

# Greenhouse Gas Report

Year 2019



**IBERDROLA**





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# Introduction



Since 2010, when Iberdrola prepared its first Greenhouse Gas Report, GHG, 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 *2019 Greenhouse Gas Report*.

Iberdrola publishes this report for the purpose of verifying the inventory of Greenhouse Gases, transparently informing its Stakeholders of the Company's emissions in accordance with the commitments assumed in the Environmental Policy approved by the Board of Directors in 2007 and the Climate Change Policy approved in December 2009, most recently amended in February 2019.

This report contains the company's 2019 inventory of greenhouse gases (GHG), with the following considerations:

- It covers Iberdrola's activities in Spain, United Kingdom, United States, Brazil and Mexico.
- The GHGs considered are: CO<sub>2</sub>, SF<sub>6</sub>, CH<sub>4</sub> and N<sub>2</sub>O.
- The consolidation of 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 of the 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.

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



A photograph of a wind farm on a grassy hill at sunset. The sun is low on the horizon, creating a warm orange and yellow glow. Several white wind turbines are visible, with the one in the foreground being the most prominent. The sky is filled with soft, colorful clouds.

# Iberdrola today



## Our business

- Electricity transmission and distribution.
- Generating electricity using renewable and conventional sources.
- Purchase and sale of electricity and gas in wholesale markets.
- Gas distribution.
- Other activities, principally linked with the energy sector.
- Iberdrola is now the third largest electricity company in the world by market capitalisation and the first in Europe with no state participation.

## What we are

La estructura societaria y de gobierno consta de:

- Iberdrola, como Sociedad *holding*.
- Sociedades *subholding* en las 5 áreas geográficas principales de actividad.
- Sociedades cabecera de los negocios dependientes de las Sociedades *subholding*.

## Iberdrola is one of the largest electric utilities in the world

### International presence

The Iberdrola group operates in many countries, including Spain, the United Kingdom, the United States, Brazil, Mexico, Germany, Portugal, France, Italy and Ireland, as well as Australia, where the company has just begun construction of a hybrid solar and wind project.

### Iberdrola group 2019 Key figures

<b>52,082</b> MW Total installed capacity		<b>32,041</b> MW Total renewable installed capacity	
<b>151,714</b> GWh Net production	<b>1,191,513</b> Km / Power lines	<b>233,502</b> GWh Distributed energy	
<b>34</b> Millions of consumers <sup>2</sup>	<b>8,158</b> €M Gross investments <sup>3</sup>	<b>8,156</b> €M Direct tax contribution	
<b>35,374</b> People Direct employment	<b>Approximately 400,000</b> People <sup>4</sup> Direct, indirect and induced employment	<b>8,716</b> €M Procurement	

(1) As at the date of issue of the Report.

(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) Net total investments for financial year 2019 were ,€ 7,240 million.

(4) Data from a Study of Iberdrola's Impact, prepared by PwC, for financial year 2018.

In October 2014, the European Union set a target to reduce its emissions by at least 40% by 2030, relative to 1990 levels, as a measure to achieve the final goal of reducing CO<sub>2</sub> emissions by 80/95% in 2050 (vs 1990).

Iberdrola advocates establishing a goal of zero net carbon emissions in 2050, increasing the ambition determined for 2030 and setting intermediate milestones for 2040 and 2045.

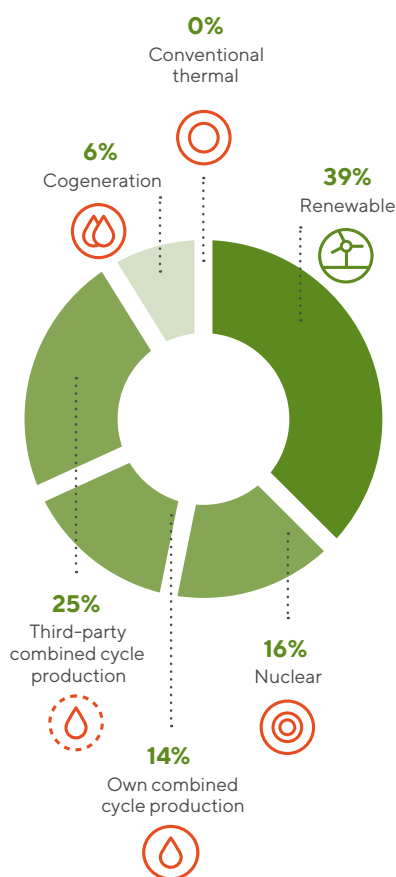
## Decarbonisation: combating climate change

