasil).
- Categoría 2: Emisiones indirectas de GEI por energía importada
  - o Emisiones asociadas al consumo de energía eléctrica en parada en las centrales térmicas, renovables y nucleares.
  - o Emisiones asociadas al consumo de energía eléctrica en los bombeos de las centrales hidráulicas.
  - o Emisiones asociadas al consumo de electricidad en los edificios del grupo.
  - o Emisiones asociadas a las pérdidas de red en el transporte o distribución de electricidad, para la actividad de transporte y distribución de energía eléctrica las emisiones se calculan considerando las pérdidas de electricidad como energía importada.

Se hace un balance entre la energía generada propia y la energía distribuida total para evitar la doble contabilidad.

# AENOR

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- Categoría 3: Emisiones indirectas de GEI por transporte
  - o Emisiones asociadas a los viajes de empleados por trabajo.
  - o Emisiones asociadas al commuting (transporte de empleados del lugar de trabajo a su residencia).
  - o Emisiones por otros procesos del ciclo de vida utilizados en la generación de electricidad, aguas arriba tales como extracción, transporte y procesamiento de combustible para producir electricidad (*Well to Tank, WTT*).
- Categoría 4: Emisiones indirectas de GEI por productos utilizados por la organización
  - o Emisiones asociadas a la producción de bienes y servicios comprados o adquiridos por la empresa declarante en el año de referencia: Emisiones asociadas a la cadena de proveedores.
- Categoría 5: Emisiones indirectas de GEI asociadas con el uso de productos energéticos que comercializa la organización
  - o Emisiones asociadas a la energía eléctrica comprada a terceros para venta a cliente final.
  - o Emisiones asociadas al gas suministrado a clientes.
  - o Emisiones de las instalaciones de generación de energía eléctrica de producción para terceros, plantas PIE en México
  - o Categoría 6: Emisiones indirectas de GEI por otras fuentes: No se han identificado

## Exclusiones

La organización no ha excluido la cuantificación de ninguna categoría de emisiones directas o indirectas relevantes, ha excluido aquellas emisiones que poseen una baja representatividad, (< 2%) respecto al total de emisiones. En este grupo se encuentran:

- Emisiones procedentes de fuentes móviles de las instalaciones de generación.
- Emisiones asociadas al consumo de energía de edificios comerciales de Iberdrola Energía Internacional, gestionados por terceros.

## Actividades de mitigación y año base

En el informe de notificación de mayo de 2023 no se han identificado iniciativas de reducción de emisiones y/o aumento de remociones de GEI.

La organización ha establecido el año 2020 como año base para el análisis de la evolución de su huella de carbono.

## Importancia relativa

Para la verificación se acordó considerar discrepancias materiales aquellas omisiones, distorsiones o errores que puedan ser cuantificados y resulten en una diferencia mayor al 5% con respecto al total declarado de emisiones, salvo para aquellas instalaciones que se encuentran sometidas a verificación reglamentaria, en cuyo caso será del 2%.

# AENOR

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## Criterios

Los criterios e información que se han tenido en cuenta para realizar la verificación han sido:

- La Norma ISO 14064-1:2018: Especificación con orientación, a nivel de las organizaciones, para la cuantificación y el informe de las emisiones y remociones de gases de efecto invernadero.
- La norma ISO 14064-3:2019: Especificación con orientación para la validación y verificación de declaraciones sobre gases de efecto invernadero.

Por ultimo, ha sido verificado el “Informe de Gases de Efecto Invernadero de Iberdrola Ejercicio 2022” de mayo de 2023, preparado por la organización.

AENOR se exime expresamente de cualquier responsabilidad por decisiones, de inversión o de otro tipo, basadas en la presente declaración.

## Conclusión

Se considera que el Informe de emisiones GEI “Informe de Gases de Efecto Invernadero de Iberdrola Ejercicio 2022” de mayo de 2023, es conforme con los requisitos de la norma ISO 14064-1:2018.