Combating climate change is one of the driving forces of the strategy followed by the Iberdrola Group, which has been committed to a sustainable, safe and competitive energy model for the past twenty years. Achieving a decarbonised energy model is currently viable. The group is in a perfect position for making the most of the opportunities that this energy transition offers thanks to its leadership in renewable energies, smart networks, storage and digitalisation. The Board of Directors formalised Iberdrola's commitment to decarbonisation in its [\*Policy for combating climate change\*](#), which addresses the group's mitigation and adaptation actions, the company's active participation in the Global Climate Action Agenda and its promotion of a social culture aimed at raising the awareness and involvement of all its stakeholders within this area.

Iberdrola wishes to contribute actively and decisively to a sustainable, low-carbon future – an effort that will also drive forward social and economic development through the creation of employment and wealth.

Since the beginning of the 2000s, Iberdrola has been committed to decarbonisation and renewable energies, supported by a strong orientation towards innovation in all the group's business units, which has resulted in a rapid adoption of new generating technologies and the automation and remote control of grids and networks. The upshot is that today Iberdrola leads the way in renewable energies and smart networks, activities that form the backbone of the decarbonisation of the electricity sector.

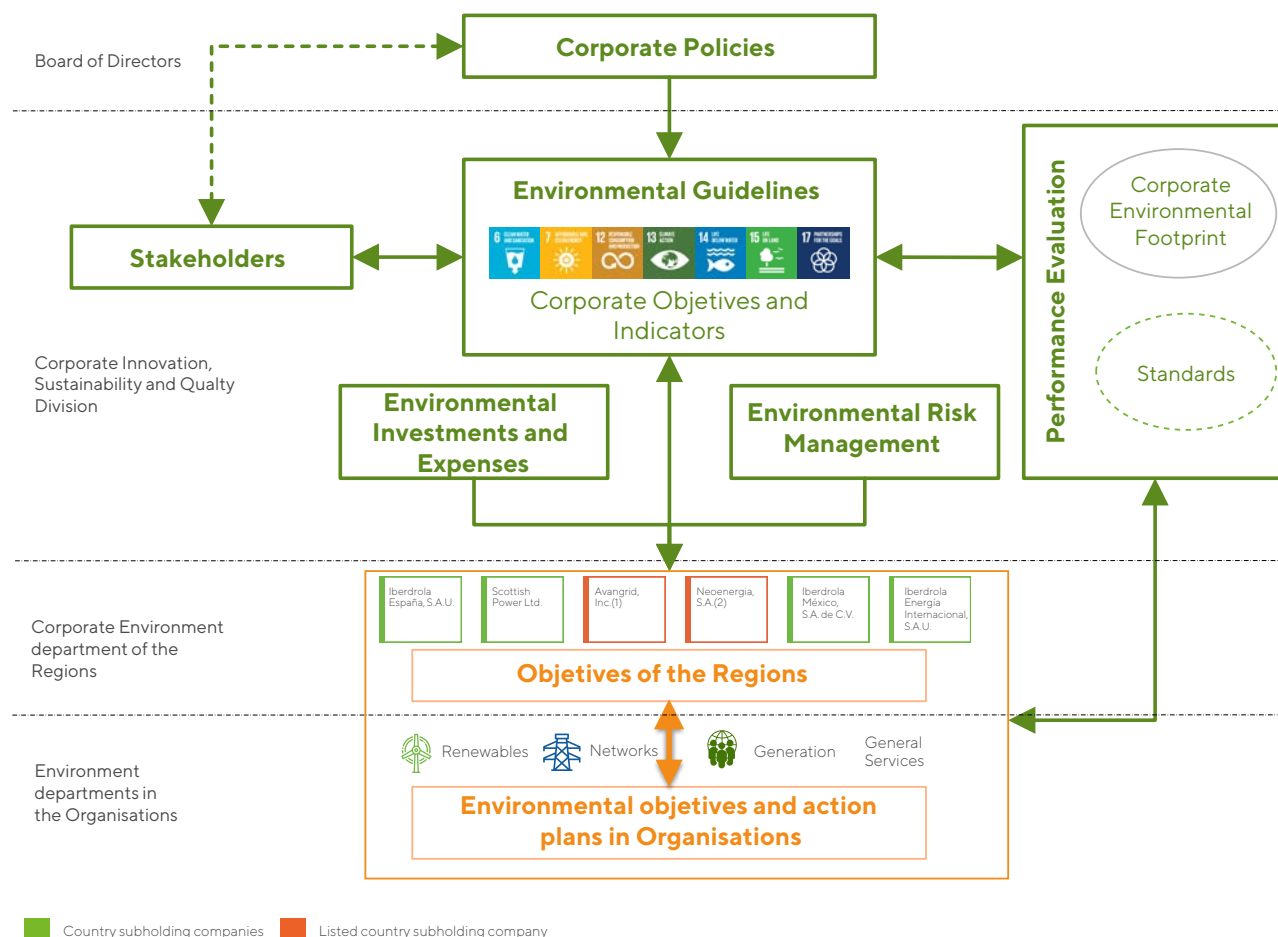
### Production plants\*



(\*) % of 2019 net output



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.



<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.

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.

A close-up photograph of a green pushpin standing upright on a map. The map features a network of red and blue lines, likely representing roads or rivers. In the background, another red pushpin is visible but out of focus. The overall scene suggests a theme of navigation, strategy, or organizational structure.

# Significant Changes and Limits of the Organisation



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## Significant changes to the Emissions Inventory

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The following significant changes affecting the development of this report took place in 2019:

- Exit from the United Kingdom's non-renewable generation perimeter.
- Sale of other assets (gas storage (USA), sludge treatment (UK)).
- Redistribution of emissions from thermal power plants in Mexico:
  - The emissions of the Independent Power Producers (IPPs) are recorded in Scope 3.
  - The emissions of the other plants are recorded in Scope 1.
- A new corporate tool (Sygris) for the consolidation of GHG information.
- Neoenergia has issued its own inventory of Brazilian emissions, which has been verified by an external body certified for the GHG Protocol. This report includes the verified data.

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## Limits of the organisation

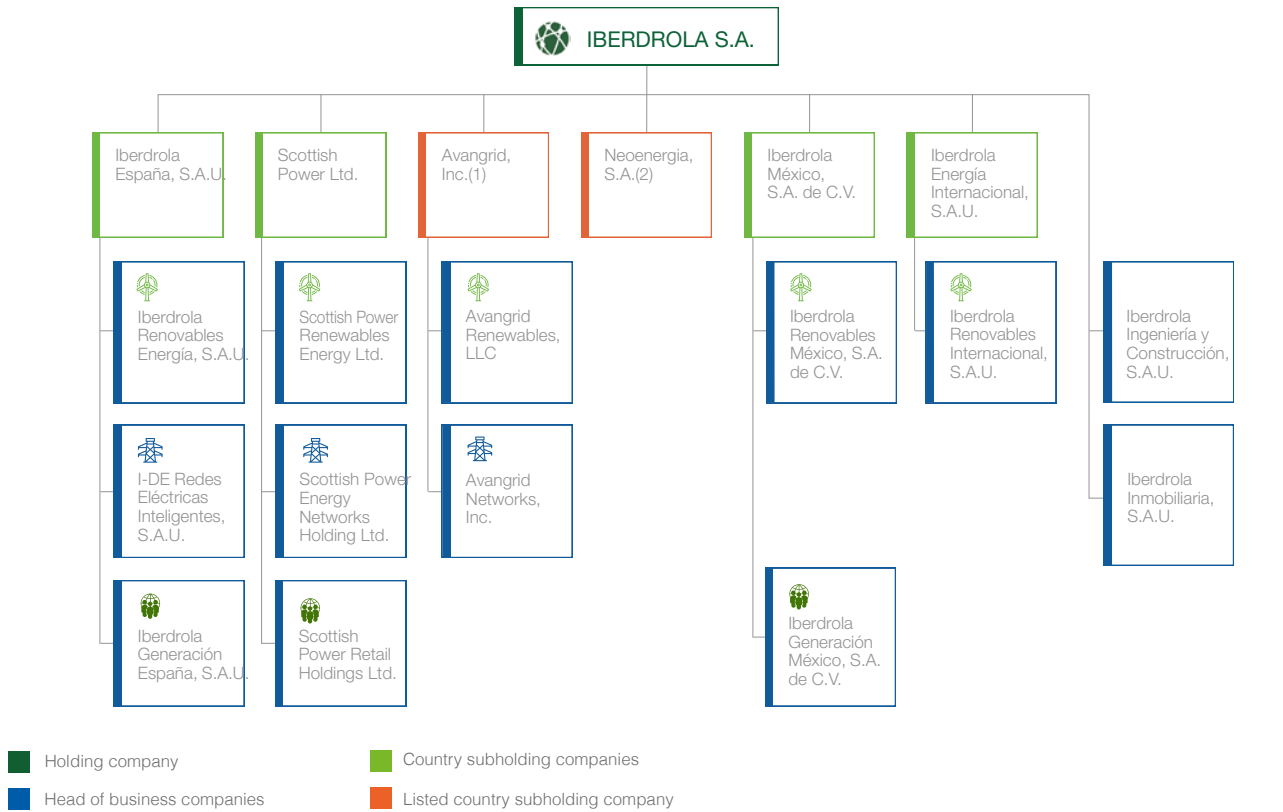
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The consolidation of GHG emissions is considered from an operational control standpoint, as stated in the considerations in the introduction to this report.

The share percentages are specified in the Consolidated Annual Financial Statements Report and Consolidated Management Report corresponding to the fiscal year ending 31 December 2019.

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.



<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.

Region means a basic group of companies by geographical area. The GHG inventory is presented at the regional level, with the following regions being considered for said inventory:











# 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 as CO<sub>2</sub>eq).
- CH<sub>4</sub> (Fugitive emissions and those associated with fuel consumption expressed as CO<sub>2</sub>eq).
- N<sub>2</sub>O (Emissions associated with fuel consumption expressed as 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

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## Scope 1 – Direct GHG emissions

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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.
- Emissions from the gas storage facility.
- Fugitive emissions of methane (CH<sub>4</sub>) (natural gas storage and transmission).
- Fugitive emissions of sulphur hexafluoride (SF<sub>6</sub>) (distribution networks, generation substations, etc.).
- Emissions from facilities that provide services to buildings (fuel consumption).
- Emissions from mobile combustion sources associated with the road transportation of employees for work with fleet vehicles.

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## Scope 2 – Indirect GHG emissions

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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 electricity during the outages of thermal, renewable and nuclear power plants, and pumping operations in hydroelectric power plants.
- Emissions associated with electricity consumption in the group's buildings.
- Emissions associated with grid losses during the distribution of third-party power.

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<sup>2</sup> It does not include generation at the IPP plants in Mexico.



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### Scope 3 – Other indirect emissions

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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 the transportation of employees for work (rental and private vehicles, aeroplanes and trains).
- Emissions associated with the supplier 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 customers (combustion).
- Emissions derived from the life cycle of the fuels consumed.

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



## 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 generation facilities.
- Emissions associated with the consumption of auxiliary energy by the wind farms owned by Iberdrola Energía Internacional, SLU.
- Emissions associated with the consumption of energy in Iberdrola Renewables buildings located in countries other than the regions defined for Iberdrola.
- The emissions from employees' own vehicles on work-related journeys.
- Emissions from business travel in Mexico.
- Emissions from the pruning of vegetation.