Basado en lo anterior, y de acuerdo con el nivel de aseguramiento limitado, en nuestra opinión:

*No hay evidencia, que haga suponer que la información sobre emisiones reportada en el “Informe de Gases de Efecto Invernadero de Iberdrola Ejercicio 2022” de mayo de 2023, no sea una representación fiel de las emisiones de sus actividades.*

De forma consecuente con esta Declaración a continuación se relacionan los datos de emisiones finalmente verificados:

Emisiones de GEI de IBERDROLA en el año 2022		t CO <sub>2</sub> e
<b>Categoría 1: Emisiones directas de GEI</b>		<b>11.270.639</b>
- Emisiones directas de CO <sub>2</sub> a partir de combustión estacionaria para la generación de electricidad		10.714.798
- Emisiones directas de CH <sub>4</sub> a partir de combustión estacionaria para la generación de electricidad		5.975
- Emisiones directas de N <sub>2</sub> O por el consumo de combustibles usados para la generación de electricidad		39.400
- Emisiones directas a partir de combustión estacionaria en los almacenamientos de gas		6.547
- Emisiones directas a partir de combustión estacionaria en el resto de las instalaciones (edificios, oficinas)		51.064
- Emisiones directas a partir de combustión móvil (flota de vehículos)		102.187
- Emisiones fugitivas directas de CH <sub>4</sub> (almacenamiento y transporte de gas)		237.645
- Emisiones fugitivas directas de SF <sub>6</sub> (redes de distribución de electricidad, subestaciones de generación)		76.726
- Emisiones fugitivas directas de CFCs (gases refrigerantes)		5.689
- Emisiones directas por el cambio de uso del suelo (poda en Brasil)		30.608

<b>Emisiones de GEI de IBERDROLA en el año 2022</b>		<b>t CO<sub>2</sub>e</b>
<b>Categoría 2: Emisiones indirectas de GEI por energía importada</b>		<b>1.893.116</b>
	<b>t CO<sub>2</sub>e (método mercado)</b>	<b>t CO<sub>2</sub>e (método localización)</b>
- Emisiones indirectas de GEI por la electricidad importada en instalaciones de generación durante las paradas y en el bombeo		713.668
- Emisiones indirectas de GEI por la electricidad importada en edificios	23.519	38.852
- Emisiones indirectas de GEI por las pérdidas en las redes de distribución de electricidad		1.140.596
<b>Categoría 3: Emisiones indirectas de GEI por transporte</b>		<b>4.727.981</b>
- Emisiones causadas por los viajes de negocio		12.471
- Emisiones causadas por el desplazamiento de los empleados desde sus hogares a los centros de trabajo		51.800
- Emisiones causadas por el ciclo de vida aguas arriba de los combustibles consumidos		4.663.710
<b>Categoría 4: Emisiones indirectas de GEI por productos utilizados por la organización</b>		<b>2.944.448</b>
- Emisiones provenientes de la cadena de suministro (proveedores de los productos y servicios adquiridos)		2.944.448
<b>Categoría 5: Emisiones indirectas de GEI asociadas al uso de productos de la organización</b>		<b>34.913.187</b>
- Emisiones de las etapas de generación, transporte de la electricidad comercializada que es comprada a terceros		8.182.410
- Emisiones de las etapas de extracción, transporte y uso del gas natural suministrado a clientes		13.641.153
- Emisiones de la etapa de uso de combustibles para la generación de electricidad en plantas con capacidad instalada para terceros		13.089.623
<b>Emisiones Directas Totales</b>		<b>11.270.639</b>
<b>Emisiones Indirectas Totales (Local based)</b>		<b>44.478.731</b>
<b>Emisiones Indirectas Totales (Market based)</b>		<b>44.463.398</b>

Madrid, 29 de junio de 2023



D. Rafael García Meiro  
CEO

## Certificados ASAP



## Certificado Huella de Carbono



HCO-2012/0007

AENOR certifica que la organización

**IBERDROLA, S.A.**

es conforme con la Norma ISO 14064-1:2018

Genera "Unas emisiones de 55.749.370 t de CO<sub>2</sub>e: (Emisiones directas: 11.270.639 t CO<sub>2</sub>e; Emisiones indirectas (local based): 44.478.731 t CO<sub>2</sub>e).

El alcance de la verificación se establece para las actividades que presta la organización:

- Generación eléctrica renovable, térmica y nuclear
- Distribución de electricidad.
- Comercialización de gas natural y electricidad

Las empresas incluidas en el alcance son:  
Iberdrola España, Iberdrola Internacional, Scottish Power,  
Avangrid, Iberdrola México, Neoenergia.