# Quantification of emissions 2019





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

	Spain	United Kingdom	United States	Brazil	Mexico	Total
Scope 1	5,800,703	46,973	1,855,716	1,024,141	4,699,572	13,427,105
Scope 2	773,019	490,451	225,217	538,803	54,255	2,081,745
Scope 3	4,215,201	9,515,931	20,041,276	4,141,152	16,364,640	54,278,200

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

	Spain	United Kingdom	United States	Brazil(*)	Mexico	Total
Emissions from energy generation (Fuel Consumption)	5,782,303	-	1,541,422	988,661	4,648,209	12,960,595
Other emissions by fuel (CH <sub>4</sub> and N <sub>2</sub> O)	7,749	5	1,561	54	44,521	53,890
Emissions from gas storage (by fuel consumption)	-	26,233	-	-	-	26,233
Fugitive emissions (CH <sub>4</sub> ) (Gas storage and transmission)	-	5	221,602	-	-	221,607
Fugitive emissions (SF <sub>6</sub> )	4,619	13,577	75,520	11,430	6,842	111,988
Emissions in buildings (Fuel consumption)	991	674	8,422	-	-	10,087
Emissions from mobile combustion (fleet cars)	5,041	6,479	7,189	23,996	-	42,705
<b>Total</b>	<b>5,800,703</b>	<b>46,973</b>	<b>1,855,716</b>	<b>1,024,141</b>	<b>4,699,572</b>	<b>13,427,105</b>

(\*) Neoenergia includes in its GHG report within scope 1 the emissions from soil change and pruning (28,437 tCO<sub>2</sub> eq) that this report does not include when considering it an exclusion.

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

	Spain	United Kingdom	United States	Brazil	Mexico	Total
Electricity consumption for auxiliary systems during stoppages and pumping.	385,033	3,557	29,745	1,109	54,255	473,699
Electricity consumed in buildings (**)	3,532	3,080	28,624	4,506	-	39,742
By grid losses	384,454	483,814	166,848	533,188	-	1,568,304
<b>Total</b>	<b>773,019</b>	<b>490,451</b>	<b>225,217</b>	<b>538,803</b>	<b>54,255</b>	<b>2,081,745</b>

(\*\*) Emissions from electricity consumption in buildings have been calculated taking into account the emission factors of the country in which they are produced, following the "Location-based" criterion of the *GHG Protocol*.



To calculate emissions according to the “Market-based” criterion, the supplier’s mix is used. At the time of verification of this report, only traceable information from Spain was available.

The calculation for Spain is:

- 2019 electricity consumption: 48,166 MWh
- Electricity with a Guarantee of Origin (green): 27,386 MWh (57%)
- The suppliers of electricity to our buildings during 2019 were:
  - Curenergía comercializador último recurso S.A.U. (2,440 MWh)
  - Iberdrola Clientes, S.A.U. (23.136 MWh), with a guarantee of origin for 4,795 MWh.
  - Iberdrola Servicios Energeticos, S.A. (22.590 MWh), all with a guarantee of origin.
- The CO<sub>2</sub> emissions according to Market-based would be **4,425 t CO<sub>2</sub>eq**.

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

	Spain	United Kingdom	United States	Brazil	Mexico	Total
Employee business trips	8,532	2,466	3,326	5,174	-	19,498
Associated with the supplier chain	1,041,568	670,017	32,324	3,227	137,636	1,884,772
Associated with the transport of employees from their residence to their place of work	14,698	7,764	15,225	12,795	1,986	52,468
Associated with electricity purchased for sale to end users	285,918	3,557,439	7,418,473	3,947,022	-	15,208,852
Well To Tank (WTT) emissions of the fuels consumed	749,834	671	196,442	172,934	2,670,367	3,790,248
Associated with the sale of gas to end customer (combustion)	2,114,651	5,277,574	12,375,486	-	-	19,767,711
Emissions associated with power generated for third parties	-	-	-	-	13,554,651	13,554,651
<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>



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## Base year

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Because of the importance of the changes described in the section “Significant Changes and Limits of the Organisation”, which prevent the conversion of the data from the previous base year, the decision was taken to consider 2019 the base year for subsequent comparisons of Iberdrola’s greenhouse gas emissions.

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## Uncertainty and maximum relative importance

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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.



# Quantification methods





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## Direct emissions - Scope 1

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### • 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:

- Conventional thermal generation (coal).
- 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).

### • Emissions from non-generating facilities

These 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 for the Hatfield Gas Storage Plant (United Kingdom).

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).

### • Fugitive emissions of methane (CH<sub>4</sub>) (natural gas storage and transmission)

To obtain the emissions due to CH<sub>4</sub> escapes produced during the transmission and storage of natural gas in CO<sub>2</sub> eq, these escapes 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 emissions of hexafluoride (SF<sub>6</sub>) in distribution networks

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 facilities that provide services to buildings (fuel consumption, oil, 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.

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## Indirect emissions - Scope 2

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- **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 made using the "Local Base" format, which applies the emission factor of the generation mix of the corresponding country.

- **Emissions associated with grid losses during the transportation of energy from third parties**

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.

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## Other indirect emissions - Scope 3

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- **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<sup>4</sup>, 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).

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<sup>4</sup> IPP plants in Mexico



- **Emissions associated with the transportation 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:

- DEFRA for Spain and the UK.
- EPA for the USA, Mexico and Brazil

- **Emissions associated with the supplier chain**

Estimated emissions data on the emission factor per euro invoiced obtained in 2017 using a supplier survey<sup>5</sup>.

- **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 2019 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**

Life cycle emissions of electricity from third-party generation sold to end users.

When own generation is subtracted from the electricity supplied to the market, the result is the electricity purchased from third parties for sale to end users.

The total CO<sub>2</sub> eq is obtained by applying the emission factor of the corresponding country's generation mix added to the upstream emissions for that energy, for which the emissions factor of DEFRA WTT (Well To Tank) are used.

- **Emissions associated with the life cycle of the fuels consumed**

These are the life cycle CO<sub>2</sub> emissions 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 CO<sub>2</sub> emissions of the gas distributed to the final customer, taking into account the emission factor of each country.

**Report completion date 20 May 2020**

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<sup>5</sup> A new survey will be carried out in 2020 to recalculate the emission factor per euro invoiced country..

# AENOR Verification Declaration



## Verification Statement of AENOR for IBERDROLA, S.A of the Inventory of greenhouse gas emissions for the year 2019

CASE FILE: 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 2019 of its activities included in the GHG report dated May 2020, which is part of this Declaration

AENOR is accredited by the Entidad Mexicana de Acreditación, with code OVVG EI 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.

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> and HFCs) according to the reference standard UNE-EN ISO 14064-1:2012.

### Objective

The purpose of the verification is to provide to 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 regions of Spain, the United Kingdom, the United States, Mexico and Brazil and to CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, SF<sub>6</sub> and HFCs as greenhouse gases considered. The list of companies whose activities are subject to the verified inventory is attached to this Declaration.

The company, in the emissions report, has considered to understand by installation a Region, 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 Regional level.

The Regions considered are the following:

- Spain
- United Kingdom
- USA
- Mexico
- Brazil

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

During the verification, the information was analyzed according to the *operational control* approach, 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 UNE-EN ISO 14064-1:2012, in line with the Sustainability Report.

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

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

### **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 UNE-EN ISO 14064-1:2012 standard for this report are:

#### **Scope 1. GHG Direct Emissions**

Including:

- CO2 emissions from electric power generation plants (fuel consumption).
- Emissions of methane (CH4) and nitrous oxide (N2O) associated with fuel consumption in generation and non-generation.
- Emissions from gas storage (fuel consumption).
- Fugitive emissions of methane (CH4) (storage and transportation of natural gas).
- Fugitive emissions of hexafluoride (SF6) in distribution networks and generation transformation plants.
- Emissions from facilities that provide services to buildings (fuel consumption).
- Emissions associated with road transport of employees in fleet vehicles (combustion of mobile sources).

Scope 2: GHG Indirect Emissions including the emissions of the generation of electricity acquired and consumed by the company

- Emissions associated with the consumption of auxiliary energy during stop in thermal, renewable and nuclear plants and pumping operations in hydro plants
- Emissions associated with the consumption of electricity in buildings
- Emissions associated with the grid losses.