PERIODO CALCULADO: 2022

CONFORME AL: Informe de Emisiones Verificado del periodo 2022  
y la Declaración de Verificación de AENOR

que se realizan en CL TOMAS REDONDO, 1. 28033 - MADRID

Emisión: 2022-05-30



Rafael GARCÍA MEIRO  
CEO

**AENOR INTERNACIONAL S.A.U.**  
Génova, 6. 28004 Madrid. España  
Tel. 91 432 60 00.- [www.aenor.es](http://www.aenor.es)

## A.2. AENOR NEOENERGIA DECLARATION OF VERIFICATION



### DECLARAÇÃO DE CONFORMIDADE Conformity Declaration

## DECLARAÇÃO DE VERIFICAÇÃO

Nº 367.014/23

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*.

#### NEOENERGIA S/A

Responsável pelo Inventário: **Vitor Amorim**

E-mail: vitor.amorim@neoenergia.com

#### Associação Brasileira de Normas Técnicas – ABNT

Verificador Líder: **Marina Brito**

E-mail: marina.brito@abnt.org.br

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 **2022**, 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 **2022** 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:  
Não houve limitações no processo de verificação.

#### Descrição do Escopo da Verificação

O inventário do ano de **2022** da **NEOENERGIA S/A** foi verificado dentro do seguinte escopo:



**ABNT** Associação Brasileira de Normas Técnicas

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



## DECLARAÇÃO DE CONFORMIDADE

### Conformity Declaration

Limites Organizacionais	Limites operacionais
<input checked="" type="checkbox"/> Controle Operacional <input checked="" type="checkbox"/> Participação Societária	<input checked="" type="checkbox"/> Escopo 1 <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: A parte de implementação e descomissionamento das unidades não estão englobadas no inventário. Também foram excluídos os extintores de incêndio de CO<sub>2</sub>.

#### Instalações visitadas

Lista das instalações visitadas durante o processo de verificação:

Nome do Local	Relação do Local com a holding	Endereço	Data da Visita
<b>Neoenergia</b>	Matriz	PRAIA DO FLAMENGO, 78	28/03/2023
<b>Usina Tubarão</b>	Unidade	Fernando de Noronha	14/04/2023



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

GEE	Escopo 1	Toneladas Métricas de CO <sub>2</sub> equivalente (tCO <sub>2</sub> e)		
		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>	-	-	-	-
<b>TOTAL</b>	<b>84.558,64</b>	<b>331.637,14</b>		<b>1.372.262,16</b>
CO <sub>2</sub> Biogênico	39.264,44	-	-	2.268,48

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

GEE	Escopo 1	Toneladas Métricas de CO <sub>2</sub> equivalente (tCO <sub>2</sub> e)		
		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>	-	-	-	-

**ABNT** Associação Brasileira de Normas Técnicas

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

## VERIFICATION STATEMENT FOR NEOENERGÍA (BRAZIL)



### DECLARAÇÃO DE CONFORMIDADE Conformity Declaration

N <sub>2</sub> O	-	-	-	-	-
HFCs	-	-	-	-	-
PFCs	-	-	-	-	-
SF <sub>6</sub>	-	-	-	-	-
NF <sub>3</sub>	-	-	-	-	-
TOTAL	84.569,76	331.650,35	-	1.372.262,16	
CO <sub>2</sub> Biogênico	39.264,44	-	-	2.268,48	

#### 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.

Gases não-Quioto  
R-22 = 1.590,65 tCO<sub>2</sub>e

Do Escopo 2, 94.726 tCO<sub>2</sub>e são referentes a perdas não técnicas.

#### Conflitos de Interesse (CDI)

Eu, **Marina Brito**, certifico que nenhum conflito 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*.



**Marina Brito**

(Verificador Líder)

08/05/2023

Data

Reconhecimento de assinatura digital:

#### 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.

**Marina Brito**

(Verificador Líder)

08/05/2023

Data

Reconhecimento de assinatura digital:

**Fabiane Governatori**

(Revisor Independente)

08/05/2023

Data

Reconhecimento de assinatura digital

**ABNT** Associação Brasileira de Normas Técnicas

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



## DECLARAÇÃO DE CONFORMIDADE

### Conformity Declaration

#### Autorização

Eu, **Vitor Amorim**, aceito os resultados desta declaração de verificação.

**Vitor Amorim**

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

Data

Rio de Janeiro, 08 de maio de 2023

  
**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 seguinte endereço eletrônico: [www.abnt.org.br](http://www.abnt.org.br). (CNPJ: 33.402.892/0001-06 – Tel.: (21) 3974-2300).

**ABNT** Associação Brasileira de Normas Técnicas

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