Scope 3: Other GHG Indirect Emissions, in this category are included the next sources listed in the GHG Protocol "Corporate Value Chain (Scope 3) Accounting and Reporting Standard":

- Emissions from power plant that produce energy for third parties (fuel consumption)<sup>1</sup>.
- 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 energy provided to customers
- Emissions for final usage of natural gas provided to customers (burning).
- Emissions associated to cycle life of consumed fuels

### **Exclusions**

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

- Emisiones procedentes de fuentes móviles de las instalaciones de generación.

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<sup>1</sup> PIE plants operating in Mexico include N2O and CH4 emissions from combustion.



- Emissions associated with the auxiliary energy consumption of the wind farms belonging to Iberdrola Energía Internacional SLU.
- Emissions associated with the energy consumption of buildings belonging to Iberdrola Renovables located in countries other than the regions defined for Iberdrola.
- Emissions from mobile sources related to business trips in owned cars.
- Emissions from travel trips in Mexico.
- Emissions from vegetation pruning.

#### **Directed actions and base year**

The company has not included in the 2019 inventory any activity aimed at reducing greenhouse gases that could be verified according to the UNE-EN ISO 14064-1:2012 StandardU.

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 UNE-EN ISO 14064-1:2012 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 UNE-EN ISO 14064-1:2012: Specification with guidance at the organisation level for quantification and reporting of greenhouse gas emissions and removals.
- 2) Standard UNE-EN ISO 14064-3:2012: 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 2019 - Iberdrola", of May 2020, 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 2019 Greenhouse Gases Report of IBERDROLA, S.A. dated May 2020 was not a true reflection of the emissions from its activities.*

### Summary to level Region of GHG emissions declared by IBERDROLA, S.A. for the year 2019 that have been verified

#### TOTAL EMISSIONS BY SCOPE AND REGION

EMISSIONS 2019 (t CO <sub>2</sub> e)	Spain	United Kingdom	U.S.A.	Brazil	Mexico	TOTAL
Scope 1: Direct Emissions	5.800.703	46.973	1.855.716	1.024.141	4.699.572	13.427.105
Scope 2: Indirect Emissions	773.019	490.451	225.217	538.803	54.255	2.081.745
Scope 3: Other Indirect Emissions	4.215.201	9.515.931	20.041.276	4.141.152	16.364.640	54.278.200

Lead Verificator: Juan HERNÁN DÍEZ

FERNANDO  
SEGARRA  
ORERO

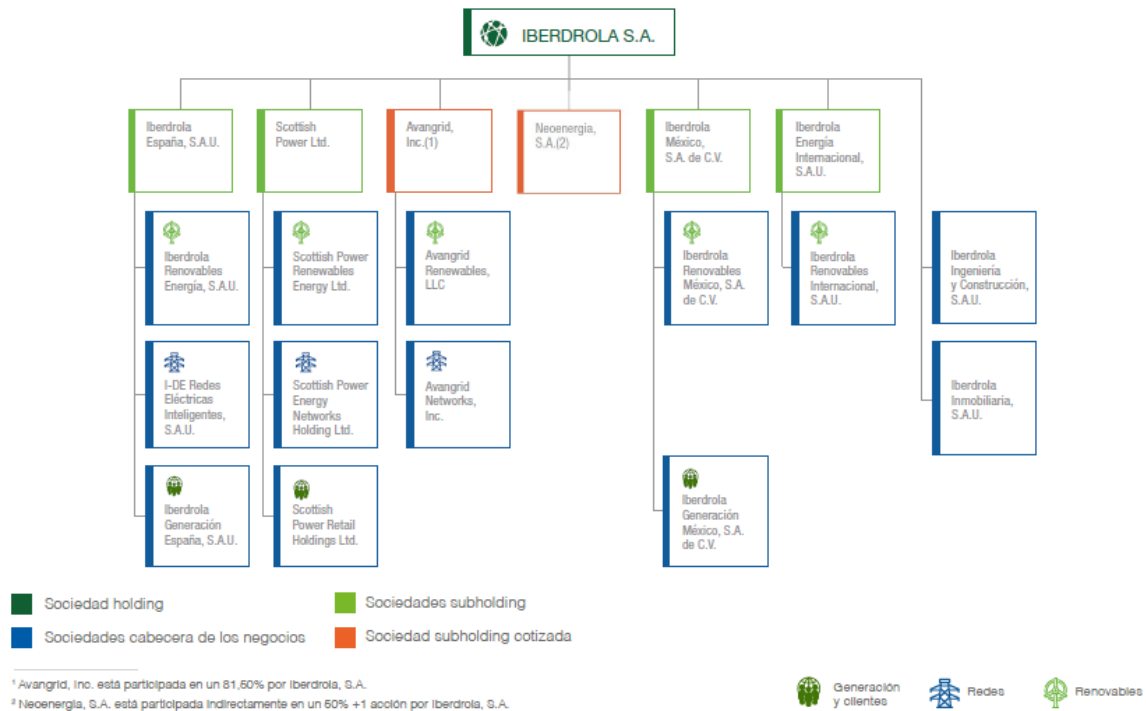
Firmado  
digitalmente  
por FERNANDO  
SEGARRA  
ORERO

Technical Review: Fernando SEGARRA ORERO

Madrid, on June 5<sup>th</sup> 2020

## ANNEX I

List of companies included in the 2019 inventory of IBERDROLA, S.A. which has been verified:





# Neoenergia Verification Declaration ABNT



## DECLARAÇÃO DE CONFORMIDADE

Conformity Declaration

## DECLARAÇÃO DE VERIFICAÇÃO

**Nº 367.009/20**

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: **LUCAS CAVICCHIOLI**

E-mail: lucas.cavicchioli@neoenergia.com

### Associação Brasileira de Normas Técnicas – ABNT

Verificador Líder: **Mariana Fellows Garcia**

E-mail: mfellows@terra.com.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 **2019**, 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 **2019** 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, por causa da pandemia do covid-19, como permitido pelo e-mail enviado pela Equipe do PBGHGP em 20 de março de 2020.



**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

#### Descrição do Escopo da Verificação

O inventário do ano de **2019** da Organização Inventariante foi verificado dentro do seguinte escopo:

Limites Organizacionais	Limites operacionais
<input 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: Emissões que possuem uma baixa representatividade (< 5%) com respeito ao total de emissões. Emissões procedentes de fontes móveis das instalações de geração renovável, térmica e transmissão; Emissões associados ao gerador de emergência de Termopernambuco; Emissões fugitivas por manutenção dos extintores de incêndio de CO<sub>2</sub>, bem como as informações de manutenção de ar condicionado das empresas do Grupo.

#### Instalações visitadas

Lista das instalações visitadas durante o processo de verificação:

A verificação ocorreu nos dias 30/03, 11/04, 12/04, 17/04 e 18/05 de 2020 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>	1.040.596,567	538.803,137	-	4.141.100,715
CH <sub>4</sub>	91,575	0,00	-	2,850
N <sub>2</sub> O	459,814	0,00	-	48,276
HFCs	0,00	-	-	0,00
PFCs	0,00	-	-	0,00
SF <sub>6</sub>	11.429,640	-	-	0,00
NF <sub>3</sub>	0,00	-	-	0,00
TOTAL	1.052.577,596	538.803,137	-	4.141.151,841
CO <sub>2</sub> Biogênico	7.463,612	-	-	-

#### Comentários Adicionais

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

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## DECLARAÇÃO DE CONFORMIDADE

### Conformity Declaration

#### Conflitos de Interesse (CDI)

Eu, **Mariana Fellows Garcia**, 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*.

**Mariana Fellows Garcia**

(Verificador Líder)

29/05/2020

Data

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

#### 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)

29/05/2020

Data

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

**Camila Torres**

(Revisor Independente)

29/05/2020

Data

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

#### Autorização

Eu, **LUCAS CAVICCHIOLI**, aceito os resultados desta declaração de verificação.

**LUCAS CAVICCHIOLI**

29/05/2020

Data

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

Rio de Janeiro, 29 de maio de 2020.

  
**Guy Ladavat**  
 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 executividade desta declaração de verificação e de quaisquer documentos a ela relacionados com base em que tenham sido elaborados e concluídos eletronicamente.  
<sup>2</sup>Caso a Declaração de Verificação tenha que ser refeita, este campo **deve** ser utilizado para informar o número de revisão do documento e a justificativa para a alteração.

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

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